National Bank of Serbia

2012

August

INFLATION REPORT

August

2012

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: 55
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 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 task of the National Bank of Serbia.

The August *Inflation Report* was considered and adopted by the NBS Executive Board in its meeting of 9 August 2012.

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*

Ana Gligorijević, *Vice Governor*

Bojan Marković, *Vice Governor*

Diana Dragutinović, *Vice Governor*

Mira Erić Jović, *Vice Governor*

ABBREVIATIONS

bln – billion
bp – basis point
CEFTA – Central European Free Trade Agreement
CPI – Consumer Price Index
ECB – European Central Bank
EIB – European Investment Bank
EMBI – Emerging Markets Bond Index
EMU – Economic and Monetary Union of the EU
FDI –foreign direct investment
Fed – Federal Reserve System
FISIM – Financial Intermediation Services Indirectly Measured
GDP – Gross Domestic Product
H – half-year
IFEM – Interbank Foreign Exchange Market
IMF – International Monetary Fund
mln – million
NAVA – non-agricultural value added
NPLs – non-performing loans
OFI – other financial organizations
OPEC – Organisation of the Petroleum Exporting Countries
pp – percentage point
Q – quarter
q-o-q – quarter-on-quarter
s-a – seasonally-adjusted
SDR – Special Drawing Rights
WTO – World Trade Organisation
y-o-y – year-on-year

Other generally accepted abbreviations are not cited.

Contents

I. Overview

Year-on-year inflation moved within the target tolerance band in the first half of the year, except in April when it touched slightly below the lower bound of the band.

Consistent with the projection published in the May Inflation Report, year-on-year inflation troughed in April 2012 (at 2.7%), touching just slightly below the lower bound of the target tolerance band. It then rallied and approached the upper bound of the target tolerance band sooner than expected, reaching 5.5% in June. Second-quarter inflation was 3.1%, due mostly to rising prices of non-processed food and products and services with a high import component.

In May, inflation expectations hit a historical low since survey records are available, but have been rising since June.

In May, financial sector inflation expectations for the coming year hit a historical low since records are available, moving within the bounds of the target tolerance band. However, they have been rising since June for all sectors and displaying increased dispersion as a reflection of heightened uncertainty among market players regarding future economic flows.

Gross domestic product is estimated to have increased marginally in the second quarter.

After declining for four consecutive quarters, GDP recorded seasonally adjusted growth of 0.6%, mainly as industrial production recovered (3.8%, seasonally adjusted) from the first-quarter drop caused by adverse weather in February. Government consumption and investment and net exports gave a positive boost to GDP growth. Private investment and household consumption declined.

The outlook for euro area economic growth is negative for 2012, while expectations for next year's growth have been revised downwards.

The euro area continues to face challenges. Uncertainties linger regarding the future course of the sovereign debt crisis, but no viable solution to contain public finance within sustainable bounds has yet been put forward. Recessionary trends continued, with unemployment reaching its peak since monetary union was formed. Although German economic growth helped the euro area avert recession in the first quarter, the outlook for second-quarter economic growth in Germany is negative. In its latest forecast, the International Monetary Fund did not revise its expectations of euro area economic growth for 2012, but it downgraded the outlook for 2013.

Country risk premiums increased across the region in the second quarter, but the rise was particularly pronounced for Serbia.

Country risk premiums across the region (as measured by EMBI) were higher at the end of the second than at the end of the first quarter. Risk premiums peaked in May, amid heightened uncertainty surrounding the Greek crisis. From June onwards, risk premiums across the region declined, but EMBI for Serbia continued up on account of increased fiscal uncertainty.

Depreciation pressures continued in the second quarter.

Second-quarter foreign exchange movements were marked by depreciation pressures. For the most part, they resulted from an FX supply-demand mismatch, mostly on account of investors' reluctance to invest in Serbia and increased government spending. In June, depreciation pressures slackened, following amendments to regulations on banks' required reserves and an increase in the key policy rate. Owing to these measures, the National Bank of Serbia did not intervene in the foreign exchange market for a month and a half.

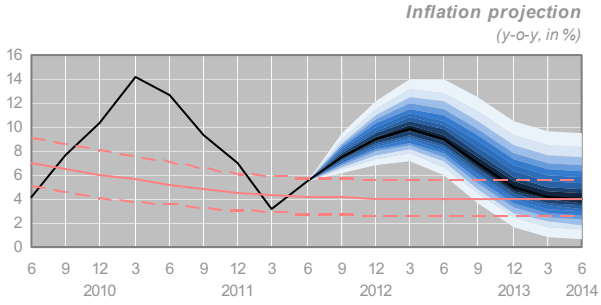
Fiscal policy remained expansionary in the second quarter.

Fiscal policy was extremely expansionary in the second quarter. In the first six months, the consolidated budget deficit came to around RSD 110 billion or 70% of the deficit planned for 2012. Although this fiscal stimulus gave a positive contribution to gross domestic product in the second quarter, investors were reluctant to invest in Serbia amid increased fiscal uncertainty.

The National Bank of Serbia responded to heightened inflationary pressures by raising its key policy rate.

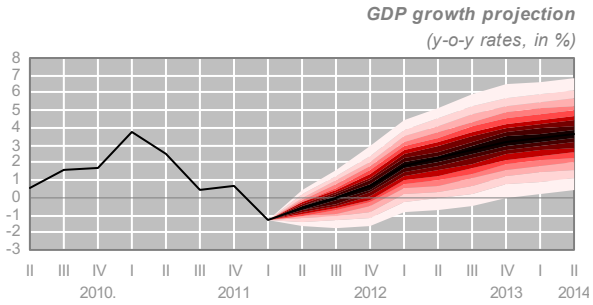
Estimating that inflationary pressures are stronger than assumed in the May inflation projection, the Executive Board of the National Bank of Serbia raised the key policy rate by a total of 100 basis points since June. The Executive Board took account of stronger inflationary pressures generated by rising import, food and administered prices, and lingering uncertainties regarding fiscal consolidation and structural reforms. Given a drain in banks' dinar liquidity triggered by amended regulations on banks' required reserves and National Bank's interventions in the interbank foreign exchange market since early 2012, liquidity repurchase transactions will be the main open market operations to be conducted in the future period.

Rising prices of primary agricultural commodities will place upward pressure on inflation and hamper economic activity.



Given the high volatility of food prices in the domestic market and a lasting drought, rising prices of primary agricultural commodities in global commodity exchanges will push up food prices at home over the coming period. Together with an increase in import and administered prices and the low base effect from the prior year, this will induce a moderate increase in year-on-year inflation. In all likelihood, year-on-year inflation will pass the upper bound of the target tolerance band in the third quarter. It will continue rising and is expected to peak in the first half of 2013. After this, it is expected to subside and settle within the bounds of the target tolerance band by end-2013. Low aggregate demand is the key factor of slowdown in price growth over the medium term.

Economic activity is expected to drop by 0.5% in 2012 and increase by 2.5% in 2013.



The outlook for the key policy rate will depend on fiscal policy, effects of the agricultural shock and developments abroad.

The outcome for GDP in 2012 has been revised downwards from the May projection from 0.5% to –0.5%, mainly on account of a poorer than expected agricultural season. In addition, as the assumption of euro area GDP growth for 2013 has been downgraded, we revised our estimate of Serbia's GDP growth from 3.0% to 2.5% in 2013. As so far, the largest contribution to GDP growth is expected to come from net exports.

The future path of the key policy rate will depend primarily on the dynamics and intensity of fiscal consolidation, continuation of the arrangement with the International Monetary Fund and food price movements and their impact on inflation expectations. To a degree, risks also relate to developments in the international environment.

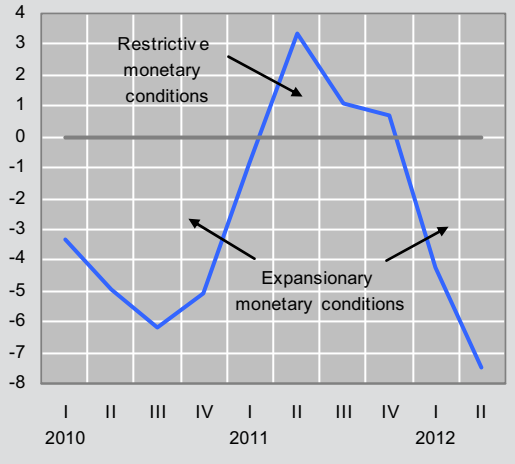
II. Monetary policy since the May *Inflation Report*

Given the inflation projection and rising inflationary pressures, the NBS Executive Board initiated in June the cycle of key policy rate hikes.

The analyses underlying the Executive Board's decision-making process at the June 2012 meeting signalled somewhat higher inflationary pressures than assumed in the May inflation projection. Depreciation pressures were stronger at the time due to the suspension of the arrangement with the IMF, high budget deficit, low capital inflow and foreign investors' reluctance to invest amid uncertainties prevailing at home – in terms of the speed of government formation and fiscal consolidation, and abroad – in regard to the euro area debt crisis. The available budgetary data showed unexpectedly high deviations from the planned framework. Further, signs emerged that unfavourable weather conditions could drag down on agricultural output.

On the other hand, sluggish economic recovery urged caution in deciding on the level of the key policy rate. Following a decline in Q1, GDP was estimated to pick up somewhat, chiefly on account of elevated net exports and to a lesser extent higher final consumption. Exports were expected to rise as the investment cycle ended and production in export-oriented branches was launched, notably in the automobile industry. The first effects of automobile production are likely to be evident in H2 2012, while a full-blown effect will be felt in 2013. Consistent with this, disinflationary pressures from aggregate demand will gradually weaken.

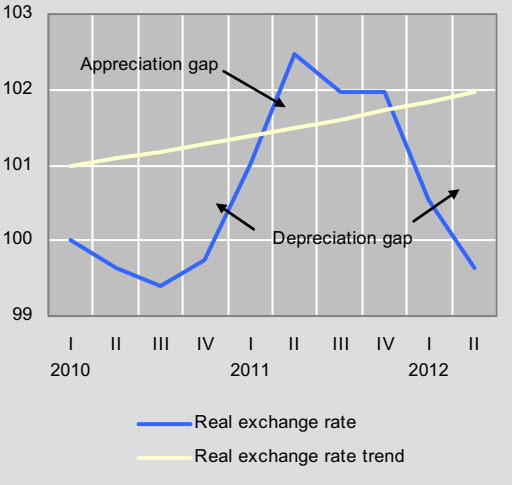
Chart II.0.1 **Monetary Conditions Index**
(in %)



Source: NBS.

Monetary policy expansiveness was amplified further in Q2.

Chart II.0.2 **Real exchange rate and its trend**
(base index, Q1 2010 = 100)



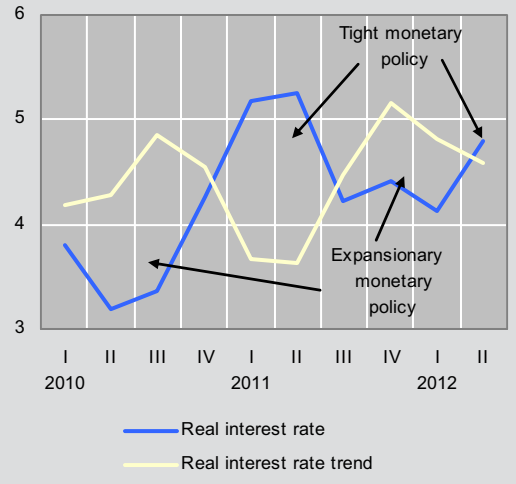
Source: NBS.

The real exchange rate depreciation gap widened in Q2.

Given all the above and the likely administered price growth in H2, the Executive Board raised in June the key policy rate from 9.5% to 10.0%. It highlighted that the degree of future monetary policy restrictiveness would depend crucially on the speed of the adoption, intensity and implementation of the fiscal consolidation programme, including the continuation of the arrangement with the IMF.

At its July meeting, the Executive Board raised the key policy rate by 25 bp (to 10.25%). The decision was prompted by the fact that CPI excluding food, energy, alcohol and cigarettes, as an indicator of core inflation which is relevant for monetary policy, overshot the upper bound of the target tolerance band in June, for the first time since the inflation targeting regime was introduced in 2009. The rise in these prices was determined primarily by prices of import products and services. The key policy rate was raised to prevent a spillover of rising agricultural product and administered prices on inflation expectations and to contribute to macroeconomic stabilisation. The Executive Board reiterated that the degree of future monetary policy restrictiveness would depend crucially on fiscal policy developments, i.e. the speed of the adoption, intensity and implementation of the fiscal consolidation programme, including the continuation of the arrangement with the IMF.

Chart II.0.3 **Real interest rate and its trend** (in %)



Source: NBS.

After one year, the real interest rate stood above its neutral level in Q2.

To moderate inflationary pressures and act pre-emptively to contain inflation expectations, the Executive Board raised the key policy rate by 25 bp to 10.50% in August.

To support financial stability, the NBS amended in June the Decision on Banks' Required Reserves with the NBS: 1) the ratio of required reserves on FX clause-indexed dinar liabilities was raised to 50% for all maturities; 2) the current ratios of FX required reserves on other liabilities stayed the same, but the share of the dinar portion of FX required reserve allocations was raised from 20% to 27% for up to two-year liabilities, and from 15% to 19% for over two-year liabilities. These measures are expected to stabilise developments in the FX market, reduce the difference between dinar and FX costs of borrowing, and further encourage long-term funding in the coming period.

To ensure smooth operation of the FX market and ease excessive daily volatility of the dinar, the NBS intervened in the IFEM, selling c. EUR 1.3 bln from early 2012 until end-July.

Given a contraction in bank liquidity, prompted by amendments to required reserves regulations and NBS's interventions in the IFEM since the early year, the Executive Board adopted in July the decision establishing repo transactions of securities purchases as the main open market operations. Being a flexible instrument, most frequently used by central banks to achieve monetary policy objectives, these transactions were introduced to provide liquidity to banks.[1]

The monetary conditions index shows that the degree of monetary policy expansiveness increased in Q2. This was due to widening of the real exchange rate depreciation gap. Another index component – the real interest rate, was above its neutral trend.

The real exchange rate depreciation gap, which opened in Q1, widened in Q2 due to higher average nominal depreciation of the dinar against the euro compared to the difference between inflation at home and in the euro area.

The real two-week BELIBOR rate exceeded its neutral level by around 20 bp. Real BELIBOR rose in Q2 as its

[1] See Text box 1, p. 8.

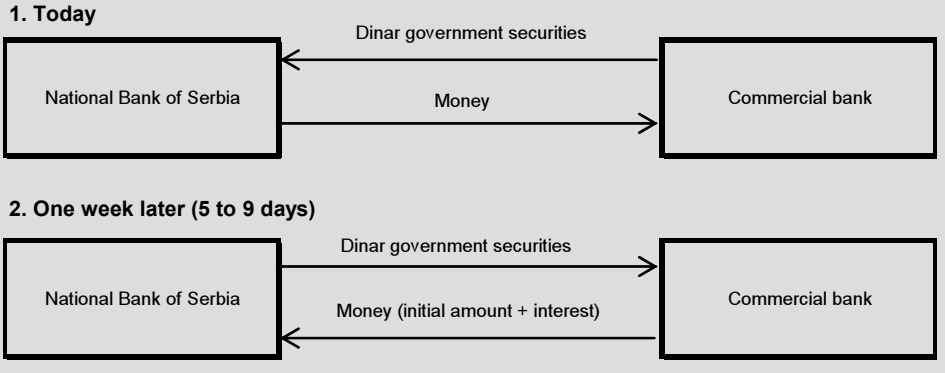
nominal average quarterly growth outpaced the rise in inflation expectations. At the same time, the trend of the real interest rate declined as the country's risk premium receded and real interest rates in the foreign money market continued down.

Text box 1: Regulation of banking sector liquidity in the coming period

As the liquidity of banks contracted on the back of amended reserve requirement regulations and NBS's interventions in the IFEM since early 2012, the main open market operations will no longer be reverse repurchase transactions (liquidity withdrawal) but repurchase transactions (liquidity creation).[1] These transactions are a flexible instrument, most frequently used by central banks to achieve monetary policy objectives.

Instead of withdrawing liquidity from banks against collateral, as it has been the case so far, the NBS will be providing liquidity against collateral. It will thus temporarily boost banks' reserves in order to dampen their volatility driven by autonomous factors[2] which are, as a rule, variable. Two transactions are basically combined: the first, in which the NBS provides money to banks buying from them high quality securities (dinar government securities), and the second, in which banks redeem these securities one week later, at a fixed price, i.e. they return money at interest. The interest oscillates and thus reflects the costs of short-term borrowing. As a rule, auctions are organised once a week under a pre-defined schedule.

Chart O.1.1 **Repo transactions of securities purchases**



Another novelty is the implementation of auctions by the variable multiple interest rate method, with the determined lowest interest rate that a bank's bid may contain to be accepted for processing. That is the NBS's key policy rate set by the Executive Board under the standard procedure. It efficiently signals the monetary policy stance and represents the threshold for interest rates in main operations. The NBS allocates an appropriate amount of liquidity depending on current and forecast liquidity. Starting from banks' bids at highest interest, which are considered priority ones, the desired amount of liquidity is allocated until fully allocated or until there are no more bids accepted for processing. The lowest interest at which liquidity is allocated (marginal rate) is higher than the key policy rate in the former case and equal to it in the latter case.

[1] The Decision Determining the Main Open Market Operations (RS Official Gazette, No 67/2012).

[2] Autonomous factors are not under a direct NBS's impact and imply a change in banking sector liquidity under a change in government deposits with the NBS, cash in circulation and NBS FX transactions with the government.

As shown by results of auctions of repurchase transactions held so far (each Wednesday, from 18 July 2012)[3], banks have adapted to the model of new main operations. On average four banks took part in auctions and their total bid, i.e. demand for liquidity, somewhat exceeded the amount that the NBS decided to allocate. At the last auction (8 August), the marginal rate equalled the key policy rate.

The change in main open market operations in the direction of liquidity provision and shortening of the transaction maturity from two weeks to one week, will encourage banks to more actively manage their liquidity. It should also raise the attractiveness of investment in government securities and enhance the process of dinarisation as dinar government securities are the only securities accepted as collateral. Further, different haircuts are envisaged depending on the securities type and remaining maturity[4], which will impact not only on short-term but also long-term interest rates. Besides, the change in main open market operations will stimulate the development of other financial instruments and contribute to efficient capital allocation in the financial market.

[3] Reports on auctions are published on NBS website: http://www.nbs.rs/internet/cirilica/33/33_5/oot/index.html.

[4] Decision Determining the Upward/Downward Haircut to the Nominal Value of Securities, NBS website: http://www.nbs.rs/internet/cirilica/20/index_mon.html.

III. Inflation developments

Y-o-y inflation moved within the target tolerance band throughout H1, apart from April when it fell slightly below the lower bound of the band. A fall in y-o-y inflation, initiated in May last year continued until April this year. Its gradual rise ensued, mainly on account of food price hikes.

In Q3, y-o-y inflation is expected to continue up and settle above the upper bound of the target tolerance band.

Inflation developments in Q2

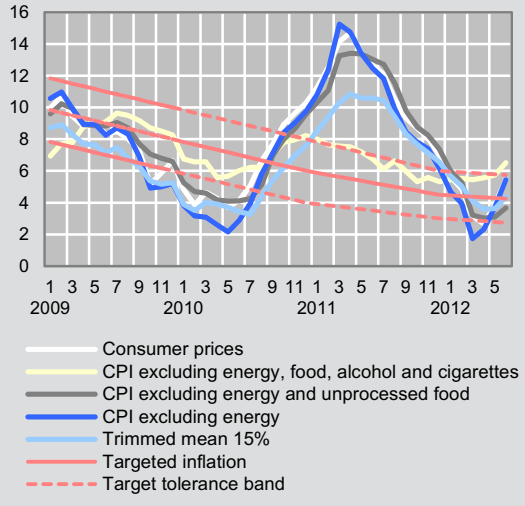
Inflation came at 3.1% in Q2, chiefly on account of rising prices of unprocessed food and products with prices linked to the exchange rate.

A fall in inflation, recorded over the last year, continued in April when y-o-y inflation touched its historically lowest comparable level of 2.7%. In May and June, y-o-y inflation increased to reach 5.5% by end-Q2 and came close to the upper bound of the target tolerance band (5.75%). From April to June, it went up by 2.8 pp mainly on account of food price hikes (2.5 pp).

Consumer prices rose by 3.1% in Q2, above expectations from the previous Inflation Report. This was mainly due to a sharper rise in prices of unprocessed food and products and services with a high share of the import component.

Prices of food and non-alcoholic beverages gained 5.8%, almost fully reflecting a rise in unprocessed food

Chart III.0.1 **Price movements**
(y-o-y rates, in %)



Source: RSO and NBS.

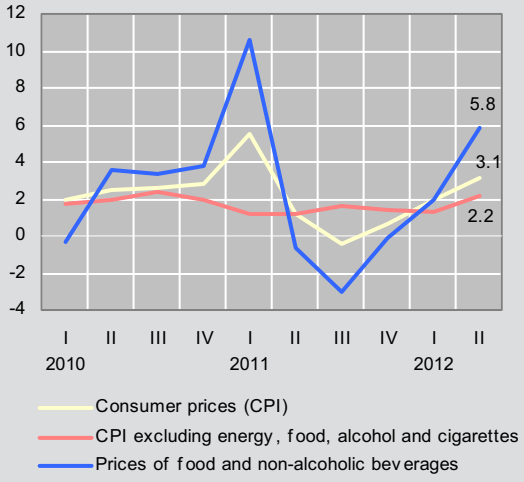
A fall in y-o-y inflation was halted in April. By end-Q2, inflation came close to the upper bound of the target tolerance band.

Table III.0.1 **Consumer price growth by component**
(quarterly rates, in %)

	2011			2012	
	II	III	IV	I	II
Consumer prices (CPI)	1.2	-0.4	0.6	2.0	3.1
Unprocessed food	-5.4	-8.3	0.7	7.5	14.7
Processed food	1.8	-0.4	-0.5	-0.7	1.0
Industrial products excluding food and energy	0.9	0.8	1.1	2.1	1.7
Energy	6.9	1.0	1.1	2.9	0.5
Services	0.6	2.1	1.0	1.2	2.4
Core inflation indicators					
CPI excluding energy	0.1	-0.7	0.5	1.8	3.7
CPI excluding energy and unprocessed food	1.2	0.7	0.5	0.8	1.6
CPI excluding energy, food, alcohol and cigarettes	1.1	1.6	1.4	1.3	2.2
Administered prices	4.1	0.4	0.9	1.3	0.1

Source: RSO and NBS.

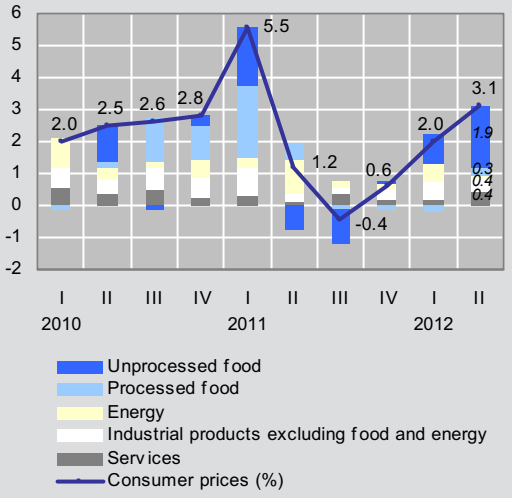
Chart III.0.2 **Price movements**
(quarterly rates, in %)



Source: RSO and NBS.

A rise in prices of food and non-alcoholic beverages accelerated in Q2.

Chart III.0.3 **Contribution to quarterly consumer price growth**
(in pp)



Source: RSO and NBS.

The major contribution to consumer price growth in Q2 came from unprocessed food prices.

prices (14.7%). Within unprocessed food, the strongest contribution was provided by vegetables, fruits and fresh meat. A higher than seasonal rise in fruit and vegetable prices was due to unfavourable weather. Owing to high temperatures and the drought, these prices recorded a smaller than seasonal drop in June. Meat prices rose as cost-push pressures strengthened in response to higher animal feed and import prices.

Processed food prices went up by 1.0% in Q2 reflecting higher prices of sunflower oil and processed meat.

Prices of industrial products excluding food and energy picked up by 1.7%, with prices of passenger vehicles and household chemicals rising the most.

Within **energy**, the highest increase was noted for prices of fuel and lubricants. Though global oil prices declined, dinar's depreciation drove up petroleum product prices (1.5%).

Prices of services were up by 2.4% in Q2. The largest rise was observed for prices of travel arrangements (20.5%) as summer arrangements were taken into calculation.

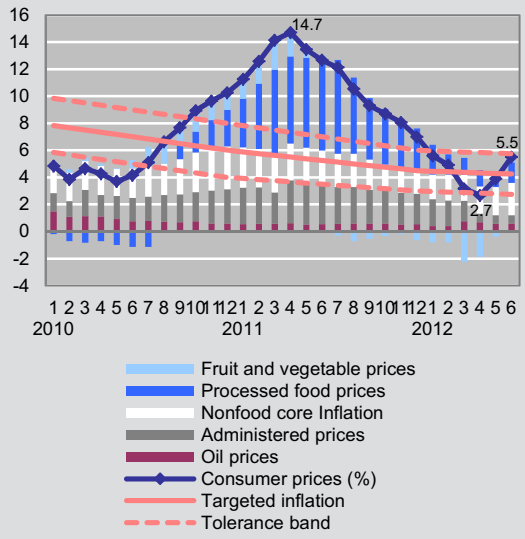
Table III.0.2 **Price indicators**
(y-o-y rates, in %)

	IX 2011 / IX 2010	XII 2011 / XII 2010	III 2012 / III 2011	VI 2012 / VI 2011
Consumer prices	9.3	7.0	3.2	5.5
Domestic industrial producer prices	12.3	9.7	5.9	3.4
Agricultural producer prices	11.6	3.0	0.9	5.6*
Prices of materials for incorporating in construction	0.2	0.5	0.8	2.3

* May on May.
Source: RSO and NBS.

Directly adjusted to exchange rate volatility, prices of travel arrangements and house rentals rose also because of dinar's depreciation. Prices of transportation services and apartment maintenance and repair rose as well.

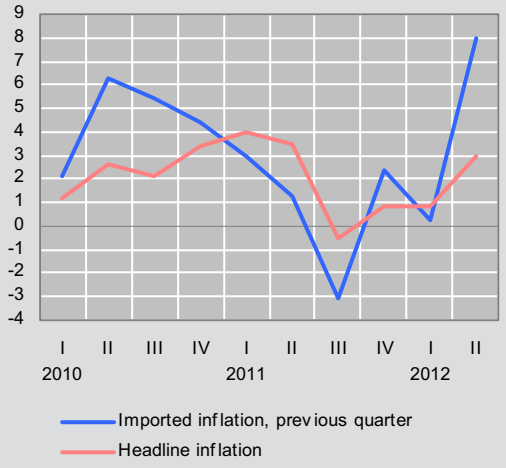
Chart III.0.4 **Contribution to y-o-y consumer price growth**
(in pp)



Source: RSO and NBS.

A rise in y-o-y inflation since April has been driven by food price hikes.

Chart III.0.5 **Domestic and imported inflation***
(quarterly rates, in %)



Sources: NBS and Eurostat.

* Ratio of averages for two consecutive quarters.

A rise in import prices decelerated in Q2.

CPI excluding prices of energy, food, alcohol and cigarettes (generally accepted measure of core inflation) was up by 2.2% in Q2. Y-o-y, it accelerated to 6.5%, above the upper bound of the target tolerance band.

Consistent with our expectations, **administered prices** rose modestly (0.1%) and gave an insignificant contribution to headline inflation in Q2. Their y-o-y rise slowed further (to 2.8%).

Domestic industrial producer prices fell by 0.3%[2] in Q2. The largest contribution was provided by plummeting prices in the sectors of crude oil and natural gas exploitation and the production of chemicals and chemical products. In y-o-y terms, a rise in domestic industrial producer prices continued to decelerate to 3.4% at end-Q2.

Agricultural producer prices[3] rose in April and May (4.2%) primarily reflecting a hike in farming (6.1%) and cattle breeding (1.9%) prices. At product level, prices of corn and live pigs increased the most. Y-o-y agricultural producer prices rose by 5.6% in May.

Prices of elements and materials incorporated in construction stepped up their y-o-y growth – 2.3% in June.

According to our estimate, **euro-denominated import prices** recorded a sluggish rise[4] of 0.3% relative to Q1, mainly due to falling energy prices. A decline in world food prices and prices of import intermediate goods also slightly contributed to the slowdown. Rising prices of consumer goods acted in the opposite direction. However, prices of primary agricultural products moved up again by the quarter-end due to inclement weather globally, which will reinforce pressures on domestic prices in conditions of a long-lasting drought.

Short-term inflation projection

Y-o-y inflation is expected to rise further in Q3 and move above the upper bound of the target tolerance band.

Y-o-y inflation will continue up and settle above the upper bound of the target tolerance band most probably in July.

[2] Domestic industrial producer prices rose by 3.0% in Q1.

[3] Prices of producers of agricultural and fishing products.

[4] As indicator of import prices, we used the weighted average of global oil and food prices, the index of export and consumer prices of Germany as our most important foreign trade partner.

Such trend is estimated to continue in the months to come, mainly on account of rising import and food prices, but also low monthly inflation rates from H2 2011.

In quarterly terms, prices will rise less in Q3 than in Q2. This will be chiefly due to falling prices of seasonal fruits and vegetables. The fall will be smaller than seasonal because of high temperatures and the drought.

Q3 is likely to see a higher contribution of processed food price hikes to headline inflation than in Q2. The growth in these prices may accelerate as cost-push pressures build up from rising prices of primary agricultural products.

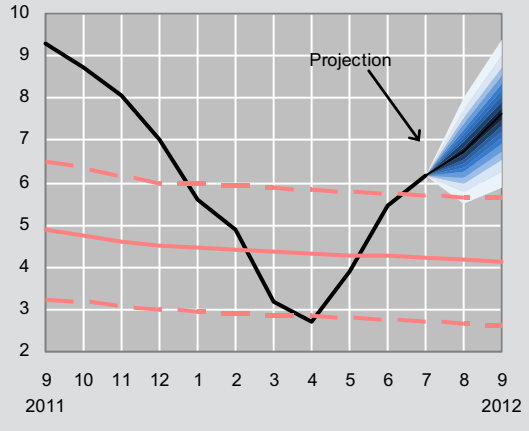
The major boost to Q3 inflation will come from prices of industrial products excluding food, primarily on account of rising import prices.

Services prices are expected to rise and provide a similar contribution to headline inflation as in Q2.

Given the forecasts of stable oil price movements, an insignificantly higher price growth is expected within the group of energy.

Administered price growth is expected to be somewhat higher in Q3. In July, cigarette prices went up, driven by rising prices of excises, import components and costs of raw materials. Prices of medicaments and housing-utilities services are likely to go up as well.

Chart III.0.6 **Short-term inflation projection**
(y-o-y rates, in %)



Source: NBS.

Inflation will continue up and will exceed the upper bound of the target tolerance band until end-Q3.

Growth in CPI excluding prices of energy, food, alcohol and cigarettes will probably stay at around Q2 levels as the effects of past depreciation of the dinar spill over to prices.

Risks to the short-term projection are associated with uncertainties regarding the effects of unfavourable weather on agricultural product prices, the character of fiscal policy and developments in the international environment.

Inflation expectations

In May, inflation expectations of economic agents slid to their record low ever since surveys have been conducted. In June, however, they nudged up.

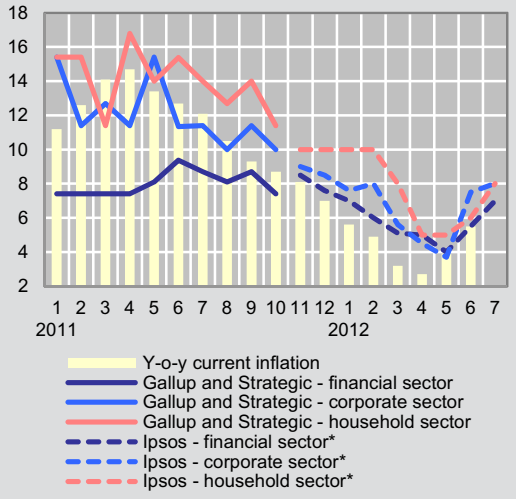
Inflation expectations of all sectors continued down until May when they touched their record low ever since surveys have been conducted. According to Bloomberg and Ipsos surveys, one-year ahead inflation expectations of all sectors entered for the first time the target tolerance band. Concurrently with their decline, the dispersion of expectations increased, which may be correlated with the uncertainty as to the speed of formation of the new Government and the adoption, dynamics and implementation of the fiscal consolidation programme. Expectations of all sectors have been on an increase since June.

As shown by the Bloomberg survey, **financial sector** expectations temporarily rose to 6.2% in April, only to fall to 5.5% in May. In June, they edged up to 6.0%, where they stayed until July, with reduced dispersion. They continued up to 6.3% in August.

According to the Ipsos survey, inflation expectations of all sectors continued down in the first two months of Q2, but increased in June. In April and May, **financial sector** representatives continued to revise their expectations down – to 5.0% and 4.0% respectively. Expectations of this sector thus slid to the level of targeted inflation. However, in June they rose to the upper bound of the target tolerance band (5.5%).

In May, expectations of the **corporate sector** were revised to the lowest level (3.7%) compared to all other sectors. They however rose to 7.5% next month. Inflation expectations of **households**, usually higher than of other sectors, declined in April by 3.0 pp to 5.0%, where they

Chart III.0.7 **Current inflation and one-year ahead inflation expectations – by sector**
(y-o-y rates, in %)

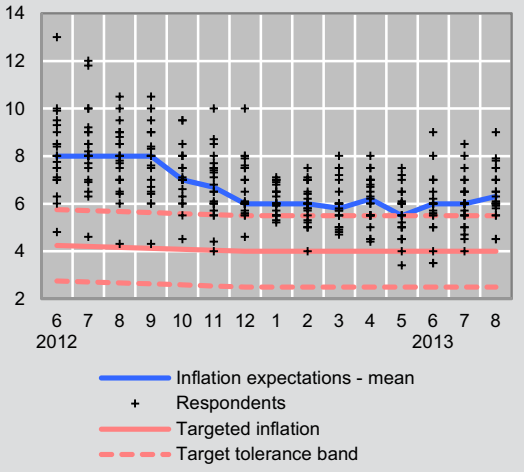


* Ipsos agency as of November 2011.

Source: Gallup and Strategic, Ipsos and NBS.

Following a May decline to the lowest level ever since surveys have been conducted, inflation expectations of all sectors went up.

Chart III.0.8 **One-year ahead expected and targeted inflation – financial sector**
(y-o-y rates, in %)



Source: Bloomberg and NBS.

Over the last several months, the dispersion of financial sector inflation expectations increased.

remained in May. They rose to 6.0% in June. After declining to the level of targeted inflation in May (4.0%), expectations of **trade unions** rose the most relative to all other sectors – 10.0% in June.

In July, a further rise was observed for inflation expectations of all sectors, apart from trade unions: financial sector to 7.0%, and corporate and household sectors to 8.0%.

Text box 2: Assessment of credibility of the monetary policy conducted by the National Bank of Serbia

In its communication with the public, the National Bank of Serbia has repeatedly highlighted that monetary policy should not respond to supply-side price shocks, such as oil and agricultural shock or a VAT rate increase. These shocks are temporary in character and it is impossible to prevent an increase in prices of products and services they directly affect. Monetary policy, however, should react if there is a risk that a rise in these prices may spill over to other prices through increased inflation expectations. In practice, the intensity of the monetary policy response depends on how credible the central bank is. In principle, fully credible central banks do not respond to such shocks, but engage in more intensive communication with the public to explain that the shocks are temporary in character and that their effects will wear out over the short run. However, banks that do not enjoy full credibility need to respond also by tightening their monetary policy stance.

Testing the relationship between inflation expectations and the inflation target is a way to empirically assess monetary policy credibility. With this in mind, we made an econometric estimation of the relationship between inflation expectations and the inflation target for the period since the introduction of the implicit inflation targeting regime by the National Bank of Serbia to this day. We assumed that inflation expectations for the next year are based on current y-o-y inflation, annualized inflation for the next quarter but also target inflation for the year ahead, taking due account of a certain degree of inertia in inflation expectation movements.

On the basis of series of data presented at quarterly level, we estimated the following equation:

$$\mathbf{O_t = C_3 \bullet [C_1\, O_{t-1} + ((1 - C_1) \bullet (C_2\, \pi_t + (1 - C_2) \bullet r_{t+1}))] + (1 - C_3) \bullet \pi_{t+4^*}}$$

where: $\mathbf{O_t}$ represents financial sector inflation expectations for the year ahead, $\boldsymbol{\pi_t}$ – year-on-year inflation, $\mathbf{r_{t+1}}$ – annualized expected inflation for the next quarter and $\boldsymbol{\pi_{t+4^*}}$ – target inflation rate for the year ahead.

The results of the estimation and their statistical properties are given in the table below:

Table O.2.1 **Results of econometric estimation of the relationship between inflation expectations and target inflation**

	Coefficient	St. error	t statisticss	p value
C_3	0.845	0.05	17.387	0.000
C_1	0.688	0.06	13.362	0.000
C_2	0.905	0.09	9.973	0.000

$\overline{R}^2$ = 0.92 ; DW = 1.69

On the basis of the results listed in the table, the evaluated equation of inflation expectations is:

$$\mathbf{O_t = 0.845 \bullet [0.688\, O_{t-1} + ((1 - 0.688) \bullet (0.905\, \pi_t + (1 - 0.905) \bullet r_{t+1}))] + (1 - 0.845) \bullet \pi_{t+4^*}}$$

The evaluated coefficient attached to the target inflation rate is 0.15, which suggests that the National Bank of Serbia's credibility is 15%. This signals that, when forming their own expectations, market players also take account of the target that the National Bank of Serbia aims to achieve. The connection between the above variables is also evaluated on the basis of monthly series of data for two sub-periods (from March 2007 until end-2009 and early 2010 until June 2012) to determine if monetary policy credibility intensified or weakened in the inflation targeting regime. The estimated coefficient attached to the inflation target for the period from March 2007 until end-2009 is 12%, and for the period since early 2010 until June 2012 it is 32%.

The results of the analysis point to enhanced monetary policy credibility in the more recent period, which could be a result of increased monetary policy transparency after the introduction of the inflation targeting regime, as well as of more efficient communication with the public and a higher degree of financial system dinarisation.

Another indicator of enhanced monetary policy credibility is the fact that inflation expectations are better anchored. Despite a notable acceleration of inflation during 2010 and 2011 on the back of an agricultural shock (from 4.2% in June 2010 to 14.7% in April 2011), financial sector inflation expectations recorded a far more modest growth (from around 6% to around 8% in the same period).

IV. Inflation determinants

1. Money and capital market trends and bank lending

Interest rates

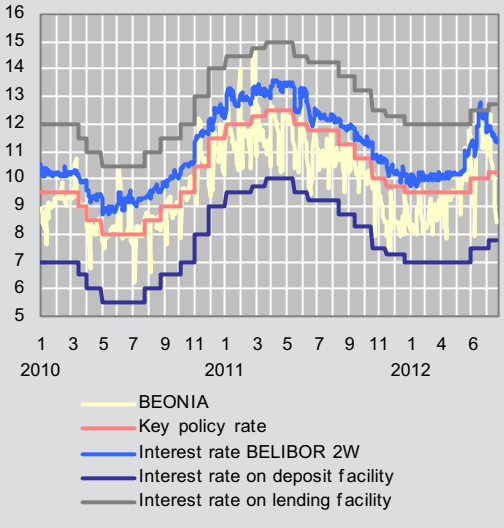
Money market rates rose in Q2 in response to contracted dinar liquidity. Rates on new dinar corporate and household loans went down.

Contraction in dinar liquidity in Q2 drove up dinar rates in the interbank money market. BEONIA gained more than 2 pp and has almost continuously trended above the key policy rate since early May. Besides, dampened dinar liquidity pushed up average daily trading volumes in the overnight interbank market by 6.8% relative to Q1.

BELIBOR displayed similar movements. Compared to March, average monthly BELIBOR rates overshot the key policy rate in June – the rise ranged from 1.5 pp for 3m and 6m maturity to 2.0 pp for TN maturity. Though the yield curve slope declined in the interbank money market, interest rates rose for all maturities.

In July, banks' dinar liquidity increased as the government stepped up its spending and securities deposited with the NBS fell due. This drove down the interest rates in the interbank money market. By end-July, BEONIA trended below the key policy rate, while BELIBOR rates shrank. BEONIA touched 8.4% and BELIBOR rates moved between 10.1% and 12.5%, down by 0.5 pp to 2.4 pp respectively m-o-m.

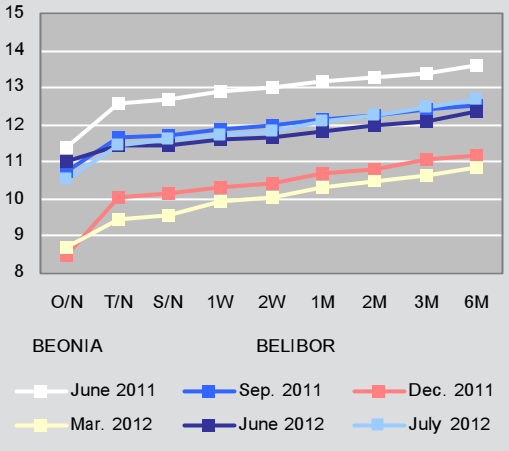
Chart IV.1.1 **Interest rate movements**
(daily data, p.a., in %)



Source: Thomson Reuters and NBS.

Contracted dinar liquidity in Q2 impacted on BEONIA movements above the key policy rate.

Chart IV.1.2 **Yield curve in the interbank money market**
(average values, p.a., in %)



Source: Thomson Reuters and NBS.

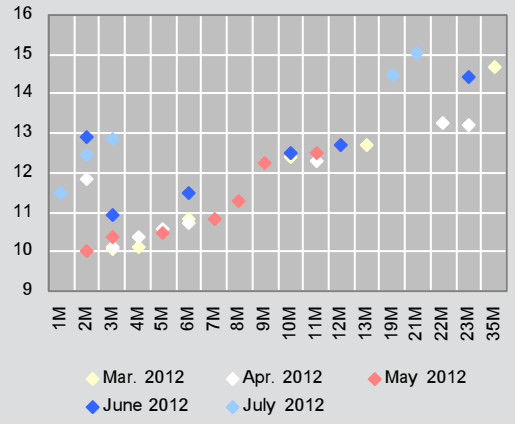
All BELIBOR rates increased in Q2, and the slope of the yield curve in the interbank money market narrowed.

Accepted rates in the primary market of government securities also rose, though more modestly than rates in the interbank money market. A sharper rise in shorter-maturity accepted rates brought about a reduction in the slope of the yield curve in the primary market of government securities.

A rise in accepted rates was expected as the key policy rate was raised and dinar liquidity contracted. Auctions in May, particularly in June, were characterised by lower demand and weaker performance. Average performance of dinar securities was 45.2% in Q2, but fell to only 19.0% in June. A rise in risk premium and uncertainties regarding the dynamics and intensity of fiscal consolidation dented investor interest and resulted in weaker performance in June. That is why the government decided to offer again shorter-maturity securities (3-m and 6-m) in July. At two auctions of 3-m securities, the interest rate reached 12.7%, while at 6-m auctions it was 13.25%. In July, rates on government securities continued up – 0.9 pp for 12-m maturity, 0.5 pp for 18-m and 0.8 pp for 3-y maturity.

Three auctions of euro-denominated government securities were held in Q2, at almost maximum

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

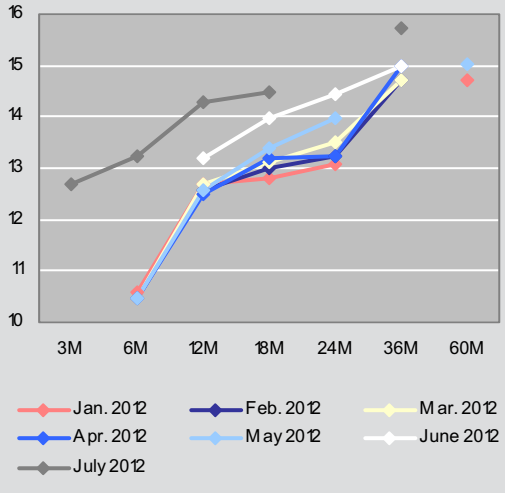


* Excluding all trading up to two business days from the day of primary trading settlement and including all trading above RSD 5 mln.

Source: Ministry of Finance and Central Securities Depository.

Trading volumes in the secondary market decreased, while yield to maturity rates went up.

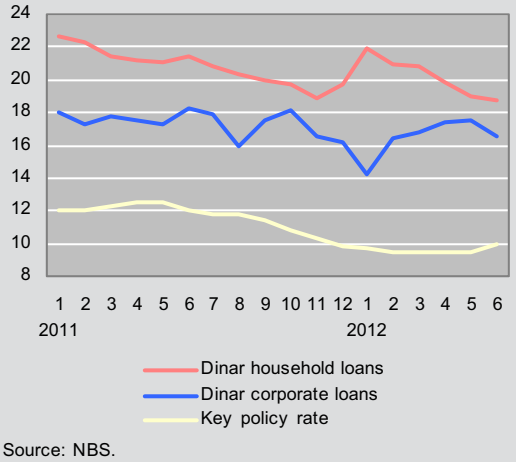
Chart IV.1.3 **Interest rates in the primary market of government securities**
(p.a., in %)



Source: Ministry of Finance.

The slope of the yield curve declined in the primary market of government securities.

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

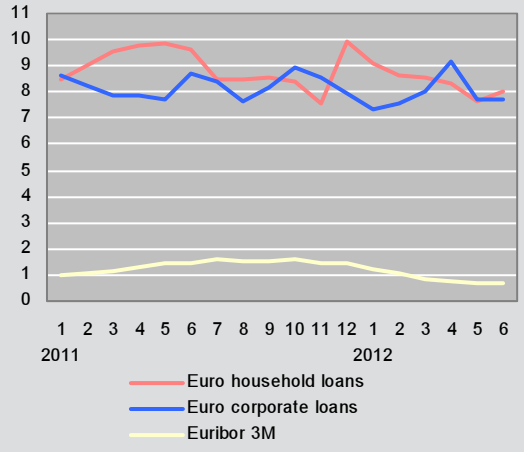


Source: NBS.

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

Interest rates on household and corporate loans declined.

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

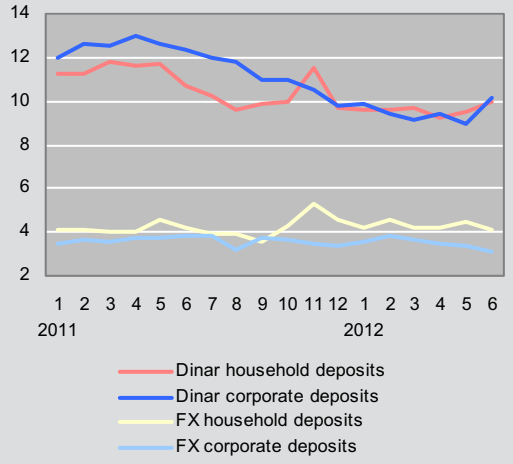


Source: NBS and European Banking Federation.

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

Interest rates on euro and euro-indexed loans mirrored EURIBOR movements in Q2.

Chart IV.1.7 **Interest rates on new time household and corporate deposits**
(weighted average values, p.a., in %)



Source: NBS.

Interest rates on new deposits stayed close to their Q1 levels.

performance (99.4%). Accepted rates rose in this segment of the market as well – 6.25% for 2-y maturity (a 0.15 pp rise from March) and 6.3% for 18-m maturity. Two auctions of euro-denominated securities were held in July, with lower performance (33.7%), while interest rates remained almost flat.

Yield to maturity rates increased in the secondary market of government securities, most notably for shorter maturities. Rates for 3-m maturity rose by 0.9 pp to 10.9%, and by 0.7 pp to 11.5% for 6-m maturity. Yield to maturity rates for over 1-y maturity stayed generally unchanged from end-Q1. Total trading volumes in the secondary market in Q2 equalled RSD 9.2 bln, down by 59.6% on Q1. Yield rates in the secondary market continued up in July.

The weighted average rate on new dinar household and corporate loans fell in Q2 to 17.3% – by 2.0 pp to 18.8%, and by 0.2 pp to 16.6%, respectively.

Rates on all categories of new dinar household loans declined in Q2, most notably consumer and other loans[5].

A decline in corporate loan rates was prompted by falling rates on other loans[6] (from 17.1% to 15.5%), while rates on current assets loans stayed the same. By contrast, rates on investment loans went up (from 14.2% to 18.4%), but due to their small share in total new loans, this rise did not elevate the rates on total corporate loans.

Rates on euro loans and euro-indexed dinar loans fell by 0.3 pp and came at 7.8% in June. Household loan rates experienced a heftier fall (0.6 pp), while corporate loans were cheaper by 0.3 pp. Lower rates in this segment may be associated with lower EURIBOR values.

Rates on new term deposits rose slightly in Q2. A sharper rise was noted for rates on dinar term corporate deposits (1.0 pp), while household rates were only slightly raised (0.2 pp). The interest rate on euro household savings fell to 4.1%, and the rate on FX term corporate deposits was down to 3.1%.

[5] The category of other household loans relates primarily to cash loans.

[6] The category of other corporate loans relates primary to liquidity loans and factoring.

Stock exchange trends

Share prices declined both on the Belgrade and all regional stock exchanges in Q2.

Both indices of the Belgrade Stock Exchange (BSE) declined in Q2. BELEX15 recorded a continuous monthly fall and reached 436 index points by end-June (a 18.0% fall from end-March). BELEXline experienced a softer drop (13.7%) – 887.6 index points by end-Q2.

In light of slower than expected economic growth and the public debt crisis in the euro area, benchmark indices plummeted across the region. A steeper drop in BSE indices compared to the region was due to amplified uncertainties in the country surrounding the formation of the new government and its future economic policy. Moreover, the exclusion of Agrobanka shares from the BSE listing negatively impacted on financial sector shares which were among more liquid ones on the BSE.

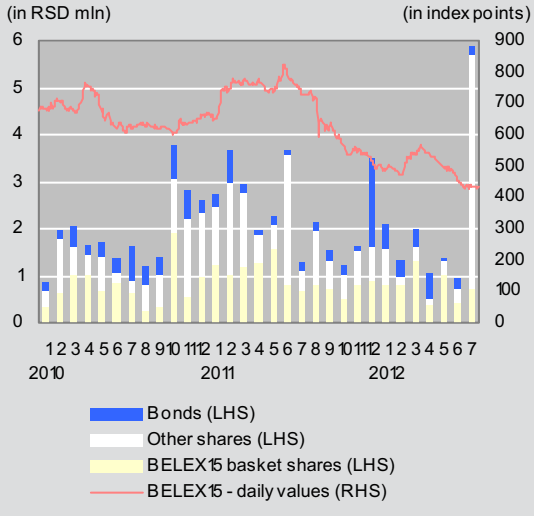
The above factors dragged down on BSE trading volumes that reached RSD 3.4 bln in Q2, down by 38.1% on Q1. Trading in shares amounted to RSD 2.5 bln, less by 38.7% on Q1. At the quarterly level, foreign investors bought shares worth RSD 0.1 bln net (5.4% participation), most of it in April. In May and June, foreign investor activity on the BSE was balanced in purchase and sale terms.

Trading in bonds amounted to RSD 0.8 bln, down by a third q-o-q. Most traded was the 2016-series which accounted for 30.7% of the total. Yield to maturity rates ranged from 5.4% to 5.8% by end-Q2.

BSE market capitalisation contracted by RSD 123.9 bln to RSD 727.6 bln by end-Q2. The major contribution – RSD 102.2 bln, came from falling share prices. Because of the sharp reduction in market capitalisation, the BSE share in GDP declined by 4.2 pp (from 26.7% in March to 22.5% in June).

Benchmark indices tumbled down on all regional stock exchanges. After the BSE, the largest drop was recorded on the Ljubljana stock exchange with SBITOP down by 13.2%. SOFIX and BIRS, indices on Sofia and Banja

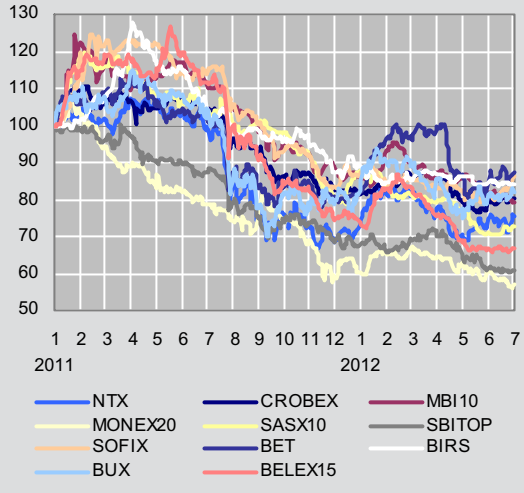
Chart IV.1.8 **BELEX15 and Belgrade Stock Exchange turnover**



Source: Belgrade Stock Exchange.

Turnover contraction and falling share prices were observed on the BSE in Q2.

Chart IV.1.9 **Stock exchange indices across the region**
(in index points, normalised, 31. 12. 2010 = 100)



Source: BSE and regional stock exchanges.

In Q2, stock exchange indices plummeted across the region.

Luka stock exchanges, fell the least – by 5.2% and 3.1% respectively.

July trading in shares in BSE rose significantly to RSD 5.7 bln, or RSD 1.1 bln monthly on average since early 2012. However, such an increase does not signal greater investor activity in light of block trading that implies a previously contracted transaction due to a change in ownership. In July, a decline in both BSE indices slowed – BELEX15 lost 0.1% and BELEXline 1.8%.

Monetary aggregates

Dinar monetary aggregates M1 and M2 experienced a real y-o-y decline in Q2, while M3 rose imperceptibly. A rise in net claims on the government gave the strongest boost to M3 growth.

At end-Q2, total reserve money increased q-o-q: 8.9% in nominal and 5.7% in real terms. Dinar reserve money gained 33.8% nominally and 29.8% in real terms.

Reserve money was largely created through reduced bank lending in repo securities. In Q2, banks withdrew RSD 103.7 bln from the repo stock as they had to allocate more dinars against the dinar portion of FX required reserves and due to NBS's interventions in the IFEM. Throughout Q2, the government continued spending from its account with the NBS, thus giving a further boost to reserve money. Reserve money was withdrawn mainly via NBS's interventions in the IFEM.

Within the structure of dinar reserve money, bank reserves rose by RSD 69.5 bln as calculated dinar required reserves went up (RSD 43.2 bln)[7]. Though down by RSD 1.5 bln, cash in circulation remained above November 2011 levels when the government stepped up spending from its account with the NBS.

The dinar component of money supply declined in real terms, while the broadest monetary aggregate M3 rose as FX deposits increased. Dinar monetary aggregates M1 and M2 fell by 2.0% and 3.1% in real terms respectively, while M3 rose by 2.7%. In y-o-y terms, growth in M1 and M2 slowed (7.7% and 4.8% respectively), while M3 mildly accelerated (12.0%).

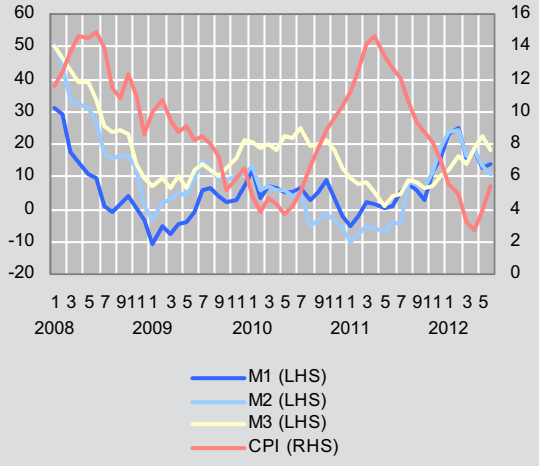
Table IV.1.1 **Monetary aggregates**
(real y-o-y rates, in %)

	2011		2012		Share in M3 June 2012 (%)
	Sep.	Dec.	March	June	
M3	-1.1	3.1	10.5	12.0	100.0
FX deposits	13.5	7.4	5.1	7.3	72.0
M2	-1.5	11.1	12.7	4.8	28.0
Time and savings dinar deposits	1.4	15.5	13.4	0.8	11.1
M1	-3.4	8.4	12.2	7.7	16.9
Demand deposit	-3.1	3.9	4.0	1.7	10.3
Currency in circulation	-4.0	16.3	27.3	18.5	6.6

Source: NBS.

After spending its deposits with the NBS and intensification of borrowing from banks via securities issues, the government gave the strongest boost to M3. Household lending also contributed to M3 growth, with a rise in banks' NFA acting in the same direction.

Chart IV.1.10 **Monetary aggregates and CPI**
(y-o-y rates, in %)

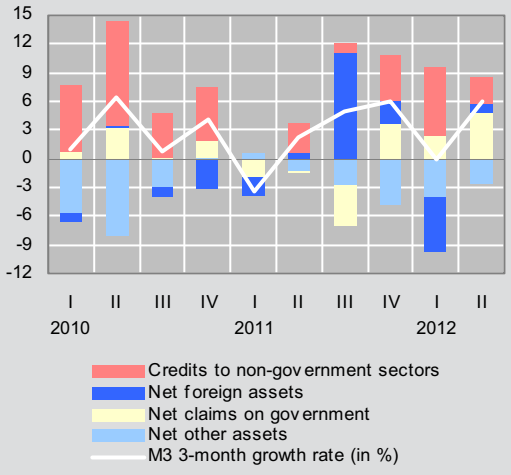


Source: RSO and NBS.

The dinar component of money supply decelerated in y-o-y terms, while at the same time y-o-y growth in M3 accelerated on the back of rising FX deposits.

[7] In April and June 2012, the NBS amended the Decision on Banks' Required Reserves with the National Bank of Serbia. Amendments stipulated, inter alia, an increase in the dinar share of FX required reserves. As a result, calculated dinar required reserves went up.

Chart IV.1.11 **Contribution to M3 growth**
(in percentage points)



Source: NBS.

A rise in net claims on the government gave the strongest boost to M3 growth. Household lending and rising NFA acted in the same direction.

In terms of the structure, M3 components displayed diverse movements in Q2. A sharpest drop was noted for dinar savings and term deposits (RSD 3.0 bln), including cash in circulation (RSD 1.5 bln). On the other hand, dinar transaction and FX deposits rose by RSD 4.2 bln and EUR 407.0 mln respectively.

Household FX savings were up by EUR 179.1 mln, while dinar savings declined by RSD 3.4 bln. Relative to Q1, a sharper rise in FX savings was mainly due to depositing of funds received from the collection of frozen FX savings bonds falling due by end-May. In Q2, citizens opted rather for short-term savings, i.e. up to one year.

Given a faster rise in reserve money than dinar deposits, the value of monetary multiplier declined significantly relative to end-Q1. As growth in reserve money in Q2 was caused mainly by higher dinar required reserves, monetary multiplier may in the coming period stay at the current level. The velocity of circulation remained unchanged on end-Q1.

According to preliminary data, M1 rose in July primarily on the back of increased cash in circulation. On the other hand, savings and term deposits contracted and weighed down on M2. The broadest monetary aggregate M3 rose nominally, but FX deposits, excluding the exchange rate effect, remained at a similar level as in June.

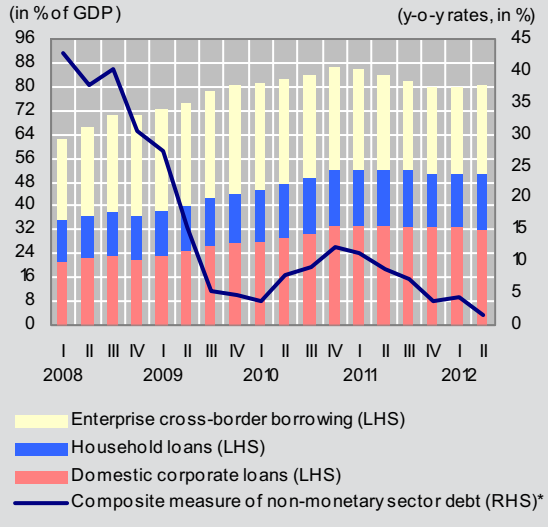
Bank lending

Bank lending slightly subsided in Q2. Household lending increased, while corporate lending declined as several banks wrote off a part of NPLs.

Under the composite measure[8], y-o-y growth in total loans, excluding the exchange rate effect, slowed to 1.7% in Q2 (down by 2.6 pp on Q1).

Total domestic loans were higher by RSD 37.7 bln nominally or lower by RSD 18.3 bln excluding the exchange rate effect. Y-o-y lending continued up at a slower pace. Y-o-y growth in domestic loans reached 3.2% in June (excluding the exchange rate effect)[9], down by 3.8 pp from March.

Chart IV.1.12 **Loans to GDP and lending activity growth***



* Loans to non-governmental sectors, excluding the exchange rate effect.

Source: NBS.

Household lending increased in Q2 unlike Q1, while corporate lending slightly declined.

[8] As an indicator of total borrowing, it covers domestic lending to the private sector, public enterprises and local levels of government, including enterprise cross-border borrowing.

[9] Calculated at the RSD/EUR exchange rate on 31 August 2008, assuming that all FX and FX-indexed loans were extended in euros.

At 52.8% in June, the share of domestic loans in GDP remained broadly unchanged from Q1. While lending to the corporate sector from domestic sources somewhat declined, enterprise cross-border borrowing stepped up.

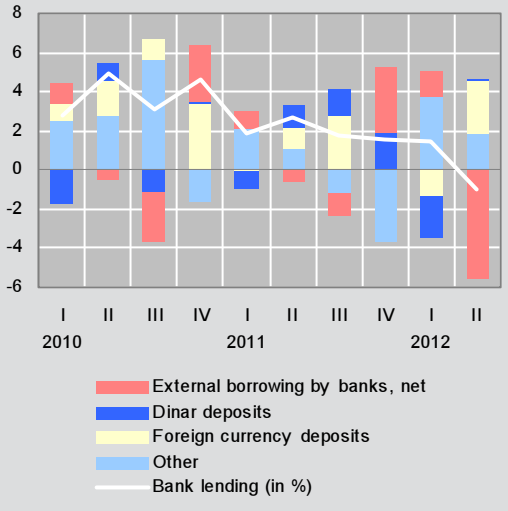
A rise in banks' external claims bore down on lending activity in Q2. A part of funds released under FX required reserves was used by banks to repay their external debt. Rising domestic savings had an opposite effect. An increase in short-term FX deposits (mainly household) lifted up domestic savings to a greater extent than an upturn in dinar deposits. A part of funds withdrawn by banks from the repo stock in Q2 was used to finance lending.

Bank claims on corporate loans were up by RSD 7.0 bln nominally, but declined excluding the exchange rate effect. Such decline was generally due to the write-off of NPLs in several banks. Current assets loans were extended in the same amount and investment loans in a smaller amount compared to Q1. Broken down by sector, most loans were invested in transportation, though less than in Q1.

Following a slump in Q1, household lending picked up in Q2. Claims on household loans rose by nominal RSD 27.1 bln, or RSD 9.5 bln excluding the exchange rate effect. Housing loans were extended the most. Debt under cash and consumer loans built up as well, which can be associated with falling interest rates on these types of loans. At the same time, borrowing increased under the most expensive forms of lending – credit cards and current account overdrafts.

Activity in the subsidised segment of the market was relatively low, though more intensive than in Q1. Government-subsidised loans worth around RSD 7.7 bln were approved in Q2, with around RSD 4.4 bln relating to agricultural loans under a decree enacted this year. As funds earmarked in the budget for housing loan subsidies (RSD 1.7 bln) were disbursed already in H1, growth in this category of loans is likely to decelerate in the coming period. In May and June, banks extended subsidised energy efficiency loans, but given a small amount of funds set aside for this purpose, the programme had no major impact on lending dynamics.

Chart IV.1.13 **Contributions to quarterly rate of lending growth***
(in percentage points)

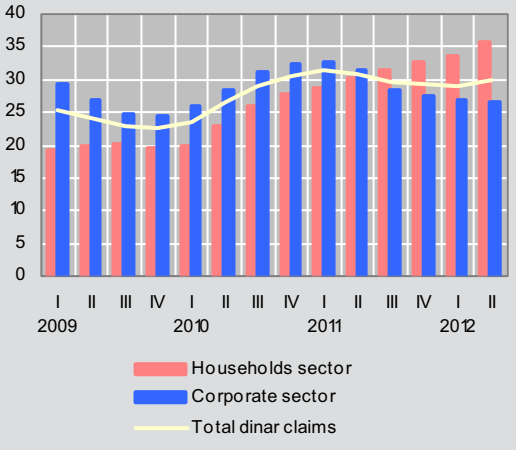


* Excluding the effect of exchange rate changes.

Source: NBS.

Lending activity declined in Q2 in response to rising bank external claims.

Chart IV.1.14 **Share of dinar in total bank receivables on corporate and household sectors**
(%)



* Excluding the exchange rate effect.

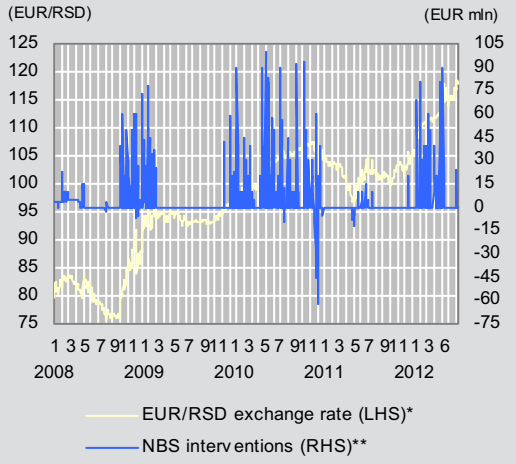
Source: NBS.

A rise in the share of dinar loans continued in the households sector in Q2. A decline in this share decelerated in the corporate sector.

Relative to March, the share of dinar in total corporate and household loans declined by 0.1 pp to 27.8% in June. The share of dinar loans declined in the corporate and went up in the household sector. Excluding the exchange rate effect[10], the share of dinar in total corporate and household loans rose by 0.7 pp (to 29.9%).

The loan repayment capacity, measured by the NPL share in total loans, improved insignificantly compared to Q1. Total NPL share, under the gross principle, equalled 19.5% in June (11.5% under the net principle). In sectoral terms, the NPL share in the corporate sector fell by 1.2 pp to 21.4%.[11] Household loan arrears rose by 0.2 pp to 8.4% in June.[12] However, despite a high NPL share, banking sector stability is satisfactory, as signalled by other relevant indicators – capital adequacy ratio of 17.2% and the loan loss reserves to NPL ratio of 124.4% in June.

Chart IV.2.1 **Movements in EUR/RSD exchange rate and NBS FX interventions**



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

Source: NBS.

Depreciation pressures in the FX market were alleviated in June.

2. Movements in the foreign exchange market and the dinar exchange rate

Depreciation pressures in the foreign exchange market which prevailed throughout Q2 were alleviated in June. The NBS increased the scope of interventions in the IFEM compared to Q1.

The depreciation pressures in the foreign exchange market recorded in April and May caused the dinar to slide against the euro by 4.5% from end-March to end-May. As the market movements stabilised in June, the dinar appreciated by 0.7%. Overall in Q2, the dinar's average depreciation against the euro was 5.0%.

The dinar's depreciation vis-à-vis the euro, against the backdrop of the euro's weakening against the dollar, amounted to the dinar's losing 7.1% on average against the dollar. The nominal effective exchange rate of the dinar[13] in Q2 relative to Q1 depreciated on average by 5.4%.

The movements in the foreign exchange market in Q2 were marked by a pronounced imbalance between the foreign exchange offer and demand, a key driver for the heightened depreciation pressures. Non-residents remained net buyers of the foreign exchange, which, with the upswing in the net sale of the foreign exchange to residents and lower net repurchase of the foreign exchange from exchange offices and natural persons worked to keep the gap between offer and demand wide. Such trends could have been attributed to the heightened uncertainty surrounding the formation of the new government and the dynamics and intensity of fiscal consolidation. Pressures were most striking during May, which saw the greatest monthly depreciation of the dinar since the start of the year (4.0% at end-month).

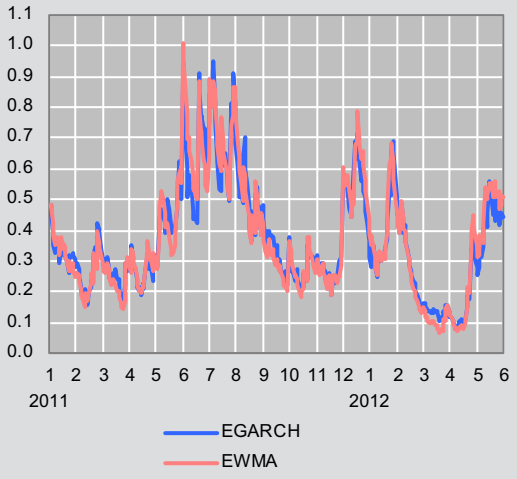
The depreciation pressures were alleviated in June, mostly owing to the amendments to the regulations on banks' required reserves and raising of the key policy rate. The NBS increased the portion of the banks' required reserves allocated in dinars, thus freeing up foreign currency liquid assets and reducing dinar liquidity. The banks ensured the necessary dinar funds by scaling down their investments into NBS repo securities and sale of foreign exchange in the IFEM, thus additionally alleviating the depreciation pressures. As a result, June

[10] Calculated at the RSD/EUR exchange rate on 31 December 2011.

[11] JOne of the reasons for a high NPL share is the unfavourable tax treatment of their direct write-off, which is why banks perform direct write-off only after all prior legal actions are concluded (cashing the collateral, conclusion of bankruptcy proceedings etc). Court proceedings often span several years, have an uncertain outcome and involve the accompanying costs.

[12] Including entrepreneurs, loan arrears rose stayed unchanged at 9.9%.

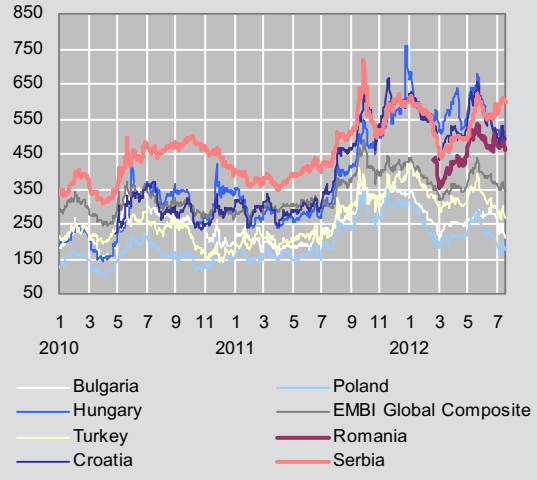
Chart IV.2.2 **Short-term volatility of the RSD/EUR exchange rate**
(in %)



Source: NBS.

Daily oscillations of the dinar exchange rate subsided in Q2 relative to the previous quarter.

Chart IV.2.3 **Risk premium indicator – EMBI by country**
(daily data, in basis points)



Source: JP Morgan.

Region-wide, EMBI indices moved according to similar dynamics in Q2.

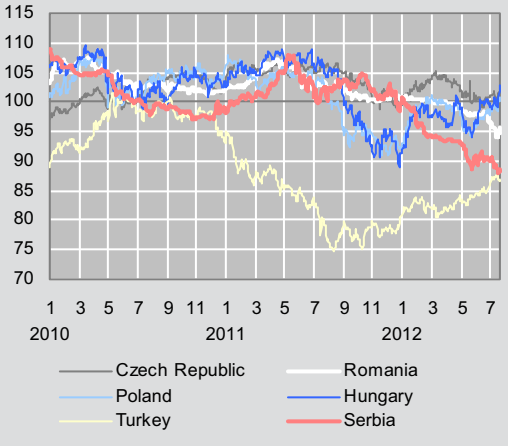
saw, for the first time this year, nominal appreciation of the dinar (0.7%).

While shrinking from the previous quarter (19.8%), the average daily turnover in the IFEM rose month-on-month in Q2. In parallel, the volatility of the dinar exchange rate also increased from one month to another, measured by EWMA[14] and EGARCH[15] methods. However, on a quarterly basis, the volatility of the exchange rate eased relative to Q1.

In order to ensure smooth operation of the foreign exchange market and ease the excessive daily oscillations of the exchange rate, the NBS sold EUR 790.3 mln in the IFEM in Q2. At the same time, in order to encourage the development of interbank swap trading and the market of hedging instruments, the NBS continued to organise regular quarterly FX swap auctions, selling EUR 16 mln and buying EUR 36 mln in Q2.

Risk premiums of all countries in the region, measured by EMBI, moved along similar paths in Q2. Following a May increase, triggered by the euro area public debt

Chart IV.2.4 **Movements in exchange rates of national currencies against the euro**
(daily data, June 30, 2010 = 100)



Sources: NBS and websites of central banks.

* Growth indicates appreciation.

Similar to majority of other currencies in the region, the dinar weakened against the euro in Q2.

[13] Calculated as a geometric average of nominal exchange rates EUR/RSD and USD/RSD, applying weights 0.8 and 0.2, i.e. the formula (EUR/RSD^0.8)*(USD/RSD^0.2).

[14] EWMA (Exponentially Weighted Moving Average) – method of weighted moving averages which assigns different weights to percentage daily changes in the exchange rate for different moments in time, with the exponential lowering of weights while moving away from the present moment.

[15] EGARCH (Exponential General Autoregressive Conditional Heteroskedastic) – a method for estimating conditional variance which captures the asymmetric effect of positive and negative shocks on the estimate of conditional variance.

crisis, EMBI stepped down in June, reflecting higher yields on 10-year US bonds. Serbia's risk premium reached its quarterly peak in early June (619 bp), only to drop by 60 bp by the end of Q2. The drop went across the board in June, with Hungary (144 bp) and Croatia (103 bp) experiencing the sharpest falls.

The July increase in Serbia's risk premium reflected uncertainty regarding fiscal consolidation. Higher risk premium, coupled with the heightened government spending and a modest capital inflow prolonged the depreciation pressures. In July, the dinar lost 1.9% against the euro. The NBS's one and a half month long intervening in the IFEM aimed at mitigating the excessive daily oscillations of the dinar exchange rate amounted, in late July, to the sale of EUR 44.5 mln.

The currencies of most countries of the region running similar exchange rate regimes depreciated against the euro in Q2. Observed at the end of period, the Czech crona (weaker by 3.5%), Polish zlot (by 2.3%) and Romanian leu (by 1.6%) lost the most, while Hungarian forint (stronger by 2.6%) and Turkish lira (by 4.3%) gained ground.

Foreign capital inflow

A modest capital inflow in Q2 arising from FDI and portfolio investments was insufficient to cover the current account deficit, which heightened depreciation pressures.

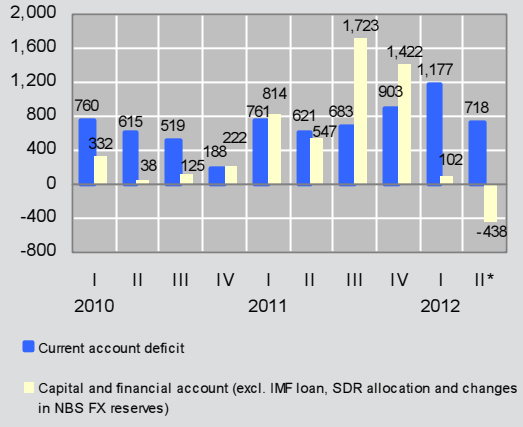
Q2 saw net capital outflow of EUR 438.1 mln. This was partially due to amendments to the bank required reserve regulations, which freed up EUR 559.2 mln in the observed period. Banks placed the major part of these funds on the accounts abroad and used the remaining part for cross-border repayments. Formerly balances in the banks' foreign exchange required reserve accounts with the NBS, the released funds had no bearing on the foreign exchange market trends.

Excluding the outflow triggered by changes in reserve requirements, Q2 saw a meagre net capital inflow of EUR 121.1 mln, insufficient to cover the current account deficit of EUR 718.1 mln. Observed by category, FDI and portfolio investment inflows rose from Q1, while financial loans featured a net outflow.

Net FDI inflow in Q2 equalled EUR 231.8 mln, more than half of which originated from investments into trading, automotive and tobacco industries.

Heightened uncertainty in financial market deflated foreign investor interest in portfolio investments. The EUR 59.9 mln inflow marks a drop of 21% compared to Q1.

Chart IV.2.5 **Current account deficit and net capital inflow**
(in EUR mln)

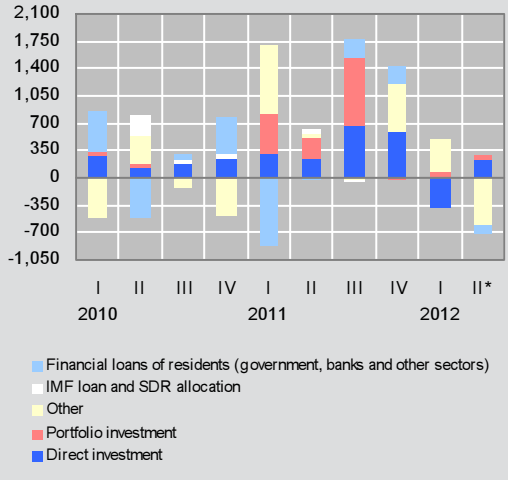


*Preliminary data.

Sources: RSO and NBS.

Capital outflow was triggered by the amendments to the Decision on Required Reserves, while other categories recorded modest inflows.

Chart IV.2.6 **Structure of the financial account**
(in EUR mln)



*Preliminary data.

Sources: RSO and NBS.

Q2 saw net inflow of FDI and portfolio investments and new outflow of capital across other categories.

Net borrowing under financial loans shrunk in Q2. Banks continued cross-border repayments, generating a net capital outflow of EUR 337.6 mln. On the other hand, corporates' liabilities to international creditors rose by EUR 131.5 mln net, mainly due to the borrowing of Fiat Automobiles Serbia. In the same period, government's net borrowing equalled EUR 87.3 mln.

According to the NBS projection, the GDP is set to fall by 0.5% in 2012, reflecting the squeeze in household consumption and private investments. H2 GDP trends will receive a positive impetus from the growth in net exports and automotive industry production, the depreciation of the dinar and, to a lesser extent, from government consumption and investments.

3. Aggregate demand

Aggregate demand is estimated to have risen mildly in Q2, while slowing down year-on-year. Higher net exports, government consumption and investments aided to its growth.

Halting a four-quarter-long downward trend, aggregate demand mildly recovered in Q2. The growth in net exports, owing to exports growing faster than imports, reflected positively on GDP growth (2.0 pp contribution). A positive stimulus came also from government consumption and investments. On the other hand, private sector investments and household consumption subsided.

Owing to such trends, the y-o-y fall in aggregate demand slowed down to –0.6% in Q2. The fall in net exports was reversed into a mild growth, while domestic demand abated, due to lower private investments.

Domestic demand

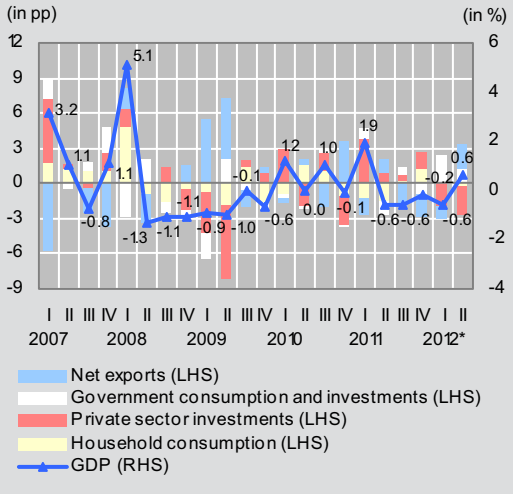
Household spending

Household consumption subsided in Q2.

Household consumption is estimated to have contracted relative to Q1, while slightly rising y-o-y. This is signalled by a slump in retai trade turnover, the key indicator of household consumption trends. Other indicators, such as personal consumption, estimated to have dropped based on the Household Budget Survey, the subdued passenger transport and lower catering turnover, confirm such trend.

Overall sources of household consumption[16] recorded a mild increase of 0.2% s-a in Q2, induced by the growth in remittances and consumer and cash loans. The increase in savings left no room for growth in consumption. Contraction in the wage bill and social transfers also signal a squeeze in household consumption.

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

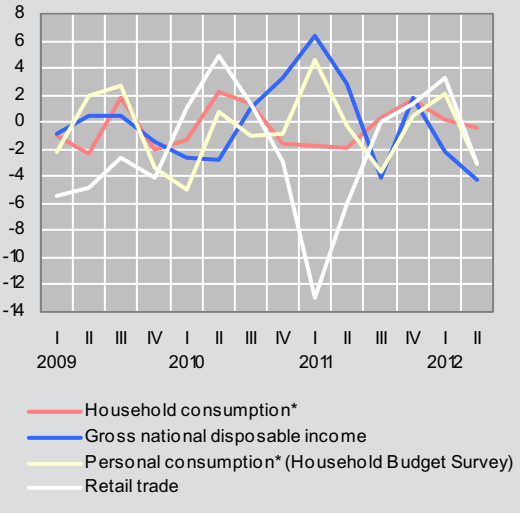


* NBS estimate.

Sources: RSO and NBS.

Quarterly GDP growth in Q2 was aided by higher net exports and government consumption and investments.

Chart IV.3.2 **Household consumption**
(s-a rates, in %)



* NBS estimates for Q2 2012.

Source: NBS.

Household consumption shrunk in real terms in Q2.

Private sector investments

Q2 saw a contraction of private sector investments.

According to the NBS estimate, private sector investments declined by 12.0% s-a in Q2, reflecting negatively on GDP (2.3 pp) and pulling total investments down by 8.4% s-a (–1.9 pp). Y-o-y, private sector investments fell by 31.7%.

A decline in fixed investments is signalled by lower imports of equipment and production of capital goods. A considerable squeeze in investment loans approved in Q2 indicates subdued investment activity.

Table IV.3.1 **Investment indicators**

	2011			2012	
	Q2	Q3	Q4	Q1	Q2
Real indicators *(seasonally-adjusted, quarterly, growth, in %)*					
Construction	3.3	1.9	2.1	0.7	-0,8*
Industrial production of capital goods (physical volume)	-19.0	-8.6	6.0	14.3	-6.6
Exports of capital goods**	-6.6	10.4	3.1	-0.5	1.9
Imports of capital goods**	0.7	5.9	1.2	-2.2	-5.1
Stocks of capital goods	2.5	-3.7	-12.9	-5.0	-12.3
Industrial production of intermediate goods (physical volume)	-1.2	-2.6	-2.6	-4.2	6.2
Exports of intermediate goods**	-6.5	-2.8	1.4	-8.8	3.4
Imports of intermediate goods**	-0.7	-5.1	-0.2	10.3	-4.3
Stocks of intermediate goods	-4.4	-1.9	-4.4	-1.0	3.8
Government investment***	-25.2	0.3	-3.6	27.6	11.4

* NBS estimate.
** Exports and imports are denominated in euros.
*** Government investment spending is deflated by the industrial producer price index.

Government consumption and investments

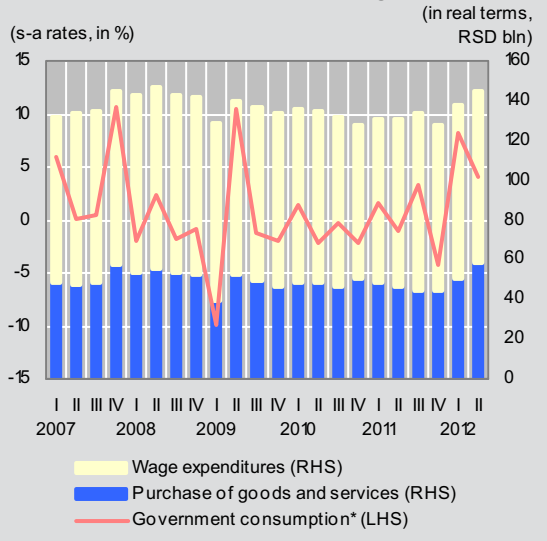
Government consumption and investments ramped up in Q2.

Economic activity in Q2 was boosted by government consumption and investments (1.3 pp). This component of aggregate demand upped by 5.1% s-a and 11.2% y-o-y, mainly thanks to an upswing in government consumption.

Government consumption is estimated to have risen by 4.1% s-a, driven by higher outlays for purchase of goods and services (13.1% s-a).

Government investments in Q2 rose by 11.4% s-a, as confirmed by higher consolidated capital expenditures.

Chart IV.3.3 **Government spending**



* NBS estimate for Q2 2012.

Source: NBS.

Government consumption in Q2 recorded real growth.

Net external demand

Contrary to Q1, net external demand gave a positive contribution to GDP growth in Q2.

Net external demand expanded by 10.3% s-a (2.0 pp contribution to GDP) as a result of a real growth in exports and a decline in goods and services imports. Some of the export activities date from Q1 and were postponed due to bad weather conditions.

With exports growing faster than imports in Q2 – 7.9% and 5.4%, respectively, net exports slightly picked up y-o-y (1.1%) and gave a positive contribution to GDP (0.1 pp).

In euro terms, exports of goods gained 5.8% s-a in Q2, with agricultural products, electrical equipment, metal and food products contributing the most to its growth. A significant hike in the exports of agricultural products, primarily corn,

[16] Wage bill, social transfers, household loans and remittances.

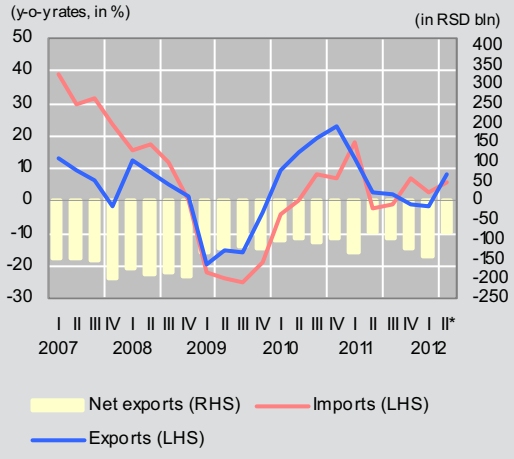
originated from export activities pushed forward to Q2 due to iced rivers. Exports of base metals experienced a slump, due to downscaling of black metals production.

The fall in imports of goods in Qm (by 2.7% s-a) partly reflected the completed investment cycle in automotive industry, as imports of equipment and intermediate goods experienced the greatest decline. According to the EU classification by purpose, all categories of imports, save from durable consumer goods, recorded decreases. Energy and intermediate goods imports plunged the most.

Such trends pushed exports 13.5% above and imports 14.4% below their pre-crisis levels[17].

Oil price at end-Q2 fell 20.2% q-o-q, with the sharpest drop recorded in May. Price movements reflected uncertainties regarding future market developments and prevailing geopolitical risks. While the supply increased thanks to production boost in OPEC countries, especially Saudi Arabia, global demand dwindled due to lower than expected economic growth of largest oil consuming countries. Political uncertainties and protracted public debt crisis in the euro area both bore down on the price of this energy commodity. Easing of geopolitical tensions in the Middle East in June reduced the uncertainty regarding future oil production and, against the backdrop of a slower-than-expected rebound, stabilised the expected path of oil prices.

Chart IV.3.4 **Exports and imports of goods and services**
(in constant prices 2009)

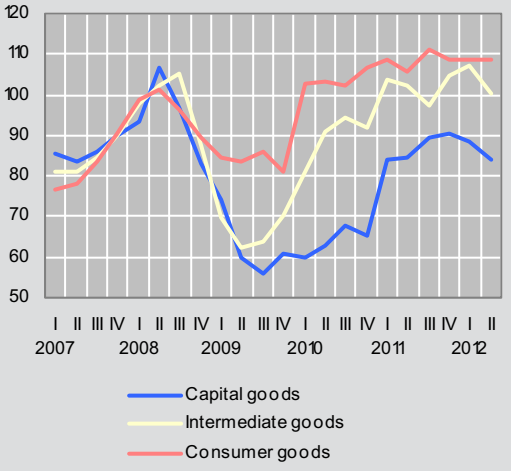


* NBS estimate.

Source: NBS.

In y-o-y terms, exports grew faster than imports.

Chart IV.3.5 **Imports by key components**
(s-a, H1 2008 = 100)



Sources: RSO and NBS.

Completion of investment cycle in automotive industry led to a decline in imports of capital and intermediate goods.

In July, oil prices swelled on the back of increased US demand on the one hand and, as tensions in the Middle East heightened, fears from lower transport-aggravated deliveries on the other. The analysts however predict that the hike in oil prices will be temporary.

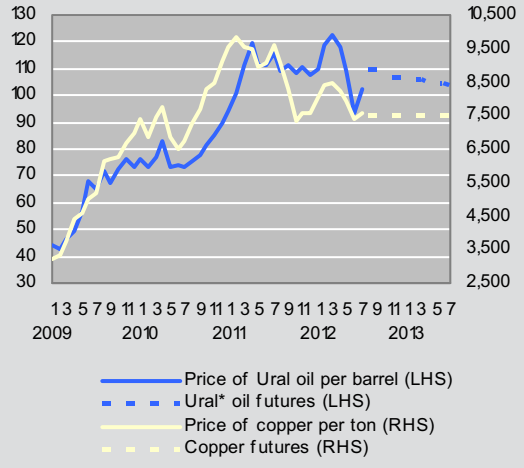
Copper price slid by 10.3% from end-Q1. As in the case of oil, the greatest drop occurred in May, induced by factors on the demand side. The price trends were determined by the news on economic slowdown of largest copper consumers, China and USA and concerns over the euro area public debt crisis.

The FAO Food Price Index lost 7.1% q-o-q. Prices of sugar, dairy products and edible oil slumped the most. Late in June, prices of primary agricultural commodities started to go up due to generally bad weather conditions. Recently published unfavourable agricultural production outlook indicates further price hikes of primary

[17] H1 2008

agricultural commodities which will increase pressures on global food prices. Therefore, only in July, FAO Food Price Index recorded an increment of 6.2%.

Chart IV.3.6 **Oil and copper price movements**
(average monthly prices, in USD)

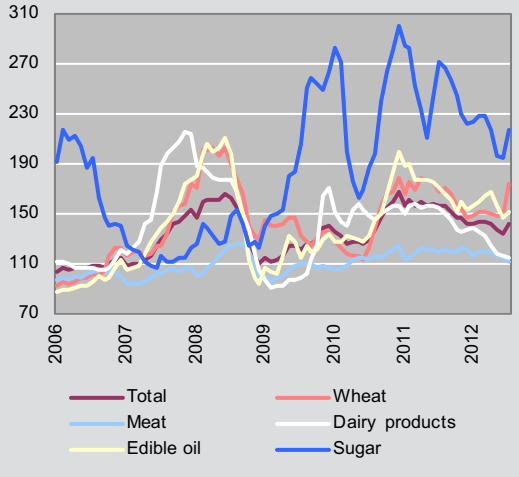


Sources: Bloomberg, futures market and NBS.

* Price of oil futures for Ural oil was calculated based on historical price differences between Brent and Ural oil.

In Q2, oil and copper prices went down. The expectations about the future price movements are stable.

Chart IV.3.7 **World food price index**
(in real terms, 2002 - 2004 = 100)



Sources: FAO, UN.

World food prices in international markets dropped in Q2. As of July, they have been on the rise.

4. Economic activity

Economic activity is estimated to have slightly bounced back in Q2. Negative output gap is shrinking.

GDP and NAVA quarterly growth forecasts of 0.6% and 0.8% s-a, respectively, mostly relied on the manufacturing growth. Economic activity in Q2 was below its pre-crisis level from H1 2008 (GDP was 2.7% lower and NAVA 1.7%).

GDP growth, after four consecutive quarters of decline, originated from a rebound in industrial production (3.8% s-a). The growth was influenced by the low base from Q1, when bad weather conditions in February, electric power cuts and one-month interruption in Smederevo Steel Plant operations, caused a decline in industrial production (–4.8% s-a).

Physical volume of industrial production expanded by 4.0% s-a in Q2. This growth also resulted from the low base in Q1, and the key driver was the expansion in physical volume of manufacturing, by 6.6% s-a (4.8 pp contribution to total industrial production). Mining also grew, by 3.7% s-a (0.2 pp contribution), while electricity, gas and steam supply shrunk by 5.8% s-a (–1.0 pp contribution).

Within manufacturing, the greatest s-a ramp-up of activity was recorded for oil derivatives (contribution of 1.5 pp to total industrial production) and base metals production (0.8 pp). The largest s-a fall in output was recorded for other means of transport (contribution of –1.0 pp).

According to estimates, gross value added in construction lost 0.8% s-a.

Retail trade turnover in Q2 dropped by 3.1% s-a, which puts it 27.9% below its pre-crisis level.

Gross value added in agriculture declined by 2.7% s-a, due to high temperatures and drought which negatively affected fall field crops, fruits and vegetables.

Y-o-y downward trend of economic activity seems to have continued in Q2 (–0.6% according to RSO flash estimate), though at a slower rate than in Q1. The downward pressure came primarily from the fall in agricultural production, estimated at around 11.5% y-o-y, which bore down on GDP (0.9 pp). In Q2, NAVA added 0.6% y-o-y.

The fall of economic activity decelerated mostly thanks to the positive impetus from information and communication and construction sectors. Information and

communication boast a usually high growth (7.0% y-o-y, which provided a contribution of 0.5 pp). Construction recorded a 3.4% y-o-y increase of gross value added (contribution of 0.1 pp), which is less than in Q1.

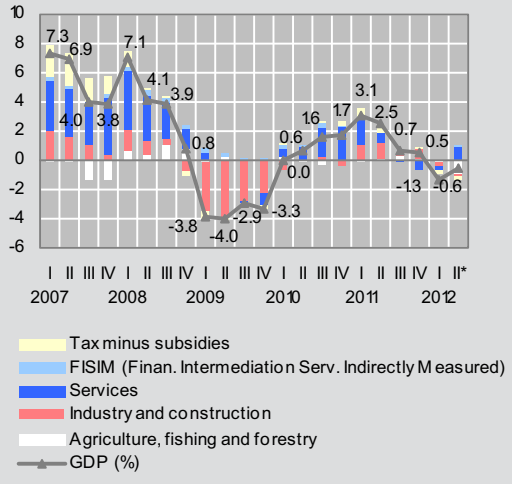
Reversing a four-quarter long decline, trade expanded by 1.4% (contribution of 0.2 pp), as signalled by a y-o-y increase in retail trade turnover.

Having lost 2.9% y-o-y, industrial output shrunk about the same as in the previous quarter (contribution of –0.5 pp). The greatest negative contributor was electricity, gas and steam supply.

Quarterly growth of economic activity in Q2 reduced the negative output gap. As the gap still remains, disinflationary pressures from aggregate demand may be expected in the future period as well. However, as potential GDP may be overestimated in periods of crisis (due to the erosion of production capacities and work skills of the long-term unemployed), the actual output gap may be lower than estimated. This is indicated by the fact that the negative output gap estimate based on the Hodrick–Prescott filter (HP filter) is lower than the one based on the Kalman filter. In the case of a lower gap, disinflationary pressures stemming from aggregate demand may be weaker than anticipated.

Despite the expected positive stimulus from automotive production launch in H2, we have revised our GDP growth forecast for this year from 0.5% to –0.5% due to significant underperformance of agricultural output.

Chart IV.4.2 **Contribution to y-o-y GDP growth rate – production side**
(in pp)

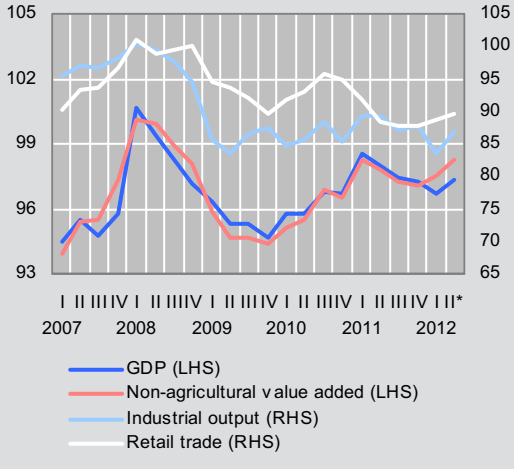


* NBS estimate.

Sources: RSO and NBS.

The greatest negative contribution to y-o-y GDP movements in Q2 came from industrial production.

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

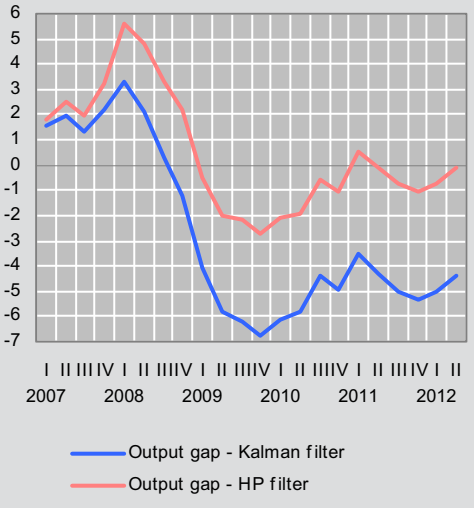


* NBS estimate.

Sources: RSO and NBS.

GDP and NAVA recorded growth in Q2, mostly due to the low base from Q1.

Chart IV.4.3 **Output gap**
(percentual deviation from the trend)



Source: NBS.

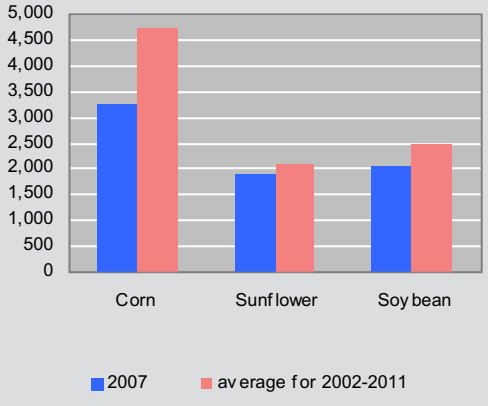
Negative output gap narrowed in T2.

Text box 3: Effects of a bad agricultural season on GDP and inflation in Serbia

Unfavourable weather conditions in 2012 (extreme colds in Q1, high temperatures and low land moisture in late Q2 and early Q3) bore down on domestic agricultural output, which is likely to fall far behind the one from the last year and provide a negative contribution to the overall economic activity in 2012. The weaker agricultural output will also put an upward pressure on prices of agricultural commodities and, indirectly, on food prices, since agriculture provides raw materials for food industry.

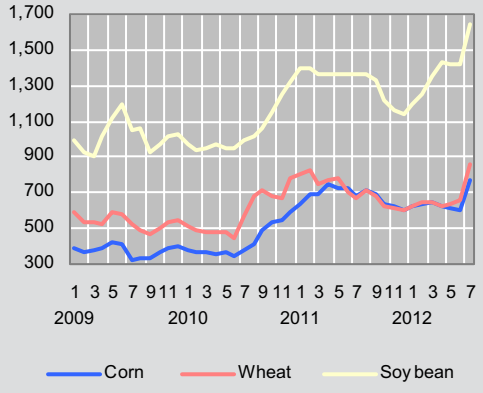
Bad agricultural seasons and low crop yields were not uncommon in Serbia during the past decade. In 2007 agricultural output shrunk by 7.8% (Chart O.3.1) due to high temperatures and drought in July and August. Similar developments were experienced this year, except that fall crop yields are likely to be hardest hit (corn, soybean, sunflower and sugar beets). The fall in production and expected hikes in corn and soybean prices will also negatively affect livestock breeding, as these are the main inputs in production of animal feed. Unfavourable weather conditions also weighed on fruit and vegetable yields. Under the assumption that fall crop yields will move around their 2007 levels and that fruit and vegetable production will go down by 5%, and livestock breeding by 4%, the total contraction in agricultural output would settle at around 12%. Poorer agricultural performance in 2012, compared to 2007, could stem from the base effect. Namely, the drop of 7.8% in 2007 bucked the trend of several bad seasons, while the potential fall in 2012 would ensue after a series of relatively good seasons. The assumed 12% drop in agricultural output would pull down economic activity by around 1.0 pp. Taking this into account, the growth of economic activity in 2012 is likely to be lower than previously forecasted.

Chart O.3.1 **Average crop yields**
(kg/ha)



Source: RSO.

Chart O.3.2 **International prices of agricultural commodities**
(USD/bushel)



Source: Chicago Board of Trade - CBOT

Since mid-June, agricultural output forecasts of major agricultural exporters (USA, Russia, Ukraine, Argentina) have been revised down, accounting for bad weather conditions, which triggered price increases in agricultural commodity markets world-wide (Chart O.3.2). Price hikes started to spill over to the domestic market, additionally fuelled by the effects of the dinar exchange rate depreciation from the past period. In the period ahead, this will put inflationary pressure on processed food prices. Inflationary pressure could also stem from the growth of unprocessed food prices (fresh meat and fruits and vegetables). Prices of fresh meat recorded a more than usual growth in June, due to a rise in animal feed prices and depreciation of the dinar and these factors are expected to continue throughout the next period. Furthermore, smaller fruit and vegetable yields will bring about a lower than expected seasonal drop in fruit and vegetable prices (characteristic for Q3). The NBS estimates that bad agricultural season will add 2–3 pp to y-o-y inflation growth, most of which will materialise in H1 2013.

Food price hikes expected in the coming period will be temporary, impacting the y-o-y inflation rate over the next 12 months. As a reminder, similar movements were seen in H2 2010, when the global growth in prices of primary agricultural commodities spilled over to Serbia, pushing the y-o-y inflation 10.5 pp up. However, it is anticipated that this year's growth in world food prices is going to be lower than the one in 2010, which entails a lower inflation hike. In addition, owing to the liberalisation of trade with the EU, customs duties and levies on imports of agricultural products were lowered (import duties are on average lower by 30% in 2012 relative to 2009), which could additionally moderate the fluctuation of food prices and inflation increase compared to 2010.

5. Labour market developments

Wages

Following the earlier quarter's increase, real wages declined in Q2. A one-year downward trend in labour productivity in industry was halted, which held back the growth of unit labour costs.

In s-a terms, nominal net wages rose from the quarter earlier by 1.5%, while real net wages dropped by 1.4%. Real net wages lost 1.8% s-a in the public sector, while gaining 0.2% s-a in the private. The private sector wage increase during crisis is attributed primarily to the layoffs of low-wage workers, which somewhat improved the average earnings of those who kept their jobs. This conclusion is corroborated by the data on greatest employment decreases in basic professions.

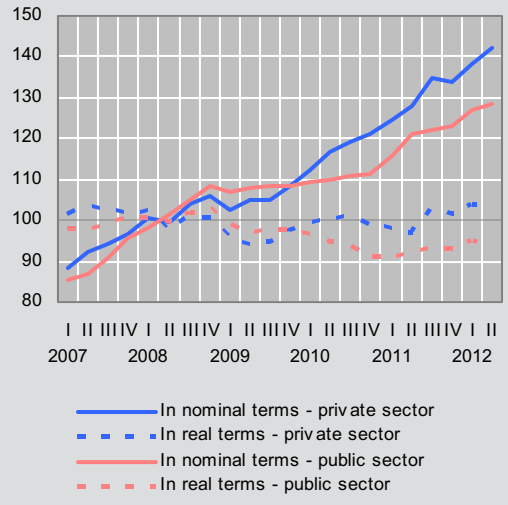
Relative to the previous quarter, real net wages plunged across all industries, with greatest decreases recorded in agriculture, forestry and fishing, as well as mining.

Compared to the same period the year earlier, real wages recorded growth, though at a slower rate (5.3% in Q2 vs. 6.3% in Q1). Real wage growth lost steam in the public sector (1.8% in Q2 vs. 4.9% in Q1) and gained traction in the private (7.0% in Q2 vs. 6.0% in Q1).

The average net wage paid out in Serbia in Q2 equalled RSD 41,664.

Reversing a one year downward trend, labour productivity went up in Q2, slowing down the growth of unit labour costs in industry (1.3% s-a). Nevertheless, unit labour costs rose slightly from the previous quarter, as gross real wages grew somewhat faster than labour

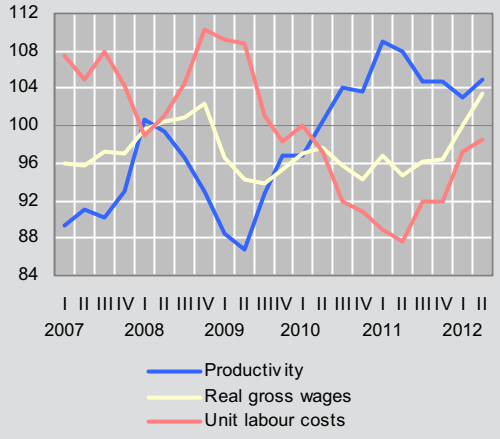
Chart IV.5.1 **Average net wages**
(s-a, H1 2008 = 100)



Source: RSO.

Real wages grew in the private sector and decreased in the public sector in Q2.

Chart IV.5.2 **Movements in productivity, real gross wages and unit labour costs in the industry**
(s-a, H1 2008 = 100)



Source: RSO.

Labour productivity in industry increased in Q2, but unit labour costs went up due to faster rising of real gross wages.

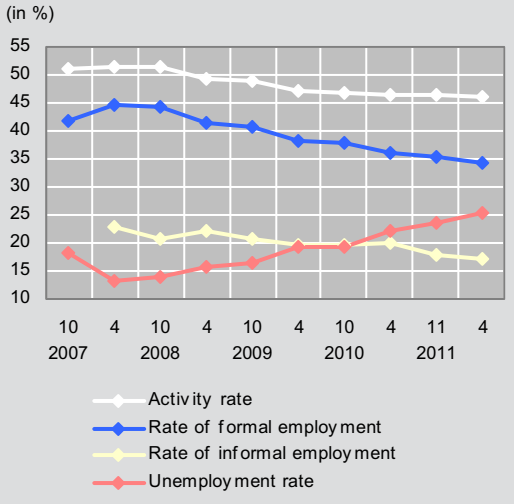
productivity (3.5% vs. 2-0% s-a). Manufacturing recorded positive trends. Unit labour costs decreased by 5.4% s-a relative to Q1, due to labour productivity growing considerably faster than gross real wages (6.2 vs. 0.6% s-a).

Employment

According to the April Labour Force Survey, unemployment rate upped to 25.5%, as other labour market indicators deteriorated.

A sluggish rebound of economic activity prolonged negative trends in the labour market. As expected, the April Labour Force Survey revealed deterioration relative to November 2011. The unemployment rate, i.e. the share of the unemployed in the total active population[18] stood at 25.5% in April, an increment of 1.8 pp from November. Total unemployment increased by 44,961 and stood at 736,802. Taking into account trends in the real sector, no improvements are expected from the October survey. This trend prevails region-wide and hinges largely on economic prospects of the euro area.

Chart IV.5.3 **Employment, unemployment and activity according to the Labour Force Survey**



Source: RSO.

According to the April Labour Force Survey, all labour market indicators deteriorated.

Among the indicators of labour market trends, particularly aggravating was a further increase in long-term unemployment (unemployed for one year or longer), which had been high to start with. The share of long-term unemployed in total unemployment soared to 78.1% in April 2012, compared to 74.0% in November last year. Furthermore, the comparison with November data shows that the share of very-long-term (four-year and longer) unemployment also expanded by 3.0 pp, reaching 44.4%. The long-term unemployment rate jumped to 19.9% in April (vs. 17.6% in November 2011).

Total employment (in formal and informal economy)[19], according to the April Labour Force Survey stood at 2,157,618 persons, down by 66,890 from November 2011. This marked a 1.0 pp drop in employment rate (i.e. the share of the employed in the total population aged 15 years and older) which came at 34.3%. Employment plunged the most in basic professions (by 39,346 persons). Sector-wise, agriculture, manufacturing and construction suffered the greatest employment slumps.

The increase in unemployment is still smaller than the drop in employment, which indicates that a number of persons became inactive and gave up job search. This marked a further fall in activity rate, i.e. the share of active population in the total population aged 15 years and older. The activity rate slid 0.2 pp from November 2011 and came at 46.1% in April 2012.

The April Labour Force Survey recorded also a drop in informal employment[20], from 17.8% in November 2011 to 17.0% in April 2012.

[18] Active population (labour force) comprises all employed and unemployed persons aged 15 and over.

[19] According to the Labour Force Survey, any person performing a paid job (paid by money or in kind) for minimum one hour in the week observed and any employed person who during the given week happened to be absent from work, is considered to be an employed person. Employed workers also include farmers and assisting household members who derive their only income from household work. Therefore, the survey does not take into account the formal status of a surveyed person, but the actual activities he/she performed in the week observed.

[20] Informal employment (unreported employment) includes persons employed with unregistered companies, or with registered companies, but without formal employment contract and social and pension insurance, as well as assisting household members.

According to the RSO data, the RAD survey indicated a slight increment in formal employment[21] in Q2. With 138 jobs added, formal employment figure climbed to 1,730,207.

6. International environment

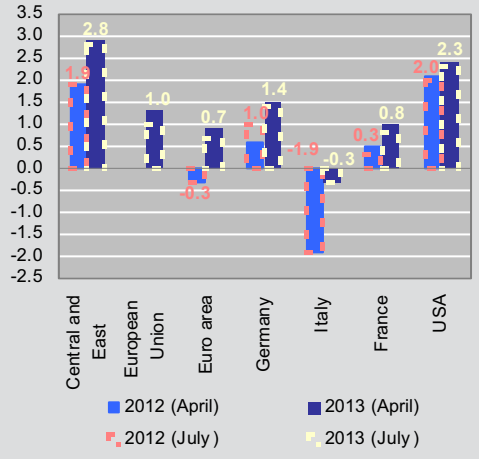
Q2 was marked by uncertainties surrounding the future course of the euro area debt crisis amid continuing recessionary pressures.

The euro area continues to face challenges. After Greek government was formed, fears that Greece may leave the euro area subsided. As banking sector crisis deepened, Spain requested and was granted assistance from euro area finance ministers. This came in the form of a credit line of EUR 100 bln for recapitalization of troubled banks. In late June, Cyprus became another country to seek official assistance.

Euro area economic growth declined by 0.3% in Q4 2011 and was broadly flat in Q1 2012. The rift among member states continued to widen. Although a technical entry into recession was averted in Q1, early economic indicators, PMI and *Eurocoin*, point to a fall in activity in Q2 and a possible negative growth outturn of around 0.6%. Unemployment is at its highest since the forming of the Monetary Union (11.2% in June). Euro area growth for 2012 is expected to be in the negative zone, with signs of a mild recovery in 2013. Bleak economic growth forecasts, compounded by political tensions and lack of a viable solution to bring public finances within sustainable bounds, continued to fuel high sovereign bonds yields for severely indebted member states.

In its July forecast, the IMF kept its euro area growth forecast for 2012 unchanged (– 0.3%), but downgraded prospects for 2013 from the April projection to 0.7%. The most recent Consensus Forecast expects euro area growth to drop by 0.5% in 2012 and rise modestly by 0.5% in 2013. The sharpest downturn is expected for Portugal, Italy and Spain (–3.35, –2.0% and –1.7%, respectively). Propped up by robust exports and domestic demand, Germany was able to offset a fall in GDP in Q4 2011 and record a growth of 0.5% in Q1 2012. Early economic

Chart IV.6.2 **Revisions of real GDP growth forecasts for 2012 and 2013 by the IMF*** (%)

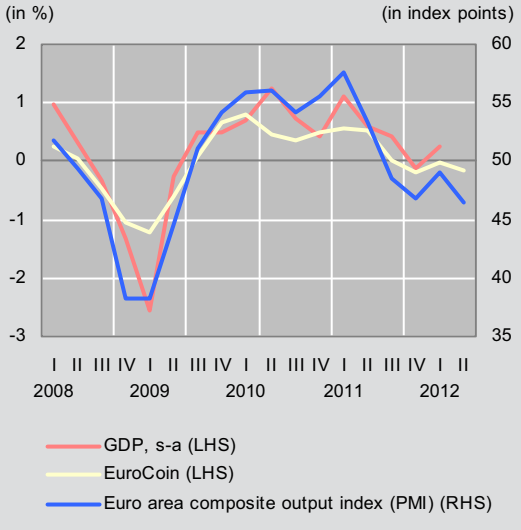


* Revision relative to the April World Economic Outlook Update.

Source: IMF WEO Update (July 2012) and IMF WEO (April 2012).

The economic growth outlook for Germany improved, while the outlooks for France and the USA were mildly downgraded.

Chart IV.6.1 **Movements in GDP and economic activity indicators of the euro area** (quarterly rates)



Source: Eurostat, Markit Group and Banca d'Italia

Indicators point to economic activity decline in Q2.

[21] Employed persons are those engaged based on an employment contract (with legal entities and private entrepreneurs). Persons engaged on a service contract or contract on temporary and seasonal jobs are not included.

activity indicators, however, signal that even Germany may see negative growth in Q2. As past measures have failed to produce the expected results, there is heightened awareness that austerity measures will have to go hand in hand with growth supporting measures in order for crisis to be weathered[22]. At the same time, support is growing for joint Eurobonds issue to provide relief for countries with the highest sovereign bond yields, an initiative strongly opposed by Germany. In the EU Summit in late June, leaders agreed to establish a single supervisory mechanism for euro area banks, while the European Stabilization Mechanism (ESM) will have the possibility to recapitalize banks directly, helping member states to avoid further accumulation of debt.

In July, Moody's Investors Service changed its outlook for Germany, the Netherlands and Luxembourg to negative from stable, citing an increased chance that Greece could leave the euro area and an increasing likelihood that greater collective support for Spain and Italy will be required. Moody's also downgraded Italy's country rating in July. In Q2, *Standard&Poor's*, *Fitch* and *Moody's* downgraded Spain's rating, while *Fitch* also lowered the ratings for Greece and Cyprus.

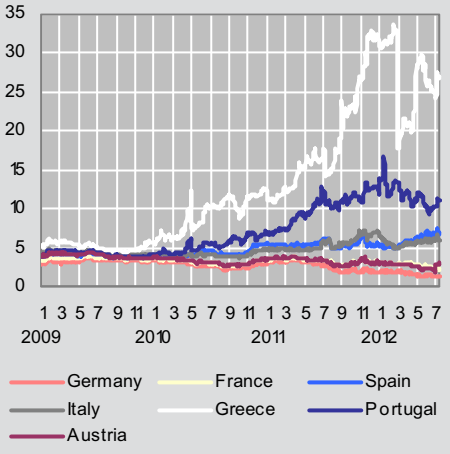
Euro area crisis induced slackened growth in Central and East Europe, with some countries of the region entering into recession. Forecasts for this part of Europe continue to be glum. Recovery is not expected before end-2012, and pressures on consumption and subsiding growth in public and private investments are expected to continue through 2013. As indicated by its EU 11 Regular Economic Report, the World Bank expects all EU11 countries to grow at a slower pace in 2012 (1.5%) compared to 2011 (3.1%). Poland is expected to see strongest growth, while Slovenia, Croatia and Hungary are likely to see a downturn. Serbia's growth is expected to be meagre. Certain relief for countries of the region battling with high import prices and inflation could come from a fall in prices of raw materials, particularly oil. Despite uncertainties surrounding future perspectives, a probable scenario is a gradual, unevenly distributed, weakening of the impact of the euro area crisis and a modest economic recovery across the region.

Inflationary pressures in the euro area are gradually waning, with the inflation rate nearing the target. In July, y-o-y inflation was 2.4%, unchanged from the previous three months. With inflation subsiding amid continuing recessionary pressures, the ECB decided to ease its monetary policy further in early July, cutting the reference rate to a historical low of 0.75%[23]. The ECB expects inflation to continue downwards in 2012, dropping below 2% in 2013. Further relaxation of the monetary policy stance is expected in the period ahead.

By contrast to the euro area, movements and projections of macroeconomic indicators in the US improved. Still, forecasts of economic growth and unemployment were downgraded from the April projection. Inflation continued to subside to 1.7% y-o-y in June, while Q1 economic growth (1.9%) was lower than in Q4 2011 (3.0%). In its June meeting, the FED Board of Governors decided to keep the Fed funds rate at 0.25% and announced its intention to keep the rate low throughout 2014. The board also decided to extend the Operation Twist, due to be ended in late Q2, until the end of the year. The Fed abstained from another round of quantitative easing measures, despite expectations prompted by low economic growth and slower than expected rise in employment.

Inflationary pressures waned across most Central and East European countries, mostly on account of lower

Chart IV.6.3 **Yield on sovereign bonds of euro area members**
(daily data, in %)



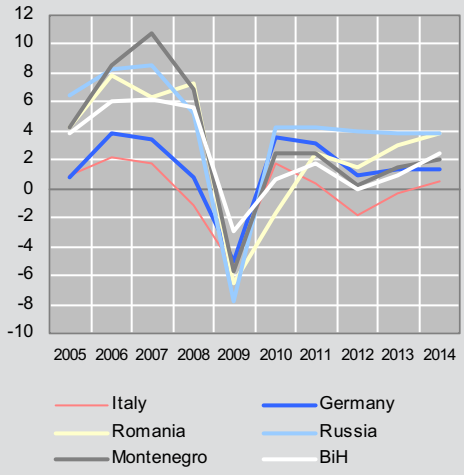
Source: Bloomberg.

Spanish 10-year government bond yields broke above 7 per cent in June, past the level beyond which Greece, Portugal and Ireland sought assistance.

[22] In the Summit in late June, EU leaders agreed to invest EUR 120 bln to encourage growth in countries most affected by the crisis.

[23] The reference rate was last lowered to 1% in the December 2011 meeting.

Chart IV.6.4 **GDP movements of Serbia's key foreign trade partners**
(y-o-y, in %)



Source: IMF WEO (latest available data).

A more palpable recovery of our key foreign trade partners is not expected before 2013.

prices of oil. The National Bank of Poland raised its reference rate by 25 bp as anticipated inflation overshot the target. In the Czech Republic, the reference rate was lowered by 25 bp due to an economic growth slowdown. The Central Bank of Hungary announced that it can only lower its reference rate (currently 7.0%) – the highest in the EU – after its government enters into a financial arrangement with the EU and the IMF to help topple the country's risk premium.

The exchange rate of the euro against the dollar weakened in Q2, particularly in May when it fell by 8%. This came as a result of deepening of the euro area debt crisis and uncertainties surrounding the outcome of the Greek election. Risk-averse investors found a safe haven in the dollar and the Swiss franc. The price of gold displayed a downward trend on account of diminished investor interest. Demand for gold subsided as the dollar strengthened and inflation declined, since gold is traditionally considered a store of value. In July, the euro gained against the dollar on the back of ECB officials' announcement of another set of euro area rescue measures.

V. Inflation projection

Year-on-year inflation will continue rising in Q3 2012, shooting past the upper bound of the target tolerance band. After peaking in H1 2013, it is expected to start retreating towards the target tolerance band and settle within it by end-2013. In the period ahead, inflation will be driven mostly by rising food and import prices, but will also be due to a very low base effect from the prior year. Low aggregate demand will work in the opposite direction. Risks to the projection are associated with domestic fiscal movements, food prices and developments abroad.

After declining by 0.5% in 2012, GDP is expected to increase by 2.5% in 2013, propped up by stronger net exports.

Medium-term inflation projection aims to show expected inflation movements (CPI), key factors behind such movements and the underlying risks. It is expressed both as a range for the CPI and as a central projection rate. This projection assumes an active monetary policy which aims to keep inflation within the target tolerance band in the medium run and fulfil its principal role as defined by the current monetary policy framework.

Initial conditions

As anticipated in the May Inflation Report, y-o-y inflation troughed in April (2.7%) touching slightly below the target tolerance band. It then rallied and increased at a slightly faster pace in June than anticipated in the May central projection due to a higher than expected adjustment in meat prices. At end-Q2, y-o-y inflation settled at 5.5%.

Quarterly inflation reached 3.1% in Q2 as non-processed food prices went up (fresh fruit and vegetables and fresh meat). Meat prices surged since end-May as higher prices of fodder (particularly soybean meal) and a weaker dinar pushed up the import price of meat. Strong upturn was also recorded for prices of products and services directly related to movements in the RSD/EUR exchange rate.

In May, financial sector inflation expectations were the lowest since records are available (4.0% based on the Ipsos survey and 5.5% based on the Bloomberg survey) settling within the bounds of the target tolerance band. They picked up from June, however, and are now at 6.2% (Bloomberg survey) and 7.0% (Ipsos survey) for the year ahead. Since June, there has also been a greater dispersion in respondents' expectations of inflation movements, as the market seems to expect increased economic uncertainty in the period ahead.

In Q2, the dinar depreciated by 5.0% in nominal terms against the euro[24] on the back of a pronounced FX supply-demand mismatch triggered mainly by foreign investors' reluctance to invest in Serbia and increased government spending. And while NBS interventions in the IFEM (EUR 790.3 bln in Q2) and regulatory amendments relating to required reserves managed to lessen depreciation pressures, they at the same time bore down on banking sector dinar liquidity.

Risk premium (as measured by the EMBI) increased at end-Q2 relative to Q1 across the region, but the increase was particularly pronounced for Serbia (by 86 bp). In late Q2, EMBI for Serbia reached a regional high (553 bp) for the first time in five months. And while risk premiums across the region have been declining since June, EMBI for Serbia continued up as foreign investors restrained from making investments amid rising uncertainties surrounding fiscal movements. At end-July, EMBI for Serbia climbed to around 600 bp.

[24] Average depreciation in the period.

Second-quarter fiscal policy was expansionary. In the first six months of the year, the consolidated budget deficit is estimated at around RSD 110 bln, or over 70% of the 2012 deficit agreed with the IMF. This came as a result of faster than planned growth in expenditures, including primarily outlays for subsidies, capital expenditures and outlays for goods and services. Such large difference between actual and planned deficits and the quickly rising public debt call for urgent fiscal consolidation.

GDP is estimated to have increased by 0.6% s-a in Q2 and its decline to have slowed y-o-y from 1.3% to 0.6%. Net exports (thanks to stronger exports of goods and services and declining imports) and government consumption gave a positive contribution to GDP growth. Conversely, private sector investments and household consumption subsided.

As GDP increased, the output gap mildly contracted but remained negative in Q2, signalling a continuation of demand-side disinflationary pressures in the period ahead. This is also supported by the latest labour market developments. According to the Labour Force Survey, unemployment rose to 25.5% in April (from 23.7% in November), while rates of formal and informal employment went down.

The international environment in Q2 was marked by uncertainties surrounding the future course of the euro area sovereign debt crisis amid continuing recessionary pressures. Although the euro area did not technically enter into recession in Q1, economic growth indicators (PMI and Eurocoin) signal a possible drop in euro area's GDP in Q2 2012. This, together with expectations of a continued decline in inflation, prompted the ECB to continue easing its monetary policy stance, lowering the key policy rate to a historical low of 0.75% in early July.

Global food prices (FAO Food Price Index) trended down throughout Q2 and in June fell to their record low since September 2010. However, adverse weather worldwide recently triggered a recovery in global prices of primary agricultural commodities. Thus, a poor harvest in South America pushed up prices of soybean meal globally, which had an impact on these prices in our country as well. Prices of major primary agricultural products – corn and wheat – gained 6.0% and 4.6%, respectively, in the national commodity exchange. The recently published outlook for global agricultural production is grim. This will affect price movements in global commodity exchanges, placing additional pressure on domestic prices especially in the context of droughty weather and high food price volatility in Serbia.

Crude oil prices in global commodity exchanges plummeted in Q2 as demand subsided and bad economic news came from the euro area and the USA. In the domestic market, this produced only a moderate disinflationary effect on petroleum product prices as the dinar weakened against the US dollar (7.1% on average in Q2).

As of Q2, the National Bank of Serbia tightened its monetary grip. The key policy rate was raised on three occasions – by 0.5 pp in June and by 0.25 pp each in July and August to reach 10.5%. As banking sector dinar liquidity had been on a steady decline since the start of the year, in July the National Bank introduced liquidity operations, i.e. repo purchase of securities with 1-week maturity, as its main open market operations.

As indicated by the MCI, monetary policy was expansionary in Q2. This is signalled by a widening depreciation gap of the real exchange rate, which could trigger an increase in marginal costs for net importers in the upcoming period. On the other hand, the real interest rate had a restrictive effect as it edged up above the trend in Q2.

Projection assumptions

External assumptions

Though German economic growth helped the euro area avert technical recession in Q1, early economic activity indicators signal a possible fall in German GDP in Q2. Still, the Bundesbank and the IMF have recently revised upwards their projections of German GDP growth for 2012, citing robust domestic demand. The outlook for the euro area GDP is unchanged from the May mid-term projection, i.e. the projection assumes a 0.5% drop in 2012. The recovery expected for 2013 has been moderated from 0.9% to 0.5%. Domestic demand will be weighed down by fiscal consolidation measures to be taken in most euro area countries and uncertainties surrounding the future course of the sovereign debt crisis.

The ECB projection anticipates a continuing fall in euro area inflation in 2012 to below 2.0% in 2013. This will probably encourage the ECB to lower its reference rate further. An anticipated slight recovery in economic

Table V.0.1 **Projection assumptions**
(changes relative to the prior projection are given in brackets)

	2012		2013	
External assumptions				
EU inflation (Q4 to Q4)	2,0%	(+0,1)	1,7%	(-)
ECB policy rate (year-end)	0,5%	(-0,5)	0,5%	(-0,5)
Euro area GDP growth	-0,5%	(-)	0,5%	(-0,4)
Ural oil price per barrel (year-end, USD)	105	(-5)	105	(-5)
Internal assumptions				
Administered prices (Dec to Dec)	9,3%	(+1,5)	7,2%	(-)
Fruit and vegetable prices (Dec to Dec)	19,5%	(+11,7)	2,2%	(-6,4)
Trends				
Appreciation trend of the real exchange rate (average)	2,0%	(-)	2,2%	(-)
Real interest rate trend (average)	4,6%	(+0,5)	3,6%	(+0,5)

Source: NBS.

activity coupled with well-anchored long-term inflation expectations should moderate the pressure on prices in the euro area in the period ahead.

As global oil prices declined in Q2, the assumption for end-2012 Ural oil price has been mildly downgraded. The current increase in oil prices triggered by the EU embargo on Iranian oil imports is not expected to display a long term trend. The projection assumes that, given dampened global demand, oil prices will not increase in 2013 either. Moreover, movements in crude oil futures signal a possibility for the decline in oil prices to continue into 2013 as well.

Internal assumptions

The current medium-term inflation projection is based on the assumption that the absence of adjustment in administered prices in H1 will be compensated for in the second half of the year.

Due to this year's drought, fruit and vegetable prices will increase more than expected. As their level will therefore be very high, they are expected to record a relative decline in the coming year (i.e. a slower growth relative to other prices) even if the agricultural season turns out to be only average.

The current projection also assumes a 2.0 pp increase in the VAT rate. This increase would have a one-off impact on inflation, but its effect would linger in the year-on-year inflation rate for a year.

Inflation projection

Y-o-y inflation is projected to continue rising in Q3 2012 and pass the upper bound of the target tolerance band. After peaking in H1, it will start retreating towards the target tolerance band and settle within it by end-2013.

As anticipated in the May Inflation Report, inflation growth will be fuelled by several factors: cost pressures on food prices, past depreciation of the dinar and faster increase in administered prices.

As fruit and vegetable prices were low before the start of this year's agricultural season, we already anticipated their adjustment and a resultant increase in inflation. However, due to extremely adverse weather, this year's season will probably mirror the 2007 season[25], resulting in pronounced y-o-y growth in fruit and vegetable prices in Q3 and Q4. Cost pressures on prices of processed food will be further fuelled by the already rising prices of primary agricultural commodities (most notably corn and wheat). In addition, poorer global agricultural output will reflect on prices of primary agricultural commodities in the global market as well.

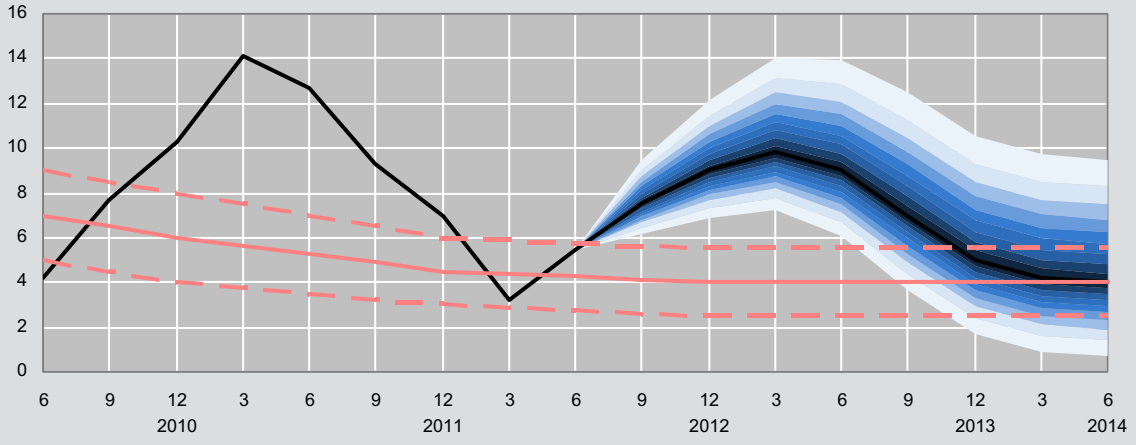
Past depreciation of the dinar in part spilled over to prices, while at the same time pushing up real marginal costs for net importers. This is likely to lead to further price growth in the period ahead. The strength of the resultant inflationary pressures will, however, depend on the ability of net importers to raise their prices in the conditions of faltering demand.

Administered prices had a disinflationary effect in H1, as there were hardly any adjustments in these prices in that period. As electricity prices are expected to increase in Q4, H2 is likely to witness stronger inflationary pressures coming from administered prices. The absence of a clear timeline and strategy for administered price adjustments further encourages the already strong volatility in domestic inflation.

The resulting heightened inflationary pressures are expected to push inflation expectations up. Their rise may be moderated by movements in the domestic

[25] 2007 was also a drought year.

Chart V.0.1 **Inflation projection**
(y-o-y, in %)



Source: NBS.

Inflation has been rising since Q2 2012 and is expected to peak in H1 2013. It will then start a gradual decline and settle within the target tolerance band by end-2013. The projection is asymmetrical to the upside due to uncertainties surrounding fiscal movements, food prices and developments abroad.

The fan chart depicts probability of various inflation outcomes in the next eight quarters. Central projection is within the darkest central band and the probability that inflation would lie in it is 10%. Outturns of inflation are also expected to lie somewhere within the entire fan chart 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%.

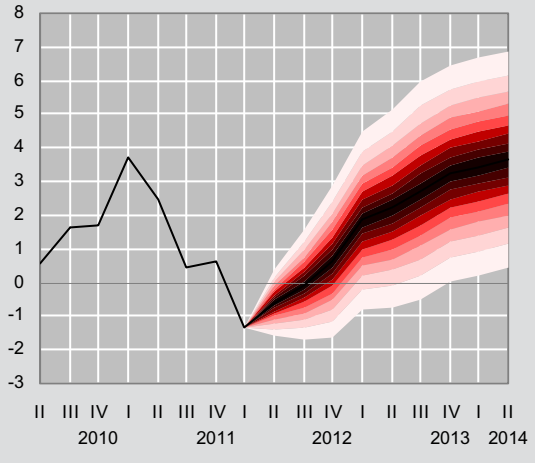
economic activity and the deepening of the negative output gap by mid-2013.

By contrast to food, administered and import prices which are expected to produce an inflationary effect, low aggregate demand will be the key factor of disinflation containing price growth in the forecast period. Domestic and net external demand continue to run low.

By contrast to the May Inflation Report which projected GDP for 2012 to grow by 0.5%, the current central projection anticipates a 0.5% drop in GDP due to meagre agricultural production. As earlier, on the expenditures side, the projection is based on slower economic recovery of Serbia's main trading partners, which is likely to weigh down on export demand and domestic investment. Nonetheless, the key positive contribution to GDP in 2012 is expected from net exports, as a result of automotive industry investments completed in the prior period and the past weakening of the dinar. Fixed investment and final consumption will record a decline.

After declining in 2012, GDP is expected to gain 2.5% in 2013, driven mainly by net exports. The projection band

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



Source: NBS.

Economic activity will decline in 2012, but is expected to recover in 2013.

for GDP growth is symmetrical, as there is equal probability of downside and upside departures.

Risks to the projection

Uncertainties surrounding the projected outlook for inflation are associated with fiscal policy movements and food prices, and, to a degree, international developments.

After a highly expansionary fiscal policy stance in H1, preservation of macroeconomic stability of the country calls for a strong fiscal adjustment in the shortest possible time.

At a time when the global financial market is highly sensitive to indicators of public debt sustainability, the importance of sustainable public finance cannot be overestimated. The rise in the risk premium for Serbia, which will probably be further elevated if no valid fiscal consolidation programme is adopted, and potential depreciation pressures could put further strain on inflation.

Agricultural commodity prices in Serbia are characterised by high volatility. In the prior period, this was buttressed by relatively strong customs protection on imports and incentives for exports of agricultural products amid rising food prices in the global market, as well as an inadequate policy of commodity reserves. Lifting of measures limiting the already slack supply of agricultural commodities in the domestic market in the period ahead would alleviate the volatility in agricultural commodity prices and the resultant strain on inflation.

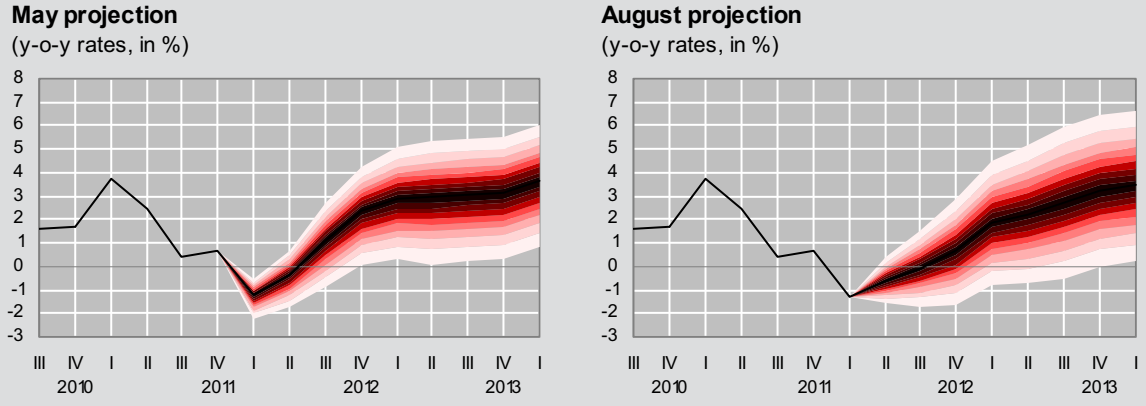
Failure to restore investor confidence in public finance sustainability of some euro area members could push the area into a still deeper crisis, affecting Serbia's exports and the risk premium. Crisis in the euro area would weigh down on investment inflows and clog the wheels of the domestic economy, while the potential rise in risk premium and the resulting depreciation pressures would build up inflationary pressures.

On balance, the risks to the inflation projection are judged to be skewed to the upside, due to a possible absence of a valid fiscal consolidation programme, potential growth in country risk premium and stronger depreciation pressures, as well as faster than expected growth in inflation expectations.

Comparison with the previous projection

The projected spread of inflation outcomes is higher than in the May report. This is due mainly to stronger rise in import prices, but also to poorer agricultural season, both globally and at home, which has already pushed up prices of primary agricultural commodities and non-processed food.

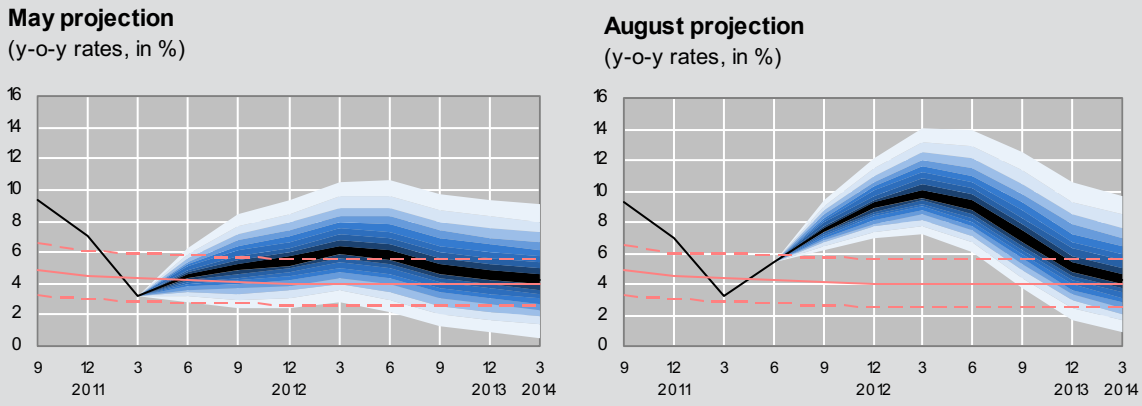
Chart V.0.3 **Current vs. previous GDP growth projection**



Source: NBS.

The new GDP growth projection is lower than the May 2012 projection for almost the entire projection period.

Chart V.0.4 **Current vs. previous projection**



Source: NBS.

The new inflation projection is higher than the May 2012 projection for the entire projection period.

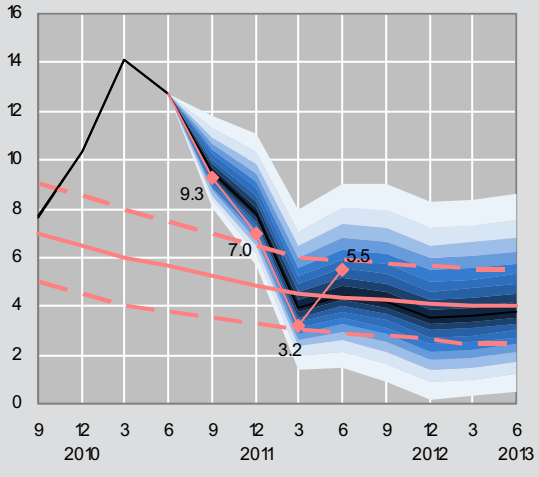
Over the last year, inflation moved within the range projected in August 2011. Until Q2, it moved slightly below the central projection, only to edge up above it in the second quarter. This was due to rising prices of fresh meat and lower than expected drop in fruit and vegetable prices in June.

The new GDP growth projection is lower than in the May report almost for the entire projection period. It was revised downwards for 2012 due to a bad agricultural season and for 2013 due to lower than expected GDP growth in the euro area.

Outlook for the key policy rate

The future path of the key policy rate will depend primarily on the dynamics and intensity of fiscal consolidation, continuation of the arrangement with the IMF, and food price movements and their impact on inflation expectations for the coming year. To a degree, risks also relate to developments in the international environment.

Chart V.0.5 **Inflation outturn vs. August 2011 inflation projection**
(y-o-y rates, in %)



Source: NBS.

During the last year, y-o-y inflation moved within the band projected in August 2011.

Table A
Indicators of Serbia's external position

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	I 2012	II 2012
EXTERNAL LIQUIDITY INDICATORS (in %)												
Forex reserves/imports of goods and services (in months)	4.1	4.7	3.9	6.1	9.0	7.2	5.2	9.4	8.1	8.6	7.8	7.1
Forex reserves/short-term debt	360.7	535.6	702.2	519.2	941.7	917.5	380.8	528.8	546.4	1,860.8	1,914.1	2,971.0
Forex reserves /GDP	13.6	16.4	16.3	24.2	38.7	33.8	25.0	36.6	35.7	38.7	35.5	33.3
Debt repayment/GDP	1.4	2.0	3.9	4.7	7.0	10.1	10.6	11.5	12.3	13.1	12.1	14.5
Debt repayment/exports of goods and services	7.0	9.0	16.4	17.7	23.5	33.2	34.0	39.1	33.8	35.5	33.7	34.4
EXTERNAL SOLVENCY INDICATORS (in %)												
External debt/GDP	58.7	55.9	49.8	60.1	60.9	60.2	64.6	77.7	84.9	77.5	77.2	79.0
Short-term debt/GDP	3.8	3.1	2.3	4.7	4.1	3.7	6.6	6.9	6.5	2.1	1.9	1.1
External debt/exports of goods and services	300.9	251.6	211.5	228.9	204.1	197.3	207.6	265.3	236.2	210.3	211.1	208.5
FINANCIAL RISK EXPOSURE INDICATORS (in %)												
Forex reserves/M1	143.3	195.1	220.1	290.3	356.1	306.7	300.4	393.4	416.6	429.6	462.9	437.4
Forex reserves/reserve money	131.9	167.8	165.5	169.8	179.5	173.8	140.7	190.5	196.4	207.6	219.4	192.2
OPENNESS OF ECONOMY (EXPORTS + IMPORTS)/GDP	59.3	63.9	73.7	73.6	81.2	85.8	86.8	73.6	90.3	90.9	93.7	102.4
MEMORANDUM: (in EUR million)												
GDP (in EUR million)	16,028	17,306	19,026	20,306	23,305	28,468	32,668	28,957	28,006	31,140	7,005	7.164 [1)]
External debt	9,402	9,678	9,466	12,196	14,182	17,139	21,088	22,487	23,786	24,125	24,068	24,086
External debt servicing	218	348	736	945	1,635	2,885	3,453	3,314	3,403	4,072	848	1,042
Central bank foreign exchange reserves	2,186	2,836	3,104	4,921	9,020	9,634	8,162	10,602	10,002	12,058	11,073	10,161
Short-term debt	606	529	442	948	958	1,050	2,143	2,005	1,830	648	579	342
Current account balance	-671	-1,347	-2,620	-1,778	-2,356	-5,053	-7,054	-2,084	-2,082	-2,968	-1,177	-718

		2004	2005		2006		2007	2008	2009	2010	2011
		Nov	May	July	Feb	Apr	Jun	Dec	Dec	Nov	Mar
CREDIT RATING	*S&P*	B+		BB-	BB- /positive		BB- /stable	BB- /negative	BB-/stable		BB /stable
	Fitch		BB-			BB- /stable		BB- /negative		BB- /stable	

Methodological notes:
Foreign exchange reserves/imports of goods and services (in months) - ratio of foreign exchange reserves at end-period to average monthly imports of goods and services.
Foreign exchange reserves/short-term debt (in %) - ratio of foreign exchange reserves to short-term debt at end-period.
Foreign exchange reserves/GDP (in %) - ratio of foreign exchange reserves at end-period to GDP.
Debt repayment/GDP (in %) - ratio of debt repayment to GDP during period under review.
Debt repayment/exports (in %) - ratio of debt repayment to exports of goods and services during period under review.
Debt/GDP (in %) - ratio of outstanding debt at end-period to GDP.
Debt/exports (in %) - ratio of outstanding debt at end-period to annual value of exports of goods and services.
Foreign exchange reserves/M1 (in %) - ratio of foreign exchange reserves to money supply at end-period.
(Exports + imports)/GDP (in %) - ratio of value of exports and imports of goods and services to GDP during period under review.

[1)] NBS estimate.

Notes:
1. Data are subject to corrections in line with the official data sources.
2. As of October 2006, the IMF publication "International Financial Statistics" features a page on monetary statistics of the Republic of Serbia. This required the NBS to bring its statistical reports in compliance with international statistical standards and methodology harmonised, at the level of the IMF, for all countries. We have adjusted our financial risk exposure indicators accordingly.
3. Trade with Montenegro is registered within relevant transactions as of 2003.
4. Foreign debt repayment does not include: short-term debt repayment and advanced debt repayment.
5. In accordance with BPM 5, a portion of estimated remittances was transferred from the financial account to the current account.
6. As of 01.01.2010 Statistical Office, according to UN recommendations, applies general trade system which is broader concept and includes all goods entering/exiting country's economic territory. Statistical Office has published comparable data for 2007, 2008 and 2009. Previous years are disseminated using special trade system.
7. In September 2010, the methodology of external debt statistics was changed – public sector external debt includes liabilities under SDR allocation (EUR 443.5 mln) used in December 2009, as well as the capitalised interest to the Paris Club Creditors (EUR 86.4 mln). Private sector external debt excludes loans concluded before 20 December 2000 in respect of which no payments are made (EUR 875.4 mln, of which EUR 397 mln related to domestic banks and EUR 478.4 mln to domestic enterprises).

Table B
Key macroeconomic indicators

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	I 2012	II 2012
Real GDP growth (in %)[1]	4.3	2.5	9.3	5.4	3.6	5.4	3.8	-3.5	1.0	1.6	-1.3	-0.6
Consumer prices (in %, relative to the same month a year earlier)[2]	14.8	7.8	13.7	17.7	6.6	11.0	8.6	6.6	10.3	7	3.2	5.5
NBS foreign exchange reserves (in EUR million)	2,186	2,836	3,104	4,921	9,020	9,634	8,162	10,602	10,002	12,058	11,073	10,161
Exports (in EUR million)[3][8]	3,125	3,847	4,475	5,330	6,949	8,686	10,157	8,478	10,070	11,470	2,519	3,030
- growth rate in % compared to a year earlier	16.0	23.1	16.3	19.1	30.4	25.0	16.9	-16.5	18.8	13.9	-2.6	5.1
Imports (in EUR million)[3][8]	-6,387	-7,206	-9,543	-9,613	-11,971	-16,016	-18,843	-13,577	-14,838	-16,823	-4,042	-4,302
- growth rate in % compared to a year earlier	27.2	12.8	32.4	0.7	24.5	33.8	17.7	-28.0	9.3	13.4	5.5	5.8
Current account balance[4][8] (in EUR million)	-671	-1,347	-2,620	-1,778	-2,356	-5,053	-7,054	-2,084	-2,082	-2,968	-1,177	-718
as % of GDP	-4.2	-7.8	-13.8	-8.8	-10.1	-17.7	-21.6	-7.2	-7.4	-9.5	-16.8	-10.0
Unemployment according to the Survey (in %)[5]	13.3	14.6	18.5	20.8	20.9	18.1	13.6	16.1	19.2	23.0	25.5	
Wages (average for the period, in EUR)	152.1	176.9	194.6	210.4	259.5	347.6	402.417	337.9	330.1	372.5	357.6	363.5
RS budget deficit/surplus (in % of GDP)[6]	-4.3	-2.6	-0.3	0.3	-1.9	-1.7	-1.7	-3.4	-3.7	-4.2	-7.0	-7.2
Consolidated fiscal result (in % of GDP)	-1.8	-2.4	0.8	0.9	-1.9	-2.0	-2.6	-4.5	-4.7	-5.0	-7.1	/
RS public debt, government securities by nominal value (external + internal, in % of GDP)[6][7]	72.9	66.9	55.3	52.2	37.6	30.9	29.2	34.5	44.0	47.7	50.7	54.7
RSD/USD exchange rate (average, in the period)	64.70	57.56	58.44	66.90	67.01	58.39	55.76	67.47	77.91	73.34	82.38	88.77
RSD/USD exchange rate (end of period)	58.98	54.64	57.94	72.22	59.98	53.73	62.90	66.73	79.28	80.87	83.31	92.15
RSD/EUR exchange rate (average, in the period)	60.66	65.13	72.70	83.00	84.10	79.96	81.44	93.95	103.04	101.95	108.11	113.73
RSD/EUR exchange rate (end of period)	61.52	68.31	78.89	85.50	79.00	79.24	88.60	95.89	105.50	104.64	111.36	115.82
Memorandum												
GDP (in EUR million)	16,028	17,306	19,026	20,306	23,305	28,468	32,668	28,957	28,006	31,140	7,005	7.164 [9]

[1] At constant prices of previous year.
[2] Retail prices until 2006.
[3] Trade with Montenegro is registered within relevant transactions as of 2003.
[4] In accordance with BPM 5, a portion of estimated remittances was transferred from the financial account to the current account.
[5] Source: Labour Force Survey, Statistical Office.
[6] Source: MoF for public debt and NBS for estimated GDP.
[7] Public debt statistics records government securities at market value since November 2011. In line with such methodological change, the National Bank of Serbia made a backward estimate of the stock of public debt.
[8] As of 1 January 2010, the Statistical Office, according to UN recommendations, applies the general trade system which is a broader concept and includes all goods entering/exiting the country's economic territory, apart from goods in transit. The Statistical Office published comparable data for 2007, 2008 and 2009. Previous years are disseminated under a special trade system.
[9] NBS estimate.

Notes:
1. Data are subject to corrections in line with the official data sources.

Index of charts and tables

Charts

Tables

Charts in boxes

Tables in text boxes

Sources of data: the National Bank of Serbia and Serbian Statistical Office, unless stated otherwise.

Executive Board meetings and changes in the key policy rate

2011

Date	Key policy rate (p.a., in %)	Change (in basis points)
17 January	12.00	+50
10 February	12.00	0
10 March	12.25	+25
7 April	12.50	+25
12 May	12.50	0
9 June	12.00	-50
7 July	11.75	-25
11 August	11.75	0
8 September	11.25	-50
6 October	10.75	-50
10 November	10.00	-75
8 December	9.75	-25

2012

Date	Key policy rate (p.a., in %)	Change (in basis points)
19 January	9.50	-25
9 February	9.50	0
8 March	9.50	0
12 April	9.50	0
10 May	9.50	0
7 June	10.00	+50
12 July	10.25	+25
9 August	10.50	+25
6 September		
18 October		
8 November		
6 December		

Press releases from NBS Executive Board meetings

Press release from Executive Board meeting held on 7 June 2012

The NBS Executive Board has raised the key policy rate from 9.5 to 10 percent.

Though year-on-year inflation was around the lower bound of the target tolerance band in April, it is expected to rise moderately towards the target from May onwards. This rise will be driven by the growth in import prices, the onset of a new agricultural season, and the increase in administered prices in the second half of the year. Based on the NBS projection, inflation is expected to move around the upper bound of the target tolerance band in late 2012 and early 2013. With this in mind, the Executive Board voted to raise the key policy rate to 10 percent.

The Executive Board noted once again that the degree of monetary policy restrictiveness in the coming period will depend primarily on the speed of enactment and implementation of the fiscal consolidation programme, the intensity of the programme itself, and continuation of the arrangement with the IMF.

To support financial stability, the Executive Board also decided in its meeting today:

• to keep the current foreign exchange required reserve ratios, while at the same time increasing the dinar share of allocations under foreign exchange required reserves from 20 to 27 percent for the sources of funding with maturity of up to two years, and from 15 to 19 percent for the sources of funding with maturity of over two years, as well as

• to increase the required reserve ratio on dinar liabilities with a foreign currency clause to 50 percent for all maturities.

These measures are expected to lessen the difference between the cost of borrowing in dinars and in foreign exchange, contribute to the stabilisation of movements in the foreign exchange market, and provide an additional impetus to long-term borrowing in the coming period.

Governor Šoškić will explain the reasoning behind the above decisions at a press conference tomorrow.

The next rate-setting meeting will take place on 12 July.

Press release from Executive Board meeting held on 12 July 2012

The NBS Executive Board voted to maintain the key policy rate at 9.5 percent.

The NBS Executive Board raised today the key policy rate from 10.0% to 10.25%.

Consistent with NBS projections, year-on-year inflation has been rising since May, in response to the onset of a new agricultural season and higher import prices. A moderate rise in year-on-year inflation is expected to continue in the coming period, due to the low base effect, current agricultural product prices and administrative price hikes in the second half of the year. Driven by these factors, year-on-year inflation will temporarily move above the upper bound of the target tolerance band. To prevent a spill-over to inflation expectations and contribute to macroeconomic stabilisation, the NBS Executive Board decided to raise the key policy rate to 10.25%.

The NBS Executive Board highlights that the degree of future monetary policy restrictiveness will depend crucially on fiscal policy developments, i.e. the speed of the adoption, intensity and implementation of the fiscal consolidation programme, including the continuation of the arrangement with the IMF.

Governor Dejan Šoškić will further explain the rationale behind the decision at the press conference on Monday, 16 July.

The next rate-setting meeting of the NBS Executive Board will be held on 9 August 2012.

Press release from Executive Board meeting held on 9 August 2012

The Executive Board of the National Bank of Serbia raised today the key policy rate from 10.25% to 10.50%.

Year-on-year inflation approached the upper bound of the target tolerance band in June. Inflation is expected to increase further in the period ahead on the back of expected higher food prices due to a poor agricultural season, increase in import and administered prices and low base effect from the prior year. Inflation is expected to peak in the first half of 2013 and then start retreating towards the target. In view of such developments and an increase in the country's risk premium, the Executive Board voted to raise the key policy rate in order to moderate inflationary pressures and act pre-emptively to contain inflation expectations.

The Executive Board highlights that the degree of future monetary policy restrictiveness will depend on the dynamics of fiscal consolidation, food price movements and international developments.

At its today's meeting, the Executive Board considered and adopted the August Inflation Report which will be presented to the public on 15 August 2012.

The next rate-setting meeting will be held on 6 September 2012.

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