National Bank of Serbia

2022

INFLATION REPORT

August

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 August *Inflation Report* was considered and adopted by the NBS Executive Board at its meeting of 11 August 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

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 August.

Contents

I Overview

In the period since the previous Report, the global economy has experienced elevated geopolitical tensions following the continuation of the Ukraine crisis, further acceleration of inflation and the tightening of financial conditions. The recession in the USA, economic slowdown in some European countries and a sharper than expected downturn in China are clouding the global growth outlook.

Some of the key risks to the projection associated with factors from the international environment, which we identified in our previous Report, have materialised. The Ukraine conflict has continued and geopolitical tensions heightened further, pushing up the already high energy prices. As a result, global inflation picked up and financial conditions tightened faster than expected. Moreover, given that China's slowdown due to the zero-Covid policy and containment measures was stronger than expected, while the USA and the euro area are facing a growing risk of recession, **relevant international institutions have further revised down the global growth projection for this and next year, assessing that risks to the projection remain tilted to the downside**. In July, the IMF lowered the global growth projection to 3.2% for 2022 and 2.9% for 2023. As estimated by the IMF, the risks to the global growth projection are more skewed to the downside as Russia's gas supplies to Europe may be suspended and it may be more difficult to curb global inflation than initially expected. Other factors include the tightening of financial conditions and the resulting debt repayment problems in some emerging economies, as well as a potential further slowdown of the Chinese economy and the contraction of international trade and cooperation.

Inflationary pressures that are stronger and more durable than initially expected, including labour market pressures, have led to faster than anticipated monetary policy tightening by leading central banks.

The uncertainty surrounding the pace of global growth and further acceleration of global inflation reflected on elevated volatility in the international financial market and diminished investor appetite. As inflationary pressures were stronger and more durable than expected and inflation touched its multi-decade highs, in the past months leading central banks, **the Fed and the ECB, have tightened their monetary policies faster than expected by markets**. They also announced further hikes in their key rates, whose pace will depend on expected inflation movements in the medium run, the growth outlook and the situation in the labour market in the coming months. Regional central banks pursuing the inflation targeting regime also decided to continue tightening their monetary policies more than anticipated, reflecting the build-up of cost-push pressures and the effects of domestic demand and labour market trends.

Given that Serbia's inflation is driven chiefly by cost-push pressures from the international environment and bearing in mind the importance of continued growth amid a deteriorating global growth outlook and mounting recessionary risks, the NBS continued to moderately tighten monetary conditions.

In the period since the previous Report, the Executive Board assessed that, in an environment of continued cost-push pressures fuelled by rising global food and energy prices and imported inflation going up more than expected, **it is necessary to further tighten monetary conditions at home to contain second-round effects on inflation expectations and ensure that inflation strikes a downward trajectory** and returns within the target tolerance band until the end of the projection horizon. In April–August, the key policy rate was raised by 2.0 pp to 3.0%. **By maintaining the relative stability of the dinar exchange rate against the euro, the NBS**, among other things, helped cushion the effects of the spillover of imported prices to domestic prices, as it was the case in the previous years, even amidst elevated global uncertainty triggered first by the pandemic and later by geopolitical tensions and the Ukraine conflict. Since the start of the year until end-July, the dinar gained around 0.2% against the euro, with appreciation pressures prevailing as of May. An impetus was also provided by **FDI inflows, which as of mid-April returned to the levels recorded prior to the Ukraine conflict and reached EUR 1.6 bn in six months**. From April until end-July, the NBS intervened in the IFEM by buying EUR 760 mn net, reducing the amount of net sale to EUR 1.35 bn since the start of the year.

As geopolitical tensions are mounting and agrometeorological conditions are worse than expected, in Q2 food and energy prices rose more than expected in May, with core inflation moving in line with the NBS expectations.

Amid the further heightening of geopolitical tensions between western countries and Russia and the resulting continued increase in global energy prices, including the still high food prices, **y-o-y inflation in Serbia, similarly as in other countries, continued up, measuring 11.9% in June, with over two-thirds of the contributions still coming from food and energy prices**. Core inflation rose under the impact of imported inflation, but it was much lower than headline inflation in Q2 as well. It touched 6.7% y-o-y in June, still reflecting the ensured relative stability of the exchange rate and medium-term inflation expectations of the financial sector remaining within the target band.

On the fiscal front, revenue is still rising faster than expected, which opens room for an additional fiscal response in the event the global energy crisis deepens further.

The government economic measures capping the prices of staple foodstuffs and energy at home continue to alleviate inflationary pressures, preventing any major negative effects on citizens' living standard and companies' business activity. The effects of reduced excises on petroleum products by 15–20% have been offset by rising revenue on other accounts, contributing to a lower general government deficit, which in H1 measured RSD 15.6 bn, down by around 60% y-o-y. This opens room for a fiscal policy response in the event the global energy crisis deepens further. The new medium-term fiscal plan, based on macroeconomic projections from H1 this year, projects a decline in the share of the

general government deficit in GDP to 3% this year, and 0.5% until end-2025, which will ensure a decline in public debt to around 51% by end-2025. In line with the available fiscal room, the fiscal policy will focus on further reducing the total tax burden on labour, which will additionally ease the burden on the corporate sector and increase its competitiveness. On the expenditure side, priority will be on infrastructure and capital projects (government outlays for capital investment are projected at around 6–7% of GDP p.a.), and the pensions and wages policy. When increasing these largest expenditure categories, care will be taken that their shares in GDP do not go above the pre-pandemic levels and do not trigger any major demand-side inflationary pressures.

Even amid moderate tightening of monetary conditions, lending activity remained an important factor of financing production, investment and consumption, owing to the continued rise in loan demand and preserved bank asset quality.

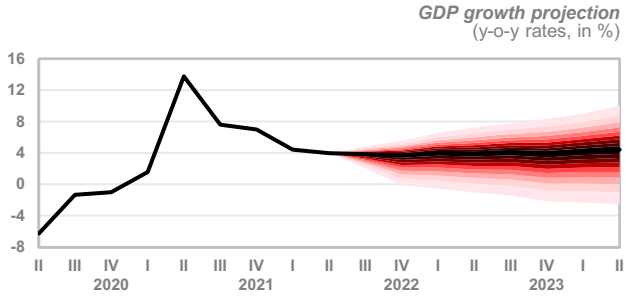
Despite a rise in interest rates on loans in Q2, **borrowing conditions in the domestic market can still be assessed as favourable as they support lending activity and, by extension, economic growth**. The y-o-y growth rate of loans to the non-monetary sector picked up further in June relative to March, to 13.1%, with corporate loans remaining a stronger contributor than household loans. **The NPL share in total loans fell to a new record low of 3.26% in June**, indicating that the bank asset quality has not deteriorated even after the government economic support measures were wound down, and does not pose an obstacle to further lending growth.

The escalation of the Ukraine crisis and dented external demand have so far not produced any major negative effects on manufacturing output and exports in Serbia owing to a constant increase in manufacturing capacities and rising export supply on that account.

According to the SORS estimate, GDP posted relatively robust y-o-y growth of 4.4% in Q1 and **continued a similar growth pace in Q2 (4% y-o-y), exceeding our expectations from the previous *Report***. Manufacturing output and exports continue up in Serbia, indicating that for the time being dented external demand has not produced any major negative effects on our country. This most probably reflects past investment in tradable sectors, which significantly ramped up export supply, while as of May agricultural exports also increased following the relaxation of measures that temporarily limited them. According to our estimate, a positive contribution on the production side in Q2 also came from service sectors and mining, while production in construction declined due to the last year's high base, as did activity in the energy sector, reflecting on the continued high energy imports.

Under our new projection, GDP is set to rise by 3.5–4.5% both this and next year, and accelerate to 4–5% p.a. in the medium run.

We have kept our GDP growth projection for this year unchanged relative to May, at 3.5–4.5%. Namely, despite a gloomier global growth outlook and a build-up of cost-push pressures on account of higher energy prices, economic activity in Q2 exceeded our expectations. However, due to the anticipated economic slowdown in the remainder of this and early next year amid mounting recessionary pressures in the euro area, we revised our 2023 GDP growth projection down by 0.5 pp to the range

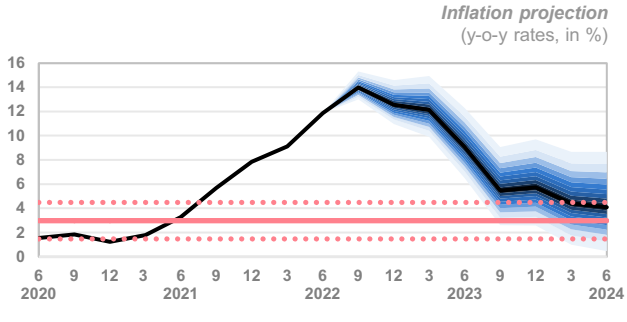


The entire increase in the current account deficit in H1 compared to the same period last year results from elevated energy imports.

of 3.5–4.5%. Thereafter, we expect its return to the previously anticipated growth trajectory of around 4–5% p.a., as the effects of the Ukraine conflict on external demand wear off and the planned investment projects are implemented, mainly in road, railway and utility infrastructure.

Energy imports, due primarily to soaring global energy prices, reflected on the widening of the current account deficit, which measured EUR 2.7 bn in H1. Energy imports amounted to EUR 3.1 bn, up by EUR 2.1 bn compared to H1 2021. Working in the opposite direction was the continued rise in goods exports at relatively high rates (32.6% y-o-y). Despite a slowdown in external demand, exports picked up in 22 of 23 branches of manufacturing compared to the same period last year. Remittances inflows also increased, as did the surplus on trade in services, owing to the recovery of tourism and continued intensive growth in ICT sector exports. Continued robust energy imports in the period from the previous *Report*, prompted primarily by a further rise in prices, are the key reason why we revised up the share **of the current account deficit in GDP to 9.4% for this year**. In the medium run, a rise in export capacities, along with the expected wearing off of negative effects of external demand and unfavourable terms of trade, should contribute to a gradual decline in the current account deficit and preservation of external sustainability. External sustainability will also benefit from continued relatively high FDI inflows to Serbia, projected at around EUR 3.4 bn this year (EUR 3.3 bn net), with similar amounts expected in the coming years as well.

Although inflation in the new projection is higher, reflecting food and energy prices, as well as imported inflation, which exceeded our expectations from May, we still anticipate that it will strike a downward trajectory during this year.



Under the central August projection, we expect **y-o-y inflation to peak in Q3 this year and strike a downward path thereafter**. It should decline more sharply in H2 2023 and retreat within the bounds of the target tolerance band in H1 2024, i.e. towards the end of the projection horizon. Inflationary pressures will be soothed by the past monetary tightening, anticipated gradual waning of the effects of global factors underpinning energy and food price growth in the past period, and subdued external demand. In the short term, they will also be alleviated by the government economic measures to contain food and energy prices at home. Compared to the May projection, inflation will trend at a higher level throughout the projection horizon as two key risks identified at the time have materialised – further heightening of geopolitical tensions, which are driving up energy prices, and the agricultural season at home, which, contrary to expectations, will most probably fall short of the average and will be more similar to last year's season as we have again faced a drought during the summer months.

The uncertainty associated with the achievement of the inflation and GDP projection **remains high and concerns primarily the factors from the international environment**, i.e. the effects of the Ukraine conflict on energy availability and prices in the global market, including the global growth outlook, which will largely determine global primary commodity prices. When it comes to factors from the domestic environment, the risks to the projection are mostly associated with the outcome of this year's agricultural season, i.e. the extent to which it will fall short of the average. Another risk are developments in the energy sector – the volume of coal and electricity production in the domestic market, the prices at which we will import the portion of gas exceeding the level defined in the agreement with Russia, as well as any measures the Government might take to ensure energy security at home. The NBS will continue to monitor and analyse trends in international commodity and financial markets and to evaluate their impact on our economy. Depending on geopolitical developments and the movement in key inflation factors from the domestic and international environment in the coming period, **the NBS will estimate whether there is a need to tighten monetary conditions further in order to ensure that inflation returns within the target band over the projection horizon**. Going forward, the NBS's monetary policy priority will remain to deliver price and financial stability in the medium term, while supporting further economic growth and development, a further rise in employment and a favourable investment environment.

The NBS is ready to respond promptly using all available instruments 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.

II Monetary policy since the May *Report*

In the period since the May Report, the Executive Board assessed that amid continued cost-push pressures on account of rising global food and energy prices, as well as higher than expected imported inflation growth, it was necessary to further tighten monetary conditions in the domestic market so as to limit the second-round effects on inflation expectations and ensure that inflation in Serbia strikes a downward path and returns within the target tolerance band until the end of the projection horizon.

After raising the **key policy rate** by 50 bp in April, May and June, the **NBS** revised it in July and August by 25 bp each, to the current level of 3.0%. At the same time, as the NBS interest rate corridor was widened in April from ±0.90 pp to ±1.0 pp relative to the key policy rate, the rate on credit facilities now equals 4.0% and the rate on deposit facilities 2.0%. By raising the key policy rate at a more moderate pace than in the previous months, the NBS continued to react to inflationary pressures while taking care also about the significance of uninterrupted economic growth.

The NBS helped limit the spillover effect of rising import prices on domestic prices, as in the previous years, by **preserving the relative stability of the EUR/RSD exchange rate** even amid heightened global uncertainty caused first by the pandemic and later by geopolitical tensions and the conflict in Ukraine. Since early year, as at end-July the dinar gained around 0.2% against the euro and lost 9.6% against the dollar due to the dollar's strengthening against the euro in the international market.

In making its decision to further tighten monetary conditions, the Executive Board had in mind the fact that **global cost-push pressures are still elevated, and further intensified with the outbreak of the Ukraine conflict** on account of a hefty increase in global energy prices, prices of primary agricultural commodities and industrial raw materials, as well as extended international supply chain bottlenecks. Even though weaker global growth outlook and greater risk of recession in the USA and the euro area pushed down the global prices of cereals and metals in May and June, they are still at a significantly higher level than early this year. Moreover, under the influence of the new package of sanctions imposed on Russia, which included oil imports into the EU, global oil prices continued up in May and June. According to the assessment of the relevant international institutions on this account, **global inflation will move on an upward path for some time**, and the risks to the inflation projection are judged to be tilted to the upside. In the euro area, Serbia's key trade partner, inflation measured 8.6% y-o-y in June, and according to the preliminary estimates, it picked up to 8.9% y-o-y in July. In addition, producer prices grew to 35.8% y-o-y in June, fuelled by significantly higher prices of energy, food and industrial raw materials. According to the ECB's June projection, euro area inflation will average 6.8% this year, which is up by 1.7 pp relative to what was expected three months ago, while according to the July Consensus Forecasts, inflation projection was raised additionally to 7.5%. Besides higher energy prices and other production costs, in the inflation-targeting regional peers with which we have important trade ties, double-digit inflation is also driven up by domestic demand, as well as labour market conditions, as evidenced by core inflation in these countries, which is higher than in Serbia. For this reason, the central banks of these countries tightened monetary conditions in recent months to a greater degree than the NBS did.

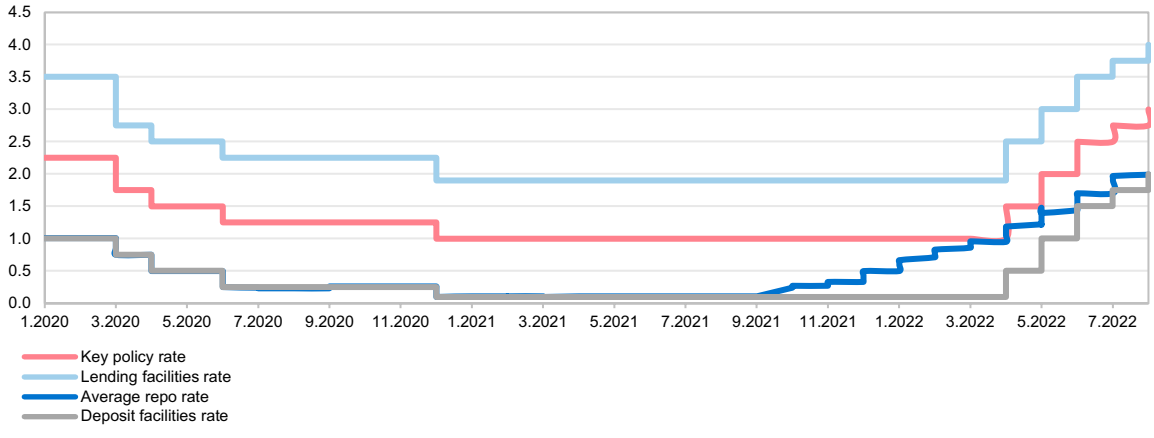
Heightened geopolitical tensions **increased uncertainty in the international financial market** amid weaker global economic growth outlook. Along with the effects **of the achieved and anticipated monetary policy tightening of leading central banks**, the Fed and the ECB, this dented investor readiness for portfolio investments and pushed up the risk premium of Serbia and other European emerging economies, spilling over onto higher neutral rates in these countries.

In June and July, the Fed further tightened monetary conditions by raising its fed funds rate by 75 bp each, to the range of 2.25–2.5%, and by normalising its balance sheet. It is evident that the monetary policy tightening will continue in the period ahead. The ECB decided to end its APP in early July, and to start raising its policy rates for the first time since 2011. Although it was announced that the policy rate would be raised by 25 bp, the increase was higher than expected and measured 50 bp. In addition, in the June extraordinary meeting it was decided to widen the flexibility of reinvesting within the PEPP, and to create a new instrument in order to prevent market fragmentation and an unjustified excessive rise in the yield on securities of certain euro area economies. Decisions on the future monetary policy of leading central banks will depend primarily on the strength and persistence of inflationary pressures, which have so far proved to be stronger than expected, but also on the growth prospects of their economies, which are less favourable than the projections of these central banks three months ago. Given that the **Fed's and ECB's faster than anticipated monetary policy normalisation could lead to lower capital inflows and depreciation pressures in emerging economies going forward**, the Executive Board noted that this warranted caution in the NBS's monetary policy making.

The decisions on monetary policy in the period since the previous *Report* were based on the May medium-term inflation projection, which predicted that inflation in Serbia would strike a downward path in H2 this year and return within the target band in H2 next year. The Board holds that this should be supported by the effects of past monetary policy tightening, and, in the short run, the effects of the Serbian government measures aimed at capping the prices of basic foodstuffs and energy in the domestic market. The effects of the rise in global prices of primary commodities and energy, as well as higher imported inflation were anticipated to soften in the projection horizon (i.e. in the next two years), consistent with projections of the relevant international institutions and market expectations. Assuming an average agricultural season in the domestic market, as well as lower global prices of primary agricultural commodities in the remainder of the year and beyond, the cost-push pressures in the production of other food in the domestic market were also expected to weaken going forward. In Q2, under the impact of higher food and energy prices, inflation moved at a somewhat higher level than expected in the May projection and measured 11.9% y-o-y in June. Over two-thirds of the contributions was still driven by the rise in the prices of food and energy. Moreover, high air temperatures and drought in July suggest that this year's agricultural season will probably be weaker than anticipated and that a typical decline in fruit and vegetable prices in Q3 will most likely not occur. Also, cost-push pressures arising from food prices will weaken less than anticipated in the May projection.

When it comes to **core inflation** (excluding the prices of food, energy, alcohol and cigarettes), which is most affected by the monetary policy, its outcome in Q2 was in line with May expectations. Driven by the higher imported inflation, core inflation in the domestic market also continued up, but was still significantly lower than headline inflation and measured 6.7% in June. What helped keep core inflation at a lower level is **the relative stability of the exchange rate**, which has been a powerful anchor of price stability over the past eight years, and the absence of any stronger inflationary pressures on the demand side.

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



Source: NBS.

Inflation expectations of the financial and corporate sectors for one year ahead grew moderately over the past months, and currently stand above the upper bound of the target tolerance band. Still, **medium-term expectations are lower and within the target band when it comes to the financial sector**, indicating that the financial and corporate sectors consider that the factors driving inflation up will begin to subside in the period ahead.

In making its decision on monetary conditions, the Executive Board had in mind that the **current tightening of monetary conditions would not significantly weaken domestic demand**. According to SORS estimate, GDP growth came at 4.4% y-o-y in Q1. On the production side, growth was led by the service sectors and industry, and on the expenditure side, by inventories, private consumption and fixed investment. On the other hand, the contribution of net exports was negative, mainly due to elevated energy imports. Despite a weaker global growth outlook for this year due to the Ukraine conflict, manufacturing output and exports are rising further in Serbia, indicating that subdued external demand has not had significant negative effects on Serbia thus far. This is probably thanks to prior investment in tradable sectors, which significantly propped up our export supply. Furthermore, agricultural exports have gathered pace since May following the relaxation of measures that temporarily restricted the export of these products. According to SORS data, GDP growth came at 4% y-o-y in Q2. However, economic activity is expected to slow down in the remainder of the year, reflecting global slowdown, rising production costs driven by higher energy prices, as well as heightened global uncertainty in the international financial market amid pronounced geopolitical tensions.

Although inflation outcome over the projection horizon will be probably higher than forecast in May, mainly due to the continued increase in global energy prices and imported inflation, the Executive Board judges that inflation will peak in Q3, resume a downward trajectory thereafter and return within the target band in H1 2024. However, until the end of the projection horizon, it is expected to move at a higher level than anticipated in May. Inflation will slow down as a result of the effects of monetary policy tightening to date, as well as the anticipated weakening of the effects of global cost-push pressures. As the main risks to inflation and other economic developments continue to emanate from the international environment, the NBS will continue to monitor and analyse trends in the international commodity and financial markets and assess whether there is a need for additional tightening of monetary conditions or whether the effects of past measures provide for a sustainable return of inflation within the target tolerance band over the projection horizon. Delivering price and financial stability in the medium term will remain a priority of the NBS's monetary policy, along with supporting continued growth and development of our economy, a further rise in employment and a favourable investment environment.

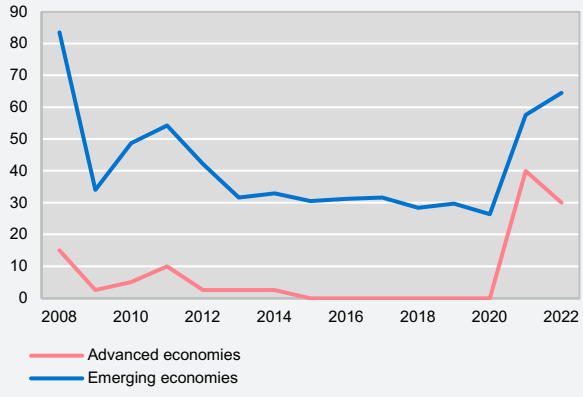
Text box 1: Global inflation and central banks' monetary policy responses

Having been at rock bottom for close to a decade, global energy and food prices soared in early 2021. Initially, the hike was caused by a sudden leap in demand as containment measures were relaxed and many economies opened up after the development and wide rollout of Covid-19 vaccines. Together with global value chain disruptions, resulting mostly from the inability of supply to adjust to soaring demand in the short term, and the greatly elevated prices of international container transport, mounting global prices of primary commodities (oil, agricultural commodities and metal) placed cost-push pressures on producer prices. Inflation was also fuelled by generous monetary and fiscal stimuli adopted by many countries and the shift in demand from services to goods during the pandemic. Taking stock of the above factors, most central banks in 2021 assessed the rise in inflationary pressures as temporary and likely to subside once supply and demand gradually became more balanced. However, robust growth in global energy prices, most notably of natural gas, but also oil, coal and electricity as alternative energy sources, from October last year spurred a further spike in producer and import prices which began to spill over to retail (consumer) prices of a broadening range of products and services. In late 2021, global prices of primary commodities levelled off somewhat and there were first signs of improvement in supply bottlenecks. Mounting geopolitical tensions in early 2022 and the outbreak of the Ukraine conflict, however, pushed world prices of energy, primary agricultural commodities and industrial raw materials further up (as Russia and Ukraine are major global exporters of cereals and Russia also of oil, natural gas and some precious metals), to or past their historical highs. In such circumstances, current and projected global inflation in 2022 are much higher than anticipated last and early this year, and the return of inflation to target without sharply restricting the economic expansion is the greatest challenge faced by most central banks since the 2008 global economic crisis.

Elevated international energy and food prices and global value chain disruptions are the key shared factors of inflation growth worldwide, while the intensity of inflationary pressures generated by other factors differs from country to country. In some countries, it was domestic demand that greatly facilitated the spillover of cost-push pressures from producer to consumer prices. In others, stringent labour market conditions resulted in major wage adjustments in response to inflation growth, opening up the inflationary spiral. In some countries (e.g. Turkey), the effects of higher import prices on domestic inflation were compounded by the weakening of the domestic currency amid heightened uncertainty in the international financial market and undermined macroeconomic fundamentals at home. The intensity of central banks' monetary policy responses therefore differed and was more robust in those countries where both demand-side factors and tight labour market conditions additionally fuelled inflation expectations.

Inflation was on a rise in 2021 and 2022 in both advanced and emerging economies, but it was higher on average in emerging economies due to the greater share of food and energy prices in the consumer price index. According to the IMF's classification of countries based on their degree of development, in late 2021 around 40% of advanced economies (out of a total of 40) and around 57% of emerging economies (out of a total of 153) posted inflation higher than 5%. As inflation growth gathered momentum across all countries in 2022, this percentage is currently even higher and, in advanced economies, not likely to be below its 2021 level at the end of 2022, as was forecast in the IMF's April projections when projections for all countries were available. Similarly, the July projection places inflation growth in advanced economies taken together at 6.3% at end-2022 compared to 4.8% in

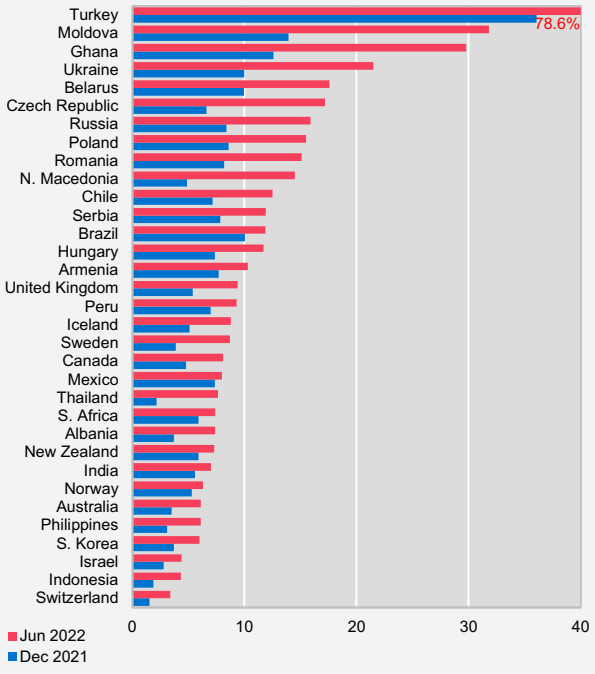
Chart O.1.1 **Share of countries with inflation above 5%**
(in %)



Source: IMF, WEO (April 2022).

April. This is an inflation level not seen in advanced economies for decades. In June 2022, inflation reached 9.1% y-o-y in the USA and 8.6% y-o-y in the euro area and is at its highest level in the past 40 years – in the US, since November 1981, and in the euro area, since its launch in 1999. According to economists (e.g. Olivier Blanchard[1]), however, US inflation is driven more by demand than supply, while in Europe it is the opposite. This is also suggested by the fact that the Fed started monetary policy tightening even before the Covid-19 pandemic broke out and that its monetary restriction is currently greater than the ECB's.

Chart O.1.2 **Inflation in selected countries**
(y-o-y rates, in %)



Sources: central banks of selected countries.

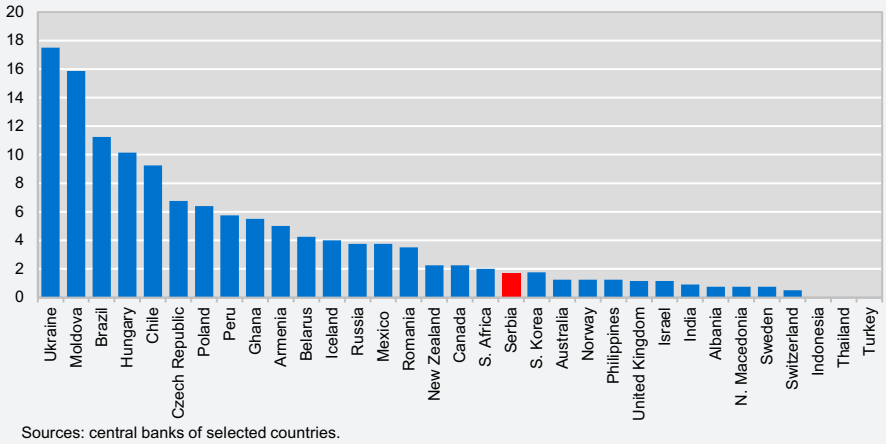
According to June 2022 data, inflation overshot the target in all of the 33 analysed countries officially pursuing the inflation targeting regime as their monetary policy strategy. Inflation topped 5% in 21 countries in late 2021 and in 30 countries in June this year, and was two-digit in almost a half of the observed countries. In this group, only two central banks – of Indonesia and Thailand – did not raise their key policy rates last and this year. The Central Bank of Turkey initially increased its key policy rate from 17% to 19% in March 2021 and later trimmed it to its present level of 14%, adopting measures to discourage dollarisation. As the rouble strengthened against the dollar, the Bank of Russia voted in its meeting of 10 June to cut the key policy rate by 150 bp to 9.5%, restoring it to the level before tensions between Russia and Ukraine escalated. In July, the rate was lowered to 8% but remains higher than at the start of monetary tightening in March last year.

Among the observed inflation targeters, the key policy rates in Ukraine and Moldova increased the most, followed by the rates in Brazil and Chile. Central European economies (Hungary, the Czech Republic, Poland) also saw relatively sharp key policy rate hikes. For example, Hungary's key policy rate rose by 10.15 pp to 10.75% from June 2021 until end-July 2022, while the Czech Republic raised its key policy rate by 6.75 pp to 7%. Since Q4 2021, the National Bank of Poland's key policy rate also went up by 6.4 pp to 6.5% in July. Another reason for these banks' strong response was the high, two-digit core inflation which indicates that surging global food and energy prices also had major second-round effects on the prices of other products and services, and that both domestic demand and elevated labour costs produced inflationary effects.

According to central banks' projections, in most countries inflation should peak in the coming months and settle below its current level by year-end. This should be supported by the effects of past monetary tightening and the anticipated weakening of the effects of rising global energy and primary commodity prices. Still, relevant international institutions and central banks hold that average inflation will be higher this year in both advanced and emerging economies, including in the inflation targeters of the region, compared to expectations before the Ukraine conflict broke out. Specifically, the latest available central bank projections in inflation-targeting Central European countries (the Czech Republic, Poland, Romania and Hungary) put average inflation between 12% and 14% in 2022, which is much higher than expected early in the year. Consensus Forecasts' expectations for this country group are similar. Except in Hungary, inflation in these countries is not anticipated to return within the bounds of the target tolerance band even by end-2023, despite the past and expected future monetary policy tightening by their central banks.

[1] https://noahpinion.substack.com/p/video-interview-olivier-blanchard

Chart O.1.3 **Key policy rate change until end-July relative to the start of the monetary policy tightening cycle in 2021**
(in pp)

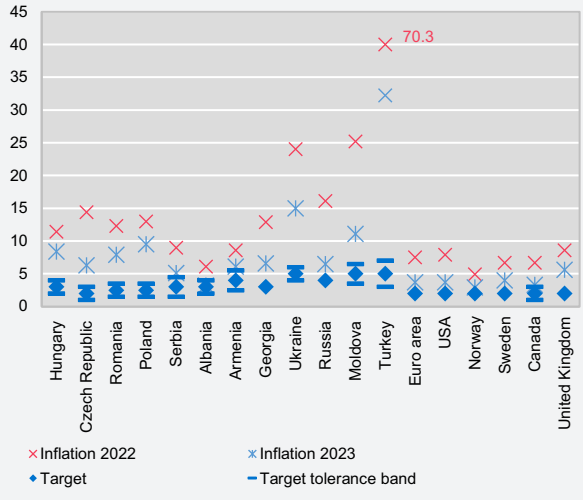


Sources: central banks of selected countries.

It should, however, be noted that analysts increasingly expect an intensification of recessionary pressures worldwide in the coming period. As a result, global prices of oil and other primary commodities could decline faster than anticipated, as we have already witnessed in the past month and a half, while inflation could slow sooner than expected, though global energy prices will most likely stay high. Even as global inflation is expected to slacken from its currently high level, estimates prevail that it is still difficult to expect its medium-term return to the low levels, persistently below central banks' targets, recorded for years back, i.e. since the global economic crisis of 2008 until last year.

Economists cite several reasons for such a view, as higher global inflation could lead to behavioural changes of economic players that tend to entrench it at a higher level.[2] These changes are more likely if an inflation rise is large and persistent enough to affect businesses and households and if they have sufficient bargaining and pricing power to trigger an inflation spiral. Indicators signal that global **inflation expectations** of all sectors are less well anchored. For this reason, as existing wage agreements expire, workers are likely to seek larger wage rises, particularly as real wages grew unusually slowly over the past year and even declined in some countries, though labour market conditions were remarkably tight and unemployment rates were low. In some countries, they have already secured wage indexation clauses to guard employees against future inflation surprises. Moreover, the recent broadening of inflationary pressures suggests that many firms have greater pricing power than they had pre-pandemic.

Chart O.1.4 **Projected average inflation and target by country**
(p.a., in %)



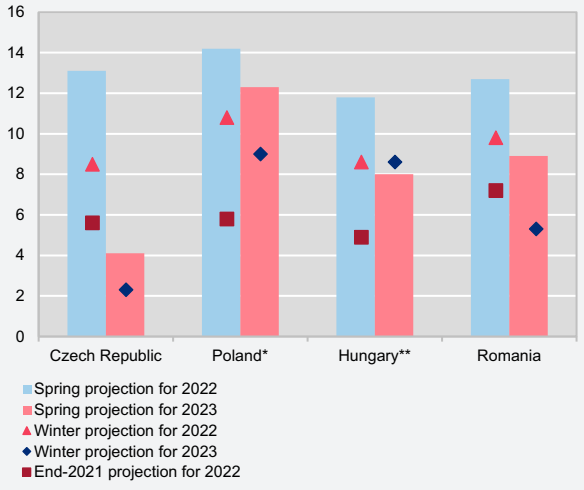
Source: Consensus Forecasts.

In addition to higher inflation expectations, another cause of concern is the **higher degree of correlation between changes in relative prices and inflation**. In a low-inflation environment, this correlation is week, i.e. the pass-through effect of price change by sector is low. This pass-through effect has now intensified and is estimated to be close to the level typical for high-inflation periods.

[2] *BIS, Annual Economic Report, June 2022.*

The disinflationary effect of some factors prevailing in the past several decades has also waned, bringing about fundamental changes to inflation dynamics. First of all, **deglobalisation** appears to have replaced globalisation. Tight trade measures, pandemic-induced supply bottlenecks and sudden cost-push pressures due to the military conflict in Ukraine reinforced the focus towards supply-side reforms and led to higher expenditures and investment, which should ensure greater safety of the supply and production process going forward. And whereas some adjustments in global production chains are desirable, excess fragmentation of production not only affects inflation but also negatively impacts global growth and productivity. Also, **green transition** calls for substantial investments and fuels inflation, even as it produces long-term benefits in terms of putting in place a sustainable energy mix.

Chart O.1.5 **Revisions of inflation projections for 2022 and 2023**
(in %)



Sources: central banks.
* Projections relate to July and March.
** Projections relate to June and March.

Therefore, inflation movements are the key challenge facing central banks going forward. Though inflation projections are surrounded by numerous risks, inflation is almost certain to stay above the target level in most countries for some time yet as the factors fuelling its rise are still in place, despite being expected to subside over the projection horizon. The key role in delivering low inflation and preventing a shift from low to high inflation will be played by the monetary policies and credibility of central banks.

III Inflation movements

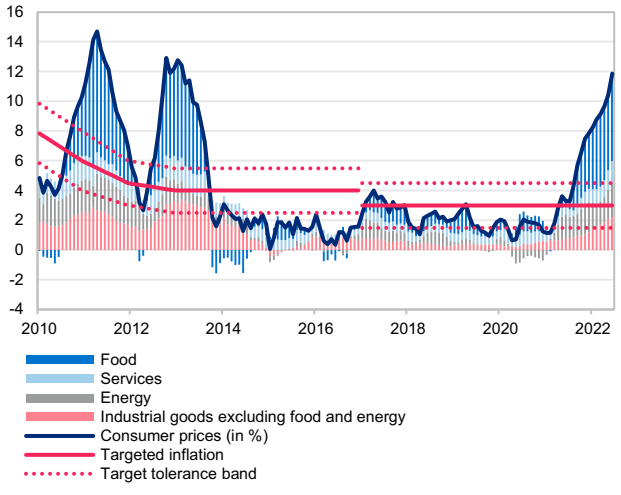
In the period since the May Report, y-o-y inflation in Serbia, as in other countries in the region, continued up and measured 11.9% in June. More than two-thirds of the contributions came from the prices of food and energy which stayed high in the global market as well amid continued geopolitical tensions and the Ukraine conflict.

Core inflation grew under the impact of the still high imported inflation, but it was considerably below the headline inflation also in Q2, and measured 6.7% y-o-y in June. This was further underpinned by the relative stability of the exchange rate and medium-term inflation expectations of the financial sector anchored within the target band.

Inflation movements in Q2

Amid continued geopolitical tensions and the Ukraine crisis, which pushed global prices of energy further up, and still high global food prices, **y-o-y inflation** in Serbia, as in other countries, continued on an upward path and measured 11.9% in June. Compared to March, when y-o-y inflation measured 9.1%, the contribution of food prices edged up by 1.0 pp due to higher production and transportation costs, and the absence of the anticipated drop in fruit and vegetable prices in June with the onset of the new agricultural season. At the same time, the contribution of energy prices also edged up by 0.8 pp. Due to extended halts in global supply chains and shortages of some industrial raw materials, a higher contribution to y-o-y inflation in June relative to March came also from the prices of industrial products excluding food and energy (by 0.5 pp), as well as from the prices of services (by 0.4 pp), which also reflect higher prices of energy.

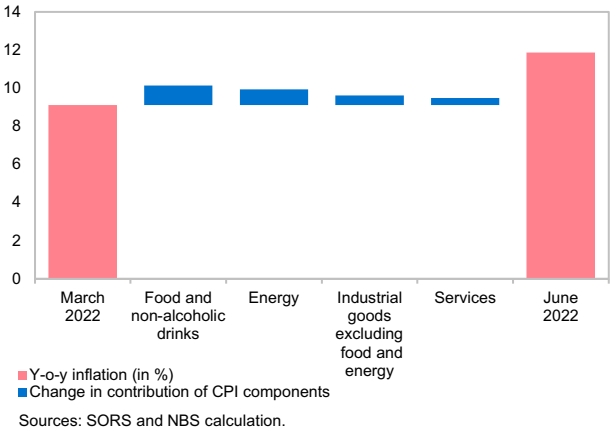
Chart III.0.1 **Contribution of CPI components to y-o-y consumer price growth**
(in pp)



Sources: SORS and NBS calculation.

Under the impact of the increase in producer and import prices, **y-o-y core inflation** (measured by CPI excluding food, energy, alcohol and cigarettes), grew in Q2 as well – from 4.8% in March to 6.7% in June. However, it was still significantly lower than headline inflation. Lower core inflation is underpinned by the relative stability of the RSD/EUR exchange rate and medium-term inflation expectations of the financial sector that are anchored within the target band, despite unfavourable global circumstances.

Chart III.0.2 **Changes in contribution of main CPI groups to y-o-y inflation**
(in pp)



Sources: SORS and NBS calculation.

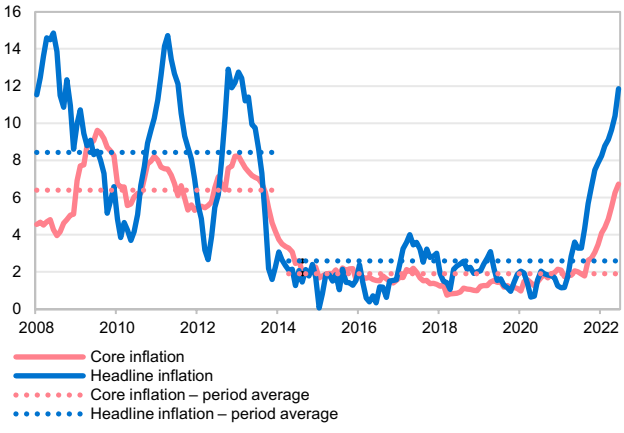
Quarterly consumer prices growth of 4.4% in Q2 was higher than expected in the May *Inflation Report*, mainly driven by the higher than anticipated hike in the prices of food and energy, while core inflation moved in line with

Table III.0.1 **Growth and contribution of components to consumer price growth in Q2 2022**
(quarterly)

	Growth rates (in %)	Contribution (in pp)
Consumer prices (CPI)	**4.4**	**4.4**
Unprocessed food	8.1	0.9
Processed food	5.4	1.1
Industrial products excluding food and energy	2.7	0.8
Energy	6.5	1.0
Services	2.5	0.6
CPI excluding energy, food, alcohol and cigarettes	2.9	1.3
Administered prices	0.2	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.

our expectations. The **prices of food and non-alcoholic beverages** rose by 6.3% (with a 2.1 pp contribution). The **prices of unprocessed food** rose by 8.1%, primarily on account of price hikes in fresh meat (11.5%, with a 0.5 pp contribution) due to a further surge in global meat prices. In quarterly terms, the prices of fresh fruit and seasonally unusual hike in the prices of fresh vegetables in June gave a 0.4 pp contribution to headline inflation. The **prices of processed food** rose in Q2 by 5.4%, mostly on account of higher prices of milk and dairy, meat products and bread and cereals (with a 0.9 pp cumulative contribution to inflation), amid elevated cost-push pressures in food production and transportation. The prices of other processed food picked up as well in Q2 (with a 0.2 pp cumulative contribution to inflation).

Energy prices grew by 6.5% in Q2, as a result of a significant rise in the prices of petroleum products in the domestic market (11.8%, with a 0.7 pp contribution), and a seasonally untypical rise in the prices of solid fuels – firewood and coal (10.5%, with a 0.3 pp contribution), amid a drastic surge in global energy prices and the risk regarding their availability in the winter months.

The prices of industrial products (excluding food and energy) recorded a rise of 2.7% in Q2, driven by a seasonal hike in the prices of clothes and footwear (4.5%) and higher prices of furniture, household appliances and maintenance (3.8%), with 0.2 pp contribution each. The prices of other industrial products rose as well in Q2, reflecting also a rise in the prices of petroleum products which are used in their production.

The prices of services increased by 2.5% in Q2, driven by a seasonal rise in travel packages (27.2%) and the higher prices of restaurant and hotel services, transport and medical services, and to a lesser degree, the increase in the prices of rent, crafts and personal services.

Administered prices rose mildly in Q2 (0.2%), providing a negligible contribution to inflation. Administered prices slowed down their y-o-y growth somewhat to 1.8% in June (from 1.9% in March).

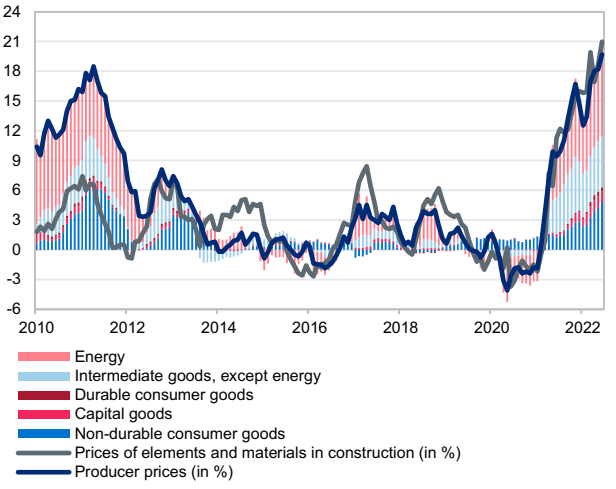
Prices within core inflation recorded an increase by 2.9% in Q2, led by the mentioned hike in the prices of clothes and footwear, household cleaning products, catering services and travel packages.

Producer and import prices

In the period since the previous *Report*, cost-push pressures in the international market intensified additionally on account of extended halts in supply and

shortages of some industrial raw materials, leading to a further y-o-y rise in **industrial producer prices in the domestic market** to 19.7% in June (from 17.0% in March). Relative to the previous quarter, in Q2 all other components provided a higher contribution in y-o-y terms, mainly the **costs of food production and beverages and energy production prices** (crude oil and petroleum products). A higher contribution also came from the prices of **intermediate goods** production (chemicals, rubber and plastic products and base metals), while the prices of **capital** and **durable consumer goods** in June provided a similar contribution to industrial producer prices as in March. Although y-o-y growth in the **prices of elements and materials incorporated in construction** in early Q2 slowed down mildly, it measured 21.0% in June, somewhat higher than in March (19.9%), indicating still pronounced cost-push pressures in construction.

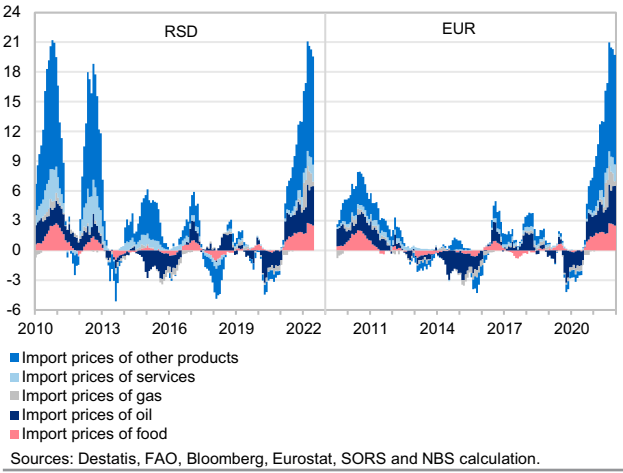
Chart III.0.4 **Contribution of components to y-o-y producer price growth***
(in pp)



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

Import prices expressed in dinars[1] slowed down their y-o-y growth mildly in Q2, which measured 19.6% in June (after 21.1% in March), on account of a lower contribution of import gas prices and somewhat lower contribution of global food prices and export prices of Germany (which are used for the approximation of the import prices of equipment and intermediate goods). The contribution of euro area consumer prices (used for the approximation of the import prices of services) and global oil prices to y-o-y growth in import prices increased slightly in June relative to March. Import prices of goods and services (expressed in dinars) increased in Q2 owing to the dinar's weakening against the dollar, as a consequence of the euro's losing ground against the dollar.

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



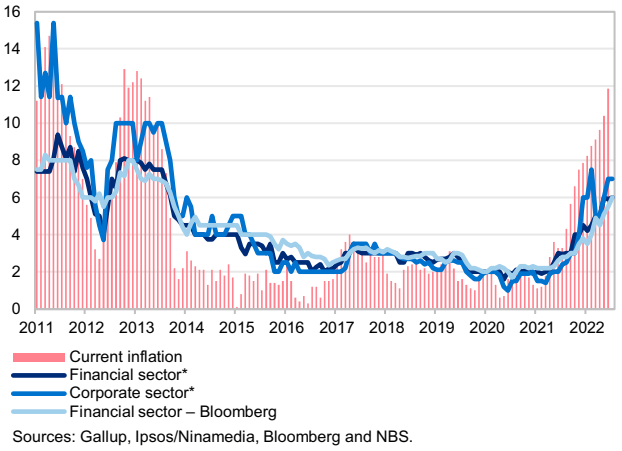
Sources: Destatis, FAO, Bloomberg, Eurostat, SORS and NBS calculation.

Inflation expectations

One-year ahead inflation expectations of the financial and corporate sectors continued on the path of the current inflation, though they were lower. Moreover, medium-term inflation expectations of the financial sector were still anchored within the target band.

According to the **Bloomberg** survey, inflation expectations of the financial sector rose to 5.1% in May, continuing up also in June and July (5.5% and 6.0%, respectively). According to the July Ipsos survey, although falling slightly to 5.9% in June, **one-year ahead**

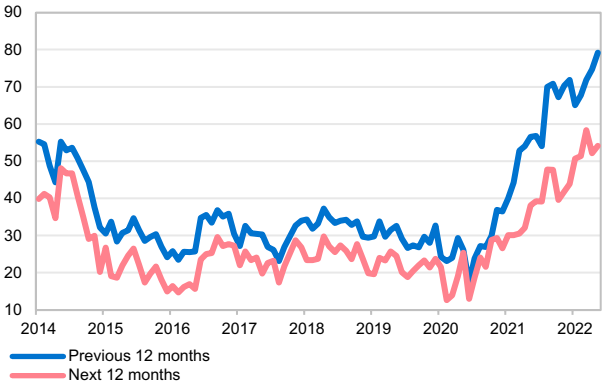
Chart III.0.6 **Current inflation and one-year ahead inflation expectations**
(y-o-y rates, in %)



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

[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 trade partners, is used as an indicator of import prices. The base year is 2010.

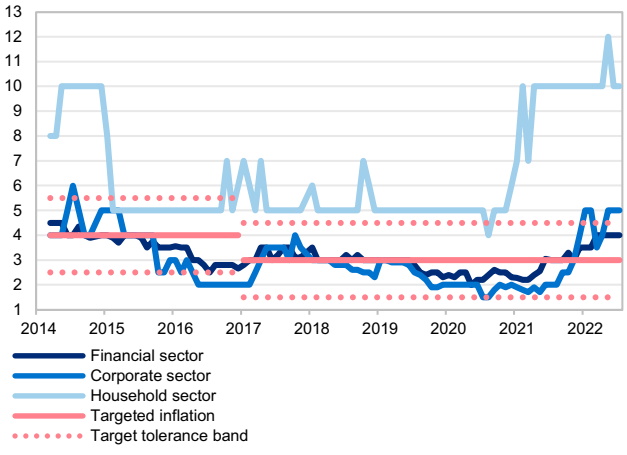
Chart III.0.7 **Household perceived and expected inflation***
(in index points)



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.

inflation expectations of the financial sector returned to their May level in July (6.0%).

After the stabilisation in April, inflation expectations of the **corporate sector** rose as well, first to 6.0% in May, and then to 7.0% in June and July. The net percentage (NP) of corporates expecting rising input prices over the next three months equalled 65.0%, whereas 57.8% expect an increase in the prices of their own products in this period. On the other hand, the net percentage of corporates expecting an increase thereafter, over the next twelve months, is lower – at 62.2%, while 74.4% of respondents expect an increase in the prices of their own products/services in the next year.

One-year ahead inflation expectations of households stayed unchanged from April, at 20.0%. 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 and three years ahead have been unchanged since April and are within the NBS target tolerance band, measuring 4.0% and 3.5%, respectively. Medium-term inflation expectations of **corporates** rose to 5.0% in May for two years ahead, staying there in June and July. After rising to 4.0% in May and stagnating in June, three-year ahead corporate expectations continued up in July to 5.0%. After rising in May (to 12.0%), two-year ahead inflation expectations of **households** receded in June to their April level at 10.0%, staying there in July as well, the same as for three years ahead.

[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

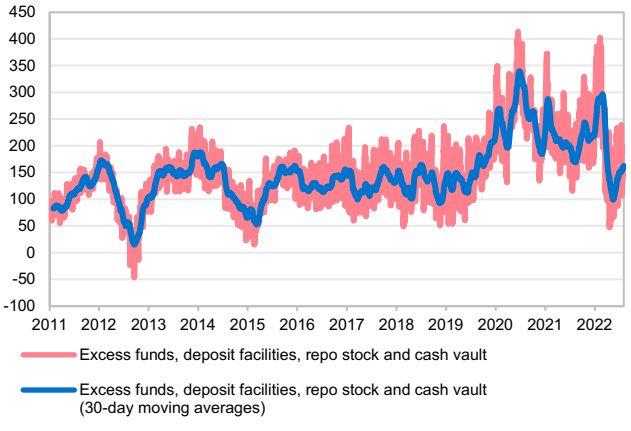
The tightening of monetary conditions had an expected impact on money market interest rates in Q2, which, coupled with the effects of heightened uncertainty in the international financial market and increased risk premium, same as in other emerging economies, fed also into higher yield rates on local currency government securities. Q2 also saw a rise in interest rates on lending and savings, both dinar- and euro-denominated.

Interest rates

The NBS tightened monetary conditions in Q2 by raising **the key policy rate** by 150 bp, and by 25 bp in July and August each. The NBS interest rate corridor was widened in April from ±0.90 pp to ±1.0 pp relative to the key policy rate, so the lending facility rate now equals 4.00% and the deposit facility rate 2.00%. Excess dinar liquidity of banks contracted, mainly as a result of NBS interventions by net selling foreign currency in late 2021 and Q1 this year. The average stock of sold repo securities decreased from RSD 39.8 bn in March to RSD 12.0 bn in June, with the average repo rate climbing by 74 bp to 1.7% (increasing further in July, to 1.97% at month end). The average daily amount of overnight bank deposits with the NBS increased from RSD 42.0 bn in March to RSD 51.5 bn in June.

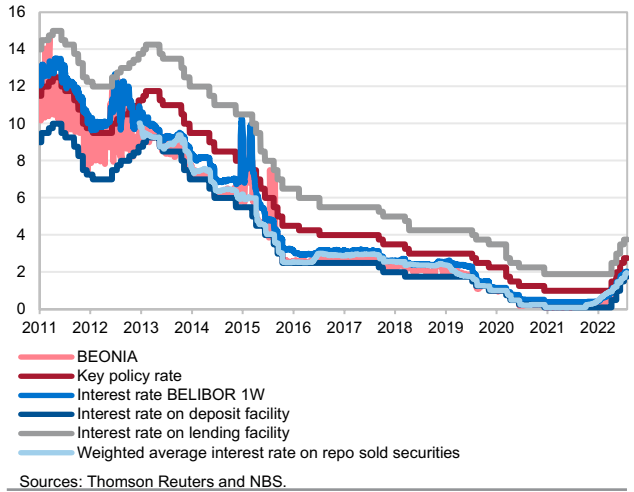
The tightening of monetary conditions put an upward pressure on interest rates in the **overnight interbank money market**, so that in Q2 BEONIA rose by 86 bp, to 1.62% at end-June. The average daily turnover decreased by RSD 3.1 bn q-o-q, to RSD 3.8 bn in June. A sharper rise was recorded for BELIBOR rates of all maturities, which added around 109 bp in Q2, moving at end-June from 1.63% for the shortest maturity to 2.45% for the six-month maturity. At the same time, the growth of the average repo rate on one-week transactions concluded in the money market amounted to 88 bp, with the rate climbing to 1.83% in June. Interest rates in the interbank money market extended their rise into July.

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



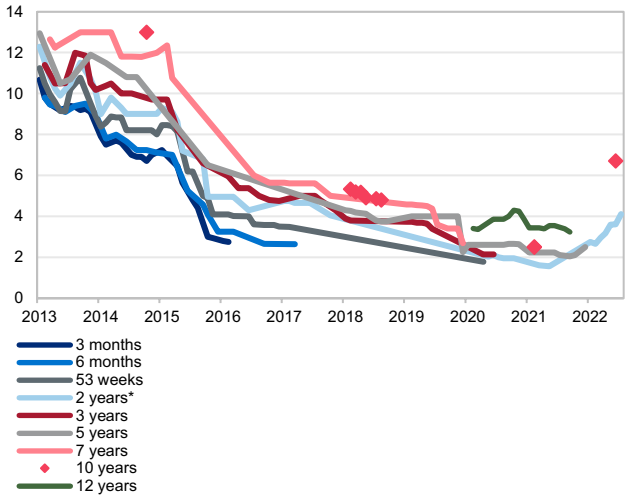
Source: NBS.

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



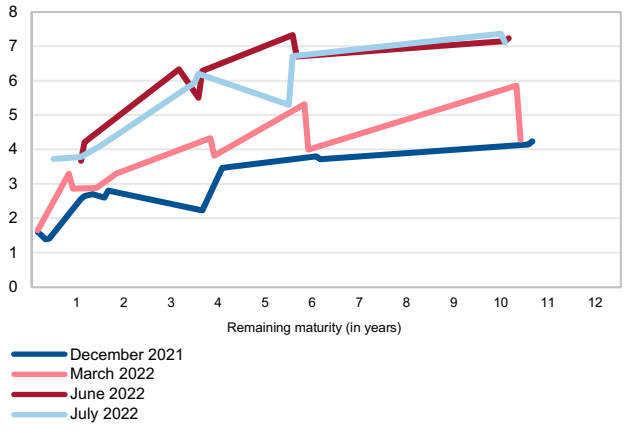
Sources: Thomson Reuters and NBS.

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



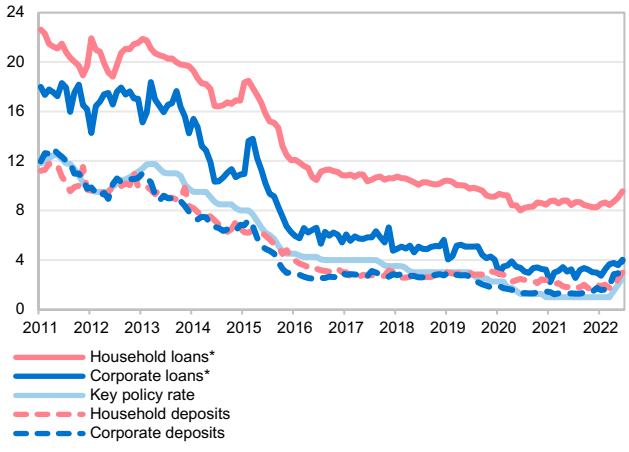
Source: Ministry of Finance.
* Excluding coupon securities with the rate linked to the NBS key policy rate.

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.

Turning to t**he primary market of dinar government securities**, in Q2 two-year dinar securities were offered in four auctions and ten-year securities in one auction, this being the ninth re-opening of the issue from 6 February 2018. Persistent uncertainty in the international financial market continued to affect the domestic securities market. This is confirmed by a further rise in the effective rate on two-year securities, which went up in several rounds, reaching 3.6% and posting a 65 bp increase relative to the previous auction of this maturity held at end-Q1. At the auction of ten-year dinar securities, the effective rate reached 6.7%, increasing by 420 bp from the previous auction held on 9 February 2021.

Q2 saw the sale of dinar securities nominally worth RSD 23.3 bn, as well as the maturing of previously sold securities nominally worth RSD 49.2 bn, so the stock of dinar securities sold declined by close to RSD 26.0 bn, to RSD 894.6 bn at end-Q2. The stock of dinar securities owned by non-residents shrank further in Q2, by RSD 25.2 bn to RSD 142.6 bn at end-June, due to the further tightening of monetary policies by leading central banks and mounting uncertainty in the international financial market.

Uncertainty in the international financial market and subdued investment appetite continued to affect the domestic **secondary market of dinar securities**. As a consequence, Q2 saw a further rise in yield rates and a contraction in turnover by 19% to RSD 58.6 bn. The weighted average yields on government dinar bonds with the remaining maturity of four, six and ten years edged up in Q2 by around 1.35 pp, 2.70 pp and 2.91 pp to 5.65%, 6.72% and 7.21%, respectively. The yield rates on dinar securities of shorter maturity moved from 3.7% for the remaining one-year to 6.3% for the remaining three-year maturity. In June, a 53-week eurobond was issued through private placement and was sold in the nominal value of EUR 350 mn, at the coupon rate of 2.4%.

There was only one auction of **government euro securities** in Q2 – of 2.5-year maturity, with the effective rate unchanged from the previous auction in February at 0.81%, which is below the coupon rate of 0.85%. Securities of this maturity were sold in the nominal amount of EUR 11.0 mn, and since Q2 saw the maturing of earlier sold euro securities in the nominal amount of EUR 100.0 mn, the stock of euro securities sold declined to EUR 2,142.4 mn at end-June.

The rise in interest rates in the interbank money market in Q2 put an upward pressure on interest rates on **new dinar loans** as well. Relative to March, interest rates on dinar household loans edged up by 1.1 pp (to 9.5% in June), and on corporate loans by 0.4 pp (to 4.0% in June).

The rise in interest rates on dinar corporate loans was driven by the rate on working capital loans, which increased by 0.9 pp to 4.8%, and interest rate on investment loans (up by 0.8 pp to 5.9%), which admittedly account for a significantly smaller share in total dinar corporate loans compared to working capital loans. On the other hand, the rates on other non-categorised loans decreased by 0.2 pp, to 2.5%. Higher interest rates on dinar household loans reflected the rise in interest rates on all loan categories, primarily cash loans (up by 1.1 pp to 10.1%), given that these loans have the dominant share in overall household lending. An interest rate increase was also recorded by housing loans, due to the higher cost of energy efficiency loans (up by 1.3 pp to 8.8%) and other non-categorised loans (by 1.0 pp to 7.1%).

The weighted average interest rate on **euro-denominated** corporate loans edged up by 0.4 pp relative to March, to 2.7% in June. The increase was mainly led by the rising interest rates on working capital loans – by 0.5 pp to 2.6%, and investment loans – by 0.4 pp to 3.4%, which together account for more than 80% of total corporate lending. The average interest rate on euro-indexed household loans inched up by 0.3 pp to 3.7%, due to the rise in interest rates on euro-indexed housing loans by 0.3 pp to 2.9%, and to a lesser extent also due to the increase in interest rate on cash loans, by 0.4 pp to 3.4%, as their share in total lending is low.

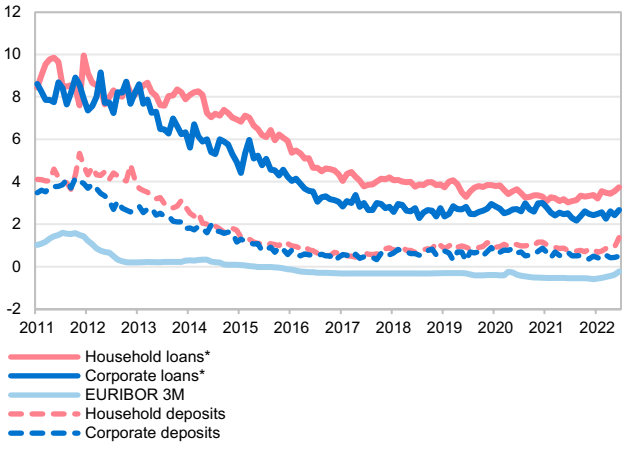
Relative to March, interest rate on household dinar **savings** increased by 1.3 pp, to 3.0% in June, while the interest rate on euro savings added 0.5 pp, coming at 1.4%. Interest rate on term euro deposits of corporates flatlined from March (0.5%), while the one on term dinar deposits gained 2.1 pp, climbing to 4.0% in June.

Risk premium

Continued geopolitical tensions, adoption of additional packages of sanctions against Russia by the West and the Russian counter-measures pushed the global risk premium further up in Q2, including that of Serbia. Stronger risk aversion in the international financial markets was also underpinned by the monetary policy tightening by leading central banks amid accelerated global inflation.

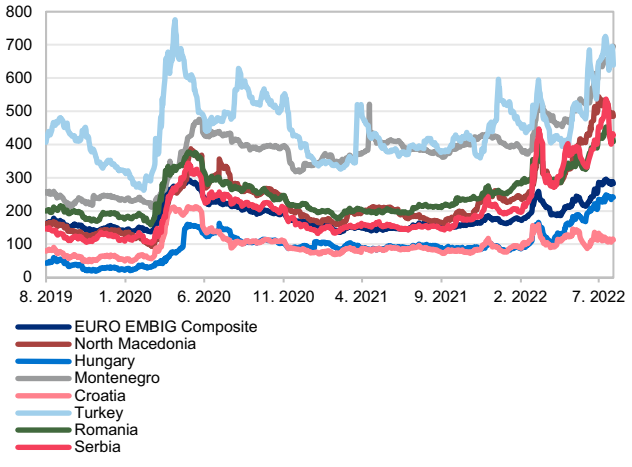
EURO EMBIG Composite went up in Q2 by 83 bp, reaching 272 bp at end-June. At the same time, EURO EMBIG for Serbia increased by 165 bp, to 440 bp. Serbia's dollar risk premium also rose in Q2 (by 117 bp, to 312 bp), continuing to move below EMBI Composite though, which went up by 113 bp, to 460 bp in Q2.

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



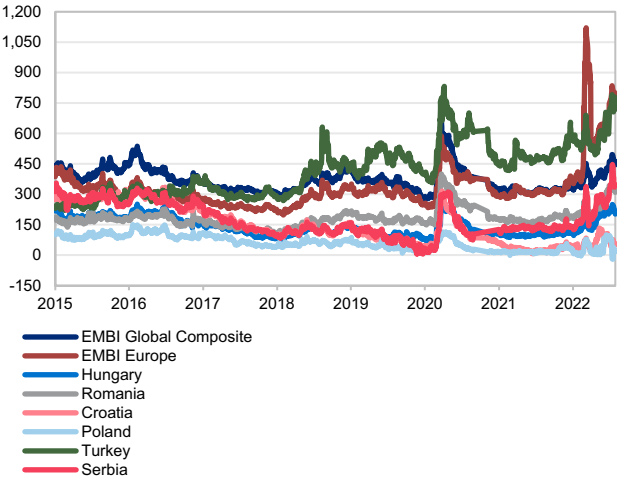
Sources: European Banking Federation and NBS.
* Excluding revolving loans, current account overdrafts and credit card debt.

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)

	2018	2019	2020	2021	2022
S&P	BB /positive[5]	BB+ /positive[5]	BB+ /stable[2]	BB+ /positive[5]	BB+ /stable[3]
Fitch		BB+ /stable[4]			
Moody's		Ba3 /positive[4]		Ba2 /stable[1]	

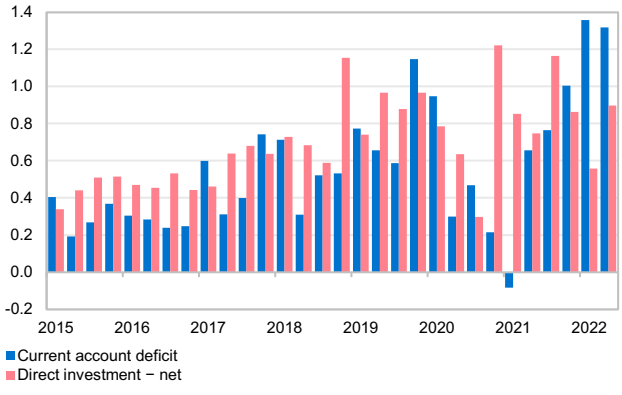
Source: NBS.
[1] March, [2] May, [3] June, [4] September, [5] December.

In June, Standard & Poor's maintained Serbia's credit rating at BB+, while changing the outlook from positive to stable because of geopolitical circumstances and, above all, the potential indirect impact of the Ukraine conflict on Serbia. The agency emphasised the credibility and continuity of monetary and overall economic policy of Serbia, as well as the resilience of our economy and the preserved stability of the banking sector. In addition, Standard & Poor's pointed out Serbia's favourable economic growth outlook over the medium run, supported by a high inflow of investments in export-oriented sectors.

Foreign capital inflow

The bulk of capital inflows in Q2 were FDIs. Higher external borrowing also generated inflows, as did portfolio investments, reduced bank funds in accounts abroad and a simultaneous increase in non-residents' deposits. The said inflows outstripped the outflows on trade loans by multiple times.

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

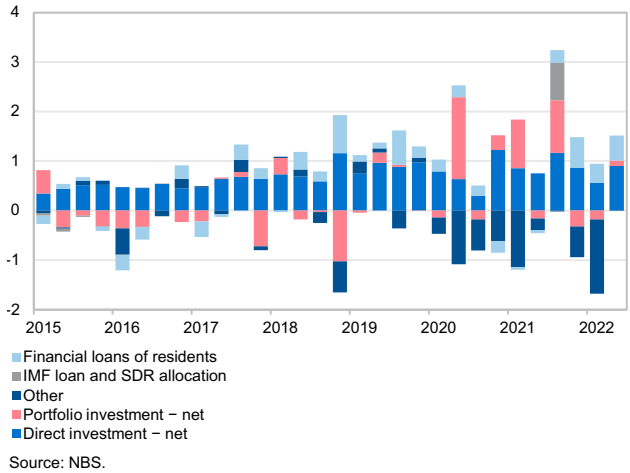


Source: NBS.
Note: Preliminary data for Q2 2022.

After temporary deceleration in Q1, in Q2 FDI inflows returned to the high levels recorded before the outbreak of the Ukraine conflict. According to preliminary data, FDIs to Serbia measured EUR 997 mn in Q2, whereby FDI inflow in H1 reached EUR 1.6 bn. Sector-wise, investments went primarily to manufacturing, construction, and trade. At the same time, residents stepped up their investments abroad, so **net FDI inflow** in Q2 came at EUR 898 mn.

Portfolio investment brought in a net capital inflow of EUR 109 mn. The key contribution came from the purchase of EUR 350 mn worth of government securities in the primary market through private placement in June, whereby the amount of sale in the secondary market – particularly pronounced in April, was exceeded. An outflow was registered on account of maturity of government securities owned by non-residents, while at the same time an inflow was generated on account of matured foreign securities held by residents.

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



Source: NBS.
Note: Preliminary data for Q2 2022.

In Q2, net external liabilities of residents on account of **financial loans** rose by EUR 505 mn due to intensified borrowing of banks, government and corporates. There was also an inflow in respect of **cash and deposits** (EUR 437 mn), as a result of a decrease in domestic banks' funds in accounts abroad and an increase in non-residents' funds in accounts with domestic banks. On the other hand, trade loans incurred an outflow of EUR 474 mn due to unpaid exports.

Trends in the FX market and exchange rate

The depreciation pressures from late last year and Q1 this year weakened considerably in April, making way for appreciation pressures from May onwards. Observed at period end, the dinar strengthened against the euro by 0.3% in Q2, while weakening by 6.0% against the dollar due to the depreciation of the euro vis-a-vis the dollar in the international market.

Since the beginning of Q2 the demand for foreign currency in the IFEM dropped and the supply increased. In May, the supply outstripped the demand, with the gap significantly broadening in June and July which resulted in stronger appreciation pressures. The supply of foreign currency went up primarily owing to FX-indexed bank assets[3] and net purchase of foreign cash. Following the sale of a record amount of foreign cash in March as a result of heightened uncertainty due to the escalation of the Ukraine crisis, as of April a net purchase of foreign cash was recorded again, with particularly high purchase amounts in May and June. In addition, the longer positions of banks on account of payment card use pushed the supply up. On the other hand, the demand for foreign currency was considerably lower as banks sold to both residents and non-residents smaller amounts of foreign currency than in Q1. As for residents, the demand for foreign currency was still generated by energy importers, while high inflows from exports and FDI increased some companies' supply of foreign currency offered to banks.

From April to end-July, the NBS intervened in the IFEM purchasing EUR 760 mn net in order to preserve the relative stability of the exchange rate of the dinar against the euro. From the beginning of the year until end-July, the NBS sold EUR 1,355 mn net in the IFEM.

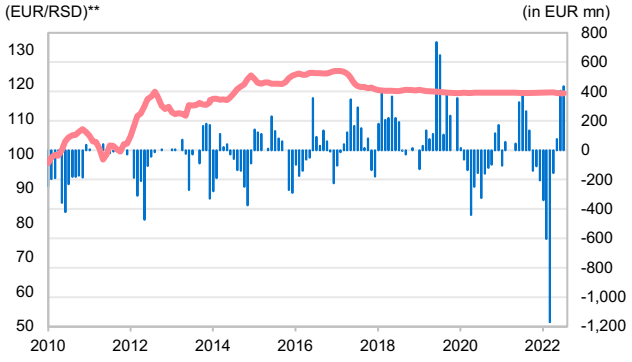
Trading volumes in the IFEM[4] went up in Q2, to an average of EUR 43.6 mn, up by EUR 16.5 mn from Q1 with a surge in May (EUR 53.3 mn) and June (EUR 41.6 mn), these being the record amounts posted since December 2021. At the same time, trading volumes in regular FX swap auctions went further down. In Q2, banks bought and sold EUR 10.0 mn each in two-week auctions, while three-month auctions saw no activity.

Unlike the dinar, which appreciated slightly, most currencies of regional inflation-targeting peers weakened in Q2 despite the continued monetary policy tightening.

[3] Aiming to balance their long open foreign currency positions, thus reducing exposure to foreign exchange risk, banks sell foreign currency, which results in the strengthening of the dinar.

[4] Excluding the NBS.

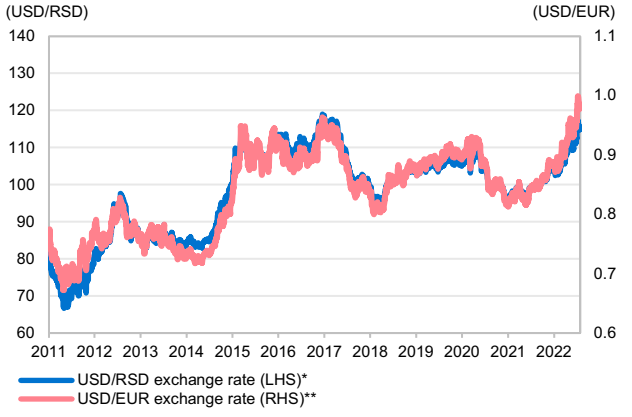
Chart IV.1.11 **Dinar exchange rate and NBS transactions in the FX market**



Source: NBS.

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

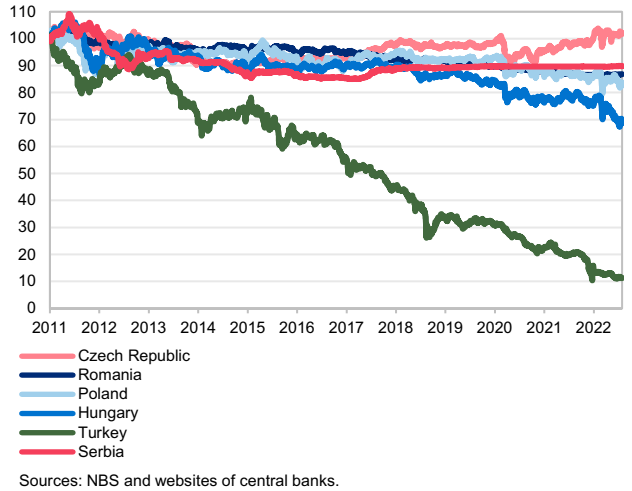
Chart IV.1.12 **Movements in USD/RSD and USD/EUR exchange rates**



Source: NBS.

* USD 1 in RSD.
** USD 1 in EUR.

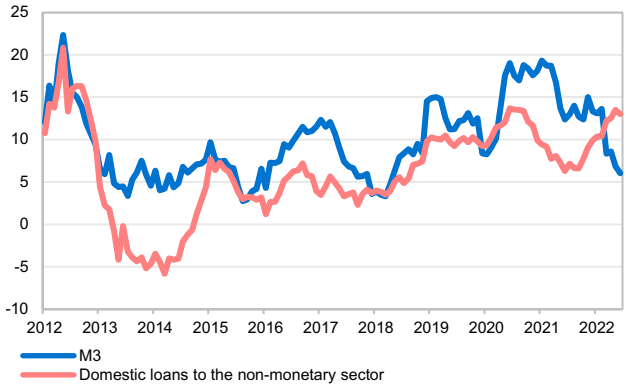
Chart IV.1.13 **Exchange rates of selected national currencies against the euro***
(daily data, 31 December 2010 = 100)



Sources: NBS and websites of central banks.

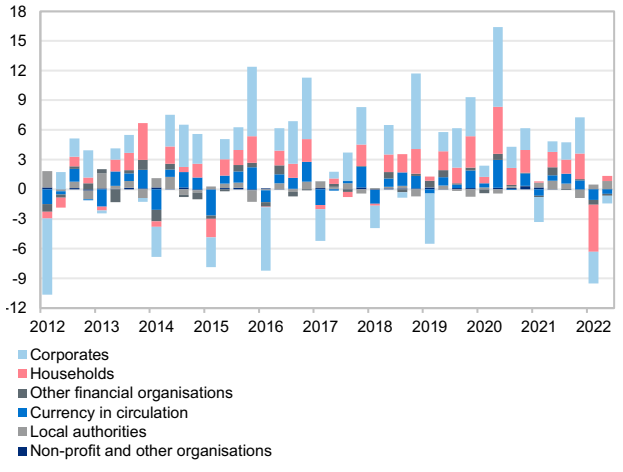
* Growth indicates appreciation.

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



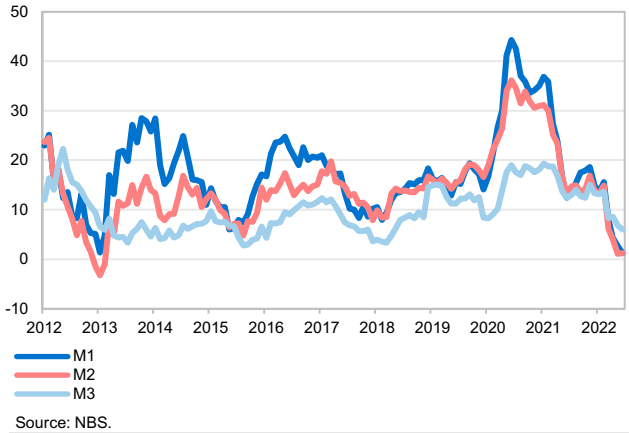
Source: NBS.

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



Source: NBS.

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



Source: NBS.

At period end, the Turkish lira and Hungarian forint recorded the sharpest depreciation against the euro (6.9% and 6.8%, respectively), while the Czech koruna weakened by 1.4% and Polish zloty by 0.6%. Only the value of the Romanian leu remained almost unchanged.

2 Money and loans

Deceleration of the y-o-y growth of monetary aggregates persisted in Q2 amid global uncertainty caused by the further escalation of geopolitical tensions. On the other hand, domestic lending continued to record double-digit y-o-y growth rates, driven mainly by corporate, but also by household lending.

Monetary aggregates

Compared to end-Q1, dinar money supply M2 declined by 0.1%, driven by the fall in the most liquid components. Term dinar deposits and the FX component went up, contributing to the rise in the broadest monetary aggregate, M3 by 0.9% in Q2.

By category, **sight dinar deposits** dropped by RSD 4.9 bn in Q2, with transaction deposits recording a decline in all sectors except households. At the same time, **term dinar deposits** rose by RSD 11.0 bn in Q2, mostly on account of corporate deposits (RSD 12.7 bn). As a result of heightened risk aversion caused by the escalation of geopolitical tensions, household dinar savings dropped by RSD 2.6 bn in Q2, reaching RSD 85.3 bn at end-June. Nevertheless, it is important to stress that financial stability and relative stability of the exchange rate have been preserved even in times of crisis and that the temporary downward trend of dinar savings was halted in June when a monthly increment amounted to RSD 1.0 bn.

FX deposits of residents went up by EUR 343.3 mn in Q2. Household FX savings recorded the most pronounced increase, going up by EUR 312.8 mn in Q2, to EUR 12.7 bn at end-June. At the same time, corporate FX deposits increased by EUR 39.1 mn, thanks to FX inflows on account of exports, FDI and external borrowing.

In y-o-y terms, the growth in monetary aggregates slowed down further in Q2. Stable lending growth continued to exert a positive effect on monetary aggregates, while the high last year's base, coupled with heightened global uncertainty and risk aversion, worked in the opposite direction. In June, dinar money supplies – M1 and M2 recorded a y-o-y growth rate of 1.2% each, while M3 rose by 6.0%.

Loans

In y-o-y terms, domestic lending activity continued posting double-digit growth rates, and, excluding the exchange rate effect, it rose by 13.1% in June, with corporate lending growth at 15.8% and household at 9.8%. Corporate lending continued to provide the largest contribution to the y-o-y increase in total loans – 8.0 pp in June, followed by household loans that provided a 4.6 pp contribution.

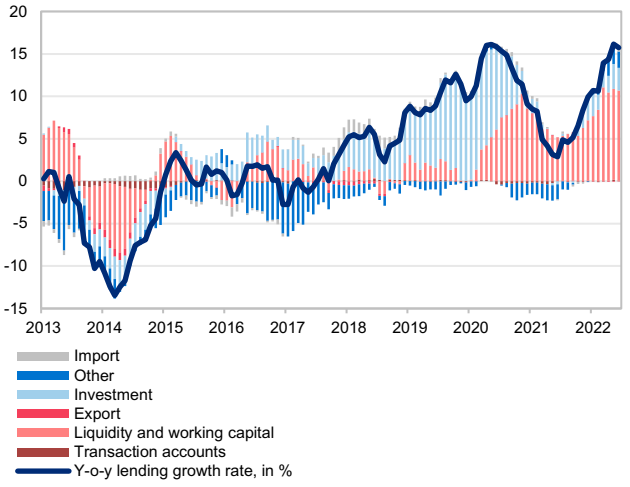
Excluding the exchange rate effect, **corporate loans** increased by RSD 48.3 bn in Q2. The highest increment was recorded for liquidity and working capital loans (RSD 18.7 bn), which accounted for 47.7% of total corporate loans at end-June. Non-categorised loans went up by RSD 15.1 bn, while investment loans increased by RSD 11.7 bn (and their share in corporate loans stood at 39.3% in June). Other types of loans recorded relatively smaller changes in stock compared to end-Q1. Size-wise, loans granted to micro, small and medium-sized enterprises accounted for 61.1% of total stock of corporate loans in June. The rise in FX-indexed corporate loans and the decrease in dinar receivables on account of maturity of guarantee scheme loans pushed down the degree of dinarisation of corporate receivables by 1.0 pp in Q2, to 22.5% in June.

The volume of new corporate loans in Q2 equalled RSD 294.9 bn, up by 1.4% compared to the same period last year. In Q2 as well, corporates mostly used liquidity and working capital loans (55.4%), and almost 60% of these loans were absorbed by micro, small and medium-sized enterprises. Investment loans accounted for 25.9% of new corporate loans in Q2, with 56.6% granted to micro, small and medium-sized enterprises.

Excluding the exchange rate effect, **household loans** increased by RSD 38.4 bn in Q2. Cash loans went up by RSD 16.8 bn, and housing loans similarly, by RSD 16.6 bn, whereby their stable growth trend continued. The share of cash and housing loans remained at a similar level as in March (44.0% and 39.4%, respectively). The stock of other types of household loans was almost unchanged compared to end-Q1. As for loans granted to entrepreneurs, liquidity and working capital loans were higher by RSD 3.2 bn and investment loans by RSD 1.0 bn. As FX-indexed and dinar receivables grew at the same pace in Q2, the degree of dinarisation of household receivables in June measured 54.4%, for the fourth consecutive month.

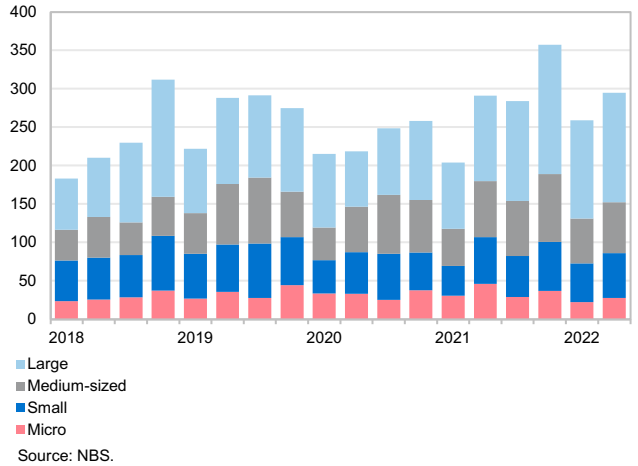
The amount of new household loans in Q2 (RSD 149.3 bn) was lower by 1.6% than in the same period last year.

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



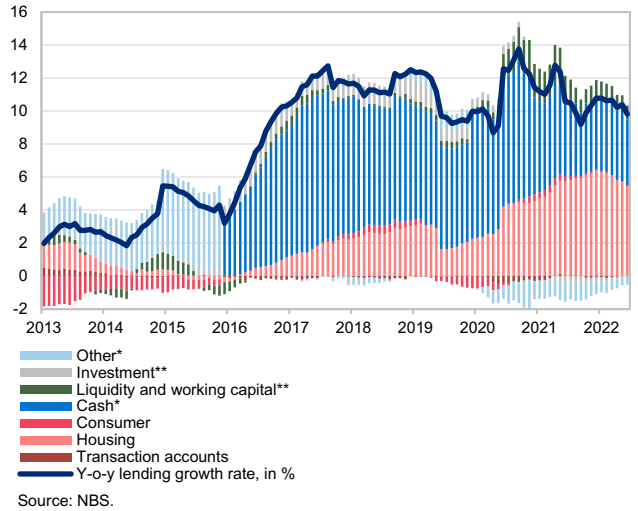
Source: NBS.

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



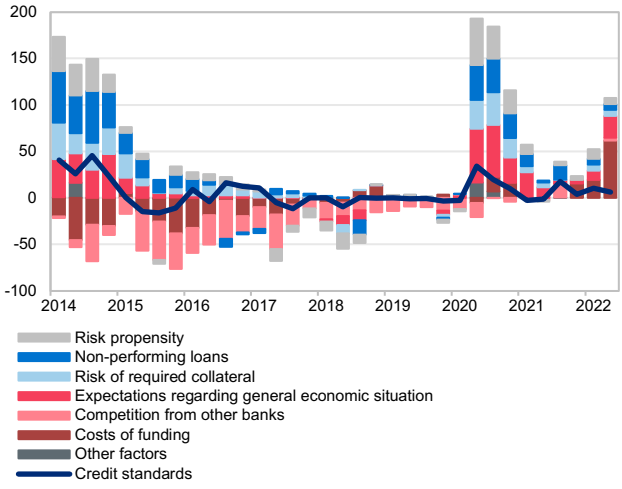
Source: NBS.

Chart IV.2.6 **Contributions to y-o-y household lending growth**
(in pp, excluding the exchange rate effect)



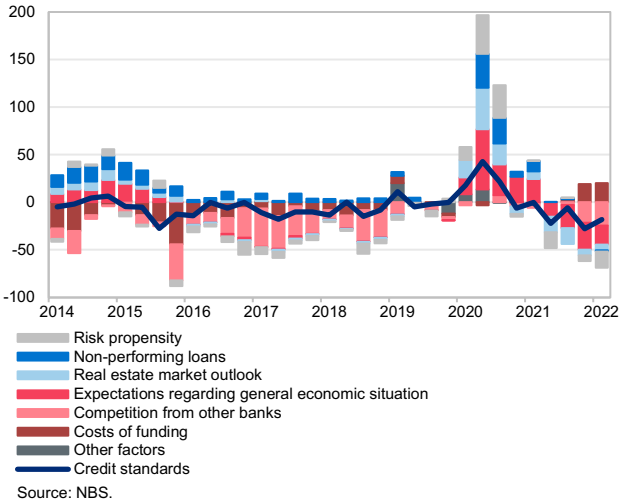
Source: NBS.
* Until December 2015, the contribution of cash loans is shown within the contribution of other loans.
** Loans extended to entrepreneurs.

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



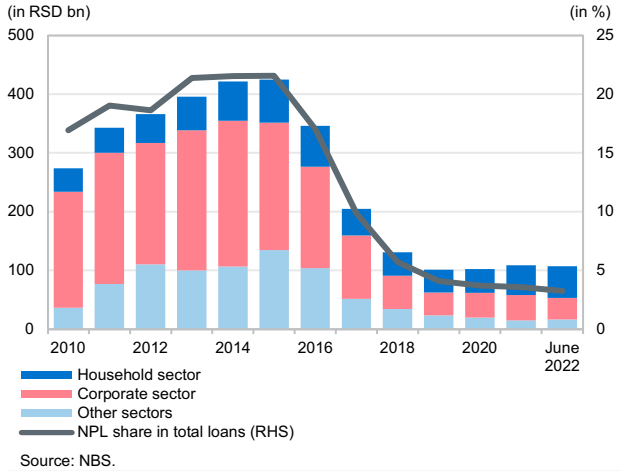
Source: NBS.
Note: Growth indicates the tightening and decline indicates the easing of credit standards.

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.

Cash loans made up 60.5% of new loans in Q2, while almost a quarter of new household loans were housing loans. The volume of new housing loans in Q2 (RSD 32.5 bn) testifies to a stable increase in household demand for real estate.

The results of the July NBS Bank Lending Survey[5] show that in Q2, as expected, banks continued with mild tightening of corporate credit standards. Also, after a year of easing, household credit standards were slightly tightened in Q2. Higher costs of sources of funding and lower risk propensity were the key factors of standard tightening, which banks expect to continue in Q3. Banks estimate that both corporate and household loan demand went up in Q2, driven by the need for liquidity, restructuring of liabilities and real estate purchase.

Gross **NPL ratio** declined by 0.2 pp from end-Q1, to 3.26% in June, its lowest value so far. Compared to end-Q1, corporate gross NPL ratio[6] also dropped by 0.2 pp, to 2.2% in June, while remaining the same in case of households,[7] at 4.2%. NPL coverage remained high – allowances for impairment of total loans stood at 90.7% of NPLs in June, while allowances for impairment of NPLs reached 57.0% of NPLs.

Capital adequacy ratio[8] measured 19.4% at end-Q2, indicating high capitalisation (regulatory minimum – 8.0%) and resilience of the banking sector to external and domestic risks.

3 Aggregate demand

According to SORS estimate, a faster than expected GDP growth in Q2 reached 4.0% y-o-y and was driven by consumption and private sector investments, as well as rising inventories. Headwinds came from net exports, whose contribution remained negative due to the rising volume of energy imports despite the fact that exports continued recording high growth rates even amid a slowdown in external demand.

Domestic demand

After the base effect caused by the coronavirus pandemic waned, the growth in **private consumption** slowed down and returned to sustainable dynamics recorded in the pre-

[5] The NBS implements the survey since the start of 2014.

[6] Includes companies and public enterprises. Looking at companies alone, NPL share in total loans in June equalled 2.4%.

[7] Including entrepreneurs and private households, the NPL share also stood at 4.2% in June.

[8] The regulatory Basel III framework is applied as of 30 June 2017.

crisis period. According to our estimate, it measured 3.5% y-o-y in Q2, adding 2.5 pp to GDP. This is indicated by the slowing increase in real retail trade turnover, which came at 5.6% in Q2. A somewhat slower rise was also recorded by the import of consumer goods, which expanded in Q2 by 20.4% y-o-y in nominal terms. In addition, the number of overnight stays by domestic tourists went up by 28.2% y-o-y in Q2 on account of further improvement of the epidemiological situation, while the turnover in catering increased by almost 55% y-o-y in April–May, according to SORS preliminary data.

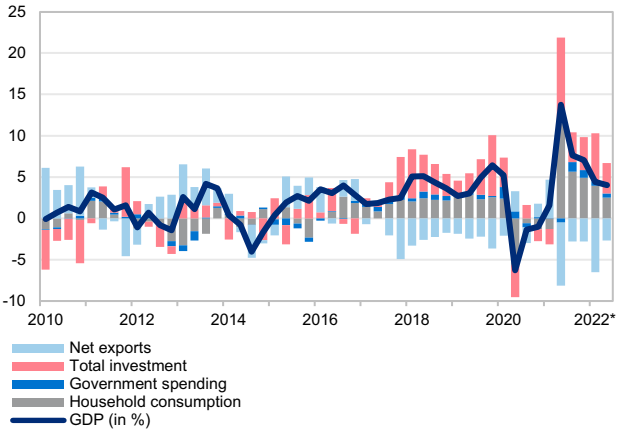
When it comes to the sources of consumption, wage bill, as the key source, rose by close to 16% y-o-y in April and May on the back of favourable labour market conditions which resulted in rising wages and employment. There was also a higher inflow of remittances in Q2 (43.5% y-o-y) owing to a further easing of restrictive measures in Europe and greater labour force mobility. Monetary policy tightening and a gradual rise in interest rates did not reflect on the dynamics of the growth in loans intended for consumption, which stayed almost unchanged from the previous quarter at around 7% y-o-y.

We estimate that **government consumption** also went up in Q2 – by 3% y-o-y, resulting in a 3.0 pp contribution of total consumption to GDP growth.

We estimate that a slight positive contribution to GDP growth in Q2 also came from the growth in fixed investments, on account of the accelerated **private sector investments**, which we estimate to have increased by 3.1% y-o-y, after slackening in Q1 due to the outbreak of the Ukraine crisis and the consequently heightened uncertainty. That investments accelerated is suggested primarily by the increase in the production of machines and equipment by 12.4% y-o-y in Q2, and in equipment imports, expressed in euros, by 28.6% y-o-y. The import of construction materials also went up by 37.5% y-o-y, while the number of issued construction permits in April and May rose by 12.4% y-o-y. Sources of investment financing also indicate stepping up of investment activity as, despite rising global uncertainty, net FDI inflow went up in Q2 by 14.0% and the stock of investment loans by 6.3% y-o-y.

According to our estimate, **government fixed investments** remained at a similar (slightly lower) level in y-o-y terms and their contribution to economic growth in Q2 was almost neutral. It should be noted that government investments reached a record high level last year and were the main leverage for kick-starting the economy after the coronavirus pandemic. Therefore, the unchanged level of government investments amid a

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



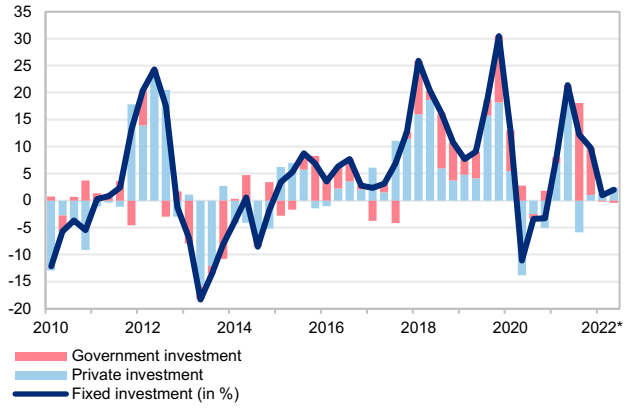
Sources: SORS and NBS calculation.
* NBS estimate for Q2 2022.

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

	2021		2022	
	Q3	Q4	Q1	Q2
Household consumption	**8.1**	**7.2**	**7.1**	**3.5** *
Indicators				
Retail trade	7.8	8.4	11.0	5.6
Catering turnover	100.0	118.5	72.3	54.9 **
Number of domestic tourists	5.2	39.6	27.7	38.7
Number of overnight stays of domestic tourists	3.6	23.5	18.8	28.2
Consumer goods import (BEC classification), nominal	5.8	13.0	21.6	20.4
Sources				
Total wage bill, nominal	12.5	14.8	16.4	15.9 **
Net remittances inflow, nominal	4.9	14.8	16.9	43.5
Stock of loans intended for consumption, nominal	6.9	6.7	6.8	7.1

Sources: SORS and NBS calculation.
* NBS estimate.
** April–May.

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



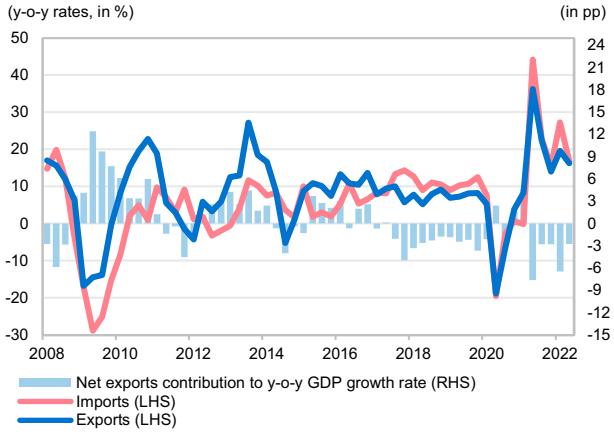
Sources: SORS and NBS calculation.
* NBS estimate for Q2 2022.

Table IV.3.2 **Investment indicators**

	2021		2022	
	Q3	Q4	Q1	Q2
Real y-o-y growth rates (in %)				
Fixed investment (national accounts)	12.2	9.8	1.0	2.0 *
Construction (national accounts)	15.7	10.9	-5.0 *	-8.0 *
Government investment	93.1	26.4	-1.0	-2.0 *
Number of construction permits issued	31.5	34.4	28.2	12.4 **
Production of construction material	0.4	-0.2	3.4	0.2
Value of works performed	15.1	10.4	-5.9	-8.8
Import of equipment, nominal	14.6	7.6	13.3	24.2
Production of domestic machinery and equipment	12.6	7.7	7.1	12.4
Finished product inventories in industry	2.4	4.0	-0.2	1.5

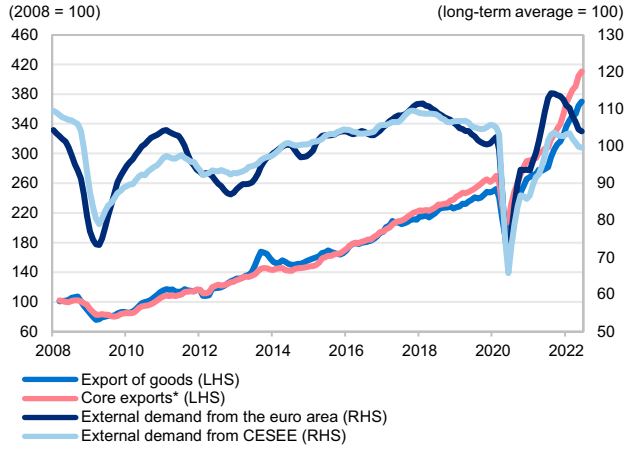
Sources: SORS and NBS calculation.
* NBS estimate.
** April–May.

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



Sources: SORS and NBS calculation.
Note: NBS estimate for Q2 2022.

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.

global geopolitical crisis caused by the Ukraine conflict indicates the government's commitment to supporting sustainable economic development with continued intense implementation of infrastructure projects.

A positive contribution to GDP growth is also expected from rising **inventories**, as a result of oil and petroleum product stockpiling and replenishment of other strategic commodity reserves.

Q-o-q, GDP growth accelerated to 1.1% s-a (0.7% s-a in Q1), driven also by domestic demand, primarily on account of rising inventories, as well as a somewhat faster growth of private consumption.

Net external demand

In Q2 as well, according to our estimate, real imports were rising at a somewhat faster pace than exports in y-o-y terms (16.8% vs. 16.2%), producing a 2.7 pp negative contribution of net exports to y-o-y GDP growth.

Driven by manufacturing, and supported by mining and agriculture, **commodity exports** posted strong growth in Q2 as well, though external demand continued decelerating and global supply chains were additionally burdened with geopolitical tensions and counter-pandemic measures in China. According to the balance of payments data, commodity exports, expressed in euros, went up by 34.0% y-o-o in Q2, primarily owing to the 26.2% y-o-y increase in manufacturing exports. Almost all branches (22 out of 23) recorded a rise in exports, with the greatest contribution coming from food products, chemical products, base metals, petroleum products, electric equipment, rubber and plastic products, motor vehicles and other machinery and equipment. A big nominal increase in exports is for its major part due to the increase in exported quantities, and partly due to higher export prices. Mining exports were driven by copper. At the same time, agricultural exports recovery is noticeable since May, following the relaxation of measures which restricted the export of cereals early this year.

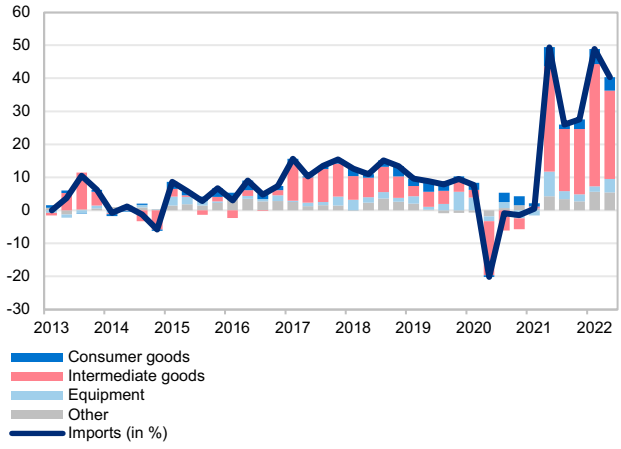
Commodity imports, expressed in euros, rose by 39.0% y-o-y in Q2, largely owing to increased energy imports as in Q1, primarily oil and gas. Energy imports amounted to EUR 1,525.8 mn in Q2, up by EUR 909.7 mn from the same period the year before, contributing, in our estimate, 13.7 pp to the y-o-y import growth. The largest portion of the rise in gas and oil imports (around 84%) is a result of their higher import prices, while the remainder is attributable to imported quantities. According to the BEC classification, the rise in imports was largely driven by

intermediate goods (48.4% y-o-y), a category which includes energy, followed by equipment and consumer goods which rose by 28.6% and 20.4% y-o-y, respectively, indicating a further growth in investments and personal consumption. Such trends are also confirmed by the classification of imports by destination, where the rise in imports was mostly driven by energy and intermediate goods, followed by capital products and consumer goods.

Foreign **trade in services** went up in Q2, with an almost equal y-o-y rise in exports (35.3%) and imports (39.1%). Due to a higher share of exports, the surplus on trade in services increased by 16.9% y-o-y, to EUR 367.1 mn. Trade in all types of services increased, with the highest contribution to the increase in exports coming from tourist and ICT services, and to imports from transport and tourist services.

In June, the exports-to-imports ratio[9] measured 75.1%, or 83.6% if services are included, which is lower than at end-2021 primarily because of higher energy imports.

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



Sources: SORS and NBS calculation.

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

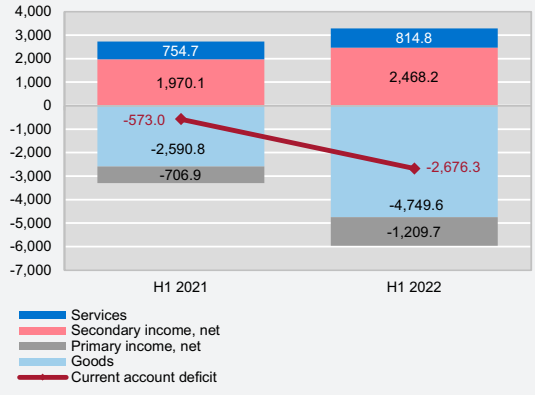
Text box 2: Factors contributing to CAD increase in 2022

After the coronavirus pandemic abated, the Serbian economy, like many others, faced new challenges brought on by the energy crisis associated with the escalation of the conflict in Ukraine. In no time, these impacts reflected on the balance of payments. The main factor behind this year's increase in the current account deficit (CAD) has been the rise in global energy prices. The current account deficit amounted to EUR 2.7 bn (9.6% of GDP) in H1 2022, exceeding earlier expectations and leading, inter alia, to the upward revision of the CAD projection for 2022 (to 9.4% of GDP) and 2023 (around 8.5% of GDP). Should there be a further worsening of geopolitical tensions resulting in a decreasing or cutoff supply of Russian gas to Europe, Serbia might see additional deterioration in its CAD amid skyrocketing energy prices and depressed external demand.

Looking at current account components, the deficit increase in H1 2022 is attributable primarily to the widening of the deficit on trade in goods that was driven largely by the rising import energy prices. The primary income deficit also widened, while the growing surplus on trade in services and secondary income worked in the opposite direction.

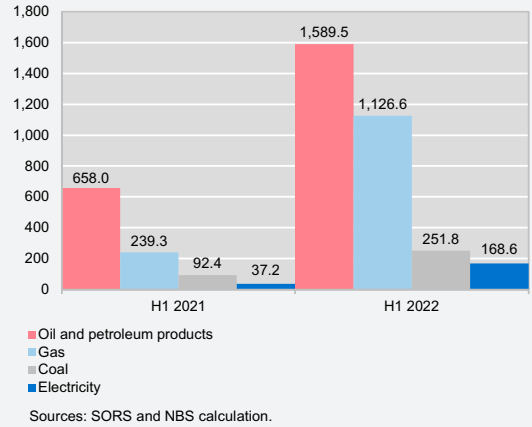
The deficit on trade in goods amounted to EUR 4.7 bn in H1 2022, with imports rising faster than exports (43.4% vs. 32.6% y-o-y). Relative to the same period a year earlier, goods imports went up by EUR 5.3 bn and exports by EUR 3.1 bn. As a result, the deficit on trade in goods **increased by EUR 2.2 bn**. Close to 98% of the increase relates to the value of energy imports which gained EUR 2.1 bn y-o-y, rising from EUR 1.0 bn in H1 2021 to 3.1 bn in H1 2022. At the same time, around 80% of the increase is owed to the growth in import prices, while around 20% is attributable to the rise in imported quantities. The effect of higher import price was the most pronounced in case of gas, where it accounted for as much as 96% of the higher import value, while in case of petroleum products and oil, the price effect was somewhat lower, equalling 78% and 66%, respectively. In addition to the global growth in energy prices that began in 2021, the higher value of energy imports is also due to the greater imported quantities during winter amid problems in the electricity system that emerged in December 2021 and persisted in 2022. This effect was particularly pronounced for gas, as the daily gas consumption considerably exceeded the usual levels and quantities envisaged by the agreement with Russia (6 million m³/day), to which a favourable price applied – the price was first fixed at a low level, and later continued to be calculated at the so-called oil formula. We estimate that around two-thirds of total needs were met under these more favourable prices, while the rest (around one-third) was paid at several times higher prices prevailing in the market, which were between four and five times higher than those agreed with Russia. Problems in the

Chart O.2.1 **Current account structure**
(in EUR mn)



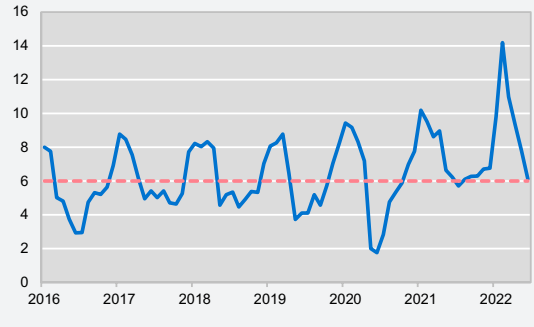
Source: NBS.

Chart O.2.2 **Energy imports**
(in EUR mn)



Sources: SORS and NBS calculation.

Chart O.2.3 **Daily gas imports**
(monthly average, in million m³)



Source: NBS calculation based on SORS data.

energy system in late 2021 weighed down the production of coal, and hence, electricity generation from coal. This led to an increase in gas imports for the purposes of electricity generation, as well as to increased imports of coal, but also of electricity. Higher electricity imports also reflected the unfavourable hydrological situation and the consequently reduced hydrological potential (somewhat more than a quarter of total electricity output originates from hydro power plants). While imports of all energy increased relative to the same period of 2021, the sharpest increase was registered for crude oil and petroleum products (EUR 1.6 bn vs. EUR 658 mn in 2021), which in addition to the higher price, reflected the need to establish strategic energy reserves, as well as for gas, whose imports in value terms increased from EUR 239 mn in H1 2021 to over EUR 1.1 bn this year.

Apart from energy, contributors to the y-o-y growth in imports, though to a much lesser extent, were intermediate and capital goods, as well as consumer goods, owing to the further rise in investment and a rebound in household consumption. At the same time, exports continued growing amid persistent disruptions to global supply chains and lower external demand, driven chiefly by manufacturing, and to a lesser degree, also by mining, which offset a part of the growth in imports. It should be noted that in case of exports too, a part of the increase was due to higher prices. Manufacturing exports climbed by 26.1% y-o-y. Thanks to project-diversified investments, export growth was broad-based and registered in 22 out of 23 branches. The main drivers of export growth were base metals, food products, chemical products, petroleum products, rubber and plastic products, and electrical equipment.

Upward pressure on the current account **deficit also came from the deficit on the primary income account,** which widened by **EUR 502.8 mn** y-o-y, amounting to EUR 1.2 bn in H1 2022, led mainly by the higher expenditure on FDI income. Such movements were expected given the continuous rise in the stock of FDI in Serbia, and the consequently higher expenditure on account of dividend payments. At the same time, the amount of reinvested earnings was higher than a year ago, pointing to investors' commitment to further investment in Serbia. On the other hand, expenditure on portfolio investment was lower, owing in part to the past borrowing under favourable conditions and to the maturing of eurobonds issued earlier at higher interest rates.

External trade in services continued to expand, exerting a soothing effect on the current account deficit. Though imports of services grew at a faster pace than exports in H1 2022 (41.7% vs. 34.3% y-o-y), due to the higher share of exports in total external trade in **services the surplus on trade in services** rose further, to EUR 814.8 mn, which is **60.2 mn** more than in H1 2021. Trade in all types of services increased y-o-y, with exports being led primarily by tourism, ICT and business services, and imports by transport and tourism services.

A significant dampening effect on the current account deficit came from the **surplus on the secondary income account,** which amounted to EUR 2.5 bn in H1 2022, **rising by EUR 498.1 mn** y-o-y, mainly as a result of the higher inflow of remittances from abroad that reached almost EUR 2 bn in H1.

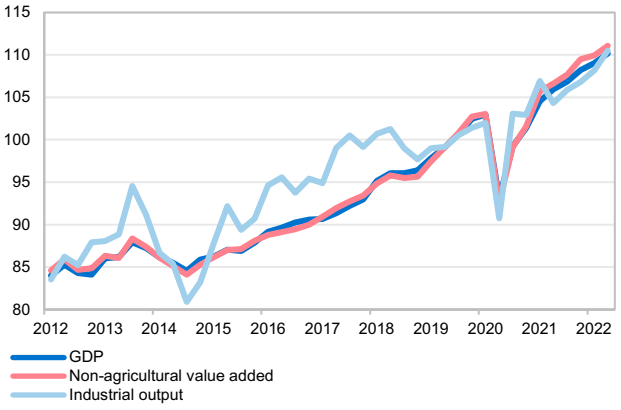
The current account deficit is likely to stay at a similar level in the remainder of the year based on the factors stated above, while it is expected to decline in the years that follow assuming there is no further worsening of geopolitical tensions and a cutoff in gas supply to Europe from Russia. In addition to the anticipated easing of the negative effects of external demand and unfavourable terms of trade, the decline in the current account deficit should be aided by the expansion of export capacities owing to constant investment into export-oriented sectors. This is supported also by the expected continuation of relatively high FDI inflows to Serbia, projected at around EUR 3.4 bn this year (EUR 3.3 bn net), which is close to the levels expected in the years beyond.

4 Economic activity

Even though geopolitical tensions escalated further, economic activity in Serbia grew 4.0% y-o-y in Q2, at a faster pace than previously estimated, suggesting that the negative effects of the Ukraine conflict on the Serbian economy so far have been less grave than anticipated. As in the prior period, relatively strong economic growth in Q2 was driven by services, while a somewhat higher contribution than previously expected also came from industry. At the same time, we have revised our forecast of agricultural output slightly downwards due to unfavourable weather conditions.

Q-o-q, economic growth accelerated to 1.1% s-a (from 0.7% s-a in Q1), owing to the expansion recorded by industry, and to a somewhat lesser extent also by services.

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



Sources: SORS and NBS calculation.

In Q2, as in the previous quarters, the largest contribution to economic growth came from **services** (2.4 pp) even though the activity in services slackened from 6.3% y-o-y in Q1 to 4.6% y-o-y in Q2. A somewhat slower pace of growth in this sector is also suggested by the real turnover in retail trade which rose by 5.6% y-o-y in Q2 (vs. 11.0% y-o-y in Q1). On the other hand, the relaxation of containment measures and improved population mobility sustained the rise in tourism, as testified by the increase in the number of overnight stays by 50.1% y-o-y in Q2, largely of foreign tourists who almost doubled the number of their overnight stays in this period in y-o-y terms.

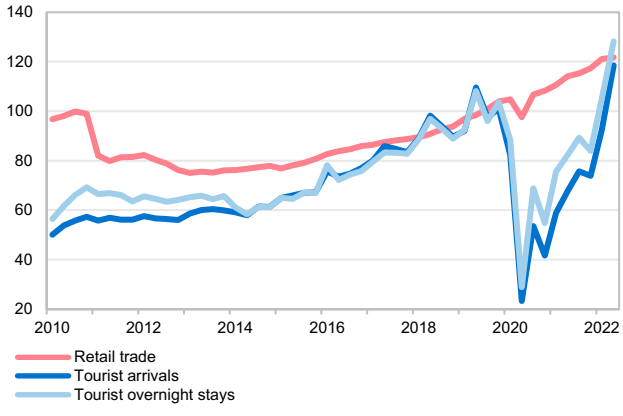
Table IV.4.1 **Contributions to y-o-y GDP growth**
(in pp)

	2021			2022	
	Q2	Q3	Q4	Q1	Q2*
GDP (in %, y-o-y)	**13.7**	**7.6**	**7.0**	**4.4**	**4.0**
Agriculture	-0.3	-0.4	-0.4	0.0	0.0
Industry	3.1	0.5	0.9	0.4	0.9
Construction	0.8	0.8	0.7	-0.3	-0.4
Services	7.7	5.2	4.6	3.3	2.4
Net taxes	2.8	1.5	1.3	1.3	1.2

Sources: SORS and NBS calculation.
* NBS estimate.

Heightened global uncertainty, caused by the escalation of the Ukraine conflict, did not affect Serbian manufacturing much. In addition, a significant increase in mining activity has offset the fall in the electricity supply sector. According to our estimate, Q2 saw a rise in **industrial production** by 4.5% y-o-y. This is also confirmed by the 4.7% y-o-y growth in the volume of industrial production in Q2, with the positive contribution stemming from manufacturing and mining (3.7 pp and 2.1 pp, respectively), while the supply of electricity slumped by 14.5% y-o-y due to problems in the electricity system in the prior period, which shook off 1.3 pp from the volume of industrial production. Within manufacturing, activity picked up in 15 out of 24 branches, with a particularly pronounced rise in the volume of production of petroleum products (27.2%) which contributed 2.2 pp to manufacturing growth. A high contribution to manufacturing growth also came from the production of pharmaceutical products, food, metal products and machines, and to a somewhat lesser degree from the production of tobacco and paper products.

Chart IV.4.2 **Service sector indicators**
(s-a, 2019 = 100)



Sources: SORS and NBS calculation.

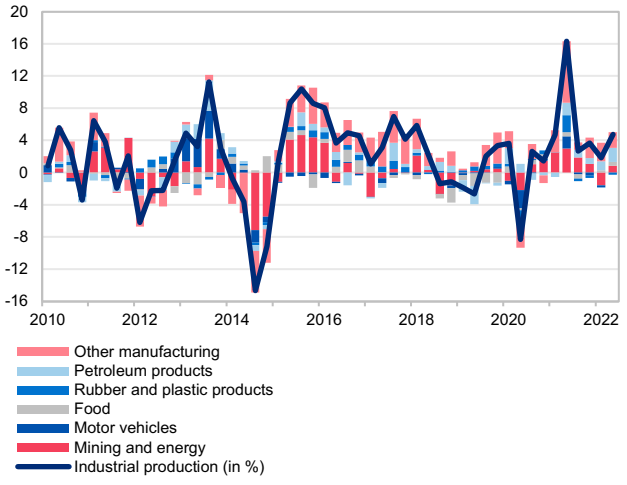
According to our estimate, the fall in **construction** activity continued in Q2 (-0.4 pp contribution to GDP), as indicated by the 8.8% y-o-y decline in the value of construction works performed. At the same time, the movement of other construction indicators suggests more favourable developments in this sector. Namely, following the 28.2% y-o-y increase in the number of issued permits in Q1, April–May saw the number of issued construction permits climb by 12.4% y-o-y. The import of construction materials went up in Q2, by 37.5% y-o-y, as did the production, albeit to a somewhat lesser degree (0.2% y-o-y), while employment in the sector rose by 2.1% y-o-y. Also, according to our estimates, the level of government investments in Q2 will be almost the same as in the same period a year earlier, indicating that the government has maintained strong momentum in the implementation of capital infrastructure projects.

Net taxes are also expected to provide a positive contribution (1.2 pp), partly owing to the introduction of a new fiscalisation system.

As weather conditions were less favourable (summer drought), our projection of **agricultural output** for this year has been revised downwards relative to May expectations and we now estimate it will be at the last year's level, providing a neutral contribution to GDP. Preliminary SORS data indicate lower wheat production (by 7.5%) relative to the last year's which was record high. Surface areas under corn are smaller by 6.5%, while surface areas under sunflower are larger by 18.1% than in 2021.

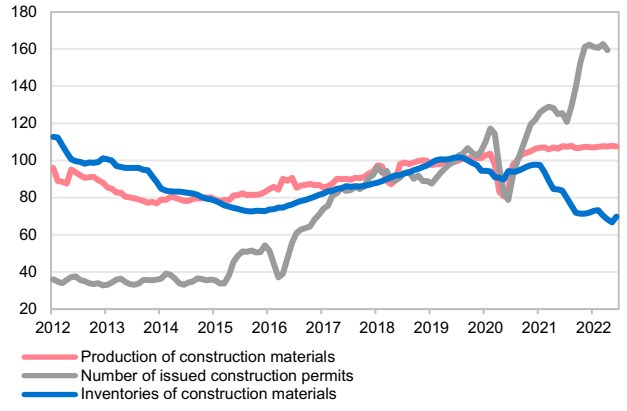
Q-o-q, economic activity accelerated to 1.1% s-a, according to our estimate, driven primarily by the growth in industry and services.

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



Sources: SORS and NBS calculation.

Chart IV.4.4 **Construction activity indicators**
(quarterly averages s-a, 2019 = 100)



Sources: SORS and NBS calculation.

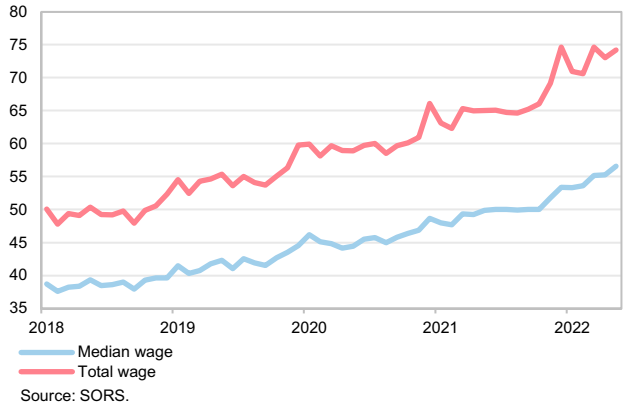
5 Labour market developments

All labour market indicators point to the continuation of favourable trends – private sector formal employment reached a new record high, accompanied with the rise in wages and a further reduction in registered unemployment in all occupational groups.

Wages and labour productivity

The nominal net wage amounted to RSD 73,590 (EUR 626) **in the April–May period**, having increased by 13.2% y-o-y. The increase was driven by a rise in wages which was much faster in the **private** (16.6%) than in the **public sector** (6.7%). This contributed to the further

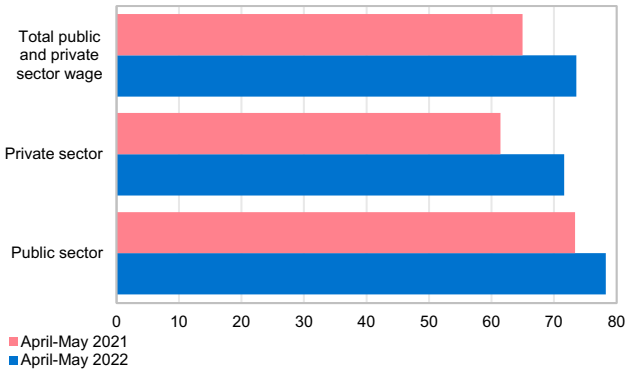
Chart IV.5.1 **Monthly dynamics of average nominal net wage and median net wage***
(in RSD thousand)



Source: SORS.
* Since January 2018, Tax Administration data have been used for wage calculations.

narrowing of the gap between public and private sector wages. At the same time, the median net wage rose by 12.9% y-o-y, to RSD 55,925 (EUR 475). In April and May, as previously, nominal wages were rising faster than headline inflation (in y-o-y terms), indicating that the growth in real income was preserved and, hence, the purchasing power of households. This is also confirmed by the increase in the coverage of the average and minimum consumer basket with the average and minimum wage to 88% and 81%, respectively (data for January–May).

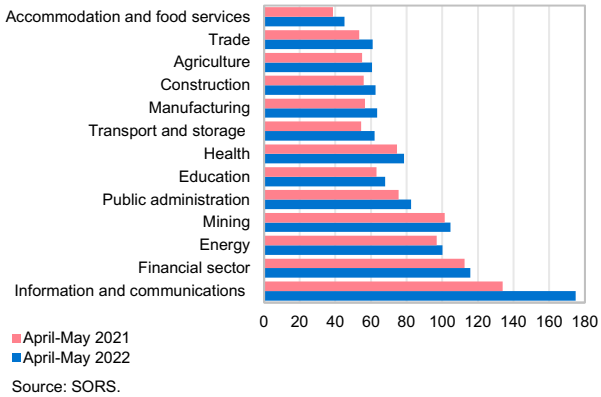
Chart IV.5.2 **Average nominal net wage**
(in RSD thousand)



Source: SORS.

The y-o-y rise in average wages in all **economic branches** continued in April and May. The growth was the most pronounced in ICT[10] (30.6%), followed by scientific, innovation and technical services (19.0%), as well as accommodation and food services (17.0%) as the demand for tourist and catering services stepped up with the significant easing of containment measures in Europe. Other services, which are dominated by the private sector, also recorded a double-digit y-o-y growth in average wages, as did manufacturing, construction and agriculture. Branches dominantly belonging to the public sector (public administration, education[11] and health and social protection) also registered higher average wages in April and May. The y-o-y rise in average wages in the observed period was widely spread across **Serbian regions** – Belgrade region recorded a 14.9% growth, Vojvodina 13.3%, Southern and Eastern Serbia 11.9%, and Western Serbia and Šumadija 11.5%.

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



Source: SORS.

The increase in average wages and formal employment pushed up the **overall nominal net wage bill**, as the dominant source of consumer demand, by 15.9% y-o-y in April and May.

In 2022, **the average pension** exceeded RSD 30,000 for the first time (in nominal terms) and amounted to RSD 30,981 in April and May, up by 5.4% from the same period a year earlier.

According to a preliminary estimate, **overall economic productivity** continued up in Q2 (2.4% y-o-y), though at a slightly slower pace than in Q1 (2.8%) due to a somewhat lower economic growth rate in our country. **Industrial productivity** also went up in Q2 (3.9% y-o-y), driven by industrial production growth.

[10] A strong rise in ICT sector wages is partly due to the fact that inflows from abroad are included in the Tax Return for Withholding Tax that is used as a source of data for average wages.

[11] People employed in education were paid a one-off assistance amounting to RSD 10,000 in April.

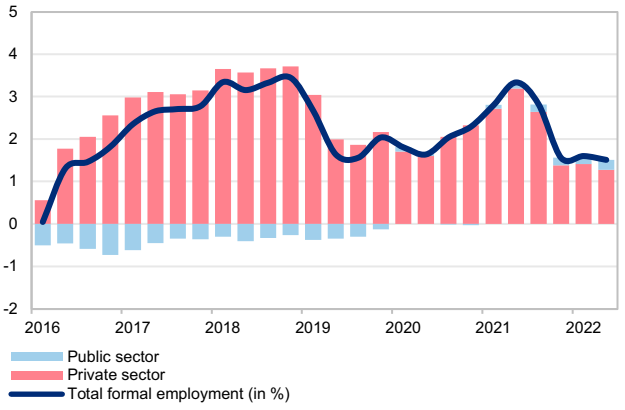
Employment

Total formal employment exceeded 2.3 million in Q2. In June, there were by around 31 thousand employed persons more than a year ago, with the y-o-y increase mildly slowing down to 1.5% in Q2 (from 1.6% in Q1). According to Statistical Office data obtained from the Central Registry of Mandatory Social Insurance and the Statistical Business Register, the y-o-y increase in formal employment recorded in June was driven by further recruitments by legal entities (by close to 38 thousand persons), while the number of individual farmers and entrepreneurs dropped (by around seven thousand collectively).

Private sector formal employment reached a new record level in Q2 (1.70 mn persons). In June, the number of employed persons was by around 26 thousand higher than a year ago. The highest number of new recruits was recorded in ICT (almost 11 thousand persons), followed by professional, scientific, innovation and technical services (around seven thousand persons) and administrative and auxiliary services (around five thousand persons). Manufacturing, construction and mining also recorded a noticeable increase in employment in the same period. Owing to a more flexible control of recruitment,[12] **formal public sector employment** also went up in June (by around five thousand y-o-y), primarily in health and social protection. In contrast, June saw a y-o-y reduction in employment in energy and agriculture (by around three thousand persons collectively), and to a lesser degree also in transport and storage services, as well as the financial sector.

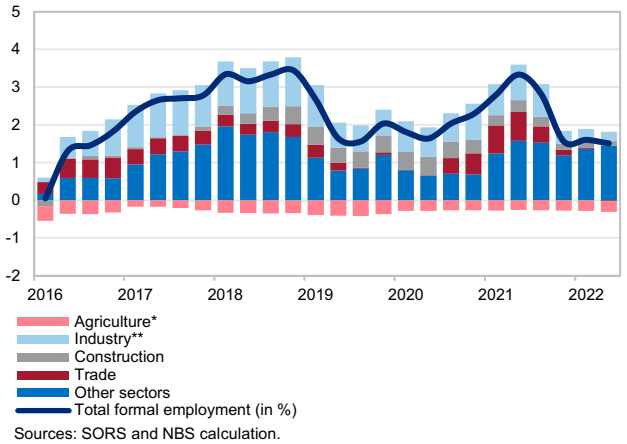
According to the National Employment Service, **registered unemployment** touched the new lowest level in June (444,213), by around 96.5 thousand unemployed people less than in the same period the year before. The June y-o-y reduction in unemployment was widespread across occupational groups in manufacturing and services sectors. In addition, the number of newly registered job seekers continued down in June (by around three thousand y-o-y). In parallel, employers' recruitment needs were on the rise, considering that in June they reported close to two thousand vacancies more than in the same period a year earlier.

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



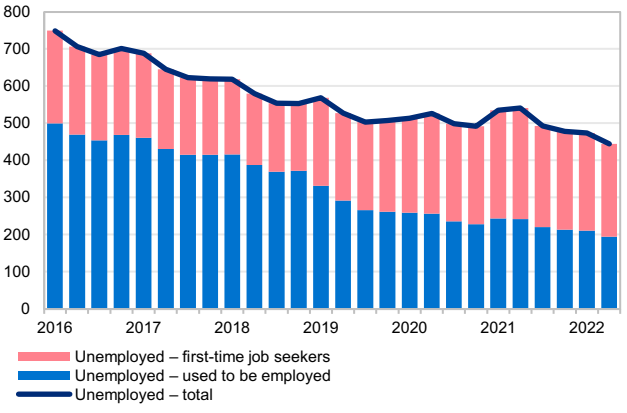
Sources: SORS and NBS calculation.

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.

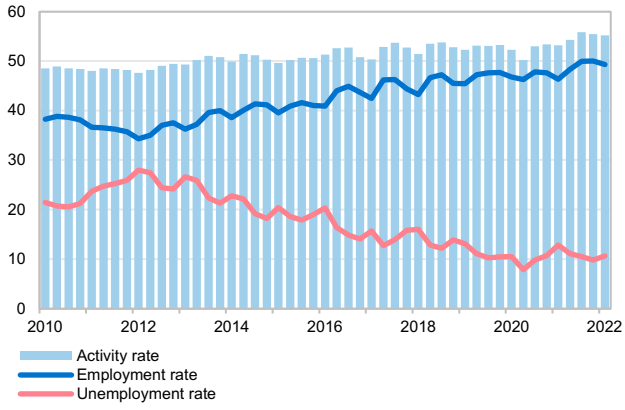
Chart IV.5.6 **Movement of registered unemployment**
(in thousand persons, end-of-quarter)



Source: National Employment Service.

[12] From 1 January 2021 until 31 December 2023, public funds beneficiaries are allowed to employ new people for indefinite and definite periods without any special permits or government approvals, but subject to meeting certain conditions regarding the number of departures, as well as budget constraints.

Chart IV.5.7 **Labour market indicators according to the Labour Force Survey**
(in %)



Source: SORS.

The continuation of favourable labour market trends is also confirmed by the results of the revised **Labour Force Survey**. Namely, the activity rate stood at 55.2% in Q1 and the participation rate (the activity rate of persons in the 15–64 age group) at 71.0%. The y-o-y growth recorded was 2.1 pp and 2.5 pp, respectively. The employment rate went up in Q1 by 3.0 pp y-o-y, to 49.3%, while the unemployment rate dropped by 2.2 pp, to 10.6%. The long-term unemployment rate also declined (the share of the unemployed looking for a job longer than a year in total active population) – to 4.5% in Q1 (y-o-y decrease of 2.4 pp).

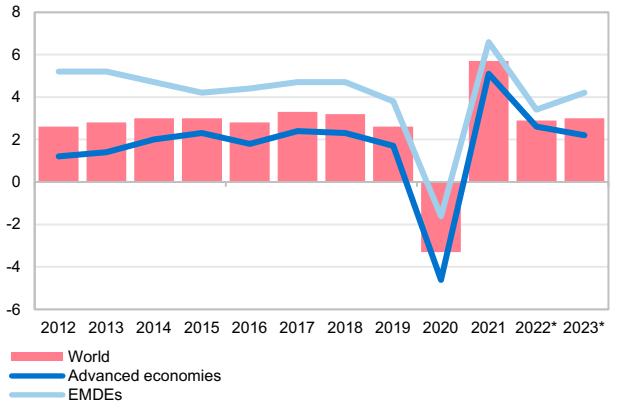
6 International environment

Negative effects arising from heightened geopolitical tensions in the wake of the escalating crisis in Ukraine act as an additional drag on economic growth, whose projection for 2022 has been revised down for the majority of countries, and risks to the projection are still estimated as pronouncedly tilted to the downside.

In the period since the previous* Report, *cost-push pressures have been stepped up additionally, leading to inflationary pressures being broadly dispersed and having a dampening effect on the already subdued economic activity. Central banks continue to tighten their monetary policies in an effort to rein in inflation that is touching its multi-decade records.

Economic activity

Chart IV.6.1 **Global economic activity**
(in %)



Source: Global Economic Prospects, June 2022.
* World Bank projection for 2022 and 2023.

In its June Global Economic Prospects, the World Bank estimated that the previously projected **global economic slowdown was further aggravated** upon the outbreak of the Ukraine crisis, given the new wave of hikes in the prices of raw materials, extended halts in supply, disrupted food and energy safety, and exacerbation of financial conditions. Taking that into account, in June the World Bank significantly revised down its January global growth projection trimming it by 1.2 pp to 2.9% in 2022, the same as growth forecasts for the group of developed economies (to 2.6%) and emerging and developing economies (to 3.4%). Economic consequences of the conflict in Ukraine fell particularly hard on countries that are net importers of primary commodities, and at the same time they exceed short-term gains of net exporting countries. Among **numerous risks** estimated as **skewed to the downside**, persistent inflationary pressures in the energy and food markets stand out in particular, conditioning faster and broader monetary policy tightening, which is reflected on higher costs of

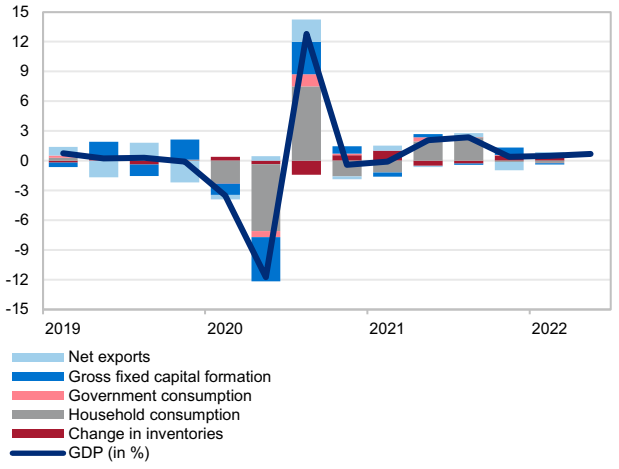
borrowing and financial vulnerability of some developing countries. If they turn out to be more lasting, elevated geopolitical tensions and global uncertainty may lead to greater fragmentation of global trade, financial and investment flows.

In its July World Economic Outlook, the **IMF's baseline scenario forecast global economic growth of 3.2% in 2022** (0.4 pp lower than the April projection). **Risks to the projection** are still assessed as **pronouncedly skewed to the downside** due to the possibility of a complete halt in natural gas supply from Russia to Europe, more difficult reining in of inflation than previously expected, tightened financial conditions and difficulties in debt repayment in some emerging and developing countries on this account, additional slowdown of the Chinese economy, as well as prolonged geopolitical fragmentation. In an alternative scenario, the IMF assumed the materialisation of all of these risks, which would result in a higher level of inflation, in which case global economic growth in 2022 is forecast at 2.6%.

Growth of 0.5% s-a in the **euro area economy** in Q1 was dictated by an increase in net exports and inventories (with an aggregate contribution to GDP of 0.9 pp). The fall in household and government consumption and fixed investments acted in the opposite direction (with an aggregate negative contribution to GDP of 0.4 pp). Higher s-a growth in Q1 than previously estimated (0.3% s-a) is mostly owed to Ireland's strong GDP growth rate, while in the rest of the euro area GDP growth averaged 0.3% s-a. In **Germany** and **Italy**, Serbia's key foreign trade partners in the euro area, Q1 saw s-a GDP growth of 0.8% and 0.1% respectively, on account of an increase in total investment.

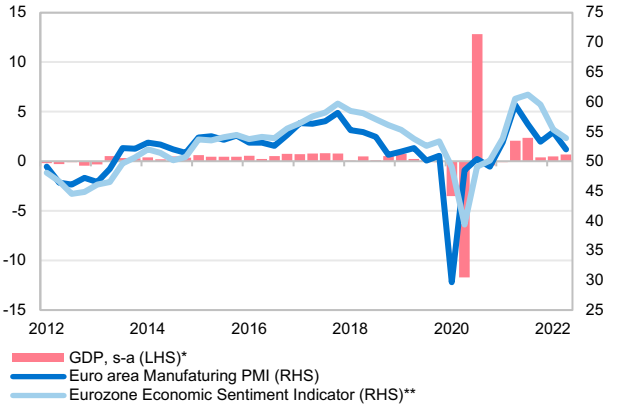
In June, the **ECB** estimated that euro area's GDP in Q2 will post modest growth which, according to the Eurostat preliminary flash estimate, measured 0.7% s-a. However, the positive effects of the loosening of containment measures are overshadowed by the adverse effects of the conflict in Ukraine, and lower external demand is mostly attributable to the reinstated counter-pandemic measures in China. Despite the recovery in demand for services that imply physical contact, higher prices of energy and food are having a limiting effect on household consumption, while production and trade activities are restricted due to disruptions in production chains, which have worsened because of the Ukraine crisis and quarantine in China. This is also indicated by the **dynamics of leading euro area economic activity**

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



Source: Eurostat.

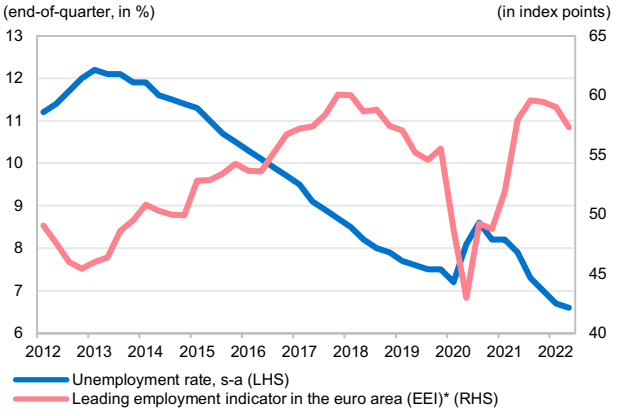
Chart IV.6.3 **Movements in GDP and leading indicators of the euro area**
(quarterly rates, in %) (in index points)



Sources: Eu rostat, S&P Global and European Commission.

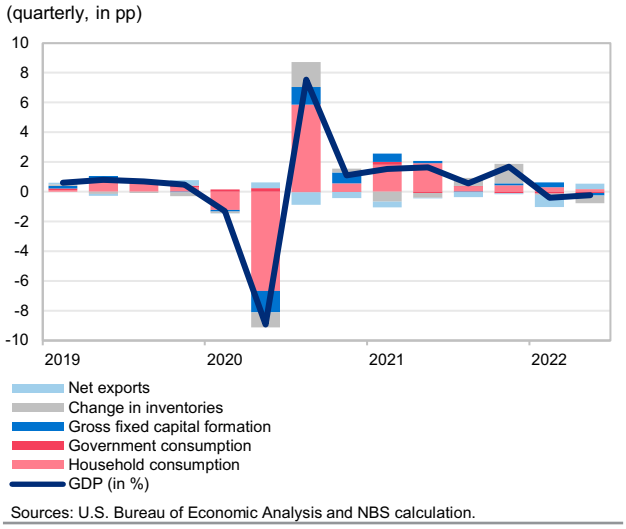
* Eurostat's preliminary flash estimate for Q2 2022.
** ESI is standardised relative to PMI.

Chart IV.6.4 **Unemployment rate and leading euro area employment indicator**



Sources: Eurostat and European Commission.
* EEI is standardised relative to PMI.

Chart IV.6.5 **Contributions to s-a real GDP growth rate of the USA**



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

indicators – Composite PMI[13] decreased to 52.0 points in June (the lowest level since February 2021), with a fall in activity in both the production and services sectors, while at the same time ESI[14] fell to 103.5 points (the lowest level since April 2021), mostly as a consequence of shattered confidence among consumers and employers in the construction sector. In view of the above, as well as bearing in mind expectations that investment activity going forward will be under the impact of elevated global uncertainty, rising costs and tightening financial conditions, **in June the ECB did a major downward revision of euro area's March 2022 GDP growth forecast**, by 0.9 pp to 2.8%. Risks to the projection are still significantly tilted to the downside, especially due to the possible issues in energy supply to European countries, which would give rise to new energy hikes and a fall in output. At the same time, preliminary July data on leading euro area indices Composite PMI (49.4 points) and ESI (99.0 points) indicate an economic contraction in the euro area at the start of Q3.

Despite the economic consequences of the Ukraine crisis, favourable trends in the **euro area labour market** continued. With somewhat lesser support of short-term work schemes, the unemployment rate dipped further, to 6.6% in June (from 6.7% in March), its lowest level since the euro area was established. The participation rate (15–64 years) in Q1 rose to 74.6%, and the employment rate to 60.6% owing to the loosening of containment measures and the nascent economic recovery. Still, employers in main economic sectors – construction, industry and services – expect a weaker pace of hiring in the coming months, as indicated by the leading Employment Expectations Indicator (EEI)[15] for the euro area, which contracted to 110.2 points in June and then to 107.0 points in July, reflecting poorer conditions in the euro area labour market which provided the main support to consumer demand in the prior period.

The US economy recorded a fall of 0.4% s-a in Q1 (1.6% annualised), dominantly led by a fall in net exports, and to a lesser degree by decreasing inventories and government consumption, while household consumption and fixed investments were on the rise. Movements in the ISM Manufacturing PMI,[16] which dropped to 53.0 points in

[13] The value of Eurozone Composite PMI above 50 points indicates expansion, and below 50 a contraction in manufacturing within the euro area.

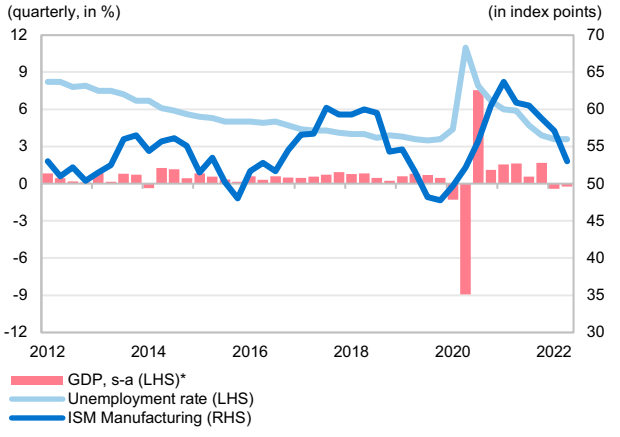
[14] The value of Economic Sentiment Indicator above 100 points indicates improvement, and below 100 worsening of economic expectations.

[15] The value of Employment Expectations Indicator above 100 points indicates managers' high employment expectations, while the opposite holds true for values below 100.

[16] The value of ISM Manufacturing PMI above 50 points indicates expansion, and below 50 a contraction in manufacturing in the USA.

June (its lowest level since June 2020) on account of a contraction in new orders – for the first time in two years – as well as due to the evident deterioration in consumer confidence also indicate slower economic dynamics. In contrast, industry still records solid output volume and a gradual recovery in external demand, which – together with signals of mitigated halts in supply – was decisive in the **Fed's** June estimate of positive US GDP growth rate in Q2. Still, according to a preliminary assessment of the US Bureau for Economic Research, Q2 saw an 0.2% s-a fall in GDP (0.9% annualised). Also, in July Manufacturing PMI decreased further to 52.8 points, signalling a further slowdown in US manufacturing. Against the backdrop of aggressive monetary policy tightening, which will continue through 2022, in June the Fed revised down its March economic growth forecast for 2022 by 1.1 pp to 1.7%.

Chart IV.6.6 **Movement of selected macroeconomic indicators for the USA**

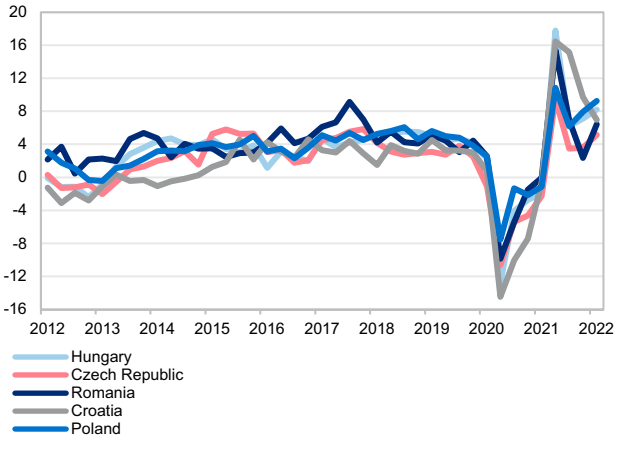


Sources: U.S. BEA , U.S. BLS and Institute for Supply Management.
* U.S. BEA preliminary estimate for Q2 2022.

During Q2, the **US labour market** remained tight, though somewhat less than in Q1, as indicated by around 600,000 fewer job vacancies (non-farm payroll) in June relative to March (when the peak of almost 12 mn vacancies was reached). In June, the total number of new non-farm payroll rose by around 400,000 persons, which is similar to the March level. The highest growth was recorded in professional and business services, and entertainment and catering. During Q2, the employment rate moved around 60% (as in Q1), and the unemployment rate was kept at 3.6%, which is its lowest level since the outbreak of the pandemic. In this regard, the Fed's projection of the unemployment rate for 2022 was only slightly revised up in June relative to March (by 0.2 pp to 3.7%).

Propped by positive labour market dynamics, fiscal measures for suppressing inflation and an inflow of EU funds, the **economy of the CESEE region** proved relatively resilient and in Q1 recorded solid growth of 7.5% y-o-y, thanks to stepped-up domestic demand (with a 10.9 pp contribution to GDP), as opposed to the decrease in external demand (-3.4 pp contribution to GDP). The World Bank estimated that external demand will continue to slow down, while elevated inflation, in conditions of tightened monetary conditions and increased uncertainty, will subdue domestic demand. Therefore, economic growth in this region is expected to weaken in the remainder of the year at a pace similar to euro area's growth. In June, the World Bank revised its previous GDP growth projection for 2022 – trimming it by 1.0 pp both for the Central European region (to 3.7%) and the Western Balkans (to 3.1%).

Chart IV.6.7 **Y-o-y GDP growth rates of selected CESEE countries**
(quarterly, in %)



Source: Eurostat.

Chart IV.6.8 **Y-o-y real GDP growth rates of Russia and China**
(quarterly, in %)

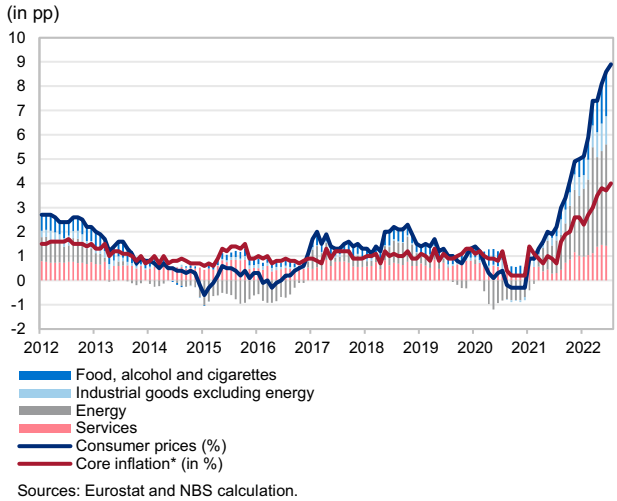
Source: National statistics.

According to the Russian statistical office, in Q1 the **Russian economy** recorded y-o-y growth of 3.5%, owing to the positive effects of tendencies carried over from 2021. The Bank of Russia said that since end-February, the Russian economy was faced with a combination of shocks – a drastic restriction of foreign trade, difficulties in procuring raw materials and components, and disruptions in delivering a certain number of products to the Russian market due to sanctions. Leading indicators suggest a fall in economic activity as of Q2, which will measure 8.9% at the level of 2022, according to the World Bank's June forecast, or 6.0% according to the IMF's July forecast (due to export in the previous part of the year performing better than expected).

In Q2, the **Chinese economy** significantly slowed down its y-o-y growth, to 0.4% (from 4.8% in Q1), due to the renewed spread of the coronavirus and closure of key industrial zones and ports. After a major deterioration of economic indicators in April, gradual recovery was recorded in May and June (Composite PMI returned to the expansion zone). This was simultaneously facilitated by fiscal incentives (tax cuts for corporates and increased allocations for infrastructure projects) and monetary stimuli (lowering the main interest rate and mitigated regulations). According to a preliminary estimate of the National Bureau of Statistics, China's GDP rose 2.5% y-o-y in H1. At the level of entire 2022, in June the World Bank forecast growth of 4.3%, and the IMF came out with a forecast of 3.3% (due to prolonged economic consequences of new lockdowns and problems in housing construction).

Inflation movements

Chart IV.6.9 **Contributions of HICP components to y-o-y inflation in the euro area**
(in pp)

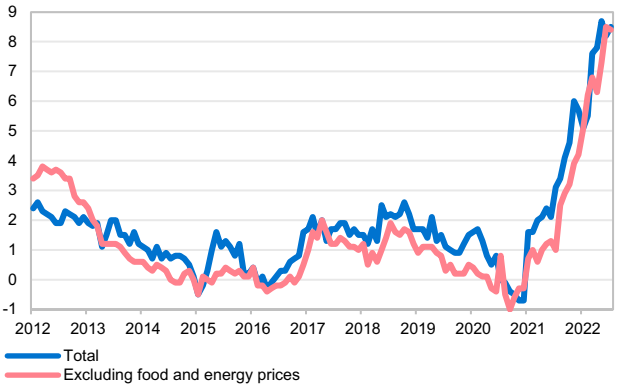


Sources: Eurostat and NBS calculation.

During Q2, **y-o-y inflation in the euro area** picked up further and measured 8.6% in June. As in March, it was dominantly dictated by energy hikes (4.2 pp contribution to y-o-y inflation) and higher food prices (contribution 1.9 pp), due to increased costs of fuel and fertilisers, and hampered supply. Relative to March, **y-o-y core inflation** also increased in June, coming at 3.7%, though its pace slightly slowed down for the first time this year, from 3.8% in May. This was facilitated by the prices of services rising in y-o-y terms somewhat more slowly in June than in May, while the prices of industrial products (excluding energy) remained at a similar level. Measured by the change in the HICP, **y-o-y inflation in Germany** picked up in April and May, however, growth in consumer prices slowed down to 8.2% in June as a result of the evident deceleration of growth in services prices, notably transport ones (once the government passed measures to administer public transport prices), and somewhat lesser

increase in energy prices. After displaying slower growth in April, **y-o-y inflation in Italy** continued on the upward path until end-Q2 and reached 8.5% in June. The ECB expects euro area inflation to remain elevated going forward, not only on account of the rising energy and food prices against the backdrop of the crisis in Ukraine, but also because of hikes in other products and services in the European market. According to Eurostat's preliminary flash estimate, headline inflation in the euro area reached 8.9% y-o-y in July, and core inflation 4.0% y-o-y, indicating broadly dispersed cost-push pressures.

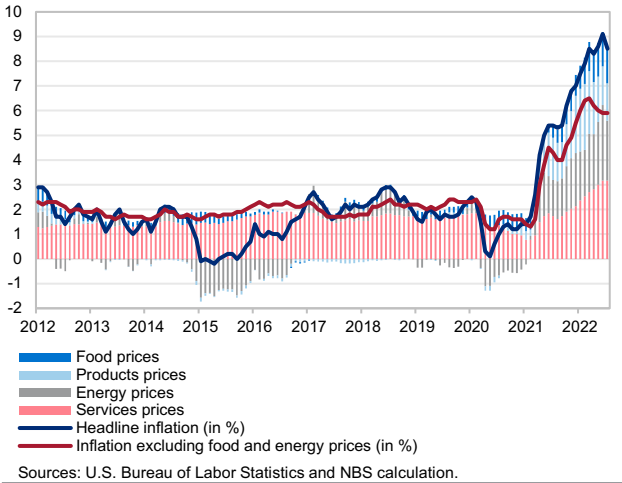
Chart IV.6.10 **HIPC for Germany and Italy**
(in %)



Source: Eurostat.

After slowing down slightly to 8.3% y-o-y in April, **headline inflation in the USA** (measured by the CPI) picked up in the remainder of Q2 and touched a new record in June, equalling 9.1% y-o-y. The recorded y-o- y inflation increase in June, which is the highest in four decades, is attributable to robust growth in energy (41.6% y-o-y) and food prices (10.4% y-o-y). Though consumer price increase is still broadly dispersed, growth in **core inflation** (excluding food and energy prices) in Q2 slowed down to 5.9% y-o-y in June, its lowest level this year. This is primarily attributable to slower y-o-y growth in product prices (clothes, used and new cars), while increase in the prices of the majority of services continued to accelerate. According to the Fed, persistently high inflation in the USA is the result of the still present production bottlenecks, raw material shortages and tight labour market, as well as the rising demand, supported by fiscal and monetary stimuli and savings accumulated during the pandemic. A preliminary estimate of the US Bureau of Labour Statistics states that headline inflation in July slowed down to 8.5% y-o-y, dominantly as a result of slower y-o-y growth in fuel and product prices, while the prices of food and services rose further in y-o-y terms. Core inflation in July remained at 5.9% y-o-y.

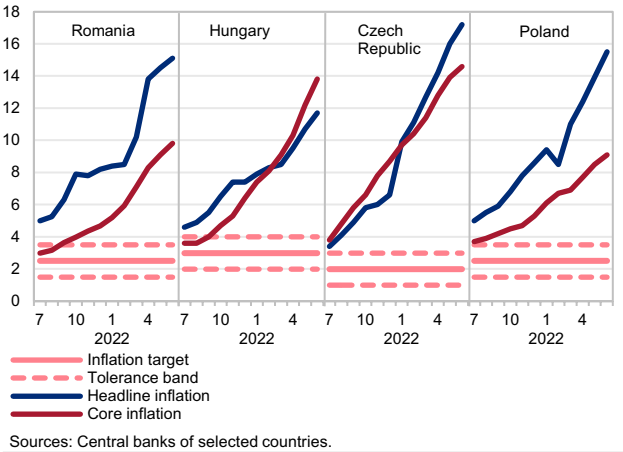
Chart IV.6.11 **Contributions of ICP components to y-o-y inflation in USA**
(in pp)



Sources: U.S. Bureau of Labor Statistics and NBS calculation.

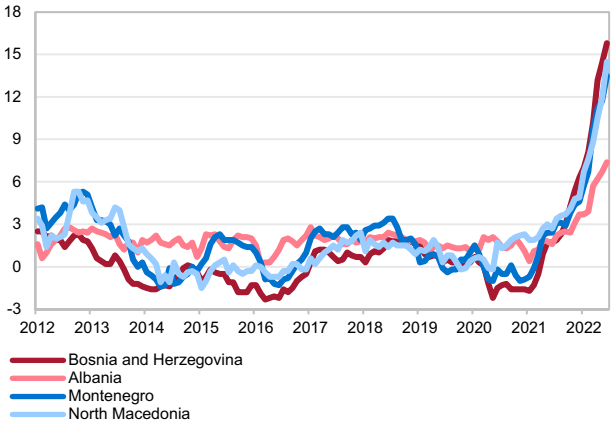
In all observed **CESEE countries**, y-o-y inflation continued up during Q2, driven by higher food and energy prices, as in the prior period. The most pronounced increase in headline inflation was recorded in the **Czech Republic** (17.2% y-o-y in June) on account of higher prices of processed and unprocessed food and all types of energy (petroleum products, natural gas and solid fuels). All components of the CPI had an effect on inflation growth in **Poland** (15.5% y-o-y in June), despite the fact that fiscal measures adopted as part of anti-inflation packages are still in force. **Romania** also recorded a similar level of y-o-y inflation in June (15.1%), notably due to the increase in the prices of petroleum products and processed food. In **Hungary** y-o-y inflation in June measured 11.7%, based on higher food inflation and prices within core inflation. In contrast, the prices of petroleum products were unchanged as the government's decision on

Chart IV.6.12 **CPI movements in selected CESEE countries in the previous year**
(y-o-y rates, in %)



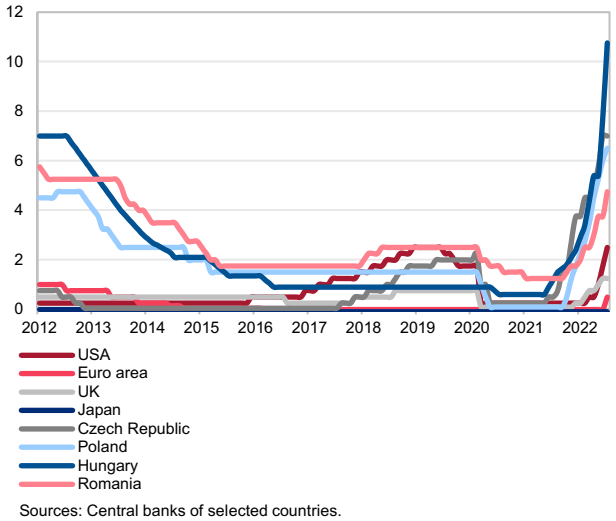
Sources: Central banks of selected countries.

Chart IV.6.13 **CPI movement in Western Balkan countries**
(y-o-y rates, in %)



Source: State statistical bureaus.

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



Sources: Central banks of selected countries.

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

Central bank	Inflation*	Inflation target	Policy rate**
Serbia	11.9	3.0 ± 1.5	2.75
Poland	15.5	2.5 ± 1.0	6.50
Czech Republic	17.2	2.0 ± 1.0	7.00
Hungary	11.7	3.0 ± 1.0	10.75
Romania	15.1	2.5 ± 1.0	4.75
Turkey	78.6	5.0 ± 2.0	14.00

Sources: Central banks of selected countries.
* CPI, y-o-y rates in June 2022.
** Latest available data.

capping these prices is still in force, and its application has been extended in July until October. The prices of some basic foodstuffs have also been capped. During Q2, y-o-y core inflation rose in the entire region, indicating that inflationary pressures were broadly dispersed. Leading Consensus Economics' analysts estimate that during Q3 inflation will peak in the observed countries in the region (with the exception of Hungary, where gas and electricity prices are expected to go up), after which it will most likely strike a downward trajectory.

In the majority of **Western Balkan** countries (except Albania) y-o-y inflation posted two-digit growth rates during Q2, under the impact of rising food and energy prices. The biggest y-o-y inflation growth in June was registered in Bosnia and Herzegovina (15.8%) and North Macedonia (14.5%), followed by Montenegro (13.5%) and Albania (7.4%).

Monetary policy

The **ECB** did not change its key interest rates during Q2, but in the June meeting it announced that July will see the beginning of the cycle of rate hikes. In July the main refinancing rate was raised by 50 bp, which is more than the 25 bp increase announced in June. Further hikes are expected in the following meetings, depending on economic data and inflation estimates in the medium term, while as part of the continued monetary policy normalisation it also announced that it would consider options for the remuneration of excess liquidity holdings. In the June meeting it also passed a decision on discontinuing net asset purchases within the **APP** starting from 1 July, though funds from maturing securities purchased within the programme will be reinvested over a longer period after the interest rates begin to increase.

The principal payments from matured securities purchased within the **PEPP**, which was ended at end-March, will be reinvested at least through 2024, with careful portfolio management in order to secure its consistency with the appropriate monetary stance. To lower the risks of the fragmentation of the euro area bond market (growth in yields on bonds of some countries), in an *ad hoc* meeting at mid-June a decision was made to utilise the flexibility when reinvesting matured securities within the PEPP, which enables a temporary increase in the purchase volume of bonds of some countries. As announced, a new instrument was presented in July – **TPI** (Transmission Protection Instrument), whose goal is precisely to prevent fragmentation and a higher rise in the yields on securities of some members of the monetary union. The TPI enables purchase in the secondary market of public sector debt securities with the remaining

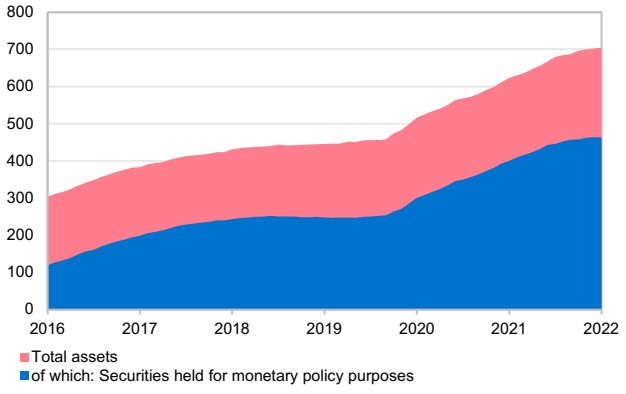
maturity between one and ten years of those members that are faced with deteriorated financing conditions. The purchase volume is not limited in advance, and purchases would be terminated either upon a durable improvement in the transmission, or based on an assessment that persistent tensions are due to country fundamentals. In Q2 the ECB continued to ensure liquidity via its targeted longer-term refinancing operations (TLTRO III), and special terms of financing within the programme were applied until end-June.

The **Fed** continued with monetary policy tightening, increasing the federal funds rate range by 50 bp in May, and by 75 bp each in June and July, to 2.25–2.50%, making these the biggest increases since 1994. Further federal funds rate hikes are expected in upcoming meetings as well, and in June most FOMC members expected the rate within the range of 3.25–3.5% at end-2022, significantly above March expectations. Federal funds rate hikes are expected in 2023 too, with the median of expectations at 3.75% at the end of the year, while in 2024 it may go down and move within the range of 3.25–3.5% at the end of the year. In addition, June saw the Fed start reducing its asset holdings at the monthly pace of USD 47.5 bn, whereas as of September this amount should go up to USD 95 bn a month. The Fed explained that the continued monetary policy tightening is necessitated by further strengthening of labour market indicators (and by growth in economic activity in June), while inflation remains elevated, reflecting the imbalance between supply and demand, higher energy prices, as well as cost-push pressures that are increasingly spilling over to other products and services. It was estimated that developments in Ukraine are contributing to inflation growth and burdening global economic activity, while lockdowns in China will most likely exacerbate supply chains disruptions.

The **Bank of England** continued with monetary policy tightening and in May and June meetings it raised the interest rate by 25 bp each to 1.25%, its highest level since January 2009. In accordance with the February decision, it began unwinding its balance sheet by pulling a brake on reinvestments of assets from maturing bonds. In May it announced that the sale of corporate bonds from the Bank of England's portfolio should begin in September, and in line with previous guidance (once the policy rate reaches 1%) it also began considering the decision on launching the sale of government bonds which make up around 98% of the Asset Purchase Facility (APF).

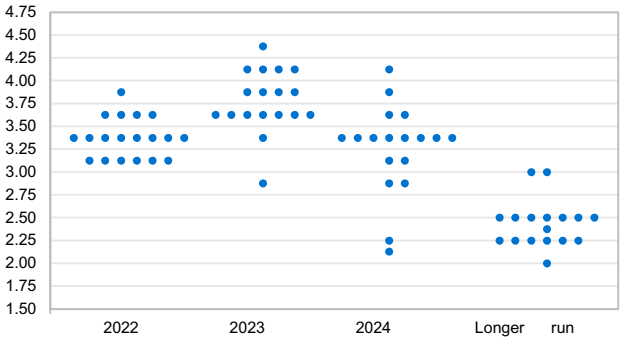
Unexpectedly, in June, for the first time since 2007, the central bank of **Switzerland** also raised its policy rate (by 50 bp to -0.25%), and further hikes are also a possibility.

Chart IV.6.15 **Total ECB assets**
(end-of-month, in EUR bn)



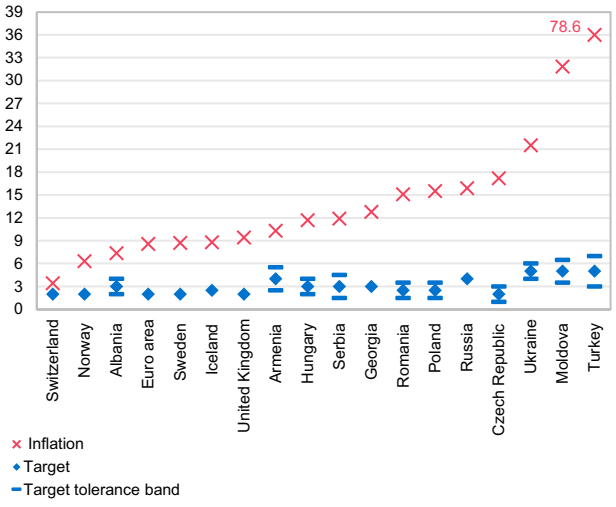
Source: ECB.

Chart IV.6.16 **Fed: Expectations of FOMC members about adequate monetary policy - median value of target range or target level of the main rate**
(in %)



Source: Fed, Summary of Economic Projections, June 2022.

Chart IV.6.17 **Inflation and target by country in June 2022**
(p.a., in %)



Sources: Eurostat and central banks of selected countries.

In conditions of elevated inflationary pressures, central banks in the CESEE region stepped up their monetary policy tightening. The central bank of the **Czech Republic** raised its policy rate by 200 bp during Q2, of which the June hike equalled 125 bp, when the rate hit 7.0%, its highest level since April 1999. As of June 2021, the policy rate was raised nine times in a row, by a total of 675 bp. The central bank of **Hungary** also continued with sharp policy rate increases, raising it by 635 bp between April and end-June, to 10.75%. In July the policy rate was lifted twice, and the increase at the beginning of the month (200 bp) was the largest on record. As of June 2021, the policy rate was raised 15 times by a total of 1015 bp. In addition, at end-June a decision was made to bring the rate on one-week deposits to the same level as the policy rate. Announcements going forward include the continuation of the cycle of monetary policy tightening and policy rate hikes until inflation expectations stabilise around the central midpoint and risks to inflation are equally balanced over the monetary policy horizon.

The central bank of **Poland** also continued with monetary policy tightening and between April and July it raised its policy rate by a total of 300 bp to 6.5%. Thus, since October 2021, the policy rate was raised ten consecutive times by a total of 640 bp. The central bank of Poland stated it would take all the necessary measures to ensure macroeconomic and financial stability, primarily to reduce the risk of inflation remaining elevated for an extended period. Between April and July, the central bank of **Romania** raised its policy rate by an additional 225 bp to 4.75%, i.e. by a total of 350 bp since October 2021.

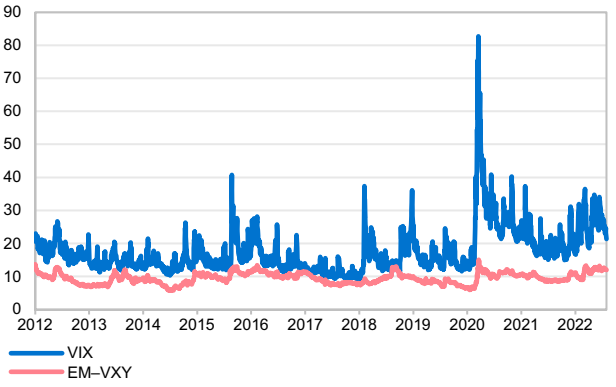
In contrast, despite strong inflationary and depreciation pressures, the central bank of **Turkey** did not change its policy rate in Q2 either (14.0%), explaining that inflationary pressures are a consequence of supply-side negative shocks triggered by the hike in the prices of energy, food and primary commodities, and not factors stemming from altered economic fundamentals.

After a major policy rate increase in February, the central bank of **Russia** trimmed the rate by a total of 1050 bp between April and June, to 9.5%, whereby it practically returned the rate to the level before the escalation of the crisis in Ukraine. The policy rate cut was explained by inflation decreasing more quickly and by expectations of its further decline. This was confirmed by the July decision when the policy rate was trimmed by an additional 150 bp to 8.0%, with estimates that further policy rate cuts will be considered in the remainder of the year.

Financial and commodity markets

Prolonged geopolitical tensions and conflict in Ukraine, coupled with the imposition of additional sanctions packages on Russia by the West, drove up uncertainty in the international financial market. Also, further acceleration of global inflation and translation of inflationary pressures onto an increasingly wider spectrum of products and services, reflecting on faster than expected monetary policy tightening by leading central banks, are having an additional impact on movements in money flows internationally. In regard to this, the implicit measure of **financial market volatility (VIX)** increased during Q2 2022 by 8.2 pp to 28.7%. At the same time, **the EM–VXY index, which indicates the volatility of currencies of emerging economies**, rose by 0.4 pp and measured 11.9% at end-June 2022.

Chart IV.6.18 **Implied volatility of the global financial market***

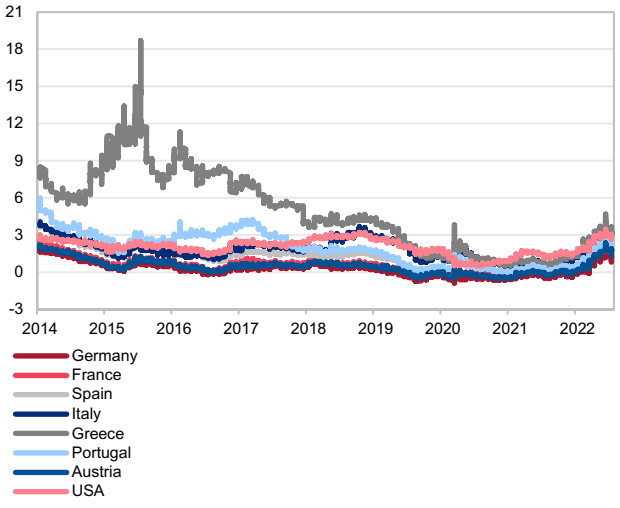


Source: Bloomberg.

* 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.

Yields on ten-year government bonds of advanced countries continued up during Q2 as well. Decisions by leading central banks on embarking on monetary policy tightening and the anticipated faster future response in order to halt rising inflation played a key role in dictating movements in financial markets in Q2 and also affected the increase in yields of government bonds of advanced countries by around 1 pp on average, despite elevated fears of recession and a considerable slowdown in global growth. Similar movements, with a more pronounced growth, was recorded by yields on ten-year bonds of countries in the region due to the stronger monetary policy tightening and lifting of policy rates by their central banks.

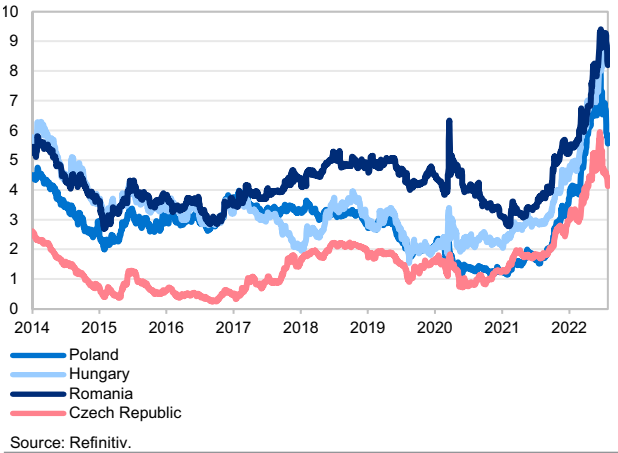
Chart IV.6.19 **Yields on ten-year bonds of euro area countries**
(daily data, in %)



Source: Bloomberg.

Movements in international currency markets in Q2 were under a dominant impact of the Fed's increased federal funds rate, which helped the **dollar advance against most observed currencies**. The dollar's appreciation vis-à-vis the euro was also greatly facilitated by market participants' expectations as to the Fed's faster monetary policy tightening going forward, bearing in mind that its officials insist on reining in inflation even at the cost of slower economic growth, emphasizing that risks of a more restrictive monetary policy stance are far lesser than potential failure to keep inflationary pressures under control. On the other hand, the ECB's decisions about the pace of monetary policy normalisation had to take into account – and to a good deal – the consequences of tightening on economic growth given the anticipated greater slowing down of euro area economic activity against the backdrop of the geopolitical crisis.

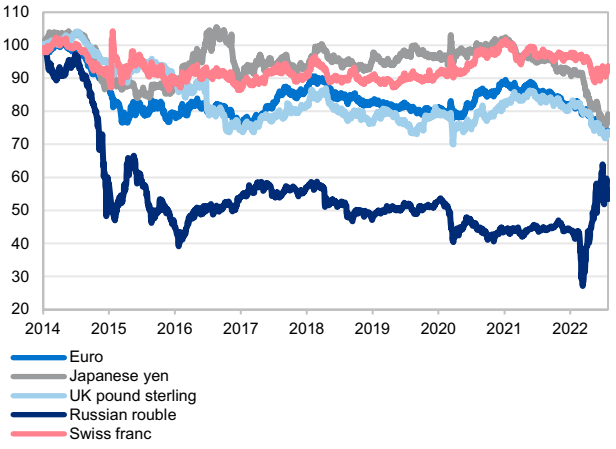
Chart IV.6.20 **Yield on ten-year bonds by country**
(daily data, in %)



Source: Refinitiv.

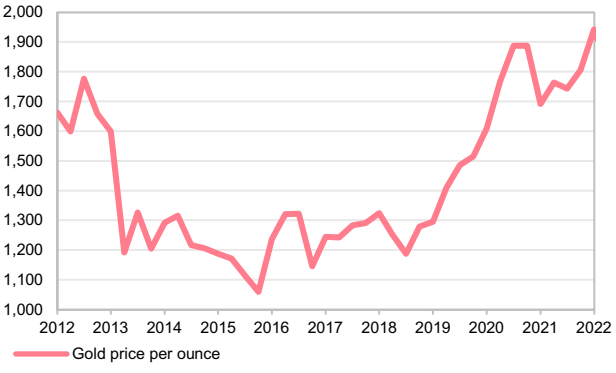
During Q2 the **global price of gold** was dominantly on the downward path, under the impact of the dollar gaining on other major currencies – from mid-April (when the

Chart IV.6.21 **Exchange rates of selected national currencies against the dollar***
(daily data, 31 December 2013 = 100)



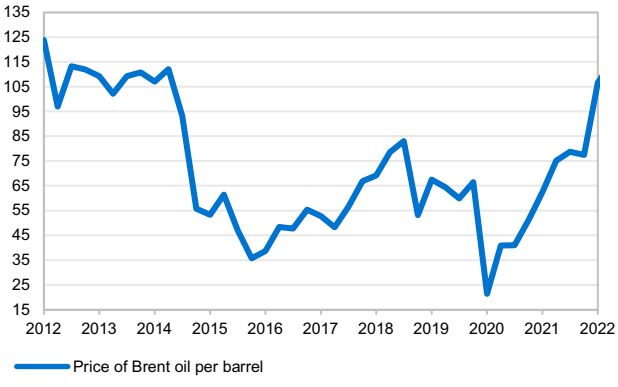
Source: IMF.
* Growth indicates appreciation.

Chart IV.6.22 **World gold price movements**
(end-of-quarter, in USD)



Source: Bloomberg.

Chart IV.6.23 **World oil price movements**
(end-of-quarter, in USD)



Source: Bloomberg.

price fell below USD 1,900 per ounce) to mid-May – and high yield rates on long-term US Treasuries. Though in the second half of May the price of gold edged up slightly, propped by pronounced geopolitical tensions and inflationary pressures that amplify the likelihood of a global recession, in June it continued on a downward path amid the initiated winding down of the Fed's balance sheet and anticipated faster and more comprehensive monetary policy tightening by end-2022, including poorer prospects of global economic growth. At end-Q2 the price of gold retreated to USD 1,817 per ounce (a fall of 6.4% from Q1), reaching a level slightly above that from end-2021. In July, the price of gold went down further (to around USD 1,750 per ounce at end-month), under the impact of the dollar accelerating significantly, tightened monetary policy stances of central banks and a slower economic recovery of China, the world's biggest buyer of gold.

From the level of around USD 107 per barrel, where it stood at the end of March and April, the **price of oil in the global market** rose to around USD 120 per barrel at end-May, due to elevated geopolitical tensions and concerns over global crude oil supply amid failure of OPEC+ to fulfil plans on increasing output, as well as sanctions of the West, notably the EU, on the import of around two-thirds of oil from Russia by sea. Therefore, the oil price posted new records in the first half of June, exceeding USD 126 per barrel, only to edge down to around USD 115 per barrel in the second half of the month, amid fears of a possible global recession which would restrict oil demand, as well as due to the renewed spread of the virus in China. Even so, the price of oil at end-Q2 was 7.9% higher than at end-Q1, and significantly above the level from end-2021. In July, the oil price contracted against the backdrop of heightened recession pressures on global economy, new lockdowns in multiple Chinese cities, and increased oil inventories in the USA, hence it fell to around USD 108 per barrel at the end of the month.

During the major part of Q2, **the benchmark price of natural gas for Europe** (Dutch TTF hub) trended below EUR 100 per MWh, primarily under the impact of increased inventories of liquid oil gas and warmer weather. Still, as of mid-June, the price of gas went back up amid issues in gas supply from the Texas terminal (around 20% of the US export supply) and dampened supply of gas from Russia. At end-Q2, gas was close to EUR 150 per MWh (equivalent to around USD 1,650 per 1,000 cubic metres of gas[17]), which is around 20% more

[17] The price expressed in dollars per one thousand cubic metres of gas was calculated based on the production price of gas expressed in MWh, the EUR/USD exchange rate and an appropriate coefficient (10.55 MWh ≡ 1,000 m^3).

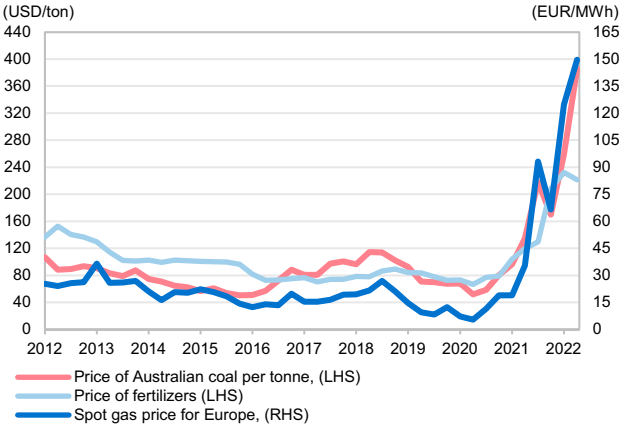
than at end-Q1. During July, the price of natural gas continued up, coming at around EUR 200 per MWh (i.e. around USD 2,150 per 1,000 cubic metres of gas), amid persistent concerns of European countries over gas supply (especially after cuts in the gas supply from Russia through the North Stream), which is why EU members reached an agreement on trimming gas use by 15% in the coming months. If gas supply issues persist, this will raise questions as to the adequacy of gas inventories for winter in Europe, which might push its price further up and thus lead to electricity hikes.

According to World Bank data, the **price of thermal coal** (delivered from Australia) continued up, touching its new peak of almost USD 430 per tonne in May, mostly under the impact of stepped-up demand by industrial zones in Asian countries, including China, where the process of boosting domestic production as of end-2021 was slowed with the new spread of the coronavirus. Once coal import from Russia was banned (and rerouted to China and India), the EU and Japan also faced higher demand for coal from other countries, which exerted additional pressure on the rise in prices that are likely to remain elevated going forward. Increased coal inventories resulted in its price being revised down by around 10% in June, only to exceed USD 400 per tonne already in July, owing to a resurge in demand and continued supply disruptions, intensified by the conflict in Ukraine.

With the majority of **mineral fertilisers** prices were on a decline in Q2, except potassium chloride which stagnated since March, and the price of phosphorite, which rose sharply (around 60%) amid increased demand and limited supply. With the exception of phosphorite, the prices of other mineral fertilisers decreased further in July, though they still remain higher than at end-2021.

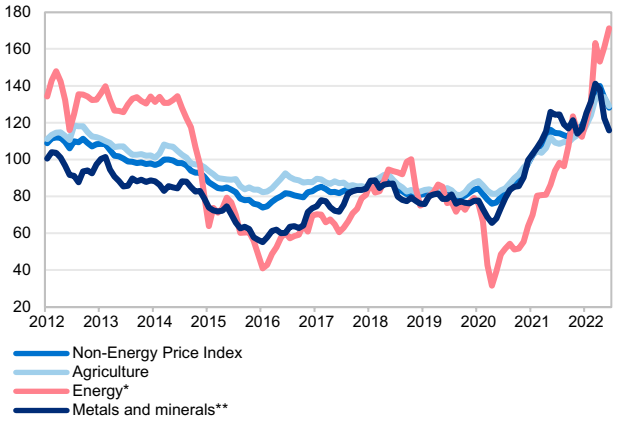
After hitting their historical maximum in March, the **prices of metals and minerals** decreased significantly in Q2 (by 18.1%) according to the World Bank index. This is attributable to increased production and supply globally on the one hand, and on the other, dampened demand from China and shattered growth prospects in other countries. The biggest fall (by more than 20%) was recorded for the prices of tin, nickel and aluminium, and to a lesser degree for the iron ore, copper, lead and zinc. Amid dampened demand, the price of palladium also contracted in Q2, despite the still hampered supply from Russia, the world's biggest palladium producer. Though the prices of metals and minerals underwent significant corrections in Q2, they still remain high against the backdrop of prolonged supply halts due to the conflict in

Chart IV.6.24 **Natural gas, thermal coal and fertilizers price movements**
(end-of-quarter)



Sources: Refinitiv and World Bank.

Chart IV.6.25 **World Primary Commodity Price Index**
(2010 = 100)

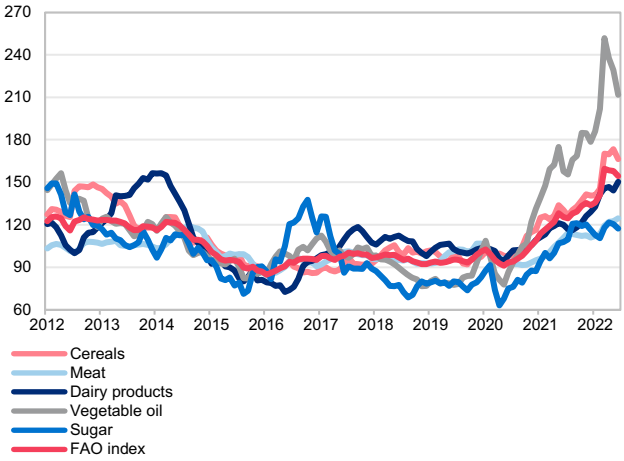


Source: World Bank.

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

Ukraine and the West's sanctions towards Russia, given that both countries are among key global exporters of these raw materials. The prices of metals and minerals went further down in July, by 13.4%, as key metals cheapened significantly – the price of tin dropped by 19.5%, iron ore by 17%, and copper and nickel by 16% each.

Chart IV.6.26 **World Food Price Index**
(in nominal terms, 2014−2016 = 100)



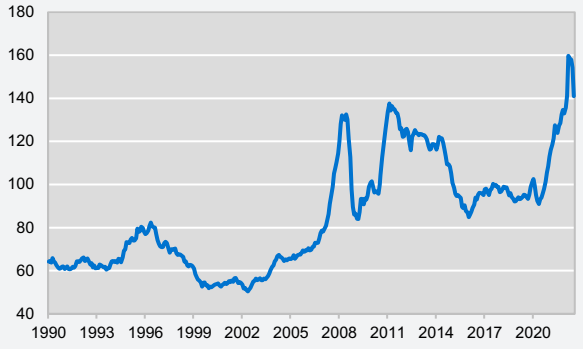
Source: UN FAO.

Having reached their historic maximum in March, the **global food prices** (measured by the FAO index) declined in Q2 (by 3.4%). This is mostly attributable to significantly lower prices of vegetable oils (by 15.9%), notably palm oil, on account of increased production and export from Indonesia, while lower prices of sunflower and soy bean oil are owed to poorer import demand. The **prices of cereals**, of which Serbia is a net exporter, came close to their record level in May, only to dip slightly in June (by 2.2%), with the arrival of a new agricultural season. Lower global prices of wheat in Q2 were facilitated by more favourable farming conditions in the northern hemisphere, including Canada, improved prospects for production in Russia, as well as a weaker pace of import, whereas the fall in the price of corn is the result of a successful harvest in Argentina and Brazil, and more favourable harvesting conditions in the USA. Concurrently, the prices of barley and sugar cane contracted significantly. Sugar prices dipped slightly (by 0.5%) amid subdued demand and good production prospects, notably in Brazil. In contrast, the prices of meat went up in Q2 (4.4%), mostly as a consequence of a sharp increase in the price of poultry meat due to hampered supply and the outbreak of bird flu in the northern hemisphere. The prices of veal also went up after China revoked restrictions on veal import from Brazil, and the prices of pork followed as demand for this type of meat increased in several leading importers. Milk and dairy prices in Q2 were 3.0% higher based on stepped-up import demand, and the still present halts in supply and low inventories. A significant cut of 8.6% in global food prices in July (the biggest monthly fall since October 2008) is owed to the sharp fall in the prices of vegetable oils (19.2%) and cereals (11.5%), notably wheat (14.5%). This is mostly a reaction to the agreement between Ukraine and Russia to unblock the main Ukrainian ports on the Black Sea. July saw smaller corrections in the prices of other food categories (sugar, meat, and milk and dairy).

Text box 3: Factors behind the surge in food prices worldwide and in Serbia and expectations going forward

After almost an entire decade, since H2 2020 world food prices have been on an upward trajectory, recording vigorous growth. In March 2022, measured by the FAO Food Price Index, they reached their maximum level so far. March 2022 also saw the highest monthly rise in world food prices (13.2%), whereafter they moderately declined over the following months, primarily due to the adjustments of cereal prices, lower prices of vegetable oils and sugars on account of dented demand and elevated supply with the onset of the new agricultural season on the northern hemisphere. However, in H1 2022 the cumulative growth in world food prices equalled 15.4%, and was even more pronounced in y-o-y terms, measuring 23.1% in June. Food prices gained around 60% since the start of the pandemic. Several factors together contributed to the surge in world food prices, fuelling global inflation.

Chart O.3.1 **Global food prices**
(2014-2016=100)

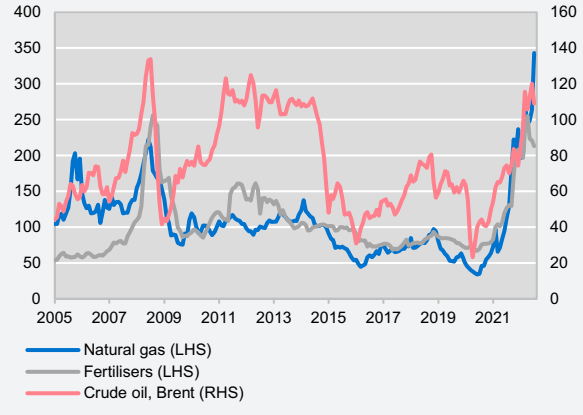


Source: UN FAO.

One of the key factors behind the initial surge in food prices was the easing of restrictive containment measures and a sudden rise in global demand after the development and wider rollout of Covid-19 vaccines. However, the sudden spike in demand, with supply unable to adjust in the short run, brought about global supply bottlenecks and soaring prices of international transport, which affected the world food market as well. Transport costs were also driven up by rising prices of crude oil and petroleum products. Furthermore, through higher fertiliser prices (as many fertilisers are obtained by processing petroleum products and gas), the energy price hike spilled over directly to rising food prices.

The outbreak of the Ukraine conflict generated an additional inflationary pressure on food prices on several grounds, notably as Russia and Ukraine have a significant share in the global production of primary agricultural commodities. Ukraine is at the very top of world producers of many agricultural products – it holds the sixth place in the production of wheat and barley, fourth in corn production, and is the largest world exporter of sunflower oil – which inevitably led to the contracted supply of these products globally and a surge in their prices. According to UNCTAD, taken together Ukraine and Russia account for around 25% of total wheat and barley supply in the world market and for 16% of corn. The upturn in the prices of primary agricultural commodities is accompanied with market participants' heightened fears about their future availability, given the uncertainty as to the duration and consequences of the Ukraine conflict, adding to inflationary pressures.

Chart O.3.2 **Movement of prices of selected primary commodities**
(index, 2010=100) (in USD/bbl)



Source: World Bank Commodity Price Data (The Pink Sheet).

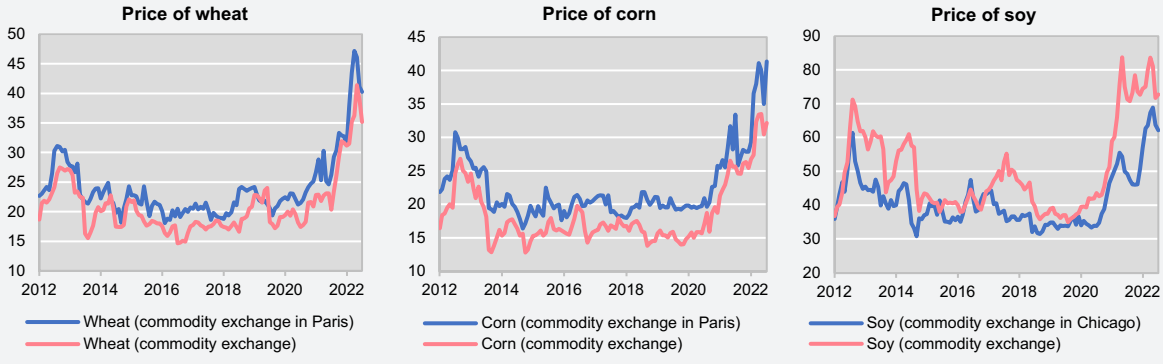
In terms of individual components of the FAO Index, the prices of three out of five observed groups of primary agricultural commodities (cereals, oilseeds, meat, milk and sugar) touched their maximum values in 2022. World cereal prices have recorded two-digit y-o-y growth rates for two years already, equalling 27.6% in June. Oilseed prices recorded similar movement, going up 34.3% in June y-o-y. The y-o-y rise in dairy prices stepped up to 25.2% in June, and prices of meat and sugar gained 12.5% and 8.9%, respectively. Measured by the FAO Index, the y-o-y growth in global food prices slowed significantly in July, to around 13%, reflecting much lower prices of almost all

food categories, which remained on a decline that began in Q2. This was largely supported by the Ukraine–Russia deal to unblock Ukraine's Black Sea ports, which facilitated the delivery of agricultural products.

The global **prices of primary agricultural commodities**, notably cereals (corn, wheat and soy[1]) have a significant influence on these prices in the domestic market, as shown by available commodity exchange data (Chart O.3.3). Until the outbreak of the Ukraine crisis in late February, the wheat price in the domestic market was stable at around RSD 31 per kilogram, whereafter, in step with the global price dynamic, it suddenly spiked in March and April, only to accelerate further in May to over RSD 40 per kilogram, also encouraged by the vigorous rise in prices of petroleum products and mineral fertilisers. Reacting to elevated demand, the **corn price in Serbia** grew together with its world counterpart, measuring RSD 27 on average per kilogram until late February, only to rise to around RSD 33 from March to May.

With the arrival of the new agricultural season and lower activity on the demand and supply side, the wheat price on the commodity exchange entered a downward path in June, going down to RSD 34 per kilogram in late Q2, while the price of corn also fell to RSD 31 per kilogram. Due to weaker demand for soybeans in foreign markets, the **soy price in Serbia** hit a downward trajectory even before, in early May, and at end-June it was at a lower level (RSD 68.5 per kilogram) than early in the year. Although cereal prices declined in the domestic and global markets in Q2, they remain much higher than in earlier years, amid concerns across the world over potential food shortages due to pent-up supply and mounting geopolitical tensions.

Chart O.3.3 **Prices of wheat, corn and soy in the international and domestic market**
(monthly data, in RSD/kg)



Sources: Refinitiv and Commodity Exchange in Novi Sad.

The price of wheat in the domestic market was relatively stable in July as the harvest was completed and yields were relatively good, although lower than last year's. However, due to high temperatures as of late June, and the drought in the international market (Paris commodity exchange), corn prices went up in July. As a result, the corn price on the domestic commodity exchange also increased, to around RSD 34 per kilogram at end-July. It is noteworthy that in an agreement with farmers, the Government made the decision to abolish the measure prohibiting wheat and corn exports.[2] In late July, the soy price also picked up on the Chicago Mercantile Exchange over concerns associated with unfavourable weather conditions in Europe and the USA and the continuing high oil prices. This reflected on an increase in the soy price on the domestic commodity exchange as of mid-July, so that it stood at around RSD 77 per kilogram in mid-July. It should be noted that Serbia still bans the import of genetically modified soybean, which is most often offered in the regional and international market.

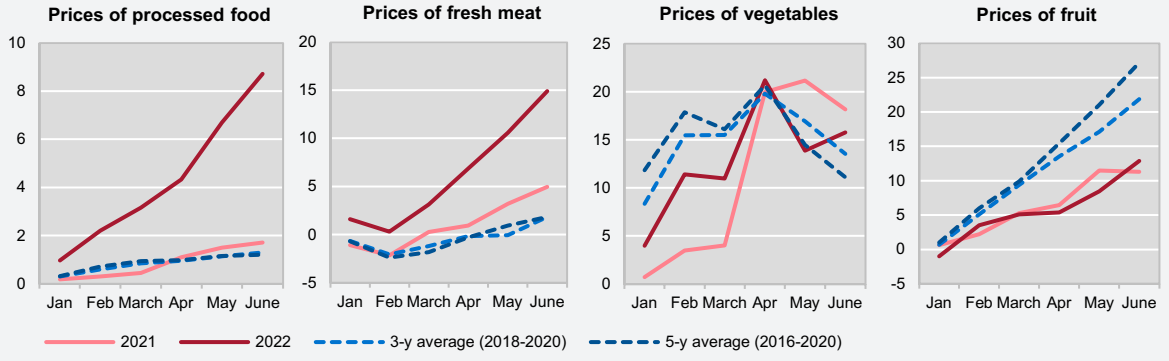
As primary agricultural commodities are used as inputs in food production and their prices remain high internationally, cost-push pressures at home surged, including cost-push pressures in food production and sale. Since early 2022, **prices in the group of food and non-alcoholic beverages** increased by 11.2% cumulatively in H1, on account of the vigorous rise in **unprocessed food prices** (15.9%) and widely distributed growth in processed food prices (8.7%), controlled to an extent

[1] There is a high positive correlation between the prices of wheat, corn and soy in the domestic and global market, as indicated by simple correlation coefficients in the past ten years – wheat 0.93, corn 0.94, and soy 0.85.

[2] Free exports will be in force until the start of autumn, when the new estimate of the stock and total inventories of key cereals will be made.

by government regulations capping the prices of basic foodstuffs, whose validity is extended in line with market circumstances. In y-o-y terms, unprocessed food prices rose 25.4% in June, mirroring a surge in the prices of fresh meat, vegetables and fruit. A 15.4% rise in processed food prices in June is owed primarily to much higher prices of bread and cereals, milk and dairy products, processed meat products, edible oils and fats. These price hikes influenced the June increase of 18.8% y-o-y in the prices within the group of food and non-alcoholic beverages.

Chart O.3.4 **Cumulative rise in food prices in the domestic market in the first six months 2022 and 2021 and multiyear averages**
(in %)

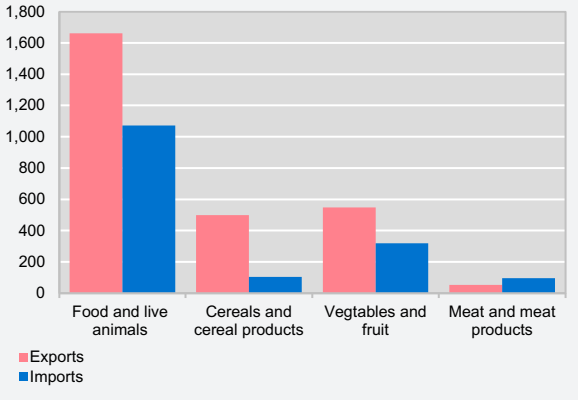


Sources: SORS and NBS calculation.

Responsive to the vigorous rise in their global counterparts, **fresh meat prices in Serbia** also went up (14.9% in H1) and shot past their multiyear averages (Chart O.3.4). Fresh meat prices gained almost 35% y-o-y in June. Under the government decree, the pork loin price was capped at the level registered in mid-November last year, while the prices of other meat categories increased, particularly in Q2, mainly under the impact of a hike in the prices of energy and inputs for fodder production, which is expected to continue in the months to come.

Having surged last year due to the drought and high summer temperatures, **fruit and vegetable prices** were exceptionally high. Since the start of this year, they have continued vigorously up (14.8% in H1), notably after the escalation of the Ukraine crisis, when energy and mineral fertiliser prices went up. Cumulatively, the vegetable price growth in H1 (15.8%) exceeded multiyear averages, while the rise in fruit prices (12.9%) remains significantly lower (Chart O.3.4). The decline in vegetable prices recorded in May (-6.1%) was absent in June, though such trend was expected in the new agricultural season. Vegetable prices increased in June (1.7%), which is unusual for the season, in parallel with fruit prices (4.1%), which were also expected to go down. In June, vegetable prices rose by almost 20% and fruit prices by around 14% y-o-y. In light of this, the expected decline in fruit and vegetable prices may not happen in the coming months either, bearing in mind the drought period in late June and during July, and further hikes in energy prices, which will inevitably reflect on higher food producer and sale prices.

Chart O.3.5 **Cumulative food exports and imports in the first six months of 2022**
(in EUR mn)



Sources: SORS and NBS calculation.

The current rise in global food prices has positive effects on our country's foreign balance as domestic production in Serbia largely meets our country's own needs for food, with surpluses going to foreign markets. Observed by SITC sections, **in January–June 2022, as well as in earlier years, Serbia was the net exporter of most agricultural and food products**, with exports at the level of the food and live animals sector amounting to almost EUR 590 mn. In the first six months of the current year, Serbia recorded a surplus of close to EUR 400 mn in international trade in cereals and cereal-

based products, and a surplus of almost EUR 230 mn in fruit and vegetable trade. This provides funds for the imports of products whose demand cannot be fully met from domestic supply, or the products which, given the agrometeorological conditions, are not produced in Serbia (citrus fruits, coffee, rice etc.).

Food inflation movements in the coming period will significantly depend not only on the outcome of this year's agricultural season and the period over which the prices of basic foodstuffs will be limited, but also on the dynamic of world prices of food, energy and other primary commodities, which are still associated with a high degree of uncertainty, notably in relation to the economic consequences of the Ukraine conflict, the length of supply chain bottlenecks and potential further escalation of geopolitical tensions. These are at the same time the key risks to the inflation projection in the short run, as well as over the projection horizon, which are still assessed as asymmetric to the upside.

V Projection

We have kept our GDP growth projection for 2022 at the range of 3.5–4.5%, unchanged from May, as Q2 activity in manufacturing and service sectors topped our expectations despite poorer global growth prospects and the continued rise in cost-push pressures fuelled by elevated energy prices. As economic activity is expected to slacken, however, in the remainder of this and early next year amid mounting recessionary pressures in the euro area, we have revised the economic growth outlook for 2023 down by 0.5 pp to the range of 3.5–4.5%. Thereafter, we expect its return to the previously anticipated growth trajectory of around 4–5% p.a. as the effects of the Ukraine conflict on external demand wear off and the planned invested projects are implemented, mainly in road, railway and utility infrastructure.

The period since the previous medium-term inflation projection from May this year was marked by a further mounting of geopolitical tensions over Ukraine conflict continuation. Also, the agricultural season will in all likelihood not be average as we anticipated in May, since we have again been hit by a drought in the summer months. As the risks of these factors, identified in the May projection, have materialised, inflation will be running at a higher level than projected in May throughout the inflation horizon. Under the central August projection, y-o-y inflation is expected to peak in Q3 this year and strike a downward path thereafter. It should decline more sharply in H2 2023 and retreat within the bounds of the target tolerance band in H1 2024, i.e. towards the end of the projection horizon. Inflationary pressures will be soothed by the past monetary tightening, anticipated weakening of the effects of global factors underpinning energy and food price growth in the past period, and subdued external demand. In the short term, they will also be alleviated by the Government's economic measures to contain food and energy price growth in the domestic market.

Uncertainty surrounding the inflation and GDP projections remains high and is mostly associated with factors from the international environment, notably the effects of the Ukraine conflict on the availability and international prices of energy products, and on the global economic growth outlook, which in turn will have a significant impact on global prices of primary commodities. At home, the risks to the projection are mostly associated with the outcome of this year's agricultural season, i.e. the extent to which it will fall short of the average. Another risk to the projection are developments in the energy sector – the volume of coal and electricity production in the domestic market, the prices at which we will import the portion of gas exceeding the level defined in the agreement with Russia, as well as any measures the Government might take to ensure energy security at home.

Initial conditions and projection assumptions

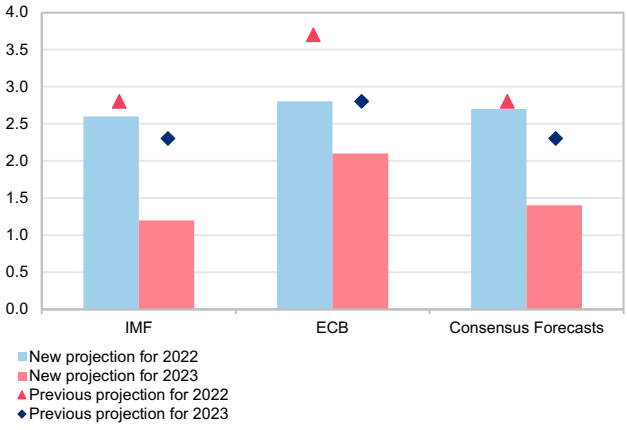
The global growth outlook has become gloomier amid heated geopolitical tensions over the escalation of the Ukraine conflict, further pick-up in inflation and tighter global financial conditions, negative spillovers from the Ukraine conflict on other economies and worse-than-anticipated slowdown in China due to lockdowns. In July, the IMF expected global growth to contract from 6.1% in 2021 to 3.2% in 2022 and 2.9% in 2023, lower by 0.4 pp and 0.7 pp, respectively, than in the April projection. US growth was revised down the most – by 1.4 pp to 2.3%, reflecting lower than expected growth earlier this year, reduced household purchasing power and tighter monetary conditions. China's growth projection for 2022 was also marked down substantially – by 1.1 pp to 3.3%,

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	3.6	3.2	3.6	2.9
Euro area	2.8	2.6	2.3	1.2
Germany	2.1	1.2	2.7	0.8
Italy	2.3	3.0	1.7	0.7
USA	3.7	2.3	2.3	1.0
Russia	-8.5	-6.0	-2.3	-3.5
China	4.4	3.3	5.1	4.6

Sources: IMF WEO (July 2022) and IMF WEO (April 2022).

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



Sources: IMF, ECB and Consensus Forecasts.

reflecting lockdowns, port closures and the deepening real estate crisis, which has led to further supply bottlenecks and slackened demand.

When it comes to the **euro area** as our main trade partner, aside from the direct negative effects of the Ukraine crisis and sanctions against Russia on foreign trade and the energy security due to downsized gas deliveries from Russia, it has also faced a number of indirect effects stemming from lingering supply chain disruptions, which have particularly affected the automobile industry, and mounting inflationary pressures calling for faster-than-anticipated tightening of the ECB's monetary policy. Though economic activity expanded in Q2 as well, there are mounting risks of recession in the euro area in H2, signalled by leading economic activity indicators – PMI and ESI – in July. Under the ECB's June projection, euro area will grow by 2.8% this year and 2.1% in 2023. In July, Consensus Forecasts projected 2022 euro area growth at a similar level (2.7%), but it significantly marked down the growth outlook for 2023 – to 1.4%. Because of its relatively large manufacturing sector, Germany is particularly hard hit by the Ukraine conflict and the possibility that gas supply could be cut off, since it had greatly benefited from low energy prices and high integration in global value chains in the preceding decades. According to Consensus Forecasts, Germany's GDP growth will equal 1.6% each in this and the next year, down by 0.6 pp and 0.9 pp, respectively, relative to three months ago, while Italy's GDP growth will measure 2.7% this and 1.3% next year. And whereas Italy's 2022 growth outlook has not been changed from three months ago since the tourism sector is expected to provide a robust contribution to GDP growth, this being the first season after three years that it operates at full capacity, the 2023 growth projection was revised down by 0.6 pp. In July, the IMF had similar expectations of euro area growth as the Consensus Forecasts, putting it at 2.6% in

Table V.0.2 **Key projection assumptions**

	2022		2023		2024	
External assumptions	May	Aug.	May	Aug	May	Aug
Euro area GDP growth	2.9%	2.7%	2.3%	1.4%	1.0%	2.0%
Euro area inflation (average)	6.5%	7.7%	2.4%	4.0%	2.2%	2.0%
3M EURIBOR (December)	0.3%	1.1%	1.3%	1.2%	1.3%	1.3%
International prices of primary agricult. commodities (Q4 to Q4)*	17.1%	13.7%	-8.9%	-7.8%	3.5%	-6.7%
Brent oil price per barrel (December, USD)	99	97	87	87	80	82
Internal assumptions						
Administered prices (Dec to Dec)	4.7%	6.2%	7.0%	7.0%	6.0%	6.0%

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

2022 and anticipating its slowdown to 1.2% in 2023. When it comes to Germany and Italy, 2023 growth was marked down to 0.8% and 0.7%, respectively.

So far, the Ukraine crisis has had no major negative spillovers on the **level of activity in the Central and Southeast European region**. Notwithstanding this, leading Consensus Economics and Focus Economics analysts forecast a slackening of the region's GDP growth in the coming period. The pace of this slackening will depend primarily on the duration of the Ukraine conflict and its consequences for trade flows and food and energy prices. Potential disruptions in energy supply could place additional burden on production and add to inflationary pressures in the countries of the region, particularly given the halts in direct Russian natural gas exports to Poland and Bulgaria and EU plans to ban or phase out the import of fossil fuels from Russia by 2027. It should also be noted that central banks of some Central and Southeast European counties have greatly tightened their monetary conditions. Still, Consensus Forecasts revised up its 2022 GDP growth projection for almost all countries in the Central European region relative to three months ago, taking into account GDP outturns earlier in the year, i.e. the smaller-than-anticipated effect of the Ukraine crisis. Forecasts for the next year were revised down. Conversely, 2022 growth in **Western Balkan** countries was revised down from three months ago, because at that time downward revisions for this group of countries were smaller than for Central European countries. The speed of recovery of this region will depend primarily on energy prices and availability, pace of recovery of the euro area which is its most important trade partner, and monetary policy measures taken in the face of mounting inflationary pressures.

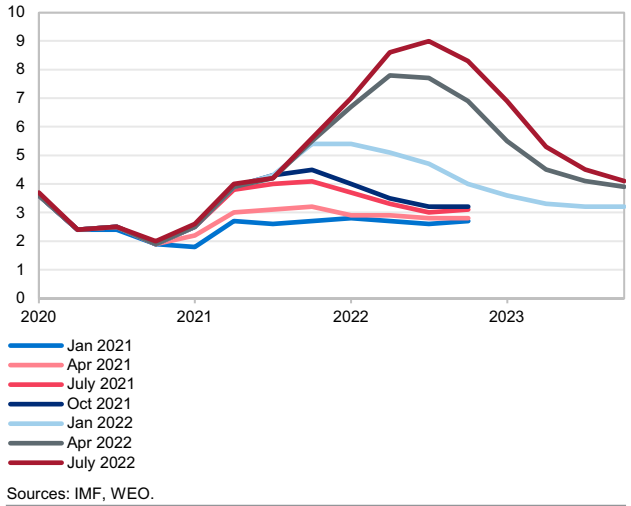
Table V.0.3 **Economic growth estimate by country**
(real growth, in %)

	April 2022		July 2022	
	2022	2023	2022	2023
Poland	3.9	3.4	4.8	2.4
Czech Republic	2.0	3.1	2.2	2.1
Hungary	3.8	3.5	4.6	2.4
Romania	2.7	4.1	4.5	3.3
Slovakia	2.6	3.7	1.9	3.0
Slovenia	4.0	2.8	4.8	2.5
Croatia	3.3	3.5	4.1	3.0
Bulgaria	2.7	3.2	2.8	2.5
Albania	3.5	3.5	2.6	3.6
Bosnia and Herzegovina	3.1	3.0	2.9	2.8
North Macedonia	3.3	3.2	2.6	3.2
Montenegro	4.1	4.2	3.6	4.0
Serbia	4.1	3.7	3.5	3.7

Source: Consensus Forecasts.

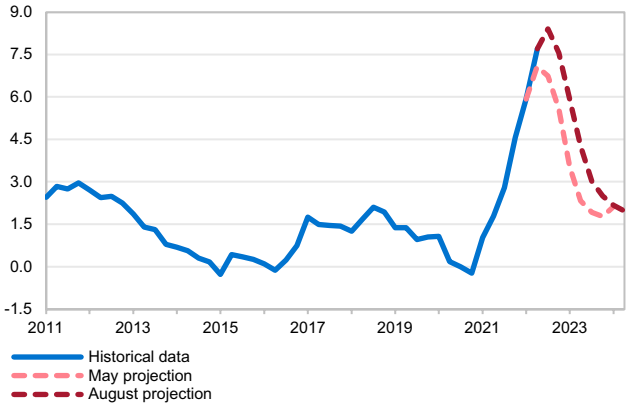
Inflation continued to rise well above expectations in most advanced and emerging economies, mostly reflecting the surge in food and energy prices which intensified further with the outbreak of the Ukraine conflict. In some countries, it was also underpinned by domestic demand and labour market factors. Though costs of international overseas transport have abated, supply bottlenecks and shortages of some inputs in production continue to place pressures on global inflation. As this mix of factors resulted in more persistent inflationary pressures, central banks and international institutions revised their inflation projections further up, even as they expect the situation in the primary commodities market to calm down, possibly helping inflation return gradually to target. This should also be supported by the anticipated gradual normalisation of global value chains. In line with the Consensus Forecasts'

Chart V.0.2 **Global inflation forecasts**
(in %)



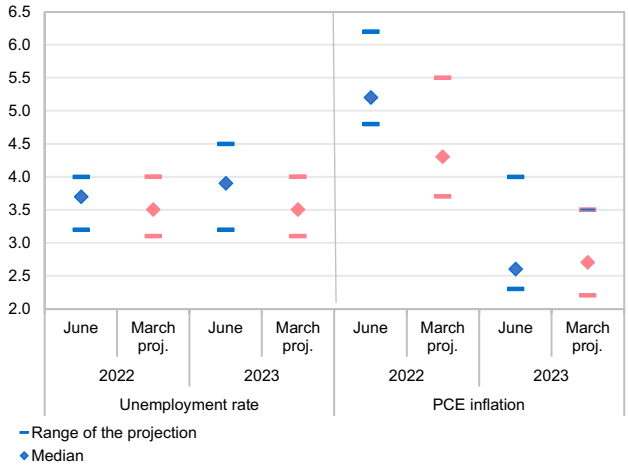
Sources: IMF, WEO.

Chart V.0.3 **Assumption for euro area inflation**
(y-o-y growth, in %)



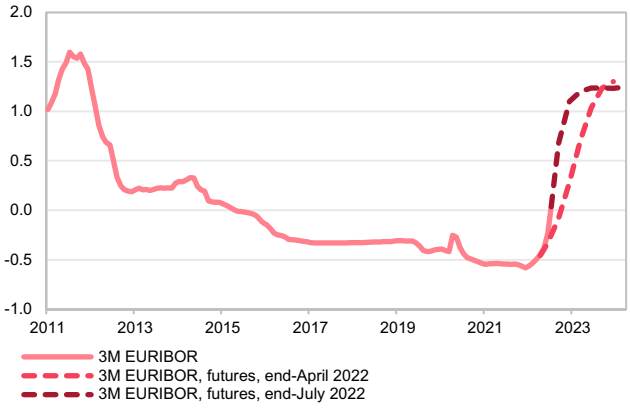
Source: NBS calculation based on projections of relevant institutions.

Chart V.0.4 **US inflation and unemployment rate projections**
(in %)



Source: Fed.

Chart V.0.5 **Expected 3M EURIBOR**
(p.a., in %)



Source: Bloomberg.

projection, we have assumed **euro area inflation** to average 7.7% this and 4.0% next year, which is more than what we expected in May.

Mounting inflation has prompted many central banks to tighten their monetary policies sooner than expected, even if that leads to a short-term slackening of economic growth. The prevailing view is that a high inflation over a longer time period would hurt economic growth more in the medium term than the negative short-term effects produced by monetary policy tightening. The **Fed** thus decided to raise its Fed funds rate range by 50 bp in May and by 75 bp each in June and July, to 2.25–2.5%, the largest increase since 1994. It is expected to raise its rate further in the following meetings. In the June meeting, the largest number of FOMC members expected the Fed funds rate to move in the range of 3.25–3.5% in late 2022, which is well above expectations from March. The Fed funds rate is expected to be raised further in 2023, the median expectation being 3.75% for the year end. It may decline in 2024 to the range of 3.25–3.5% late in the year. Monetary policy tightening is not only supported by high inflation but also by labour market data, including primarily the unemployment rate which stayed at 3.6% despite lower anticipated growth this year of 1.7%, under the Fed's June projection. In July, the **ECB** raised its main refinancing rate by 50 bp, though a 25 bp rate increase was signalled in June. Further hikes are expected in future meetings depending on economic data and estimated inflation movements in the medium term. Consistent with futures, our projection assumes that the three-month EURIBOR will measure 1.1% late this year.

The impact of primary commodity prices on cost-push pressures at home was compounded by the **dollar's appreciation against the euro** and, by extension, against the dinar, primarily as the Fed's monetary policy tightening has so far been faster-paced than that of the ECB. The strengthening of the dollar pushed dinar-denominated prices of primary commodities further up. Going forward, the dollar is expected to stay relatively stable against the euro, at the current level of USD 1.02 for EUR 1, since, according to announcements, the ECB will tighten its monetary policy sooner than anticipated as well.

The global oil price continued up until mid-June when it turned down amid fears of major slackening of global growth and recession in two out of three leading world economies in H2. Consistent with the latest available end-July futures, the global oil price is expected to measure around USD 97 per barrel in late 2022 and continue to drift down in the coming two years (to USD

87 and 82 per barrel, respectively), which is very similar to the expectations of the International Energy Agency (USD 96 per barrel in late 2022 and USD 87 per barrel at end-2023).

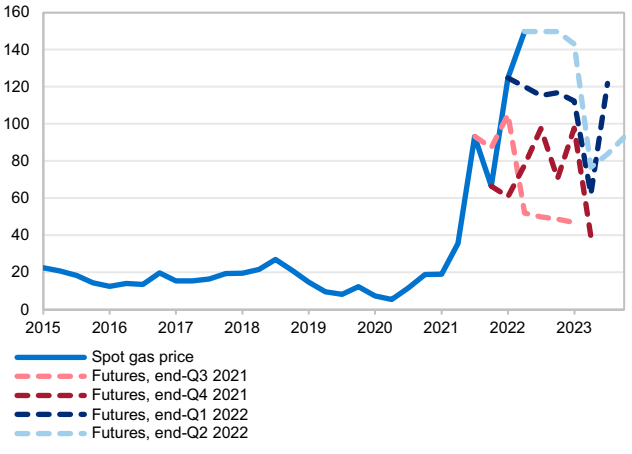
Though the **global price of natural gas** was expected to decline with the seasonal softening of demand, it continued up in the period since the previous projection. In the latter half of June and early July, it more than doubled in the Dutch hub, ranging between EUR 175 and 185 per megawatt hour. This was due primarily to fires at the Texas terminal, which accounts for around a fifth of US gas exports, and downsized gas deliveries from Russia through the NordStream 1 pipeline due to problems with turbine overhaul. This led to lower than anticipated refill of Europe's gas storages for winter. Consistent with futures, gas prices will go up during the next heating season and decline in the remainder of 2023. Still, it currently seems unrealistic to expect their return to the pre-energy crisis levels until the end of the projection horizon. The gas price increase spurred elevated demand for **coal and electricity**, as alternative energy sources, prompting a substantial further rise in their prices. It is important to note that **our central projection does not assume any further heightening of geopolitical tensions or cut-offs of Russia's gas supply to the euro area and other EU countries. Should this risk materialise, however, gas, coal and electricity prices would rise substantially, pushing global production costs further up**. Though Serbia will most probably be paying for most of its gas (around two-thirds of total needs) at prices much more favourable than the market ones, according to the so-called oil formula, elevated gas prices could mean that the remainder of gas will be imported at much higher prices. This could push up electricity prices for the corporate sector. In addition to direct effects, the indirect effects of higher energy prices on disposable income and, by extension, on inflation and economic growth will differ, depending on the share of energy expenses in total expenses of households and corporates, and are therefore more difficult to measure.

Due to swelling global prices of energy products and their reduced availability, gas and electricity prices for households will have to be raised as well to avoid major losses of companies operating in the energy sector. The gas price for households will be lifted by 9% in August, while the price of electricity per kilowatt hour will go up 6.5% in September. In August, the incentive for preferred electricity producers will be raised from RSD 0.437 to RSD 0.801 per kilowatt hour. We have assumed that gas and electricity prices for households will be adjusted further in 2023. The hike in gas and electricity prices,

Chart V.0.6 **Assumption for Brent oil prices**
(USD/barrel)

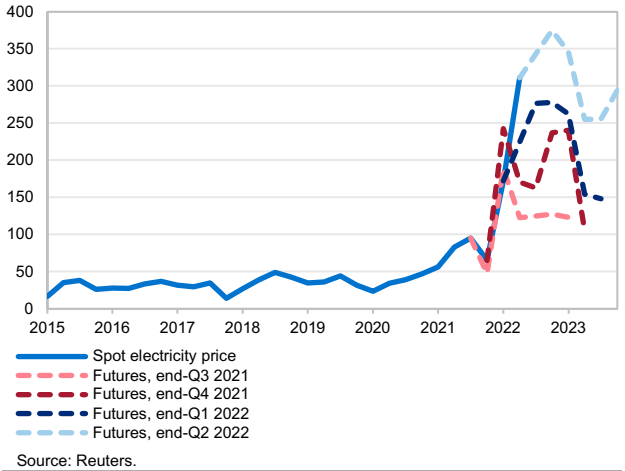
Source: Bloomberg.

Chart V.0.7 **Benchmark natural gas price for Europe, Dutch TTF hub**
(EUR/MWh)



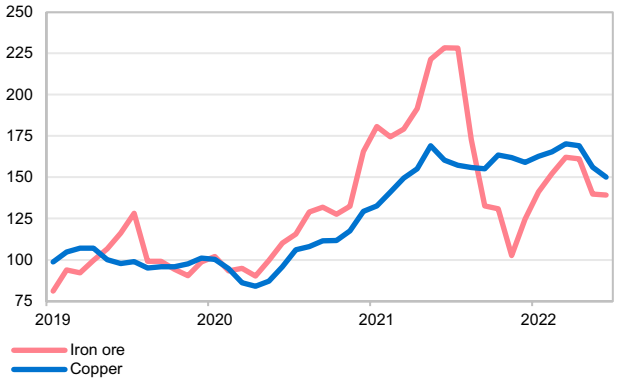
Source: Reuters.

Chart V.0.8 **Benchmark electricity price for Europe, German power baseload**
(EUR/MWh)



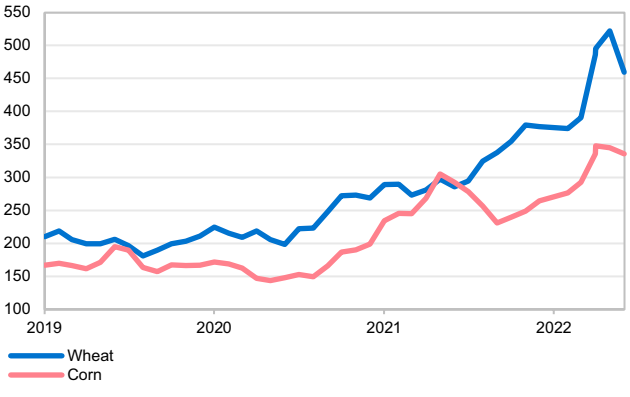
Source: Reuters.

Chart V.0.9 **Iron ore and base metal prices in the global market**
(index points, 2019 = 100)



Source: *Commodity Prices*, World Bank.

Chart V.0.10 **Wheat and corn prices in the global market**
(USD/mt)



Source: *Commodity Price Data*, World Bank.

along with the anticipated increase in the prices of utilities and cigarettes based on regular annual excise adjustments, ought to result in **administered price** growth of 6.2% this and 7% next year. The projection assumes that the temporary 15% reduction of fuel excises will remain in place until the end of the projection horizon. When it comes to government measures to cap the prices of basic foodstuffs, primarily the new decree on meat prices, we assumed them to stay in force in the coming period as well.

After hitting record-high levels in March under the impact of geopolitical tensions and the escalation of the Ukraine crisis, **global prices of metals and minerals** subsided during Q2. This reflected their increased output but also in part the weaker global growth outlook and the announced robust monetary policy tightening by leading central banks, as these prices greatly depend on the stage of the global economy's business cycle, particularly in China as their largest global consumer. According to projections of relevant international institutions, these prices should continue down in the coming period, helping ease pressures on producer prices in industry and construction.

Under the impact of geopolitical events, global prices of **primary agricultural commodities** increased further since the May projection, though they have been declining since June, reflecting gloomier global growth prospects. Our projection of these prices relies on futures data from global stock exchanges, according to which they should post annual growth of around 14% late this year, followed by a decline of around 8% next year. 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. Because they recorded stronger growth in the period between the two projections, domestic prices of agricultural commodities will be higher than in the previous projection until the end of the projection horizon, also reflecting persistently high costs of their production (mineral fertilisers).

When it comes to factors affecting domestic demand, the **medium-term fiscal framework**, defined in the Fiscal Strategy for 2023 with Projections for 2024 and 2025, sets out a gradual tightening of the fiscal policy and a decline in the general government deficit to 3% of GDP this year and further to 0.5% of GDP by end-2025. Depending on the available fiscal space, the fiscal policy will continue to focus on further reducing the overall tax burden of labour, additionally relieving the corporate sector and boosting its competitiveness. On the expenditure side, infrastructure

and capital projects will be prioritised (with government capital investment expenditure projected at around 6–7% of GDP per annum), as will the wages and pensions policy, though care will be taken to ensure that the increase in these largest expenditure categories does not raise their share in GDP. Altogether, this should help sustain the living standard of households and provide more funds for new investment, while at the same time ensuring a return of public debt to a downward trajectory. The effects of the 15–20% decrease in petroleum product excises have been offset by higher revenues on other accounts. As a result, the general government deficit contracted to RSD 15.6 bn in H1 2022, which is around 60% lower than in the same period last year. This will leave space for fiscal policy response if the global energy crisis intensifies further.

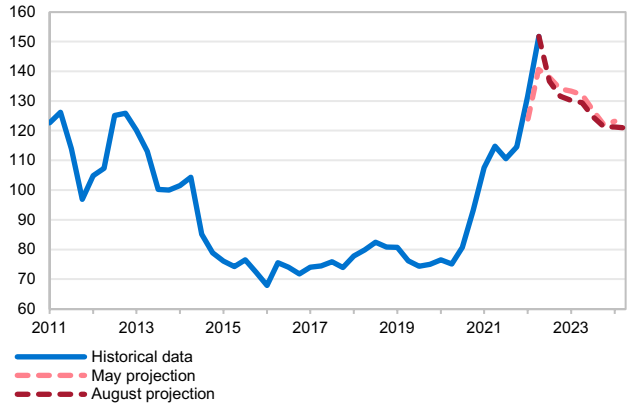
According to our estimate, **wage growth** this year will be somewhat faster in the **private** than in the public sector, sustained by the anticipated further increase in the minimum wage made possible by the relieving of the corporates' tax burden. As employment continues up, the **total wage bill** will increase by around 14%, remaining the key source for financing consumption.

Weather conditions earlier in the year, most notably the drought during the summer months, could lead to somewhat lower outputs of autumn crops (especially corn, sunflower and soy) and vegetables. This year's **agricultural season** will, therefore, most probably not be average, as we assumed in our previous projection, but more similar to the last year's season. The firsts SORS estimates indicate that this year's total output of wheat (which makes up around 10% of total agricultural output) was around 7% lower than the record-high level recorded last year.

GDP projection

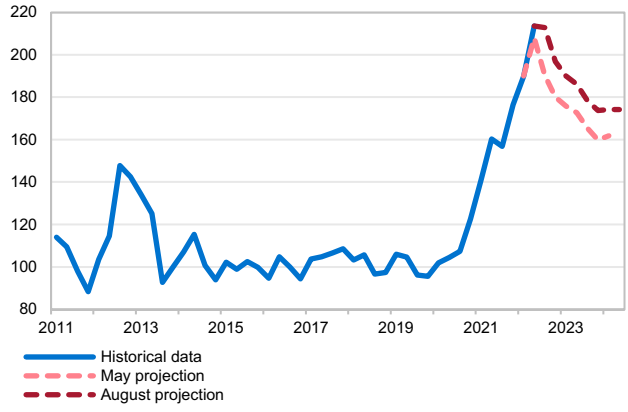
According to the SORS estimate, GDP posted relatively robust y-o-y growth of 4.4% in Q1 and continued a similar growth pace in Q2 (4.0% y-o-y), exceeding our expectations from the previous *Report*. Manufacturing output and exports continued up, indicating that subdued external demand has so far not had major negative effects on Serbia. In all likelihood, this was propped up by investment in tradable sectors from previous years which significantly ramped up export supply. Exports of agricultural products also picked up from May onwards as the temporary ban on their exports was relaxed. According to our estimate, the service sectors and mining also provided a positive contribution on the production side in

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



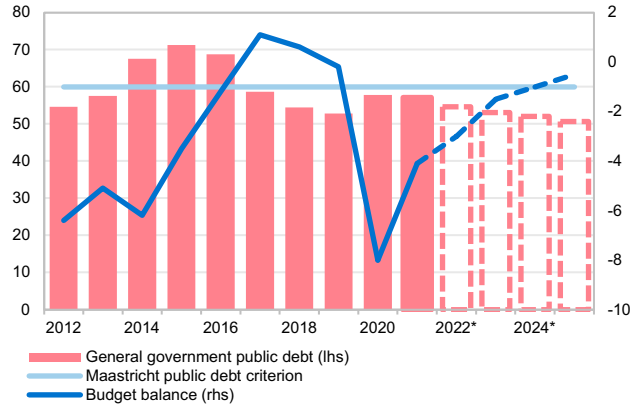
Sources: CBOT, Euronext and NBS calculation.

Chart V.0.12 **Assumption for domestic prices of primary agricultural commodities***
(Q4 2013 = 100)



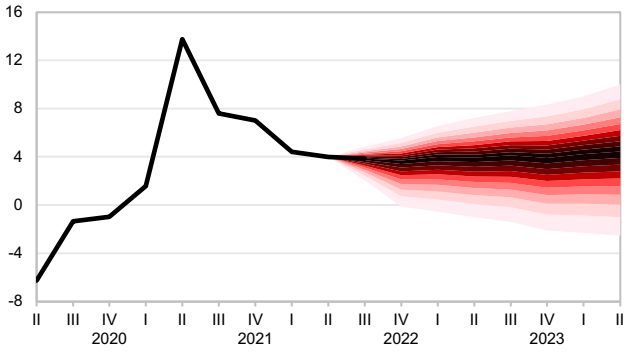
Sources: Commodity Exchange Novi Sad, CBOT, Euronext and NBS calculation.
* Measured by the composite index of wheat, corn and soybean prices.

Chart V.0.13 **Budget balance and general government public debt**
(in % of GDP)



Source: Ministry of Finance.
* Projection from the Fiscal Strategy for 2023 with Projections for 2024 and 2025.

Chart V.0.14 **GDP growth projection**
(y-o-y rates, in %)

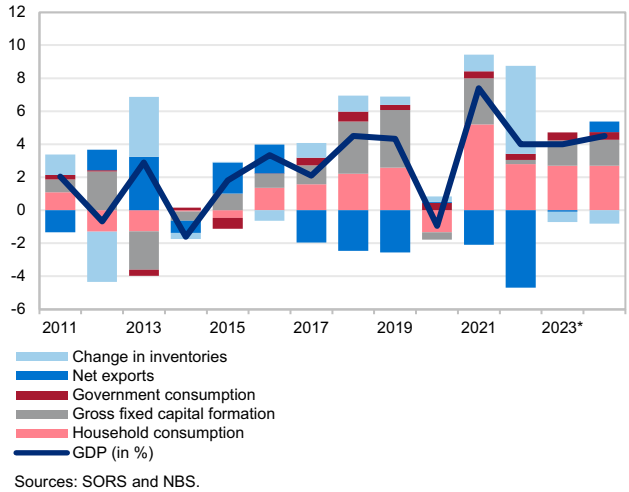


Source: NBS.

Q2, while production in the energy sector and construction remained on a decline.

Q2 GDP growth was higher than anticipated in our May projection, which will most probably offset the expected deceleration of economic activity in the remainder of the year amid weaker global growth prospects and mounting recessionary pressures in the euro area due to greatly elevated prices of energy and industrial raw materials and lingering disruptions in global value chains. We nevertheless expect quarterly GDP rates to stay positive in the rest of the year too. With this in mind, **we have kept our GDP growth projection for this year unchanged relative to May, but we revised our 2023 GDP growth projection down by 0.5 pp to the range of 3.5–4.5% because of the lower anticipated carry-over effect from this year and weaker projected euro area growth**. We then expect its return to the previously anticipated growth trajectory of around 4–5% p.a., as the effects of the Ukraine conflict on external demand wear off and the planned investment projects are implemented, mainly in road, railway and utility infrastructure. It is also important to note that this projection assumes no further deepening of geopolitical tensions or cut-offs in gas supply to the euro area, though, in line with assumptions from the ECB's June projection, sanctions against Russia will stay in place until the end of the projection horizon.

Chart V.0.15 **Contributions to real GDP growth**
(in pp)



Sources: SORS and NBS.
* NBS estimate.

According to our estimates, **consumption will rise more slowly than total GDP, ensuring its medium-term sustainability**. Its contribution to GDP growth this year and in the medium term is estimated at around 2.8 pp per annum. Consumption growth will be propped up by the continued rise in employment and wages, most notably in the private sector. This will reflect the higher minimum wage, though income disposable for consumption will be somewhat lower than what we expected in May due to the lingering rise in energy and food costs and the moderately higher cost of borrowing at home due to the NBS's and the ECB's monetary policy tightening. Pensions will be another important source for consumption. Though a relatively substantial rise in pensions is expected next year, reflecting nominal GDP growth this and the next year, their share in GDP will not exceed the pre-pandemic level. Other sources include one-off fiscal benefits provided early in the year and incentives to promote childbirth. The Government also increased the value of vouchers for holidays in Serbia from RSD 5,000 to RSD 15,000, which will help raise the number of domestic tourists' arrivals and overnight stays.

Government consumption is also expected to provide a mildly positive contribution to GDP this year and in the medium term (around 0.5 pp per annum). We expect that,

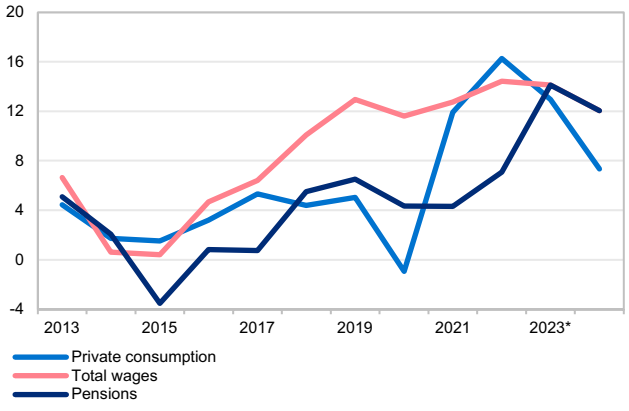
in line with the Fiscal Strategy, outlays for wages and procurement of goods and services will rise at a moderate and measured pace, and that care will be taken that their share in GDP does not increase.

The global investment rate has declined in the face of current geopolitical tensions, higher operating costs of businesses due to much elevated prices of energy and raw materials, as well as subdued external demand amid poorer global growth prospects and a mounting risk of stagflation. The investment propensity could also be dented by monetary policy tightening of leading central banks. In such circumstances, we expect a lower than anticipated investment growth rate in Serbia, contributing 0.2 pp to GDP this year. A somewhat higher contribution of investment is expected in the next two years (1.6 pp each) as production costs go down and global value chain disruptions are gradually resolved. Own sources remain the key source of funding **private investment**, including FDI inflows projected at around EUR 3.4 bn this year (EUR 3.3 bn, net). Thanks to the favourable macroeconomic outlook of the country, FDI inflow is estimated to stay relatively high in the medium term (around 4-5% of GDP per annum) and, as so far, diversified by project and mostly directed at tradable sectors. 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, possibly inflating the cost of borrowing in the foreign currency. Because of the last year's high base, the contribution of **government investment** will probably be mildly negative this year, but, in accordance with the Fiscal Strategy, the share of government capital expenditure in GDP is expected to stay relatively high (around 6-7% per annum), which ought to result in a mildly positive contribution of **government investment** next year and a neutral contribution thereafter.

Inventories are expected to provide a high positive contribution to GDP growth this year. Their rise has been propped up by the forming of strategic commodity reserves, primarily of food and energy products. As energy and food prices and availability gradually normalise and global value chain disruptions are resolved, inventories are expected to decrease next year, providing a negative contribution to GDP.

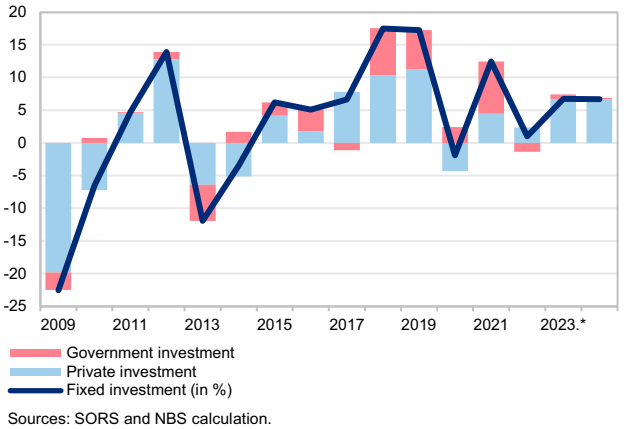
Net export is expected to provide a significant negative contribution to GDP this year. This primarily reflects higher import of all major energy products – gas, oil, coal and electricity. Because of issues faced by the energy sector since end-2021 and downsized coal exploitation,

Chart V.0.16 **Rate of growth in private consumption and its sources**
(y-o-y rates, in %)



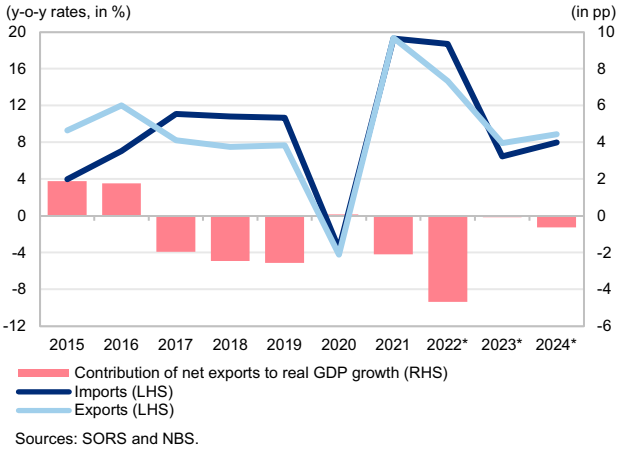
Sources: SORS and NBS calculation.
* NBS estimate

Chart V.0.17 **Fixed investment**
(y-o-y growth, in pp)



Sources: SORS and NBS calculation.
* NBS estimate.

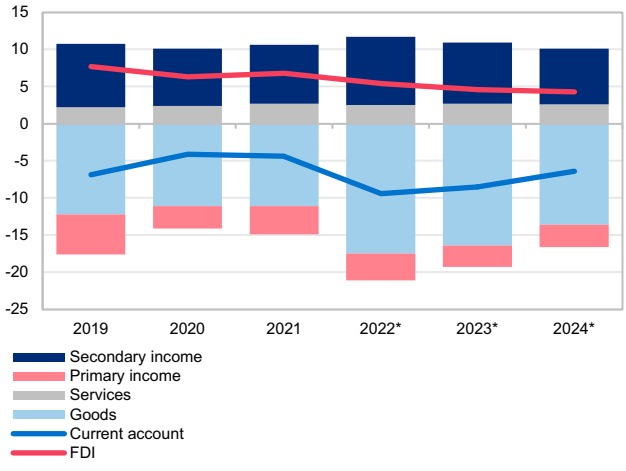
Chart V.0.18 **Real export and import growth**



Sources: SORS and NBS.
* NBS estimate.

Serbia will most likely be the net importer of electricity this year, unlike in previous years. To a smaller extent, the negative contribution of net export also resulted from higher equipment imports for the purpose of investment projects implementation and subdued external demand. Softer external demand will partly be offset by rising export supply based on earlier investments, but cereals exports will most probably be weaker this year due to temporary caps early in the year and the forming of strategic food inventories in the domestic market, as well as to smaller than anticipated yields since, according to initial estimates, the agricultural season will not be average as we assumed in our previous projection.

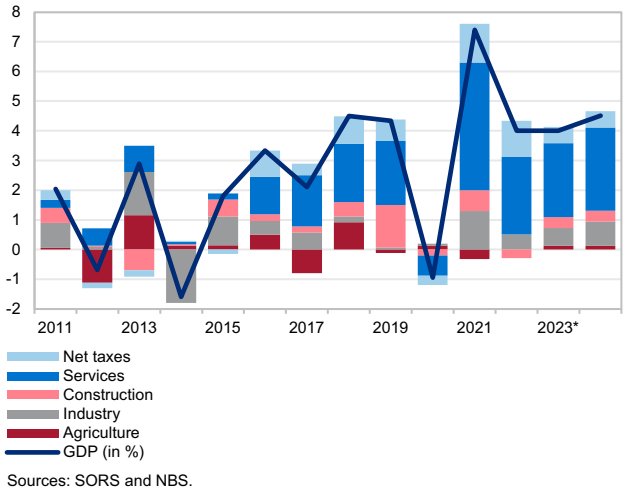
Chart V.0.19 **Current account and FDI projection**
(in % of GDP)



Source: NBS.
* NBS projection.

As a result of the above movements in goods exports and imports and less favourable terms of trade reflecting substantial energy price hikes globally, the **share of the current account deficit in GDP** will climb to 9.4% this year. This should also reflect increased expenditures on account of primary income amid continued growth in FDI inflows and the anticipated profit payments to foreign-owned companies and, to a smaller extent, also higher costs of repayment under debt instruments on account of monetary tightening by central banks worldwide. Stable inflows from remittances and the surplus on trade in services will work in the opposite direction, primarily thanks to rising demand for tourism services and the continued expansion of ITC sector exports. The share of the current account deficit is expected to contract gradually over the medium term, helped by more favourable terms of trade, which ought to preserve external sustainability.

Chart V.0.20 **Contributions to real GDP growth, production side**
(in pp)



Sources: SORS and NBS.
* NBS estimate.

On the **production side**, service sectors are expected to provide the largest positive contribution to GDP growth, reflecting their high share in GDP and continued growth in personal consumption. This contribution will measure 2.5 pp each in this and the next year and accelerate mildly in 2024. Mining and manufacturing are expected to provide almost the same positive contribution this year (0.6 pp each). The expansion of activity in the mining sector resulted primarily from the activation of new production capacities and increased metal ore exploitation, particularly of copper. As manufacturing output growth in H1 exceeded expectations, the annual contribution of manufacturing is estimated to be similar as in our previous projection, despite reduced external demand and higher production costs. Manufacturing industry growth continues to be led by the activation of new and the expansion of existing capacities and the resulting rise in export supply. With the anticipated waning of the effects of higher operating costs due to elevated prices of energy, primary commodities and industrial raw materials, the contribution of manufacturing industry ought to speed up

slightly from next year. A mild negative contribution this year will come from construction, with activity in this sector expected to pick up gradually as of next year, propped up by the planned implementation of infrastructure projects, primarily in the area of transport and utility infrastructure. However, as the global growth outlook has worsened, both the service sector and industry and construction will provide a slightly lower contribution next year compared to the previous projection. Since electricity and coal production have been downsized in the year so far, a negative contribution to growth is expected to come from the energy sector this year. In addition, the contribution of agriculture will most likely be neutral instead of mildly positive, which we expected in the previous projection assuming an average agricultural season.

Inflation projection

Short-term inflation projection

Under the central projection, headline inflation will continue up in Q3, primarily reflecting high production costs fuelled mostly by elevated global prices of energy, primary agricultural commodities and industrial raw materials, as well as the substantial upturn in producer prices of our trade partners in the euro area.

In addition, instead of declining as usual for the season, fruit and vegetable prices are expected to see a slight quarterly increase due to the drought. This is contrary to what we estimated in May when we expected the contribution of fruit and vegetable prices to subside with the arrival of the new agricultural season and turn negative in Q4, especially in light of their robust growth in the prior period on account of the last year's drought.

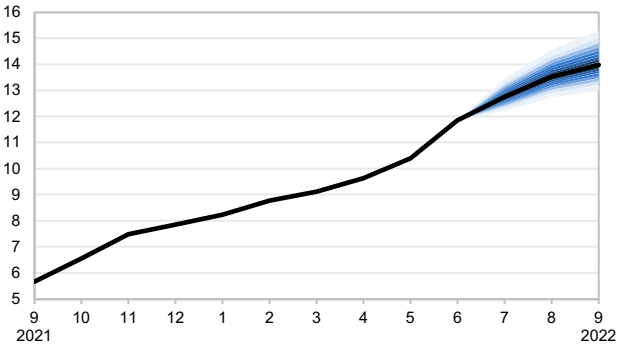
The rise in administered prices – of gas and electricity – will also support higher inflation.

In the short term, the risks to the inflation projection are mostly associated with unprocessed food prices due to uncertainties surrounding the effects of the drought and the new agricultural season.

Medium-term inflation projection

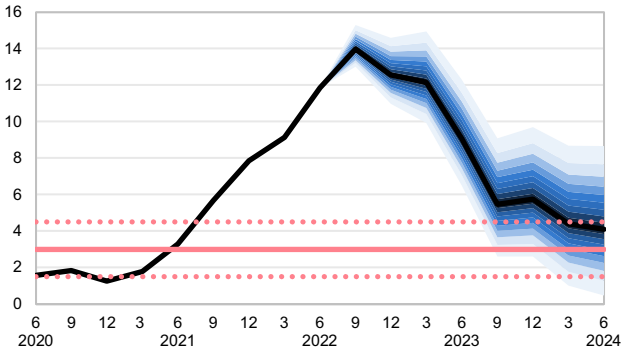
In the period since our May projection, two main factors were at play, which have already largely reflected on consumer prices. The first is the further heightening of geopolitical tensions due to the Ukraine conflict, while the second refers to the drought's impact on this year's agricultural production, which will most probably fall short of the average, whereas in May we assumed the

Chart V.0.21 **Short-term inflation projection**
(y-o-y rates, in %)



Source: NBS.

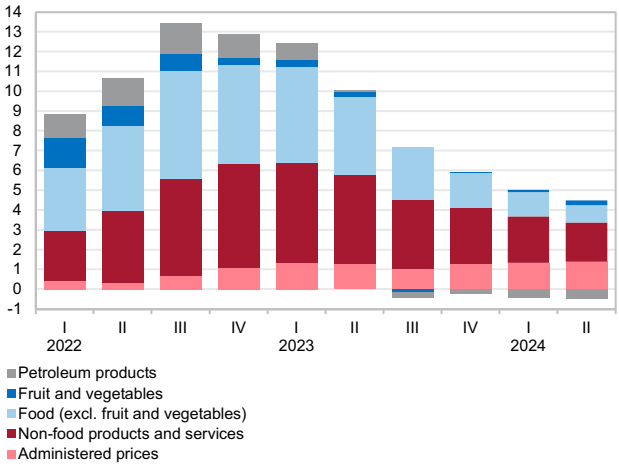
Chart V.0.22 **Inflation projection**
(y-o-y rates, in %)



Source: NBS.

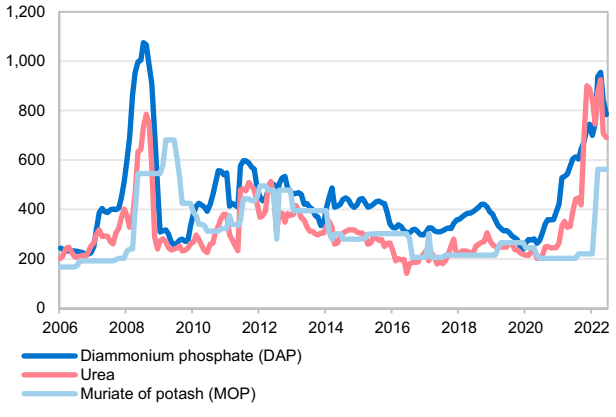
The fan chart depicts the probability of various inflation outcomes in the next eight quarters. The central projection is within the darkest central band and the probability that inflation would lie in it is 10%. Each following shade includes 10% probability, which means that outturns of inflation somewhere 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.0.23 **Contributions to y-o-y inflation by component**
(average y-o-y rates, in pp)



Source: NBS.

Chart V.0.24 **Global prices of agricultural fertilisers**
(USD/mt)



Sources: Bloomberg and World Bank.

Chart V.0.25 **Global supply-chain pressures**
(index, 2022)

Source: Federal Reserve Bank of New York.

agricultural season to equal the multiyear average. As the risks of these factors, identified in the May projection, have materialised, inflation will be running at a higher level than projected in May throughout the inflation horizon.

Under the central August projection, we expect y-o-y inflation to peak in Q3 this year and strike a downward path thereafter. It should decline more sharply in H2 2023 and retreat within the bounds of the target tolerance band in H1 2024, i.e. towards the end of the projection horizon. Inflationary pressures will be soothed by the past monetary tightening, anticipated gradual waning of the effects of global factors underpinning energy and food price growth in the past period and, to a smaller extent, also by subdued external demand. In the short term, they will also be alleviated by the Government's economic measures to contain food and energy prices at home.

In view of outturns earlier in the year, we no longer expect **fruit and vegetable prices** to be the key disinflationary component of projected inflation.[18] Due to the drought, instead of decreasing substantially, fruit and vegetable prices went slightly up, the same as in the corresponding period last year. For this reason, our new projection assumes a mild increase in fruit and vegetable prices in Q3, which is contrary to movements usual for the season and to our previous estimates (when we anticipated a decline and, from Q4, a negative contribution to y-o-y inflation). We expect their contribution to y-o-y inflation to subside thereafter and become almost neutral. We also bore in mind that persistently mounting cost-push pressures fuelled by elevated prices of energy and, by extension, mineral fertilisers additionally heighten the costs of agricultural production. We expect fruit and vegetable prices to go down with the onset of a new agricultural season next year, which we assume will be average.

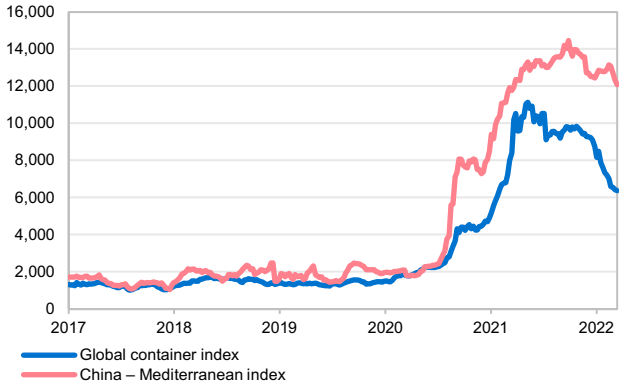
Similarly as in our previous projection, we expect the contribution of **petroleum product prices** to remain relatively high in the short term, becoming negligible after Q1 2023 if the global oil price moves in line with the futures.

Rising costs in food production, resulting mostly from elevated global prices of oil and primary agricultural commodities (corn, wheat, soybean), pushed up **food inflation** at home, though this was somewhat moderated by the Government's decision to cap the prices of basic foodstuffs. We estimate that in Q2 the indicator of cost-

[18] For more details, see: Text box 4, p. 65.

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) – reached its highest level since 2012, which indicates that cost-push pressures are still spilling over to prices of food products. Still, as notable departure of this indicator from its neutral level customarily signals its decline in the future, we expect the impact of most cost-push pressures to subside with time, which should also be supported by the anticipated fall in the prices of primary agricultural commodities. This should soon set food inflation on a downward path, supported also by the anticipated fall in imported inflation and the calming of inflation expectations. In part, prices of food products will also hinge on how long the cap on prices of basic foodstuffs remains in place.

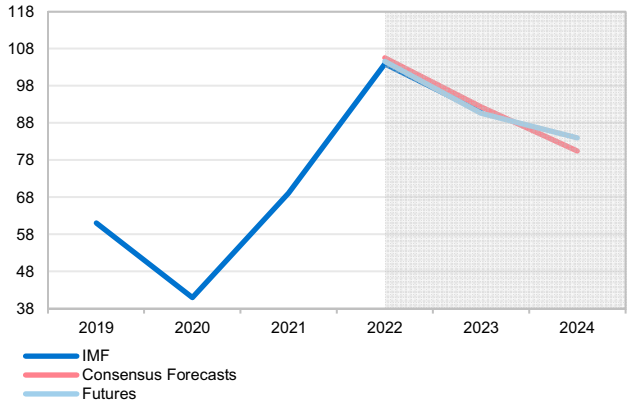
Chart V.0.26 **Container transport price**
(USD)



Source: Freightos.

Non-food inflation is expected to display a similar trend, though this component's 2022 maximum will be lower than that of food inflation. 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, in the short term we expect the rise in non-food inflation, which was more pronounced in the last two quarters, to continue in the coming months amid higher imported inflation and raw material shortages, as well as elevated energy and transport prices. With the gradual decline in imported inflation, the initiated reduction in international transport costs, moderation of global value chain disruptions and subdued aggregate demand, we expect pressures on domestic prices of non-food products to abate and the contribution of this group to headline inflation to subside from end-2022.

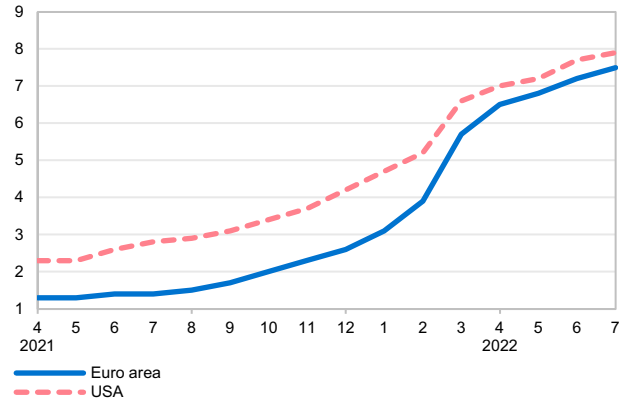
Chart V.0.27 **Global oil price projections**
(USD/bbl)



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

The contribution of **administered prices** will edge up gradually, consistent with our assumption of a rise in these prices by 6.2% this and 7% next year. The contribution of administered prices to headline y-o-y inflation will, therefore, be 1.1 pp late this and 1.3 pp late next year.

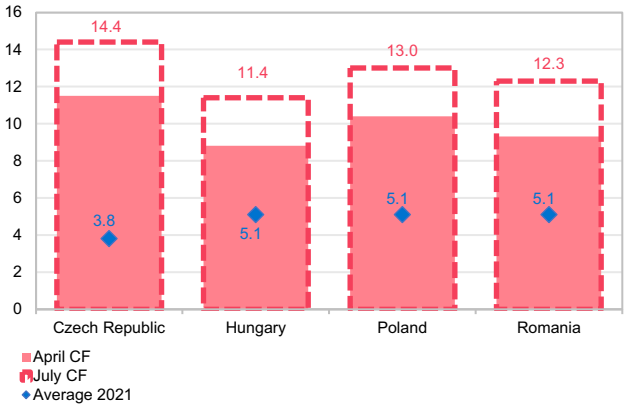
Chart V.0.28 **Revisions of inflation forecasts for 2022 in the past year**
(y-o-y growth, in %)



Source: Consensus Forecasts.

In terms of factors, **prices from the international environment remain the key generator of inflationary pressures in Serbia**. Global inflation has risen still further, despite global growth slackening, under the impact of rising food and energy prices and supply and demand mismatches. This was compounded by shortages of materials, equipment and labour, and the persisting relatively high transportation costs. Global **food prices** are much higher than in 2021, though they have levelled

Chart V.0.29 **Revision of inflation forecasts for 2022**
(in %)



Source: Consensus Forecasts.

off over the past few months. This was propped up by the improved harvest outlooks in North and South America, and the easing of some protectionist measures (in India and Indonesia) introduced in the wake of the Ukraine conflict. Also, the current arrangements ought to ensure the export of Ukrainian wheat and help a gradual normalisation of these prices. Hence, after rising by close to 14% this year, **prices of agricultural commodities** ought to decline by around 8% next year, gradually lowering the current, extremely high costs of food production. Expectations are similar for the **global oil price** which, after rising robustly until mid-June, levelled off in response to global growth slowdown and the powerful hike in interest rates, especially by the Fed. Going forward, the global oil price is expected to drift down moderately, greatly contributing to a fall in Serbia's y-o-y inflation. Conversely, in view of the market contracts, **global prices of natural gas** are expected to continue up, particularly during this winter, with no major decline anticipated before 2024. The situation is similar for **coal and electricity prices**.

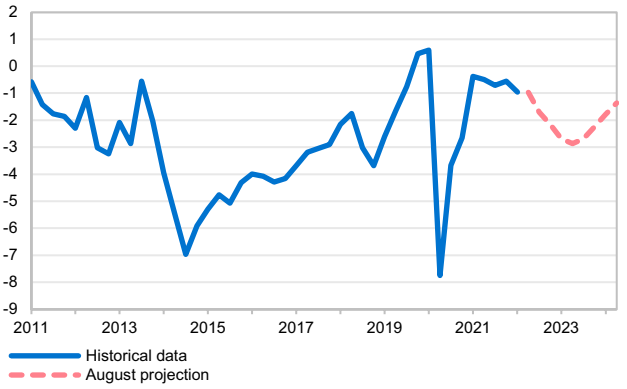
The **level of gas supply to EU countries** in 2022 and 2023 is particularly concerning. Complete discontinuation of Russian gas exports to European economies would push global inflation significantly up, through higher energy prices and production costs. Europe may also have to rationalise its energy consumption, which would produce powerful negative effects on key industry sectors, slash euro area growth in 2022 and 2023, and fuel inflation further, producing negative cross-border spillovers.

Inflation is still running at decades-high levels in leading global economies and countries of the region. Since 2021, global consumer prices have constantly been rising faster than anticipated by central banks and relevant international institutions. Higher than anticipated inflation, particularly in the US and leading European economies, resulted in **more stringent global financial conditions**. The synchronised monetary policy tightening in most countries is expected to produce effects and slow down inflation in the coming period. This will help relieve pressures from imported inflation on Serbian prices during the projection horizon, which is an important factor behind the inflation's projected return to the target.

We do not expect any major inflationary pressures from **aggregate demand**. Namely, global growth prospects are gloomier than three months ago and the global

economy could soon be entering a recession, only two years after the latest downturn episode. Even if there are no further disruptions in gas supply from Russia, the euro area, our most important trade partner, will probably see a recession late in the year. The negative effects of the Ukraine conflict on leading European economies are stronger than initially expected, mostly because of higher energy prices, diminished consumer confidence and industrial output slowdown amid lingering supply bottlenecks and higher input costs. For this reason, we expect disinflationary pressures from low aggregate demand and a **deepening of the negative output gap**, which will not close even until the end of the projection horizon. This will be influenced mostly by subdued external demand. Though income disposable for consumption will somewhat diminish due to the ECB's and NBS's moderate monetary policy tightening, this will partly be offset by the announced increase in public sector wages and pensions, and continued positive trends in the labour market. With the anticipated rise in external demand, the above factors ought to bring about a gradual narrowing of the negative output gap from mid-2023.

Chart V.0.30 **Output gap projection***
(in % of potential output)



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

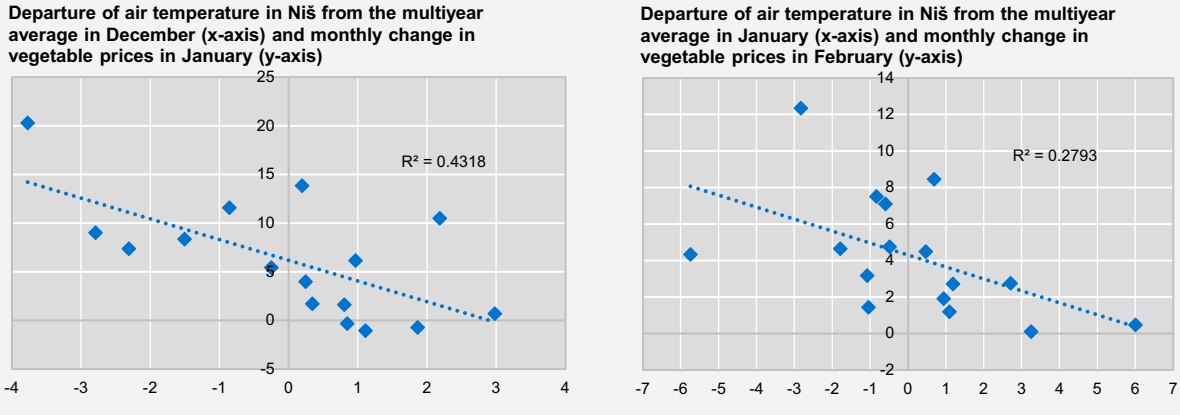
Text box 4: Impact of meteorological conditions on fruit and vegetable prices in Serbia

In our May inflation projection, we assumed that this year's agricultural season would be average and that, from May onwards, domestic prices of fruit and vegetables (aggregately) would slide from their high levels caused by the last year's drought. At the time, we assumed that, once the new agricultural season kicked in, the contribution of fruit and vegetable prices would subside from 1.5 pp in Q1 to 1 pp in Q2, and then further down to 0.2 pp in Q3, turning negative in Q4. However, air temperatures in late June and July were above the multiyear average (the average temperature in July this year was 31.8°C in Novi Sad and 32.3°C in Niš, compared to their 15-year averages of 29.6°C and 31°C, respectively) and the amount of precipitation was lower, heralding another drought year. In all likelihood, this will not only affect vegetable and fruit yields, but also the yields of autumn crops (corn and industrial plants). As the new heat wave swept across other European countries as well, the region could see a poorer than average agricultural season too.

Our earlier analyses have shown that fruit and vegetable yields, which greatly depend on weather conditions[1], are the dominant factor behind oscillations in fruit and vegetable prices in Serbia and departures from seasonal trends. We have, therefore, analysed the impact of air temperature on fruit and vegetable prices and looked at their movements in the past 15 years. Specifically, we examined deviations of the average temperature in a given month from the multiyear average for that month in the Novi Sad and Niš area (as the largest fruit and vegetable producers in Serbia) and assessed their impact on monthly changes in fruit and vegetable prices with a one-month time lag. The results of the analysis confirmed a statistically significant negative correlation between average temperatures in December and January and fruit and vegetable prices in January and February, respectively. This means that an air temperature above the multiyear average in December or January is conducive to greenhouse production and vegetable prices in the next month decline, as do fruit prices. A negative and statistically important correlation is also perceived between temperatures in April and fruit prices in May, as frost in April has been seen to significantly lower fruit yields and push fruit prices up (e.g. strawberries, cherries). Conversely, the correlation between average temperatures in June and July and fruit and vegetable prices in July and August is positive and statistically significant (correlation degree above 0.5%), because above-average temperatures mostly result in drought, due to which prices of vegetables (primarily peppers, tomatoes and cabbage) and fruit decline less than usual for the season or not at all. This greatly explains why the seasonal decline in vegetable prices which began in May failed to continue in June this year. As weather conditions in July were unfavourable, the anticipated seasonal decline in fruit and vegetable prices may not occur in August and September.

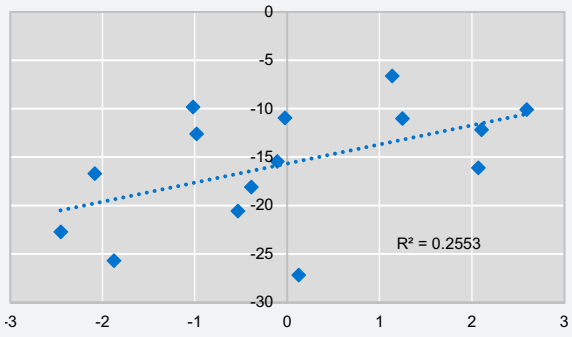
In the past ten years, vegetable prices subsided by around 15% on average in Q3, while in drought years such as 2021 they did not decline at all (quite to the contrary, they gained around 4%) or they declined much less than is usual for the

Chart O.4.1 **Assessed correlation between departures from average temperatures in Novi Sad and Niš in the 2007–2021 period (until June 2022) and monthly changes in fruit and vegetable prices in the domestic market**

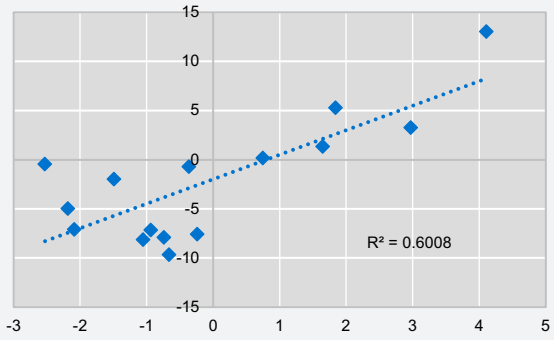


[1] See: Inflation Report – May 2021, Text box 1, p. 13.

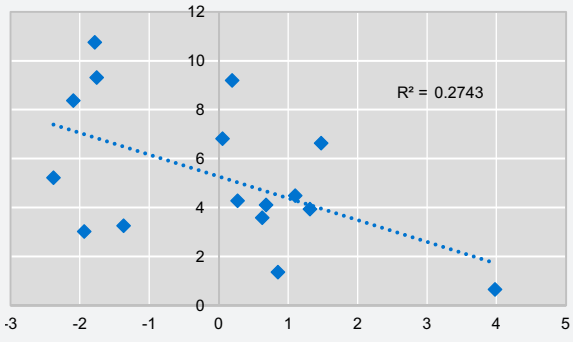
Departure of air temperature in Novi Sad from the multiyear average in June (x-axis) and monthly change in vegetable prices in July (y-axis)



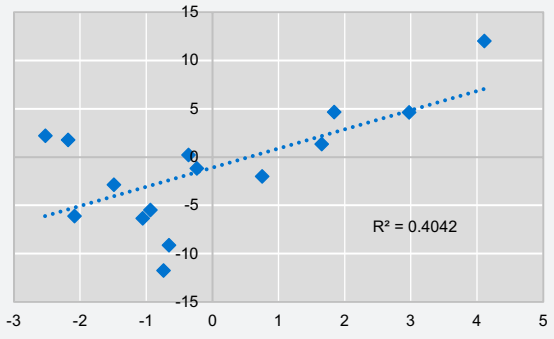
Departure of air temperature in Niš from the multiyear average in July (x-axis) and monthly change in vegetable prices in August (y-axis)



Departure of air temperature in Novi Sad from the multiyear average in April (x-axis) and monthly change in fresh fruit prices in May (y-axis)



Departure of air temperature in Niš from the multiyear average in July (x-axis) and monthly change in fresh fruit prices in August (y-axis)



Sources: European Climate Assessment & Dataset and SORS, NBS calculation.

season (such as in 2012, when they fell by only 1.2%). Fruit prices gained as much as 10% in Q3 2021 and roughly 12% in 2012, while, according to the ten-year average, a fall of around 2% is usual for Q3.

Given the meteorological conditions prevailing in the year so far, we can almost certainly say that this year's agricultural season will not be average, but below average. For this reason, our new projection assumes an over 3% increase in fruit and vegetable prices aggregately in Q3, which is the opposite of what we assumed in May – a decline by around 11%. We also have in mind that the costs of agricultural production have been further fuelled by persistently mounting cost-push pressures generated by elevated prices of energy and, by extension, mineral fertilisers. To a large extent, this explains why our new inflation projection is higher than we assumed in May.

Since it is hard to forecast meteorological conditions in the coming period with precision or to estimate the extent to which this year's season will fall short of the average, as output data are only available at annual level and that late in the year, it will be difficult to project fruit and vegetable prices in the coming period as well. Departures from our assumptions are possible, which is why the character of the agricultural season continues to be one of the most significant risks to our inflation and GDP projections.

Risks to the GDP and inflation projection

Geopolitical developments relating to the Ukraine conflict continue to be the main source of uncertainty surrounding our new macroeconomic projections as they greatly determine the intensity and duration of cost-push pressures from the international environment, including shortages of some production inputs and the speed of global economic growth. The achievement of our projections will also depend on the pace of normalisation of monetary policies of leading central banks – the Fed and the ECB, which, despite a poorer global growth outlook, is currently faster than anticipated in response to intensified inflationary pressures. When it comes to factors from the domestic environment, the risks to the projection are mostly associated with the outcome of this year's agricultural season, i.e. the extent to which it will fall short of the average. Another risk are developments in the energy sector – the volume of coal and electricity production in the domestic market, the prices at which we will import the portion of gas exceeding the level defined in the agreement with Russia, as well as any measures the Government might take to ensure energy security at home.

Geopolitical developments have impacted global **energy** markets in particular. Energy prices will be under the sway of the Western sanctions against Russia and their possible expansion, disagreement over how to pay for energy products (in roubles or dollars), countries' position towards the import of energy products from Russia, transit options, etc. The risks are somewhat smaller in the case of oil than in the case of gas and electricity, as there are alternative supply sources and it is possible to intervene by releasing strategic reserves. When it comes to gas, however, European countries do not have many substitution options, at least not in the short run, and the price of this energy product is subject to greater risk. It should also be noted that European gas inventories had dropped below their several years' average even before the Ukraine crisis which, coupled with a powerful surge in demand guided by record-high prices of emission permits, generated the upward trend in the price of this energy product even before the Ukraine conflict. Assuming no further heightening of geopolitical tensions and no cut-offs in Russian gas supply to Europe, we judge that **the risks to the GDP projection on account of global energy prices are skewed to the downside and to the inflation projection – to the upside**.

Downside risks to **global economic growth** intensified further since the previous *Report*, primarily reflecting geopolitical uncertainty. Any further escalation of the Ukraine conflict and new sanctions on Russia could additionally dent export demand for our products and, by

extension, slacken growth in manufacturing and exports. Moreover, the zero-Covid policy in China could compound the situation with global value chains, while the emergence of new virus strains globally would slash demand for services further, though these effects would be far smaller than in the previous waves of the pandemic. With this in mind, we judge the **risks to the inflation and GDP projection in respect of global economic growth and weaker external demand to be tilted to the downside**.

Subdued global growth could drag primary commodity prices down, as they greatly depend on the stage of the global economic cycle. On the other hand, as Russia and Ukraine are large producers and exporters of primary agricultural commodities, metals and minerals, further deepening of geopolitical tensions could slash their global supply. Russia is also the dominant producer of

Table V.0.4 **Key risks to the GDP and inflation projection**

Risk	Possible channels of influence	Estimate of the risk effect on GDP relative to the baseline scenario	Estimate of the risk effect on inflation relative to the baseline scenario
Geopolitical tensions and events in Ukraine	– Further conflict escalation and stricter sanctions could weigh on external demand for our products; – Heightening of geopolitical tensions would inflate production costs amid continued rise in the prices of energy and primary commodities and deepening of global supply chain disruptions.	↓	↑
Global economic growth outlook, particularly euro area growth prospects	– Slower economic growth globally, and particularly in the euro area, would result in subdued external demand for our exports and fewer demand-side pressures on inflation.	↓	↓
International oil, gas and electricity prices (Serbia is a net energy importer)	Rising global prices of energy have inflated production costs, trimming funds available for investment and potentially producing second-round effects on inflation, which may partly be offset by subdued demand for these products.	↓	↑
International prices of primary agricultural commodities and metals (Serbia is a net exporter)	The rise in the prices of primary agricultural commodities and metals produces inflationary effects. Though this inflates production costs and decreases income available for investment, the effects on GDP would most probably be neutralised by higher exports, as Serbia is a net exporter of primary agricultural commodities and metals.	↑	↑
Growth in global inflation, particularly in euro area inflation, and monetary policies of leading central banks	– Higher than anticipated global inflation, particularly euro area inflation, leads to elevated imported inflation, raising production costs; – Greater and/or faster than anticipated monetary tightening by leading central banks leads to higher risk aversion of investors and reduced capital flows to emerging economies.	↓	↑
Agricultural season	A below-average agricultural season leads to reduced supply of agricultural products and may produce inflationary pressures.	↓	↑
Disposable income	Lower disposable income resulting from elevated production costs and slower than anticipated rise in employment and wages would lead to a slackening of domestic demand growth and more disinflationary pressures.	↓	↓
Administered prices, Government measures to cap food and energy prices	Higher growth in administered prices leads to higher inflation and less disposable income for consumption and investment.	↓	↑

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

mineral fertiliser components, the prices of which greatly affect the costs of agricultural production worldwide, Serbia included. Moreover, the heat waves which affected many countries across Europe could lead to a poorer than average agricultural season. For this reason, we judge the **risks of departure of global prices of primary commodities to be very high and, in the case of both inflation and GDP projection, probably tilted to the upside**. When it comes to the impact on GDP, it should be noted that elevated global prices of primary commodities have pushed up production costs and lowered income disposable for investment, while at the same time contributing to stronger export of agricultural commodities and metals, through in case of agricultural commodities there is also a supply-side risk as the value of exports will hinge on the outcome of the agricultural season.

Since global value chain disruptions and the energy crisis could be extended, **there is a risk of more durable inflationary pressures in the euro area, leading to a further rise in production costs in Serbia, lower economic growth and higher inflation**. Robust inflation growth in the most advanced global economies in the prior period makes it increasingly likely that **leading central banks will tighten their monetary policies more than the markets expect**. If monetary policies of leading central banks are tightened more than anticipated, global financial conditions would become more stringent, reducing capital inflows to emerging economies and generating depreciation pressures on this account. In that case, the higher cost of borrowing in a foreign currency would weigh on 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 more considerably, leading central banks could limit their monetary tightening or discontinue it altogether, which would result in more favourable than expected global financing conditions.

When it comes to domestic factors, the **character of the agricultural season** is the greatest risk to the inflation projection. Meteorological conditions (data on average temperatures and precipitation) point to another drought year, but the extent to which this agricultural season is poorer than average is not certain. In our new projection, we assumed that agricultural production will be similar as last year, when it declined by around 5%. There are risks, however, that the effects of this year's drought could be even stronger and we **judge the risks to the inflation**

projection on this account to be tilted to the upside and to the GDP projection – to the downside.

The risks to the inflation projection are also associated with the **pace of domestic demand growth**. Lower proceeds from subdued export demand could lead to less disposable income and slower than anticipated employment and wage growth, with negative implications for domestic demand. Possible major hikes in the prices of food and energy in the global market would work in the same direction. With this in mind, **we judge the risks to the GDP and inflation projection to be slightly skewed to the downside**.

Developments in the energy sector are another risk to the projection. Because of problems in the electric energy system during the previous winter, it is uncertain whether it will be possible to raise the volume of coal and electricity production at home in the next season. In addition, if there is a substantial increase in the prices at which the portion of gas exceeding the level defined in the agreement with Russia is imported, production costs of energy companies would go notably up, calling for **higher than projected hikes in gas and electricity prices for households, and electricity prices for corporates**, in order to ensure energy security in the domestic market. This is certainly an **upside risk to the inflation projection and a downside risk to economic growth**.

Prices of other products capped by the Government in the prior period may also depart from the assumptions used in the projection. For instance, if economic growth slackens more notably under the impact of global factors and fiscal indicators deteriorate, or global oil prices decline more than anticipated, **the Government may decide to abolish the reduction of fuel excises at some point**, triggering fuel price growth. The Government may also decide to extend the period in which basic foodstuff prices are capped. We do not expect that the extended caps on staple foodstuff prices would have a major impact on producers, as they refer to a small number of products.

As the key risks to inflation and other economic developments continue to come from the international environment, the NBS will continue to monitor and analyse trends in international commodity and financial markets and to evaluate their impact on our economy. Depending on geopolitical developments and the movement in key inflation factors from the domestic and international environment in the coming period, the NBS will estimate whether there is a need to tighten monetary conditions further. Going forward, the NBS's monetary policy priority will remain to deliver price and financial

stability in the medium term, while supporting further economic growth and development, a further rise in employment and a favourable investment environment. The NBS is ready to respond promptly using all available monetary policy instruments in case of materialisation of any of the risks that would keep inflation above the upper bound of the target tolerance band until the end of the projection horizon.

Text box 5: Alternative scenarios of inflation, GDP and CAD projections

Uncertainty as to the materialisation of central projections of inflation, GDP and current account deficit share in GDP remains high, stemming primarily from the factors in the international environment, as reflected in the fan charts showing the distribution of probability of inflation and GDP projections. Risks to the projection still largely relate to the geopolitical tensions and situation in Ukraine, and their impact on prices and availability of energy in the global market, as well as of other primary commodities and industry inputs, given that both Russia and Ukraine are important world exporters of cereals and Russia also of energy, metals and minerals. Further developments in Ukraine will largely determine the duration and intensity of halts in global supply chains. Due to the high dependence on energy imports from Russia, in case of materialisation of these risks, i.e. continued strong upswing in energy and primary commodity prices, the hardest hit would be the euro area and other EU countries, which are precisely the countries with which Serbia has the strongest trade links. There is also a pronounced risk that global growth could underperform expectations, with recession pressures building up primarily in the USA and the euro area. These pressures would reflect a higher than expected global inflation denting the income disposable for investment and consumption, a faster than anticipated monetary policy tightening of leading central banks and globally elevated uncertainty, all of which having a negative bearing on investment and consumer confidence. Another risk to global growth is the possible spreading of new coronavirus strains, especially bearing in mind that China's industrial sector this year was strongly affected by containment measures, which resulted in shortages of some raw materials and production inputs globally. Turning back home, the key risk to the materialisation of macroeconomic projections is the outcome of the agricultural season which has been put in question by the strong heat wave in the second half of July. In the baseline scenario we assumed that this year's season will resemble the last year's (below-average), but there are risks that the yields of primary agricultural commodities in food production (corn, soybean, sunflower and other industrial plants) might turn out even lower than assumed, which would also reflect on higher processed food prices. Also, unfavourable weather conditions triggered a seasonally uncommon hike in vegetable prices in June, pushing inflation above the expected level. The second domestic risk is the underperforming coal production, entailing higher energy imports.

The assumptions concerning the prices and availability of energy which we used in our central projection of macroeconomic indicators are based on the assumptions used in the ECB projection from June, i.e. that the Ukraine conflict would keep the same intensity during the year, with no further tightening of geopolitical tensions in the future period and no halts in Russian energy supply to Europe, while the ongoing sanctions against Russia are expected to remain in place until the end of the projection horizon, i.e. over the next two years. In such a case, according to the ECB's estimate, medium-term

Table O.5.1 **External assumptions of baseline and alternative scenarios**

		Baseline scenario	Scenario with a cutoff gas supply to euro area in Q3	Scenario with lower global growth
Euro area GDP growth rate (in %)	2022	2.7	1.3	1.8
	2023	1.4	-1.7	1.1
Average euro area inflation (in %)	2022	7.7	8.6	6.8
	2023	4.0	6.7	3.0
Global oil price (average, USD/barrel)	2022	105	127	92
	2023	91	135	78
Global oil price (year end, USD/barrel)	2022	97	146	74
	2023	87	128	80
Global gas price (average, USD/cubic metre)	2022	1,280	1,720	1,100
	2023	1,450	2,710	1,010
Global gas price (year end, USD/cubic metre)	2022	2,000	3,990	1,330
	2023	1,340	2,280	990
Global primary agricultural commodity prices (y-o-y growth in Q4, in %)	2022	13.7	56.6	3.9
	2023	-7.8	-18.2	4.2
3M EURIBOR (year end)	2022	1.1	1.3	1.1
	2023	1.2	1.5	1.2

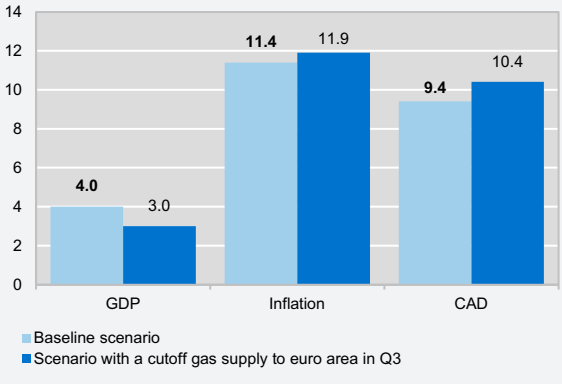
Sources: Consensus Forecasts, ECB, Bloomberg.

economic growth outlook for the euro area remains positive, though somewhat less than expected three months ago, while halts in global supply chains should be gradually fixed until they are totally removed by end-2023. In this case, over the projection horizon, euro area inflation would remain at a higher level than in previous years, due to increased production costs, euro's depreciation against the dollar and the tightening of labour market conditions on account of wage growth and lower unemployment rate. Still, euro area inflation would gradually slow down thereafter, on the back of relaxation of high prices of energy and food and halts in global supply chains, with the effects of the ECB's monetary normalisation and lower than expected economic growth. Bearing in mind the risks stemming from the current geopolitical tensions in terms of the prices and availability of energy and other primary commodities, as well as from the possibly less favourable global growth outlook, this text box presents two alternative scenarios for the projection taking into account the materialisation of these risks. Similar alternative scenarios of macroeconomic projections were published by the IMF in July WEO Update.

Alternative scenario – cutoff gas supply from Russia to the euro area in Q3 (higher prices and reduced availability of energy in the global market)

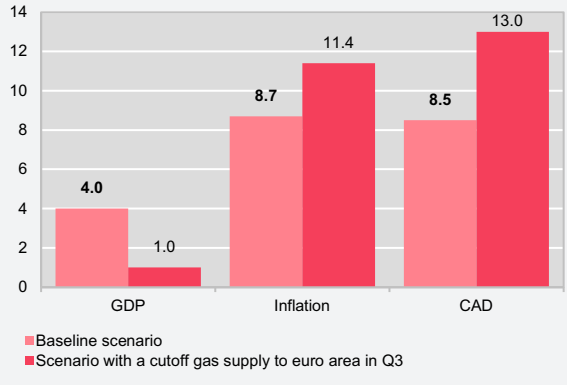
In this scenario we started from the assumption which the ECB used in its alternative scenario in June projections. The scenario assumptions were that Russian gas supply to the euro area would be cut off as of Q3. Due to considerably higher gas and oil prices, uncertainty in the international financial market would be significantly elevated, the demand reduced and financing conditions more unfavourable, which would certainly entail lower economic growth in the euro area compared to the baseline scenario, amounting to 1.3% in 2022 and -1.7% in 2023. A rebound and faster growth than in the baseline would ensue in 2024. Due to the carry-over effect, economic growth in 2022 would remain positive, though with negative quarterly growth rates in H2 and probably also in early 2023, as the production would contract, primarily in energy-intensive sectors. In 2022 and 2023, euro area inflation would overshoot the baseline figure, averaging 8.6% and 6.6%, respectively.

Chart O.5.1 **Comparison of baseline scenario and scenario with a cutoff gas supply to euro area in Q3 for 2022**
(in %)



Source: NBS.

Chart O.5.2 **Comparison of baseline scenario and scenario with a cutoff gas supply to euro area in Q3 for 2023**
(in %)



Source: NBS.

Specifically, this scenario rests on the assumption that natural gas price for Europe until Q4 this year would be twice higher than in the baseline scenario (whose assumption relies on the latest available futures for end-July), due to the inability to ensure, in the short-term, an alternative to gas imported from Russia. On these grounds, the global oil price at end-2022 would also run higher than in the baseline scenario, by over 50%, though no major oil supply problems are anticipated as in the case of gas. Under this scenario, prices would probably calm down in the medium term and the energy market would regain its equilibrium, though at the end of the projection horizon the prices would remain higher than in the baseline scenario. The increase in fuel and mineral fertiliser prices would put an upward pressure on the prices of primary agricultural commodities, which could peak at around 35% above the baseline scenario level.

The realisation of all assumptions set out above would result in more unfavourable macroeconomic developments in Serbia, with higher inflation and current account deficit levels and a lower GDP growth rate than envisaged by the baseline scenario.

A further growth in global oil prices would have direct effects on **domestic inflation** (through higher prices of petroleum products in the domestic market), as well as indirect effects (through elevated cost-push pressures, i.e. higher imported inflation), due to the additional rise in global prices of energy and primary agricultural commodities. This would also trigger a higher euro area inflation, which could in part be offset by the effects of lower aggregate demand in the domestic and international markets. At the same time, the rise in energy prices and heightened uncertainty in the international financial market would result in higher energy imports in value terms, rising country risk premium and lower capital inflow to Serbia, primarily in the form of portfolio investments, which would add to depreciation pressures. In that case, inflation would decline to a single-digit level only in Q3 2023, but would not return within the bounds of the target band by the end of the projection horizon.

Due to the higher costs of energy purchase and consequently reduced disposable income for investment and consumption, lower external demand (above all, from the euro area) and generally lower consumer and investment confidence, contractedapital inflow and less favourable financing conditions, **Serbia's economic growth** would turn out lower in this scenario primarily in 2023. In terms of growth composition, the contribution of private consumption and investment would be lower than in the baseline scenario, while the contribution of net exports would be more negative against the backdrop of dented external demand. On the other hand, due to the heightened global uncertainty and lower external demand, the contribution of inventories would probably go up, at least in the short term, as would that of government consumption, driven by the need to support the most vulnerable population categories, probably even at the expense of public investments. The estimated GDP growth in that case would be by around 1 pp lower than in the baseline scenario (with central projection equalling 3%), while due to the lower carry-over effect from Q4 2022, the next year's growth would be by as much as 3 pp lower compared to the baseline scenario (featuring central projection of 1%). This is still a somewhat smaller adjustment to economic growth compared to the adjustment for the euro area owing to the fact that energy supply to the domestic market would not be put into question thanks to the measures undertaken to ensure sufficient gas reserves. Also, a new agreement was struck with Russia which would ensure the import of a greater share of gas in winter months at terms more favourable than market ones.

The **current account deficit** would be higher than in the baseline scenario by around 1 pp in 2022 and by over 4 pp in 2023, reflecting also less favourable terms of trade due to a significant hike in energy prices and contraction in external demand. Remittances inflow would probably turn out lower than in the baseline scenario because lower economic growth would also reflect on the euro area labour market, wherefrom a significant portion of remittances to Serbia originates. Greater expenses arising from income would reflect less favourable financing conditions in the international financial market and stronger monetary policy tightening by the ECB and the FED.

Alternative scenario assuming a weaker global growth outlook, but without a cutoff gas supply to the euro area

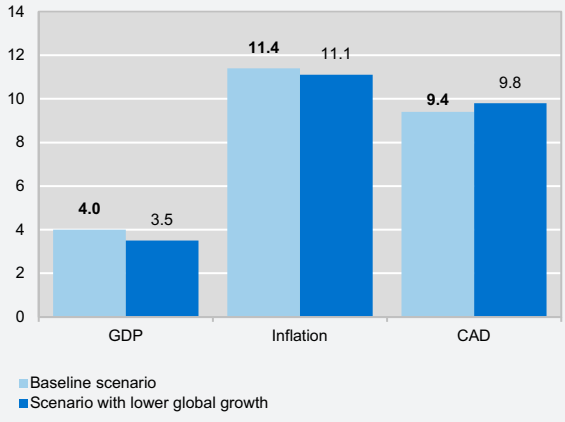
In the second scenario we assumed that the euro area and USA would face deeper recession in H2 2022 than envisaged by the baseline scenario and that the global economic growth would be weaker. The materialisation of risks in this scenario would entail weaker growth and a higher current account deficit in Serbia compared to the baseline, while inflation would run lower.

In this scenario we assumed that euro area economic growth would amount to 1.8% in 2022 and 1.1% in 2023, which would also weigh down on economic growth in Serbia through the effect of lower external demand. In that case, the central projection of **Serbia's GDP growth** rate would be 3.5% this year and 2% next year. A lower growth outcome than in the baseline scenario would stem largely from a more negative contribution of net exports and to a lesser extent also of lower contribution of personal consumption and investment amid lower capital inflow to Serbia.

A weaker global growth outlook would lead to a sharper fall in the prices of oil and other primary commodities in the period ahead compared to what is expected under the baseline scenario, which would ease cost-push pressures and result in faster than expected slowdown in **imported and domestic inflation**, while an additional contribution to lower inflation would stem from lower aggregate demand. Assuming that global oil prices at end-2022 are lower than in the baseline scenario by over 50% and the prices of primary agricultural commodities by close to 15%, inflation would be lower than in the baseline scenario by around 0.3 pp on average this year and by 0.5 pp next year.

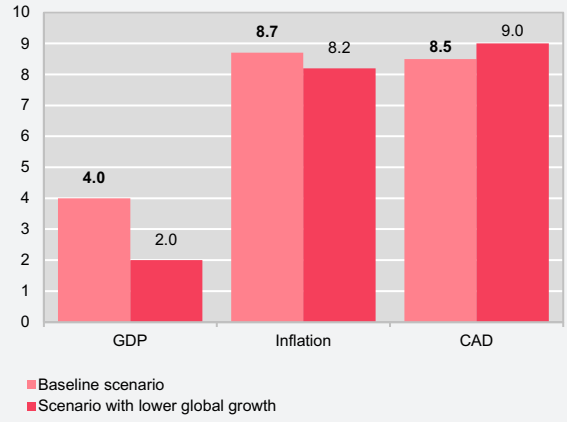
When it comes to the current account deficit, reduced external demand on the one hand would entail lower exports, but this would be partly compensated for by the effects of more favourable terms of trade which, owing to the assumed fall in energy prices, would work towards a lower current account deficit.

Chart O.5.3 **Comparison of baseline scenario and scenario with lower global growth for 2022**
(in %)



Source: NBS.

Chart O.5.4 **Comparison of baseline scenario and scenario with lower global growth for 2023**
(in %)



Source: NBS.

Let us conclude. Further geopolitical developments and the strength of global cost-push pressures will largely determine the materialisation of our macroeconomic projections. As these are the factors beyond the reach of the NBS's measures, risks to the macroeconomic projections are higher than in the normal circumstances.

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	Q1 2022	Q2 2022
EXTERNAL LIQUIDITY INDICATORS (in %)																			
FX reserves/imports 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	4.7	4.5
FX reserves/short-term debt	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	230.5	244.4	220.5	
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	30.9	26.1	26.1
Debt repayment/GDP	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	8.8	9.3	11.8
Debt repayment/exports of goods and services	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	16.4	14.9	19.1
EXTERNAL SOLVENCY INDICATORS (in %)																			
External debt/GDP	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	68.5	67.5	
Short-term debt/GDP	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	12.6	11.8	
External debt/exports of goods and services	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	127.9	121.2	
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	131.3	136.7
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	164.4	167.3
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	115.6	138.9	137.7
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	53,317	13,092	14,901
External debt	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	36,536	37,007	
External debt servicing	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	4,694	1,223	
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	14,296	14,776
Short-term debt[2]	951	968	1,044	1,832	1,852	1,758	612	455	196	99	303	672	844	1,401	1,925	1,585	1,762	1,877	
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	-1,358	-1,318
CREDIT RATING (change of rating and outlook)	2005 May/July	2006 Feb	2007 July	2008 March/ Dec	2009 Dec	2010 Nov	2011 March	2012 Aug	2013 July	2014 Jan	2015 Dec	2016 Jan/March/ June/Dec	2017 March/Dec	2018 Dec	2019 Sept/Dec	2020 May	2021 March/Dec	2022 June	
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	BB+ /stable	
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, Q1 2022 and Q2 2022 is NBS estimate.

[2] At original maturity.

Notes:

1. The Statistical Office revised GDP data for the period 2005-2017, which led to a change in the share of macroeconomic indicators in GDP.
2. Data are subject to corrections in line with the official data sources.
3. Starting from 2007 data on exports and imports of goods and services are shown in accordance with BPM6. Data for 2005 and 2006 are shown according to 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	Q1 2022	Q2 2022
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	7.4	4.4	4.0
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	9.1	11.9
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	14,296	14,776
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	8,189	9,192
- 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	31.7	34.3
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	9,991	11,325
- 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	48.0	39.0
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	-1,358	-1,318
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	-10.4	-8.8
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	11.0	10.6	
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	419.8	466.0	510.9	560.2	612.7	625.5
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	-4.7	2.1
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	-4.1	-4.5	3.0
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	56.5	51.9	53.2
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	104.94	110.35
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	105.50	112.26
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	117.62	117.56
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	117.75	117.41
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	53,317	13,092	14,901

[1] At constant prices of previous year. Data for 2021and Q1 2022 is SORS preliminary estimate, data for Q2 2022 is SORS flash estimate.

[2] Retail prices until 2006.

[3] Starting from 2007 data on balance of payments (current account, exports and imports of goods and services) are shown in accordance with BPM6. Data for 2005 and 2006 are shown according to the previous methodology. Due to the break in the series for 2007, exports and imports growth rates are not shown. Starting 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. Data for 2005 and 2006 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, Q1 2022 and Q2 2022 is NBS estimate.

[6] Data are revised according to the new methodology of Labour Force Survey from 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 average of the period RSD/EUR exchange rate. Data for Q2 2022 is average of two months.

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

Notes:

1. The Statistical Office revised GDP data for the period 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

Table in text box

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	1.00	0
7 April	1.50	+50
12 May	2.00	+50
9 June	2.50	+50
7 July	2.75	+25
11 August	3.00	+25
8 September		
11 October		
10 November		
8 December		

Press releases from NBS Executive Board meetings

Press release from Executive Board meeting held on 9 June 2022

At its meeting today, the NBS Executive Board voted to raise the key policy rate by 50 bp to 2.5%.

As the NBS interest corridor remained unchanged (±100 bp, i.e. ±1 pp relative to the key policy rate), the credit facility rate equals 3.5% and the deposit facility rate 1.5%.

In making the decision on further tightening of monetary conditions, the Executive Board took into account the continuation of the Ukraine conflict, which resulted in deepening of the energy crisis globally, a further spike in the prices of primary agricultural commodities and industrial raw materials, and the continued aggravated functioning of international supply chains. Amid the build-up of inflationary pressures globally, the Executive Board assessed it was necessary to further tighten the monetary conditions at home, in order to limit the second-round effects on inflation expectations and preempt a further hike in domestic inflation. The NBS invests considerable effort to this end, including, among other measures, by maintaining relative stability of the dinar exchange rate against the euro.

As in most other countries, inflation in Serbia continued along the upward trajectory. It measured 9.6% y-o-y in April, with food and energy prices still accounting for around two thirds. Core inflation (headline inflation excluding the prices of food, energy, alcohol and cigarettes) went up reflecting an upturn in imported inflation. Still, measuring 5.5% in April, core inflation remains much below both the core inflation of regional peers and headline inflation at home. In addition to preserved relative stability of the exchange rate, an important factor behind lower and stable core inflation are medium-term inflation expectations of the financial sector, which continued to move within the NBS target tolerance band.

According to the May medium-term projection, inflation will hit a downward trajectory in H2 2022 and return within the target band in H2 2023. As assessed by the Executive Board, the rise in global prices of primary commodities and energy, and higher imported inflation will for some time yet be exerting inflationary pressures, whereafter they are expected to gradually dissipate. The new agricultural season should bring fruit and vegetable prices down from their currently high levels. Working towards the calming of inflationary pressures will also be the effects of past monetary policy tightening and, in the short run, the effects of the government economic measures aimed at capping the prices of basic foodstuffs and energy in the domestic market.

Geopolitical developments and the escalation of the conflict in Ukraine have considerably dimmed the global economic growth prospects, while the further build-up in inflationary pressures at international level has led to upward revisions of inflation forecasts for a large number of countries and to a tightening of their monetary policies. Thus, the FED continued the cycle of rate hikes in May (in total by 75 bp this year), to the range of 0.75–1.0%, and decided to start scaling down its balance sheet in June. It is certain that the FED will tighten monetary conditions further in the months to come. Amid stronger than anticipated inflationary pressures, the ECB decided in March to additionally trim the volume of quantitative easing in the course of Q2, only to announce in May that it might suspend net asset purchases in early Q3 and start with rate increases. Monetary tightening by leading central banks, as well as mounting global uncertainty, could dampen the risk appetite of international portfolio investors who determine the pace of capital flows to emerging markets. In addition to this, the Executive Board took into account that global primary commodity and energy prices were extremely volatile in recent months and that they are still considerably higher than at the beginning of the year and, as such, producing upward pressure on producer and import prices. Having subsided in April, the global oil price rose again following the introduction of an additional package of sanctions on Russia, which includes EU oil imports from that country.

Despite the negative effects of the Ukraine conflict on developments in the international commodity and financial markets, most indicators for the period January–April point to continued economic growth at home. According to the SORS estimate, our GDP increased by 4.4% y-o-y in Q1. On the production side, growth was led by the service sectors and industry, and on the expenditure side – by private consumption and fixed investment. The build-up of inventories also exerted a positive effect, while net exports provided a negative contribution, mainly due to the growth in energy imports. Despite a high degree of uncertainty, the NBS expects our economy to expand further in the coming period. GDP growth this year is forecast within the range of 3.5–4.5%, which is 0.5 pp lower than expected at the beginning of the year because of the unfavourable global growth outlook following the outbreak of the Ukraine conflict – most of all,

because of the expected lower growth of the euro area and countries in the region. Assuming there is no further worsening of geopolitical tensions and gas cutoffs globally, the NBS has kept the medium-term growth projection at 4–5% per year.

Depending on geopolitical developments and the movement in key inflation factors from the domestic and international environment in the coming period, the NBS will assess whether there is a need to tighten monetary conditions further or whether the effects of past tightening ensure a sustainable return of inflation within the target tolerance band over the projection horizon. Delivering price and financial stability in the medium term remains the NBS's monetary policy priority, while supporting further economic growth and development, a further rise in employment and a favourable investment environment.

The next rate-setting meeting will take place on 7 July 2022.

Press release from Executive Board meeting held on 7 July 2022

At its meeting today, the NBS Executive Board voted to raise the key policy rate by 25 bp to 2.75%. The lending facility rate now equals 3.75% and the deposit facility rate 1.75%.

Today's decision maintains continuity of the ongoing process of the tightening of monetary conditions. With a more moderate rate increase than in recent months, the NBS continues to respond to inflationary pressures, having in mind the expected effects of past monetary policy tightening and taking care of the importance of economic growth continuity. The Executive Board leaves room for a future response, as appropriate given developments in the domestic and international environment, with additional monetary policy tightening, and does not exclude the possibility of considering, in addition to raising the main interest rates as a general measure, some other, more direct measures, targeting inflationary pressures.

In making the decision on further tightening of monetary conditions, the Executive Board was guided primarily by the persistently high global cost-push pressures on account of international prices of energy, primary agricultural commodities and industrial raw materials, as well as prolonged disruptions to global supply chains, which are likely to keep global inflation on an upward path for quite some time yet. The Executive Board therefore assessed it was necessary to further tighten the monetary conditions at home by raising the key policy rate, in order to limit the second-round effects on inflation expectations and make sure that inflation in Serbia strikes a downward trajectory from August. The NBS eases the spillover of rising import prices onto domestic prices to a significant degree also by maintaining relative stability of the dinar exchange rate against the euro.

Y-o-y inflation measured 10.4% in May, with food and energy prices still accounting for around two thirds. Higher imported inflation translated into a higher core inflation (headline inflation excluding the prices of food, energy, alcohol and cigarettes) which amounted to 6.3% y-o-y in May. Still, this inflation measure, affected more by monetary policy, remains considerably below headline inflation at home, but also below core inflation of regional inflation-targeting countries. In addition to preserved relative stability of the exchange rate, an important factor behind lower core inflation are medium-term inflation expectations of the financial sector, which continued to move within the NBS target tolerance band.

The Executive Board judges that inflation should return within the target tolerance band (3±1.5%) in H2 2023, on the back of past monetary tightening. The effects of government economic measures aimed at capping the prices of basic foodstuffs and energy in the domestic market will also work towards alleviating inflationary pressures in the short run. The effects of surging global prices of energy and primary commodities, as well as of higher imported inflation, are expected to gradually weaken over the projection horizon (i.e. next two years), which is consistent with the projections of relevant international institutions and market expectations. The onset of a new agricultural season has brought domestic vegetable prices in May slightly down from their hefty levels, and this is likely to continue in the coming period. Assuming an average agricultural season and lower global prices of primary agricultural commodities, going forward we should see a weakening of cost-push pressures on the production of other food in the domestic market as well.

Geopolitical developments and escalation of the Ukraine conflict reflected on upward revisions to inflation projections of a number of countries and fuelled the views about the prevalence of risks that inflation could turn out higher and more durable than initially expected, which prompted many central banks to tighten their monetary policies. In June, the Federal Reserve System continued to tighten monetary conditions by raising the federal funds rate by 75 bp points to the 1.5–1.75% range and by reducing its balance sheet, and the tightening will certainly continue in the coming period. The European Central Bank decided to wind down its asset purchase programme (APP) by the start of July, and to embark,

during that month, on reference rate hikes. The NBS Executive Board judges that the tightening of monetary conditions by these leading central banks and increased uncertainty due to the deteriorated global growth outlook could instil more caution in international portfolio investors, which dictate capital flows toward emerging economies.

Despite the reduced global growth outlook for this year due to the Ukraine conflict and unfavourable economic activity indicators for the euro area in Q2 compared to Q1, Serbian manufacturing sector output and exports continued to post high growth rates in April and May, signalling that the contraction in external demand has had no major negative effects on Serbia so far. This is owed to investments in tradable sectors in previous years, which considerably boosted export supply, while the May export rise also reflected the higher exports of agricultural products after the relaxation of temporary restriction measures. Despite a high degree of uncertainty, the NBS expects further growth of our economy in the coming period, estimating that the real GDP growth this year will be between 3.5% and 4.5%. Assuming there is no further escalation of geopolitical tensions and cutoffs in global gas supply, Serbian GDP is projected to grow 4–5% per year in the medium-term.

Depending on geopolitical developments and the movement of key inflation factors in the domestic and international environment going forward, the NBS will assess whether there is a need for additional tightening of monetary conditions or whether the effects of past tightening ensure a sustainable return of inflation within the target tolerance band over the projection horizon. Delivering price and financial stability in the medium term remains the NBS's monetary policy priority, while supporting further economic growth and development, a further rise in employment and a favourable investment environment.

The next rate setting meeting of NBS Executive Board is scheduled for 11 August 2022.

Press release from Executive Board meeting held on 11 August 2022

At its meeting today, the NBS Executive Board voted to raise the key policy rate by 25 bp to 3%. At the same time, the lending facility rate now equals 4% and the deposit facility rate 2%, meaning that the entire interest rates corridor was increased by 25 bp.

In making such decision, the Executive Board maintains the continuity of moderate monetary policy tightening, whereby it adequately responds to heightened inflationary pressures without jeopardising further growth in economic activity.

The Executive Board estimated that against the backdrop of prolonged cost-push pressures, as well as imported inflation rising beyond expectations, monetary conditions at home need to be tightened further. Thus the NBS seeks to limit the second-round effects on inflation expectations and make sure that inflation in Serbia strikes a downward trajectory, as well as that it returns within the target tolerance band until the end of the projection horizon. As of October 2021, the NBS has gradually and continuously tightened monetary conditions at home by using different tools, depending on the estimated character of inflationary pressures. In addition to lifting main interest rates and tightening dinar liquidity conditions, the NBS significantly contributes to limiting the effects of the spillover of imported price growth onto domestic prices by maintaining the relative stability of the RSD/EUR exchange rate.

When making the decision, the Executive Board was aware that geopolitical developments and escalation of the conflict in Ukraine are reflected on further growth in global inflation through high prices of energy and food, as well as the still present halts in global supply chains. Against such backdrop, a number of central banks opted for revising their inflation projections up, noting that risks that inflation might be higher and more durable than expected are still more pronounced. Therefore many central banks, including the most influential ones – the Federal Reserve System and the European Central Bank – have tightened their monetary policies over the previous months faster than expected. These factors may result in more unfavourable global growth prospects, which would also increase volatility in the international financial market and channel global capital flows from developing countries towards advanced economies.

Energy prices in the global market and imported inflation continued on the upward path. This, coupled with the effects of the drought not only at home, but also in a major part of Europe reflecting on further food price hike, resulted in a somewhat higher inflation in the domestic market than expected. Serbia's y-o-y inflation in June stood at 11.9%, of which around 70% is still attributable to food and energy price growth. Higher imported inflation also translated into higher core inflation (headline inflation excluding the prices of food, energy, alcohol and cigarettes), which measured 6.7% y-o-y in June. It must be noted that core inflation is still significantly lower than headline, but also lower than core inflation in countries of the region pursuing the same monetary policy regime. In addition to the preserved relative stability of the exchange rate, important factors behind lower core inflation are medium-term inflation expectations of the financial sector which continued to move within the NBS target band.

Under the August projection, y-o-y inflation will most likely peak during this quarter and then strike a downward trajectory. The factors that will work toward easing inflationary pressures include past monetary tightening, the expected weakening of global factors that drove food and energy prices up in the prior period, as well as lower external demand amid unfavourable global growth prospects. Government economic measures aimed at capping the prices of basic foodstuffs and energy in the domestic market will also work towards alleviating inflationary pressures in the short run.

As estimated by the SORS, after relatively strong GDP growth of 4.4% y-o-y in Q1, a similar pace of growth was maintained in Q2 (4% y-o-y). Despite deteriorating growth outlook for the euro area, Serbia's manufacturing output and exports continued up, indicating that the weakening of external demand has not had any major negative effects on Serbia thus far. This is thanks to investment in tradable sectors from earlier years, which considerably increased our export supply. Furthermore, agricultural exports have gathered pace since May following the relaxation of measures that temporarily restricted the export of these products. Having this in mind, and despite mounting risks that the euro area would slip into recession in H2, the NBS still expects our GDP to grow 3.5–4.5% this year. The Executive Board judges that the ongoing tightening of monetary conditions at home will not have any major negative effects on economic developments.

Depending on global geopolitical situation and the movement of key monetary and macroeconomic factors in the domestic and international environment going forward, the NBS will assess whether there is a need for additional tightening of monetary conditions. Delivering price and financial stability in the medium term remains the NBS's monetary policy priority, while supporting further economic growth and development, a further rise in employment and a favourable investment environment.

At today's meeting, the Executive Board also adopted the August Inflation Report, featuring the latest macroeconomic projections that will be presented to the public in more detail at a press conference scheduled for 17 August.

The next rate-setting meeting of the NBS Executive Board will take place on 8 September.

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