National Bank of Serbia

February 2022

INFLATION REPORT

February 2022

INFLATION REPORT

NATIONAL BANK OF SERBIA
Belgrade, Kralja Petra 12
Tel: +381 11 3027-100

Belgrade, Nemanjina 17
Tel: +381 11 333-8000

www.nbs.rs
Number of copies: 60
ISSN 1820-9394

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 February *Inflation Report* was considered and adopted by the NBS Executive Board at its meeting of 10 February 2022.

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 Index
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 4 February.

Contents

I Overview

As of H2 2021, global economic recovery lost steam, and economic movements in Q4 were under the impact of a significant increase in energy prices and spread of the Omicron variant, in addition to the continued disruptions in global value chains. These factors are also reflected in somewhat less favourable global growth prospects in 2022 – according to January estimates of the World Bank, global economic growth in 2022 will stand at 4.1%, down by 0.2 pp from previous expectations, while according to the IMF, growth will equal 4.4%, which is 0.4 pp lower than three months ago. The euro area, our key foreign trade partner, is particularly affected by these factors, which led to the reinstatement of containment measures in some countries and a further slowdown of the area's economic growth. Still, in Q4 growth in the euro area was higher than expected and measured 0.3% s-a.

Halts in global supply chains, a significant hike in energy prices and the spread of new coronavirus strains are reflected in somewhat less favourable prospects for global growth.

Global prices of primary commodities and energy, as well as numerous problems on the supply side, are still causing heightened inflationary pressures across the globe. In many countries, inflation is trending above target levels, and in some it has reached the highest levels in several decades. Yet, according to estimates of international financial institutions, inflationary pressures at the global level are expected to subside around mid-2022 in most countries, though in some emerging countries they will remain high, notably where depreciation of the local currency amplified the effect of rising import prices. Risks to the inflation projection globally are still more skewed to the upside, mainly due to the escalation of the energy crisis and the estimate that halts in global supply chains could last longer than expected because of the new coronavirus strain. Stronger and more enduring inflationary pressures than initially expected, coupled with tightening in the labour market, underpinned the decisions of the Fed and the ECB to downsize the volume of QE in the coming period. The same factors are raising market participants' expectations that leading central banks could tighten their monetary policy sooner and more than expected. Such movements drove central banks in the region to continue (the Czech Republic, Hungary) or to start (Poland, Romania) tightening their monetary policies in Q4.

Heightened cost-push pressures and pressures from the labour market are driving central banks towards tightening their monetary policies.

In the period since the previous Report, the NBS continued to increase its weighted average repo rate, as well as the percentage of dinar liquidity withdrawn from the banking system via reverse repo operations.

Also, since October 2021, the NBS has gradually decreased the level of monetary policy expansiveness by raising the weighted average rate in reverse repo auctions, whereby excess dinar liquidity is withdrawn from the banking system for a week, while the percentage of excess dinar liquidity withdrawn via these auctions was also increased. With the last auction held on 9 February, the weighted average rate increased by 64 bp to 0.75%. The decision to increase the rate gradually over the previous months was made mostly under the impact of rising cost-push pressures in the international and local environment, as well as the need to influence market participants' inflation expectations and limit the second-round effects on the prices of other products and services. When making the decision on monetary conditions, the Executive Board was aware that the favourable financial conditions which are conducive to economic growth can also be maintained with a somewhat tighter monetary policy. In addition, caution in the pursuit of monetary policy was also mandated by developments in the international environment, notably movements in the international goods and financial market, which is also the breeding ground of the key risks to the achievement of projected inflation and Serbia's growth.

Lending in 2021 recorded an almost double-digit growth rate and remained an important factor of financing investments and spending.

Borrowing conditions in the domestic market remained favourable throughout Q4, continuing to stimulate lending to the non-monetary sector which posted almost double-digit growth in 2021 as well (9.9%), for the fourth consecutive year. In addition to the waning of the high base effect from last year, which reflected the implementation of the moratorium on loan repayment, another factor behind accelerated growth in loans, which began in Q3 and picked up in Q4, was increased lending, notably to the corporate sector. At end-2021, the share of NPLs in total loans stood at 3.5%, lower than before the crisis.

Fiscal performance turned out better than envisaged by the 2021 budget revision as a result of accelerated economic growth and positive labour market developments.

The fiscal result in 2021 was not only better than the initially planned, but it also outperformed the October budget revision – at the consolidated level, fiscal deficit equalled 4.2% of GDP. Such outcome was underpinned by the accelerated economic growth and favourable labour market trends, which also reflected on the better than anticipated collection of fiscal revenues. This is primarily indicated by the double-digit growth rates in income tax, corporate profit tax and VAT receipts. At the same time, government capital expenditures were higher than in 2020 by more than 50% and reached 7.5% of GDP. The share of general government public debt in GDP at the end of the year was 57.5%, which is below the Maastricht criterion. Though a large part of the funds will still be directed to infrastructure projects, which contribute to growth in potential output, in the medium

term fiscal deficit is projected to decline further and transform into a primary surplus. This will ensure that public debt also embarks on a downward trajectory. Moderate growth in public debt over the past two years and the anticipated decline in the fiscal deficit, coupled with favourable growth prospects in the medium run, a high inflow of FDI, narrowed external imbalance, a record high level of FX reserves, a credible monetary policy framework and entrenched financial stability are the key factors behind the improvement in Serbia's credit rating from stable to positive, according to Standard & Poor's. Thus, Serbia is now half a step away from investment grade.

Despite increased energy import, the share of the current account deficit in GDP in 2021 was at a similar level as in 2020, as a result of the increasing export capacities, attributable to investments in the prior period and higher external demand.

Current account deficit in 2021 equalled 4.4% of GDP, slightly higher than last year. This is somewhat higher than our expectations in the previous Report and is attributable to increased energy imports at the end of the year. Compared to the previous year, factors conducive to the improvement of the current account deficit were growth in the services surplus, as well as in secondary income, notably on account of a rebound in the inflow of the remittances from abroad, as well as larger deliveries of goods and services to Kosovo and Metohija. On the other hand, the primary income deficit increased on account of the pay-outs of income from FDI, while the goods deficit also went up. As a result of higher export capacities and growing external demand, goods export recorded y-o-y growth of 29.1%, despite persistent halts in global supply chains. Export growth was recorded in 20 of the 23 manufacturing areas, and the greatest contribution to growth came from the export of basic metals, metal ores, food products, chemicals and chemical products, electrical equipment, rubber and plastic products, and motor vehicles and trailers. On a parallel note, goods import increased by 25.4%, of which two-thirds of contributions pertain to the import of intermediate goods, partly due to the higher energy prices, while the import of consumer goods and equipment exerted a smaller contribution. According to our projection, the share of the current account deficit in the medium term will remain below 5% of GDP, with maintained full coverage by net FDI inflows. Growth in the domestic economy's export capacities, as well as the anticipated global economic recovery, will work towards improving the external position, while planned large infrastructure investments will bolster equipment import.

The adequate level and composition of FX reserves reinforce Serbia's resilience to external risks.

Capital inflow to Serbia on account of FDI exceeded the record level from 2019 and equalled EUR 3.9 bn in 2021. As in prior years, the inflow was diversified across projects and geographies, and mainly channelled to tradable sectors. Full coverage of the current account

deficit by net FDI inflows for the seventh year straight and the successful issuance of eurobonds in the international financial market contributed the most to the increase in the NBS's FX reserves which, without cross-currency changes and changes in the price of assets, posted growth of EUR 2.6 bn. At the end of the year, FX reserves equalled EUR 16.5 bn, ensuring that the coverage of the goods and services import is twice their adequacy standard. In 2021, the NBS was again successful in preserving the relative stability of the EUR/RSD exchange rate, keeping a watchful eye on factors from the local and international environment that affect the movements in the domestic FX market, and responding in a timely and measured way. In conditions of the prevailing appreciation pressures during the major part of 2021, at the year level the NBS was a net buyer of FX in the interbank FX market in the amount of EUR 645 mn, despite the fact that at end-2021, due to the seasonally higher energy import, it reacted mostly on the side of FX sale.

Though economic growth of our main trade partners slackened, Serbia's GDP maintained relatively robust growth dynamics in Q4 as well.

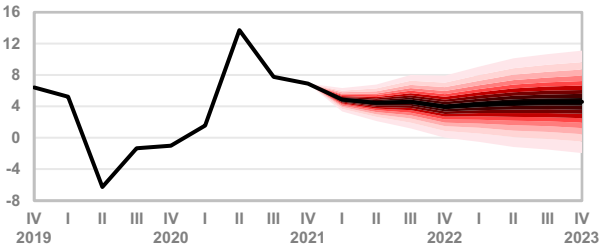
Serbia's GDP maintained its relatively powerful growth dynamics in Q4 2021 as well, posting y-o-y growth of 6.9%, according to the SORS estimate. As in the preceding three quarters, growth outstripped our expectations, resulting in real GDP growth of 7.5% at year level. This was largely due to the service sectors, hit particularly hard in the first stage of the pandemic, followed by construction, manufacturing – despite persisting global value chain disruptions, and mining. Only agricultural production provided a negative contribution to growth, declining by 5% due to the drought. According to NBS estimates, Q4 growth measured 1.6% s-a. At year-end, GDP was thus more than 5% above its pre-crisis level. On the expenditure side, Q4 growth was led by fixed investment amid robust FDI inflow and increased execution of government capital expenditures, as well as by personal consumption, thanks to favourable trends in the labour market.

A favourable medium-term economic growth outlook, projected in the range of 4–5% p.a., is supported by the preserved investor and consumer confidence, higher production capacities and jobs, as well as the anticipated implementation of planned projects, mostly in the area of road, railway and utility infrastructure.

In 2022 and in the medium term, we expect the economic growth rate to range between 4 and 5%, supporting Serbia's continued convergence towards EU economies. Growth will be led by domestic demand, i.e. elevated private consumption based on real and sound foundations, and by fixed investment. The latter's share in GDP ought to outstrip 25% in 2022 and rise beyond this level thanks to the anticipated implementation of large investment projects in the area of road, railway and utility infrastructure, as well as to the preserved investment confidence. In this and the next two years, we expect the contribution of net export to be mildly negative amid increased equipment import due to investment projects implementation, though export growth rates will also be

relatively high, supported by capital inflow to mostly export-oriented sectors and the anticipated rise in external demand. The risks to the projection remain associated with the path of the pandemic and its impact on economic activity and inflation globally, including movements in commodity and financial markets. Overall, the risks to the projection are judged to be symmetric, with those from the international environment still slightly skewed to the downside and those from the domestic environment mildly tilted to the upside. Faster than anticipated growth recorded in Q4 2021 due to the carry over effect makes it more likely that our GDP growth projection for this year will materialise.

GDP growth projection
(y-o-y rates, in %)



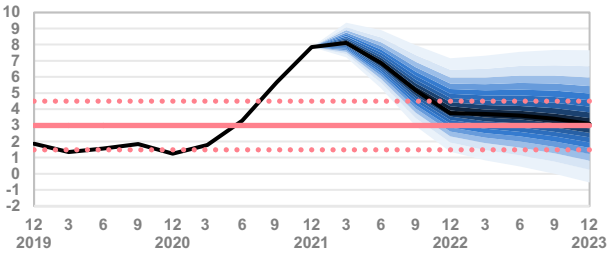
Similarly as in other countries, Serbia's y-o-y inflation continued up in Q4, measuring 7.9% in December, amid heightened cost-push pressures fuelled mostly by elevated global prices of energy and other primary commodities, global value chain disruptions and much higher international transport costs. That these are mostly supply-side pressures, which are largely beyond the impact of monetary policy, is evident from the fact that food and energy prices accounted for three-quarters of the contribution to December inflation. Core inflation, which is influenced more by monetary policy measures, moved on average around the target midpoint of 3.0% in Q4 and measured 3.5% y-o-y in December. This indicates that for the time being there are no major demand-side inflationary pressures, thanks to the important contribution provided by several years' relative stability of the exchange rate and medium-term inflation expectations of the financial and corporate sectors which remain within the bounds of the target tolerance band.

Similarly as in other countries, y-o-y inflation in Serbia continued up during Q4, guided mainly by elevated food and energy prices and the effects of last year's low base. Core inflation, however, remained well below headline inflation and lower than in other inflation-targeters in the region.

Under the central February projection, y-o-y inflation is expected to move around its current level in the next three months, begin to slow from Q2 and settle within the range of 3.5–4% at year end. It will then continue to slow towards the target midpoint until the end of the projection horizon. Inflation will slacken mostly as last year's increases in petroleum product prices drop out of its y-o-y calculation, while prices of fruit and vegetables, as well as raw materials in processed food production, are expected to slide from their current high levels with the arrival of the new agricultural season in mid-2022. Moreover, consistent with the expectations of leading international financial institutions, we expect that the effects of stronger cost-push pressures from the international environment on different accounts – global primary commodity prices, global value chain disruptions, international transport costs, producer and import prices – will soften gradually, though all these factors have a more inflationary effect in the current than in the previous projection. Uncertainties surrounding the

Under our new projection as well, y-o-y inflation is expected to be on a declining path from Q2 and measure 3.5–4% at year end. It will then continue to slow and hover around the target midpoint.

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



inflation projection are still largely associated with the international environment, most notably the duration of disruptions in global value chains and the global growth outlook, which continue to hinge largely on the path of the pandemic, movement in world prices of primary agricultural commodities and energy, as well as developments in the international financial market and capital flows to emerging economies. The risks to the projection associated with the domestic environment refer mainly to the new agricultural season, and less to the pace of domestic demand and movement in administered prices. Overall, the risks to the inflation projection are judged to be slightly skewed to the upside, mostly on account of possible extended duration of global value chain disruptions and the energy crisis.

In case of materialisation of any of the risks that would keep inflation above the upper bound of the target tolerance band for a longer period of time, the National Bank of Serbia is ready to respond in the shortest time possible using all available monetary policy instruments.

Going forward, the National Bank of Serbia's monetary policy priority will be to maintain price and financial stability in the medium term, while supporting economic growth, further rise in employment and living standards for households, strengthening of the export sector and preservation of a favourable investment environment. The National Bank of Serbia will continue to keep a close eye on the movement and the impact of key factors from the domestic and international environment on inflation, financial stability and the pace of economic growth and to adjust its measures accordingly in the interest of businesses and households. The National Bank of Serbia is ready to respond promptly by using all monetary policy instruments on hand in case of materialisation of any of the risks that would keep inflation above the upper bound of the target tolerance band for a longer period of time.

II Monetary policy since the November *Report*

Since October 2021 the NBS has been gradually reducing the degree of monetary policy accommodation by raising the weighted average rate at reverse repo auctions where excess liquidity is withdrawn from the banking system on a one-week term, and by increasing the percentage of excess dinar liquidity withdrawn. At the last auction held on 9 February, the weighted average rate equalled 0.75%.

In making the decision to gradually increase the weighted average rate, the NBS was guided primarily by the elevated cost-push pressures in the international and domestic environment, and the need to influence the inflation expectations of market agents and limit the second-round effects on the prices of other products and services. The NBS Executive Board made the decision on monetary conditions bearing in mind that favourable financial conditions that stimulate economic growth can be maintained even with a somewhat tighter monetary policy.

The main risks to the inflation and economic growth projection are still associated with the international environment, which mandates caution in monetary policy conduct. Uncertainty prevails in the international commodity and financial markets. The global prices of energy and primary agricultural commodities are at multiple-year highs, and still largely hinge on the course of the pandemic and the uncertain weather conditions. Movements in the international market and, as a result, capital flows to emerging economies are swayed mainly by expectations concerning the pace of monetary policy tightening by leading central banks, the Fed and ECB, which is expected given the level of inflation and economic activity and labour market indicators in the US and the euro area.

In the period since the November Report, the NBS Executive Board **kept the key policy rate unchanged at 1.0%, as well as the rates on deposit (0.10%) and credit facilities (1.90%)**. However, in view of the elevated cost-push pressures, which reflect predominantly external factors, and aiming to limit their second-round effects on other prices through inflation expectations, the NBS continued to lower the degree of monetary policy accommodation by increasing the weighted average rate at one-week reverse repo auctions and by raising the percentage of excess dinar liquidity withdrawn at these auctions. **Since the start of October 2021, the average repo rate at one-week reverse repo auctions was raised from 0.11% (since early 2021, on average) to 0.75% (last auction held on 9 February).** The repo securities sale auctions have been taking place at the multiple-rate method since December 2012 (instead at the hitherto fixed rate), opening room for the NBS to adjust monetary conditions without changing the main interest rates, and to respond even between the Executive Board meetings.

When deciding to lower the degree of monetary policy accommodation, the NBS Executive Board was guided by the fact that the global prices of energy, primary agricultural commodities and metals, including global supply halts and soaring transportation costs, are producing stronger than anticipated cost-push pressures both in the global and domestic market. Global demand also picked up in this phase of the pandemic. It was spurred by the scrapping of restrictive health measures owing to vaccination, activation of built-up savings and the still robust economic measures that support businesses and citizens in most countries. In some countries, including Serbia, it was the drought that additionally pushed up the prices of primary agricultural commodities and unprocessed food.

Along with the low base effect from last year, these factors propped up inflation in 2021 in almost all countries. According to SORS data, in December 2021 inflation measured 7.9% y-o-y, with over three fourths influenced by food and energy prices. Core inflation (excluding the prices of food, energy, alcohol and cigarettes), which is under a stronger impact of monetary policy measures, was much lower than headline inflation, measuring around 3% y-o-y on average in the past

months. Core inflation remained low thanks to relative stability of the exchange rate, which has been a strong anchor of price stability in the past eight years.

As inflation was driven up mainly by supply-side factors, which are, as a rule, temporary in nature, and are less affected by monetary policy measures, whilst domestic factors, except for the drought effects, did not generate any major inflationary pressures, the NBS tightened monetary conditions to a lesser degree than other inflation-targeting countries in the region. The NBS's smaller scope of response was also determined by the expectation that inflation will hover around the target midpoint within the monetary policy horizon, i.e. late this and early next year. As assessed by the NBS Executive Board, in Q1 2022 inflation will continue to move around the level recorded late last year or slightly above it, reflecting the effects of the global energy crisis and the resulting higher prices of import products. As of Q2 inflation is likely to slow and move towards the midpoint. Inflation will slow as the effects of temporary factors wane, most notably higher energy and agricultural product prices, as well as owing to the expected gradual resolving of halts in global supply chains. In the short run, price growth will soften also on account of government measures temporarily capping the prices of basic foodstuffs and electricity in the corporate sector.

In making the decision on monetary conditions, the NBS Executive Board had in mind the elevated one-year ahead inflation expectations of the financial and corporate sectors. According to the December survey, the expectations of the financial sector were around the upper bound of the target band, while those of the corporate sector exceeded it, most probably due to higher energy prices. Still, medium-term expectations of both sectors remained within the target band. This means that these sectors believe that inflation picked up due to temporary factors and that, once these factors wane, it will return to the pre-pandemic levels.

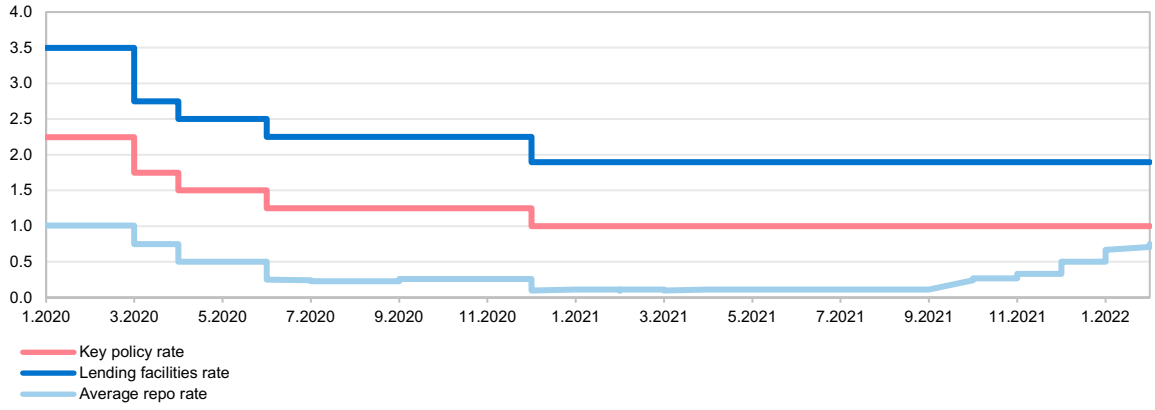
The Executive Board also had in mind that favourable financial conditions supporting economic growth can be maintained even with somewhat more restrictive monetary policy. According to the SORS flash estimate, real GDP grew 7.5% in 2021, which is above NBS expectations from November (growth in the 6.5– 7% range) and allows for continued acceleration of growth this year as well. These trends reflect growth in service sectors and construction, but also industry, despite the prevailing challenges concerning global supply halts. A negative contribution came only from agricultural production, which contracted 5% amidst the drought. The NBS expects medium-term growth at 4.0–5.0% on account of the continued investment cycle, implementation of major infrastructure projects and rising personal consumption supported by favourable labour market trends. Fiscal policy is expected to contribute to domestic demand this year as well (though less than in the past two years) thanks to higher capital expenditure, rising wage and pension expenses and one-off benefit outlays. A positive impulse to growth is also expected from exports, which reflects, on the supply side, past investment in tradable sectors, and, on the demand side, a favourable growth outlook of our most important trade partners this year. Export supply is rising as FDI flows to Serbia amounted to EUR 3.9 bn in 2021, exceeding the record level from 2019. As so far, FDI went mostly to export sectors.

The international environment is still plagued by heightened uncertainty concerning the impact of the course of the pandemic and new virus variants on the pace of global economic growth, global prices of primary commodities and, by extension, inflation. Nonetheless, the global economic recovery does continue despite strong cost-push pressures and the worsening of the epidemiological situation in some countries. At the same time, countries across the world have shown a high degree of adjustment to the changed operating conditions amidst the pandemic. After it faced challenges originating from a much higher natural gas price and halts in supply chains, the euro area, our most important economic partner, expects to see accelerated industrial production, notably in Germany, which should positively reflect on our exports and manufacturing. The first signals are emerging that halts in global production and supply chains are being eased.

Caution in NBS monetary policy making is also mandated by movements in the international commodity market. Having soared last year, the global prices of oil and other primary commodities are higher than before the pandemic. Still, as estimated by leading international financial institutions, these prices should stabilise and then gradually decline in the coming period. As the new agricultural season sets in, the prices of primary agricultural commodities and other food should decline, as their currently high levels mirror the globally weaker last year's agricultural season. The energy crisis is also expected to be gradually resolved. The crisis has been ongoing since October and has hit EU countries particularly hard, translating onto a further rise in cost-push pressures and higher import prices.

The decisions of leading central banks, the Fed and ECB, will continue to have the strongest bearing on the international financial market and capital flows to

Chart II.0.1 **Movement in the key policy rate and average repo rate**
(y-o-y rates, in %)



Source: NBS.

emerging economies, including Serbia. These two central banks have still not raised their main rates, but decided to reduce the volume of additional liquidity injected into the financial system within their QE programmes. In December the Fed decided to speed up the scaling-down of net asset purchases within QE. More favourable outturns and outlook in the US labour market further fuel the expectations that the Fed will launch the policy rate hike cycle in March. According to December projections, the FOMC expects three rate hikes this year. In December the ECB decided to reduce the scope of asset purchases under the PEPP and to terminate the programme in March this year. Faster than expected economic growth, more favourable labour market trends and higher than anticipated inflation could result in faster than expected monetary policy tightening by leading central banks, possibly leading to lower capital inflows and depreciation pressures in emerging economies, including Serbia.

As the main risks to inflation and other economic trends still emanate from the international environment, the NBS will continue to keep a close eye on movements in the international commodity and financial markets and estimate their impact on our economy. It is particularly important that our economy is today more resilient than in earlier crises. In its December update, Standard & Poor's highlighted the high resilience of the Serbian economy to the pandemic shock and upgraded Serbia's BB+ outlook from stable to positive. The agency pointed out a stable medium-term growth outlook, a credible monetary policy framework, bolstered financial stability, high FDI inflows, reduced external imbalances, a record high level of FX reserves, a moderate rise in public debt, and the expected fiscal deficit reduction.

Looking ahead, the focus of monetary policy makers will stay on maintaining price and financial stability, as well as on supporting as fast growth of our economy and employment as possible, further expansion of the export sector, and a favourable investment environment. Monetary policy will continue to be predictable and consistent in delivering low and stable inflation in the medium run, while safeguarding the achieved financial stability and contributing to economic growth and higher living standards.

The NBS stands ready to respond promptly by using all instruments on hand in case of materialization of any of the risks that would keep inflation above the upper bound of the target band for a prolonged period of time.

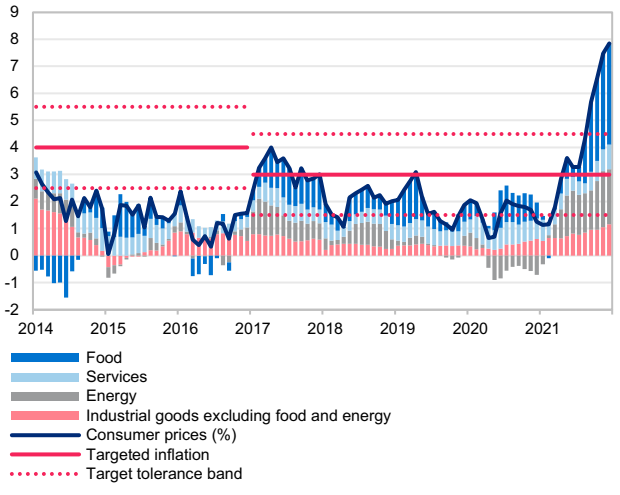
III Inflation movements

As in other countries, y-o-y inflation in Serbia continued on the upward trajectory in Q4 and reached 7.9% in December amid stronger cost-push pressures, which resulted primarily from the surging global prices of energy and other primary commodities, halts in global supply chains and considerably higher prices of international transport. At the same time, core inflation moved on average in Q4 around the target midpoint of 3.0% and measured 3.5% y-o-y in December, indicating the absence of major inflationary pressures on the demand side. Stable core inflation is underpinned by the years-long relative stability of the exchange rate, as well as medium-term inflation expectations of the financial and corporate sectors that are still within the NBS target band.

Inflation movements in Q4

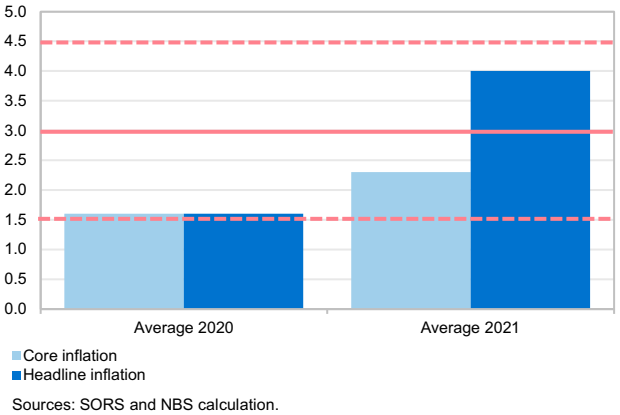
Amid stronger cost-push pressures, **y-o-y inflation** continued on the upward trajectory in Q4 and reached 7.9% in December (vs. 5.7% in September), which was in line with NBS expectations stated in the previous *Report*. Moreover, around three quarters of the consumer price growth in 2021 stemmed from the higher prices of food and energy, mainly due to the low base effect from the same period of 2020. In Q4, the prices of processed food increased their contribution to y-o-y inflation the most (by 0.9 pp to 1.7 pp) due to a further hike in global primary agricultural commodities and other inputs in food production, and also to the effects of the drought in summer months. The contribution of unprocessed food prices also increased on this account (by 0.25 pp to 2.1 pp). Energy prices increased their contribution to y-o-y inflation to 2.0 pp in December (from 1.5 pp in September), dominantly reflecting the higher global oil price. Higher energy prices indirectly spilled over to the prices of industrial products (excluding food and energy) and the prices of services. Their contribution to y-o-y inflation in December was 1.2 pp and 0.9 pp, respectively, up by 0.2 pp from September. The rise in the prices of industrial products also reflected disruptions in global supply chains, as well as the higher global prices of other primary commodities.

Chart III.0.1 **Contribution to y-o-y consumer price growth**
(in pp)



Sources: SORS and NBS calculation.

Chart III.0.2 **Inflation in 2020 and 2021**
(in %)



Sources: SORS and NBS calculation.

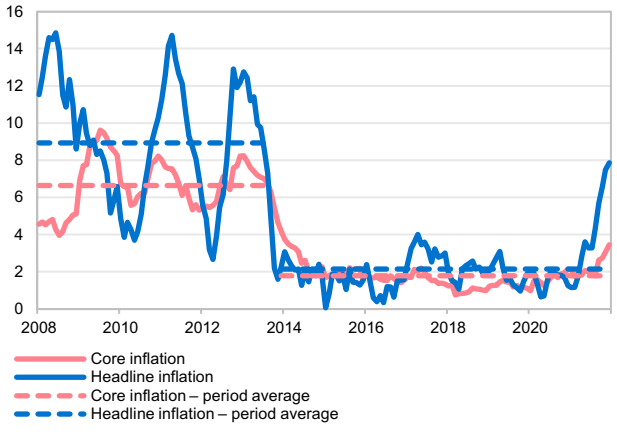
According to SORS estimates, average y-o-y inflation in 2021 equalled 4.0% and average core inflation 2.3%. **Core inflation** (measured by the change in CPI excluding prices of energy, food, alcohol and cigarettes), which is most affected by the monetary policy, moved on average around the target midpoint of 3.0% since September and came at 3.5% y-o-y in December. Its significantly lower

Table III.0.1 **Growth and contribution of components to consumer price growth in Q4 2021**
(quarterly)

	Growth rates (%)	Contribution (pp)
Consumer prices (CPI)	**2.3**	**2.3**
Unprocessed food	0.0	0.0
Processed food	5.0	1.0
Industrial products excluding food and energy	1.6	0.5
Energy	2.9	0.5
Services	1.3	0.3
CPI excluding energy, food, alcohol and cigarettes	1.6	0.7
Administered prices	0.1	0.0

Sources: SORS and NBS calculation.

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



Sources: SORS and NBS calculation.

level than that of headline inflation indicates that there were no major inflationary pressures on the demand side. The preserved low and stable core inflation is largely underpinned by the maintained relative stability of the exchange rate.

At quarterly level, **consumer prices picked up by 2.3% in Q4**, mainly driven by the 5.0% hike in the prices of **processed food** (with a 1.0 pp contribution to inflation). Within processed food prices, the strongest contribution to inflation in Q4 came from the higher prices of bread and cereals, non-alcoholic beverages and milk and dairy products (0.7 pp cumulative contribution). **In November, the Serbian Government decided to put a cap on the prices of basic foodstuffs** (sugar, flour and edible oil) **for households** – the cap being the price level as at 15 November 2021. This most likely led to the deceleration of inflation expectations and processed food price growth in December compared to previous months. The hike in the prices of fresh meat in Q4 was neutralised by the decline in fresh fruit and vegetable prices. Thus, the prices of **unprocessed food** stagnated in Q4.

Energy prices grew by 2.9% in Q4, mostly as a result of the rise in the prices of petroleum products in the domestic market (4.4%) in October and November, while they slightly declined in December, mirroring the movement in the global crude oil price. In Q4, typically for the season, the prices of solid fuels (firewood and coal) went up (7.2%), while other energy prices (electricity and gas for households) remained unchanged.

The prices of industrial products (excluding food and energy) rose by 1.6% in Q4, driven by the seasonal increase in the prices of clothes and footwear, and higher prices of furniture, household appliances, vehicles and spare parts (with a 0.3 pp cumulative contribution to inflation).

The prices of services increased by 1.3% in Q4, mainly as a result of the higher prices of rents, mobile telephony services and catering (with a 0.2 pp cumulative contribution to inflation).

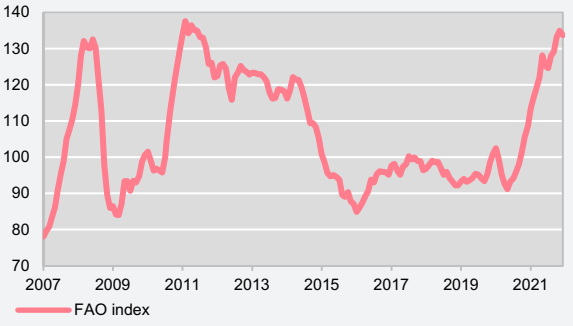
Administered prices stayed almost unchanged in Q4, while their y-o-y growth slowed down slightly – from 4.8% in September to 4.7% in December.

Prices within core inflation increased by 1.6% in Q4 (with a 0.7 pp contribution to inflation), driven by the mentioned hike in the prices of clothes and footwear, household cleaning products, rents, cars, mobile telephony and catering.

Text box 1: High growth in global food and oil prices in 2021 compared to previous periods

During 2021, global oil and food prices increased considerably, partly due to the low base from the previous year, but also due to a sudden pick-up in global demand amid the opening of the global economy and the relaxation of containment measures. The rise in these prices was also affected by the supply-side factors – slower adjustment of the output of OPEC+ countries to growing demand and geopolitical tensions in case of oil prices, and globally weaker agricultural season in case of the prices of primary agricultural commodities. Given that the global prices of oil and food, measured by the FAO index, reached their 10-year highs at end-2021, and around three quarters of inflation in Serbia in 2021 stemmed from the higher prices of food and petroleum products, this text box compares the growth in global oil and food prices in 2021 with previous episodes of their relatively high growth, both in terms of the intensity and duration and in terms of the effects on inflation.

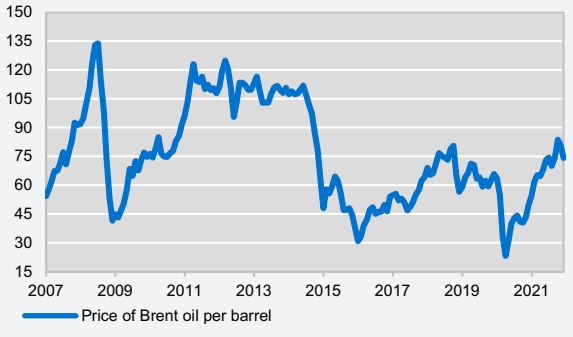
Chart O.1.1 **FAO index**
(in nominal terms, 2014−2016 = 100)



Source: UN FAO.

Looking at the historical movements of the FAO index as of 2007, since inflation in our country has been measured by the change in CPI, four episodes of its relatively high growth can be observed – during 2007, from early 2009 to early 2011, during 2016 and 2017, and from mid-2020 through 2021. Global cereal prices soared in 2012 as well, but this lasted for several months and did not have a major impact on the movement of the overall FAO index, as other categories of this index decreased (sugar, edible oil, meat, and dairy products).

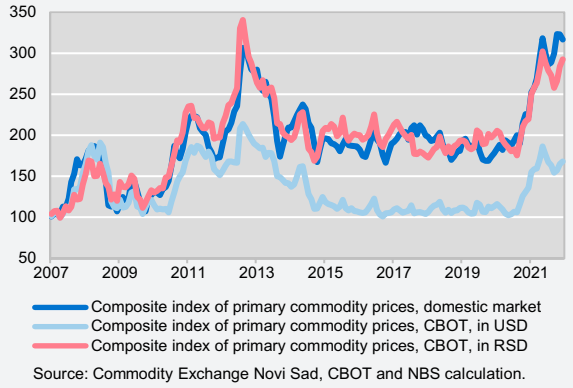
Chart O.1.2 **Global oil price movements**
(in USD)



Source: Bloomberg.

The common feature of the four mentioned episodes of high growth in global food prices is the hike in global oil price. In addition to increasing food production costs, higher oil price also increased the demand for biofuels, whose production relies primarily on corn and soybean. These periods were also characterised by unfavourable weather conditions for the production of primary agricultural commodities, which reflected on their lower supply in the global market, as well as by the low base effect, i.e. low levels of the prices of these commodities in the previous period. Another common feature of the observed episodes is the depreciation of the dollar amid the Fed's accommodative monetary policy.

Chart O.1.3 **Movements in domestic primary agricultural commodity prices***
(December 2006 = 100)



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

Given that the global market of primary agricultural commodities is highly integrated due to stock trading, the prices of primary agricultural commodities in the domestic market are dictated by global market conditions, as indicated by the high degree of their correlation (Chart O.1.3), especially in the periods which record high growth in the global market prices.

Based on Table O.1.1, it can be concluded that the rise in cereal prices during the current crisis caused by the coronavirus pandemic was most similar to the rise in 2010 and was

particularly pronounced in corn prices. The hike in global oil prices in this period was even stronger than in the previous periods, largely due to the low base effect, as global oil prices fell to the lowest level on record during April 2020, amid the global economy lockdown.

Table O.1.1 **Growth in global prices of selected primary commodities**

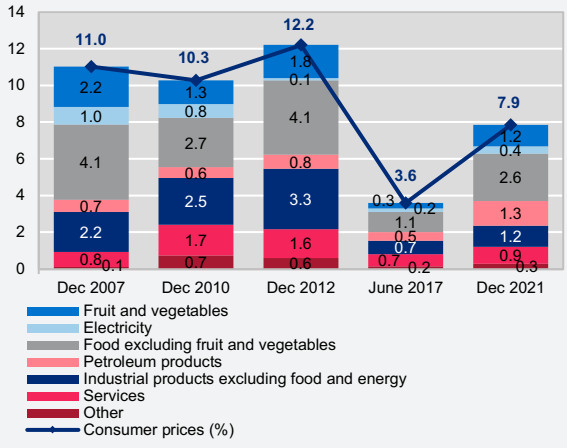
	2007/2008		2010/2011		2012		2016/2018		2020/2021	
	in months	in %	in months	in %	in months	in %	in months	in %	in months	in %
Corn	14	84.6	10	112.3	5	33.5	13	4.4	11	118.9
Wheat	11	81.7	9	64.6	7	44.7	9	9.6	10	62.2
Soybean	15	127.1	8	43.7	7	48.6	14	13.0	12	86.8
Meat	17	46.2	16	28.8	5	4.7	15	20.2	10	24.7
Oil	16	146.6	12	64.8	6	5.1	22	148.8	14	258.4

Sources: CBOT, FAO, Bloomberg.

The comparison of the contribution of food and petroleum product prices to inflation in 2021 and in the previous episodes reveals that the greatest contribution in 2021 came from petroleum product prices (Chart O.1.4). This was mostly due to a more pronounced rise in global oil prices than in previous episodes and, to a lesser degree, to their higher share in the consumer basket. The contribution of food prices (excluding fruit and vegetables), as well as of fruit and vegetable prices in 2021, was similar to the contribution in 2010, as the domestic and global agricultural performance was similar in these two years. However, the contribution of food prices to inflation in 2007 and 2012 was even greater, as the drought particularly affected the yields of fruit and vegetable crops.

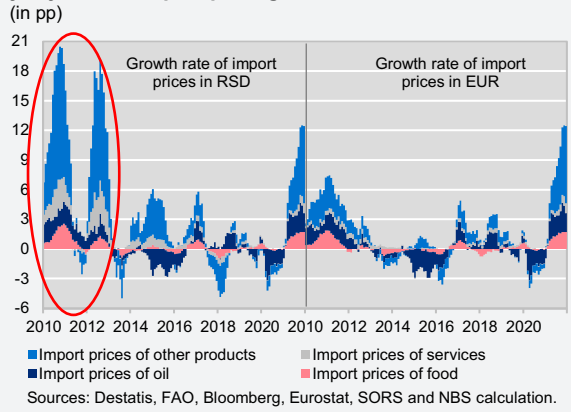
Chart O.1.4 shows that, thanks to the achieved and preserved relative stability of the dinar exchange rate and anchored inflation expectations, the contribution of other CPI components to inflation (industrial products excluding food and energy and services) was lower in 2021 than in the previous episodes, with the exception of 2016–2017, when global food prices did rise to a lesser degree than in other episodes. **The lower contribution of other inflation components in 2021 indicates that stronger second-round effects of rising global food and energy prices on other products and services have been avoided.** Moreover, unlike the previous episodes of high depreciation of the dinar (concluding with 2012), **in the current episode, the effect of higher import prices was not amplified further by the depreciation of the dinar against the euro**. Besides, **it should be noted that according to almost all indicators, the ongoing crisis caused by the pandemic is stronger than the previous global economic crisis**, in which we did not face the problems we currently have, such as halts in transport and global production chains.

Chart O.1.4 **Contributions to headline inflation**
(in pp)



Sources: SORS and NBS calculation.

Chart O.1.5 **Contribution of individual components to y-o-y rate of import price growth**
(in pp)



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

Table O.1.2 **Share of food and petroleum products in CPI**
(in %)

	2007	2010	2012	2017	2021
Food excluding fruit and vegetables	29.3	31.5	32.3	25.1	24.8
Fruit and vegetables	5.0	6.3	6.5	6.9	6.6
Petroleum products	4.4	4.5	4.6	5.7	5.8

Sources: SORS, NBS calculation.

Producer and import prices

Amid extended halts in global production chains and higher import prices of production inputs, **industrial producer prices in the domestic market** continued up until November, only to slow down to 14.7% y-o-y in December. This was mainly the result of somewhat lower cost-push pressures in the production of energy and intermediate goods (base metals), although these components still gave the strongest contribution to producer prices in industry. Intensified cost-push pressures were also present in construction, as indicated by 16.0% y-o-y growth in the **prices of elements and materials incorporated in construction** in December (compared to 12.1% in September).

As with producer prices, **import prices expressed in dinars**[1] stepped up their y-o-y growth until November, only to slow down mildly to 12.4% in December, driven predominantly by the somewhat lower contribution of global oil prices. The strongest impetus to the y-o-y rise in import prices in dinars came from the export prices of Germany (which are used for the approximation of the import prices of equipment and intermediate goods). In December, the contribution of global food and euro area consumer prices (used for the approximation of the import prices of services) remained at the November level.

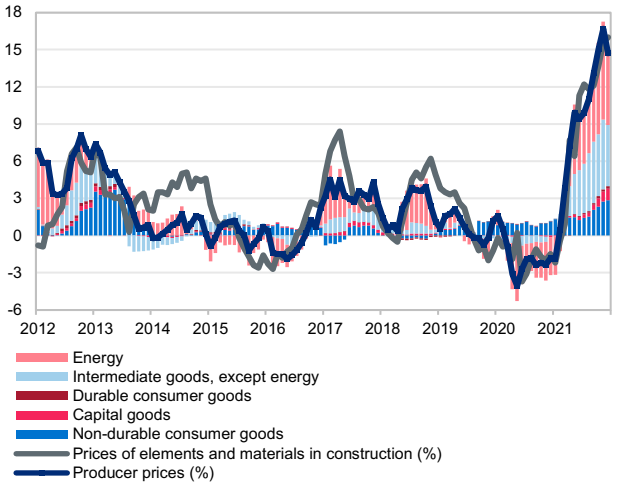
Inflation expectations

Higher consumer prices in Q4 2021 led to an increase in short-term inflation expectations in this period. Medium-term inflation expectations of the financial and corporate sectors increased less, settling slightly above the target midpoint.

Although higher, **one-year ahead inflation expectations of the financial sector** remained within the target tolerance band for more than 8 years now (since October 2013), which is a significant indicator of the credibility of the NBS monetary policy. According to the results of the December Ipsos survey, one-year ahead inflation expectations of the financial sector increased to 4.5% (from 4.0% in October and November). According to the results of the Bloomberg survey, in Q4 inflation expectations ranged from 3.0% in October to 3.8% in December, only to decrease to 3.5% in January, the same as in November. The decrease in inflation expectations can be associated also with the measures of the Serbian

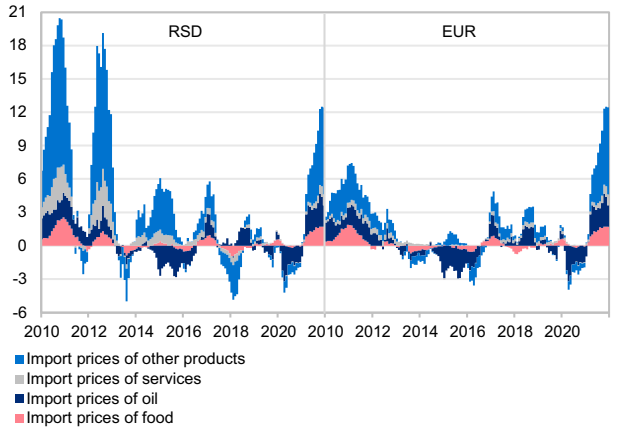
[1] Preliminary data. The weighted average of the global Brent oil price, food price index (FAO index), euro area consumer prices, and export prices of Germany, one of Serbia's most significant foreign trade partners, is used as an indicator of import prices. The base year is 2010.

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



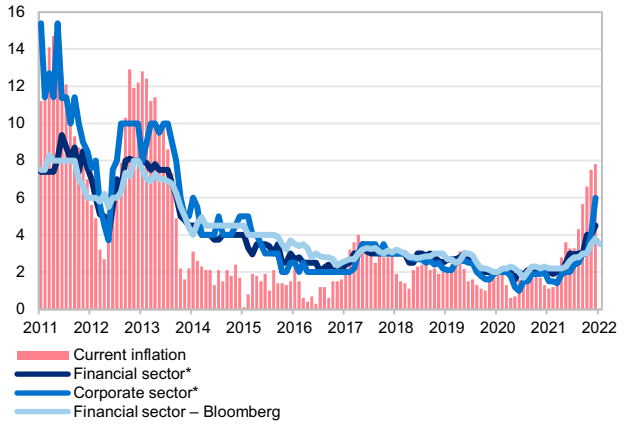
Sources: SORS and NBS calculation.
* Industrial producer prices for the domestic market.

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



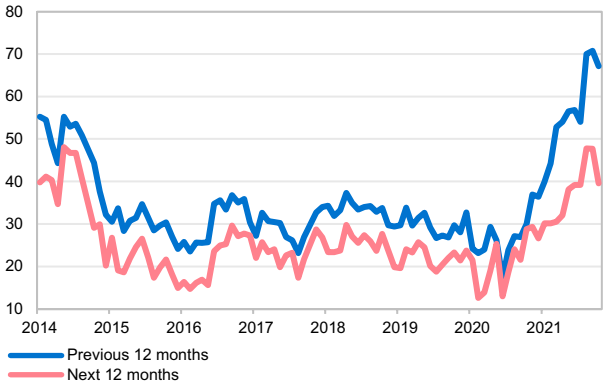
Sources: Destatis, FAO, Bloomberg, Eurostat, SORS and NBS calculation.

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



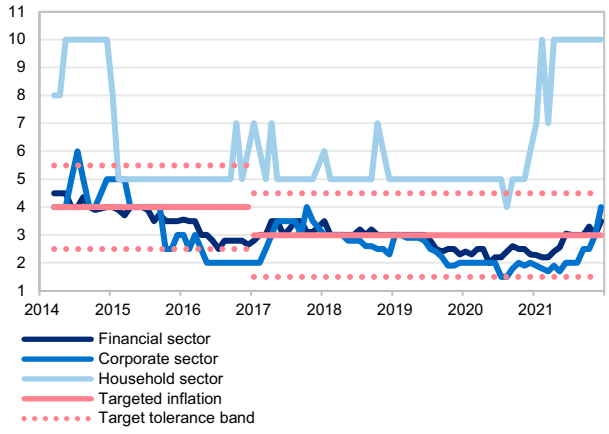
Sources: Gallup, Ipsos/Ninamedia, Bloomberg and NBS.
* Ipsos and Gallup until December 2014, Ninamedia since December 2014, and Ipsos since January 2018.

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.

Government to limit the prices of basic foodstuffs, as well as with interventions in certain market segments from commodity reserves.

According to the December survey, **one-year ahead inflation expectations of the corporate sector** recorded an increase to 6% (from 3.0% in October and 4% in November). Most likely as the consequence of rising global energy prices and costs of food production, the majority of corporates (around 75%) expect that the prices of production inputs will rise over the next 12 months, but also the prices of final products and/or services. In spite of that, corporates are optimistic regarding turnover (production) and business conditions.

After rising to 15.0% in November, **one-year ahead inflation expectations of households** returned to 10.0% in December, the same as in most of the past year. The results of the qualitative survey[2] show that the index of perceived inflation is higher than the index of expected inflation, indicating that households expect that inflation will be lower in the coming 12 months compared to the previous year.

Medium-term inflation expectations of the financial sector for two years ahead have been anchored within the NBS target tolerance band since their monitoring began (March 2014), lingering slightly above the target midpoint in Q4 2021 (within the range of 3.3–3.5%). Three-year ahead inflation expectations have been at the target midpoint since June 2021. **Inflation expectations of corporates** for two and three years ahead increased to 4.0% and 3.0%, respectively, while those of **households** stayed unchanged at 10.0%.

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

IV Inflation determinants

1 Financial market trends

Monetary policy tightening, manifested in a gradual rise in the average repo rate, partly reflected on interest rates in the money market. In Q4, the yield rates on government securities also recorded growth, while interest rates on dinar loans were even mildly lower than in Q3.

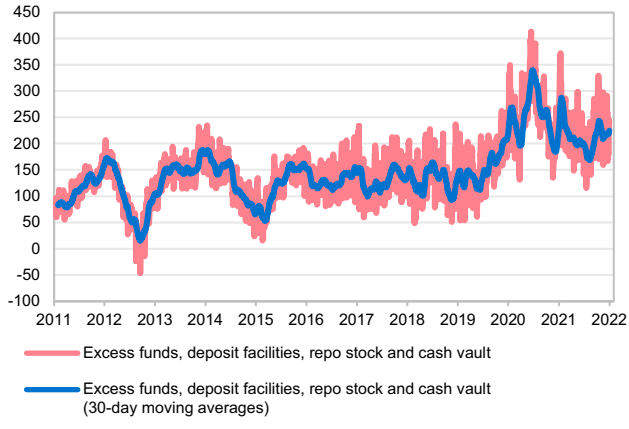
Interest rates

Even though the key policy rate remained unchanged in Q4 2021, the NBS reduced the intensity of monetary policy expansion since October by increasing the weighted average interest rate at reverse repo auctions. In Q4, the volume of auctions for securities repo sale increased by more than 50% (from RSD 47.2 bn on average in September, to RSD 72.3 bn on average in December), enabling a gradual rise in the weighted average repo rate. Relative to end-September when it was almost the same as the deposit facility rate, the weighted average repo rate went up by 0.39 pp to 0.5% at end-2021. Further, as of October, repo auctions for the sale of securities maturing in three months at a rate equal to the deposit facility rate were suspended. Hence, in Q4, all securities became due, whereby liquidity in the amount of RSD 49.4 bn was withdrawn. The increase in repo stock brought about a fall in overnight bank deposits with the NBS, which went down on average from RSD 96.2 bn in September to RSD 67.4 bn in December.

The rise in the average repo rate influenced the average interest rate on concluded one-week transactions in the interbank money market, which went up by 26 bp from September, to 0.41% in December.

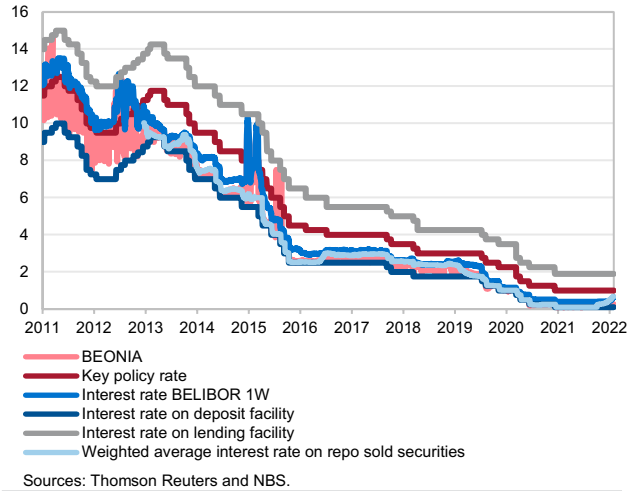
In the **overnight interbank money market**, BEONIA recorded somewhat lower growth (9 bp) in Q4 reaching 0.23% at year-end, with the average daily turnover going down to RSD 3.6 bn in Q4. Compared to Q3, the decrease measured RSD 4.2 bn. All BELIBOR rates also recorded slightly less intense growth in Q4 (up to 6 bp). At the end of the year, they ranged from 0.32% for the shortest to 1.13% for the six-month maturity.

Chart IV.1.1 **Dinar liquidity**
(in RSD bn)



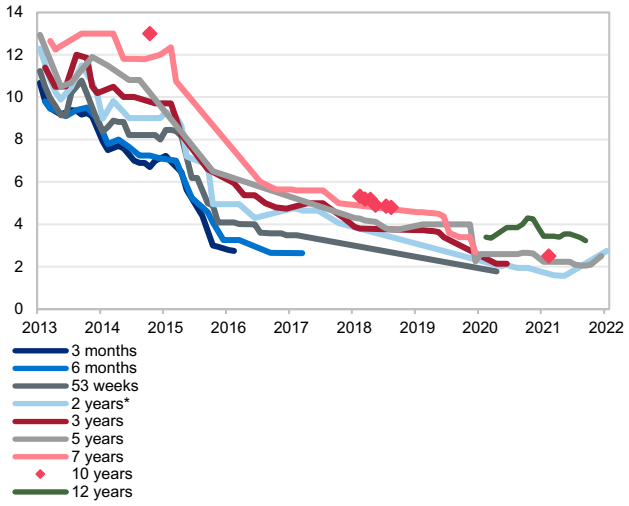
Source: NBS.

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



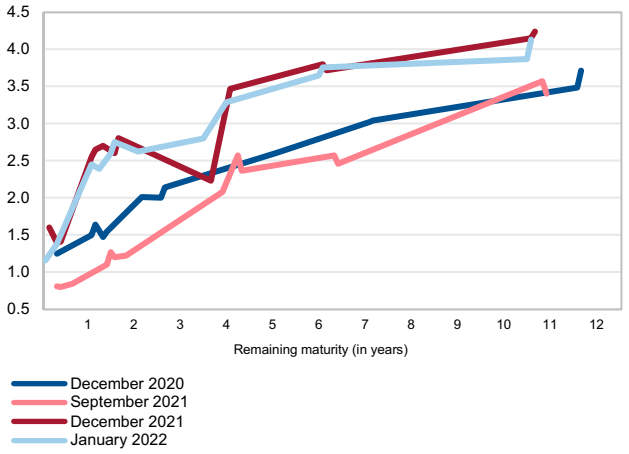
Sources: Thomson Reuters and NBS.

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



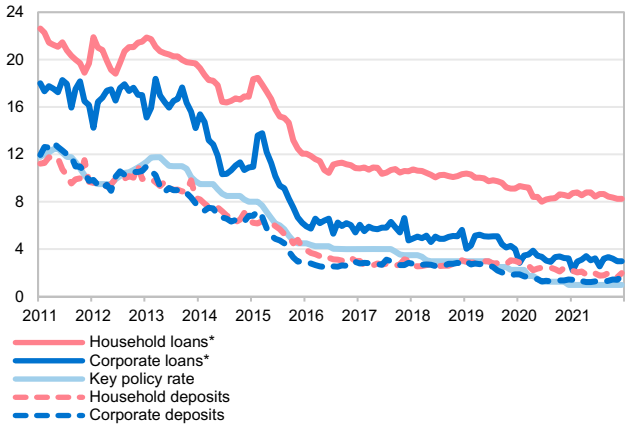
Source: Ministry of Finance.
* Excluding coupon securities with the rate linked to the NBS key policy rate.

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



Source: Central Securities Depository and Clearing House.

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.

In January, the average repo rate continued up, reaching 0.67% at the end of the month. This reflected on the interbank money market rates, which rose from 3 bp to 19 bp in January, depending on maturity.

In the **primary market of dinar government securities, only auctions** for the sale of dinar securities maturing in five years **were held in Q4**. The first auction in October saw the effective rate increase by 5 bp, while in the December auction the effective rate went up by additional 40 bp, to 2.5%.

The total sale size equalled RSD 3.9 bn nominally. On the other hand, auctions for the early buyback of dinar securities recorded the performance of RSD 19.9 bn in nominal value (RSD 13.4 bn pertaining to securities that should mature in January 2022), so the stock of sold dinar securities dropped by RSD 16 bn, to RSD 990.6 bn at the end of the year. In anticipation of monetary policy tightening by leading central banks, non-residents did not participate in the purchase of dinar securities in the primary market, while they did participate in the secondary market, mainly on the sale side. As a result, the stock of dinar securities in their ownership went down by RSD 24.4 bn, to RSD 177.1 bn in Q4.

Just as the primary market, the **secondary market** recorded a rise in yield rates, by over 0.5 pp in Q4, ranging, on average, between 1.40% for four-month remaining maturity and 4.22% for 11.5Y remaining maturity in December. The government held two auctions in December for the early buyback of 12Y dinar securities (11.5Y remaining maturity), buying securities in the nominal value of RSD 3.1 bn at the average effective rate of 4.13% and putting an end to the increase in the yield rates in the secondary market. Since demand was lower than supply, turnover in the secondary market of dinar government securities dropped by 27.2% from Q3, to RSD 115.6 bn.

In January, there was a new issue of 2Y dinar bonds, and they were sold in the nominal amount of RSD 9.9 bn, at the effective rate equal to coupon rate (2.75%). In the secondary market, yield rates until maturity were mainly unchanged, with the weighted average rate for the longest remaining maturity (11.5Y) dropping by 0.1 pp, to 4.1%.

As in Q3, in Q4 one auction was also held for the sale of government **securities in euros** with 12Y maturity, where the effective rate remained unchanged, at 1.6%. Securities in the nominal value of EUR 15.4 mn were sold, and since no securities which had been sold earlier became due in Q4, the stock of sold securities in euros increased to EUR 2,318.4 mn at end-December.

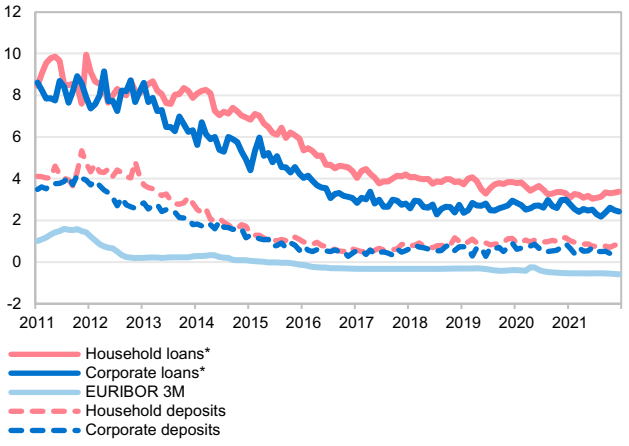
A slight upward adjustment of BELIBOR rates did not reflect on interest rates on **new dinar loans**, which moved slightly downwards in Q4 – by 0.2 pp, to 8.25% for household loans and by 0.35 pp, to 3.0% for corporate loans, in December.

The fall in interest rates on dinar corporate loans was particularly pronounced in investment loans and other non-categorised loans for which the interest rates went down by 0.5 pp each, to 4.15% and 2.5%, respectively, while the interest rates on working capital loans dropped by 0.3 pp, to 3.1%. As for dinar household loans, cash loans recorded a drop in interest rates by 0.4 pp, to 8.6%, while interest rates on other non-categorised loans increased by 1.3 pp, to 7.0%.

The average interest rate on corporate **euro** loans was almost unchanged in Q4 (2.4% in December). However, a decrease in interest rates on investment loans is noticeable in the structure of new corporate euro loans. They went down by 0.3 pp, to 2.9% in December. On the other hand, interest rates on working capital loans were adjusted slightly upwards (0.1 pp, to 2.4%), while rates on other non-categorised loans recorded a somewhat higher rise in Q4. The average interest rate on euro-indexed household loans was almost the same relative to September (3.4%), with the interest rate on euro-indexed housing loans also staying at the September level (2.6%).

In Q4, interest rates on household **savings** were unchanged relative to September, measuring 0.8% in December for euro savings and 2.0% for dinar savings. The rates on termed corporate euro deposits also remained the same as in September (0.5%), while the rates on termed corporate dinar deposits increased by 0.4 pp, to 1.7% in December.

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

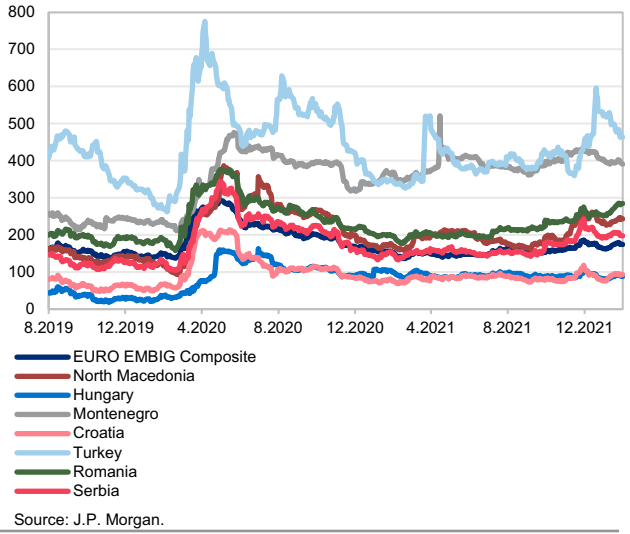


Sources: European Banking Federation and NBS.
* Excluding revolving loans, current account overdrafts and credit card debt.

Risk premium

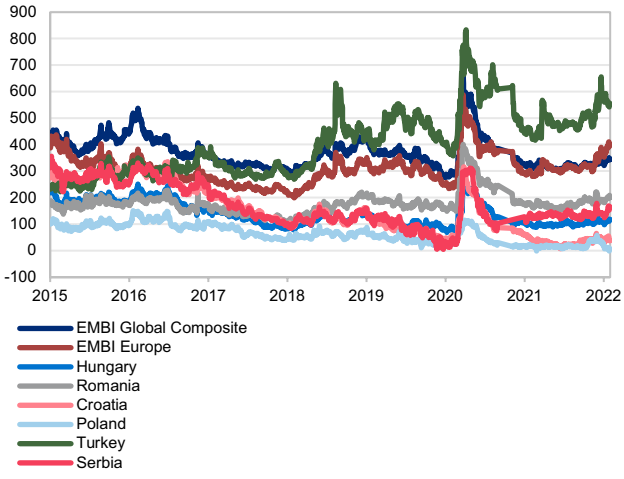
In Q4, the risk premia of Serbia and other emerging economies were affected by the emergence of the Omicron, a new strain of the coronavirus which turned out to be more contagious than previous variants. The initial concerns of market participants about the potential new economic lockdowns brought the global risk premium up in November and made investors turn to safe assets, which reduced the yields on US treasuries and bonds of developed European countries. However, as of December optimism prevailed when it turned out that the new variant of the coronavirus was affecting global economic growth less than anticipated. This reflected on a gradual decrease in investors' risk aversion and an increase in yields on bonds of the most developed world economies.

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



Source: J.P. Morgan.

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



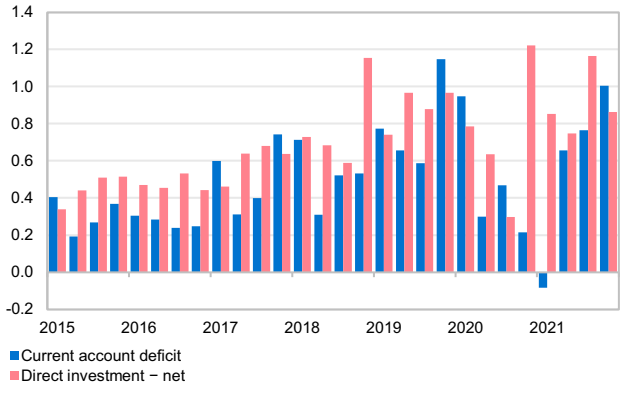
Source: J.P. Morgan.

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

	2017	2018	2019	2020	2021
S&P	BB /stable[4)]	BB /positive[4)]	BB+ /positive[4)]	BB+ /stable[2)]	BB+ /positive[4)]
Fitch	BB /stable[4)]		BB+ /stable[3)]		
Moody's	Ba3 /stable[1)]		Ba3 /positive[3)]		Ba2 /stable[1)]

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

Chart IV.1.9 **Current account deficit and net FDI inflow**
(in EUR bn)



Source: NBS.
Note: Preliminary data for Q4 2021.

EURO EMBIG, Serbia's risk premium on euro debt, rose by 25 bp in Q4, to 195 bp. At the same time, EURO EMBIG Composite went up by 11 bp in Q4, to 163 bp at end-December. Serbia's dollar risk premium recorded a mild drop in Q4 (by 1 bp, to 139 bp) and continued moving considerably below EMBIG Composite which, on the other hand, went up by 6 bp, to 330 bp in Q4.

Owing to the demonstrated high degree of resilience of the domestic economy to the pandemic shock and robust economic growth thereafter, in December 2021, Standard & Poor's kept Serbia's credit rating at BB+, but upgraded its investment grade outlook from stable to positive. Explaining the decision, Standard & Poor's emphasized favourable growth outlook in the medium run, high FDI inflow, record level of FX reserves, reduced external imbalance and the expected narrowing of the fiscal deficit. In addition, the agency assessed that a favourable credit rating outlook was supported by a credible monetary policy framework and a moderate rise in public debt.

Foreign capital inflow

Capital inflow to the financial account originated mostly from FDI, and to a lesser extent from private and public sector borrowing, as well as from the rise in non-residents' balances in accounts with domestic banks. On the other hand, non-residents curtailed their investment in government securities in the domestic market. Another outflow was generated by trade loans, i.e. higher foreign receivables of domestic companies in respect of uncollected exports.

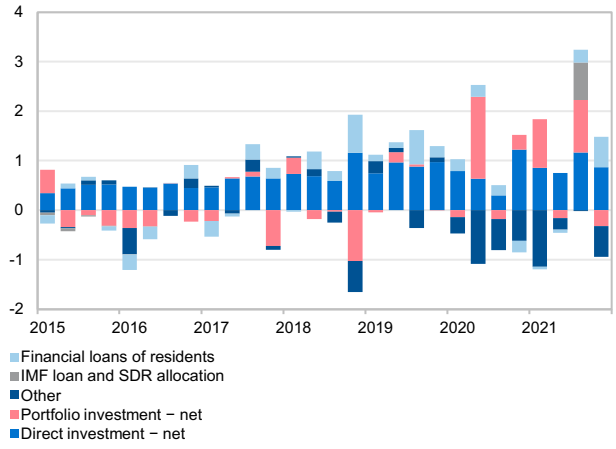
Capital inflow to Serbia on account of FDI reached EUR 3.9 bn in 2021, exceeding the record 2019 level. Investments remained widely project-diversified and directed mostly into export-oriented sectors. The bulk of investments, almost a third, went to manufacturing, followed by construction, mining and transport. Around 56% of capital inflow came in the form of equity capital, and most investments originated from the EU (close to 60%) and Asian countries (around 20%). According to preliminary data, **net FDI inflow** amounted to EUR 862.9 mn in Q4, reaching EUR 3.6 bn at the level of 2021. The trend of high FDI inflows hence continued, providing for full coverage of the current account deficit for the seventh consecutive year and contributing to the sustainability of the country's external position.

Portfolio investment accounted for a net outflow of EUR 324.2 mn in Q4. This was largely affected by the non-residents' sale of government securities in the secondary market amid expected monetary policy tightening of leading central banks, and to a lesser degree

also by the government organising the early buyback of the securities issued earlier. In addition, residents increased their investment in foreign securities in Q4. In 2021 as a whole, portfolio investment generated a net inflow of EUR 1.6 bn, owing primarily to successful eurobond issues in the international market.

Residents' foreign net liabilities on account of **financial loans** rose by EUR 614.2 mn in Q4, mainly because of bank and government borrowing, and to a smaller degree company borrowing as well. An inflow of EUR 180.5 mn was recorded in respect of **cash and deposits** owing to the increase in non-residents' balances in accounts with domestic banks. On the other hand, an outflow was generated by **trade loans** (EUR 805.8 mn) due to uncollected exports.

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



Source: NBS.
Note: Preliminary data for Q4 2021.

Trends in the FX market and exchange rate

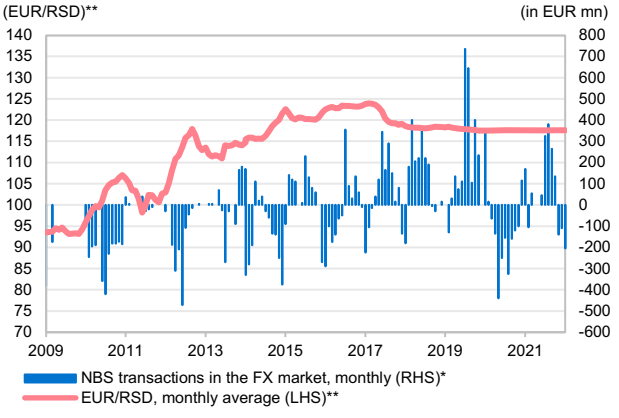
The dinar exchange rate against the euro remained stable in Q4. Its value stayed almost unchanged at end-December (RSD 117.6 for EUR 1) relative to both end-Q3 and end-2020. At the same time, as the euro weakened against the dollar, end-of-period, the dinar lost 2.5% relative to the dollar in Q4 and 8.0% at the level of the year.

The increase in demand for foreign currency in Q4 was mostly driven by domestic companies, primarily energy importers. Non-residents' demand for foreign currency also went up, largely on account of lower investment in dinar government securities, as well as payment of dividends by some foreign-owned companies. Even though Q4 saw relatively high inflows of foreign currency, the foreign currency supply was not sufficient to meet the demand. The greatest contribution to the rise in foreign currency supply came from FX-indexed bank assets[3] owing to the increase in bank lending activity and lengthening of banks' positions on account of payment card use and net purchase of foreign cash.

In Q4, the NBS intervened in the IFEM on both sale and purchase side, selling EUR 455.0 mn net at the level of the quarter. In 2021 as a whole, the NBS bought EUR 645.0 mn net in the IFEM.

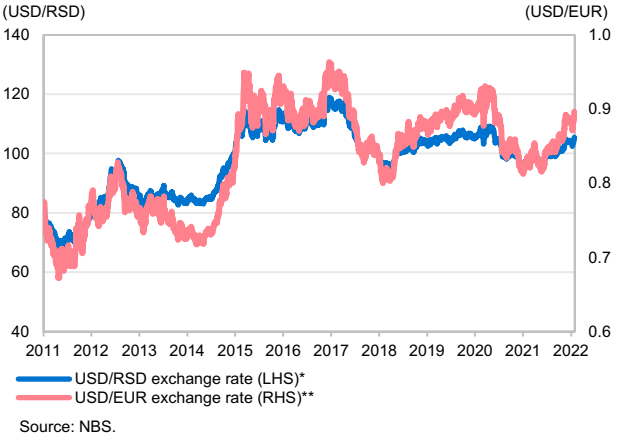
The turnover in the IFEM[4] rose from month to month, recording the highest 2021 average daily turnover in

Chart IV.1.11 **Dinar exchange rate and NBS transactions in the FX market**



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

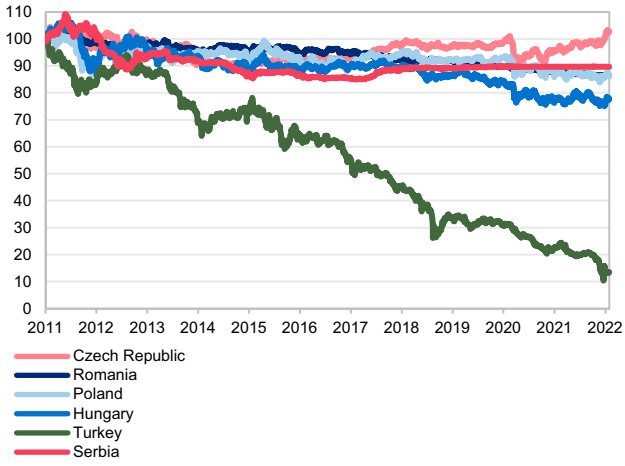
Chart IV.1.12 **Movements in USD/RSD and USD/EUR exchange rates**



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

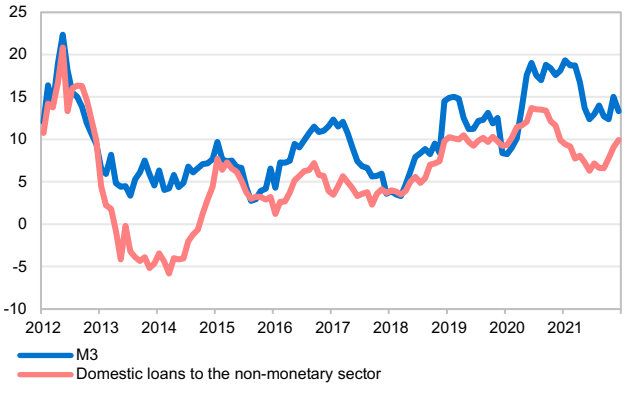
[3] Attempting to balance their long open foreign currency position and thus reduce the exposure to FX risk, banks sell foreign currency, which results in the strengthening of the dinar.
[4] Excluding the NBS.

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



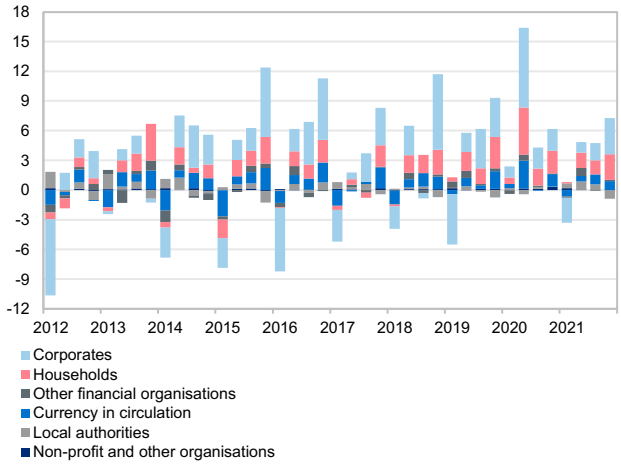
Sources: NBS and websites of central banks.
* Growth indicates appreciation.

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.

December (EUR 40.3 mn). At the level of the quarter, the value of turnover averaged EUR 34.2 mn, up by EUR 10.6 mn from Q3. On the other hand, the volume of turnover in regular FX swap auctions was lower than in Q3. The amount of EUR 106.0 mn and EUR 15.0 mn was bought from and sold to banks each at two-week and three-month auctions, respectively (vs. EUR 121.0 mn and EUR 21.0 mn, respectively, in Q3).

The currencies of inflation-targeting regional peers recorded divergent trends relative to the euro in Q4. The Czech koruna and Polish zloty continued strengthening (2.6% and 0.7%, respectively). The value of the Romanian leu remained unchanged, while the Hungarian forint weakened by 2.3%. Having lost 6.2% in October, the Turkish lira weakened by additional 44.1% from early November until 21 December when it plunged to its lowest value. Already on the next day the lira experienced a strong recovery (33.8%), owing to a set of measures adopted by the Turkish government with a view to restoring confidence in the domestic currency. Hence, the lira lost 29.8% at the level of Q4. The currencies which gained ground at the level of the year were the Czech koruna (5.6%) and Polish zloty (0.3%), while the Hungarian forint weakened by 1.0%, the Romanian leu by 1.6%, and the Turkish lira by 38.6%.

2 Money and loans

Credit and monetary aggregates increased further in Q4, supported by the faster than expected recovery of economic activity. Household savings touched new record highs, while loans to the non-monetary sector recorded an almost double-digit growth rate for the fourth year in a row.

Monetary aggregates

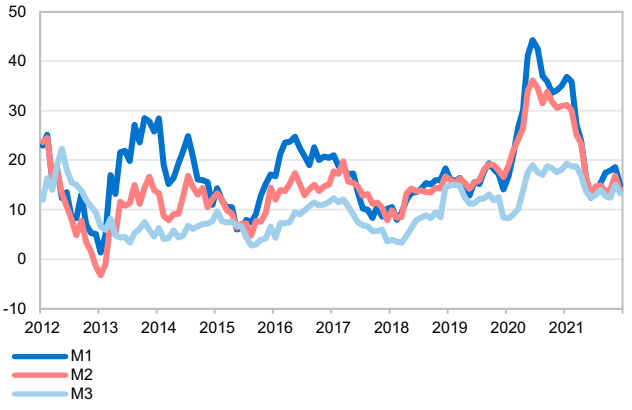
Typically for the season, dinar money supply M2 expanded by the end of the year, driven mainly by the rise in its most liquid components.

In terms of individual categories, dinar **demand deposits** gained RSD 64.6 bn in Q4, thanks to the rise in both household and corporate deposits. The balances in household transaction accounts increased by RSD 40.2 bn, with corporate transaction deposits rising to a similar degree, driven primarily by the rising deposits in trade, construction and transport.

Time dinar deposits rose by RSD 26.5 bn in Q4, with over 80% of this increase referring to corporate deposits (mostly thanks to the growth in trade company deposits).

Dinar savings of households (residents) continued the trend of stable growth, increasing by RSD 2.7 bn in Q4. At the annual level, resident dinar savings gained RSD 11.1 bn in 2021, or 12.0%, posting a double-digit growth rate for the fourth consecutive year. At year-end, they amounted to RSD 103.7 bn, their highest level so far. Stable and continuous growth in dinar savings reflects household confidence in the domestic currency and facilitates the maintenance of financial and price stability. At the same time, higher interest rates and a more favourable tax treatment of dinar savings contribute to their higher attractiveness. Accordingly, the degree of dinarisation of total corporate and household deposits is also on the rise, equalling 40.3% in December and increasing by 0.2 pp y-o-y.

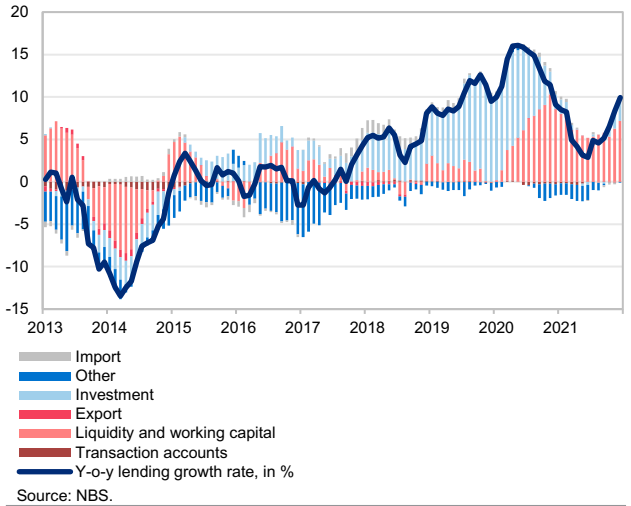
Chart IV.2.3 **Monetary aggregate movements**
(nominal y-o-y rates, in %)



Source: NBS.

FX deposits increased by EUR 487.6 mn in Q4 and by EUR 1.9 bn in 2021 as whole, primarily as a result of the rise in household FX savings. Household FX savings increased in Q4 by EUR 377.7 mn, to EUR 12.3 bn at end-December,[5] their new maximum. Corporate FX deposits increased by EUR 103.0 mn in Q4, mainly owing to FX inflows on account of exports, FDI and corporate borrowing abroad. Relatively minor changes were recorded in the accounts of other sectors.

Chart IV.2.4 **Contributions to y-o-y corporate lending growth**
(in pp, excluding the exchange rate effect)



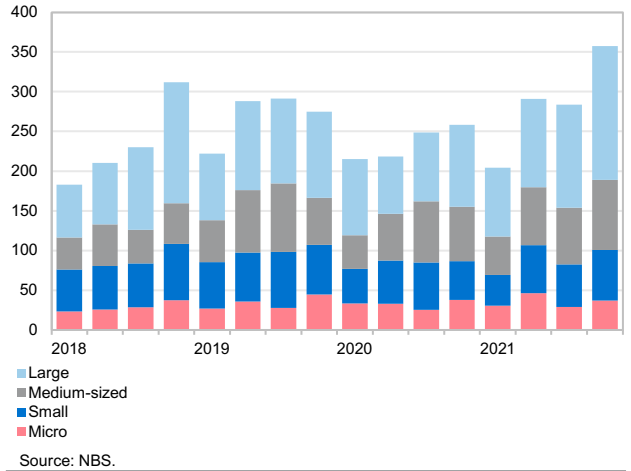
Source: NBS.

In y-o-y terms, money supply growth rates continued decelerating in Q4 because of the high last year's base, and moved close to their pre-pandemic levels. In December, M1, M2 and M3 recorded y-o-y growth rates of 14.8%, 13.8% and 13.3%, respectively, supported by the rise in economic activity, the third package of economic aid and lending growth.

Loans

Consistent with our expectations, **total domestic loans** sped up in Q4, to 9.9% y-o-y in December (from 6.6% at end-Q3), thus posting an almost double-digit growth rate for the fourth consecutive year. The accelerated growth of domestic lending stemmed from the rise in economic activity and favourable terms of financing, which reflected on higher lending, especially to the corporate sector. Faster y-o-y growth in lending in Q4 reflected the dissipation of the high base effect from 2020, given that the moratorium on repayment of household and corporate loans was in place until end-September last year.

Chart IV.2.5 **Structure of new corporate loans, by enterprise size**
(in RSD bn)

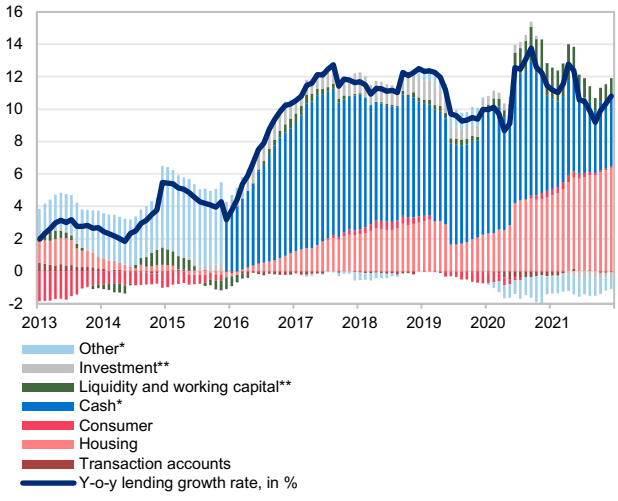


Source: NBS.

At Q4 level, excluding the exchange rate effect, **corporate loans** recorded a RSD 58.9 bn increase,

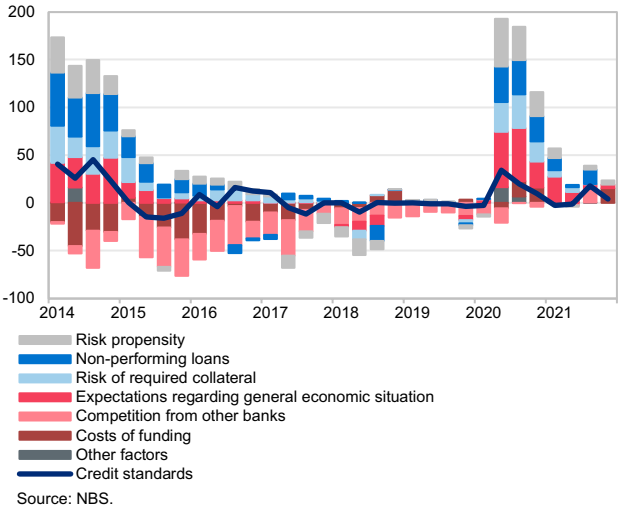
[5] Money supply M3 includes only resident funds. With non-resident funds included, at end-December dinar savings equalled RSD 104.2 bn and FX savings EUR 12.6 bn.

Chart IV.2.6 **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.

Chart IV.2.7 **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.

thanks almost fully to the rise in liquidity and working capital (RSD 30.8 bn) as well as investment loans (RSD 26.3 bn). Liquidity and working capital loans, supported by favourable terms under the Guarantee Schemes (1st and 2nd), are the prevalent category of corporate loans with the share of 46.2% in December. Next come investment loans with the share of 41.7%. Corporates in all sectors (except agriculture) increased their borrowing in Q4, most notably in energy, real estate and manufacturing. At the same time, loans approved to micro, small and medium-sized enterprises made up 66.5% of the total corporate loan stock in December. A faster rise in dinar compared to FX-indexed corporate lending in Q4, encouraged also by the rates on new dinar corporate loans which came close to the rates on euro-indexed loans, resulted in a higher degree of dinarisation of corporate loans, up by 0.2 pp to 24.0% in December.

The volume of new corporate loans in Q4 amounted to RSD 357.3 bn, up by 38.4% from the same period last year. In Q4 as well, the corporate sector predominantly used liquidity and working capital loans (51.8%), and slightly over a half of these loans were channelled to micro, small and medium-sized enterprises. Investment loans made up 30.1% of new corporate loans in Q4, up by 25.7% y-o-y and almost 70% of these loans were absorbed by micro, small, and medium-sized enterprises.

Household loans, excluding the exchange rate effect, increased by RSD 28.8 bn in Q4. The greatest share of the increase referred to housing loans (RSD 19.8 bn), which gained additional momentum y-o-y – from 16.4% at end-Q3 to 17.4% in December. The rise in cash loans in Q4 equalled RSD 9.5 bn, while liquidity and working capital loans approved to entrepreneurs went up by RSD 3.0 bn. The share of dinar household loans decreased in Q4 by 0.4 pp, to 54.6% in December, due to faster growth in housing relative to cash loans. In the structure of household loans in December, the prevalent categories were cash (44.1%) and housing loans (38.9%).

New household loans amounted to RSD 140.5 bn in Q4, up by 6.8% relative to the same period last year. Cash loans made up 57.5% of new loans in Q4, while one fourth of new household loans were housing loans. The volume of new housing loans in Q4 (RSD 34.7 bn) rose by 17% y-o-y. The expansion of household demand for housing loans has been supported by higher disposable income, favourable terms of borrowing and greater supply of apartments, as confirmed by the continuous growth in the number of completed apartments since 2016.

The results of the NBS bank lending survey,[6] carried out in January, show that in Q4 banks slightly tightened corporate credit standards, notably for FX-indexed loans, while standards for dinar loans remained unchanged. On the other hand, banks estimate that household credit standards were eased for the third consecutive quarter, notably for dinar loans. At the same time, loan demand in both sectors continued to increase in Q4, with a further rise expected in Q1 as well. In addition to the need for liquidity, capital investment financing is becoming an increasingly important driver of corporate loan demand, while real estate purchases remain the dominant one in terms of household loan demand.

Gross **NPL ratio** remained below the pre-crisis level, at 3.5% in December, 0.1 pp lower than at end-Q3. Such movements indicate that NBS and Government measures were timely, preventing major negative effects on the corporate and household sectors, and, by extension, on financial stability as well. Compared to end-Q3, gross NPL ratio of the household sector[7] edged up mildly (by 0.1 pp to 4.0% in December), while dropping by 0.1 pp in the corporate sector[8], to 2.8%. NPL coverage remained high – allowances for impairment of total loans stood at 90.6% of NPLs in December, and allowances for impairment of NPLs at 57.5% of NPLs.

Capital adequacy ratio[9] at end-Q3 2021 equalled 21.7%, indicating high capitalisation (regulatory minimum at 8.0%) and resilience of the banking sector to external and domestic risks.

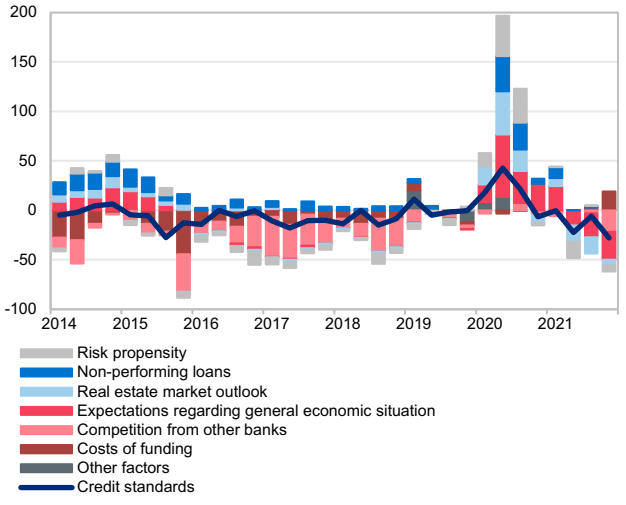
3 Aggregate demand

Owing to dynamic growth in investments and private consumption, high economic activity growth was maintained in Q4. According to a SORS estimate, it amounted to 6.9% y-o-y. Thus, GDP growth at the level of the year equalled 7.5% and was driven entirely by domestic demand, while net exports provided an almost neutral contribution.

Domestic demand

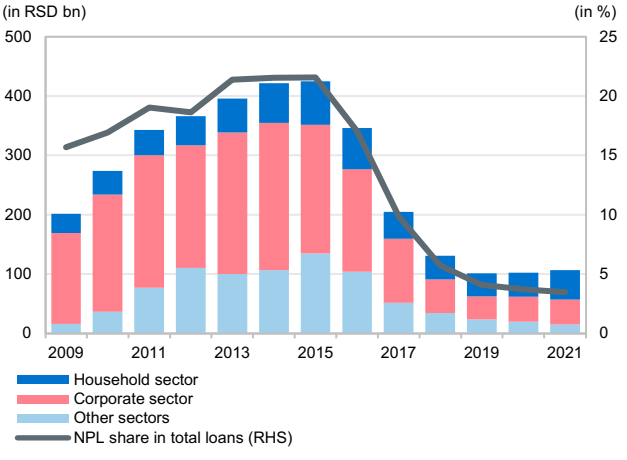
As in the previous quarters, **private consumption** recorded a relatively high growth rate of 3.8% y-o-y in Q4 as well (2.6 pp GDP contribution), which can be

Chart IV.2.8 **Change in household credit standards and contributing factors**
(in net %)



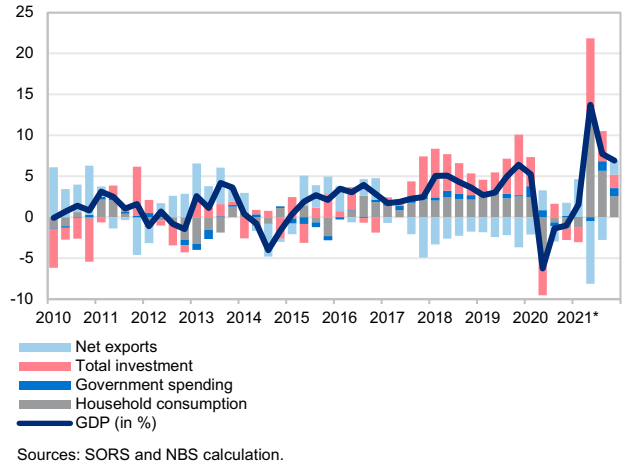
Source: NBS.
Note: Growth indicates the tightening and decline indicates the easing of credit standards.

Chart IV.2.9 **NPL share in total loans, gross principle**



Source: NBS.

Chart IV.3.1 **Contributions to y-o-y GDP growth rate, expenditure side**
(in pp)



Sources: SORS and NBS calculation.
* NBS estimate for Q4 2021.

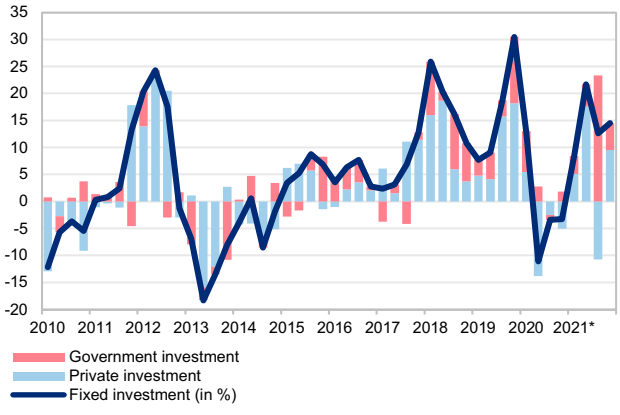
[6] The NBS has conducted the survey since early 2014.
[7] With entrepreneurs and private households included, NPL share also remains at 4.0%.
[8] Including companies and public enterprises. Looking at companies only, the NPL share in total loans in December stood at 2.9%.
[9] Regulatory standards of Basel III have 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 %)

	2021			
	Q1	Q2	Q3	Q4
Household consumption	**-1.9**	**17.1**	**8.1**	**3.8**
Indicators				
Retail trade	6.2	19.1	7.8	8.4
Catering turnover	3.0	136.7	98.2	74.1 ***
Number of domestic tourists	-2.2	111.1	5.2	39.6
Number of overnight stays of domestic tourists	-8.1	88.4	3.6	23.5
Consumer goods import (BEC classification), nominal	4.6	23.7	4.2	11.7
Sources				
Total wage bill, nominal	11.2	13.9	12.5	14.4 **
Net remittances inflow, nominal	13.1	34.4	4.9	14.8
Stock of loans intended for consumption, nominal	11.8	11.1	6.9	6.7

Sources: SORS and NBS calculation.
* NBS estimate.
** October–November.
*** October.

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



Sources: SORS and NBS calculation.
* NBS estimate for Q4 2021.

Table IV.3.2 **Investment indicators**

	2021			
	Q1	Q2	Q3	Q4
Real y-o-y growth rates (in %)				
Fixed investment (national accounts)	8.4	21.7	12.6	14.5 *
Construction (national accounts)	16.1	14.6	15.8	17.0 *
Government investment	16.4	16.7	120.3	15.0 *
Number of construction permits issued	14.1	54.7	31.5	34.5 **
Production of construction material	10.9	28.7	0.4	-0.2
Value of works performed	17.0	14.8	15.2	-
Import of equipment, nominal	-10.1	52.6	11.9	13.1
Production of domestic machinery and equipment	6.3	26.4	12.6	7.7
Finished product inventories in industry	10.4	2.4	2.4	4.0

Sources: SORS and NBS calculation.
* NBS estimate.
** October–November.

associated with compensating for the last year's lost consumption due to the pandemic. This is indicated primarily by the recovery in services, particularly tourism and catering, as well as recreation and entertainment, which were hit the most by the effects of the pandemic last year. In addition, the high growth rate of real retail trade turnover was maintained in Q4, primarily on account of the preserved labour market during the pandemic and employment and wage growth, particularly in the private sector. Favourable financing conditions were also conducive to consumption growth, as they enabled a further rise in loans intended for consumption. Remittances from abroad also went up because of greater labour force mobility and a gradual recovery of euro area economies.

In Q4, **government consumption** recorded stronger y-o-y growth than private consumption (6.2% y-o-y with a 1.0 pp contribution to GDP), which can be linked to the increase in health expenditures, as well as rising expenses for pensions and public sector wages.

A strong contribution to economic growth in Q4 also stemmed from **fixed investment** (3.7 pp). We estimate that **private investment** provided a 2.5 pp contribution to GDP growth in Q4. The rise in private investment is indicated by the increased production of machinery and equipment imports. In terms of financing sources, investments were supported primarily by FDI inflows, which measured EUR 927.3 mn at quarterly level, and somewhat less by investment loans, which recorded an increment of RSD 26.2 bn in Q4.

Government investment increase of around 15% y-o-y also contributed to GDP. Intense implementation of government-financed infrastructure projects, as testified by construction indicators, provides for long-term sustainable growth, while at the same time contributing to private sector expansion.

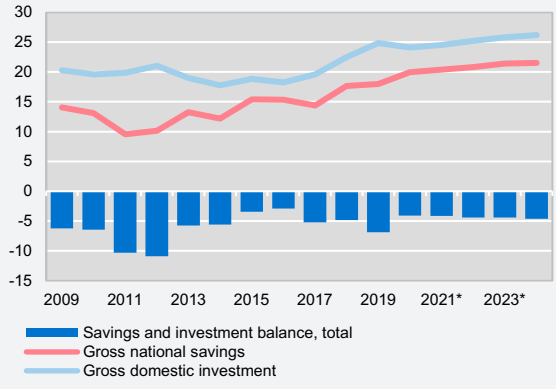
A negative contribution to economic activity originated from **inventories** (-2.1 pp), mainly on account of lower inventories of agricultural commodities due to a weaker yield of autumn crops.

In quarterly terms, GDP grew by 1.6% s-a exceeding the pre-crisis level by over 5% at the end of the year. Growth was driven by domestic demand, which rose by 2.1% s-a in Q4, according to our estimate. Government investment provided a somewhat higher GDP contribution (1.1 pp) than private investment (0.5 pp), while consumption contributed 0.7 pp.

Text box 2: Pandemic impact on savings and investment balance

The coronavirus pandemic significantly depressed consumption worldwide, amid economic lockdowns and restrictive health measures, which primarily constrained the consumption of services. In addition, in conditions of globally heightened uncertainty and risk aversion, most countries saw a rise in precautionary savings and a slump in investment activity. Lower investment appetite is evidenced by the UNCTAD data on a 35% decrease in global FDIs in 2020. In most countries, government consumption and investment expanded due to the need to purchase medical supplies and equipment to fight the pandemic, but also due to the efforts to preserve incomes and increase production capacities to the greatest possible degree so as to incite a faster economic recovery. Although consumption and investment recovered to some extent on a global scale in 2021, many countries still fall short of the pre-crisis level of economic activity, primarily because of the adverse effects of halts in production chains and international transport in external trade. Speaking of Serbia, the pre-crisis level of economic activity was reached already in Q1 2021, and the pre-crisis level of fixed investment and personal consumption in Q4 2020 and Q2 2021, respectively.

Chart O.2.1 **Savings and investment balance**
(in % of GDP)

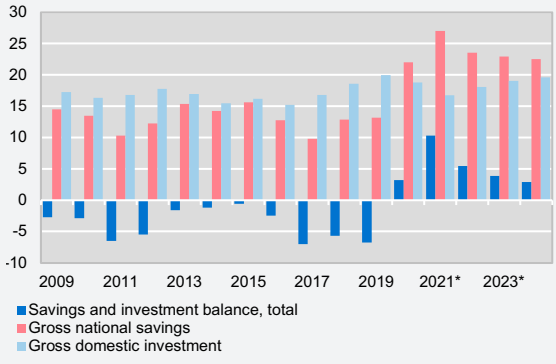


Sources: SORS, NBS calculation.
* NBS estimate.

Bearing all the above in mind, in this text box we will analyse in detail how the pandemic reflected on consumption, savings and investments of the private sector and government in Serbia over the past two years and what are the expectations for the period ahead.

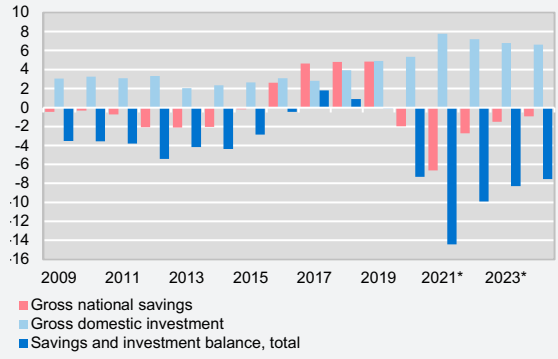
After the outbreak of the coronavirus pandemic in 2020 and the ensuing growing uncertainty and globally heightened risk aversion, **private sector investments** in Serbia slowed down, as in most countries worldwide. This entailed a lower share of these investments in GDP, down by 1.1 pp to 18.8%. Fixed investments were lower in 2020 than in 2019, primarily in transport and agriculture and, to a lesser extent, in trade and construction, while growing most sharply in mining and energy, but also in manufacturing, defence and health care. In the first stage of the pandemic the planned investment projects were mostly only delayed and not cancelled, as confirmed by the data on FDI inflows in 2020 and 2021. FDI inflow in 2020 was indeed lower than in the year before, but even so it stayed relatively high at EUR 3 bn, only to surpass the record 2019 level in 2021when it reached EUR 3.9 bn. As in the previous years, the inflow was predominantly channelled to tradable sectors and almost one third of the inflow in 2021 went to manufacturing. Investment financing from

Chart O.2.2 **Private sector savings and investment balance**
(in % of GDP)



Sources: SORS, NBS calculation.
* NBS estimate.

Chart O.2.3 **Government savings and investment balance**
(in % of GDP)



Sources: SORS, NBS calculation.
* NBS estimate.

credit sources also shrank in 2020, but this was largely compensated for in 2021, as evidenced by the data on the amount of newly approved investment loans by domestic banks (excluding the loans refinanced with the same bank), which decreased by around 22% in 2020 and increased by around the same percent (21%) in 2021.

The growing optimism spurred by the opening of the global economy, with the ensured sources of financing on all grounds (own funds and credit sources), resulted in private investment growth in 2021 of close to 7%, but since overall GDP rose at a faster pace, the share of private investment in GDP dropped mildly (to around 18%). This was fully offset by ample government investments (rising from 4.9% of GDP in 2019 to 5.3% of GDP in 2020, and then to 7.4% of GDP in 2021), so that the share of total investments in GDP (including inventories) increased in 2021 to 25.3%. Government investments were mainly channelled to infrastructure projects, which should contribute to faster private investment growth in the period ahead.

Measures aimed at preserving people's health adversely affected **household consumption**, which was on a gradual recovery path since the initial fall of around 11% s-a in Q2 2020, but still recorded a real fall of around 2% annualised that year, which entailed the lowering of its lower share in GDP to 66.6%. In 2021 consumption rose by 6.6% in real terms, but as it grew slower than total GDP, its share contracted further to 65.4% of GDP. Consumer trust was preserved mostly owing to Government measures aimed at preserving the labour market and real value of income, as well as thanks to the lower costs of borrowing and loan repayment, adoption of the moratorium on loan repayment, and other NBS measures which encouraged loan taking.

Economic support measures implemented by the NBS and the Government, hand in hand with the effects of restraining from consumption and investment in the initial stage of the pandemic, resulted in a significant **growth in national private savings**, whose share in GDP went up from 13.1% in 2019 to 22% in 2020 and then, thanks to the rise in consumption, decreased to 18% of GDP in 2021. Thus, in 2020, for the first time, the savings surpassed investments of the private sector, by 3.2% of GDP, while in 2021 the level of savings and investments by the private sector was almost identical.

As opposed to the private sector, in 2020 **the government stepped up consumption and investment** in order to mitigate the negative impact of the pandemic on economic activity. As public finances were put in order in the pre-crisis period and public debt was on a declining path, the government had enough room to increase fiscal deficit once the crisis broke out, thus significantly mitigating the effects of the pandemic and bringing economic activity to the pre-crisis level in only three quarters after the initial shock. That way, an almost balanced level of government savings and investment in 2019 entered a negative territory in 2020, measuring 7% of GDP, and declined to around -4.5% of GDP in 2021, amid lower current expenditure.

It can be concluded, overall, that investments surpassed savings even in pandemic conditions (by around 4% of GDP), though less than pre-crisis, mainly owing to the rise in private sector savings. It is certain that in the coming period private consumption will increase further, while private savings will consequently decrease, which, coupled with the expected rise in private investment, will again lead to a negative balance in private sector savings and investments (around 3% of GDP). On the other hand, fiscal policy accommodation will be reduced, which will help government savings to go up and narrow the negative savings and investment gap. In view of all the above, we estimate that in the next three years as well savings and investments will increase to the same degree, which will result in a relatively stable share of the current account deficit in GDP at the level of below 5%.

Net external demand

We estimate that net exports provided a positive contribution to y-o-y GDP growth in Q4 (1.7 pp), resulting from a faster rise in real exports than in imports (15.2% vs. 10%).

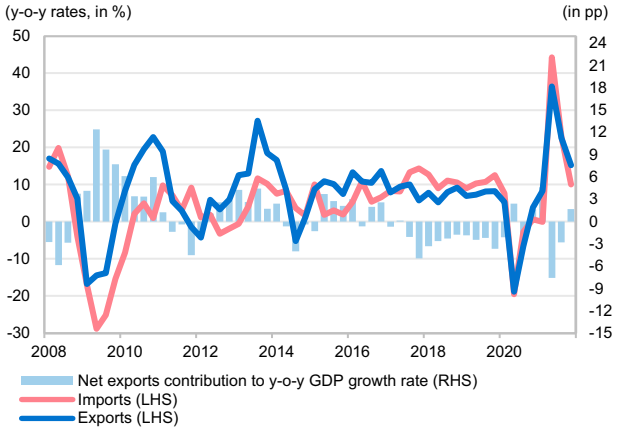
Despite the slowdown in external demand amid continuously present disruptions to global supply chains, **commodity exports**, expressed in euros, kept rising in Q4. According to the balance of payments data, they went up by 26.3% y-o-y. The growth was primarily a result of manufacturing exports, which went up by 22.3% y-o-y and was widely dispersed across sectors (20 out of 23), with the largest contribution coming from base metals, food products, chemical products, rubber and plastic products, as well as petroleum products. Mining also kept contributing to export growth, while the export of agricultural commodities went down from a year earlier, partly due to the high base effect resulting from an above-average 2020 agricultural season and partly due to the drought in summer months of 2021.

Commodity imports, expressed in euros, went up by 28.2% y-o-y in Q4, driven, inter alia, by the higher import of energy – oil, gas and electricity, which intensified in December. In Q4 2021, compared to the same period of the previous year, the import of oil and petroleum products was higher by EUR 193.6 mn, coal by EUR 82.8 mn, electricity by EUR 70.5 mn and gas by EUR 55.3 mn. In terms of broad economic categories (BEC), import growth benefited the most from intermediate goods (37.9% y-o-y), primarily on account of higher energy imports, followed by equipment (13.1% y-o-y) and consumer goods (11.7% y-o-y) whose rise indicates continued recovery of investment and personal consumption. Similar trends are confirmed by import structure, as the import of intermediate goods and energy recorded the sharpest rise, followed by consumer and capital goods.

Foreign **trade in services** stayed at a similar level in Q4 as in Q3 when exports and imports exceeded their pre-pandemic levels. In y-o-y terms, almost every service, particularly ICT and travel services, provided a contribution to export growth (24.2%). Increase in imports (25.9%) was mostly affected by transport and travel services. Even though y-o-y growth in imports was more pronounced than in exports, the surplus remained higher in Q4 (EUR 433.9 mn) than a year ago (17.8%) owing to the higher share of exports in foreign trade in services.

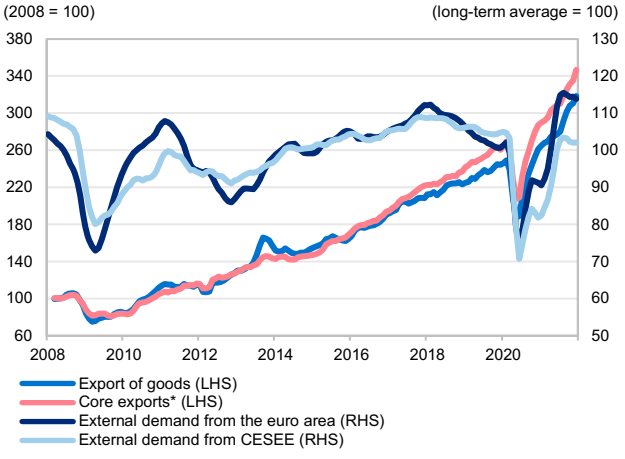
In 2021, the commodity exports-to-imports ratio measured 78.2%, or 86.9% if services are included.

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



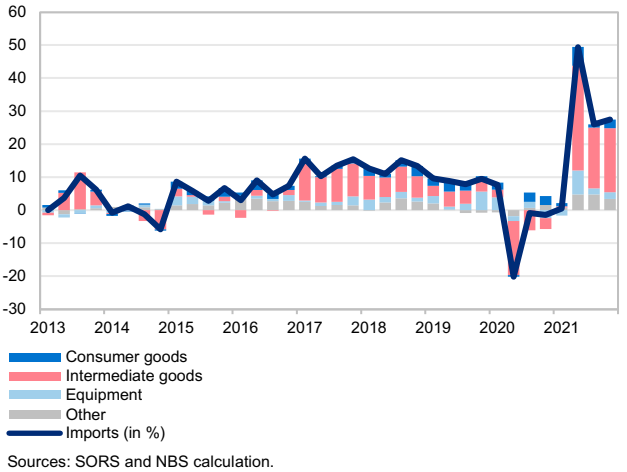
Sources: SORS and NBS calculation.
Note: NBS estimate for Q4 2021.

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



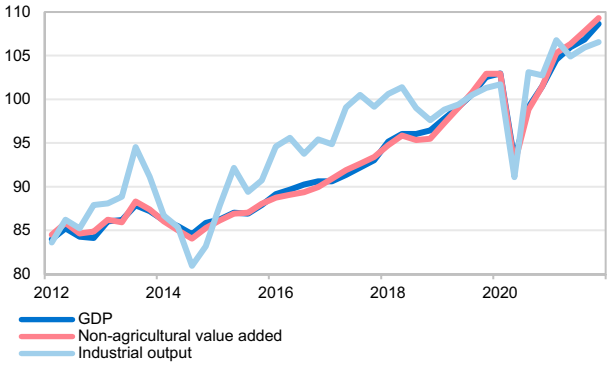
Sources: European Commission, SORS and NBS.
* Core exports are total exports excluding the export of agricultural products, base metals, motor vehicles, petroleum products and electricity.

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



Sources: SORS and NBS calculation.

Chart IV.4.1 **Economic activity indicators**
(s-a, 2019 = 100)



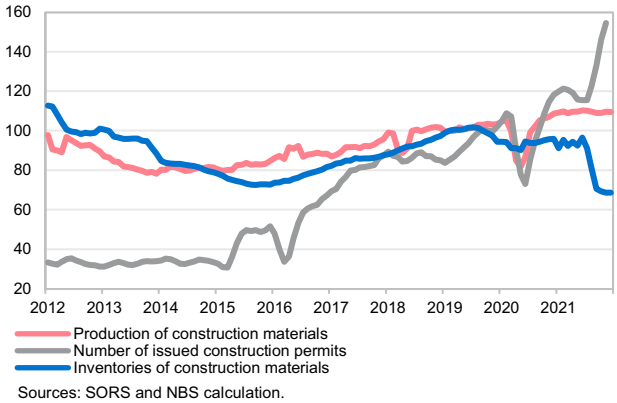
Sources: SORS and NBS calculation.

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

	2020	2021			
	Q4	Q1	Q2	Q3	Q4*
GDP (in %, y-o-y)	**-1.0**	**1.6**	**13.7**	**7.7**	**6.9**
Agriculture	0.1	-0.3	-0.3	-0.4	-0.3
Industry	0.3	0.9	3.0	0.5	0.7
Construction	-0.5	0.7	0.8	0.9	1.1
Services	-0.5	0.6	7.7	5.2	4.0
Net taxes	-0.3	-0.2	2.8	1.5	1.5

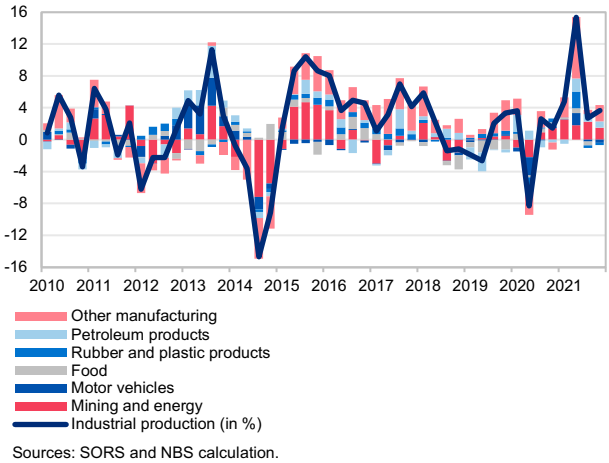
Sources: SORS and NBS calculation.
* NBS estimate.

Chart IV.4.2 **Construction activity indicators**
(quarterly averages s-a, 2019 = 100)



Sources: SORS and NBS calculation.

Chart IV.4.3 **Contributions to y-o-y industry growth rate**
(in pp)



Sources: SORS and NBS calculation.

4 Economic activity

As in the previous quarters, economic growth kept its robust y-o-y dynamics in Q4, amounting to 6.9%, driven by intensified activity in all sectors save agriculture, which was hit by drought. The strongest contribution came from services and construction, which helped quarterly growth accelerate to 1.6% s-a, thus exceeding the pre-crisis level of GDP by over 5%.

Owing to intensive implementation of government-financed infrastructure projects, **construction activity** continued its vibrant growth in Q4, which, according to our estimate, measured almost 17% y-o-y and added over 1 pp to GDP. A vigorous impetus to construction came also from residential property development. This is confirmed by the further increase in the number of issued construction permits, which measured over 30% y-o-y in 11 months (34.5% y-o-y in the period October–November). The upswing in construction industry in Q4 is suggested also by the y-o-y employment gains of 3%. Although the production of construction material stayed almost unchanged for the second quarter in a row, the consumption of construction material picked up, as seen in its inventory depletion (over 30% y-o-y) and rising imports (34.7% y-o-y).

Despite persistent problems in global supply chains, **industrial production**, according to our estimate, grew by 3.5% y-o-y, as indicated by the data on the physical volume of production. The rise in the volume of industrial production was led by the pick-up in mining, which recorded over 40% y-o-y growth for the second quarter in a row and generated a contribution of over 3 pp. The volume of production in manufacturing increased in Q4 by 2.8% y-o-y (contributing 2.2 pp), while activity in electricity supply sector decreased by around 10% y-o-y due to disruptions in the electrical energy system (with a -1.6 pp contribution).

Within manufacturing, activity picked up in 14 out of 23 branches, and it was particularly pronounced in the production of pharmaceutical and petroleum products, which contributed cumulatively 2.2 pp to the volume of industrial production. On the other hand, the volume of food production stayed almost unchanged in Q4. Due to the still disrupted global supply chains and bottlenecks in production processes, there was a contraction in the volume of production of automobile clusters (motor vehicles and rubber and plastic products), damping the volume of industrial production[10] by 0.7 pp.

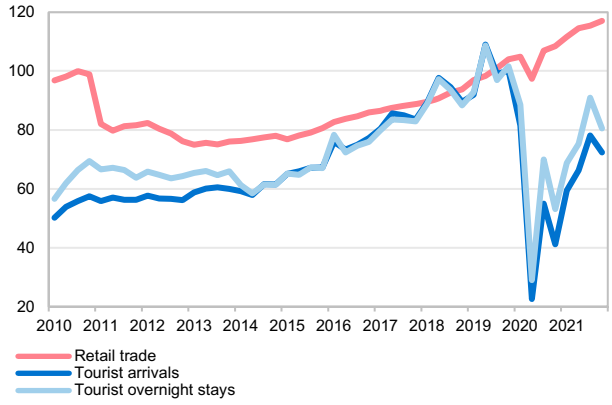
[10] See Text box 3, p. 32

Led by the recovery of private consumption, **service sectors** contributed the most to economic growth in Q4 as well (cumulatively 4.0 pp). Thus, besides the increase in the domestic tourism turnover, Q4 saw a significant rise in the number of arrivals and overnight stays of foreign tourists which more than doubled compared to the same period the year before. Due to the low base, real turnover in catering posted high y-o-y growth rates (74.1% in October). According to our estimate, the recovery in culture, recreation and entertainment provided a 0.5 pp contribution to GDP growth. Q4 saw the continuation of stable retail trade growth (8.4% y-o-y), directly mirroring the maintained employment and wage gains.

Unfavourable weather conditions in the summer led to a weaker **agricultural** season compared to the previous one, causing a contraction in agriculture of around 5% in 2021. Agricultural production is estimated to have contracted in Q4 by around 5% as well, dragging GDP down by 0.3 pp.

According to our estimate, quarterly GDP growth (1.6% s-a) was entirely led by the pick-up in services and construction, while agricultural and industrial production stayed unchanged.

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



Sources: SORS and NBS calculation.

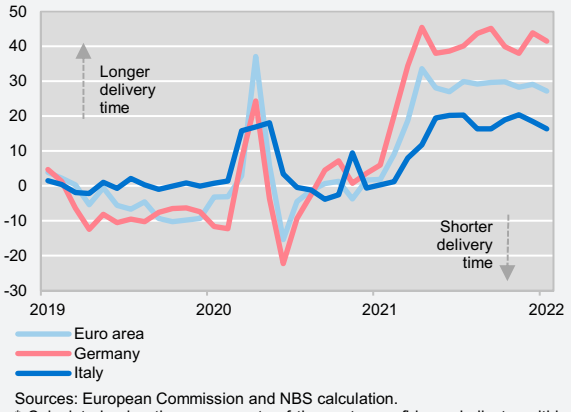
Text box 3: Manufacturing performance amid global supply chain disruptions

Halts in global supply chains which occurred with the outbreak of the COVID-19 pandemic and intensified in late 2020 and during 2021 will certainly last into H1 2022, significantly aggravating the incipient global economic recovery. The halts were triggered by several factors acting in unison. On the one hand, **demand began to bounce back**, supported by ample monetary and fiscal stimuli. A **change** was observed in the **composition of demand in favour of goods and at the expense of some services** (primarily tourist, catering and recreational), and in consumer habits amid the introduced health measures. On the other hand, the continuation of the pandemic caused sporadic lockdowns and the **lack of raw materials in production and labour shortages**, which, along with **disruptions in transportation and logistics**, notably in container ship transport, and well as land transport, **prevented supply from adjusting to elevated demand in the short run**. As a result, global trade was curtailed, and the prices of raw materials and key components (semiconductors/microchips) went up. There was also a shortage and significant prolonging of their delivery. Consequently, bottlenecks in production and transport, shortages of import equipment and intermediate goods, and rising raw material prices diminished the contribution of industry, construction and partly of trade to the recovery of global economic activity. **In its January WEO, the IMF estimated that halts in global supply chains in 2021 lowered global GDP growth by 0.5–1.0 pp, adding around 1.0 pp to a rise in core inflation.**

The car industry was most severely hit by **semiconductor shortages** because car manufacturers reduced microchip orders following the outbreak of the pandemic. At the same time, the electronics industry increased significantly its demand for microchips, on account of stepped-up purchases of medical equipment, work-from-home products (computers, printers etc.), and household appliances as people stayed at home during lockdowns. Due to a sudden increase in the orders of new cars as of H2 2020 and little spare production capacity, partly reflecting insufficient investment in pre-pandemic years, the semiconductor industry could not meet rising demand. **Labour shortages** were also registered on the back of lesser efficiency in supply and demand matching in the labour market and a falling activity rate of the working-age population. Such labour market trends were particularly pronounced in advanced economies, under the impact of high unemployment benefits, early retirement, weaker interest in jobs implying physical contact etc. The negative effects of the shortage of workers and semiconductors were most probably amplified by the Forrester (bullwhip) effect in distribution channels, when companies, expecting a further rise in demand, begin to hoard inventories, which further burdens supply chains, particularly in production.

It is of utmost importance for Serbia to keep a close eye on the situation concerning demand and supply of production factors in the euro area, primarily Germany and Italy, as our main foreign trade partners. We observed the deviation between estimated finished goods inventories and the volume of production[1], based on the economic sentiment indicator (ESI) for the euro area, which may also serve as an approximation of delays in procurement from suppliers. **Disturbances in the euro area's manufacturing were pronounced throughout 2021** (Chart O.3.1). On top of this, the prolongation of the delivery of raw materials and intermediate goods particularly constrained German production, depleting finished goods inventories, which is why supply could not match the increase in total orders driven by rising demand (Chart O.3.2).

Chart O.3.1 **Divergence between estimated inventories of finished goods and production volume***
(s-a, in pp)



Sources: European Commission and NBS calculation.
* Calculated using the components of the sector confidence indicator within the ESI index.

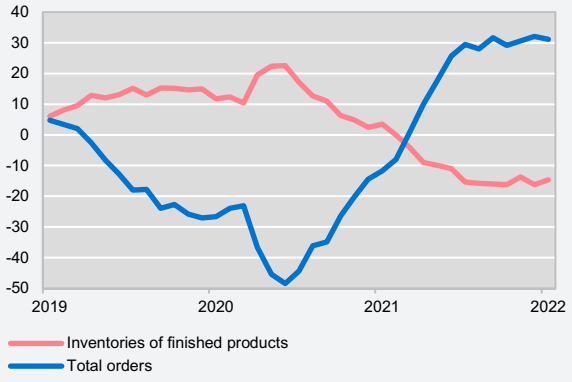
[1] Components of the sectoral indicator of confidence in manufacturing, which, having the largest weight (40%), enters into the calculation of ESI, as the leading sentiment indicator for the euro area. These components are quantified as net percentages, i.e. the difference between the number of surveyed employers in manufacturing who indicate the improvement, and those who indicate the worsening of production and a lower level of finished goods inventories.

The supply-demand mismatch fuelled cost-push pressures in production and bore down on exports and private sector investment, including total economic activity in Germany (GDP contracted by 0.7% s-a in Q4). Disruptions in Italy were shorter, as seen in GDP growth of 0.6% s-a in Q4.

Still, **the first signals of the easing of supply halts emerged in late December and January** as the December and January IHS Markit reports registered a smaller number of key raw materials missing in the production process and a shortening of the average time of their transport and unloading in the main ports to the lowest level since January 2021, which contributed to increased activity in all key areas of manufacturing, including the car industry. This is suggested by the leading measure of manufacturing trends – the Manufacturing PMI for the euro area and Germany (Chart O.3.3), which picked up to 59.0 and 60.5 points in January, respectively, reaching its highest level since August 2021. In December the Bundesbank forecast that production bottlenecks would start to be resolved throughout Q1 2022. In January the ECB stated that the easing of supply halts would begin from Q2 2022. According to the estimates of both these institutions, the halts will be eliminated by late this year.

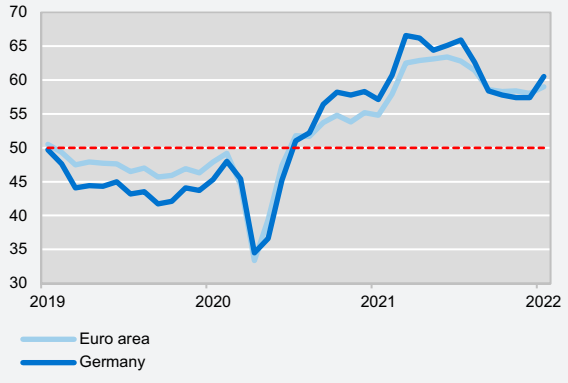
In the remainder of this text box, we shall analyse how the halts in global supply chains reflected on manufacturing in Serbia and its exports.

Chart O.3.2 **Estimates of inventories of finished goods and total orders* in Germany**
(s-a, in pp)



Sources: European Commission and NBS calculation.
* Components of the sector confidence indicator within the ESI index.

Chart O.3.3 **Leading index in the manufacturing – Manufacturing PMI**
(in pp)

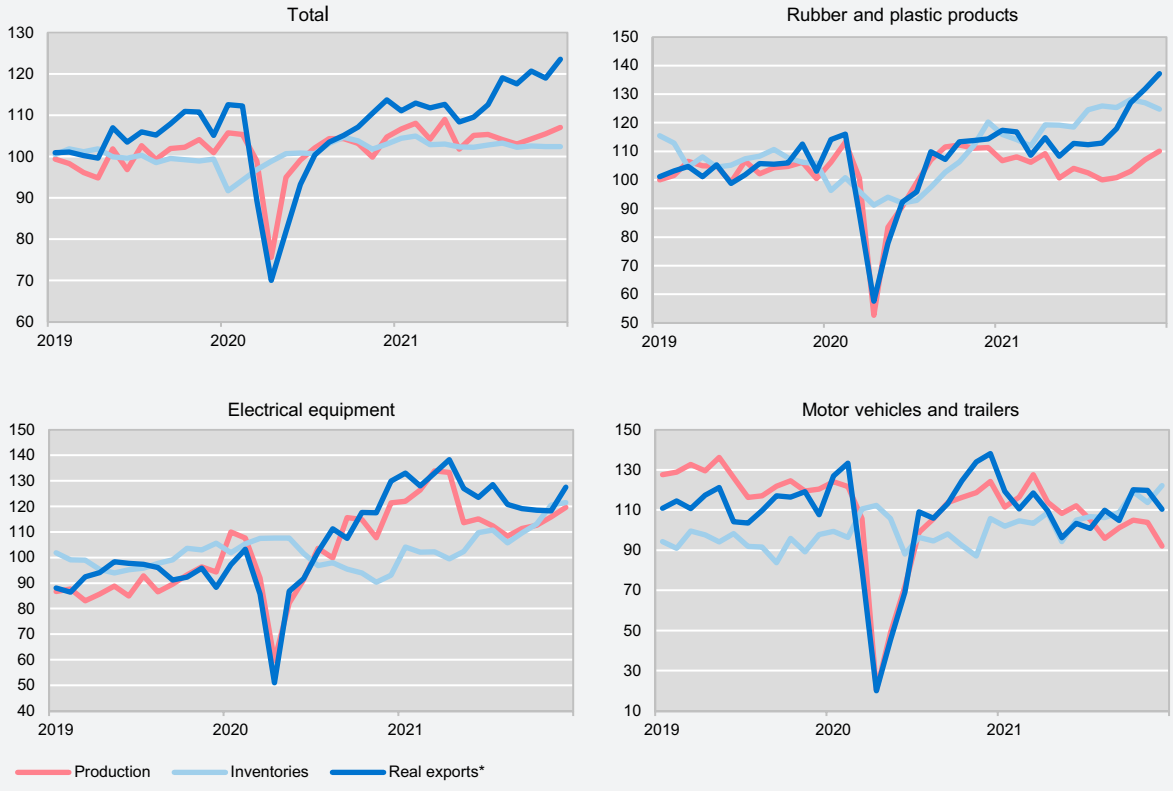


Source: IHS Markit.

Despite problems and halts in global supply chains, rising prices of raw materials, shortages of some goods and transportation problems, **Serbia's manufacturing**, whose exports make up almost 90% of the country's goods exports, recorded relatively good results in 2021, owing to past investment in tradable sectors. This is confirmed by the physical volume of production in manufacturing, which increased by 5.5% in 2021, while its exports are estimated to have gone up by 24.5% in nominal terms and around 15% in real terms (excluding the effect of changes in export prices), according to our estimates. Still, the effects of halts in global production chains are visible as of May 2021, manifesting in the slowdown in growth of manufacturing activity and exports. However, although it slowed somewhat, manufacturing activity was generally above the pre-pandemic level during summer. It has been gradually picking up as of October, while exports began to accelerate even somewhat before. The effects of halts were seen in areas related to the car industry (manufacture of motor vehicles and car components[2], i.e. electrical equipment and rubber and plastic products), where the April 2021 level was achieved in late 2021 only for rubber and plastic products, while this was not the case with two other sectors, despite the recovery in Q4. The rebound in electrical equipment production since autumn resulted largely in a build-up of inventories, while reflecting to a lesser extent on export growth, which began to step up in late 2021. Along with growth in activity, other two sectors saw a rise in exports and a decline in inventories, with fewer motor vehicles manufactured and exported in December. The period since May saw a reduction in the production of computers, electronic and optical products, whilst the exports of this group of products were rising as earlier accumulated inventories were being used. In the major part of 2021, clothing manufacturing was below the 2020-average due to halts in the deliveries of material, which, given its low value added, is not among the priorities for container transport (from China).

[2] Affected by the shortage of semiconductors, the car industry reduced its orders of components from subcontractors.

Chart O.3.4 **Manufacturing**
(s-a, 2020 = 100)



Sources: SORS and NBS calculation.
* Deflated by the index of prices of producers of export industrial products.

Our most significant individual export partner, Germany, which absorbs around 13% of Serbia's exports, is hit particularly hard by halts in global supply chains. Still, Serbia's exports to Germany were not affected to any serious extent. They temporarily dropped in May, but recovered over the following months, amounting to EUR 2.7 bn p.a., which is much above the amounts from 2020 and 2019. The same dynamics was displayed by the exports of automobile clusters to Germany, which gained 24.3% in 2021. The exports of most products increased compared to 2020, particularly of power distribution equipment and motor vehicle parts and accessories.

To conclude, the growth in production and manufacturing exports in 2021 would have been even higher had it not been for the halts in global production chains, a rise in prices and shortages of some raw materials, which affected mostly the sectors related to the car industry. Nonetheless, with the expected gradual resolution of these problems at the global level, which is largely expected until the end of this year, and together with a further rise in external demand, manufacturing and exports are likely to lend a significant impetus to GDP growth.

5 Labour market developments

The domestic labour market witnessed a further increase in wages and employment in Q4, as well as a continued drop in unemployment, which reached a new low.

Wages and labour productivity

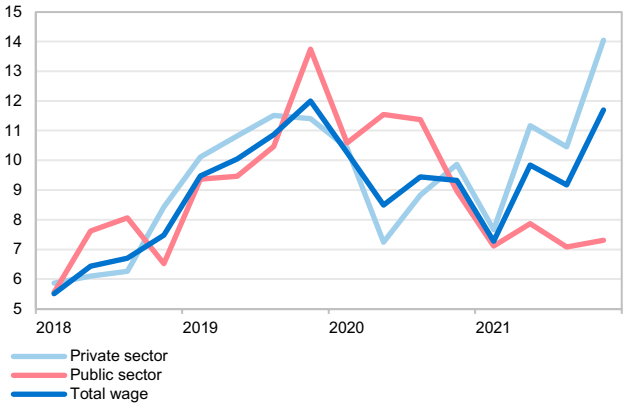
In October and November, the average nominal net wage equalled RSD 67,592 (EUR 575), recording 11.7% growth y-o-y, driven by the two times faster rise in **private sector** (14.0%) than in **public sector** wages (7.3%). In November, nominal net wage reached almost RSD 70 thousand, while medial net wage exceeded RSD 50 thousand for the first time since we have methodologically comparable data. This was partly due to the announced increase in the non-taxable part of the salary from RSD 18.3 thousand to RSD 19.3 thousand and lowering of the employer's part of pension and disability insurance contributions by 0.5% in 2022. According to SORS estimate, the average nominal net wage in 2021 rose by 8.9%, supported by government economic measures aimed at preserving the purchasing power and standard of living.

Sector-wise, October and November saw the continuation of widely dispersed y-o-y growth in average nominal net wages, primarily in the ICT sector[11] (32.0%) and professional, scientific, innovation and technical services (15.7%), followed by retail and wholesale trade (12.4%), as well as construction (11.9%), where the private sector is dominant. Higher average wages in October and November compared to the same period the year before were also recorded in prevalently public sector industries, notably in health and social protection (9.7%). A public sector wage increase of 7.3% on average is planned in 2022 (starting already from the December 2021 wage).

Reflecting further increases in wages and formal employment, **total nominal net wage bill** grew by 14.4% y-o-y in October and November, being higher by 17.6% in the private sector and by 8.0% in the public sector.

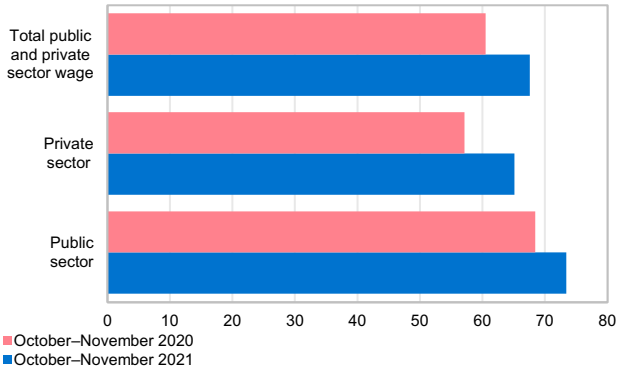
Despite the new wave of the pandemic in late 2021, **overall economic productivity** rose by 5.3% y-o-y in Q4, according to preliminary data (after 4.8% y-o-y in Q3) owing to continued economic growth. **Industrial productivity** also went up in Q4 (2.2% y-o-y) as employment gains lagged behind activity growth.

Chart IV.5.1 **Movement in the average nominal net wage**
(y-o-y growth rates, quarterly average)



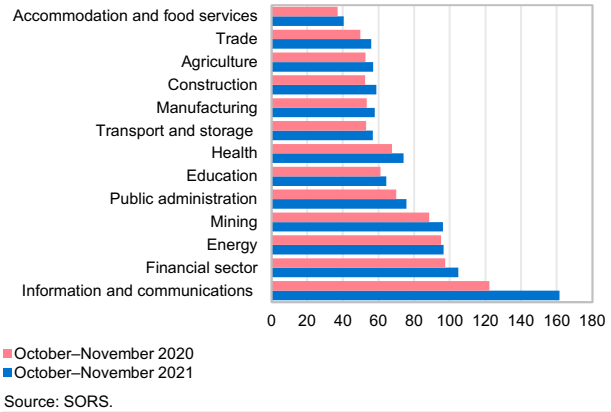
Sources: SORS and NBS calculation.
* Data for Q4 2021 are available for October and November.

Chart IV.5.2 **Average nominal net wage**
(in RSD thousand)



Source: SORS.

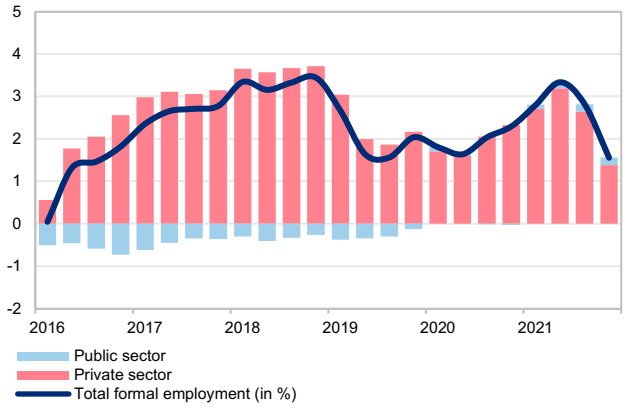
Chart IV.5.3 **Nominal net wage by economic sector**
(in RSD thousand)



Source: SORS.

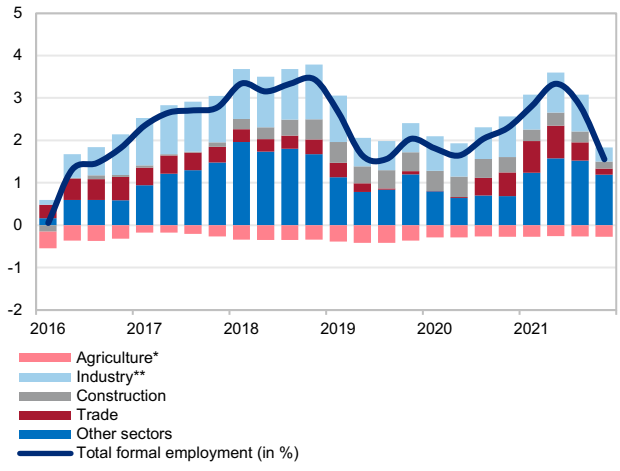
[11] Wage rise in the ICT sector is partly due to the inclusion of inflows from abroad in tax return for withholding tax, which is the source of data for average wages.

Chart IV.5.4 **Structure of y-o-y growth in total formal employment**
(in pp, quarterly average)



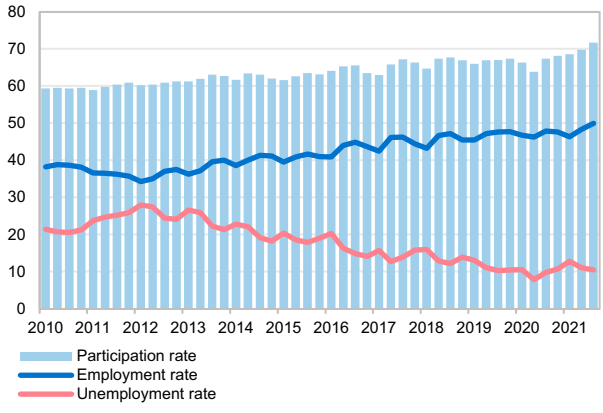
Sources: SORS and NBS calculation.

Chart IV.5.5 **Contribution to y-o-y growth in total formal employment by economic sector**
(in pp, quarterly average)



Sources: SORS and NBS calculation.
* Includes individual agricultural producers.
** Includes manufacturing, mining, energy and water supply.

Chart IV.5.6 **Labour market indicators according to the Labour Force Survey**
(in %)



Source: SORS.

Employment

Total formal employment recorded a somewhat lower y-o-y rise in Q4 than in Q3 (1.6% vs. 2.8%), amounting to 2.27 mn in December, which is by around 20 thousand more than a year ago. According to SORS data, obtained from the Central Registry of Mandatory Social Insurance and the Statistical Business Register, the December y-o-y growth in formal employment was primarily a result of continued employment with legal entities (by around 27 thousand), while the number of entrepreneurs and individual farmers dropped (by around seven thousand).

As in the past, **most new jobs in Q4 were created in the private sector**, so private sector formal employment stayed close to the record level from a quarter earlier (1.69 mn). In December, around 19 thousand persons more were employed than a year earlier, with the highest number of new recruits recorded in the ICT sector, professional, scientific, innovation and technical services, as well as administrative and auxiliary services. Manufacturing and construction also witnessed a rise in employment in the same period. Due to more flexible control of employment with public funds beneficiaries, in December formal employment in the public sector also went slightly up in y-o-y terms, primarily in health and education.

At the level of entire 2021, total formal employment increased by around 58 thousand on average (2.6%), driven dominantly by private sector employment (almost 55 thousand on average).

Total unemployment went down for the eighth consecutive month, to 477,564 in December (the lowest level on NES record). In December, unemployment went down by around 14 thousand y-o-y. Lower unemployment was recorded in almost all occupation groups in the services and industry sectors (except for textile industry occupations).

Favourable labour market conditions are also confirmed by the revised **LFS** data. They report the activity rate of 55.8% in Q3 and the employment rate of 50.0%, the highest levels since statistically comparable data are available (2010). Relative to the same period last year, the activity rate was higher by 2.8 pp in Q3 and the employment rate by 2.2 pp. In Q3, the unemployment rate measured 10.5% (y-o-y growth of 0.7 pp), which is very close to its pre-crisis level from Q4 2019 and is an additional indicator of labour market preservation amid the pandemic.

6 International environment

Global economic recovery has been losing pace since H2 2021. In addition to continued disruptions in global value chains, movements in Q4 were also under the impact of significant hikes in energy prices and spread of the new virus strain, accompanied by a reinstatement of containment measures in some European countries. These factors are also reflected in somewhat less favourable prospects for global growth in 2022.

Inflationary pressures at the global level turned out to be more permanent than expected, which – against the backdrop of the significant rise in the global prices of primary commodities and problems on the supply side – affected the decisions of leading central banks to trim their asset purchases going forward. At the same time, there was an increase in market expectations that the tightening of the Fed's and ECB's monetary policies might be broader and faster than anticipated. Central banks of countries in the region continued with or launched their monetary policy tightening during Q4.

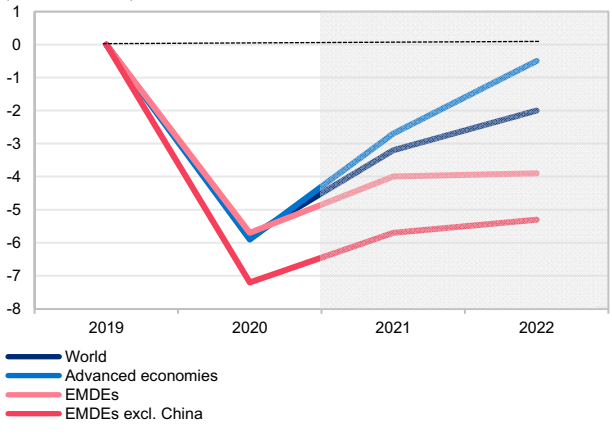
Economic activity

According to the World Bank's estimate in the January Global Economic Prospects, **global economic activity in 2021 posted growth of 5.5%**, mainly owing to a significant recovery in demand spurred by the gradual opening of economies and loosening of containment measures. However, the appearance and spread of new virus strains (Delta and Omicron) and production bottlenecks weighed heavily on the pace of economic recovery as of H2 2021, notably in emerging and developing economies, where vaccine rollout was slower, and room for economic policies limited. Amid such conditions, in January the World Bank slightly revised down its previous global growth forecast for 2022 (by 0.2 pp to 4.1%).

In the January World Economic Outlook, the **IMF estimated that global economic recovery lost pace in H2 2021** under the impact of a series of factors – extended halts in supply (notably in Europe and the USA), deteriorating epidemiological situation (in Europe in particular), disruptions in industrial production in China due to electricity shortage, declining real estate investments and faster than expected halt in public investments. Though a spike in international trade and activity in the services and industrial sectors came as a welcome surprise in November, it offset the prior economic slowdown only partially. In such conditions, global economy entered 2022 in a weaker position than

Chart IV.6.1 **Deviation of GDP from the pre-crisis level**

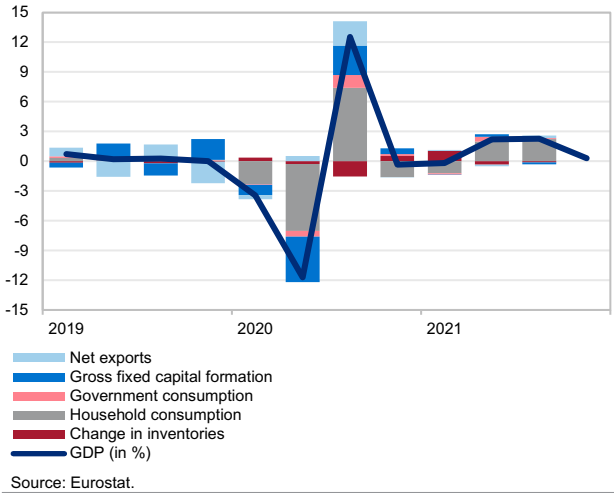
(2019 = 100, in %)



Source: Global Economic Prospects, World Bank, January 2022.
Note: the shaded surface is a World Bank's estimate.

Chart IV.6.2 **Contributions to s-a real GDP growth rate of the euro area**

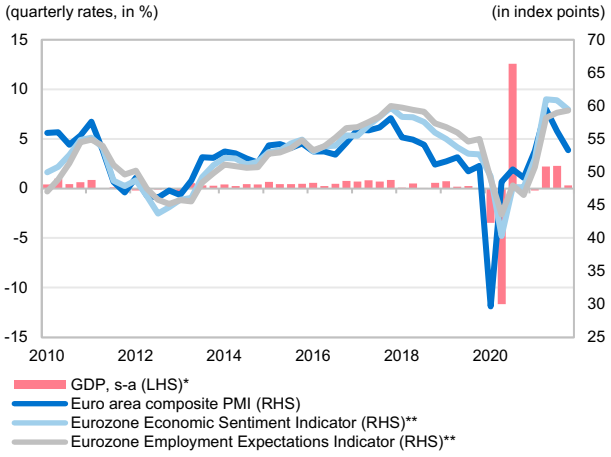
(quarterly, in pp)



Source: Eurostat.

initially expected, hence **in January the IMF revised down its 2022 global growth projection to 4.4%** (from 4.9% in October), mostly on account of poorer than expected growth prospects in the two largest economies – USA and China.

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



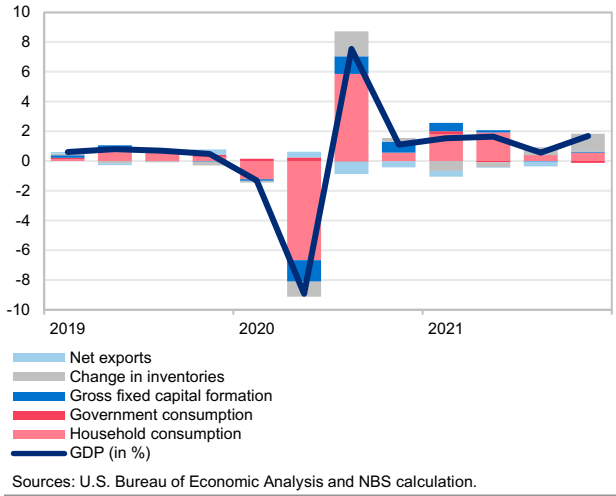
Sources: Eurostat, Markit Group and European Commission.

* Eurostat's preliminary flash estimate for Q4 2021.
** ESI and EEI are standardised relative to PMI.

Euro area economic growth of 2.3% s-a in Q3 was mainly dictated by increased household consumption, while growth in net exports was neutralised by the fall in fixed investments. The recorded s-a growth in GDP in Q3 was mostly facilitated by stepped-up service activities (notably catering and recreation) during the summer months, when containment measures were loosened, while activities in industry and construction slowed down due to shortages of raw materials and intermediate goods. As for our key foreign trade partners – **Italy** and **Germany**, Q3 also saw s-a economic growth of 2.6% and 1.7% respectively. Eurostat's preliminary data indicate that Germany's GDP in Q4 edged down by 0.7% s-a as household consumption decreased due to newly introduced measures.

In view of the recovery in real disposable income, the release of a part of accumulated savings and the preservation of the labour market, which support growth in household consumption, in December the **ECB** slightly revised up its September forecast of euro area economic growth for 2021 (by 0.1 pp to 5.1%). In Q4 2021, for the first time since the outbreak of the pandemic, euro area returned to the pre-crisis GDP level (Q4 2019), though its economic growth slowed down to 0.3% s-a (according to Eurostat's preliminary flash estimate), under the impact of the reinstated containment measures in some European countries aimed at preventing the spread of the new coronavirus strain, a significant hike in energy prices and disruptions in supply. The Composite PMI[12] and the euro area leading Economic Sentiment Indicator (ESI)[13] suggested such movements – in December, they fell to 53.4 points and 112.7 points (from 56.2 points and 116.4 points in September, respectively). It was halts in supply and uncertainty as to the course of the pandemic that drove the ECB to revise down its euro area growth forecast for 2022 (from 4.6% in September to 4.2% in December).

Chart IV.6.4 **Contributions to s-a real GDP growth rate of the USA**
(quarterly, in pp)



Sources: U.S. Bureau of Economic Analysis and NBS calculation.

As of mid-2021, euro area unemployment rate has been declining and in December it went below the pre-crisis level, to 7.0% (compared to 7.4% in September), coupled with increased employment rate, which is now close to

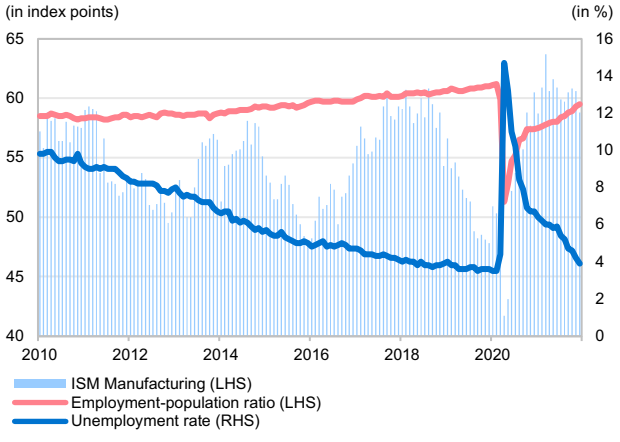
[12] The value of Eurozone PMI Composite above 50 points indicates expansion, and below 50 a decline in economic activity.

[13] The value of Economic Sentiment Indicator above 100 points indicates improvement, and below 100 worsening of economic expectations.

the pre-crisis level (59.8% in Q3 2021, compared to 60.0% in Q4 2019), indicating that the **labour market** is still recovering. Labour force is still on the short end in the euro area, as seen by the increased number of vacancies in the industry, construction and services sectors. Therefore, the ECB estimates that the success in bridging the gap between labour force demand and supply will depend on government support and measures to contain the pandemic going forward.

The US economy significantly slowed down its growth in Q3 to 0.6% s-a (from 1.6% s-a in Q2), with a positive contribution coming from inventories and private consumption (0.9 pp), while a negative contribution came from net exports (0.3 pp). The Manufacturing PMI was at a lower level in December (58.8 points) than in September (60.5 points), under the impact of a slower than expected resolution of production bottlenecks and the spread of the new virus strain. According to a preliminary assessment of the Bureau for Economic Research, US GDP growth rate in Q4 measured 1.7% s-a, mostly on account of increased inventories in trade. Bearing in mind the dynamics of economic activity throughout the major part of last year, in December the **Fed** revised down its September forecast of economic growth in 2021 (by 0.4 pp to 5.5%), while growth projection for 2022 was revised up (by 0.2 pp to 4.0%), with expectations of further opening of economies and normalisation of supply in most economic sectors.

Chart IV.6.5 **US labour market and economic activity indicators**

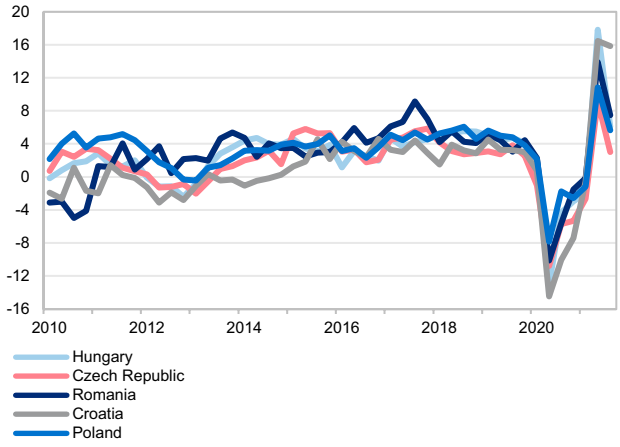


Sources: U.S. Bureau of Labor Statistics and Institute for Supply Management.

The Fed estimated that the situation in the **US labour market** improved during Q4, as confirmed by the unemployment rate falling to 3.9% in December (from 4.7% in September) and the employment rate climbing to 59.5% (from 58.8% in September), whereby both indicators came even closer to the pre-crisis level (3.5% and 61.2% in February 2020). Also, the number of new non-farm payrolls rose by around 500,000 persons in December relative to November (preliminary data), mostly in recreation and catering, and professional and business services, reaching the level of around 149 mn persons (2.2% below the pre-crisis level of February 2020).

The nascent economic recovery in the **CESEE region** continued at a slower pace in Q3, with y-o-y GDP growth of 5.6% (after posting 11.9% in Q2), on the back of the rising domestic demand (contribution 8.8 pp), which was opposed by the fall in next exports (negative contribution

Chart IV.6.6 **Y-o-y GDP growth rates of selected CESEE countries**
(quarterly, in %)



Source: Eurostat.

of 3.2 pp). Though y-o-y economic growth in Q3 was widely dispersed across geographies, the intensity of growth differed among countries in the region – the highest growth was recorded in Croatia (15.8%) and Serbia (7.7%), and the lowest in Slovakia (1.3%) and the Czech Republic (3.0%). According to Consensus Economics' analysts, a faster rebound dynamics of the region is hampered by the negative effects of the new wave of the pandemic, strained supply chains and increased inflation, which is reflected on poorer growth prospects in 2022.

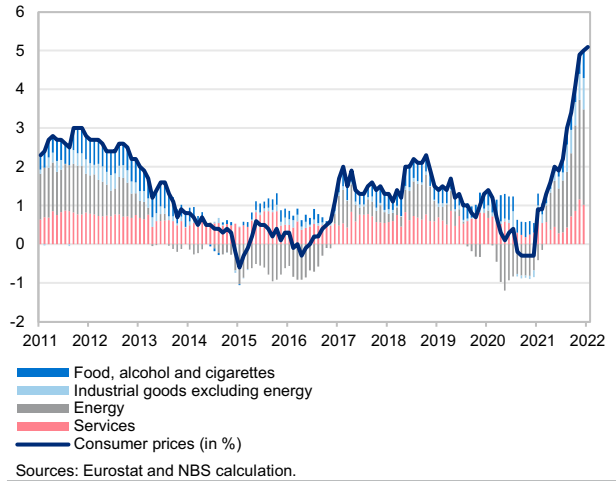
According to the preliminary estimate of the National Bureau of Statistics, the 8.1% growth in **Chinese economy** in 2021 was higher than expected, though it decelerated to 4.0% y-o-y in Q4 (from 4.9% y-o-y in Q3), dominantly as a consequence of introducing financial limitations to prevent a debt crisis in the real estate market.

The preliminary data of the government's statistical office indicate that the 4.3% y-o-y growth in the **Russian economy** in Q3 was lower than in Q2 (10.5% y-o-y), amid a weaker increase in domestic demand, while external demand is recovering significantly due to a high increase in the global prices of energy, of which Russia is among leading net exporters.

Inflation movements

Amid heightened cost-push pressures, as well as rising pressures from the labour market, **euro area inflation** picked up its y-o-y growth additionally during Q4, reaching 5.0% in December, of which a half is owed to the strong rise in energy prices, and the rest to the higher prices of services and industrial products excluding energy, which also dictated the increase in **core inflation** to 2.6% y-o-y in December. Food inflation also accelerated, to 3.2% y-o-y in December, mainly as a consequence of the higher prices of processed food due to the rising production costs and, to a lesser extent, the prices of unprocessed food on account of lower last year's base. Measured by the change in the Harmonised Index of Consumer Prices (HICP), in December y-o-y inflation in **Germany** measured 5.7% (somewhat lower than in November), while in **Italy** it picked up to 4.2%. Inflation growth in the euro area in Q4 and throughout 2021 (2.6% on average) was also under the impact of the cessation of the temporarily decreased VAT rate in Germany (ending in and inclusive of December), as well as the significant changes in HICP weights in order to take into account the changes in consumer habits during the pandemic. The ECB expects euro area inflation to remain elevated in the upcoming months as well, whereafter it should go down

Chart IV.6.7 **Contributions of HICP components to y-o-y inflation in the euro area**
(in pp)

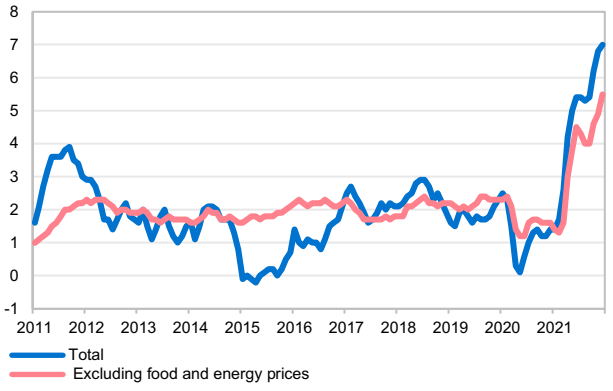


Sources: Eurostat and NBS calculation.

on account of the stabilisation of energy prices, gradual resolution of supply chain halts and normalisation in the goods and services market. Eurostat's preliminary flash estimate put January inflation at 5.1% y-o-y, which is higher than expected given that its fall had been anticipated because of the high base effect.

As in the prior period, y-o-y growth in **US inflation** during Q4 was driven by a strong increase in energy prices which, though somewhat lower in December than in November, contributed the most to the rise in December y-o-y inflation to 7.0% (measured by the CPI). Another contribution to this came from the hike in the prices of products (new and used cars and clothes) and services (notably housing), which also dictated an acceleration in **core inflation** to 5.5% y-o-y in December. Stepped-up cost-push pressures in Q4 were also confirmed by the y-o-y inflation growth, measured by the index of personal consumption expenditure of 5.7% in December, or 4.7% excluding food and energy prices. In addition to the recovering demand, attributable to the gradual opening of the economy, the higher US inflation during 2021 (4.7% on average) was the result of the rising production costs due to a shortage of inputs and labour force, as well as a significant increase in energy prices as of mid-2021. The Fed estimates that heightened inflationary pressures will last for a while more, only to subside in 2022 thanks to the resolution of supply issues and progress in vaccine rollout.

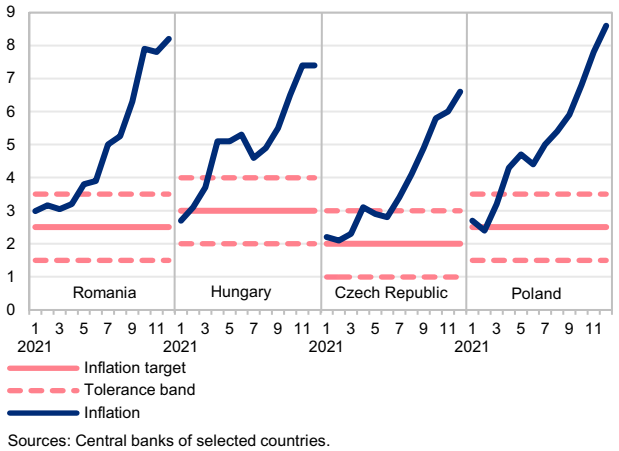
Chart IV.6.8 **US inflation, measured by CPI**
(y-o-y rates, in %)



Source: U.S. Bureau of Labor Statistics.

During Q4, energy and food prices continued to have a pronounced inflationary effect in all observed **CESEE countries**, wherefore governments in these countries took certain fiscal measures and administrative restrictions. The most pronounced inflation growth was recorded in **Poland** (8.6% y-o-y in December), where the government made two sets of fiscal measures – the first set included a reduction in the VAT rate on electricity and natural gas prices to a one-digit level, while in the second set the VAT rate on the prices of petroleum products was decreased, and VAT on the prices of food, natural gas and fertilisers was temporarily suspended. In **Romania** inflation in December picked up to 8.2% y-o-y, driven by growth in the prices of electricity, while attempts are being made to supress this growth by legal relaxations for vulnerable households and corporates. **Hungary** intends to limit the prices of basic food products, as they exert the highest contribution to inflation growth, which came at 7.4% y-o-y in December, while in the **Czech Republic** inflation stood at 6.6% y-o-y, with suspended implementation of VAT on electricity and natural gas prices in December and November. Leading Consensus Economics analysts predict inflation in countries of this region to increase in the coming months as well, in conditions of extended

Chart IV.6.9 **CPI movements in selected CESEE countries in the previous year**
(y-o-y rates, in %)

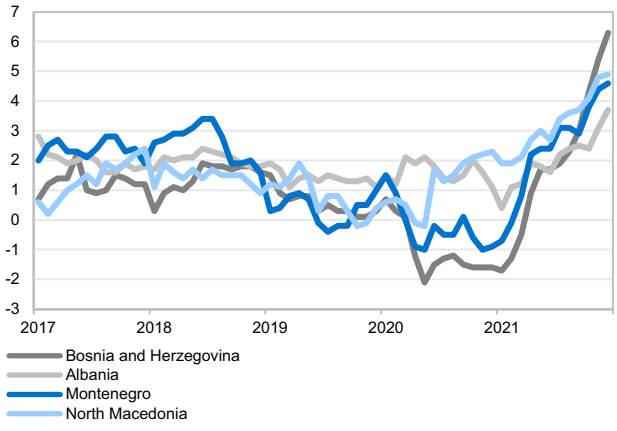


Sources: Central banks of selected countries.

halts in supply, volatility in the energy market, and a mismatch between labour force supply and demand, which create pressure on producers and merchants to shift some of the costs onto consumers.

In **Western Balkan** countries, higher food and energy prices were the dominant factor determining the continued growth in y-o-y inflation during Q4. In December it stood at 6.3% in Bosnia and Herzegovina, 4.9% in North Macedonia, 4.6% in Montenegro and 3.7% in Albania. Inflation in **Turkey** edged up to 36.0% y-o-y in December, as a consequence of a sharp depreciation of the lira.

Chart IV.6.10 **CPI movements in the Western Balkans**
(y-o-y rates, in %)

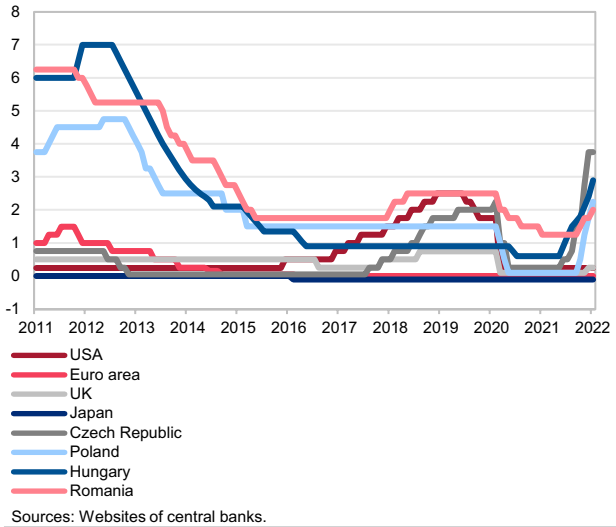


Sources: Statistical offices of selected countries.

Monetary policy

During Q4 2021, the **ECB** did not change its main interest rates, and in the December meeting it assessed that progress in terms of the economic recovery and achievement of the inflation target in the medium term is enabled by the gradual reduction in the volume of asset purchases in the coming quarters, but that the accommodative monetary policy is still needed to stabilise inflation at the target of around 2% in the medium term. Accordingly, in December it decided to trim the volume of asset purchases within the PEPP programme during Q1 2022, and to wrap up the programme at end-March, while the deadline for reinvesting maturing principals of securities purchased within the programme has been extended at least until end-2024. Reinvestment will be flexible in terms of the period, asset class and issuer, which includes the purchase of Greek bonds. Security purchases within the programme may continue if needed, in order to mitigate the negative effects associated with the pandemic.

Chart IV.6.11 **Policy rates across selected countries**
(p.a., in %)



Sources: Websites of central banks.

At the same time, in order to mitigate the effect of the conclusion of PEPP, the volume of net asset purchases within the APP programme will be temporarily increased during Q2 and Q3 2022. This programme will last as long as necessary, and should end right before the ECB begins raising its main interest rates. As so far, the ECB said that the assets from the maturing instruments purchased within the programme will be reinvested over a longer period after the interest rates begin to increase. The ECB also continues to ensure liquidity via its targeted longer-term refinancing operations to banks (TLTRO III). The third series within the TLTRO programme will still be an attractive source of bank financing for the purpose of continuing to support corporate and household lending, and special financing conditions within the programme will be in force until end-June 2022. The ECB still has not announced a

monetary policy tightening, but in the January meeting it noted that the future monetary policy decisions will depend on how the factors move in the coming period, and underlined its readiness to respond if needed.

During Q4 2021, the **Fed** kept its federal funds rate range at 0–0.25%, at the same time trimming the volume of asset purchases within the QE programme. In the December meeting, it decided that the downsizing of the volume of asset purchases should accelerate further as of January 2022, whereby the process would be wrapped up by mid-March, i.e. earlier than previously planned. Observing that the inflation rate has been trending above 2% for some time already, with inflationary pressures no longer qualified as transitory, the majority of FOMC members presented their estimates at the December meeting that full employment will be achieved relatively quickly if the labour market recovery continues at the current pace. This would help fulfil the second precondition for interest rate increase. According to December projections, all FOMC members expect the federal funds rate to go up in 2022 (nine out of 18 members shared this expectation in September) and, according to the median of their expectations, 2022 and 2023 will each see three increases in the federal funds rate and 2024 will witness two. Labour market data, i.e. the fact that the unemployment rate in the USA has dipped below 4%, indicate, according to market expectations, that it is increasingly likely that the first federal funds rate hike will be in March. In the January meeting, the Fed also announced that with inflation trending significantly above 2% and in view of the tightening in the labour market, conditions are being created for the federal funds rate to be raised.

In its December meeting, **the Bank of England** raised its key policy rate by 15 bp, thus becoming the first among leading central banks to increase its interest rate since the outbreak of the pandemic. Another hike of 25 bp (to 0.5%) came in February 2022, after y-o-y inflation reached 5.4% in December, its highest level in 30 years, while it is expected to peak in April this year, and labour market has performed well for some time now. In the February meeting it was also decided to trim the volume of corporate bond purchases, which should be wrapped up by end-2023.

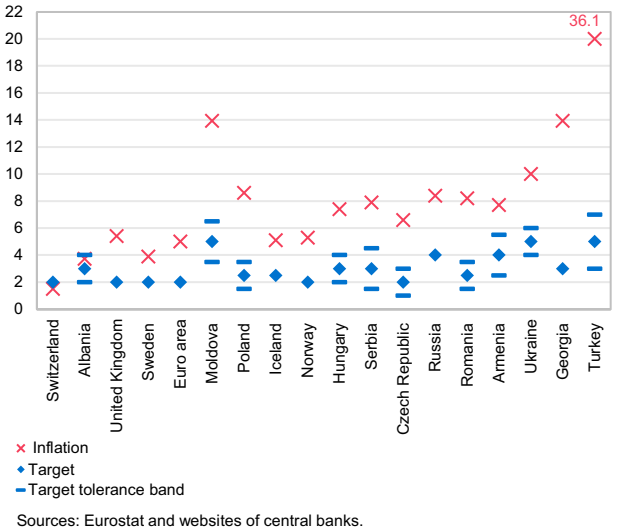
Inflationary pressures continued to gain strength in CESEE countries as well, which drove some central banks to continue or begin raising their policy rates in Q4 2021. The central bank of the **Czech Republic** raised its policy rate by an additional 125 bp in November, then by 100 bp in December and by 75 bp in February 2022, to

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

Central bank	Inflation*	Inflation target	Policy rate**
Serbia	7.9	3.0 ± 1.5	1.00
Poland	8.6	2.5 ± 1.0	2.25
Czech Republic	6.6	2.0 ± 1.0	4.50
Hungary	7.4	3.0 ± 1.0	2.90
Romania	8.2	2.5 ± 1.0	2.00
Turkey	36.1	5.0 ± 2.0	14.00

Sources: Websites of central banks.
* CPI, y-o-y rates in December 2021.
** Latest available data.

Chart IV.6.12 **Inflation and target by country in December 2021**
(p.a., in %)



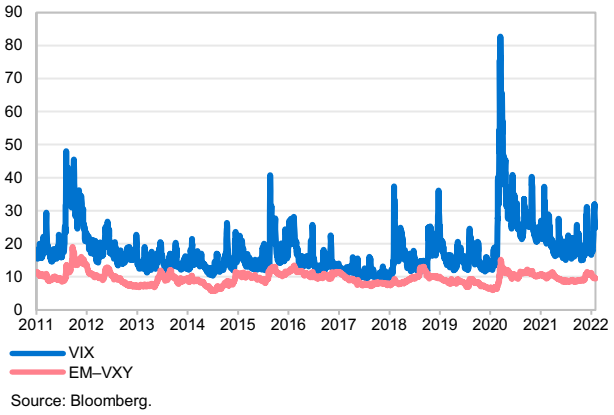
Sources: Eurostat and websites of central banks.

4.5%, its highest level in 20 years. Since June 2021, the policy rate was raised six times, by a total of 425 bp. Elaborating on the February decision, central bank officials underlined that the projected inflation rate for this year is much higher than in the previous projection, while economic growth rates have been revised down. They added that upcoming monetary policy decisions will depend on future information and projections. The central bank of **Hungary** also continued to increase its policy rate, lifting it by 15 bp in October, by 30 bp each in November and December, and by 50 bp in January 2022, to 2.9%. The January increase is the eighth policy rate hike in a row, and since June 2021 the rate was raised by a total of 230 bp. In addition, in December the central bank announced that it would suspend government and corporate bonds purchases. It also stated that monetary policy tightening would continue in 2022, noting that monthly policy rate increases would be more pronounced than in December, and that interest rate increases would continue until inflationary expectations stabilise around the target midpoint.

The central bank of **Poland** began tightening its monetary policy in October 2021 and by January 2022 it raised its policy rate four times, by a total of 215 bp (40 bp in October, 75 bp in November and by 50 bp each in December and January), to 2.25%. In addition, in November it also increased its reserve requirements rate from 0.5% to 2.0%. The Romanian central bank also began to increase its policy rate in October, continuing that in November 2021 and January 2022, each time by 25 bp, hence the policy rate stood at 2.0% in January. Representatives of both central banks announced a possibility of further monetary policy tightening.

On the other hand, despite heightened inflationary and depreciation pressures, the central bank of **Turkey** continued with policy rate cuts during Q4, by a total of 4 pp to 14.0% in December. Including the September cut, the policy rate was trimmed four times in a row, by a total of 5 pp, and after the latest reduction in December the central bank announced that it is done with the policy rate trimming cycle, and that the cumulative effects of these decisions would be estimated in Q1 2022.

Chart IV.6.13 **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 (J.P. Morgan emerging markets implied volatility index) measures aggregate volatility of emerging market currencies based on three-month forward options.

Financial and commodity markets

Movements in financial markets during Q4 2021 were largely under the impact of the new coronavirus strain (Omicron), which drove uncertainty up around mid-quarter and increased market participants' risk aversion amid fears of a new wave of lockdowns across the globe. However, very quickly investors became optimistic that the adverse effect of the Omicron variant on global

economic growth would be lower than initially expected, therefore volatility in financial markets gradually subsided during December. In regard to this, the implicit measure of **financial market volatility** (VIX) increased slightly during Q4 2021, by 1.0 pp to 17.3%. At the same time, the **EM–VXY, which indicates the volatility of currencies of emerging economies,** rose by 2.0 pp and measured 11.1% at end-December 2021.

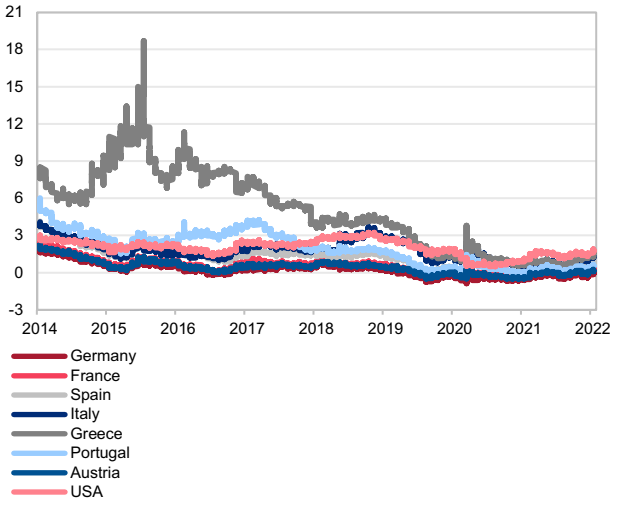
Yields on ten-year government bonds of advanced countries were revised up during Q4 2021, primarily under the impact of growing inflationary pressures and anticipated reactions of central banks in terms of the gradual monetary policy tightening. The movements in the yields on ten-year US Treasuries were also influenced by the Fed's decision to step up the downsizing of asset purchases, which markets interpret as a signal for their policy rates to potentially start going up sooner. Still, around mid-quarter, the yields on US Treasuries and government bonds of other advance countries declined temporarily amid growth in the global risk premium and increased investor interest in safe assets due to elevated concerns over the speed of economic recovery with the appearance of a new coronavirus strain.

Similar movements were also recorded by **yields on ten-year government bonds of countries in the region** in local currencies, under the impact of the increase in policy rates by their central banks, in addition to the growing inflationary pressures.

The start of the decrease in the degree of the Fed's monetary policy expansiveness, as well as its anticipated further tightening, in addition to a rise in the yield on US Treasuries, also reflected on the **strengthening of the dollar vis-à-vis the euro** during Q4, by 2.4%. Moreover, the appreciation of the dollar against the euro is also attributable to market participants' expectation that the speed of the increase of US interest rates would almost certainly be faster than the rise in euro area interest rates, given the ECB's prevailing stance as to the temporary character of inflationary pressures.

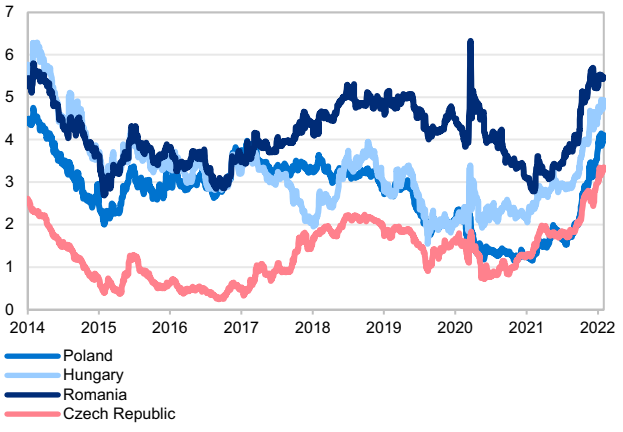
The price of gold in the global market was on the rise from early Q4 until mid-November, when it came at USD 1,860 per ounce. Afterwards, at end-November, it edged down to around USD 1,800 per ounce due to the dollar's strengthening, more favourable movements in the US labour market and increased prospects that the Fed would speed up the process of reducing asset purchase within the QE programme and increase in the interest rate levels. In December, however, the price of gold started going up slightly again in conditions of heightened

Chart IV.6.14 **Yields on ten-year bonds of euro area countries**
(daily data, in %)



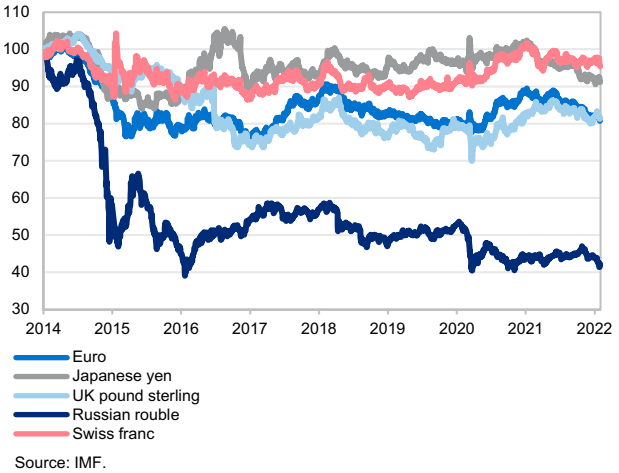
Source: Bloomberg.

Chart IV.6.15 **Yield on ten-year bonds by country**
(daily data, in %)



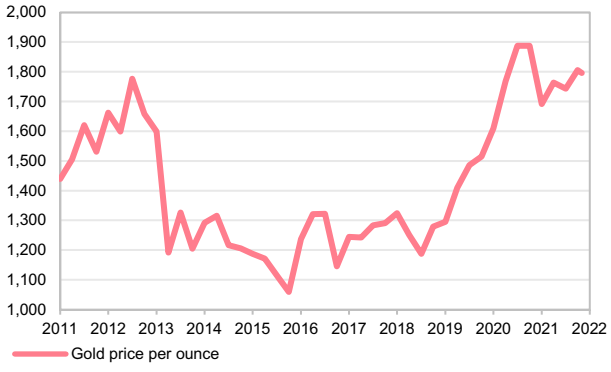
Source: Reuters.

Chart IV.6.16 **Exchange rates of selected national currencies against the dollar***
(daily data, 31 December 2013 = 100)



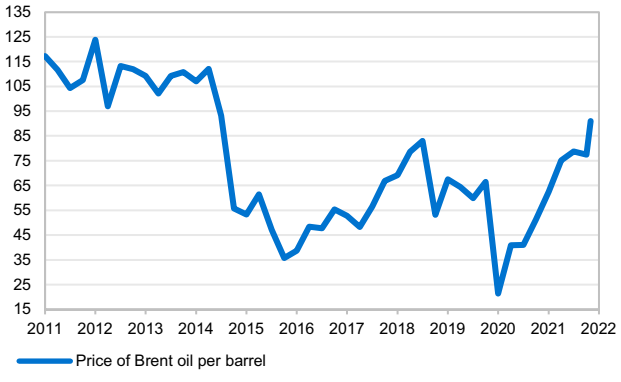
Source: IMF.
* Growth indicates appreciation.

Chart IV.6.17 **World gold price movements**
(end-quarter, in USD)



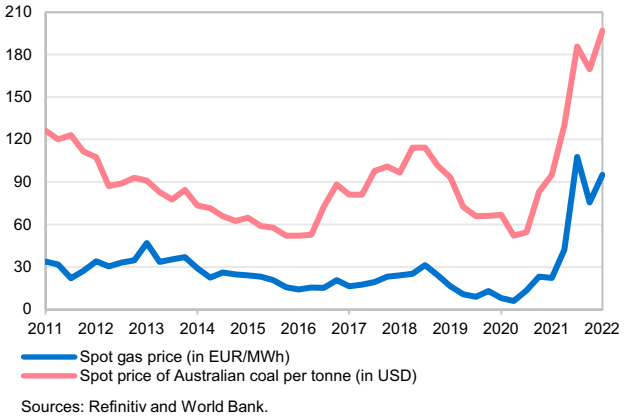
Source: Bloomberg.

Chart IV.6.18 **World oil price movements**
(end-quarter, in USD)



Source: Bloomberg

Chart IV.6.19 **Natural gas and thermal coal price movements**
(end-quarter)



Sources: Refinitiv and World Bank.

concerns of market participants over pronounced inflationary pressures globally, as well as geopolitical tensions in Ukraine, hence at the end of the year the price of gold was almost USD 1,806 per ounce, which is 3.6% above the level from end-Q3. At end-January, the price of gold went below USD 1,800 per ounce amid market expectations of significant monetary policy tightening by the Fed.

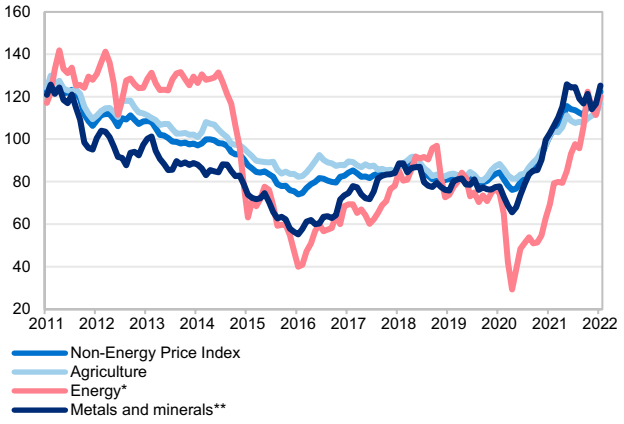
Having reached USD 84 per barrel at end-October, the **global oil price** posted a decline in November (-16.9%) under the impact of expectations of the decision by OPEC+ members to increase the monthly crude oil supply, the USA's decision to use part of the strategic oil inventories in coordination with other countries (Great Britain, Japan, South Korea, India and China) in order to mitigate inflationary pressures, as well as uncertainty surrounding the emergence and spread of the Omicron variant. During December, some countries resorted to stricter epidemic measures which, according to the International Energy Agency (IEA), is having an adverse effect on the recovery of global oil demand. In such conditions, the price of oil at end-Q4 equalled around USD 78 per barrel, down by 1.7% from end-Q3. At the start of 2022, the price of oil was again on the rise amid elevated investor optimism as to the health situation, a sharper fall in crude oil inventories in the USA, escalation of turbulences in Kazakhstan (an OPEC member), and heightened geopolitical tensions globally, therefore at the end of January it rose to around USD 90 per barrel.

Though it went down in October due to announcements of increasing deliveries from Russia, the benchmark **price of natural gas for Europe** (from the Dutch TTF hub) was on the rise in the remainder of Q4, having reached its new maximums. However, at end-December the natural gas price went below 80 EUR/MWh amid dampened demand due to unusually mild weather, as well as because liquid gas supplies were redirected to Europe, though this gas was initially intended for the Asian market. Still, the fact that the gas price rose for several months, and continued to go up in January 2022, is attributed to the still low inventories of this source of energy in Europe and stepped-up demand driven by record high prices of issuing permits (USD 90 per tonne in December). Such developments are also reflected on the hike in the price of electricity, which is forecast to last throughout winter. According to the World Bank data, after a historic maximum in October (USD 224 per tonne), **the price of thermal coal** in November decreased significantly (-29.9%) on account of increased exploitation and inventories in Chinese power plants.

Though the price of coal went back up in December – to USD 169.7 per tonne, it was 8.6% lower than in Q3. In January, the price of coal continued up on the back of restricted supply caused by the pandemic, notably in Indonesia and Australia.

According to the World Bank index, the **metals and minerals prices** posted diverging movements in Q4, maintaining almost the same level as in Q3. Having risen in October due to lower inventories in the London Stock Exchange and limited production in China, the prices of most industrial metals (except tin and nickel) were revised down in November owing to the tempered consequences of the energy crisis in China and the normalisation in the operations of heavy industry. In December the prices slightly edged up again (2.4%), propped by increased demand, and for the first time since August the price of the iron ore also rose (21.5%). In January, the prices of metals and minerals came close to their record levels from H2 2021.

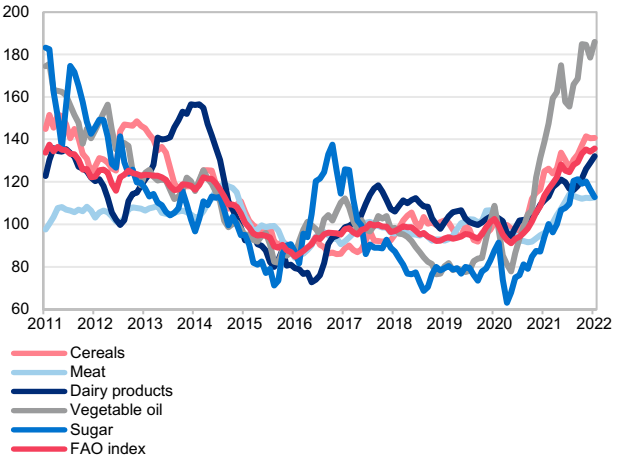
Chart IV.6.20 **World Primary Commodity Price Index**
(2010 = 100)



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

In conditions of stepped-up demand for wheat and dairy during October and November, the **global food prices** (measured by the FAO index) were on the rise, after which they edged down slightly in December (0.9%), mostly under the impact of lower prices of plant oils and sugar. Still, food prices were 3.8% higher at end-Q4 than at end-Q3 (in nominal terms), which is mostly attributable to the increase in dairy prices (9.2%), which reflected the fall in milk production in Western Europe and Oceania. The higher prices of cereals (5.8% in Q4) acted in the same direction, dominantly driven by the rise in the price of corn, the demand for which is strong, while wheat prices were revised down in December amid increased supply following the harvest in the southern hemisphere. In addition, sugar prices also decreased in Q4 (3.9%) reflecting concerns over the possible adverse effects of the Omicron variant on global demand, as well as the weakening of the Brazilian real against the dollar and the lower prices of ethanol. The slight fall in meat prices in the global market (of 0.3% in Q4) was dictated by the lower prices of poultry and ovine meat, while the price of pork decreased to a lesser degree because the several months long fall in China's imports was offset by holiday sales in countries that are among the main producers. Global food prices in January rose 1.1% on account of the higher prices of plant oils and dairy, which compensated for the fall in the price of sugar for the second consecutive month. The prices of cereals and meat remained almost unchanged.

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



Source: UN FAO.

Text box 4: Macroeconomic effects of the global energy crisis on Serbia

Under the impact of numerous demand- and supply-side factors, global energy prices (oil, natural gas, electricity and coal) increased considerably in 2021. Their growth culminated in October, mainly due to the hike in the prices of natural gas, which triggered an energy crisis, primarily in Europe, but also in Asia, Africa and Latin America.

As for **global oil prices**, they were at their minimum of close to USD 20 per barrel in April 2020 amid the outbreak of the pandemic and tightening of containment measures. The gradual opening of the global economy and relaxation of containment measures, with the effects of capped production by the OPEC+ countries, led to their gradual rise as of mid-2020. This intensified with positive news about the invention and distribution of vaccines as of end-2020. As a result of growing oil demand and slower adjustment of supply from OPEC+ members to such demand, global oil prices were above the pre-crisis levels in 2021 and averaged USD 70 per barrel (USD 77 per barrel at the end of the year), up by over 60% y-o-y. Oil prices continued up in 2022, almost to USD 91 per barrel.

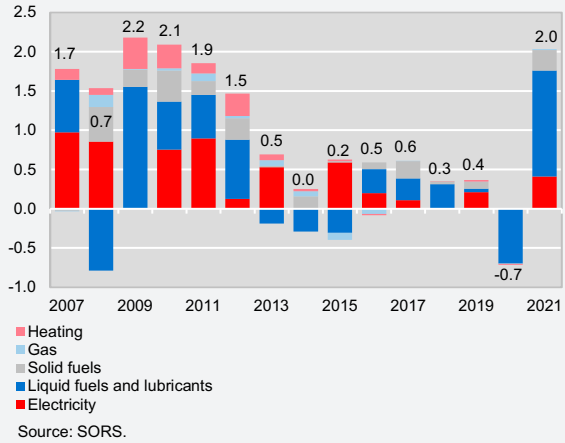
Globally increased demand for **natural gas** as of end-2020 reflects primarily economic recovery from the pandemic, as well as unfavourable weather conditions during winter and summer, which reduced energy production from renewable sources and depleted gas inventories. Natural gas reserves declined in the previous years as well, mainly due to increased demand from China, which recorded high industrial production growth rates. In addition, many countries committed to the so-called Paris Climate Agreement to reduce the emission of carbon dioxide in order to stop the negative effects of climate change, which means greater use of energy sources with a lower degree of carbon dioxide, including natural gas, so the price of natural gas increased on this account too. Vibrant demand and a simultaneous reduction in gas production spurred a hefty increase in **electricity prices**, making coal-based production profitable, despite decarbonisation policy, and leading to an increase in the **price of coal** and petroleum products as an alternative source of energy. The effects of the so-called energy crisis affected Europe in particular, as it is highly dependent on gas imports and its gas inventories have been depleted to a minimum due to the very cold past winter and hot summer, which is why gas price spiked by more than 600% in October relative to 2020. These prices stabilised somewhat after October but touched new record highs again in mid-December. As a part of gas deliveries, initially intended for the Asian market, was redirected to Europe, and the weather conditions were favourable, the end of the year saw a new drop in the prices. In any case, their level will remain susceptible to weather conditions and gas inventories in the coming period as well.

Due to increased gas and electricity prices, production in some areas of manufacturing in Europe declined temporarily, which, together with persisting disruptions in global supply chains on other grounds, placed further upward pressure on the prices of inputs and imported final products.

Given that the so-called energy crisis escalated due to the shortage of energy and a significant rise in their global prices, and that at the end of last year there were problems in electricity production in the domestic market, which further increased energy imports, in this text box we will try to analyse the macroeconomic effects of higher energy prices on Serbia. First, we will analyse the effects on inflation, and then on economic activity and balance of payments.

Global energy prices affect **domestic inflation** directly, through the adjustment of the prices of petroleum products, gas and electricity for households, but also indirectly through the impact on production costs and disposable income for consumption and investment. The growth in global Brent oil price led to a 23.5% increase in the domestic prices of petroleum products in 2021, which directly contributed 1.3 pp to the December y-o-y inflation,

Chart O.4.1 **Contribution of energy prices to y-o-y inflation**
(in pp)



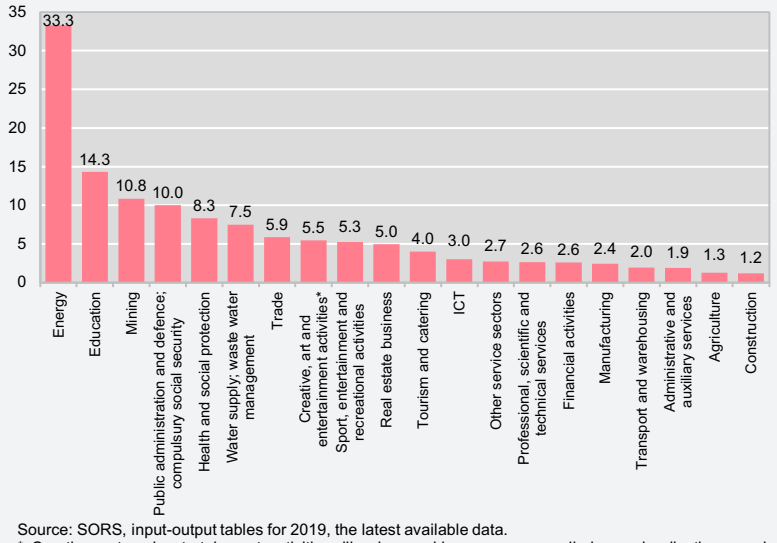
Source: SORS.

as petroleum products have around 6% share in the consumer basket. The prices of gas and electricity for households are administered prices, which means that the Government makes the decision to raise these prices. The price of gas for households was not adjusted in 2021, while the price of electricity was revised up in January and February by a total of 8.2%, with a 0.4 pp contribution to y-o-y inflation. A mildly positive contribution to inflation in 2021 (around 0.3 pp) also came from the higher prices of solid fuels (firewood and coal), so that the total contribution of energy to inflation in 2021 amounted to over one quarter.

As stated, in addition to the direct effect, the growth in global energy prices reflects on domestic inflation also indirectly, through higher production costs of both imported and domestic products. Unlike the direct effect, the indirect impact of energy prices on other prices is harder to quantify, given that energy costs do not participate in the production costs of various groups of products and services to the same degree. In addition, it should be noted that each country imports energy at prices negotiated with counterparties, which is particularly pronounced with natural gas. Having in mind that Serbia has so far paid for gas at the so-called oil formula, i.e. at a much lower than the stock market price, and that based on the agreement recently reached with the Russian Federation on keeping the price unchanged for the next six months, we do not expect any major negative cost-push pressures on domestic economy on account of rising global gas prices. However, we should not disregard the fact that gas prices increased notably in the euro area in 2021, leading to a hike in the prices of many imported final products and intermediate goods, which to a certain extent spills over to domestic inflation. As for electricity prices, the stock market price surged from around EUR 50 per megawatt-hour in previous years to around EUR 300 per megawatt-hour late last year and it applies to large high-voltage consumers, primarily industry. However, it should be noted that many companies concluded more favourable long-term contracts with "Elektroprivreda Srbije" and therefore did not have the problem of increased electricity costs. Moreover, electricity price for corporates has been limited by the Government to EUR 75 per megawatt-hour in the next six months, when the upward pressures in the global market will probably be the most prominent.

In order to assess in more detail which areas of the domestic economy can expect the greatest indirect effects of rising energy prices and how much the Serbian economy was affected in general, we used data on sectors' intermediate consumption published by the SORS. According to the latest available data for 2019, total intermediate consumption amounted to RSD 6,701.4 bn, with gas and electricity costs holding a 4.4% share. If we add costs in the production of petroleum products and coke, energy costs have an 11.8% share in the total costs of the Serbian economy. All things considered, assuming that the price of electricity and gas for corporates increases by around 25%, total intermediate consumption could go up by 1.1%. However, the rise in costs would most likely not spill over to end-customers in its entirety, as a part of the costs would be offset by lower profit margins. Besides, not all sectors of the economy would be equally affected. The structure of intermediate consumption by key economic sectors reveals that the dominant share of costs for gas and electricity is in the energy sector, i.e. in the production of electricity and gas (33%). The non-productive sectors – education, public administration and defence, as well as health and social protection, also have a high share of costs for electricity and gas, and so does mining within the production sectors. As for the key production

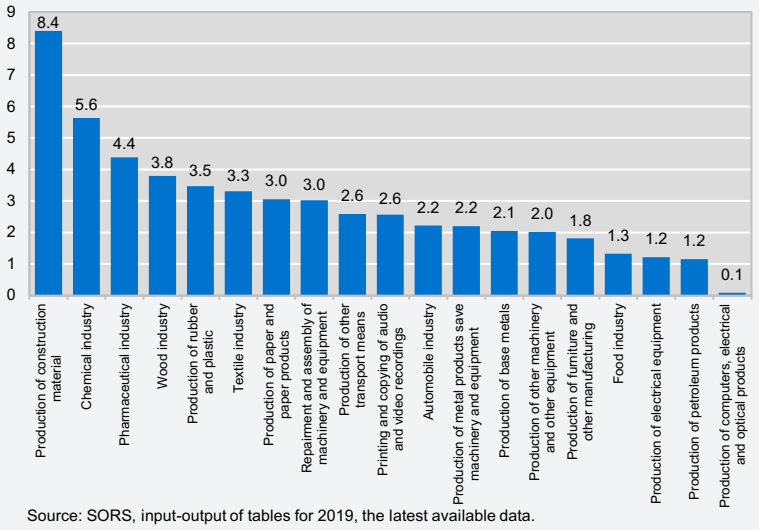
Chart O.4.2 **Share of electricity and gas costs in total intermediate consumption in key sectors**
(in %)



Source: SORS, input-output tables for 2019, the latest available data.
* Creative, art and entertainment activities; libraries, archives, museum galleries and collections, and other cultural activities; gambling and betting.

sectors – manufacturing, agriculture and construction, the share of electricity and gas costs is relatively low, less than 2.5%. However, it should be noted that the situation is significantly different in some branches of manufacturing, with the share of these costs being much higher than the average in the production of construction materials, chemical and pharmaceutical industries, followed by wood and textile industries, and production of rubber and plastic. The situation is similar in agriculture, where the share of gas and electricity costs, in total, is very small. However, in the production of mineral fertilisers, which are one of the key inputs in agricultural production, the share of gas costs makes from 60% to 80%[1] in total production costs. Also, the high share of gas and electricity costs in the production of construction materials drives the costs of the construction sector, although during construction works, electricity and gas do not hold a high share. The costs of petroleum products have the largest share in transport (primarily air transport), but the share is also relatively high in agriculture and trade (around 10%).

Chart O.4.3 **Share of electricity and gas costs in total intermediate consumption in key manufacturing branches**
(in %)



Source: SORS, input-output of tables for 2019, the latest available data.

However, when assessing the impact of higher energy prices on inflation, it should not be forgotten that higher energy expenditures reduce disposable income for consumption, and thus demand for other products and services, which partially compensates for the inflationary impact of higher energy prices.

It is difficult to estimate precisely the extent to which higher costs on account of rising energy prices would spill over to **GDP**. On the one hand, companies which are faced with rising production costs may decrease their production, especially in conditions where they are unable to fully translate rising costs (due to competition or administrative constraints) to higher prices of their products, which reflects negatively on GDP. On the other hand, the profitability of energy producers may increase, lending a boost to the volume of their production, which would partly compensate for the negative effects on GDP coming from the increased production costs of other companies. Moreover, one should bear in mind that even in the case of higher gas prices, the external competitiveness of domestic companies would be probably preserved, as competing companies from EU countries face a considerable increase in gas and electricity prices.

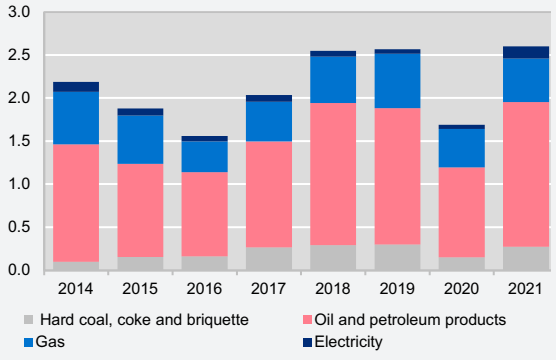
In terms of the **impact of energy crisis on the balance of payments**, it is necessary to keep in mind that in normal circumstances, Serbia is a net exporter of electricity and a net importer of crude oil and natural gas. Net electricity exports were positive in the previous years as well, despite increased consumption resulting from new investments in tradable sectors, and they ranged from EUR 16.7 mn in 2018 to EUR 55.0 mn in 2020. In 2021, the import of electricity exceeded the export by EUR 10.5 mn, amid unprecedented energy crisis and electricity price hike in the stock exchanges, as well as problems in domestic production, while the regular supply of electricity to corporates was uninterrupted. As for the period ahead, Serbia's growth dynamics is rather likely to have a similar impact on growing demand for electricity and its consumption, while the supply side is expected to activate new capacities within several projects still underway (CCPP Pančevo, Kostolac B3, new wind farms). Bearing that in mind, we estimate that net electricity exports could be positive in the coming years, similar to the period 2018–2020.

In the previous years the movement in global prices of crude oil and the associated prices of natural gas largely shaped the trends in the total current account of the balance of payments. Amid the pandemic in 2020, there was a decrease in

[1] https://www.jstor.org/stable/41322101;https://www.cambridge.org/core/journals/journal-of-agricultural-and-applied-economics/article/changes-to-the-natural-gas-corn-and-fertilizer-price-relationships-from-the-biofuels-era/1C0E7C415B04E10BFE0BBA54105A59A5.

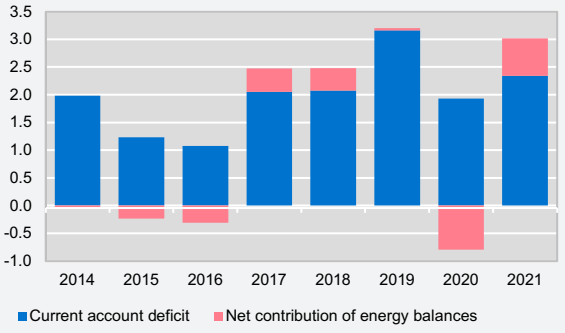
imports of crude oil and petroleum products, as well as natural gas, which, along with their falling import prices, led to the energy balance exerting a positive impact on the current account deficit by around EUR 710 mn, i.e. its share in GDP by around 1.5 pp. The effect of lower energy prices was around EUR 510 mn, and the effect of less imported quantities was around EUR 200 mn. In contrast, the gradual exit from the pandemic and the relaxation of containment measures sparked

Chart O.4.4 **Energy imports by component**
(in EUR bn)



Source: SORS.

Chart O.4.5 **Contribution of energy balance to current account deficit movements**
(in EUR bn)



Sources: SORS and NBS.

the demand for energy, as well as the prices of crude oil and natural gas in the global market in 2021, pushing up the current account deficit in Serbia by around EUR 600 mn, i.e. its share in GDP by around 1.1 pp (the price effect is estimated at around EUR 450 mn, and the quantity effect at around EUR 150 mn). Increased energy import at the end of the year was what also pushed the current account deficit in 2021 above our projections from the previous Report – to 4.4% of GDP, while we expected a deficit of around 4.0% of GDP.

As the domestic economy is likely to pick up at the annual rates of 4–5% and lead to higher imports of crude oil, petroleum products and natural gas, the current account deficit should widen on account of energy balance this and the next year, but less so than in 2021. If the crude oil price in the global market averaged around USD 85 per barrel in 2022 and around USD 78 per barrel in 2023, as in our medium-term inflation projection based on futures data, the net effect on the widening of the current account deficit would amount to around EUR 450 mn in 2022 (0.8% of GDP) and around EUR 100 mn in 2023 (0.2% of GDP). One should bear in mind that this is in line with our projection that the current account deficit will stay below 5% of GDP in the medium term, which assumes relatively high imports of equipment and intermediate goods (including energy) due to the intensification of the new investment cycle.

To conclude, although the movement of crude oil prices in global markets largely reflected on inflation movements in 2021, it may be said that the energy crisis from autumn and winter did not have significant direct effects that would further accelerate inflation. Also, so far there haven't been any major direct effects on GDP trends, while indirect effects manifested primarily through higher prices of imported products and therefore higher production costs. Higher energy prices led to an increase in energy imports and somewhat higher current account deficit in 2021. Even so, with the expected stabilisation of energy prices as of spring, their negative impact on the level of economic activity and inflation should be mitigated too.

V Projection

In 2022 and in the medium term, we expect the economic growth rate to range between 4 and 5%, supporting Serbia's continued convergence towards EU economies. Growth will be led by domestic demand, i.e. elevated private consumption, and fixed investment. The latter's share in GDP ought to reach 25% in 2022 and then rise beyond this level thanks to the anticipated implementation of large investment projects in the area of road, railway and utility infrastructure, as well as to the preserved investment confidence. In this and the next two years, we expect the contribution of net export to be mildly negative amid increased equipment import due to investment projects implementation, though export growth rates will also be relatively high, supported by capital inflow to mostly export-oriented sectors and the anticipated rise in external demand. The risks to the projection remain associated with the path of the pandemic and its impact on economic activity and inflation globally, including movements in commodity and financial markets. Overall, the risks to the projection are judged to be symmetric, with those from the international environment still slightly skewed to the downside and those from the domestic environment mildly tilted to the upside.

Under the central February projection, y-o-y inflation is expected to decline from Q2 and measure 3.5–4% at year end. It will then continue to slow and hover around the target midpoint until the end of the projection horizon. Inflation will slacken as last year's increase in petroleum product prices drops out of its y-o-y calculation, and prices of fruit and vegetables, as well as raw materials in processed food production, slide from their current high levels (resulting from last year's drought) with the arrival of the new agricultural season. The effects of stronger cost-push pressures from the international environment on different accounts – global primary commodity prices, global value chain disruptions, international transport costs, producer and import prices – are also anticipated to soften gradually. Uncertainties surrounding the inflation projection are still largely associated with the international environment, most notably the pace of global economic recovery and the duration of disruptions in global value chains, movement in world prices of energy and primary agricultural commodities, and the speed of normalisation of monetary policies of leading central banks. In part, the risks to the projection are also associated with the domestic market – the agricultural season, speed of recovery of demand and movement in administered prices. Overall, the risks to the inflation projection are judged to be slightly skewed to the upside.

Initial conditions and assumptions

Global economic growth lost further steam in Q4 amid global value chain disruptions, a sharp spike in energy prices and the spread of the Omicron coronavirus variant, prompting slight downward revisions of the 2022 global growth outlook. In its January estimate, the World Bank put 2022 global growth at 4.1%, down by 0.2 pp from what was expected earlier. Global growth is anticipated to slow to 3.3% in 2023, reflecting reduced monetary policy support in the face of elevated inflationary pressures, and less scope for fiscal policy measures in many countries. In its January WEO, the IMF revised down its global growth outlook for 2022 relative to three months ago, expecting it to measure 4.4% this year or 0.5 pp less than anticipated in October. This mostly reflects the reinstatement of containment measures and lockdowns in some economies. US growth assumptions were revised down the most (by 1.2 pp) due to smaller than anticipated fiscal

Table V.0.1 **Revision of IMF forecasts of real GDP growth for 2022 and 2023**
(in %)

	2022		2023	
	Previous projection	New projection	Previous projection	New projection
World	4.9	4.4	3.6	3.8
Euro area	4.3	3.9	2.0	2.5
Germany	4.6	3.8	1.6	2.5
Italy	4.2	3.8	1.6	2.2
USA	5.2	4.0	3.0	2.6
Russia	2.9	2.8	2.0	2.1
China	5.6	4.8	5.3	5.2

Sources: IMF WEO (January 2022) and IMF WEO (October 2021).

Table V.0.2 **Key projection assumptions**

	2022		2023	
External assumptions	Nov	Feb	Nov	Feb
Euro area GDP growth	4.4%	4.0%	1.9%	2.5%
Euro area inflation (average)	2.0%	3.1%	1.5%	1.6%
3M EURIBOR (December)	-0.3%	-0.2%	0.0%	0.4%
International prices of primary agricult. commodities (Q4 to Q4)*	-8.6%	-3.6%	-5.8%	-5.1%
Brent oil price per barrel (December, USD)	75	81	70	75
Internal assumptions				
Administered prices (Dec. to Dec.)	4.0%	5.0%	4.0%	4.5%

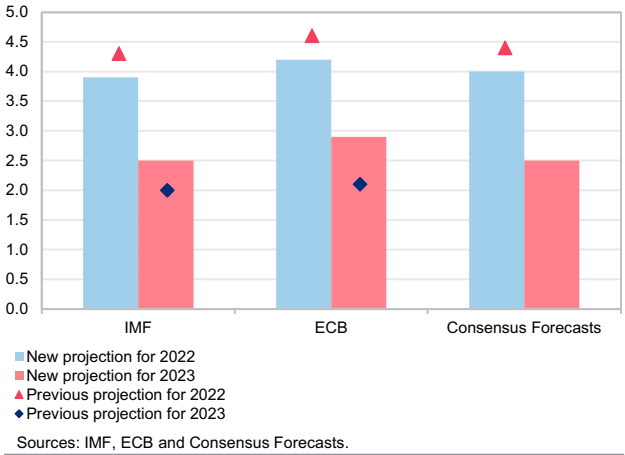
* Composite index of soybean, wheat and corn prices.
Sources: ECB, Consensus Forecasts, Euronext, CBOT, Bloomberg and NBS.

Table V.0.3 **Economic growth estimate by country**
(real growth, in %)

	October 2021	January 2022	
	2022	2022	2023
Poland	5.1	4.7	4.0
Czech Republic	4.8	4.2	3.9
Hungary	5.2	4.9	3.8
Romania	4.7	4.5	4.4
Slovakia	4.6	4.2	4.4
Slovenia	4.2	4.0	3.4
Croatia	4.5	4.6	3.7
Bulgaria	3.8	3.6	3.8
Albania	4.1	4.0	3.9
Bosnia and Herzegovina	4.2	3.5	3.3
North Macedonia	4.1	4.1	3.5
Montenegro	5.2	5.1	4.0

Source: Consensus Forecasts.

Chart V.0.1 **Revisions of euro area GDP growth projections for 2022 and 2023**
(in %)



Sources: IMF, ECB and Consensus Forecasts.

support, earlier withdrawal of monetary accommodation by the Fed and continued negative effects of global value chain disruptions. China's growth was also revised notably (by 0.8 pp) amid problems in property development and less investment expected in this sector, as well as reintroduced mobility restrictions due to China's zero-tolerance COVID-19 policy. Global growth for 2023 has been revised up (by 0.2 pp to 3.8%) as a result of lower anticipated growth this year, i.e. deferral of growth acceleration until H2.

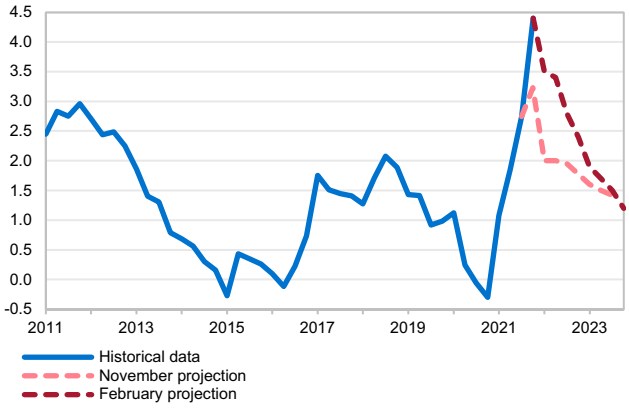
The **euro area,** our most important trade partner, was also affected by the above factors, including the spread of the Omicron variant, production bottlenecks and the energy crisis. This led to the reinstatement of containment measures in some countries and a further slackening of growth. Euro area's GDP grew by 0.3% s-a in Q4 2021. In terms of individual economies, France, Italy and Spain saw faster than anticipated growth in Q4, whereas Germany's growth dipped by 0.7% s-a, mostly on account of a hefty share of industry which suffered the consequences of value chain bottlenecks and shortages of raw materials. In its January forecast, Consensus Forecasts expects euro area to post growth of 4.0% this and 2.5% next year, which are the assumptions we used in our current projection. The IMF's expectations are similar. Growth in 2022 has been revised down by 0.4 pp from the previous *Report*, as containment measures are expected to dent personal consumption in Q1 as well and, by extension, also service sector activity. Savings accumulated during the pandemic should then support a speedier increase in consumption. Growth in Germany, which is our most important individual trade partner in the euro area, was revised down. Though it is expected to gather momentum this year, Germany's industrial sector growth has been affected by the extended effects of bottlenecks and shortages of some inputs in production and is now slower than anticipated three months ago which, given the high share of industry in GDP, has also reflected on total GDP. According to Consensus Forecasts, Germany is expected to grow by 3.7% this year, instead of 4.4% as was projected three months ago. Relative to October, Italy's growth forecast for this year was also revised down slightly (by 0.1 pp to 4.2%).Italy's economic growth will be supported by greater use of EU funds which will spur a rise in fixed investment, as well as by industrial sector growth. Despite higher rates of infection, more restrictive measures are unlikely as the symptoms of the Omicron variant are less severe.

Relative to the previous *Report*, Consensus Forecasts also revised down its 2022 GDP growth projection **for most countries of Central and Southeast Europe**, which are

Serbia's important trade partners. Central Europe is expected to post growth of 4.5% this year, down by 0.5 pp relative to the previous projection, while South Europe's growth is projected at 4.3%, which is slightly lower than in the previous projection. Similar growth rates are expected in both groups of countries next year – 3.9% and 4.1%, respectively. The speed of recovery of this region will depend primarily on the pace of recovery of the euro area which is its most important trade partner, vaccine rollout and efficiency in suppressing the spread of new virus strains, the possibility to use EU funds, and monetary policy measures taken in the face of mounting inflationary pressures.

Inflation continues to outstrip expectations in most countries and inflation projections for the coming period are being revised depending on the underlying factors. Supply disruptions caused by the renewed spread of the virus and adverse weather in many countries triggered shortages of key inputs in production. Problems in logistics and labour force shortfalls continue to place pressure on international transport prices, despite their constant growth since mid-2021. This mix of factors, together with elevated demand and the surge in global prices of primary commodities, generated inflationary pressures not seen for a long time. In late 2021, consumer price growth in the USA was thus the highest since 1982, in the euro area – since 1999 (the year euro area was launched), and in Germany, euro area's largest member – since 1992.

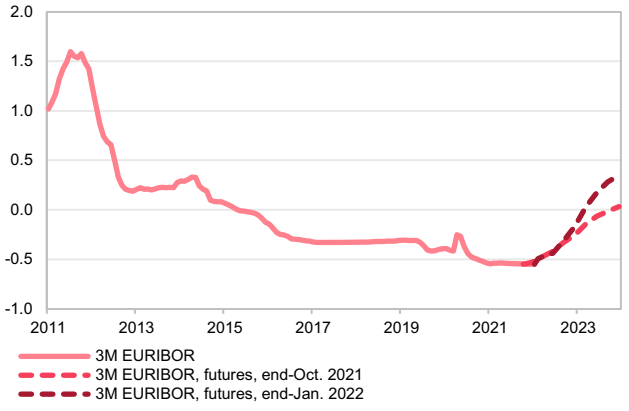
Chart V.0.2 **Assumption for euro area inflation**
(y-o-y growth, in %)



Source: NBS calculation based on projections of relevant institutions.

Global inflationary pressures are expected to subside gradually this year and inflation is anticipated to approach target levels. This will be supported by a high base, i.e. the dropping of one-off pressures resulting from primary commodity price growth out of y-o-y inflation, and the anticipated normalisation of global production chains. When it comes to global production chains, signs of improvement are reflected in reduced order waiting time and diminished transport costs.

Chart V.0.3 **Expected 3M EURIBOR**
(p.a., in %)



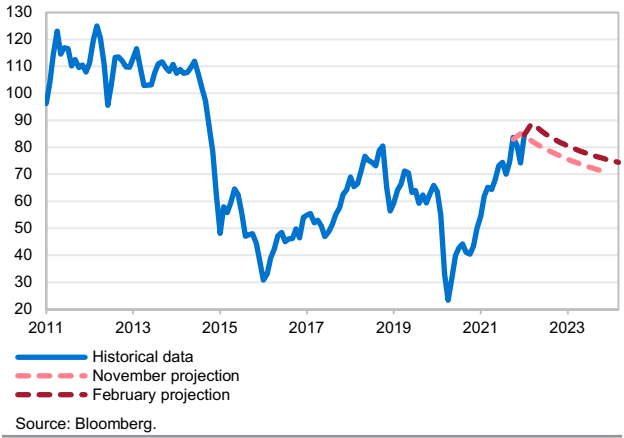
Source: Bloomberg.

Over the past few months, a number of central banks, particularly in emerging countries, responded to rising inflation by raising their policy rates. Advanced economies' central banks mostly responded by revising their quantitative easing programmes. In November, the **Fed** first decided to begin reducing the volume of its asset purchases under the QE programme by USD 15 bn per month, only to double this amount to USD 30 bn in December. At this pace, net purchases are set to be wound down by March 2022, creating space for raising the Fed funds rate, which was announced by the Fed's chair in January. According to December projections, the Fed officials expect three rate hikes in 2022 and 2023 each,

and two in 2024. In addition to high inflation, the first rate hike, which is increasingly likely to happen in March, is also supported by a decline in US unemployment to below 4%.

Inflation pressures in the euro area are more moderate and so are the **ECB's** decisions and rhetoric compared to the Fed's. In its December meeting, the ECB decided to wind down its pandemic emergency purchase programme (*PEPP*) by March, but also to temporarily increase the pace of its longer-term asset purchase programme (APP) from EUR 20 bn to EUR 40 bn in Q2, and to EUR 30 bn in Q3, in order to return to EUR 20 bn from October. The ECB has still not announced a tightening of its monetary policy, but has pointed out in its January meeting that future monetary policy decisions will depend on developments going forward, and stressed its readiness to respond if necessary. Consistent with futures, our projection assumes that the three-month EURIBOR will be higher though still negative this year, and that it will turn positive during 2023.

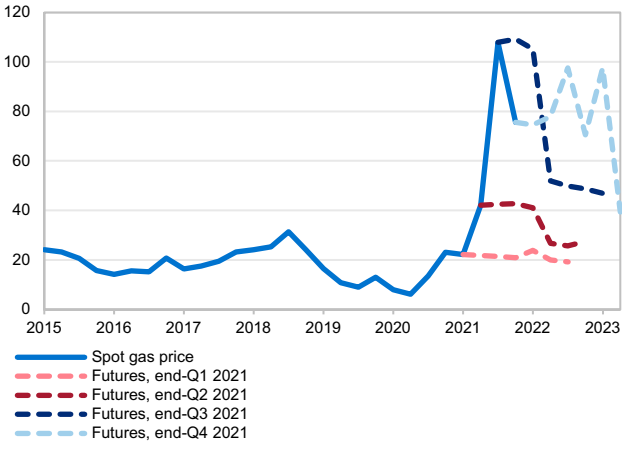
Chart V.0.4 **Assumption for Brent oil prices**
(USD/barrel)



Source: Bloomberg.

Global oil prices, which have been rising since May 2020, hit their seven-year high in early 2022. After the energy crisis, which in September and October last year pushed oil prices up to around USD 85 per barrel, initial fears of the Omicron variant slashed the oil price to USD 70 per barrel in November. As it became clearer that the new variant would not have dramatic consequences for the economy, the oil price recovered gradually. Together with geopolitical tensions and the refusal of OPEC+ countries to respond to stronger demand by notably raising supply, this pushed the oil price up to around USD 90 per barrel in January, its highest level since 2014. Consistent with market expectations (oil futures) which we use as our projection assumption, the global oil price will edge down gradually to USD 81 per barrel in late 2022 and USD 75 per barrel in late 2023. This is somewhat higher than our November projection.

Chart V.0.5 **Benchmark natural gas price for Europe, Dutch TTF hub**
(EUR/MWh)



Source: Reuters.

Global **natural gas prices** recorded a powerful upsurge in prior months, under the impact of numerous supply- and demand-side factors. Though in late October the benchmark natural gas price for Europe (at the Dutch TTF hub) decreased, low inventories and stronger gas demand in winter months pushed it further up to a new record-high in mid-December. It declined again late in the year, as part of the inventories initially intended for the Asian market was redirected to Europe and weather conditions were favourable. However, heightened geopolitical tensions in January worked in the opposite direction. In response to the spike in natural gas prices, prices of electricity and coal, as alternative energy sources, also continued up. This has most probably contained

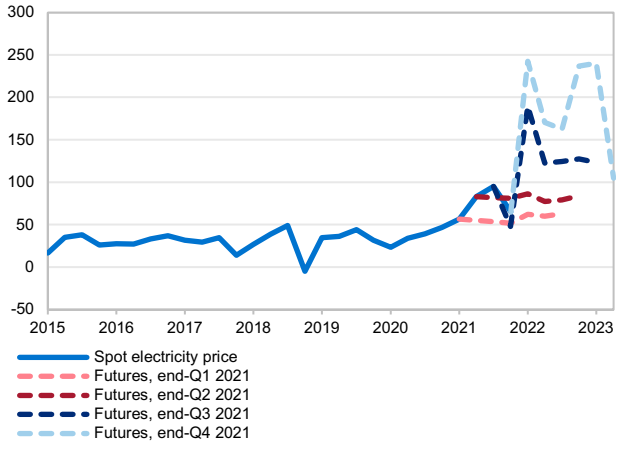
production volumes in some highly energy-intensive areas of manufacturing in the euro area in the prior months, which could extend the duration of global value chain disruptions and has already triggered an increase in producer and import prices (euro area industrial producer prices reached 26.2% y-o-y in December).

Thanks to contracts signed with Russia which are in effect until the middle of this year, i.e. in the period when risks of rising global gas prices are at their highest, Serbia will pay for most of its gas at a price unchanged from last year, so no major disruptions to the domestic economy are expected on this account. By contrast to natural gas, **the electricity price** increased by around 50% for the domestic corporate sector, but the Government decided to cap this price in the coming six-month period. Higher electricity outlays of the domestic corporate sector could produce indirect effects of inflation, but they differ from company to company, depending on the share of electricity expenses in its total expenses. When it comes to other macroeconomic effects, disruptions in the domestic energy supply system at the turn of the year resulted in subdued coal and electricity production. This has led to higher import of both coal and electricity, slashing the contribution of net export to GDP growth, and pushing the current account deficit in 2021 slightly above the projected level.

Our projection assumes that, going forward, global prices of natural gas and electricity will move in line with the futures. Consistent with futures, these prices are expected to decline from spring onwards, though they will probably remain higher than expected three months ago until the end of the projection horizon. It should also be noted that the natural gas price in Serbia will probably continue to be lower than the stock market price in the future period as well, and that it will partly be determined also on the basis of movement in global oil prices, as was the case so far.

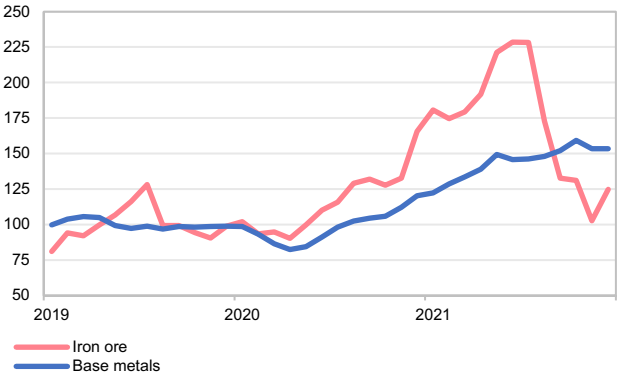
After posting robust growth in the prior period, **global prices of metals** levelled off in H2 2021, though they diverged substantially. Tin and aluminium continued up – the former because of higher electronic industry demand and continued value chain disruptions, and the latter because of China's decision to downsize production amid electricity shortages. After hitting record-high levels in July, the iron ore price fell sharply reflecting downsized steel production in China, and the copper price also declined as China's growth slowed. As global growth stabilizes and supply disruptions are removed, metal prices are expected to subside, though they will remain quite volatile going forward under the impact of environmental factors.

Chart V.0.6 **Benchmark electricity price for Europe, German power baseload**
(EUR/MWh)



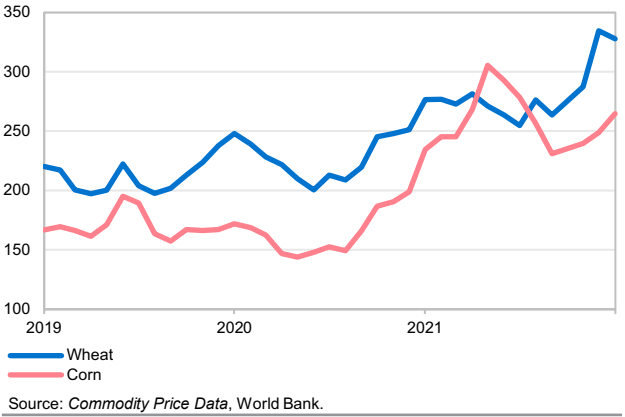
Source: Reuters.

Chart V.0.7 **Iron ore and base metal prices in the global market**
(index points, 2019 = 100)



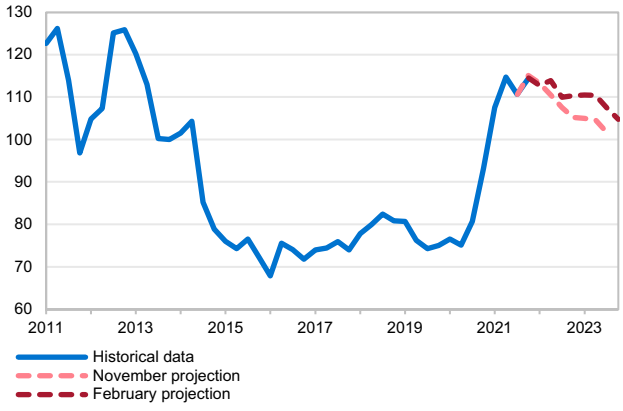
Source: *Commodity Prices*, World Bank.

Chart V.0.8 **Wheat and corn prices in the global market**
(USD/mt)



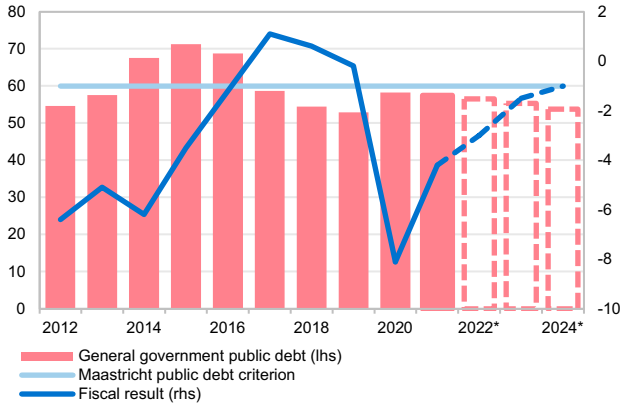
Source: *Commodity Price Data*, World Bank.

Chart V.0.9 **Assumption for international prices of primary agricultural commodities**
(Q4 2013 = 100)



Sources: CBOT, Euronext and NBS calculation.

Chart V.0.10 **Budget balance and general government public debt**
(in % of GDP)



Source: Ministry of Finance.

* Projection from the revised Fiscal Strategy for 2022 with Projections for 2023 and 2024.

Global prices of **primary agricultural commodities** have been rising moderately since the last *Report* and are currently at their highest level since 2013. After growing by 23% last year, prices of primary agricultural commodities are projected to decline moderately by around 4% during 2022 as supply conditions improve with the arrival of the new agricultural season and energy prices stabilize. Our projection of these prices relies on futures data from global stock exchanges. Consistent with this, we expect **prices of primary agricultural commodities in the domestic market,** which mirror movements in their global counterparts, to display similar dynamics. Prices of agricultural commodities are projected at a somewhat higher level relative to the previous projection.

When it comes to factors from the domestic environment, **the medium-term fiscal framework**, defined in the revised Fiscal Strategy for 2022 with Projections for 2023 and 2024, sets out a more restrictive fiscal policy than in the past two years, despite the continuation of relatively high **government capital investment expenditure** (projected at around 7% of GDP) and increased investment in the health system. This has been made possible by the previously adopted set of measures which preserved production capacities and jobs and, by extension, generated higher revenues. Going forward, **pensions and public sector wages** are projected to **increase moderately**, while **corporates' tax burden** will be somewhat reduced. Altogether, this should help sustain the living standard of households and provide more funds for new investment. At the same time, the projected narrowing of the general government deficit from around 3% of GDP this year to around 1% in 2024 and its turning into a primary surplus ought to ensure a **sustainable return of public debt to a downward trajectory**, as well as support the flexibility of public finances and the capacity to respond to potential new external shocks or crises. A responsible fiscal policy combined with a favourable growth outlook and preserved macroeconomic stability should also contribute to lower **risk premium of the country and the attainment of investment-grade rating** expected in the projection horizon.

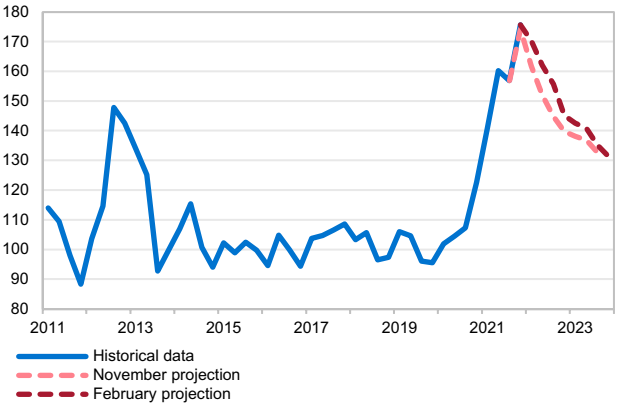
According to our estimate, **wage growth** this year will be somewhat faster in the **private** than in the public sector, sustained also by a higher minimum wage (RSD 201.22 per hour). As employment continues up, **total wage bill** will increase by around12%. Similar dynamics are expected in the medium term as well.

Our new projection assumes that this year's **agricultural season** will be average. This is our assumption for the coming years as well. Since due to adverse weather

conditions last year's agricultural season was roughly 5% lower, this year we expect agriculture to provide a mild positive contribution to GDP. With the arrival of the new agricultural season, cost-push pressures in the production of processed food and meat are expected to ease, while fruit and vegetable prices should be lower than last year.

The projection assumes **administered prices** to increase by 5.0% in 2022, similarly as last year, but more than we assumed in our previous projection. For this year, the projection assumes a revision of gas and electricity prices for households and utility services, reflecting higher global energy prices, as well as a rise in prices of cigarettes, in line with the excise tax calendar. Administered prices are projected to go up by 4.5% next year.

Chart V.0.11 **Assumption for domestic prices of primary agricultural commodities***
(Q4 2013 = 100)



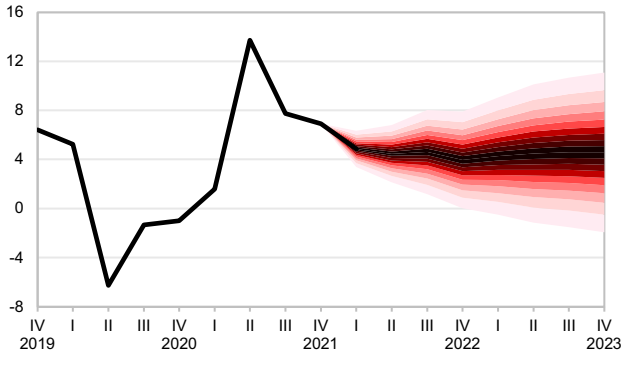
Sources: Commodity Exchange Novi Sad, CBOT, Euronext and NBS calculation.
* Measured by the composite index of wheat, corn and soybean prices.

GDP projection

Serbia's GDP maintained its relatively powerful growth dynamics in Q4 2021 as well, posting quarterly growth of 1.6% s-a, according to NBS estimates. At year-end, GDP was more than 5% above its pre-crisis level. On the expenditure side, growth was led by fixed investment amid robust FDI inflow and increased execution of government capital expenditures, as well as by consumption, thanks to favourable trends in the labour market.

As in the preceding three quarters, fourth-quarter GDP growth outstripped our expectations. According to the initial SORS estimate, it measured 7.5% at year level. This is more than we projected in our previous *Report* (6.5–7%), as we at the time assumed that activity in Q4 would reflect problems in global production and transport chains, worsening of the epidemiological situation in autumn in many European countries and tightening of containment measures. Faster than anticipated growth was largely due to service sectors, hit particularly hard by the first stage of the pandemic, followed by construction, manufacturing – despite persisting global value chain disruptions, and mining. Only agricultural production provided a negative contribution to growth, declining by 5% due to the drought.

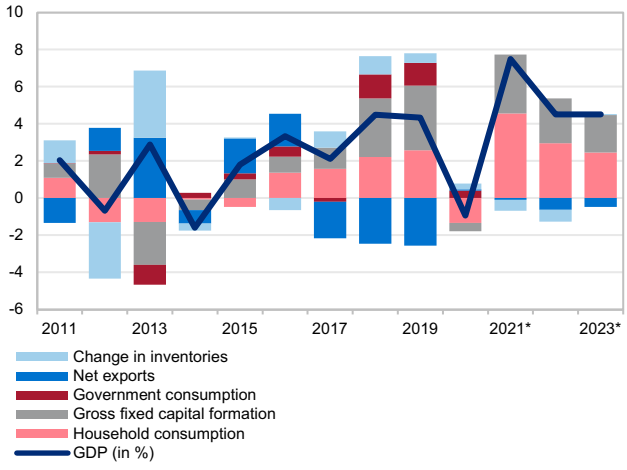
Chart V.0.12 **GDP growth projection**
(y-o-y rates, in %)



Source: NBS.

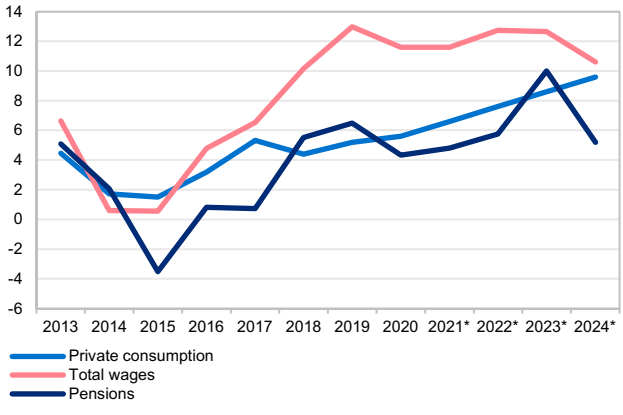
In 2022 and in the medium term, GDP growth is expected to range between 4% and 5%. A more favourable medium-term outlook is also supported by the anticipated implementation of planned projects, mostly in the area of road, railway and utility infrastructure. This refers to over 40 projects planned to be implemented in the next ten years, worth a total of around EUR 25 bn (gross value added of around EUR 5 bn). This should result in roughly

Chart V.0.13 **Contributions to real GDP growth**
(in pp)



Sources: SORS and NBS.
* NBS estimate.

Chart V.0.14 **Rate of growth in private consumption and its sources**
(y-o-y rates , in %)



Sources: SORS and NBS calculation.
* NBS estimate

0.5 pp higher GDP[14] growth at year level. Faster than anticipated economic growth recorded in Q4 2021 due to the carry over effect and estimated at around 2% makes it more likely that our GDP growth projection for this year will materialise.

According to our estimate, the largest contribution to GDP growth this year and in the medium term will come from **personal consumption. Going forward, it should rise more slowly than total GDP, ensuring economic growth sustainability**. It is estimated to provide a contribution of around 3.0 pp this year and around 2.5 pp in the medium term as a result of the anticipated continuation of wage and employment growth, particularly in the private sector, which is also sustained by a rise in the minimum labour cost. Consumption growth will be further propped up by reduced propensity for precautionary savings and the spending of savings built up during the initial stage of the pandemic. Pensions, as another important source for consumption, will go up due to the application of the so-called Swiss formula (by 5.5% this year). In February, pensioners will also receive a one-off payment of RSD 20 thousand. Direct fiscal stimuli will include the payment of assistance equivalent to EUR 100 to young people, and incentives to promote childbirth. Thanks to continuing favourable terms of lending and the easing of credit standards evident from the results of the bank lending survey, moderate growth in loans intended for consumption is expected to continue as well.

A mildly positive contribution to GDP in this and the coming years is also expected to come from **government consumption** (around 0.5 pp p.a.) amid substantial planned outlays for healthcare. We expect that, in line with the Fiscal Strategy, outlays for wages and procurement of goods and services will rise at a moderate and measured pace, and that care will be taken that their share in GDP does not increase.

Given the announced new infrastructure projects and the anticipated continuation of relatively strong FDI inflows, we expect the **contribution of fixed investment to economic growth to stay relatively high both this year and in the medium term (close to 2 pp on average per annum)**. As a result, the share of fixed investment in GDP is anticipated to exceed the desirable level of 25% in 2022 and continue up. Though disposable income for investment is currently affected by higher production costs due to elevated prices of energy and raw materials, own sources remain the key factor behind **private**

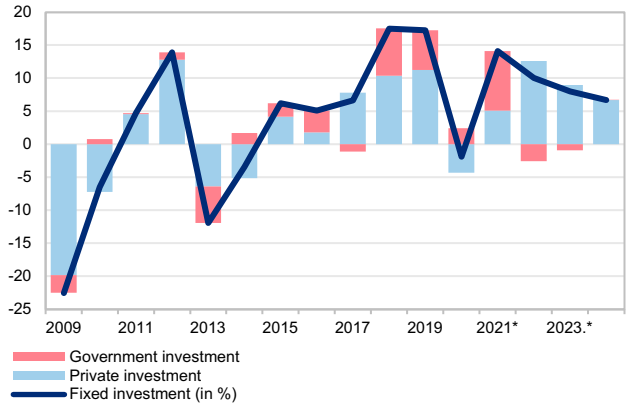
[14] For more details, see: Text box 2, *Inflation Report* – August 2021, page 33.

investment growth, thanks to preserved production capacities and jobs during the pandemic as a result of timely taken, robust monetary and fiscal policy measures. Private investment growth is supported by the preserved macroeconomic stability and the favourable investment environment reflected in high FDI inflow which over the past years exceeded our expectations, was diversified by project and mostly directed at tradable sectors. In the medium term, we have kept our relatively conservative assumption of FDI inflow of around 5% of GDP. Funds for new investments in property development and transport and utility infrastructure will also come from loan sources, although a gradual normalisation of the ECB's monetary policy is expected in the medium term, possibly inflating the cost of borrowing in a foreign currency. The GDP share of **government investment** will stay at around 6–7% in the medium term, though its contribution to GDP this and the next year is expected to be slightly negative due to the previous year's high base.

In this and the next two years, we expect the **contribution of net export to GDP to be mildly negative** amid higher import of equipment for investment projects implementation. Relatively robust export growth rates will be supported by capital inflow to mostly export-oriented sectors and the anticipated rise in external demand. We therefore expect the share of the current account deficit in GDP this year and in the medium term to move below 5% of GDP, while remaining fully covered by net FDI inflows as in the past seven years.

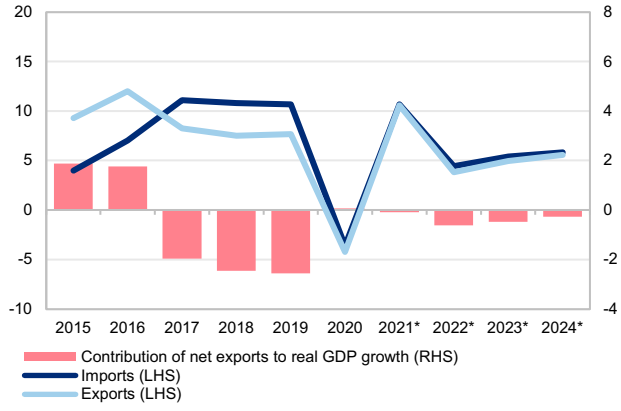
On the **production side**, due to their high share in the composition of GDP and in the context of continued growth in personal consumption, service sectors are expected to provide the strongest positive contribution to GDP growth. A positive contribution will also come from manufacturing, though it will be slightly lower than expected due to supply-side limitations and elevated production costs. Manufacturing industry growth will be propped up by the activation of new and expansion of existing capacities on the supply side, and by the economic growth rebound of our main foreign trade partners on the demand side. Activity growth in the mining sector is faster than anticipated, primarily due to the activation of new production capacities and rising exploitation of copper ore. A similar contribution as that of industry is expected to come from construction, supported by the implementation of infrastructure projects, primarily in road and utility infrastructure, and higher demand for real estate.

Chart V.0.15 **Fixed investment**
(y-o-y growth, in pp)



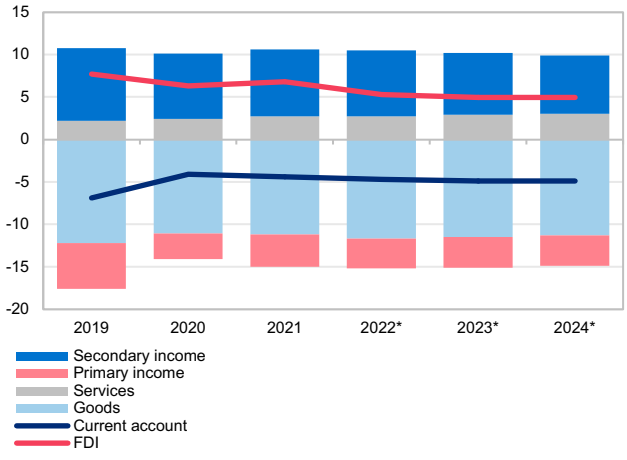
Sources: SORS and NBS calculation.
* NBS estimate.

Chart V.0.16 **Real export and import growth**
(y-o-y rates, in %) (in pp)



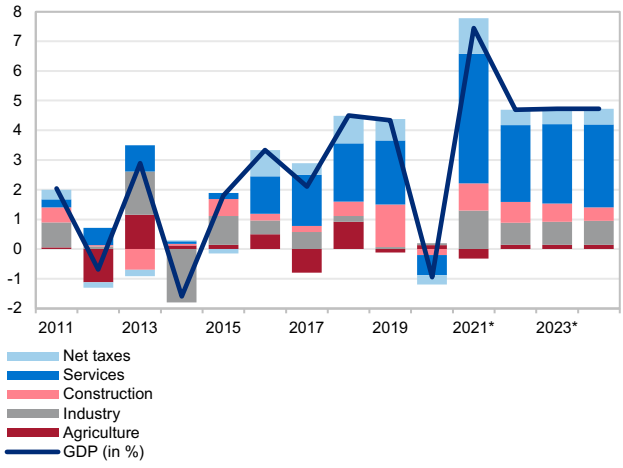
Sources: SORS and NBS.
* NBS estimate.

Chart V.0.17 **Current account and FDI projection**
(in % of GDP)



Source: NBS.
* NBS projection.

Chart V.0.18 **Contributions to real GDP growth, production side**
(in pp)



Sources: SORS and NBS.
* NBS estimate.

Overall, the risks to the GDP projection are judged to be symmetric.

The risks to the projection associated with the **international environment are judged to be skewed to the downside**. The IMF and the World Bank estimate that the risks to **global growth are tilted to the downside**, as its outlook will greatly depend on the path of the pandemic and the pace of vaccination, impact of the Fed's monetary policy measures on global financial conditions, speed of resolution of global value chain disruptions, pressures from the labour market in the direction of wage growth and, by extension, inflation, and the impact of the situation in China's property market on its growth outlook and, in turn, on global growth. Lower global growth would result in subdued external demand which could lead to diminished export and manufacturing output in Serbia, while its acceleration, propped up by the announced lifting of all containment measures in some countries (UK, France, Ireland, Denmark) would have the opposite effect.

Particularly relevant for Serbia is **euro area's economic growth outlook**, given our strong trade and financial ties with this region. In addition to the effects which euro area demand has on export and manufacturing output, production costs at home will also reflect the **pace of resolution of global value chain disruptions and the energy crisis** in the euro area, through its impact on the availability and prices of imported raw materials. In case global value chain disruptions and the energy crisis are extended, inflationary pressures in the euro area could become more durable, which would lead to higher production costs in Serbia and lower economic growth.

If inflationary pressures prove to be more durable, **monetary policies worldwide could be tightened** sooner and more than expected, which would negatively affect global financial conditions and capital flows to emerging economies, including Serbia. On the other hand, slower global economic growth would mean that the Fed and the ECB would pursue an accommodative monetary policy longer than expected. Liquidity in the international financial market would in that case remain high for a longer period of time, which would reflect positively on capital flows to emerging economies, including Serbia.

Uncertainty surrounding the projection still largely stems from **global prices of primary commodities,** which are affected by numerous supply- and demand-side factors. On the one hand, lower global growth could induce a fall in prices of primary commodities. Unfavourable meteorological conditions could, on the other hand, result

Table V.0.4. **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 global course of the pandemic	The spread of new virus strains and the worsening of the epidemiological situation dampen the global growth outlook, while speedier vaccine rollout and the lifting of containment measures would work in the opposite direction. A slower global recovery would lead to a slackening of external demand, lower Serbian exports and slower growth in manufacturing, and vice versa.	↕
Speed of resolution of global production and supply chain disruptions	Extended global value chain disruptions would lead to lower export and manufacturing output.	↓
Gas and electricity prices in the global market	A rise in the global price of gas and electricity would increase production costs, leading to lower production volumes.	↓
Capital flows, relations of main currencies in the international financial market, monetary policies of leading central banks	Slower global economic growth would mean that the Fed and the ECB should continue to pursue an extremely expansionary monetary policy going forward as well. Conversely, if global supply chain disruptions and the energy crisis are extended, global inflationary pressures could become more durable, leading to sooner than anticipated tightening of the Fed's and the ECB's monetary policies.	↕
Prices of primary commodities: – crude oil (Serbia is a net importer) – cereals (Serbia is a net exporter) – base metals (Serbia is a net exporter)	A rise/fall in oil prices would decrease/increase the disposable income and increase/decrease operating costs. A rise/fall in prices of base metals and cereals would increase/decrease exports.	↕
Domestic environment		
Higher than projected FDI inflows	Higher than projected FDI growth would contribute to faster growth of industrial production and exports, as the bulk of FDIs is directed into manufacturing, and vice versa.	↑
Additional fiscal support (tax facilities/increased outlays)	Additional fiscal support to corporates and households (either through higher tax facilities or increased outlays), together with a preserved labour market, would lead to higher disposable income and, by extension, investment and consumption. Capital expenditures growth in particular could be higher than anticipated.	↑
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.

in reduced supply of primary agricultural commodities and higher demand for energy, gas in particular. Moreover, a heightening of geopolitical tensions could cause energy prices to go up further, while their resolution would work in the opposite direction. Serbia is a net importer of oil and natural gas and exporter of metals and cereals. Therefore, elevated global prices of primary commodities would lead to higher production costs and lower disposable income for investment on the one hand and stronger export of agricultural products and metals on the other hand. We judge the risks on this account to be equally pronounced in both directions.

In our assessment, **the risks from the domestic environment are** mildly **tilted to the upside**, primarily as FDI inflows could be higher than anticipated thanks to the favourable macroeconomic outlook of the country, as was the case in prior years. Since higher than expected FDI growth would support a further expansion of production capacities, manufacturing industry output and export could record stronger growth on that account as well.

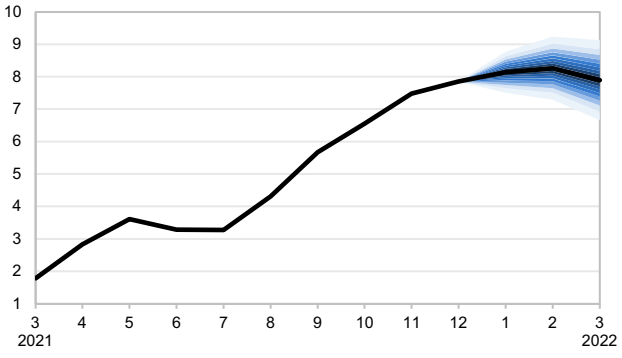
If fiscal revenues, which in our view have been quite conservatively projected for the coming period, **performed better than expected**, this would create additional scope for domestic demand growth. This refers primarily to government investment, given the need for further infrastructure development and the implementation of green economy projects, and less to consumption. On the other hand, **the duration of the pandemic could be extended and new virus strains might emerge**, possibly leading to further refrainment from consumption and build-up of precautionary savings.

Another risk to the projection is **agricultural production**, which we assumed to be average next year. Given their great dependence on meteorological conditions, shifts in agricultural production and export are equally possible in either direction.

Inflation projection

Short-term inflation projection

Chart V.0.19 **Short-term inflation projection**
(y-o-y rates, in %)



Source: NBS.

Under the central projection, headline inflation will increase slightly in the first two months of the year and return to around its December level in March.

A further mild rise in y-o-y inflation in Q1 will reflect elevated costs in processed food production and, to a smaller degree, also core inflation growth, which will be moderated as last year's increase in prices of petroleum products and electricity drops out of the y-o-y calculation.

In the short term, the risks to the inflation projection are mostly associated with unprocessed food prices and movement in global prices of oil and other primary commodities.

Medium-term inflation projection

Under the central February projection, we expect y-o-y inflation to be on a declining path from Q2 and measure 3.5–4% late in the year. It will then slow and hover around the target midpoint.

Such projection is supported by the assessment that most factors behind higher than expected inflation growth in the prior period are temporary in character and that their effect should gradually wear off and dissipate before the end of the current year.

Compared to our previous projection, we expect inflation to move at a slightly higher level during 2022. Somewhat higher projection reflects the stronger than expected increase in consumer, primarily processed food, prices in

Q4. Higher projected inflation is also the result of the assumed increased global prices of primary agricultural commodities and other costs in food production which have risen relative to the previous projection (most notably the hike in mineral fertiliser prices), pushing up the food inflation projection (excluding fruit and vegetables). Imported inflation is also higher than in our previous projection amid persisting global value chain disruptions and a lack of logistics capacities, particularly in major world ports, resulting in elevated non-food inflation.

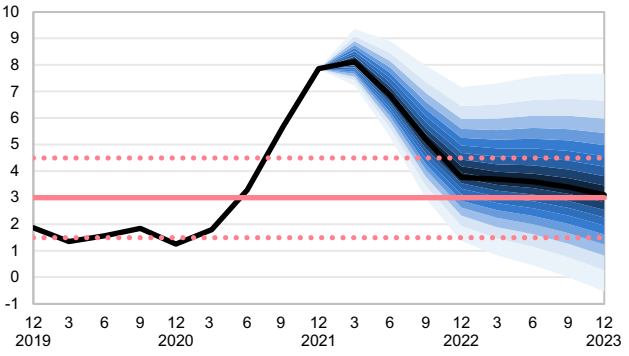
Prices of fruit and vegetables should contribute most to inflation decline in the current year. After growing robustly last year due to drought and high summer temperatures, these prices are extremely high. If the new agricultural season is average, prices of fruit and vegetables should go down. As of Q2, this should lead to a powerful decline in the contribution of this group of prices to y-o-y inflation, which ought to turn negative from mid-year.

The high base will be an important factor behind the diminished contribution of **petroleum product prices** as well. Though continued growth in global oil prices triggered petroleum product price hikes in the current quarter, they are lower than a year ago and the contribution of this group of prices to y-o-y inflation is subsiding. It should recede further in the coming quarters, as prices of petroleum products were rising for most of the last year, which will gradually drop out of the y-o-y calculation.

Rising costs in food production, resulting from elevated global prices of oil and primary agricultural commodities (corn, wheat, soybean), pushed up **food inflation** at home. Surging global prices of gas and coal indirectly induced a rise in prices of mineral fertilisers. We estimate that the indicator of cost-push pressures in food production (excluding fruit and vegetables) – the real marginal costs gap (measured by deviation from trend of the ratio of input prices to prices of final food products) – is at its highest level since 2013 and has made a key contribution to projected growth in food product prices. Notable departure of this indicator from its neutral level customarily signals its expected decline in the future and a lessening of cost-push pressures on food prices, which could set food inflation on a downward path in H2 2022.

Non-food inflation will be the last inflation component to start declining. The prices of this product category depend on the prices of numerous import components and raw materials and the functioning of global value chains. For this reason, we expect the rise in non-food

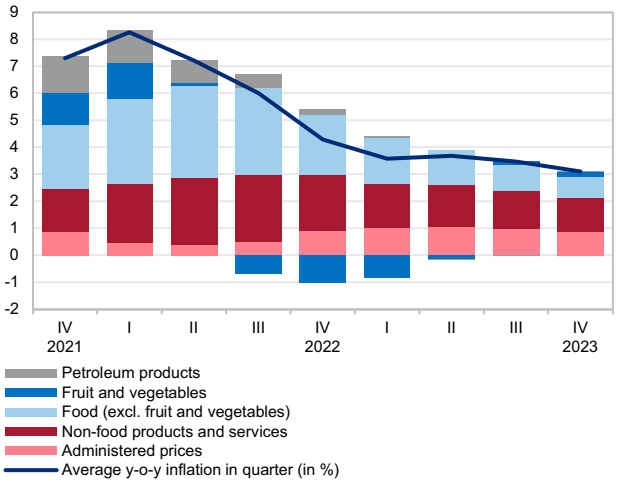
Chart V.0.20 **Inflation projection**
(y-o-y rates, in %)



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%.

Chart V.0.21 **Contributions to y-o-y inflation by component**
(average y-o-y rates, in pp)

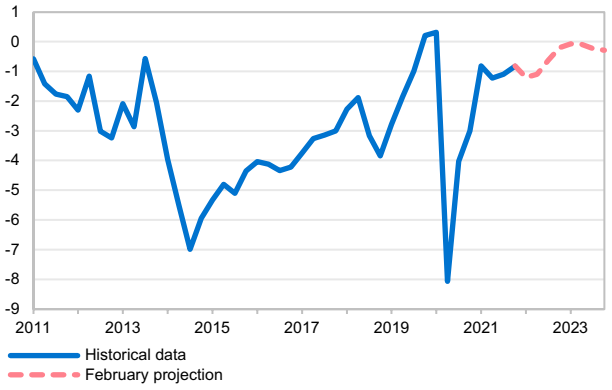


Source: NBS.

inflation, which was particularly pronounced in the last four months of 2021, to continue going forward amid higher imported inflation and raw material shortages, as well as elevated energy and transport prices. Moderation of global value chain disruptions expected this year ought to help relieve pressure on domestic prices of non-food products. Still, since the impact of costs on prices of these products is reflected only gradually, this CPI category is not expected to decline to any major degree in the current year.

By contrast to other inflation components, we assume that the contribution of **administered prices** in 2022 will remain broadly unchanged from last year.

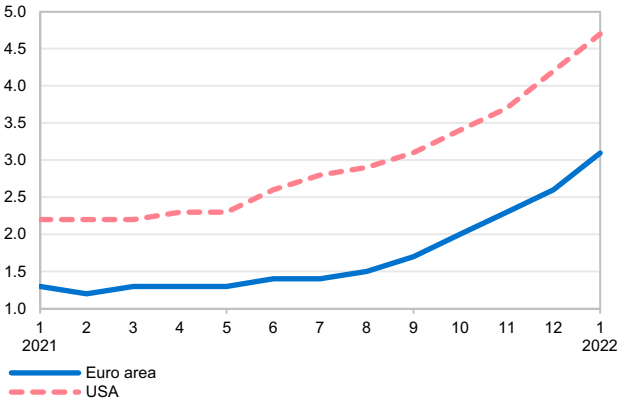
Chart V.0.22 **Output gap projection***
(in % of potential output)



Sources: SORS and NBS.
* Output gap is estimated on the basis of NAVA.

In terms of inflation factors, this inflation projection is also determined by the fact that **global supply and demand** remain predominantly under the impact of the course of the pandemic, though its effect on economic activity has greatly softened thanks to continued vaccination and better adjustment of production and consumption to the conditions of the pandemic. In addition, despite initial reductions in the volume of quantitative easing, leading central banks will continue to pursue an accommodative monetary policy for some time yet, which ought to support sustainable global recovery. On the other hand, the leap in energy prices, particularly in the euro area, gives cause for concern as it could have substantial negative effects on disposable income, consumption and economic activity in the coming months. This is compounded by material, equipment and labour force shortages, and rising transport costs. These supply-side problems are anticipated to improve next year. According to the January World Bank report, there are already signs of improvement – lower prices of container transport and reduced delivery time in November.

Chart V.0.23 **Revisions of inflation forecasts for 2022 in the past year**
(y-o-y growth, in %)



Source: Consensus Forecasts.

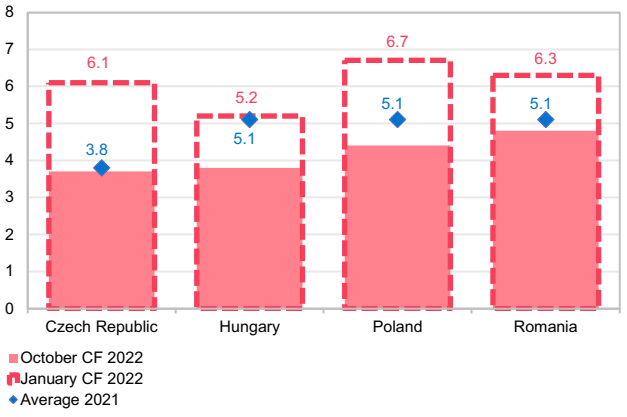
We still do not expect any major inflationary pressures from **aggregate demand**. The current inflation and GDP projection is consistent with a gradual narrowing of **Serbia's** negative **output gap**, which is estimated to remain mildly negative until the end of the projection horizon. Growth in potential GDP is expected to go hand in hand with GDP growth. The output gap ought to narrow from around -0.8% late last year to around -0.2% in late 2022, where it will remain in 2023, gradually softening the disinflationary impact of demand on inflation over the monetary policy horizon. **Domestic demand growth is supported by fiscal policy measures taken so far and the monetary policy** of the NBS, as well as the anticipated preservation of favourable terms of financing for corporates and households. Another positive effect on domestic demand, through their impact

on the price of euro-indexed loans, ought to come from **continuing extremely low interest rates in the euro area** which are not expected to rise much until the end of the projection horizon. The closing of the output gap will also be supported by higher external demand and continued relatively favourable financial conditions in the international environment for some time to come.

High **imported inflation** will continue to place pressures on domestic prices in the short term, but its effect will gradually weaken. After the initial shock of the pandemic, global demand recovered robustly which, amid persisting supply-side limitations and soaring primary commodity prices, generated powerful inflationary pressures in the international environment. Inflation is running at decades-high levels in leading world economies and countries of the region. Most central banks, however, estimate that supply and demand will gradually become more balanced, and that the rise in primary commodity prices will not continue. Inflation pressures ought also to be alleviated by the Fed's monetary policy normalisation. All these factors will help relieve pressures from imported inflation on Serbian prices during the year, which is an important factor behind inflation's projected return to the target.

Inflation's decline should also be supported by the stabilisation and then also **decrease in global prices of primary commodities**, in line with market expectations. After posting vigorous growth of 23% in 2021, prices of agricultural commodities ought to subside by around 6% this year consistent with futures, gradually toppling costs in food production from their current, extremely high level. When it comes to food, the global price of mineral fertilisers is very important too, as it gained more than 55% last year reflecting the spike in natural gas prices. Expectations for **energy** prices are similar. As a consequence of the energy crisis from Q4 last year, these prices are extremely high, but are expected to go down once the heating season is over. The global oil price, which hit its seven-year high in January, ought to decrease moderately in the current year, which would make an important contribution to y-o-y inflation decline in Serbia.

Chart V.0.24 **Revision of inflation forecasts for 2022**
(in %)



Source: Consensus Forecasts.

Uncertainties surrounding the inflation projection are still mostly associated with the international environment and refer primarily to the intensity and duration of cost-push pressures from the international environment. They will depend on a range of factors which are beyond the control of the NBS and other central banks' monetary policies, including primarily the further path of the pandemic and its impact on global economic growth, speed and degree of resolution of supply disruptions and the energy crisis, as well as movement in prices of

primary commodities. The achievement of Serbia's inflation projection will also depend on the normalisation of leading central banks' monetary policies. To a smaller extent, uncertainty also refers to the domestic market. **Overall, the risks to the inflation projection are judged to be slightly tilted to the upside**.

Slower **than expected global recovery due to the spread of a new coronavirus strain and the reinstatement of containment measures in many countries**, particularly in Asia, could result in extended shortages and disruptions in global production and supply chains, adding further to cost-push pressures and leading to more persistent inflationary pressures. Slower global growth would, however, most likely lead to lower prices of primary commodities, producing an opposite effect on inflation at home. External demand for Serbia's exports would also be subdued, possibly bolstering supply in the domestic market and slowing inflation. Conversely, if vaccine rollout in developing and underdeveloped countries steps up, global recovery could be more even and faster than anticipated. Economic growth acceleration amid announced lifting of all containment measures in some European economies would work in the same direction. It would help remove supply-side problems and moderate cost-push pressures on prices, but could also lead to higher global price growth and spillover to domestic prices as demand growth inflates, particularly with the activation of savings accumulated during the pandemic. Since **global logistics supply problems persist and are not likely to be resolved in the short term**, we judge the risks to the projection on this account to be mildly tilted to the upside.

Consistent with the Consensus Forecasts projection, we assumed that **euro area inflation** will average 3.1% this year. However, since January inflation was higher than expected and measured 5.1% y-o-y, we judge the risks on this account to be skewed to the upside. Robust inflation growth in the most advanced economies in the prior period makes it increasingly likely that **leading central banks would tighten their monetary policies sooner and more than expected**. If monetary policies of leading central banks are tightened more and sooner than anticipated, global financing conditions would tighten, reducing capital inflow to emerging economies and generating depreciation pressures on this account. In that case, the higher cost of borrowing in a foreign currency would affect domestic demand through lower disposable income, while the preserved relative stability of the dinar exchange rate would greatly diminish inflationary pressures on account of reduced capital inflows. If inflation in advanced economies returns to lower levels sooner than expected and/or if economic growth slows

further, monetary stimuli by leading central banks could last even longer than expected, as could favourable global financing conditions.

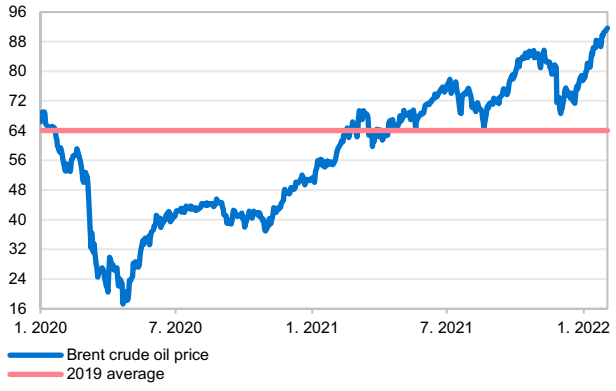
Uncertainties surrounding the projection are also largely associated with **global energy prices** which will be affected by global demand growth, but also by numerous supply-side factors specific for each primary commodity. Insufficient **oil** supply has led to a constant decline in oil inventories since mid-last year and their movement below the five-year average. Since the previous *Report*, risks associated with geopolitical tensions have particularly intensified, adding much to uncertainty regarding future oil price movements. As the global oil price is influenced by many factors, it may shift in either direction and the risks to the inflation projection on this account are symmetric.

Gas and electricity prices affect prices of other primary commodities and pose a significant risk for inflation. The gas price is currently the greatest risk for global oil price growth, since oil is used as a substitute for natural gas. The same as oil inventories, gas inventories have fallen below their several years' average, while the drastic surge in gas prices in the EU was spurred by powerful demand growth guided by record-high prices of emission permits. For this reason, we judge the risks to the inflation projection on account of global gas and electricity prices to be slightly skewed to the upside.

Global **prices of primary agricultural commodities** greatly depend on energy prices, which adds to uncertainty regarding their future movement. Rising prices of raw materials, particularly mineral fertilisers, pose a substantial risk for growth in agriculture prices. Ambitious biofuel targets could also spur a rise in prices of cereals and oil crops in the coming period. On the other hand, it is estimated that global cereal supply chains have recovered quite well and that, after being lower than average for several years, cereal supply growth would be at its several years' average, which could result in lower than assumed growth in global primary agricultural commodity prices. We estimate that departures of global primary agricultural commodity prices are possible in either direction.

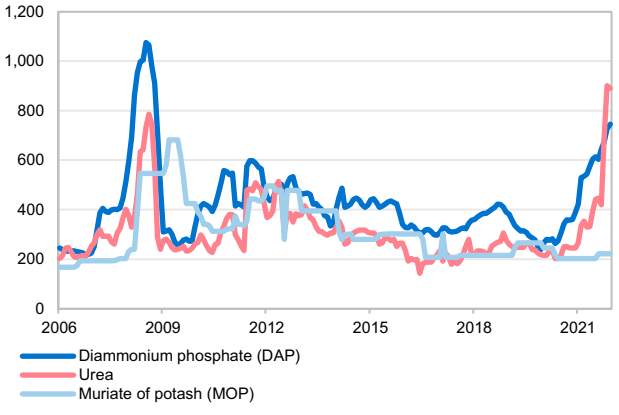
When it comes to domestic factors, the **character of the agricultural season** is the greatest risk to the inflation projection. We have assumed it to be at the level of the long-term average after last year's below-average season. As yields in agriculture greatly depend on meteorological conditions, departures are possible in either direction and we judge the risks to the inflation projection on this account to be symmetric.

Chart V.0.25 **Brent oil prices since the beginning of 2020**
(USD/barrel)



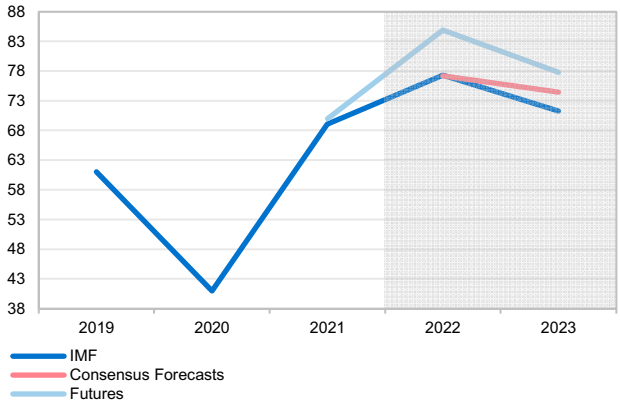
Source: Bloomberg.

Chart V.0.26 **Global prices of agricultural fertilisers**
(USD/mt)



Sources: Bloomberg, General Administration of Customs of the People's Republic of China; as in: *Commodity Markets Outlook*, World Bank, October 2021.

Chart V.0.27 **Global oil price projections**
(USD/bbl)



Sources: IMF, Consensus Forecasts, Bloomberg.
Note: Shaded area denotes the projection.

The risks to the inflation projection are also associated with **the pace of domestic demand growth**. If the epidemiological situation gets worse, economic activity and demand could slow and the situation in the labour market deteriorate, producing disinflationary effects. However, if additional fiscal space is created by a better than expected revenue performance, **stronger fiscal support to corporates and households** (either through higher tax facilities or increased outlays) would contribute to faster growth in domestic demand. Faster than expected wage growth in Serbia could push up the unit labour cost, but the impact of this on inflation would depend on the extent to which such increased costs would spill over to final prices and to which producer and merchant margins would be reduced. When assessing the risks to the projection in respect of domestic demand, it should be noted that a potential stronger rise in FDI and government capital expenditure would also contribute to

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
Uncertainty regarding the course of the pandemic and the effect on global economic growth	– Slower/faster global economic recovery results in lower/higher demand for primary commodities in the international market and, by extension, a fall/rise in their prices which produces disinflationary/inflationary effects; – Slower/faster global economic recovery leads to a slowing/acceleration of inflation growth in the international environment and to disinflationary/inflationary pressures at home on account of import prices; – Slower/faster global economic recovery leads to a slowing/acceleration of external demand growth, lower/higher Serbian exports, higher/lower supply in the domestic market and thereby produces disinflationary/inflationary effects; – Slower/faster global recovery causes leading central banks to pursue a more/less accommodative monetary policy stance which results in lower/higher interest rates globally and, through a rise/fall in loans and disposable income, in a rise/fall in demand and inflationary/disinflationary pressures.	↕
Uncertainty over the duration and intensity of imbalances in global commodity markets, supply shortages and disruptions	Worsening/moderation of supply shortages and disruptions may spur/contain price growth in these markets, affecting prices at home, i.e. producing inflationary/disinflationary effects.	↑
Crude oil price in the global market (Serbia is a net importer)	A fall/rise in the global oil price spills over to a fall/rise in petroleum product prices and produces a disinflationary/inflationary effect. This fall/rise also has secondary effects, as it spills over to a decrease/increase 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.	↕
Gas and electricity prices in the global market (Serbia is a net importer of gas and a net exporter of electricity)	A fall/rise in global gas and electricity prices produces secondary effects as it decreases/increases production costs of many domestic industrial products (primarily metals, construction materials, chemical products, processed food, etc.) and can spill over to a decrease/increase in their prices, thereby producing disinflationary/inflationary effects.	↑
Global prices of primary agricultural commodities (Serbia is a net exporter)	Prices of primary agricultural commodities in the domestic market largely mirror the dynamics of these prices in the global market. Their rise/fall produces inflationary/disinflationary effects.	↕
Euro area inflation	We used the forecast from Consensus Forecasts as our assumption of euro area inflation. After the forecast was concluded, however, euro area inflation in January was much higher than expected. The risks on this account are, therefore, skewed to the upside.	↑
Uncertainty in the international financial market and capital flows to emerging economies	Higher/lower uncertainty in the international financial market results in 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, a rise/fall in prices.	↕
Agricultural season	An above-average/below-average agricultural season results in higher/lower supply of agricultural products and may, therefore, produce disinflationary/inflationary pressures.	↕
Pace of growth in domestic demand	Deterioration of the epidemiological situation could slacken growth in economic activity, demand and the labour market, producing disinflationary effects. However, increased production capacities, in respect of FDI and other sources of investment funding, and stronger fiscal support to corporates and households (either through higher tax facilities or increased outlays), together with a preserved labour market, would contribute to faster growth in domestic demand.	↕
Decree on price caps	The projection assumes that the decree on capping the prices of five staple foodstuffs will cease to be valid after a new three-month term. As its duration may be extended beyond that term, however, the risks on this account are tilted to the downside.	↓
Administered prices	Lower/higher growth in administered prices leads to lower/higher 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.

quicker potential output growth, without inducing a faster closing of the output gap, i.e. generating additional demand-side inflationary pressures. In view of the above, we judge the risks to the inflation projection on account of domestic demand to be symmetric.

As **administered price growth** at home could be either somewhat lower or somewhat higher than anticipated, the risks to the projection on this account are symmetric as well. However, as the RS Government may decide to extend the period in which **prices of staple foodstuffs and electricity for corporates are capped, and to defer the collection of fuel excises** until further notice, we judge the risks to the projection on this account to be slightly skewed to the downside.

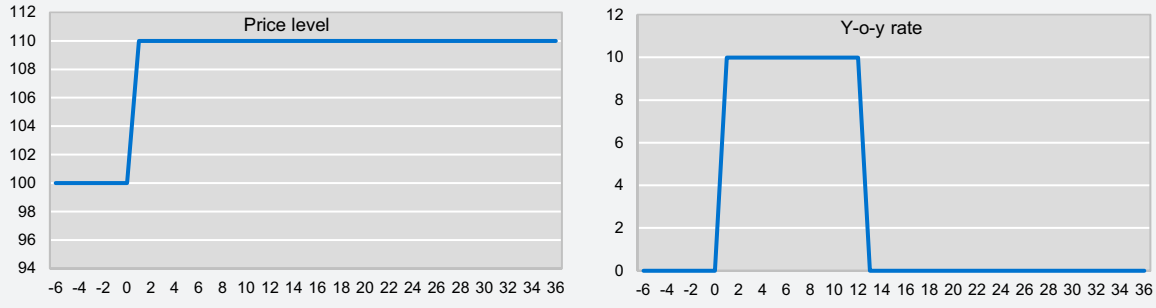
Going forward, the NBS's monetary policy priority will be to maintain price and financial stability in the medium term, while supporting economic growth, further rise in employment and living standards for households, strengthening of the export sector and preservation of a favourable investment environment. The NBS will continue to carefully monitor developments and the impact of key factors from the domestic and international environment on inflation, financial stability and pace of economic growth and to adjust its measures accordingly in the interest of businesses and households. The NBS is ready to respond promptly using all available monetary policy instruments in case of materialization of any of the risks that would keep inflation above the upper bound of the target tolerance band for a longer period of time.

Text box 5: Price shocks and their effect on y-o-y inflation

The recovery of global demand in the wake of the initial epidemic shock, coupled with persisting disruptions on the supply side, led to a global rise in inflation last year. In addition to global factors, inflation growth in Serbia was bolstered by the impact of last year's drought on the prices of unprocessed food and inputs to the production of staples and processed food in general.

Though most central banks assessed the global price shock as temporary, there are different types of temporariness. It is possible for a specific group of products or services to record a one-off price hike and to level out thereafter, while the prices of some other group of products may return to their pre-hike levels (a typical example are the prices of vegetables, fruit, meat and primary agricultural commodities). Besides, prices may increase within a relatively short period, or gradually, over a longer horizon. In this text box, we will present how different types of shocks to consumer prices reflect on the y-o-y inflation rate, which is the numerical target of the NBS's monetary policy.

Chart O.5.1 **Impact of one-off price hike without return to prior levels on y-o-y inflation**
(in %)

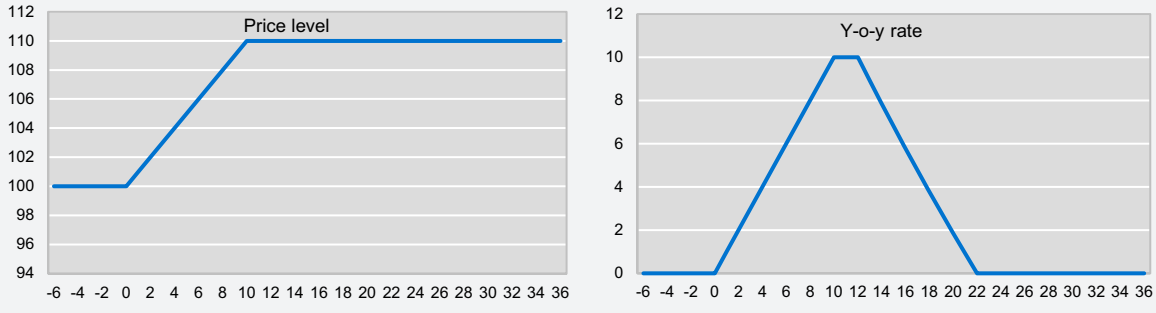


Source: NBS calculation.

The most simple example is when the price of a product or service records a one-off increase and levels out thereafter. Having in mind that y-o-y inflation represents a percentage change in the general level of prices relative to the same period of the previous year, such price movement pushes y-o-y inflation up in the same month and keeps it at that level over a period of twelve months. As this period elapses, y-o-y inflation returns to the pre-shock level. This type of shocks is common for administered prices, such as, for instance, electricity price, whose one-off increase, unless repeated next year, keeps y-o-y inflation up over the span of one year.

Price growth can also be more gradual, as set out in Chart 0.5.2, where the y-o-y growth rate of prices rises steadily, cumulating prior monthly increases, and then a year after the initial shock it gradually softens, reflecting the dropout of price increases from the calculation of the y-o-y inflation rate. Such price profile was exhibited last year by petroleum products and is in line with the expectations of the relevant international financial institutions which forecast that these prices will stabilize in 2022. As can be seen from this example, the dropout of the 2021 monthly increases alone will drive the y-o-y growth rate of petroleum product prices down, slowing at the same time y-o-y inflation.

Chart O.5.2 **Impact of gradual price hike without return to prior levels on y-o-y inflation**
(in %)

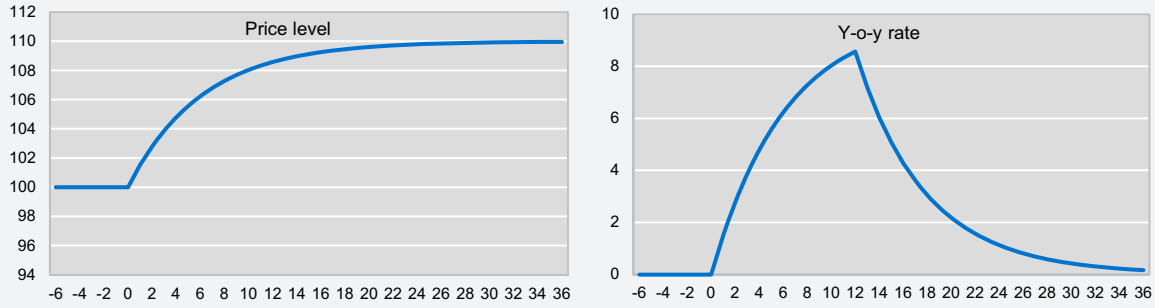


Source: NBS calculation.

Chart O.5.3 clearly shows that even if petroleum product or other energy prices continue growing in 2022 at a slower pace than in 2021, their y-o-y growth rates will nonetheless moderate, albeit more slowly, and will thus support a declining trajectory of headline inflation.

In contrast to previous examples, a price rise can be truly temporary, i.e. prices return to their initial levels after a while. Y-o-y inflation spikes in the initial period and records negative rates thereafter. Such shock profile is typical, for instance,

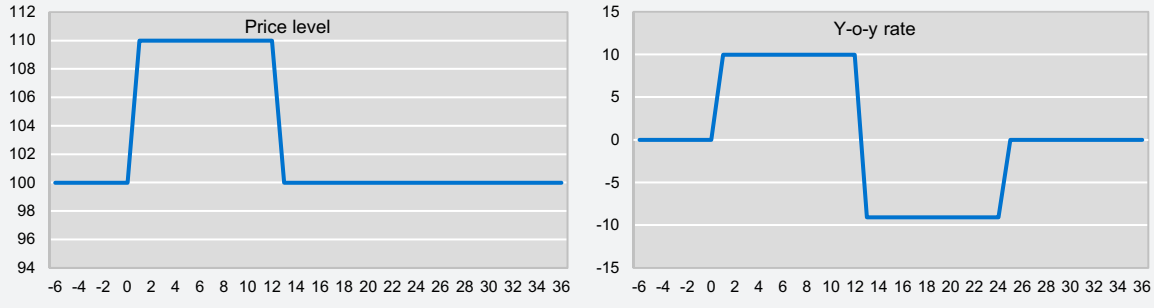
Chart O.5.3 **Impact of extended gradual price hike without return to prior levels on y-o-y inflation**
(in %)



Source: NBS calculation.

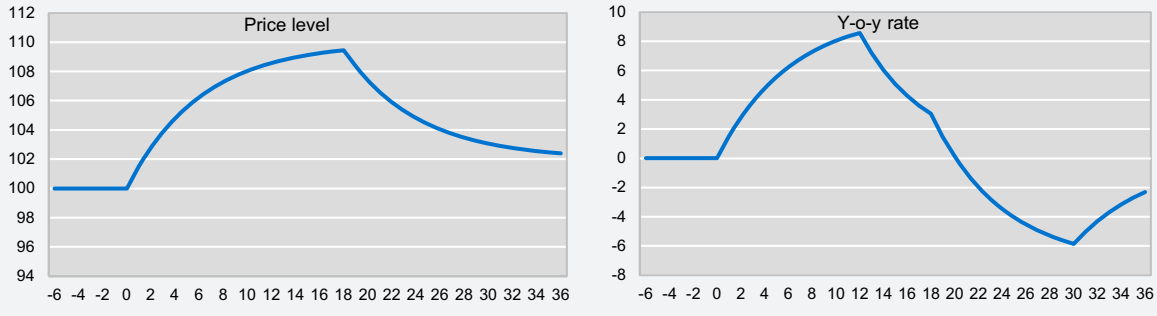
for fruit and vegetable prices, which may record a hefty rise during a single agricultural season due to drought, only to return to their levels next year if the agricultural season turns to be average. This implies robust price growth one year and a sharp decline in the year that follows. As the agricultural season in 2021 was weaker due to drought, which drove fruit and vegetable prices above the trend, this year we expect fruit and vegetable prices to return to the trend if the season is average, or slide even below the trend if the season gets better than average, implying a negative contribution to headline inflation from these groups of products starting from the next agricultural season.

Chart O.5.4 **Impact of temporary price hike on y-o-y inflation**
(in %)



Source: NBS calculation.

Chart O.5.5 **Impact of extended temporary price hike on y-o-y inflation**
(in %)



Source: NBS calculation.

Finally, "temporariness" can be longer lasting. While cost growth (oil price growth) reflects rather quickly on petroleum product prices, in case of products with higher value added and a more diversified structure of costs this impact is more gradual. In the current situation, this particularly holds true for industrial products and processed food, whose prices have been on a steady rise amid a surge in the costs of raw materials caused by the global supply-side disruptions. As the functioning of global production chains normalizes and cost-push pressures in food production abate, the prices of final products are expected to return gradually to the trend in the coming period.

Actual price movements are simplified in the above charts in order to explain the main logic behind the projection of the y-o-y rates of individual CPI components. Based on what is shown in the charts, y-o-y inflation is expected to decline as of the second quarter of 2022. At the same time, the charts, which are in line with the expected movement of prices of individual CPI components, indicate that the strongest contribution to the slowdown of y-o-y inflation will come from the anticipated y-o-y drop in fruit and vegetable prices with the onset of the new agricultural season, followed by the dropout from calculation of prior increases in petroleum products prices, and also from non-food product prices, given the expected gradual balancing of supply and demand at global level and the consequent easing of disruptions to global production and supply chains.

Table A
Indicators of Serbia's external position

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
EXTERNAL LIQUIDITY INDICATORS (in %)																	
FX reserves/import of goods and services (in months)	6.1	9.0	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	6.1	6.0
FX reserves/short-term debt[3]	177.0	265.1	250.6	162.6	220.6	191.2	299.9	237.3	268.6	294.0	256.4	234.0	202.1	210.9	275.6	229.8	346.6
FX reserves /GDP	22.1	34.8	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	28.8	31.1
Debt repayment/GDP[3]	4.7	9.7	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	5.8	10.3
Debt repayment/export of goods and services[3]	19.8	36.2	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	12.2	19.2
EXTERNAL SOLVENCY INDICATORS (in %)																	
External debt/GDP[3]	56.2	55.2	55.1	58.8	68.6	74.5	68.1	76.1	70.4	72.4	73.4	72.0	65.1	62.2	61.4	65.8	68.8
Short-term debt/GDP[3]	12.5	13.1	12.2	14.1	14.8	16.6	11.3	13.7	11.4	9.5	11.3	11.9	12.6	12.4	10.6	12.5	9.5
External debt/export of goods and services[3]	234.9	205.7	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	138.2	130.9
FINANCIAL RISK EXPOSURE INDICATORS (in %)																	
FX reserves/M1	290.3	356.1	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	130.0	138.1
FX reserves/reserve money	169.8	179.5	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	157.1	180.0
OPENNESS OF ECONOMY (EXPORTS + IMPORTS)/GDP	67.1	73.0	74.7	78.0	65.1	75.3	78.0	84.5	87.1	91.8	96.2	100.6	106.2	108.2	111.5	103.9	116.3
MEMORANDUM: (in EUR million)																	
GDP[1]	22,276	25,906	31,551	35,701	32,486	31,546	35,432	33,679	36,427	35,467	35,740	36,779	39,235	42,892	46,005	46,796	52,970
External debt[3]	12,520	14,291	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	30,787	35,233
External debt servicing[3]	1,054	2,513	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	2,710	1,429
Central bank foreign exchange reserves	4,922	9,020	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	13,492	16,455
Short-term debt[2][3]	951	968	1,044	1,832	1,852	1,758	612	455	196	99	303	672	844	1,401	1,925	1,585	1,359
Current account balance	-1,778	-2,356	-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	-1,929	-2,343
CREDIT RATING (change of rating and outlook)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	May/July	Feb	July	March/ Dec	Dec	Nov	March	Aug	July	Jan	Dec	Jan/March/ June/Dec	March/Dec	Dec	Sept/Dec	May	March/Dec
S&P	BB- /stable	BB- /positive	BB- /stable	BB- /negative	BB- /stable		BB /stable	BB- /negative				BB- /positive	BB /stable	BB /positive	BB+ /positive	BB+ /stable	BB+ /positive
Fitch	BB- /stable			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		Ba2 /stable

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 2021 is an NBS estimate.
[2] At original maturity.
[3] Data for 2021 is for Q3 2021.

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 previous methodology.
4. Starting from 2007 the general trade system of registration of exports and imports of goods is applied. This is a broader concept and includes all goods entering/exiting country's economic territory, apart from goods in transit. Data for 2005 and 2006 are disseminated using the special trade system.
5. External debt servicing does not include advance debt repayments.

Table B
Key macroeconomic indicators

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth (in %)[1]	5.5	5.1	6.4	5.7	-2.7	0.7	2.0	-0.7	2.9	-1.6	1.8	3.3	2.1	4.5	4.3	-0.9	7.5
Consumer prices (in %, relative to the same month a year earlier)[2]	17.7	6.6	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	7.9
NBS foreign exchange reserves (in EUR million)	4,922	9,020	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	13,492	16,455
Exports (in EUR million)[3]	5,329	6,948	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	22,271	28,557
- growth rate in % compared to a year earlier	19.1	30.4	-	18.2	-16.1	18.3	17.1	2.9	21.5	3.7	8.8	10.5	11.1	9.6	10.3	-4.6	28.2
Imports (in EUR million)[3]	9,612	11,970	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	26,370	33,065
- growth rate in % compared to a year earlier	0.7	24.5	-	18.1	-28.3	8.7	15.7	3.1	4.7	1.8	3.0	5.1	14.0	13.0	10.7	-5.7	25.4
Current account balance[3]																	
(in EUR million)	-1,778	-2,356	-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	-1,929	-2,343
as % of GDP	-8.0	-9.1	-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	-4.1	-4.4
Unemployment according to the Survey (in %)[6]						20.9	24.9	25.9	24.0	20.6	18.9	16.4	14.5	13.7	11.2	9.7	10.5
Wages (average for the period, in EUR)[7]	210.4	257.8	347.1	402.0	337.8	331.8	372.5	366.1	388.5	379.8	367.9	374.5	394.5	419.7	465.9	510.8	553.2
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	-8.3	-4.6
Consolidated fiscal result (in % of GDP)[4]	1.1	-1.4	-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	-8.0	-4.2
RS public debt, (central government, in % of GDP)[8]	47.6	33.9	27.9	26.8	30.9	39.5	42.8	52.9	56.0	66.2	70.0	67.7	57.8	53.6	51.9	57.0	56.9
RSD/USD exchange rate (period average)	66.87	67.03	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	103.03	99.49
RSD/USD exchange rate (end of period)	72.22	59.98	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	95.66	103.93
RSD/EUR exchange rate (period average)	82.99	84.11	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	117.58	117.57
RSD/EUR exchange rate (end of period)	85.50	79.00	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	117.58	117.58
MEMORANDUM:																	
GDP (in EUR million)[5]	22,276	25,906	31,551	35,701	32,486	31,546	35,432	33,679	36,427	35,467	35,740	36,779	39,235	42,892	46,005	46,796	52,970

[1] At constant prices of the previous year. Data for 2021 is a SORS preliminary 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 the previous methodology. Due to the break in the series for 2007, exports and imports growth rates are not shown. Starting from 2007 the general trade system of registration of exports and imports is applied. This is a broader concept and includes all goods entering/exiting country's economic territory, apart from goods in transit. The previous years are disseminated using the special trade system.

[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.

[5] According to ESA 2010. Data for 2021 is an NBS estimate.

[6] Data are revised according to the new methodology of the Labour Force Survey from 2021. Data for 2021 is data for Q3 2021.

[7] Until 2018, wages are shown according to the old methodology. Since 2018, 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 period average of the RSD/EUR exchange rate. Data for 2021 is an average of eleven 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 2015-2017, 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.

Index of charts and tables

Charts

Tables

Charts in text boxes

Tables in text boxes

Executive Board meetings and changes in the key policy rate

2021

Date	Key policy rate (p.a, in %)	Change (in basis points)
14 January	1.00	0
11 February	1.00	0
11 March	1.00	0
13 April	1.00	0
13 May	1.00	0
10 June	1.00	0
8 July	1.00	0
12 August	1.00	0
9 September	1.00	0
7 October	1.00	0
9 November	1.00	0
9 December	1.00	0

2022

Date	Key policy rate (p.a, in %)	Change (in basis points)
13 January	1.00	0
10 February	1.00	0
10 March		
7 April		
12 May		
9 June		
7 July		
11 August		
8 September		
11 October		
10 November		
8 December		

Press releases from NBS Executive Board meetings

Press release from Executive Board meeting held on 9 December 2021

At its meeting today, the NBS Executive Board voted to keep the key policy rate on hold, at 1.0%. Using the flexibility of the current monetary policy framework, since October this year the NBS has been gradually reducing the level of monetary policy accommodation without changing the main interest rates, amid heightened inflationary pressures both at home and abroad and the need to influence inflation expectations. In addition to discontinuing securities purchase auctions by way of which banks were provided with dinar liquidity in the prior period, the NBS has been gradually raising the percentage of excess dinar liquidity which it withdraws for a week through reverse repo auctions (repo sales of securities) and the weighted average rate applied at such auctions. Since October, this rate increased from 0.11%, which had been its average since the start of the year, to 0.34%, where it stood at the latest reverse repo auction. Depending on the circumstances, the NBS will continue to tighten monetary conditions gradually in the coming period as well, by raising the weighted average repo rate, within the current interest rate corridor.

Elevated global prices of energy and other primary commodities, supply disruptions and much higher transportation prices globally, together with the effects of the low last year's base, have led to higher cost-push pressures in the global and local markets. According to SORS data, y-o-y inflation measured 6.6% in October. Three-quarters of y-o-y inflation was determined by factors beyond the influence of monetary policy – food and energy prices. It should also be noted that prices of both groups of products had been extremely low last year amid subdued demand. On the other hand, core inflation (CPI excluding food, energy, alcohol and cigarettes), which is affected more by monetary policy, measured less than headline inflation in October, equalling 2.7% y-o-y. Core inflation has been maintained at a low level thanks to several years' relative stability of the exchange rate which represents a powerful anchor of price stability and shall be preserved in the coming period as well, and the fact that both one-year ahead and medium-term inflation expectations of the financial and corporate sectors are within the target tolerance band. Inflation expectations have been contained also by the measures of the Serbian Government capping the prices of food staples.

Like most other central banks, the NBS expects that the factors of higher headline inflation will for their major part be temporary in character and that their effect will dissipate next year. Consistent with that, the NBS expects inflation to slow down from Q2 2022 and return within the bounds of the target (3.0 ± 1.5%) around mid-year. Inflation will then gravitate towards target midpoint, and may even settle within the lower half of the band in late 2022, given the higher base effect from this year. The NBS stands ready to respond promptly by using all monetary policy instruments on hand should any of the risks that would keep inflation above the upper bound of the target band for a prolonged period of time materialise.

In its decision-making, the Executive Board also had in mind that the positive effects of past large-scale monetary and fiscal measures on economic activity could be expected going forward and that the favourable financing conditions could be sustained at a somewhat lower degree of monetary accommodation. The Board particularly stressed the importance of Serbia's strong growth dynamics, which outperformed expectations this year, quarter after quarter. In Q3, Serbia's GDP grew 7.7% y-o-y in real terms, exceeding the SORS preliminary estimate of 7.4%. Export activity is also vibrant and set to record this year the highest level ever. Service sectors, which bore the brunt of the pandemic last year, continued to display positive trends. Having in mind that all sectors save agriculture, which fell victim to the drought, are likely to record growth at the annual level, and that the Q3 outcome was better than expected, our GDP growth projection of 6.5–7% is now closer to 7%. In the medium term, we expect growth to be 4.0–5.0%, supported by the implementation of large infrastructure projects. As a result of dynamic economic growth, employment rate in Serbia is at its historical high of 50% despite the pandemic.

The international environment continues to be plagued by numerous challenges, notably the new virus variant, which shook investor and consumer confidence worldwide because of the uncertain effects it might have on global growth, employment and inflation. Still, it is encouraging that economies worldwide showed a high degree of adjustment to the pandemic conditions, which is expected going forward as well. Though considerable cost-push pressures persist due to halts in global supply chains, logistics problems, shortages of some inputs, but also of labour force, supply in many global commodity markets is rising steadily. After extremely strong growth recorded by the global prices of oil and other primary commodities this year, in 2022 the supply in these markets is likely to converge to demand, which will help stabilise prices. As regards the euro area, our key economic partner, after challenges stemming from the significantly

higher natural gas price and disrupted supply chains, it should see a pick-up in industrial production, notably in Germany, which should also exert positive ripple effects on our exports and economic activity. Although the ECB is not likely to raise its interest rates any time soon, the anticipated acceleration of euro area growth next year fuels expectations that it might reduce the volume of additional liquidity injected by the central bank in the financial sector. As the Fed made a similar decision in early November, this too calls for increased caution in the NBS's monetary policy making.

As so far, the NBS will keep a close eye on developments in the local and international environment. The Board emphasizes that delivering price and financial stability in the medium term will remain a priority of the monetary policy, together with supporting faster growth of our economy and employment, a further rise in the export sector, as well as a favourable investment environment.

The next rate-setting meeting will take place on 13 January 2022.

Press release from Executive Board meeting held on 13 January 2022

At its meeting today, the NBS Executive Board voted to keep the key policy rate on hold, at 1.0%. Since October 2021 the NBS has been gradually reducing its monetary policy accommodation by increasing the weighted average interest rate in reverse repo auctions whereby it mops up excess liquidity from the banking system for a period of one week, as well as the percentage of excess dinar liquidity withdrawn in those auctions. The NBS has thus used the flexibility of its monetary framework, which allows it to adjust monetary conditions even without changing the main interest rates. The weighted average interest rate at the last reverse repo auction held this month came at 0.59%, up by 48 basis points from the start of monetary tightening when it equalled 0.11%. The decision to gradually raise this rate over the past few months was motivated by heightened cost-push pressures at home and abroad and the need to influence inflation expectations of market agents and contain the second-round effects on the prices of other products and services.

According to SORS data, in December 2021 inflation amounted to 7.9% y-o-y. Like in most other countries, its growth was, in addition to the low base effect, driven mainly by the surging global prices of energy and other primary commodities, disrupted supply chains and considerably higher prices of transport at the global level. Another impetus to inflation came from the drought, which reflected primarily on the prices of unprocessed food and inputs to food production. This is evidenced by the fact that three-quarters of inflation in 2021 was due to factors beyond the influence of monetary policy – food and energy prices. On the other hand, core inflation (CPI excluding food, energy, alcohol and cigarettes), which is affected more by monetary policy, measured much less than headline inflation, averaging in prior months around 3% y-o-y. Core inflation has been maintained at a low level thanks to years-long relative stability of the exchange rate which represents a powerful anchor of price stability and shall be preserved in the coming period as well.

In the best collective judgment of the Executive Board, in Q1 this year inflation will stay around the level recorded late last year or rise slightly above it, under the impact of the global energy crisis and the consequently higher prices of imported products. However, as of Q2 inflation should slow down and recede towards the target midpoint, reaching it possibly by the end of 2022. The Board holds that inflation will slow down as a result of dissipation of the effect of transitory factors, concerning primarily higher energy and agricultural commodity prices, as well as of the expected gradual resolution of disruptions to global supply chains. In the short term, price growth should soften also on account of the Serbian Government's measures to temporarily cap the prices of food staples and the price of electricity for companies. The NBS stands ready to respond promptly by using all instruments on hand in case of materialization of any of the risks that would keep inflation above the upper bound of the target band for a prolonged period of time.

In making the decision on monetary conditions, the Executive Board took into account the fact that favourable financial conditions contributing to economic growth can be sustained even at a somewhat lower degree of monetary policy accommodation. According to the preliminary estimate of the SORS, Serbia's real GDP growth in 2021 came at 7.5%, exceeding the NBS's expectations and reinforcing the foundations of this year's growth. Such outcome resulted from the pick-up in service sectors and construction, as well as in industry, despite the persisting challenges caused by disrupted global supply chains. A negative contributor was only agricultural production, which contracted 5% due to the drought. In the medium term, economic growth is expected to range between 4.0% and 5.0%, supported by the continued investment cycle and implementation of large infrastructure projects, as well as the rise in personal consumption on the back of favourable labour market trends. Another impetus to growth should come from exports, which will benefit, on the supply side, from past investments into tradable sectors, and on the demand side, from the more favourable growth outlook of our most important trade partners. The rise in export supply is also suggested by the fact that FDI inflow to Serbia in 2021 reached EUR 3.9 bn, surpassing the previous record from 2019 and remaining channelled mainly to export-oriented sectors.

The international environment is still characterised by elevated uncertainty as to the impact of the future course of the pandemic and new virus strains on the pace of global economic growth, global prices of primary commodities and, by extension, on inflation as well. Still, it is encouraging that global growth has continued in the face of increased cost-push pressures and aggravated epidemiological situation in some countries, as well as that economies across the world have shown a high level of adjustment to the changed business conditions amid the pandemic. Speaking of economic developments in the euro area, our most important economic partner, after the challenges stemming from the significantly higher price of natural gas and halts in supply chains, industrial production is expected to pick up, primarily in Germany, which should reflect positively on our exports and manufacturing.

Caution in the conduct of NBS monetary policy is mandated also by the movements in international commodity and financial markets. After exceptionally strong growth last year, the global prices of oil and other primary commodities are higher than before the pandemic, but should stabilise in the coming period, according to the estimates of leading financial institutions, and gradually turn downward. Developments in the international financial market and capital flows toward emerging economies, including Serbia, will remain under the dominant sway of the decisions of leading central banks, the Fed and the ECB. These central banks have not yet raised their key interest rates, but did however decide to start reducing, in the coming period, the volume of additional liquidity injected in the financial system within their quantitative easing programmes.

As so far, the NBS will continue to carefully monitor movements in the domestic and international environment. The Executive Board emphasizes that delivering price and financial stability in the medium term will remain the priority of monetary policy, together with supporting faster growth of our economy and employment, further expansion of the export sector and a favourable investment environment.

The next rate-setting meeting of the Executive Board is scheduled for 10 February.

Press release from Executive Board meeting held on 10 February 2022

At its meeting today, the NBS Executive Board voted to keep the key policy rate on hold, at 1.0%. The NBS continued reducing its monetary policy accommodation by increasing the weighted average interest rate in reverse repo auctions as well as the percentage of excess dinar liquidity withdrawn in those auctions. The NBS has thus used the flexibility of its monetary framework, which allows it to adjust monetary conditions even without changing the main interest rates. The weighted average interest rate at the last repo auction held this month came at 0.75%, up by 64 basis points since October last year, when the process of monetary tightening began. The decision to gradually raise this rate over the past months was motivated by heightened cost-push pressures at home and abroad, and the need to influence inflation expectations of market agents and contain the second-round effects on the prices of other products and services.

The Executive Board underlines that inflation is still mostly driven by supply-side factors, notably higher energy and food prices, which account for three-quarters of the 7.9% y-o-y inflation in December 2021. According to the February medium-term projection, during Q1 2022 y-o-y inflation will again move around the level recorded at the end of last year or slightly above it, reflecting the effects of the still rising cost-push pressures due to the prices of energy and other primary commodities, halts in supply and high transport prices globally. As of Q2, inflation should strike a downward trajectory and settle within the 3.5–4% range at the end of the year, thereafter slowing down towards the target midpoint until the end of the projection horizon. The Board holds that inflation will slow down as a result of the dissipation of the effect of higher energy and food prices, the anticipated gradual resolution of halts in global value chains, as well as the effects of monetary policy tightening to date and the relative stability of the exchange rate which will be maintained going forward. In the short term, price growth should also soften on account of the Serbian Government's measures to temporarily cap the prices of food staples and the price of electricity for companies.

In making the decision on monetary conditions, the Executive Board estimated that the Serbian economy retained a robust growth dynamic on sustainable grounds, which will continue despite the reduced level of monetary policy accommodation. According to the preliminary estimate of the SORS, growth in Serbia's GDP in Q4 2021 came at 6.9% y-o-y, while at the year level it measured 7.5%. Such outcome resulted from the pick-up in service sectors and construction, as well as in industry, despite the persisting challenges caused by disrupted global supply chains. A negative contribution to growth originated only from agriculture, which contracted by 5% due to drought. Despite a somewhat less favourable global growth outlook, the Executive Board maintained the estimate that the economic growth rate this year and in the medium term will range between 4% and 5%, supported by the continued investment cycle and implementation of large infrastructure projects, as well as the rise in personal consumption on the back of favourable labour market trends.

The international environment is still characterised by the elevated uncertainty as to the impact of the course of the pandemic and emergence of new virus strains on the pace of global economic growth, movement of global prices of primary commodities and by extension, on inflation. However, it is encouraging that the negative effects of the Omicron variant turned out to be weaker than expected, partly owing to the fact that economies worldwide showed a high degree of adjustment to the changed business conditions amid the pandemic. According to the estimates of leading financial institutions, the energy crisis and protracted effects of halts in global supply chains caused minor downward adjustments to global growth prospects. Nevertheless, growth is expected to pick up in the second half of the year, also aided by the announced relaxation of containment measures, primarily in Europe. That should reflect positively on Serbian exports and manufacturing.

Caution in the conduct of NBS's monetary policy is also mandated by movements in the international commodity and financial markets. After temporarily calming down by the end of last year, crude oil prices have turned upward again since January, mostly due to the geopolitical tensions and increased energy demand, with prices of other primary commodities following suit. Still, according to market expectations (oil futures), the prices of crude oil and primary agricultural commodities should stabilise and then decline gradually in the coming period. Developments in the international financial market and capital flows toward emerging economies, including Serbia, will remain under the dominant sway of the decisions of leading central banks, the Fed and the ECB, which are now likely to resort to stronger than expected monetary tightening, given the inflation trending well above the target and pressures from the labour market.

As so far, monetary policy decisions in the period ahead will depend on the movement of factors in the international and domestic environment and the assessment of intensity and durability of inflationary pressures stemming from those factors. The NBS stands ready to respond promptly using all available monetary policy instruments in case of materialization of any of the risks that would keep inflation above the upper bound of the target tolerance band for a longer period of time.

At today's meeting, the Executive Board adopted the February Inflation Report, with new macroeconomic projections, the detailed account of which will be presented at the press conference on 18 February.

The next rate-setting meeting is scheduled for 10 March 2022.

CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

336.71(497.11)

INFLATION Report / National Bank of Serbia. - 2006- . - Belgrade (Kralja Petra 12) : National Bank of Serbia, 2006- (Beograd : Zavod za izradu novčanica i kovanog novca "Topčider") . - 30 cm

Tromesečno
ISSN 1820-9394 = Inflation Report (National Bank of Serbia)
COBISS.SR-ID 155775244