NATIONAL BANK OF SERBIA

INFLATION REPORT

November 2007

Belgrade, November 2007

Introductory Note

In accordance with the Memorandum on the Principles of the New Monetary Policy Framework adopted in August 2006, the NBS has committed to achieving core inflation objective within the targeted range using the key policy rate as its main instrument and other monetary policy measures as supporting instruments.

Since the NBS aims to formally adopt inflation targeting in the near future to increase transparency of its monetary policy and to enhance communication with the public, it has decided to prepare and publish quarterly inflation reports as its main channel for communicating with the public. This report shall provide information on the main developments in the economy that affect the decisions of the Monetary Policy Committee and the activities of the National Bank of Serbia.

Inflation report contains information on the current and expected inflation, analysis of underlying macroeconomic developments, explanation of the reasoning behind the decisions of the Monetary Policy Committee and an assessment of the monetary policy efficiency as implemented during the previous quarter. Integral parts of this report are inflation projection for at least four quarters in advance, assumptions on which such projection is based and an analysis of the basic risks involved in achievement of target inflation.

Access to such information shall enable the public to have better understanding of monetary policy implemented by the central bank and its commitment to achieving inflation objective. Moreover, it shall play a role in curtailing inflationary expectations and maintaining price stability, which is the basic task of the NBS as defined by the Law.

November Inflation Report was adopted by the Monetary Policy Committee on its session of 12 November 2007.

Earlier issues of the Inflation Report are available on the NBS website (http://www.nbs.yu).

Monetary Policy Committee of the National Bank of Serbia:
Radovan Jelašić, *Governor*
Ana Gligorijević, *Vice-Governor*
Diana Dragutinović, *Vice-Governor*
Mira Erić-Jović, *Vice-Governor*

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I. Overview

It is almost certain that the National Bank of Serbia will achieve its core inflation target set for the year 2007 (4-8%). As acknowledged in the recent IMF mission statement, monetary policy has performed well despite a number of inflationary pressures, such as unbalanced fiscal developments, high growth in wages, agricultural shock and the increase in oil prices.

Table I.0.1

Key macroeconomic indicators

	2006	2007		
	Dec	Mar	Jun	Sep
Retail prices (y-o-y growth, in %)	6.6	5.6	5.1	7.4
Core inflation (y-o-y growth, in %)	5.9	4.0	2.8	3.3
Belibor (90 days, monthly average, annual level)	16.5	12.3	10.1	10.3
M3 (y-o-y growth, in %)[1)]	38.9	41.2	38.4	36.6
GDP (y-o-y growth)[1)]	5.0	8.7	7.0	6.1
Consolidated fiscal result (% of GDP)[1)]				
Ministry of Finance methodology	-7.5	2.3	3.5	-1.9
IMF methodology	-7.2	0.4	2.8	-2.1
Balance of goods and services (% GDP)[1)]	-19.8	-22.9	-21.3	-18.5

[1)] Quarterly data.

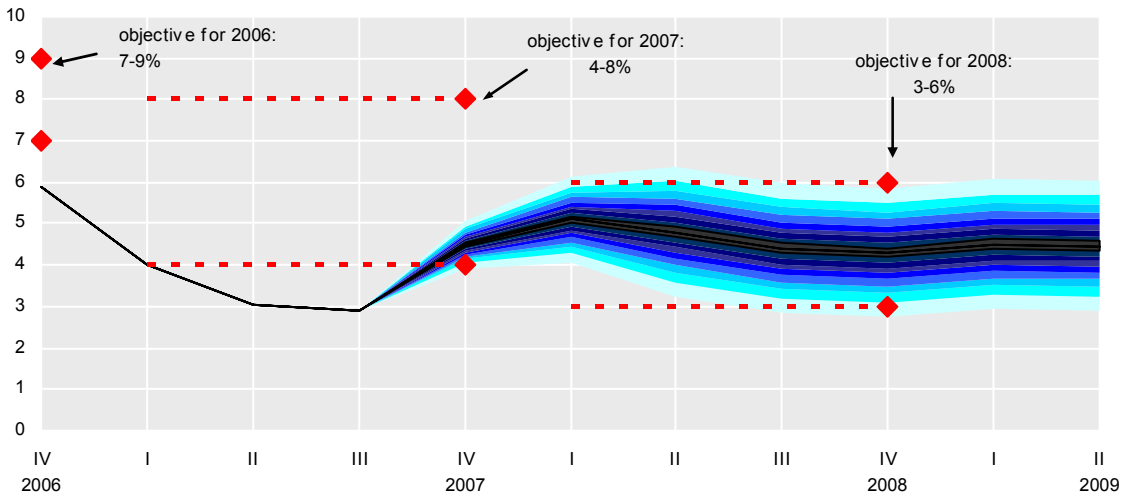
The main feature of movements in prices in Q3 is the effect of the seasonally unexpected low supply (and high growth in prices) of agricultural products which, together with the effect of the increase in world prices of oil outweighed disinflationary effects of the nominal appreciation of the dinar and the appreciation gap of the real exchange rate. As a result, core inflation more than doubled on Q2 while, after declining for two consecutive years, year-on-year core inflation recorded an increase to 3.3% in line with our expectations announced in the August Inflation Report (between 3.0 and 3.5%).

End of Q3 year-on-year increase in retail prices of 7.4% also came to our expectations (between 7.3 and 7.6%). Quarterly growth in prices of 2.6% was equally due to movements in core and regulated prices. Q3 effects of agricultural shock on core and headline inflation are estimated at around 1.2 pp and 1.5 pp, respectively.

Monetary policy retained its restrictive character in Q3 primarily as a result of real appreciation of the exchange rate for the dinar. Expecting a rise in inflation, the MPC decided to raise the key policy rate by 25 basis points in August and communicated the need for higher key policy rates in the future. The rising outlook for the key policy rate fed through into higher rates in the money market. Abundant supply of foreign currency in the market, increase in the key policy rate plus the effect of numerous other factors resulted in nominal appreciation of the exchange rate.

Despite a slow down in economic activity, GDP output and foreign trade performance retained relatively high rates of growth. Economic slowdown in Q3 was induced by unfavourable weather conditions and not by tightened monetary policy. Weather related decline in agricultural production led to a consequent decline in industrial output.

Core inflation projection
(y-o-y rates, in %)



Q4 core inflation will fall relative to Q3 and will range between 1.3% and 1.5%, while its end-2007 central projection will settle closer to the lower bound of the targeted range, i.e. 4.5%. Key factors expected to induce an increase in core inflation in Q4 are similar to those prevailing in Q3 (the drought and the increase in world prices of crude oil), while the gradual waning of the agricultural shock will be accompanied by relatively stronger effects of inflation expectations. On the other hand, Q3 nominal appreciation of the dinar leading to lower import prices and increased appreciation gap of the real exchange rate shall have a disinflationary effect in the period ahead.

The 2007 headline inflation will hover around 8.9%, and reach approximately 1.9% in Q4. As for the increase in regulated prices in Q4, an increase is expected in prices of oil derivatives, utilities, cigarettes, milk, flour and bread. It is, however, expected that growth in regulated prices and prices of agricultural products will slow down in Q4 relative to the preceding quarter.

End-2008 core inflation will range between 2.7% and 5.9% while the central projection is placed around 4.3%. We expect that the year-on-year increase in core inflation throughout the year 2008 will remain within the targeted range of 3-6%. Such projection presupposes moderate relaxation of monetary policy in the period ahead, which began by a 25 basis points cut in the key policy rate in November. The relaxation is needed in order to rein in disinflationary pressures emanating from the nominal appreciation of the exchange rate and the appreciation gap of the real exchange rate for the dinar. Monetary policy relaxation could fail to materialize should it be assessed that fiscal movements are likely to induce significant inflationary effects.

Central projection of headline inflation in 2008 is placed at around 6.0% assuming 7.8% growth in regulated prices (as projected by the Ministry of Finance). Major risk to the achievement of such projection may come from excessive demand resulting from fiscal expansion, as well as from movements in prices of oil and agricultural products.

There are no major changes from August projection in terms of core inflation except that due to agricultural shock, higher inflation expectations and surging oil prices, inflationary pressures are expected be somewhat stronger in the first half of 2008. The differences are more pronounced when it comes to monetary policy stance. While the previous projection was consistent with moderate tightening of the monetary policy, the most recent one assumes its moderate relaxation primarily on account of the assumed much stronger disinflationary pressures arising from nominal and real appreciation of the exchange rate.

II. Inflation Developments

At end-Q3, year-on-year retail price growth came to 7.4% and is expected to settle around 8.9% at year-end. The 2.6% retail price growth in Q3 was equally due to movements in regulated prices and market-determined prices. Strong increase in headline and core inflation was mainly driven by drought which contributed 1.2 percentage points to year-on-year core inflation of 3.3% at end-Q3. By end-2007, core inflation is expected to settle around 4.5%, year-on-year, which is within the targeted range.

Overall, Q3 was marked by unexpected growth in both prices of agricultural products and market-determined prices. Instead of the seasonal decline by 10-20%, due to drought-induced downturn in crop yield, prices of agricultural products recorded a 6.6% increase in the period under review.

Table II.0.1

Indicators of price growth

(growth rates in %)

	XII 2006 / XII 2005	III 2007 / III 2006	VI 2007 / VI 2006	IX 2007 / IX 2006
Retail prices	6.6	5.6	5.1	7.4
Core inflation	5.9	4.0	2.8	3.3
Consumer prices	...	4.1	4.0	8.0
Cost of living	6.0	4.2	3.5	8.9
Prices of goods	6.1	3.7	3.0	9.4
Prices of services	5.2	7.0	6.1	5.5
Industrial producer prices	7.3	5.1	4.9	6.1
Agricultural producer prices	7.3	3.4	4.8	18,0[1)]

[1)] August on August

Unfavourable movements in the market of agricultural products fed through into robust growth in prices of processed food products (meat and dairy products) - components of core and headline inflation. However, these effects are of temporary nature and will be felt to a much lesser extent in the final quarter. Growth in prices of agricultural products was also registered across all countries of the region (see text box on p.10).

As opposed to the previous two quarters when headline inflation was almost entirely determined by increase in regulated prices, in Q3 it was driven by all three price growth components: regulated prices (10.8% year-on-year in September), market-determined prices – core inflation (3.3%) and prices of agricultural products (24.9%).

Chart II.0.1

Movements in prices

(quarterly growth, in %)

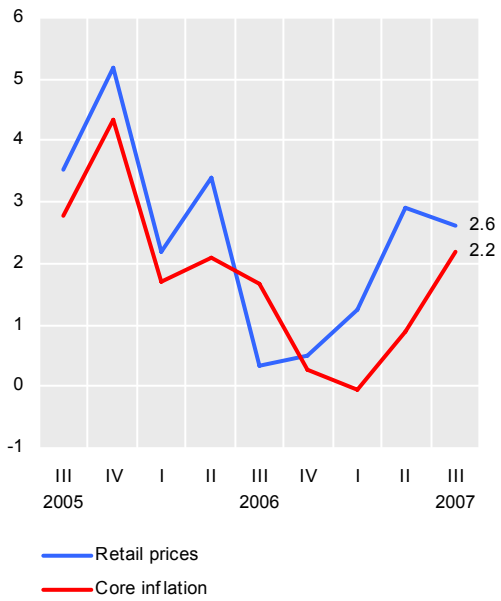
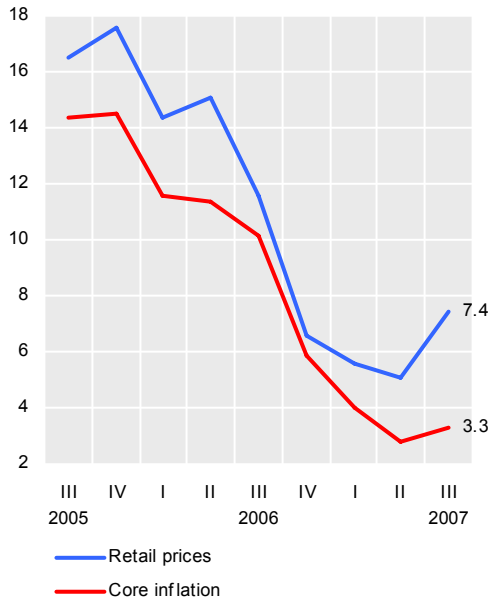


Chart II.0.2

Movements in prices

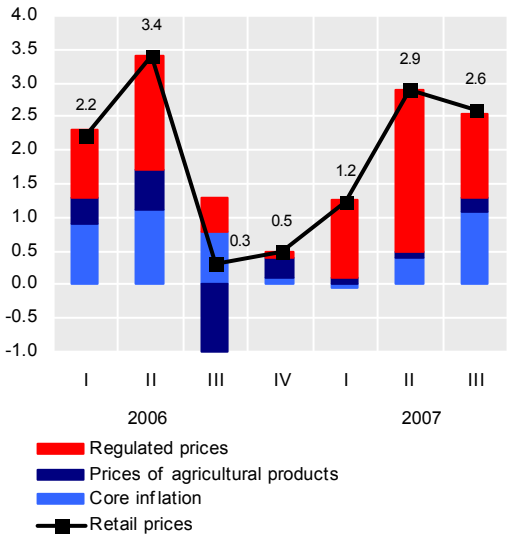
(y-o-y growth, in %)



Q3 retail price growth of 7.4% year-on-year was in line with expectations as specified in the August Inflation Report (7.3-7.6%). Main contributions to the 2.6% retail price growth[1] came from regulated (1.2 pp) and market-determined prices (1.1 pp). According to our estimates, more than half of the Q3 price growth may be put down to the "agricultural shock". Major contributors within regulated prices were petroleum products (0.3 pp) and transport and social services (0.2 pp each).

Chart II.0.3

Contribution to retail price growth
(in percentage points)



Core inflation growth reached 2.2% in Q3, which is more than double the increase in the preceding quarter (0.9%). Core inflation growth was mainly driven by the increase in prices of processed food products (estimated contribution of increase in prices of edible oil, meat, meat and dairy products is 1.4 pp). The effect of "agricultural shock" on core inflation growth is estimated at around 1.2 pp. Together with the hike in world oil prices, effects of the agricultural shock outweighed disinflationary effects of the nominal appreciation of the dinar and appreciation gap of the real exchange rate taken together. After a nearly two-year decline, year-on-year core inflation edged up to 3.3%, which is in line with expectations as specified in the August Inflation Report (3.0-3.5%).

In terms of monthly growth rates, core inflation recorded the strongest growth in August (1.1%), which at the same time represents the highest growth rate since December 2005. Somewhat lower growth was recorded in September (1.0%). However, if key food products are excluded from the calculation of core inflation (meat, meat and dairy products, edible oil and pastry), Q3 core inflation is significantly lower than headline inflation and amounts to 0.8% (as opposed to 1.1% in Q2), demonstrating the disinflationary tendencies prevailing in the rest of the basket.

Table II.0.2

Retail price growth by component
(by quarter, in %)

	2006		2007		
	Q3	Q4	Q1	Q2	Q3
Retail prices	0.3	0.5	1.2	2.9	2.6
Core inflation	1.7	0.3	-0.1	0.9	2.2
Prices of agricultural products	-26.0	10.5	2.9	3.0	6.6
Regulated prices	1.2	0.1	2.6	5.1	2.7
Electricity	0.0	0.0	0.0	15.0	0.0
Petroleum products	-1.6	-8.2	-1.3	7.2	3.5
Utilities	0.6	1.4	7.7	0.7	0.9
Social welfare services	0.1	9.1	0.6	13.9	9.4
Transport services (regulated)	6.1	1.0	0.0	0.7	4.5
Postal and telecommunications services	0.0	4.2	1.2	-0.1	-1.7
Bread and flour	2.1	1.2	1.7	0.1	17.9
Milk	5.7	0.8	3.2	0.8	12.2
Cigarettes	4.7	7.7	11.8	5.6	0.4
Medications	5.6	2.4	0.3	3.9	1.6
Other	3.0	0.8	2.3	0.0	0.6

Table II.0.3

Contribution to retail price growth
(by quarter, in percentage points)

	2006		2007		
	Q3	Q4	Q1	Q2	Q3
Retail prices	0.3	0.5	1.2	2.9	2.6
Core inflation	0.8	0.1	0.0	0.4	1.1
Prices of agricultural products	-1.0	0.3	0.1	0.1	0.2
Regulated prices	0.5	0.1	1.2	2.4	1.3
Electricity	0.0	0.0	0.0	1.1	0.0
Petroleum products	-0.2	-0.8	-0.1	0.6	0.3
Utilities	0.1	0.1	0.6	0.1	0.1
Social welfare services	0.0	0.1	0.0	0.2	0.2
Transport services (regulated)	0.2	0.0	0.0	0.0	0.2
Postal and telecommunications services	0.0	0.2	0.1	0.0	-0.1
Bread and flour	0.0	0.0	0.0	0.0	0.4
Milk	0.1	0.0	0.0	0.0	0.1
Cigarettes	0.2	0.3	0.4	0.2	0.0
Medications	0.1	0.1	0.0	0.1	0.0
Other	0.2	0.0	0.1	0.0	0.0

[1] Monthly breakdown: July 0.6; August 1.2; September 0.8.

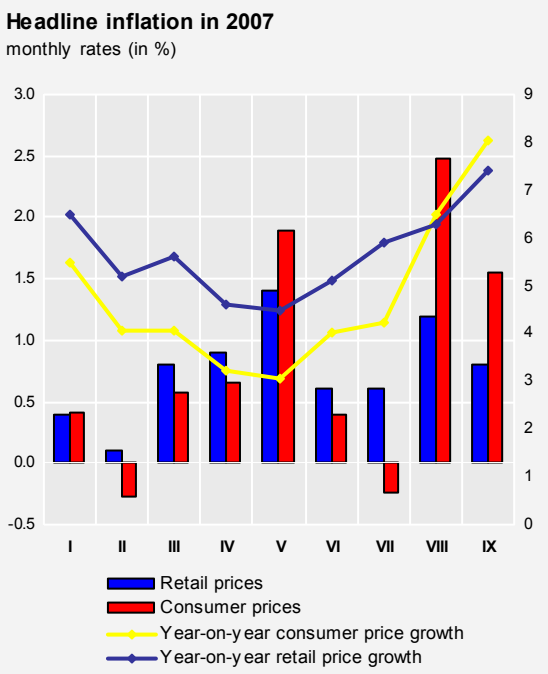
Consumer Price Index

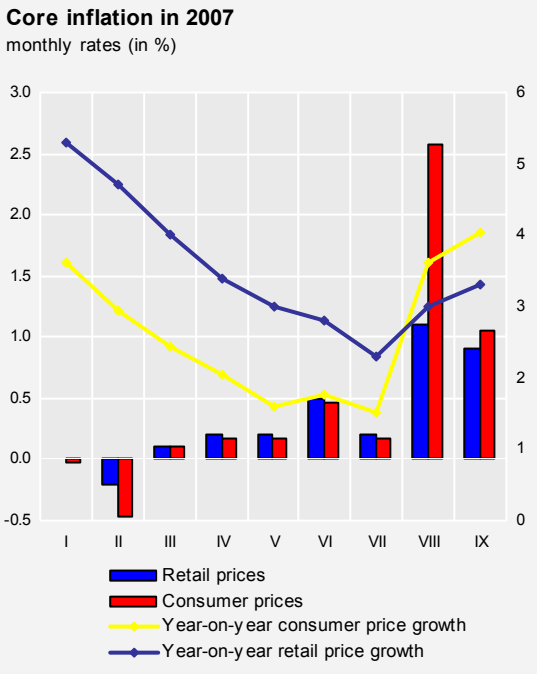
Consumer price index is the generally recognized measure of inflation in majority of countries. In anticipation that our country will soon switch to CPI as the official measure of inflation, we intend to continue to monitor its movements.

Q3 CPI growth (3.8%) was mainly due to movements in market-determined (2.1 pp) and regulated prices (1.3 pp). The rise in prices of agricultural products provided a 0.4 pp contribution.

Following decline in Q1 (-0.4%) and moderate rise in Q2 (0.8%), CPI core inflation rate increased by 3.8%[1] in Q3. Core inflation growth measured by both CPI and RPI was driven by the same factors. In terms of monthly growth rates, the strongest growth in CPI core inflation was recorded in August (2.6%), when the largest gap relative to RPI was also recorded (1.1%). The August core inflation gap is a consequence of robust growth in prices of meat[2], whose share in CPI is almost double that in RPI. At end-Q3, CPI core inflation stood at 4.0% year-on-year.

Faster growth in headline and core CPI relative to RPI is attributable to a larger share of agricultural and processed food products in the CPI basket.

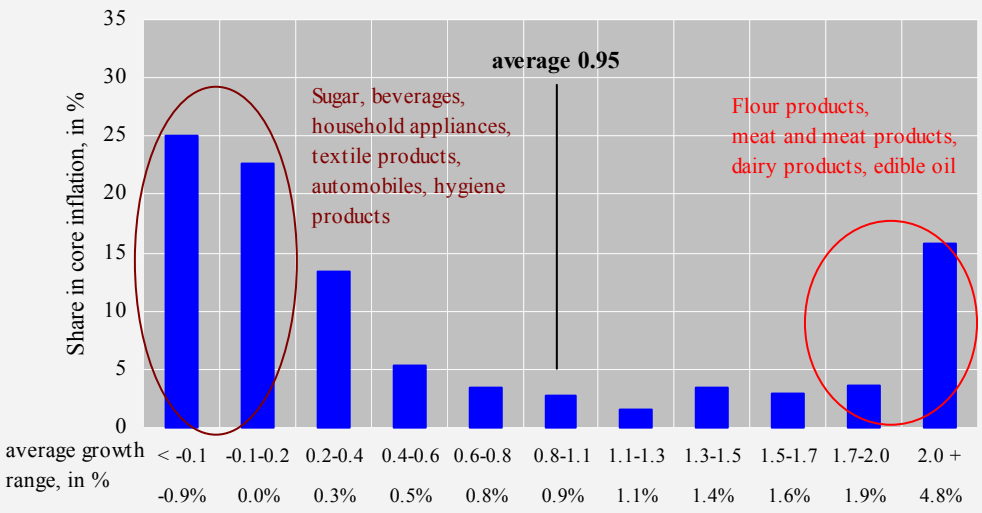




[1] Monthly breakdown: July 0.2; August 2.6; September 1.0.

[2] Contribution of 1.0 pp to headline and 1.8 pp to core inflation.

Distribution of Core Price Growth in September



In a stable environment, price growth is normally distributed, i.e. the largest proportion of growth in prices is grouped around the mean value (thereby forming symmetric, bell-shaped curve). The above chart, however, shows a considerable deviation of September core prices from normal distribution of price growth as the products whose prices show the strongest deviation from the average accounted for the highest shares. Namely, in the month of September average growth rate of 0.95% was recorded for only 3% of all products observed.

September movements in core prices were mainly due to the impact of two factors. On the one hand, unfavourable weather conditions led to an increase in prices of food products, and on the other, disinflationary pressures stemming from nominal appreciation trigerred a decline in prices of tradeable goods (above all industrial non-food products). The effects of appreciation on inflation seem to have already fed through as the share of products that recorded a decline in prices in September is very large. Nevertheless, the effects of agricultural shock proved stronger than disinflationary effects of nominal appreciation, as food products, despite smaller shares in total, recorded higher price growth rates.

Inflation Outlook for Q4 2007

Based on our current estimates, all price growth components will trend down in Q4.

Growth in regulated prices is expected to be lower than in the preceding quarters of 2007. Upward revision of electricity prices will, in all likelihood, be deferred to early 2008, as the Government has assessed that such revision would strike too harsh a blow to the citizens' standard of living bearing in mind high growth in prices of basic foodstuffs over the preceding months.

Table II.0.4

Major revisions of regulated prices expected in Q4 2007

	Growth rate (in %)	Contributions to retail price growth (p.p.)
Utilities	2.1	0.2
Petroleum products	4.5	0.4
Cigarettes	2.2	0.1
Milk	3.5	0.1
Bread and flour	13.1	0.3

Q3 2007 witnessed yet another and unexpected rally in oil prices and it is very difficult to make any forecasts until the end of the year. Prices of Ural oil hit historical highs of over USD 80 a barrel, which led to October increase in domestic oil derivatives by around 1%. If world oil prices do not retreat significantly in the meanwhile, we could expect around 3.5% increase in prices of domestic oil derivatives in November (contribution of around 0.4 pp).

Within regulated prices, utilities are expected to increase by around 2.1% thereby contributing 0.2 pp to overall price growth in Q4. Increased prices of bread and flour are expected to contribute 0.3 pp, while prices of cigarettes and milk are each expected to contribute 0.1 pp. Altogether, growth in regulated prices in Q4 is estimated at around 2.3% (9.5% p.a.).

Several factors are expected to exert their influence on core inflation in the fourth quarter:

1) rise in prices of processed food products (meat and dairy products), as the spill-over effect of unfavourable weather conditions in the preceding quarter;

2) widened appreciation gap of the real exchange rate that will continue to produce disinflationary pressures;

3) nominal appreciation of the dinar from the preceding quarter, inducing a decline in import prices.

Altogether, quarterly core inflation rate is expected to settle between 1.3 and 1.5%, with around 0.6 pp contribution of the drought-induced spill-over effect, while year-on-year core inflation is projected to amount to around 4.5% by end-Q4, which is within the targeted range.

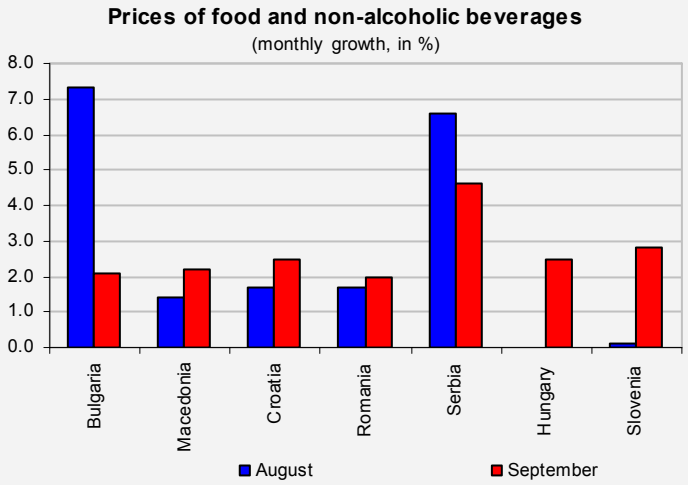
Increase in prices of agricultural products in Q4 will be somewhat lower than in Q3. Prices of agricultural products are expected to go up by around 2% thereby contributing around 0.1 pp to retail price growth.

Based on the above, retail price growth is estimated at around 1.9% in Q4, whereas year-on-year, it is expected to reach around 8.9%.

Drought Effects in the Region

This year's drought has led to an increase in prices of agricultural and processed food products throughout the region. Namely, instead of the seasonal decline, prices of agricultural products recorded a notable rise during the summer months. Prices of meat and milk recorded a strong increase and triggered a hefty rise in prices of processed food products. As a result, domestic prices of food and non-alcohol drinks (included in the CPI) rose by 6.6% in August and 4.6% in September. By contrast, in 2006 prices declined by 0.8% in August and recorded no change in September.

The chart shows price growth rates for a group of selected products in the neighbouring countries. Except for Hungary and Slovenia where an increase in prices was recorded in September only, all other countries recorded higher prices during both months under review. Differences in terms of contribution to overall price growth are due not only to registered growth rates, but also to differences in the CPI weights. Namely, food products were the major contributors to overall price growth in Macedonia, Romania and Serbia as spending on this group of products accounts for the highest share of the total.



Severe drought led the Hungarian and Croatian governments not only to declare state of emergency, but also to engage in significant interventions in the commodity markets, and grant subsidies to agricultural producers, thereby managing to alleviate the impact of bad weather conditions on price growth in their countries.

Comparative analysis shows that the drought which affected all countries in the region was most severely felt in Serbia. In addition to the fact that food and non-alcohol beverages account for the large share in the CPI, it was the lack of adequate irrigation systems, delayed interventions in the commodity market, and insufficient competition in food processing industry and trade which contributed to the comparatively higher growth in prices of these products in Serbia relative to the rest of the region.

HICP components	EU	Bulgaria	Romania	Macedonia	Hungary	Croatia	Slovenia	Serbia
All-items HICP	100%	100%	100%	100%	100%	100%	100%	**100%**
Food and non-alcoholic beverages	15%	23%	36%	37%	20%	30%	17%	**34%**
Other	85%	77%	64%	63%	80%	70%	83%	**66%**

III. Determinants of Inflation

1. Monetary Conditions

Monetary policy implemented in Q3 was of a restrictive character. However, due to resumed widening of the real exchange rate appreciation gap, it was tightened further in the quarter under review relative to the first half of the year. Based on the expected rise in core inflation, the NBS Monetary Policy Committee decided in August to raise the key policy rate by 25 basis points.

As movements in the real repo rate and the level of the real exchange rate gap indicate, monetary policy implemented in Q3 was tighter than in the first half of the year due to resumed widening of the real exchange rate appreciation gap against the background of significant nominal appreciation of the dinar and stepped up inflation growth. Nominal appreciation of the dinar was also aided by upward revision of the key policy rate.

Chart III.0.1

Real interest rate on repo operations and its trend

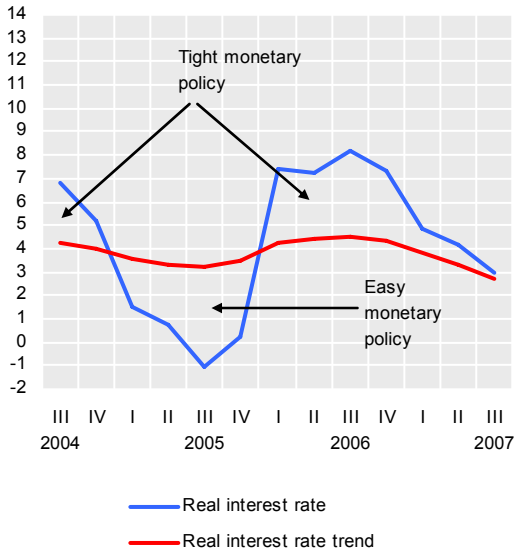
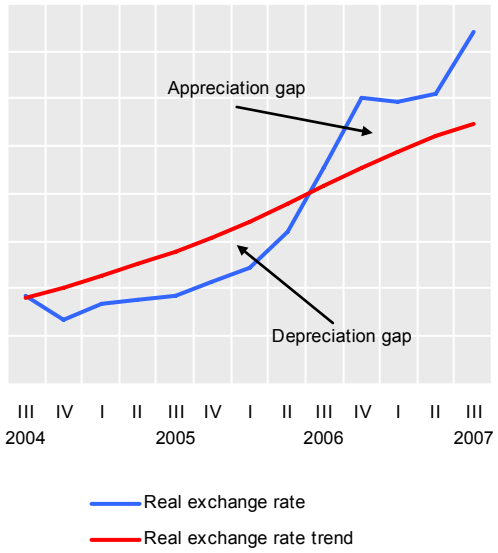


Chart III.0.2

Real exchange rate and its trend



The NBS Monetary Policy Committee decided in August to raise the key policy rate by 25 basis points against the backdrop of anticipated inflationary pressures, including those coming from fiscal expansion and accelerated credit growth. However, despite upward revision of the key policy rate, real interest rate (avg. 3.0%) drifted down by around 120 basis points from the preceding quarter due to significantly higher inflation expectations in August.The fact that the real interest rate hovered slightly above the trend points to a loosening of monetary conditions despite continued restrictiveness of the monetary policy stance.

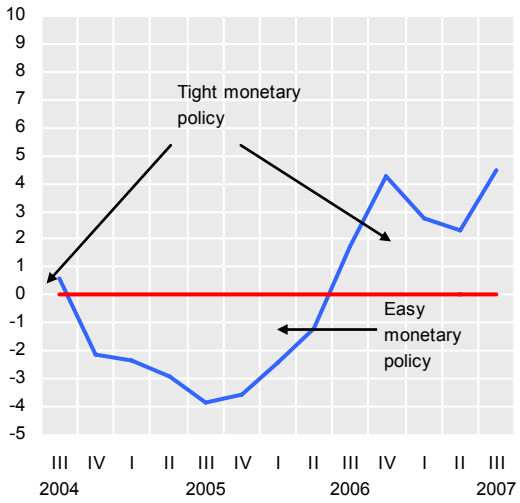
The monetary conditions index, as an indicator of the combined effect of the real key policy rate and the real exchange rate on price stability and/or aggregate demand is particularly useful in a situation when movements of the real interest rate and real exchange rate are divergent, as was the case in Q3. This indicator also points to a much tighter monetary policy stance in Q3 than in the first half of the year.[2]

According to our estimates, appreciation gap will continue to produce disinflationary pressures over the coming months. It is not unlikely that it has had a stifling effect on economic activity, all the more so as available indicators point to a slowdown in economic growth, and data on the volume of trade in the financial market and stock exchange indexes BELEXline and BELEX15 show a decline.

Acceleration in core inflation and nominal appreciation of the dinar recorded in Q3 will be the key determinants of monetary policy stance in the remaining part of the year.

Chart III.0.3

Monetary Conditions Index (MCI)



[2] The following equation was used in constructing the monetary conditions index: $MCI_t = w_r(r_t - r_{trend}) + w_z(z_t - z_{trend})$, where r_t is the real key policy rate, and z_t the real exchange rate. Weights for the real key policy rate and the real exchange rate are as follows: $w_r = 0.2$, $w_z = 0.8$.

Disinflation and Optimal Monetary Policy Flexibility

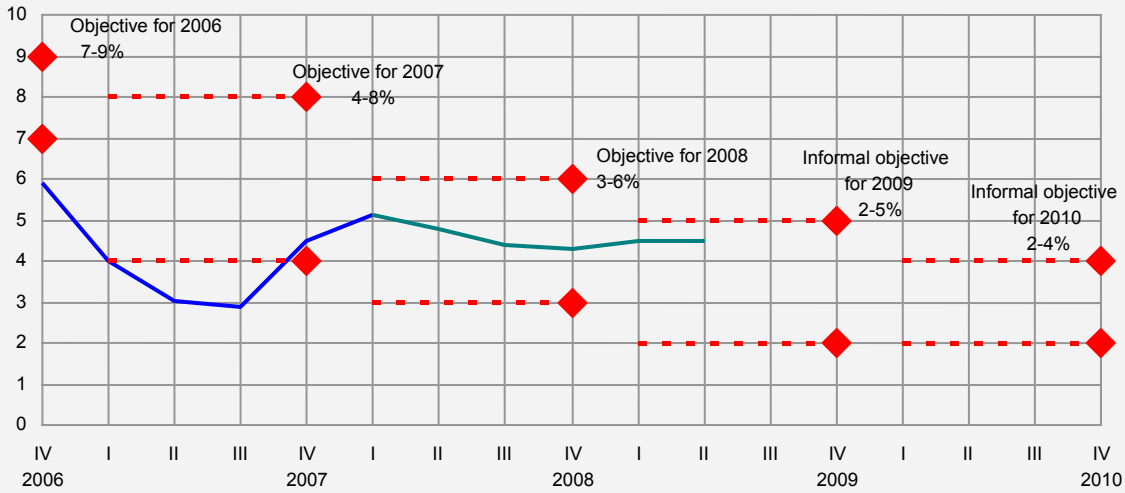
Monetary policy in an inflation targeting regime is a combination of choice of an inflation target and a discretionary response to temporary shocks and its aim is to achieve the primary objective of low and stable inflation. At the same time, as Bank of England Governor Mervyn King pointed out, an inflation targeting central bank is not an "inflation nutter". Considerations of output (and employment) are an indispensable part of the process of monetary policy decision making. During the transition from high or moderate to low and stable inflation, the monetary policy needs to answer two basic questions[1]:

1. What is the optimal speed of disinflation, and
2. How flexible should monetary policy be in accommodating temporary shocks in order to avoid costly volatility in output?

Why should a central bank not achieve low inflation immediately? The answer is that it would face high costs of disinflation, which increase more than proportionately with the rate of disinflation. Such costs are part and parcel of the process of "learning" by the general public – in principle, the longer the period during which inflation was high, the longer it will take for the public to be persuaded that monetary policy has changed and that the central bank is determined to achieve low and stable inflation.

In general, the "gradualist" approach has proven to be the least costly in the transition to price stability, as in this approach disinflation is neither too fast nor too slow. The inflation target gradually declines (from period to period), but is always below expected inflation. In all countries (except for Australia) in the process of transition to the inflation targeting regime, target inflation was below the existing rate of inflation, while transition to price stability was gradual[2]. In order to minimize costs of disinflation, the National Bank of Serbia also adopted the "gradualist approach". By gradually lowering its core inflation objectives (see chart), the National Bank of Serbia plans to achieve and maintain price stability (headline inflation of around 2%) by 2010.

Medium-term objectives for core inflation
(year-on-year rates, in %)



[1] In an environment of low and stable inflation (of around 2%), only the second question is relevant.

[2] A good example is that of Canada, which planned to bring inflation down from 6.2% to a range of 1 to 3 percent over four years.

Inflation targeting regime is based on the "divine coincidence" that there is no long-term conflict between the two objectives: stabilizing inflation and stabilizing real economy. Namely, stabilizing inflation is equivalent with stabilizing output around its potential level, as the optimal level of output can be achieved by eliminating the dispersion in relative prices. In case of demand side shocks (demand-pull inflation), there is no short-term conflict either. In that case, output stabilization is a side effect of inflation stabilization, as inflation and output move in the same direction. However, in the event of supply side shocks (cost-push inflation), absolute inflation stabilization will not be optimal, as prices and output will move in the opposite direction. The central bank will then face a trade-off between price stability and stability of the real economy which is relevant for setting a transition path for inflation to return back to the target after the shock.

As it is not always possible to achieve both objectives at the same time, an optimal monetary policy is conventionally expressed by minimizing the expected value of the so-called loss function, i.e. by minimizing deviations of inflation from target inflation and deviations of output from potential output:[3]

$$E_t \sum_{\tau=0}^{\infty} \delta^{\tau} \left[\left(\pi_{t+\tau} - \pi^* \right)^2 + \lambda \left(y_{t+\tau} - y^*_{t+\tau} \right)^2 \right]$$

where,
δ is the discount factor ($0 < \delta \leq 1$);
$\left(\pi_{t+\tau} - \pi^* \right)$ is deviation of inflation from the target rate (inflation gap);
$\left(y_{t+\tau} - y^*_{t+\tau} \right)$ is deviation of output from potential output (output gap).[4]

The parameter λ $(\lambda > 0)$ shows the relative significance of stabilization of the output gap compared to inflation stabilization and will depend on the preferences of monetary policy makers. The higher the λ, the more ready are monetary policy makers to tolerate inflation variability in order to improve the stability of real economy. Faced with aggregate demand shocks, a central bank can minimize "loss" by allowing a temporary increase in inflation, rather than seeking to prevent it at the cost of a drastic downturn in output. The speed of return to core inflation target after the shock is indicative of the significance attached by monetary policy makers to stabilization of the real economy – the longer the time horizon, the more significance is attached to stability of real economy, i.e. the lesser are variations in output and employment.

Optimal degree of accommodation to inflation shocks is much more complex in a disinflationary environment. During transition to price stability, there is a trade-off between credibility and flexibility. When "learning" by the general public depends on actual inflation outturns, any accommodation of an upward shock to inflation, albeit temporary, pushes up inflation expectations. Hence, especially in the early stages of the transition to price stability, the degree of accommodation of inflation shocks is lower than would be optimal in an environment of low and stable inflation and stable inflation expectations. Therefore, a central bank that is embarking on transition from high or moderate to low and stable inflation cannot afford to engage in as much flexibility as can a central bank which has established a track record of price stability.

[3] The loss function and the terms "strict" and "flexible" inflation targeting were introduced by Svensson, professor at the Princeton University. According to Svensson, inflation targeting is in practice always "flexible" inflation targeting, as monetary policy makers aim to stabilize not only inflation around an inflation target but also the real economy. By contrast, strict inflation targeting means the exclusive focus on inflation, regardless of volatility in output. Flexible inflation targeting involves a combination of the long-term monetary policy objective – achieving target inflation as "anchor" for inflation expectations, and short-term objective – stability of real economy.

[4] Deviations are symmetrical (equally undesirable in both directions) and squared (larger deviations represent greater "loss" than smaller deviations).

It is now understood – following the work for which Friedman, Phelps, and Lucas have all been awarded Nobel Prizes – that the short-term trade-off between inflation and real activity, which provides the basis for the effects of monetary policy on real activity, depends critically on inflation expectations. If expectations are not firmly "anchored", short-term variations in the inflation rate will not produce substantial differences between current and expected inflation, and will have only a small effect on real activity (or none at all). Conversely, if the private sector has reason to believe that departed inflation will always return fairly quickly to a low and stable long-term rate, so that the temporary departure of the inflation rate has little effect on inflation expectations, the short-term "Phillips-curve" trade-off between inflation and unemployment is much more favourable, allowing monetary policy a larger short-term effect on real activity. Hence even from the viewpoint of improved stabilization of the real economy, it is important to find a way of stabilizing inflation expectations.

For banks with a track record of high inflation, rebuilding public trust and central bank credibility is a particularly difficult task. Aware of the trade-off between credibility and flexibility, the National Bank of Serbia is committed to achieving the target (core) inflation. The width of the set target corridor is reflective of National Bank's concern for output stabilization, as it gives monetary policy makers sufficient flexibility without threatening credibility. A specific numeric objective or a narrower target inflation corridor, especially in early stages of transition to price stability when inflation expectations are still unstable, would require an excessive level of activism, which would, in turn, be costly due to volatility in output. In addition, by holding that the undershooting of the lower bound of the target corridor represents grounds for monetary policy relaxation in case of demand side shocks, the National Bank of Serbia clearly shows its concern for the stability of the real economy.

Interest Rates

With discontinuation of the downward trend in the key policy rate, an increase was recorded for the majority of money market interest rates. The value of both Belgrade Stock Exchange indices declined.

Declining trend in the key policy rate of the National Bank of Serbia reversed in August as the rate was raised from 9.5% to 9.75% p.a. Interest paid on six-month securities of the NBS sold in outright transactions also rose and continued to run above the key policy rate level, which is a trend begun in Q1[3]. Increasing by 13 basis points relative to the June auction, the rate on six-month NBS securities came to 9.88% p.a. at the September auction.

Weighted average interest rate on securities traded by the National Bank of Serbia in open market operations reached 9.75% p.a. in September, which is 25 basis points more than in June.

Chart III.1.1

Weighted average interest rate on securities used by NBS in open market operations

(in percent per annum)

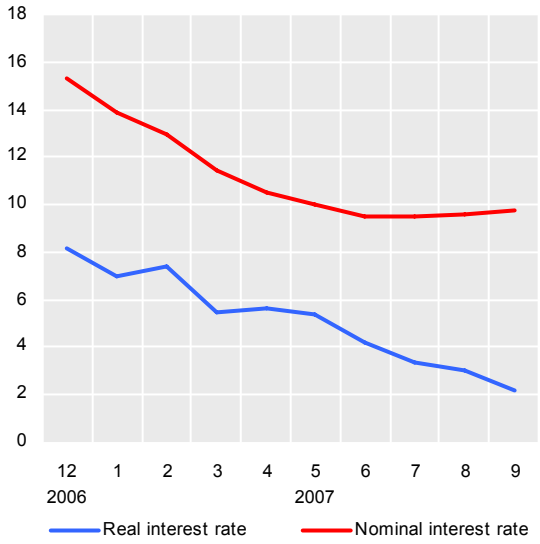
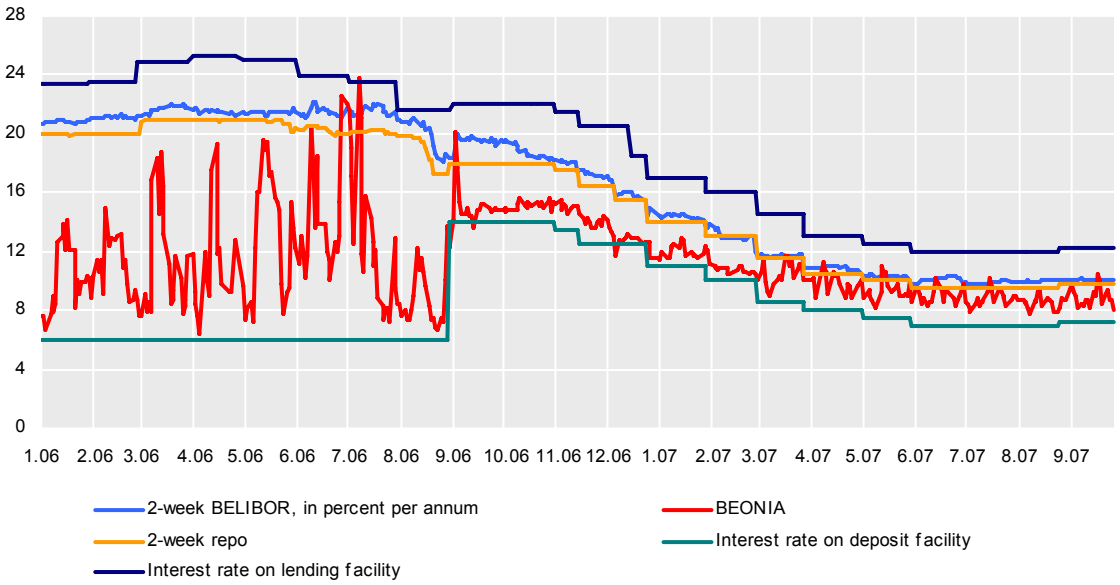


Chart III.1.2

Interest rate movements

(daily data, annual level, in %)



Source: National Bank of Serbia and Reuters.

[3] As a rule, interest rates on longer-term securities are higher than on short-term securities, as giving up liquid assets for a longer period of time carries premium. There are other factors that can influence the level of interest rates on securities: uncertainty reflected in risk levels (liquidity risk, credit risk, market risk (currency and interest rate), country risk, etc.), current liquidity needs of investors and possible tax breaks on buying/selling securities, etc. If we assume that the liquidity risk of the NBS (in this case, credit risk of banks) is negligible, and that currency risk and country risk are constant over the short term, the reasons for change in interest rate on six-month securities can be found in investors' expectations regarding future interest rate movements (inflation) and daily needs of investors (banks) for liquid assets (reflecting risks relating to operations of the buyer of such securities, i.e. bank).

The key policy rate hike gave a boost to sale of NBS securities in open market operations. This resulted in withdrawal of liquidity by the NBS in Q3 (around RSD 34 billion), as opposed to a quarter earlier when this instrument was used for reserve money creation. On the final day of September, net stock of sold NBS securities came to around RSD 188.5 billion, of which around 89.7% were two-week and 10.3% six-month securities.

Interest rate corridor of the National Bank of Serbia remained unchanged in Q3. As banks experienced no significant liquidity problems, Lombard loan use in Q3 equalled zero.

The key policy rate hike triggered a rise in the majority of money market interest rates. Thus in September **Belibor** interest rates averaged between 9.54% for 1-week maturity and 10.41% for six-month maturity. Relative to end-Q2, interest rates on this type of interbank loans rose for all maturities, the most for middle maturities: one-month, two-week and two-month, and the least for shortest maturities (T/N). Such movements in the maturity structure resulted in increased slope of the yield curve, which may indicate banks' expectations of future interest rate hikes. After declining in July and August, **Beonia,** the interest rate on overnight interbank loans, recorded strong growth in September, ending Q3 at a slightly lower level than Q2 (equalling 8.94% p.a. in September). On average, banks approved RSD 2.1 billion worth of these loans, up by RSD 46 million relative to June.

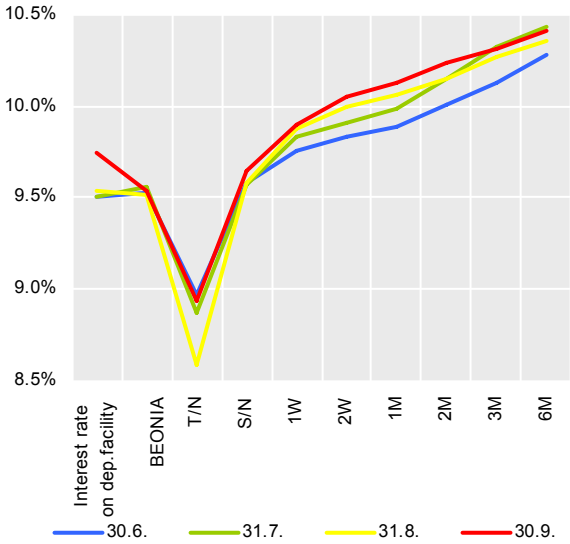
Prompted by movements in the key policy rate and money market interest rates, banks raised their **lending interest rates** in September, thereby discontinuing the declining trend recorded earlier this year. In September, weighted average lending rate equalled 11.79% p.a., which is still 54 basis points lower than in June. Banks' **deposit rates** also rose in Q3**.** In September, the average deposit rate thus came to 3.96% or 37 basis points above its June level.

As in Q3 bank lending rates declined and deposit rates increased, in September the interest rate margin shrank to 7.83%, down by 91 basis points from June. Interest rate margin is likely to contract further in the period ahead, as competition among banks intensifies.

Chart III.1.3

Interbank money market yield curve in 2007

(annual data)

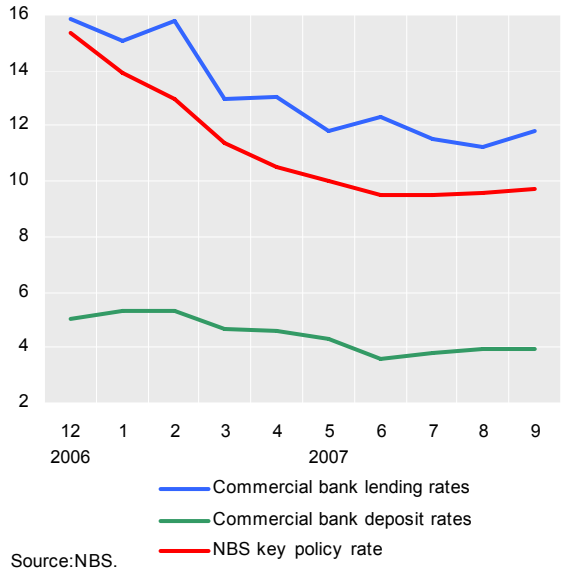


Source: National Bank of Serbia and Reuters.

Chart III.1.4.

NBS key policy rate and commercial bank interest rates

(weighted average, per annum, in %)



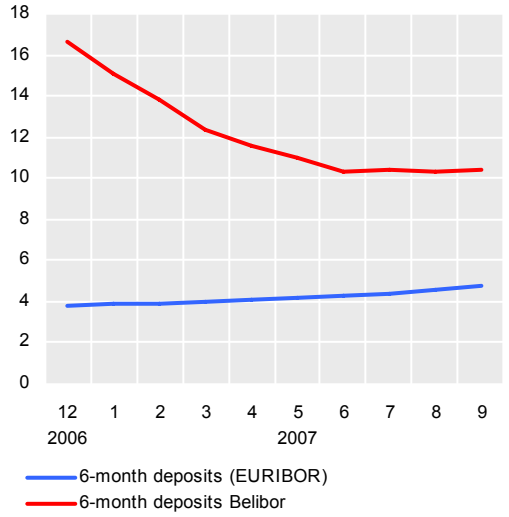
Source:NBS.

The difference between interest rates prevailing in the Serbian financial market and in the financial markets of the EU and the U.S.A. increased in Q3, as the NBS interest rate went up, while policy rates of central banks of the EU and the U.S.A. either remained unchanged or declined[4]. Nevertheless, the difference remains relatively high and continues to encourage inflow of foreign capital.

Chart III.1.5

Interest rate movements in the EU and Serbian money markets

(in percent per annum)

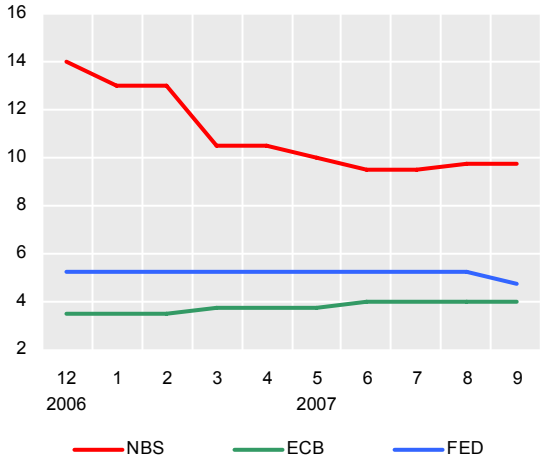


Source: Reuters and ECB, *Monthly Bulletin*.

Chart III.1.6

NBS, ECB and FED interest rates

(end of month, in percent per annum)



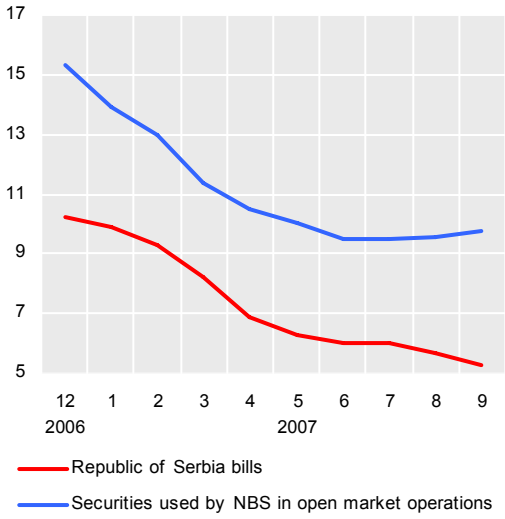
Source: NBS, ECB *Monthly Bulletin* and *Federal Reserve Bulletin*.

Interest rates on treasury bills of the Republic of Serbia Ministry of Finance continued to decline. In five auctions held in Q3, the government sold 91-day treasury bills, with the average discount rate declining from 6% in the July auction to 5.2% in the final auction in September. As the amount of matured RS treasury bills exceeded the amount of RS treasury bills sold, net reserve money creation amounted to around RSD 682 million, which is relatively insignificant in comparison with the amount withdrawn by the NBS through open market operations.

Chart III.1.7

Weighted average interest rates on securities

(in percent per annum)



Source: NBS and RS Ministry of Finance.

[4] The ECB last raised its key policy rate in June 2007 (by 25 basis points to 4.00%). Movements in inflation, economic growth and lack of liquidity in the financial market prompted the FED to cut its policy rate by 50 basis points in September this year to 5.25% p.a.

Belgrade Stock Exchange

Volume of trading in the Belgrade Stock Exchange continued to subside in Q3, despite an increase in market capitalisation. The value of both stock exchange indices declined negligibly.

Upward trend in market capitalization continued in Q3, mostly on account of the legally prescribed obligation for social enterprises to register on the stock exchange. Total market capitalization thus came to RSD 1,541 billion in late September, which is an increase by RSD 89 billion (6.2%) on end-July. All securities traded in the stock exchange contributed to the rise in market capitalization, but the main contributor were shares traded in single price auctions. The shares constituting index baskets of both BSE indices gave a positive contribution to the rise in overall capitalization in the stock exchange.

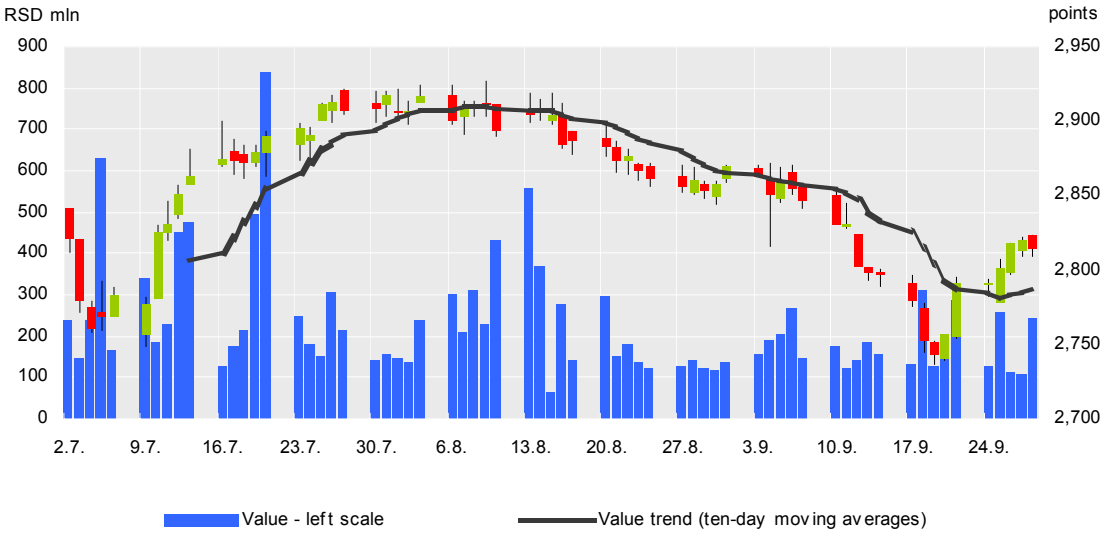
Despite growth in overall market capitalization, the volume of trading in the Belgrade Stock Exchange declined notably. Total volume of trading came to around RSD 32 billion in Q3, down by around RSD 21.6 billion (around 40%) on Q2. Shares traded by applying the continuous trading method contributed most (22 pp) to reduction in overall volume of trading, as trading in these shares declined by around 40% relative to Q2. Negative contribution to trading volumes also came from all other securities traded in the Belgrade Stock Exchange.

Decline in total volume of trading entailed a comparatively smaller decline in the number of transactions (by 29% on Q2), which points to a relative increase in small investors' interest in investing in the capital market.

Quarterly values of both Belgrade Stock Exchange indices declined moderately.

Chart III.1.8

BELEX15 index in 2007



Source: Belgrade Stock Exchange.

Following downward adjustment in share prices in Q2, both BSE indices displayed unstable movements. Namely, after an increase in both indices in July, they were revised downwards in August due to investor uncertainty caused by the global financial market crisis. Indices growth recorded in late August and early September was followed by another downward revision, largely in response to outflow of capital from the country for purchase of shares in the process of privatization of the Croatian Telecom. This was followed by a rise in the P/E index[5] of enterprises which are traded by applying the continuous trading method and account for the largest share in total trading. As a result, at end-Q3 **Belex15** reached 2,184.25 index points, which is a decline by 0.75% on end-Q2. The second BSE index, **Belexline,** reached 4,430.94 index points at end-September, or 0.38% down on end-June. Both indices are expected to remain volatile

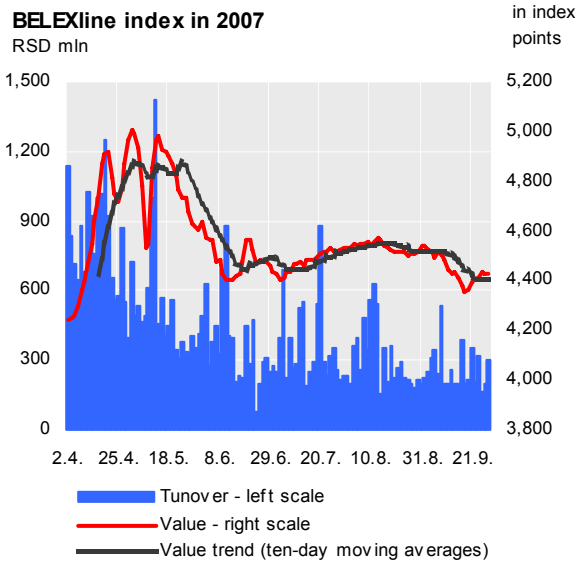
[5] The value of the above P/E index reached 79.59 in September, which represents the second highest level recorded in 2007. The value of this index indicates the price an investor needs to pay in order to earn one dinar of profits by buying shares of a given company.

during the remaining months of the year, in anticipation of publication of financial statements of quoted companies and likely increase in country risk.

Movements in the Belgrade Stock Exchange are largely consistent with movements in regional stock exchanges[6].

Chart III.1.9.

BELEXline index in 2007

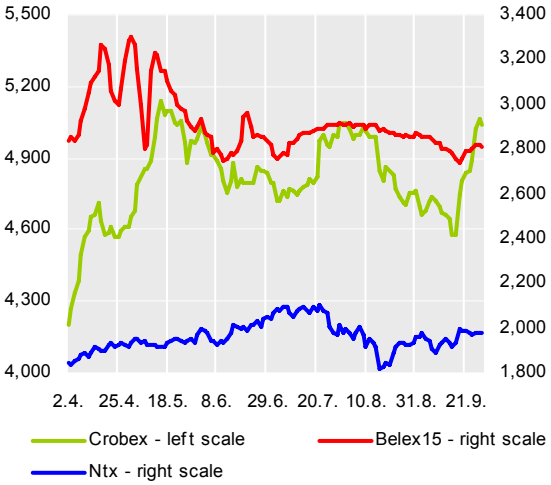


Source: Belgrade Stock Exchange.

Chart III.1.10.

Belex15, Crobex and NTX indices in 2007

(in index points)



Source: Belgrade Stock Exchange, Zagreb Stock Exchange, Bloomberg.

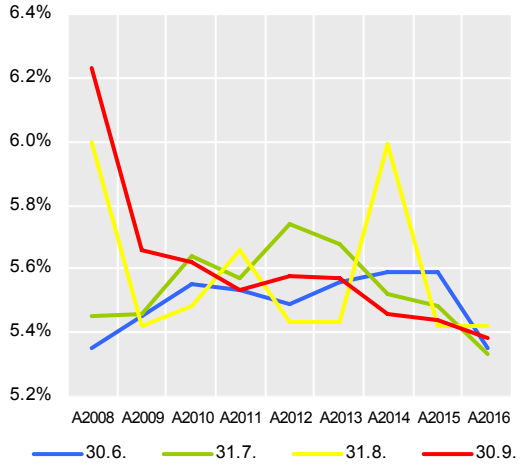
The dynamics of the Belex 15 index are broadly correlated with movements in the Crobex index (leaving out end-September 2007 – effect of capital increase of the Croatian Telecom), while correlation with the NTX index is very low[7].

Trade in RS bonds in the Belgrade Stock Exchange reached RSD 41 billion in Q3, which is a decline by RSD 2.3 billion on Q2 (35.7%). Series A2016 (33% of total trade) and A2015 (17% of total trade) were traded the most and series A2008 the least (4% of total trade). As demand and volume of trading in bonds with longest maturities swelled, their prices went up and yield declined. On the other hand, decline in demand and volume of trading in series A2008 bonds triggered a decline in their price and increase in their yield. As a result, the slope of the yield curve changed (from horizontal to negative), which is usual for the yield curve of these RS bonds, as they are subject to tax breaks and other facilities applied to purchases of state property.

Chart III.1.11.

Yield on RS frozen foreign currency savings bonds in 2007

(per annum)



Source: Belgrade Stock Exchange.

[6] Differences in index movements have partly resulted from different methodologies of index calculation. The most similar to the Belex15 index in the methodological sense is the Crobex index, which covers movements in values of 30 most liquid free float shares in the Zagreb Stock Exchange. NTX is the Vienna Stock Exchange index, which reflects movements in the value (in euros) of shares of 30 blue chip companies from Austria, Bulgaria, Hungary, Poland, Romania, Slovakia, Slovenia, Croatia and the Czech Republic.

[7] The coefficient of correlation of indices Crobex and Belex15 came to 0.6 in Q3 2007, compared to 0.75 in July and August. In September, the correlation coefficient was negative (-0.57). The coefficient of correlation of indices NTX and Belex15 equaled 0.12 in Q3.

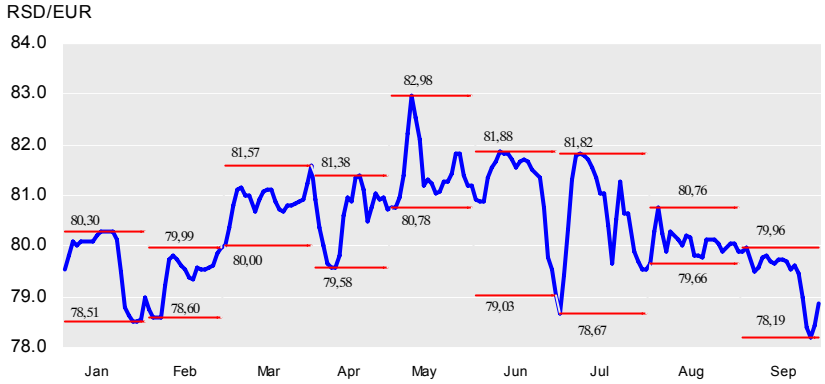
Dinar Exchange Rate Movements

After depreciating in nominal terms in the first two quarters of the year, in Q3 the average nominal dinar exchange rate appreciated by 1.3% against the euro. Following notable fluctuations in July, the exchange rate of the dinar stabilized by end-September and shot to its highest level since December 2004 under the effect of exceptionally strong appreciation pressures.

After declining against the euro in both Q1 and Q2, the exchange rate of the dinar appreciated by 1.3% in Q3. The average exchange rate for the dinar in the period under review hovered around RSD/EUR 80.0. Appreciation of the dinar was due to inflows in respect of enterprise borrowing abroad, foreign direct investments, late August rise in the key policy rate by 0.25 pp and seasonal factors (inflow of remittances, spending by migrant workers holidaying in Serbia, tourist season, etc.).

Chart III.1.12.

Movements in the RSD/EUR exchange rate in 2007

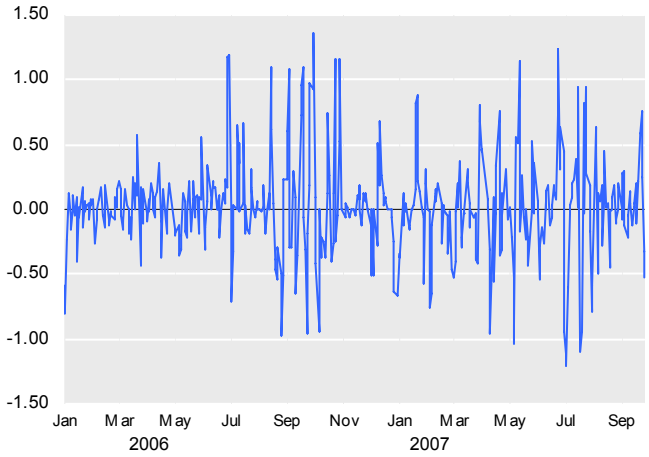


During the period under review, the ECB kept its key interest rate unchanged while the FED decided to cut its policy rate, the dollar depreciated notably against the euro and, in the last ten days of September, shot past the psychological barrier of USD 1.40 for EUR 1. As a consequence, the dinar appreciated against the dollar by 3.23% in nominal terms.

Chart III.1.13

Daily changes in RSD/EUR exchange rate[1)]

(in %)



[1)] Negative rates indicate depreciation and positive rates appreciation of the dinar.

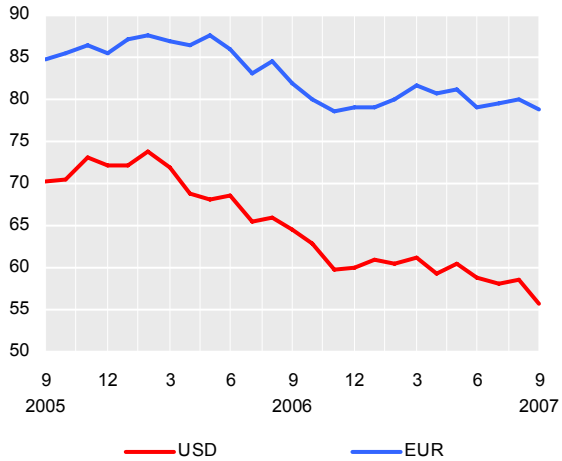
In the third quarter, the exchange rate of the dinar against the euro moved within a relatively broad band from RSD/EUR 78.1896 to 81.8181, with notable daily oscillations in July. The dinar hit its trough in early July, following completion of capital increase of AIK banka, while its pronounced strengthening in late September can be attributed to increased supply of foreign exchange in the domestic market.

End-of-period analysis of the exchange rate reveals that in Q3 the dinar appreciated by 0.2% against the euro and by 5.6% against the U.S. dollar. As these two currencies constitute the basket of currencies for calculating the effective exchange rate, the nominal effective exchange rate of the dinar appreciated by 1.8% at the end of the period.

Chart III.1.14

Nominal exchange rate of the dinar

(in dinars, end of period)



As a result of appreciation of the nominal effective exchange rate and faster growth in domestic relative to foreign prices, the real effective exchange rate rose by 4.3% at the end of

Q3. In terms of changes against individual currencies, the dinar appreciated by 2.5% against the euro and by as much as 8.2% against the U.S. dollar in real terms.

Foreign exchange trading in the interbank foreign exchange market continued growing in Q3. All trading took place outside the IFEM session. Monthly trading volumes reached their highest level in July (EUR 3.2 billion), which was higher than the overall volume of trading recorded in Q1. In August and September trading in the interbank foreign exchange market calmed down, as did oscillations in the dinar exchange rate relative to July.

Table III.1.1

Composition of trade in the IFEM in 2007

(total trade) EUR

	Q1	Q2	Q3	Total 2007
IFEM	**3,141,784,788**	**5,087,608,152**	**7,537,068,646**	**15,766,461,586**
NBS - Banks	481,250,000	94,400,000	65,000,000	640,650,000
Bank - bank	2,660,534,788	4,993,208,152	7,472,068,646	15,125,811,586

(in % of total trade)

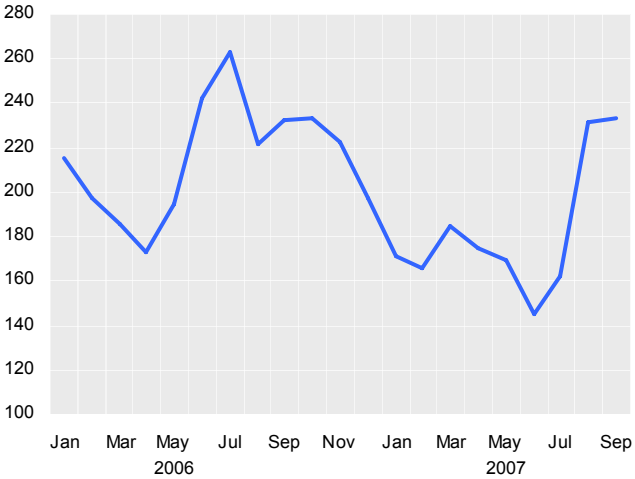
	Q1	Q2	Q3	Total 2007
IFEM	**100.00**	**100.00**	**100.00**	**100.00**
NBS - Banks	15.32	1.86	0.86	4.06
Bank - bank	84.68	98.14	99.14	95.94

In Q3, the NBS was selling EUR 1 billion on a daily basis. These funds originated from net foreign exchange purchases from licensed exchange dealers in the interbank foreign exchange market, in line with the NBS commitment to gradually withdraw from exchange transactions. However, as the average volume of daily trading in the interbank foreign exchange market came to around EUR 115 million (hence, the share of the NBS declined to below 1%) and the NBS was a "price taker", the dinar exchange rate in the period under review was formed entirely under the influence of market factors.

Chart III.1.15

Risk premium indicator - EMBI

(monthly averages, in basis points)



Source: JP Morgan.

After dropping to its lowest level of 135 basis points above US Treasuries in mid-June, EMBI[8] index picked up mildly in July. In late July and August 2007, financial crisis in international markets was in full swing, and its effects were felt in emerging markets as well, although to a lesser degree than in the case of earlier crises. As a consequence, there was a rise in the spread[9] on bonds issued in emerging markets. Thus in mid-August 2007, at the very climax of the financial crisis, the EMBI spread for Serbia hit its record for this year of 266 basis points above US Treasuries. During September 2007, with signs of moderation of the financial crisis, the EMBI index declined mildly. The sharpest drop in the EMBI index by 40 basis points in the course of two days only followed straight after the FED's intervention. In late September, EMBI spread for Serbia came to 210 basis points.

[8] Emerging Markets Bond Index.

[9] Spread – difference between yield on US Treasuries and similar bonds issued in emerging markets.

2. Import Prices

Though world prices of oil and selected primary products recorded a notable rise, imported inflation was negative in Q3 as a result of nominal appreciation of the dinar. However, due to robust growth in prices of food products and downward price rigidity, domestic inflation did not move down with imported inflation but recorded an accelerated rise which led to the widening of the appreciation gap of the real exchange rate.

Following the surge in imported inflation recorded in the first half of the year, import prices slid by 4.8% (per annum average[10]) in Q3 as a result of 5.3% nominal appreciation of the dinar against the euro and 0.5% inflation in the Euro zone. For the first time since the beginning of the year, in Q3 core inflation growth rate (6.6%) was higher than imported inflation.

As growth in domestic prices outpaced the increase in import prices (expressed in dinars), appreciation gap of the real exchange rate resumed widening. The appreciation gap is expected to produce stronger disinflationary pressures in the oncoming period and induce a decline in core inflation.

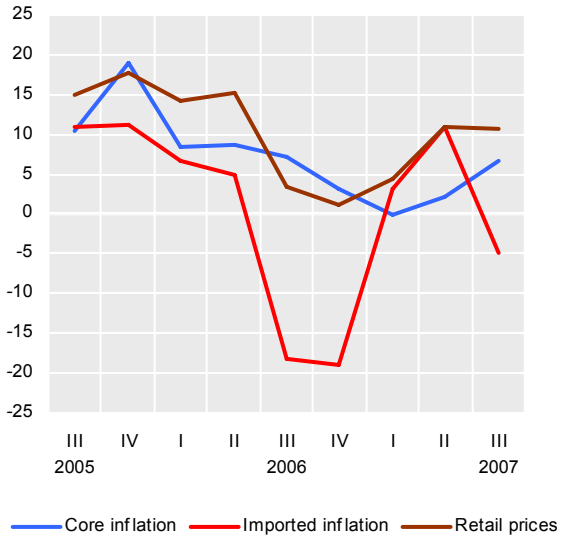
Q3 2007 witnessed yet another rally in oil prices, which hit historical highs by the end of September, with Brent North Sea crude leveling off at 79.40, and Ural oil at 76.89 US dollars.

The main reason behind the latest escalation in oil prices was reluctance of the OPEC cartel countries, which supply around 35% of the world's daily oil consumption, to increase their output during the summer driving season. However, in the September meeting, ministers of OPEC member countries reached an agreement on increasing daily oil output from 1 November, but only by half a million barrel. As the market perceived such decision as long overdue and the increase in daily output insufficient, prices spiralled up.

Rise in oil prices was also fuelled by the report on decline in US oil inventories which turned out to be sharper than expected, as well as by financial crisis in world markets which led to a cut in the FED funds rate and considerable plummeting of the US dollar. Enduring uncertainties regarding further development of Iran's nuclear program and potential outburst of conflict in its territory also contributed to further rise in oil prices.

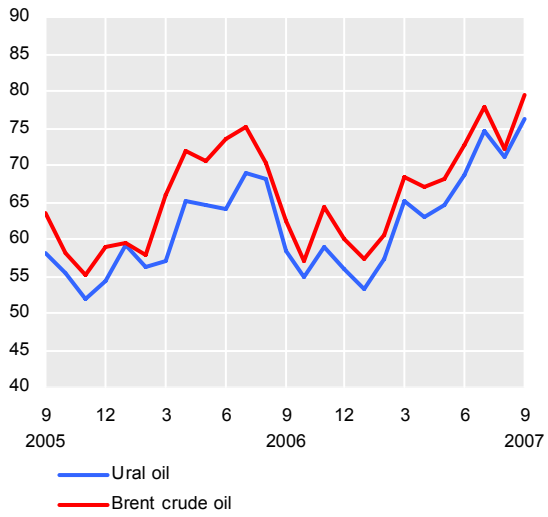
No precise forecast can be made for the closing months of the year as there is a strong correlation between oil prices and growth in oil demand during winter months, while the scope for an increase in oil

Chart III.2.1
Core and imported inflation
(average annualized quarterly growth rates)



Sourse: NBS and Eurostat.

Chart III.2.2
Oil prices
(in US dollars)



Source: Reuters.

[10] Annualized ratio of averages for two consecutive quarters.

production is not too significant. Since oil producing non-OPEC countries can not increase their output either, keeping Ural oil prices at USD 70-75 until end-2007 presupposes no disruptions in oil supply and mild winter weather.

Adverse effect of weather conditions on prices of raw materials is also evidenced by the grains price hike in the Chicago Mercantile Exchange where wheat soared to USD 8.86 per bushel or around USD 335 per ton in early September. Prices of non-ferrous metals also recorded an appreciable increase, and particularly the price of copper which once again crossed the psychological barrier of USD 8 000 per ton in early October. Total copper price growth from the beginning of the year until end-Q3 came to around 36%. After touching all-time highs of USD 8 800 in May 2006, copper prices moved downwards throughout remainder of the year. However, price of the most important non-ferrous metal is expected to continue up mainly due to unabated demand growth in China, which is likely to persist throughout 2008, as well.

Weakened US dollar and investor flight to the so-called market safe havens gave a strong impetus to a hefty rise in gold prices which reached the level of USD 745 per troy ounce in mid-September, up by around 20% from the beginning of the year. By end-September gold prices retreated to around USD 725 per troy ounce.

Consequences of the World Financial Crisis

In mid-Q3 2007, a large scale crisis swept over the world financial markets. Large-scale financial crises occur periodically, once every several years, and the time and place of their outbreak can hardly be foreseen with any precision.

The last such crisis broke out across Asian and Russian markets during closing years of the past decade. This time it hit the American mortgage market following an interest rate hike when sub-prime borrowers defaulted on their debt repayments. Pursuant to modern banking techniques, banks-lenders were able to sell their financial instruments and turn their receivables into other forms of assets through securitization, thereby earning substantial profits by trading in such securities.

This chain was broken when borrowers defaulted on their debt. The U.S. credit market went into a liquidity crisis, interbank lending rates soared and distrust set in among credit market participants.

Due to global financial interdependence, the liquidity crisis quickly spilled over across developed Western European and Asian markets as their banks had purchased securities issued in the American mortgage market. Interbank lending rates rose, while sales of shares induced a steep drop in stock exchange indices across Europe and America. Panic engulfed financial markets of developed economies.

Central banks, primarily the ECB and the FED, were forced to intervene in the market in an attempt to restore order. The ECB decided not to change the level of its key interest rate, but intervened repeatedly in the money market with large sums of money in order to stabilize the events, reduce interest rates and restore confidence.

The FED played the key role in calming down an explosive situation in credit markets by taking forceful steps towards relaxation of monetary policy, i.e. by cutting the key policy rate by 0.5 percentage points and issuing a statement to the effect that it will do all that is necessary to prevent the financial sector crisis from reflecting on the real sector and inducing recession. From that point on, financial markets began to recover, stock exchange indices to grow and the normal flows of crediting were re-established.

The latest crisis has shown the vulnerability of financial markets, and definitely shattered the illusion of the omnipotence of central banks. True, central banks can moderate the effects of crisis and restore confidence of financial market participants but, according to a number of economic analysts, they can also contribute to the emergence of crisis, as was the case with FED, which laid the path for the current crisis by conducting an extremely loose monetary policy several years ago.

In contrast to earlier crisis situations, when emerging markets bore the brunt of the crisis, this summer they successfully escaped the turmoil in the world financial markets. This may be explained by significantly improved macroeconomic performance of emerging countries, most notably their high level of foreign exchange reserves and large current account surpluses. It is believed that the emerging markets are now much more resistant to the effects of financial crisis than a decade ago.

Countries such as Serbia, running large current account deficit and strongly relying on imports of foreign capital, have not as yet felt any consequences of the financial crisis. However, in the medium run, increased lending costs are expected to make access to foreign sources of finance more difficult. Namely, loans will be available, but under less favourable terms. Provided that import of capital continues at the same pace, this could lead to further deterioration in Serbia's balance of payments position. In such a scenario, its relatively strong economic growth would be accompanied by ever growing current account deficit, whereas the alternative scenario, which appears to be more likely and less risky, implies a slowdown in economic growth due to unfavourable terms of borrowing.

3. Balance of Payments

Despite faster growth in exports relative to imports, current account deficit ran high in Q3 due to lower receipts from current transfers. Foreign direct investment and foreign borrowing by enterprises resulted in net capital inflow of around 21% of estimated quarterly GDP and led to significant strengthening of the dinar in the third quarter.

Current account deficit recorded a considerable increase on the previous quarter. Its share in estimated quarterly GDP rose from around 11.2% in Q2 to around 16.6% in Q3. Deficit on trade in goods recorded a negligible decline (by 3.3%) from the previous quarter as exports grew at a faster pace than imports.

Reduced inflow in respect of current transfers may be put down to seasonally lower net receipts from registered remittances, as well as to halved receipts from exchange transactions as purchase of foreign exchange for savings purposes increased significantly. Inflow in respect of non-resident deposits declined by USD 183 million as non-residents used their account holdings for portfolio investments (in investment funds and banks) and direct investments (capital increase of banks and enterprises).

As indicated by data on trade in goods, exports continue to outpace imports. Relative to Q2, exports and imports rose by 11.2% and 5.6%, respectively. Export to import cover ratio climbed 2.7 percentage points (from 51.4% to 54.1%).

Q3 movements in exports of goods were largely occasioned by the effects of investments made in 2006 and early 2007, implementation of the CEFTA agreement, and improved terms of trade (by 5.1% in January-August 2007 relative to the same period a year earlier, with unit value of exports and imports rising by 13.5% and 8.0%, respectively). Imports of goods were primarily influenced by a rise in investment and consumer spending, and pronounced appreciation of the dinar exchange rate.

Breakdown by economic category shows that exports of consumer and intermediate goods recorded an increase of 15.7% and 10.6%, respectively, while exports of capital goods experienced a 3.8% decline relative to the previous quarter. On the imports side, the largest growth was recorded for capital goods (9.7%), followed by consumer (5.2%) and intermediate goods (4.5%).

Breakdown by SITC section shows that the largest contribution to export growth on a quarter

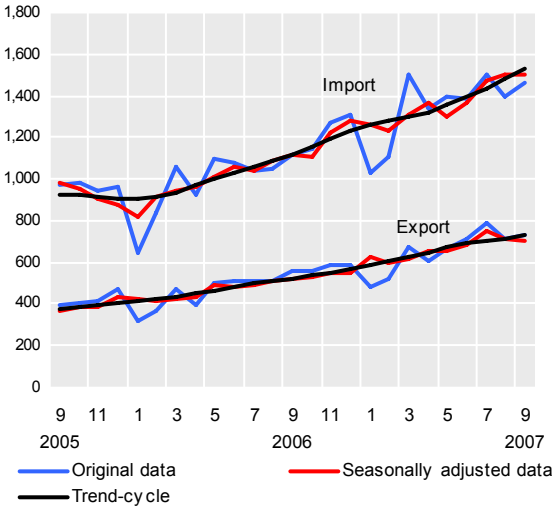
Table III.3.1

Balance of payments of the Republic of Serbia
(in USD mln)

	2007		Change
	Q2	Q3	(in %)
I. CURRENT ACCOUNT	-1,082	-1,790	65.4
Commodity trade, net	-2,028	-2,019	-3.3
Exports, f.o.b.	2,143	2,384	11.2
Imports, f.o.b.	-4,170	-4,403	5.6
Services, net	-8	23	
Receipts	676	788	16.6
Payments	-684	-765	11.8
Interest, net	-144	-187	29.9
Current transfers, net	1,046	322	-69.2
Grants	51	70	37.3
II. CAPITAL AND FINANCIAL ACCOUNT	1,677	2,312	37.9
Capital transfers	1	8	
Direct investments, net	-253	575	
Portfolio investments, net	250	156	-37.6
Medium- and long-term foreign credits, net	1353	885	-34.6
of which: early debt repayment	61	0	
Foreign lending, net	3	-8	
Short-term credits and deposits, net	134	169	26.1
Deferred payments for oil and gas	-136	62	
Commercial banks, net (increase -)	50	-14	
Other capital, net	275	478	73.8
III. ERRORS AND OMMISSIONS	-59	103	
IV. OVERALL BALANCE OF PAYMENTS (I + II + III)	536	625	
V. NBS FOREIGN EXCHANGE RESERVES (increase -)	-536	-625	

Chart III.3.1

Exports and imports
(in USD mln)



Note: For the purpose of comparability with the preceding period, data for 2005 and 2006 do not include trade with Montenegro.

earlier came from seasonal produce: fruit and vegetables, grains, metal products, iron and steel, non-ferrous metals and articles of apparel. Major contributions to Q3 import growth were provided by oil, road vehicles, iron and non-ferrous metals.

Regional breakdown shows the strongest growth relative to a quarter earlier in exports to Russia and EU member countries and in imports from EU.

Services balance improved relative to Q2, with receipts up by 16.6%, mainly from transport and tourism, and payments up by 11.8%.

Regular interest payments to foreign creditors rose by USD 39 million, while interest receipts fell by USD 4 million. Hence, net outflow in respect of interest went up by USD 43 million.

The **deficit on goods, services and interest** remained broadly unchanged from the previous quarter. Current transfers managed to offset 15% of the deficit in Q3 against 48% in Q2, resulting in a USD 726 million increase in current account deficit (excluding grants).

Net capital inflow reached USD 2,312 million, and was 37.9% higher than a quarter earlier.

Standing at USD 559 million, **foreign direct investment** remained close to the Q2 level. Nearly 70% of this amount was accounted for by capital increase of banks which gathered momentum in Q3 in response to NBS measures on the reconciliation of lending against share capital. In terms of modest domestic investments, it may be said that more funds were withdrawn than invested (net USD 16 million). As a result, net direct investment amounted to USD 575 million in Q3.

On the other hand, foreign portfolio investment declined in Q3 due to plummeting inflows in investment funds.

Net **disbursement of long-term foreign credits** increased by USD 338 million or by 61.8% on a quarter earlier excluding foreign credits taken for financing the purchase of Telekom of the Republic of Srpska in Q2 (USD 806 million). Net borrowing by banks declined by USD 154 million, while borrowing by enterprises rose by USD 205 million from the preceding quarter and reached USD 996 million.

Liabilities in respect of net **short-term credits and deposits** rose by USD 169 million. New foreign currency savings rose by 55.6% on a quarter earlier, thus recording the highest quarterly growth ever - USD 608 million.

Table III.3.2

Commodity trade by economic category

(in USD mln)

	2007 by quarter		Indices
	Q2	Q3	
EXPORTS	2,139	2,372	110.9
capital goods	157	151	96.2
intermediate goods	1,409	1,558	110.6
consumer goods	573	663	115.7
IMPORTS	4,328	4,568	105.5
capital goods	754	827	109.7
intermediate goods	2,657	2,776	104.5
consumer goods	918	966	105.2

Chart III.3.2

Current transfers over deficit on the balance of goods, services and interest

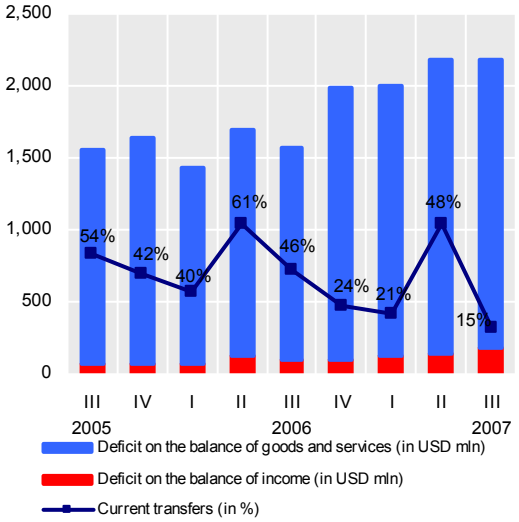
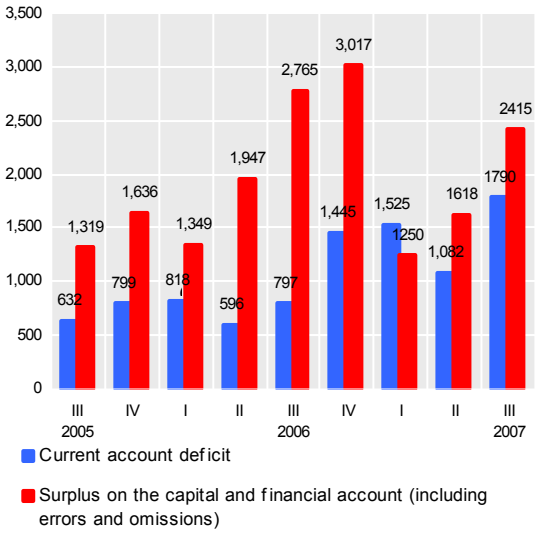


Chart III.3.3

Current account deficit and net inflow of capital

(in USD mln)



As the balance on capital and financial account exceeded the current account deficit by USD 522 million, foreign exchange reserves of the National Bank of Serbia rose by USD 625 million, excluding exchange rate differentials, and by USD 990 million, including exchange rate differentials.

At the end of Q3, **foreign exchange reserves of the National Bank of Serbia** reached USD 13,465.7 million or EUR 9,507.0 million, which is an increase by 9.1% on Q2. In late Q3, foreign exchange reserves covered nearly 8 months of imports of goods and services.

Main contribution to growth in foreign exchange reserves of the National Bank of Serbia came from income in respect of foreign securities and exchange rate differentials (around 5.5 pp), net purchase of foreign exchange in exchange transactions (2.9 pp) and allocation of required reserves by banks (1.2 pp).

During the third quarter, **outlays from foreign exchange reserves** referred primarily to redemption of bonds issued against frozen foreign currency savings deposits and economic development loan, as well as to the National Bank's participation in the interbank foreign exchange market (each contributing 0.7 pp to decline in foreign exchange reserves).

At the end of Q3, overall foreign exchange reserves of the Republic of Serbia reached USD 14,211.2 million (EUR 10,033.3 million). Of this, foreign exchange reserves of authorized banks accounted for USD 745.5 million (EUR 526.3 million).

Net foreign exchange transactions of the National Bank of Serbia accounted for the creation of EUR 290.5 million of reserve money. Major contribution to reserve money growth came from net purchases of foreign exchange in exchange transactions (EUR 259.5 million) and direct foreign exchange transactions of the National Bank of Serbia (EUR 96.0 million). On the other hand, the National Bank's participation in the interbank foreign exchange market, i.e. sale of foreign exchange purchased from licensed exchange dealers, accounted for EUR 65 million decline in reserve money. Within direct foreign exchange transactions, EUR 67.7 million was sold to the government, while other direct transactions and temporary payment transactions with Kosovo and Metohija were an input to reserve money growth in the amount of EUR 116.0 million and 47.7 million, respectively.

Chart III.3.4
Structure of capital inflow
(in USD mln)

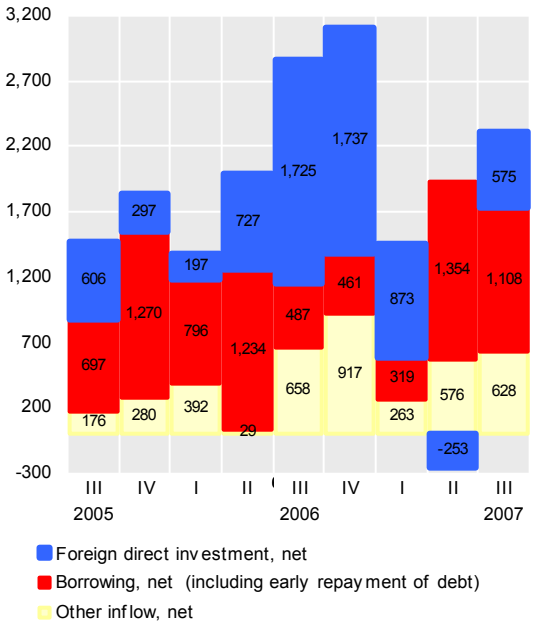


Chart III.3.5
Medium- and long-term external credit
(in USD mln)

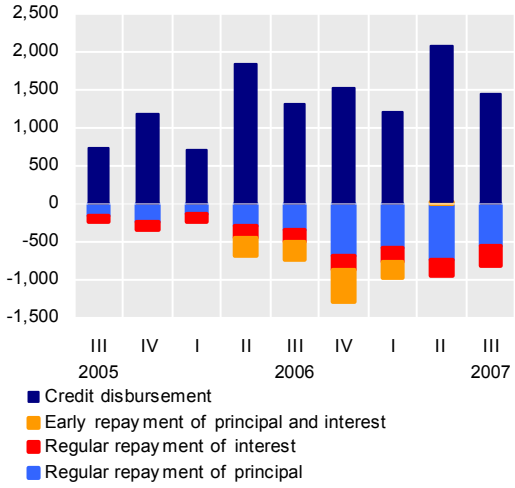


Chart III.3.6
Coverage of imports by foreign exchange reserves

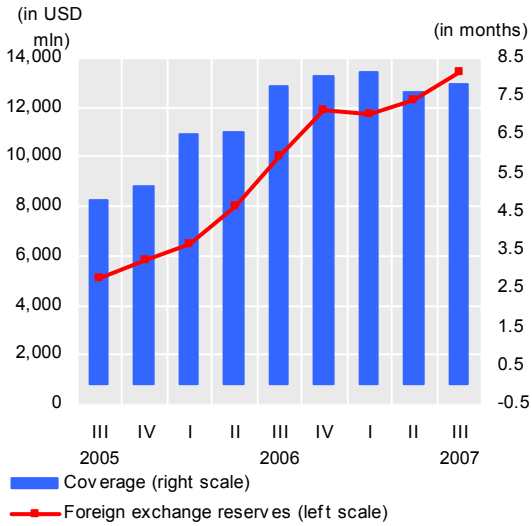


Table III.3.3

Contribution to NBS foreign exchange reserves growth
(in percentage points)

	2006				2007		
	I	II	III	IV	I	II	III
NBS foreign exchange reserves (growth in %)	**10.5**	**23.6**	**25.6**	**18.7**	**-1.3**	**5.2**	**9.1**
Foreign exchange market	2.0	10.4	6.4	10.0	-2.2	3.8	2.7
Exchange transactions	*7.3*	*11.0*	*7.0*	*4.8*	*2.7*	*4.4*	*2.9*
NBS's foreign currency net-sale in the IFEM	*-7.6*	*-3.6*	*-1.2*	*5.3*	*-5.3*	*-1.1*	*-0.7*
Temporary payment transactions1)	*2.3*	*3.0*	*0.6*	*0.7*	*0.4*	*0.5*	*0.5*
Reserve requirement on foreign currency deposits and credits, and new foreign currency savings deposits	5.6	16.9	4.4	1.1	1.5	1.5	1.2
Foreign credits to government	0.8	0.3	0.6	0.3	0.4	0.2	0.3
Grants	0.3	0.3	0.2	0.3	0.2	0.1	0.2
Frozen foreign currency savings deposits and Economic Development Loan	-0.1	-3.1	-0.8	-0.2	-0.1	-1.8	-0.7
Other[2)]	1.9	-1.2	14.8	6.6	-1.2	1.4	5.5

[1)] Payment transactions with Montenegro (until 26 June) and Kosovo and Metohija.

[2)] Includes privatization receipts, IMF credit, etc.

Table III.3.4

Net foreign exchange transactions of the NBS with an effect on the monetary base in 2007
(in millions)

	Forex market[1)]	Direct transact-ions[2)]	Exchange offices[1)]	Total net foreign exchange transactions
			Q1	
EUR	-481.2	430.8	242.9	192.4
RSD	-38,628.4	34,347.1	17,687.6	13,406.3
			Q2	
EUR	-92.4	75.6	382.9	366.1
RSD	-7,620.8	6,037.6	32,548.3	30,965.1
			Q3	
EUR	-65.0	96.0	259.5	290.5
RSD	-5,202.9	7,588.7	20,827.8	23,213.6
			Total	
EUR	-638.6	602.4	885.2	849.0
RSD	-51,452.1	47,973.4	71,063.7	67,585.0

[1)] Includes net inflow/outflow of foreign currency in respect of purchase/sale of foreign currency by the NBS in the interbank foreign exchange market and in respect of exchange transactions.

[2)] Includes net foreign exchange transactions with the government, state authorities, temporary payment transactions with Kosovo and Metohija and other net foreign exchange transactions (e.g. revenue and expenditure of the NBS in respect of transactions with foreign exchange securities, etc.)

4. Monetary Flows and Policy

Monetary multiplication continued at increased pace in Q3. This induced notable growth in monetary aggregates, especially in July and August, and led to further expansion in lending activity, which hit record high levels in August. In September, lending activity slowed down, but the enterprise sector increased direct borrowing abroad. As monetary aggregates have been recording high growth rates for quite some time, inflationary pressures may ensue over medium-run.

Monetary Aggregates

Reserve money declined minimally in Q3 2007. After recording an unusually high level in late June, bank liquidity subsided in July and August, as a result of seasonal factors and open market operations of the NBS (around RSD 33 billion), only to increase again in September to the June level, on the back of capital increase by banks and decline in government deposits. Annual growth rate of reserve money in September was also high (24.2% in nominal terms).

In Q3, the effects of reserve money creation against net foreign exchange transactions were offset by open market operations. Open market operations also offset the effect of money creation resulting from a more expansive fiscal policy, reflected in withdrawal of government deposits from accounts with the National Bank of Serbia. Anticipating a key policy rate hike by 25 basis points, banks intensified their demand for NBS securities and investment of excess liquidity in such securities.

Of reserve money elements, currency in circulation, as indicator of household spending, remained broadly unchanged from end-June, while excess bank reserves declined as banks had insufficient funds in their gyro-accounts to cover the increase in calculated dinar required reserves. On account of mismatch between gross household lending and core capital, in September banks deposited RSD 4 billion with the National Bank of Serbia.

Chart III.4.1

Reserve money creation

(cumulative changes in million dinars)

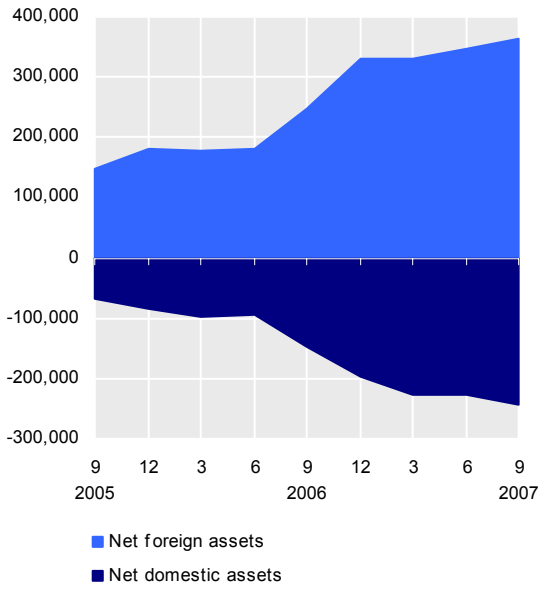
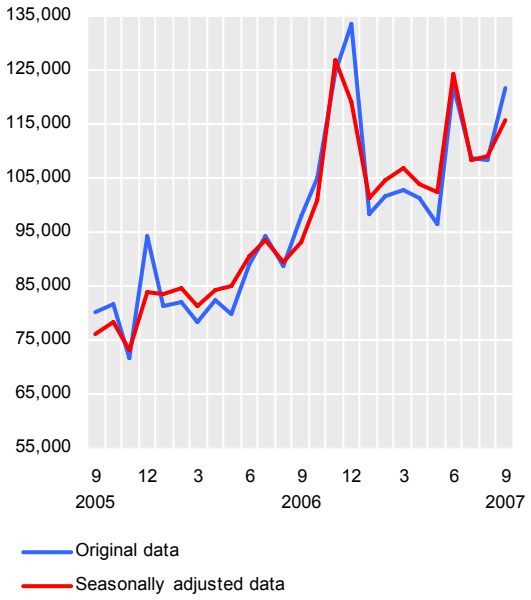


Chart III.4.2

Reserve money

(in RSD mln)



Growth rates of monetary aggregates M1, M2 and M3 rose in September relative to June. However, as inflation accelerated in Q3, these rates were lower in real terms, though they still remain relatively high. In the composition of money supply, time dinar deposits recorded the strongest growth due in part to a low starting base but also to competitive interest rates offered on dinar savings deposits and a strong rise in household income. Despite increased growth rates of quasi money, including primarily shorter-term deposits (under 1 year), foreign currency deposits remained dominant in money supply M3, recording average quarterly growth of around 9% in 2007. Households' foreign currency savings reached around EUR 4.2 billion in September, accounting for 44.3% of money supply M3. Deposits of enterprises and other financial institutions, as well as local government authorities, also recorded growth, contributing to a rise in bank lending activity. Nevertheless, in Q3 banks engaged in additional short-term borrowing abroad in the amount of around RSD 4 billion, while in August and September they used capital increase as another source of financing their lending activity.

Almost all flows contributed to creation of money supply M3, but the main contribution came from credits to enterprises and households (7.2 percentage points). Net foreign exchange transactions of the banking sector contributed 2.9 percentage points to money supply growth, primarily as a result of net purchases of foreign exchange by the National Bank of Serbia. As pronounced demand for dinars led to nominal appreciation of the currency, the effect of money creation against net foreign exchange transactions was more moderate than in earlier quarters. Net claims on government also rose as a result of spending of dinar government deposits. Only bank purchases of bonds issued against frozen foreign currency savings continued to decline, as banks invested their excess liquidity mainly in purchase of repo securities and lending to the private sector.

Table III.4.1

Contribution of selected assets to reserve money growth rate[1)]

(in percentage points)

	2006				2007		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Net foreign assets	9.7	51.8	21.1	86.7	0.0	17.3	13.6
Net domestic assets	-26.8	-38.0	-10.8	-50.6	-23.2	1.6	-13.8
Domestic credit	-22.7	-45.1	-24.5	-42.1	-35.7	-11.3	-15.9
Net claims on government	-6.7	-12.6	4.1	28.6	-23.7	-25.1	9.6
Net claims on banks	-15.2	-30.4	-28.7	-70.3	-12.2	14.3	-26.4
Net claims on other sectors	-0.8	-2.1	0.1	-0.3	0.3	-0.5	0.9
Other assets (net)	-4.1	7.1	13.7	-8.5	12.5	12.9	2.1
Reserve money	-17.1	13.8	10.3	36.1	-23.2	18.9	-0.2

1) Excluding foreign currency government deposits with the NBS.

Table III.4.2

Contribution of selected assets to M3 growth rate[1)]

(in percentage points)

	2006				2007		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Net foreign assets	0.4	26.8	11.4	13.2	3.5	3.2	2.9
Net domestic assets	1.2	-18.1	-0.7	1	1.3	2.1	9.7
Domestic credit	8.7	4.6	2.6	7.8	3.1	5.6	8.3
Net claims on government	-2.4	-3.8	0.8	6.1	-5.1	-3.8	1.2
Credit to other sectors	10.5	8.5	2.5	1.6	8.8	9.9	7.2
Households	3.7	4.6	3.3	3.1	4.3	3.6	4.5
Enterprises, in dinars	5.3	4.1	1.2	0.2	4.3	6.8	3.1
Enterprises, in foreign currency	1.4	-0.2	-1.8	-1.9	0.2	-0.5	-0.4
Other	0.1	0	-0.2	0.2	0.0	0	0
Redeemed frozen foreign currency savings bonds	0.6	-0.1	-1	0.1	-0.6	-0.5	-0.1
Short-term dinar government credit to banks	0	0	0.3	0	0	0	0
Other assets, net	-7.5	-22.5	-3.3	-6.8	-1.8	-3.4	1.4
Money supply (M3)	1.7	8.9	10.8	14.2	4.7	5.3	12.6

1) Excluding foreign currency government deposits with the NBS.

Table III.4.3

Structure of monetary aggregates

(in percentage points)

	2006	2007			Share in M3 (Sept)
	IV	I	II	III	
M3	13.5	4.3	5.3	12.3	100.0
Foreign currency deposits	10.1	7.3	10.2	10.9	61.5
M2	25.7	-4.5	9.8	15.1	38.5
Time and savings deposits	15.8	2.9	18.1	33.6	12.5
M1	29.7	-7.1	6.6	7.9	25.9
Demand deposits	28.8	-3.1	5.6	12.0	17.3
Currency in circulation	31.4	-14.3	8.5	0.5	8.6

Although money supply (in terms of monetary aggregates) recorded exceptionally high growth rates in both nominal and real terms, no significant inflationary pressures are expected in this respect for the remaining months of the year. However, as the above growth rates exceed nominal GDP growth, this may generate inflationary pressures over the medium term.

Chart III.4.3

Movements in monetary aggregates deflated by retail prices

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

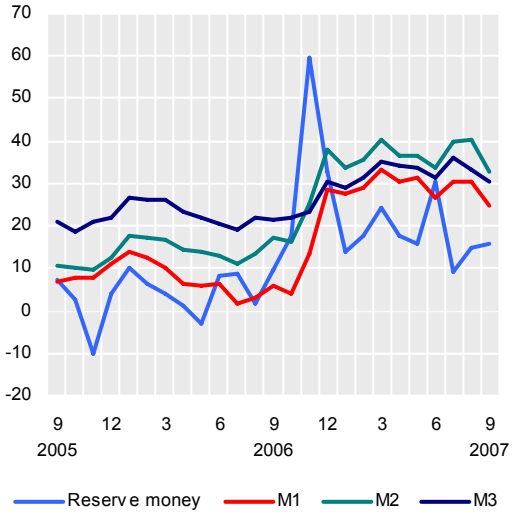
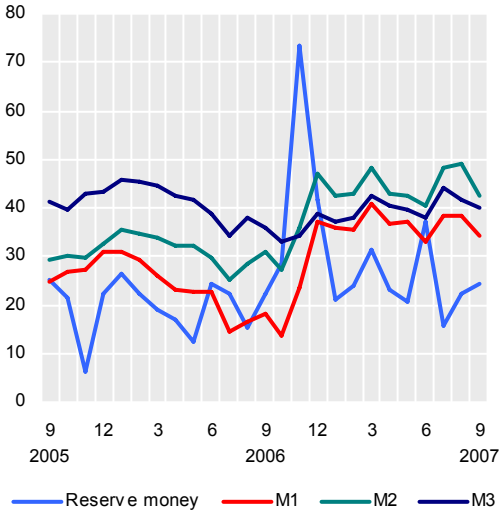


Chart III.4.4

Movements in monetary aggregates

(y-o-y growth, in %)



Bank Lending

In the nine months of 2007, bank lending to the private sector grew by over RSD 166 billion, of which household lending accounted for RSD 80 billion. Annuallized growth in lending volumes to enterprise and household sectors continued in Q3 to reach 36% in September (in excess of 26% in real terms). Credit growth accelerated in Q3 as lending rates declined further. In September, average interest rate on new lending came to 13.1%.

In Q3, credits grew by close to RSD 50 billion, of which one half was recorded in August alone. Following enactment of prudential measures to contain lending activity, growth in household lending practically came to a halt in September. By contrast, growth in lending to enterprises picked up, particularly in terms of direct foreign borrowing.

In Q3, the share of domestic credit in GDP rose by 2 percentage points to almost 30%, which is much less than in other economies in transition, not to speak of the EU countries. If, however, external debt of enterprises of almost USD 9.4 billion in September is included in the calculation, the share of total credit in GDP is around 50%.

The main sources of growth in bank lending in Q3 were foreign currency and dinar deposits of domestic non-banking sectors and the increase in share capital of banks. In September, banks intensified their short-term foreign borrowing, while long-term borrowing declined relative to June.

By contrast to lending to the private sector, lending to the Republic of Serbia and local government authorities remained broadly unchanged relative to end-2006, while lending to public enterprises continued edging up.

Growth in domestic bank credits to enterprises gathered momentum and came to around 25% in September. Long-term credits, aimed primarily to finance long-term capital investment (in equipment), recorded notable growth relative to end-June, while growth in short-term credits waned. As bank claims on enterprises in respect of issued securities rose only mildly, enterprises faced no significant liquidity problems in Q3 and recorded a comparatively lesser growth in short-term credits.

Chart III.4.5

Sources of bank lending growth

(% of balance sheet total of banks)

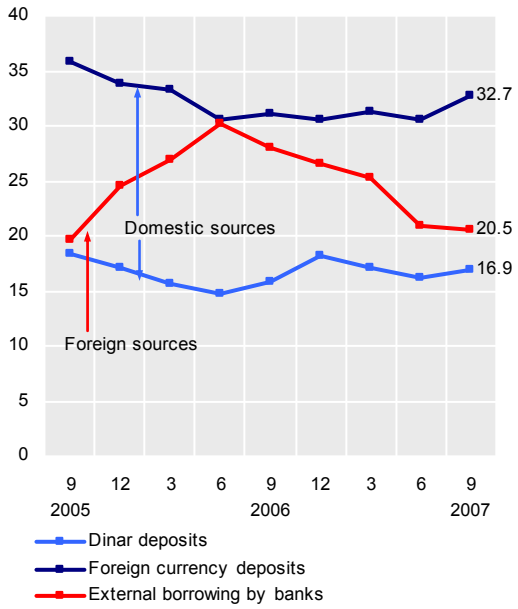
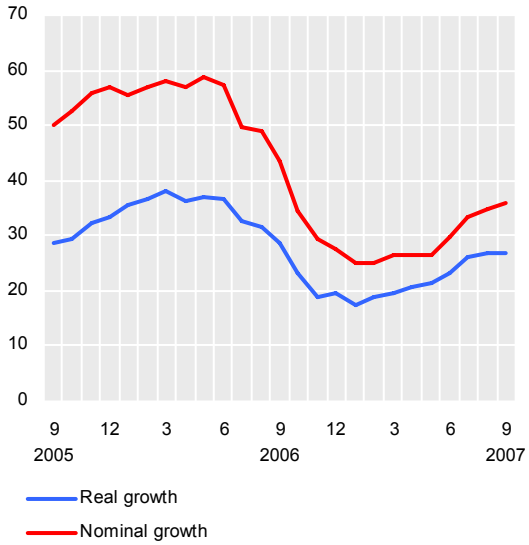


Chart III.4.6

Year-on-year growth in credit to enterprises and households

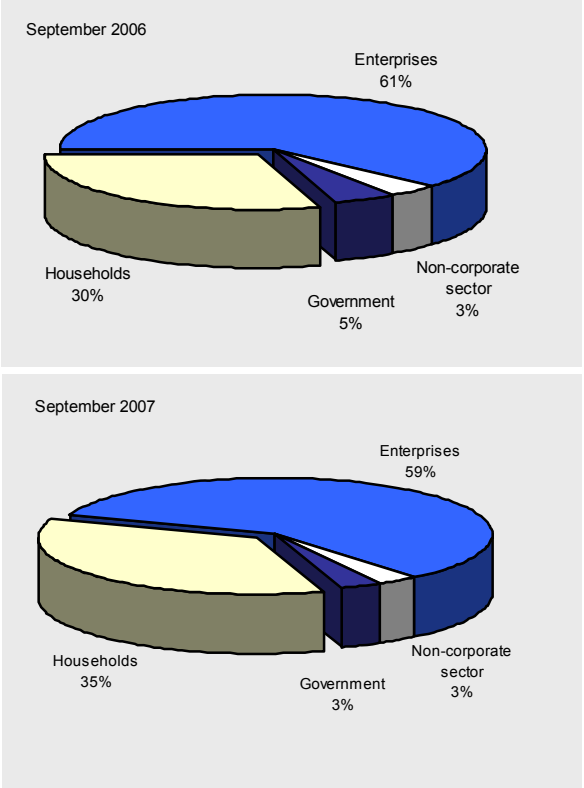
(in %)



Though annual growth in household lending remained above 50%, its growth slowed down mildly in Q3. In the year to date, the highest increase was recorded for housing loans, and their share in total household lending reached 26%. Household debt in respect of credit cards also rose notably, while growth in consumer credits was more moderate. Although inflation accelerated and, judging by other indicators, household demand increased, growth in consumer credits was comparatively slower as a result of measures aiming to contain growth in general purpose consumer credits and prescribing reconciliation of household lending to share capital of banks. Growth in consumer credits was further discouraged by the hike in the interest rate on this type of credits by 5 percentage points per annum.

Chart III.4.7

Bank credit by sector



September Effects of Prudential Measures to Curb Household Lending

Credit expansion, especially when accompanied with pressures of growing aggregate demand, requires adequate response by the economic policy decision-makers so that credit expansion may be slowed down, and ultimately, halted by monetary and fiscal policy measures. However, if these measures fail to produce expected results, relevant authorities may also resort to prudential and administrative measures.

If fast credit growth is assessed as a threat to the achievement of the National Bank's primary objective – price stability, monetary authorities are likely to raise the key policy rate, while fiscal authorities shall tighten the fiscal policy stance. Administrative measures normally complement monetary and fiscal policy measures and imply establishment of temporary control of capital. Central banks may also respond to credit expansion by enacting prudential measures (upward revision of capital adequacy ratio, reserve requirement ratio, etc.). In contrast to administrative measures which restrict credit growth directly and may in consequence lead to a drop in profitability, implementation of prudential measures helps in strengthening of the banking sector.

As most loans are foreign currency-indexed, the impact of key policy rate on lending activity is diminished. In view of the above and the likelihood of inflationary pressures generated by expansion in lending to households, in August the National Bank of Serbia issued a set of prudential measures. The most important of these measures aimed to limit repayment period for general purpose cash loans to two years and to lower the ratio of gross household lending to share capital from 200% to 150%.

After hitting record high growth rates in August, lending to households came to a halt in September apparently as a result of implementation of the above prudential measures. Analysis of new lending in September, shows that the sharpest decline was recorded for long-term loans, while breakdown of the stock of loans by type points to a drop in long-term cash loans, which may be regarded as a direct consequence of limiting the repayment period of general purpose cash loans. A note should be taken of the fact that cash loans, which were on a steady rise since April, account for the largest share of total loans approved to households.

Gross household lending (in RSD million)

	30/6/2007	31/07/2007	31/08/2007	30/09/2007
Cash loans	95,056	100,183	107,463	104,351
Credit cards	23,712	24,734	25,502	26,517
Current account overdraft	13,640	14,336	14,436	14,649
Consumer loans	20,546	21,815	22,904	22,737
Agricultural activity	6,289	6,545	6,819	7,015
Performance of other activities	707	747	758	743
Housing construction	63,673	68,325	72,993	75,507
Total	223,624	236,685	250,875	251,519

Measures relating to reconciliation of gross household lending against share capital prompted several banks to speed up capital increase in August and September. However, as indicated by September data, three banks failed to maintain the 200% ratio, while two banks were on the verge of exceeding it. If the requirement of 150% ratio of gross household lending to share capital were to be applied now, nine banks would fail to comply, these being mainly banks that account for the largest share in overall banking sector lending.

Last year's introduction of the 200% ratio of gross household lending to share capital managed to curb further growth in household loans, most notably growth in consumer loans. As September 2007 saw a turn around in trend of not only cash, but consumer loans as well, it seems that the new measure relating to the ratio of gross household lending to share capital, albeit scheduled to take efect late in the year, is also providing contribution to the slow down in lending activity. Though effects of limiting the repayment period of general purpose cash loans are currently predominant, our estimates indicate that the effects of lowering gross household lending to share capital ratio will prevail in the coming period.

5. Supply and Demand

Supply and Sources of Growth

All relevant indicators point to a slowdown in economic activity in Q3. Decline in agricultural production reflected much more on GDP growth than on growth of non-agriculture value added (NVA).

Second quarter

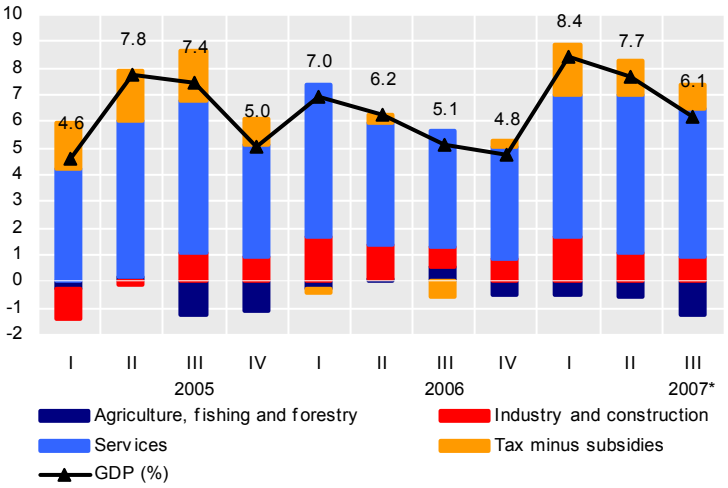
Year-on-year GDP[11] growth was slower in Q2, and was in line with expectations as specified in the August Inflation Report. However, its growth rate (7.7%) was higher than expected, which is for its major part attributable to surprisingly good results in tax collection and accelerated lending activity, and to a lesser degree to the fact that our estimates with regard to transport activity were pessimistic. Movements in GDP growth were strongly affected by weather conditions – drought in Q2 led to a slowdown in GDP growth, while exceptionally mild winter caused its unusually robust increase in Q1. Gross value added contributed 6.4 pp to year-on-year GDP growth in Q2, while tax (minus subsidies) provided 1.3 pp. Major contributor within gross value added was the services sector, and in particular transport activity (2.4 pp), retail and wholesale trade (1.9 pp) and financial mediation services (1.3 pp). Agricultural production declined by 6.6% thereby providing a negative contribution to GDP growth of 0.6 pp.

Non-agriculture gross value added (NVA)[12] reflects fundamental changes in economic activity as it excludes the impact of non-market factors. NVA points to a 9.3% year-on-year economic growth in Q2, which is 0.3% up on a quarter earlier. Lower GDP relative to NVA is attributable to exogenous factors which exerted a negative impact on agricultural production.

Chart III.5.1

Contribution to y-o-y GDP growth

(in percentage points)

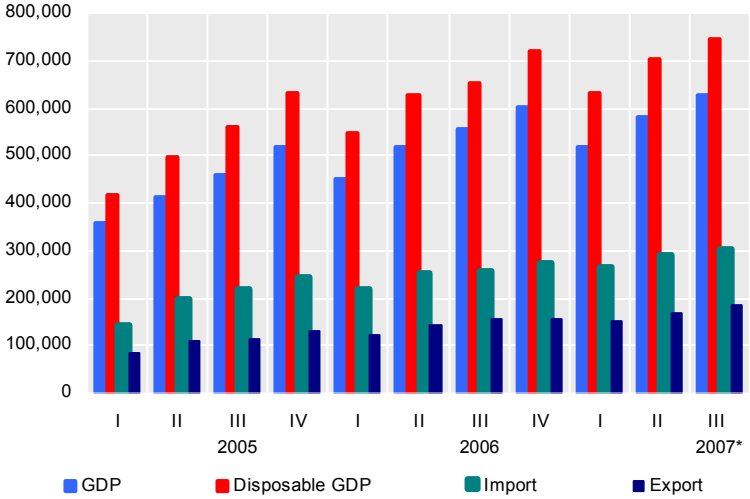


*Estimate of NBS.

Chart III.5.2

GDP - estimates by quarter

(in RSD mln)



*Estimate of NBS.

[11] The most recent communication issued by the Serbian Bureau of Statistics shows that data on GDP movements in the preceding period were adjusted. Q1 GDP growth was revised from 8.7% to 8.4%.

[12] Gross domestic product excluding tax minus subsidies and agriculture.

Third quarter

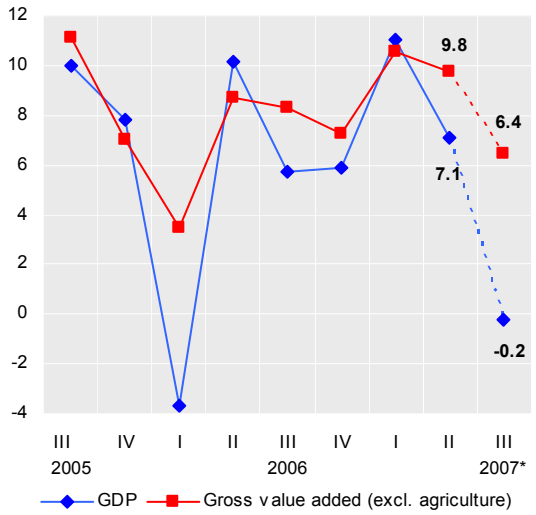
Data on GDP in Q3 are not as yet available. Our estimate based on data obtained so far is that the slowdown trend is likely to continue and that GDP growth will amount to around 6.1% year-on-year.

According to the seasonally-adjusted data on quarterly growth rates, GDP declined by 0.2% p.a. in Q3, which is 7.3 pp less than a quarter earlier. NVA growth (6.4%) also slowed down relative to Q2.

Chart III.5.3

Growth in economic activity indicators

(seasonally adjusted quarterly growth rates, at annual level)

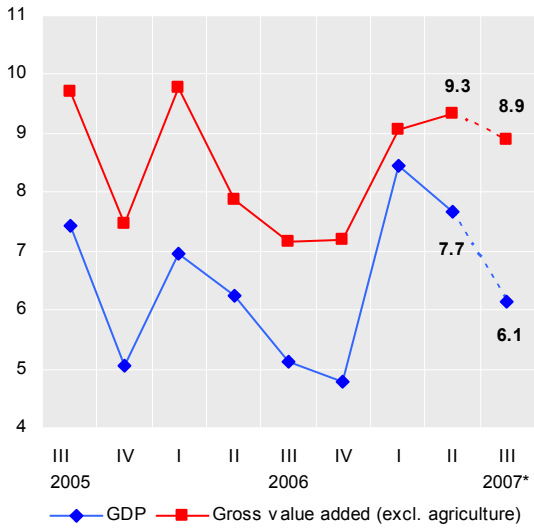


* Estimate of NBS.

Chart III.5.4

Growth in economic activity indicators

(year-on-year growth rates)



* Estimate of NBS.

As indicated by the SBS monthly statistics, pace of industrial production growth slowed down in Q3 (3.5% year-on-year) by 1.8 pp relative to the preceding quarter due to decelerated growth in the sectors of processing industry and electricity production and distribution, as well as to a decline in mining and quarrying (0.8%). Decline in mining and quarrying was recorded for the first time since Q2 2005 and had no major impact on production in higher stages of processing as demand for these materials was satisfied by increased imports and consumption of stocks. Growth in processing industry weakened despite increase in domestic demand, while slowdown in electricity production (from 8.7% in Q2 to 6.5% year-on-year) resulted from high production levels in Q2.

According to our estimates, major contributors to GDP growth in Q3 were transport (2.2 pp) and retail and wholesale trade (2.0 pp). Retail trade picked up mildly in Q3 (by 0.4 pp relative to Q2) and reached real year-on-year growth rate of 24.4%.

Construction activity is estimated to have decelerated mildly (by around 9% year-on-year). Such estimate is also confirmed by relevant indicators: decline in production of non-metal ores and slowdown in government investment spending.

Unfavourable weather conditions have been playing the key role in deceleration of GDP growth so far and will continue to do so. Namely, agricultural production is expected to continue declining in Q3 (around 10% year-on-year) and will provide a negative contribution to year-on-year GDP growth of around 1.2 pp.

Estimated real GDP growth and actual inflation indicate that third-quarter nominal GDP could rise by around 13.1% to approximately RSD 628 billion. According to balance of payments data, disposable GDP would stand at around RSD 745 billion (118.5% of GDP) with exports and imports of goods and services accounting for 29.4% and 47.9% of GDP, respectively. Year-on-year growth in aggregate demand would in such scenario come to around 14%, which is 1.4 pp up on a quarter earlier.

Indicators of Household Spending

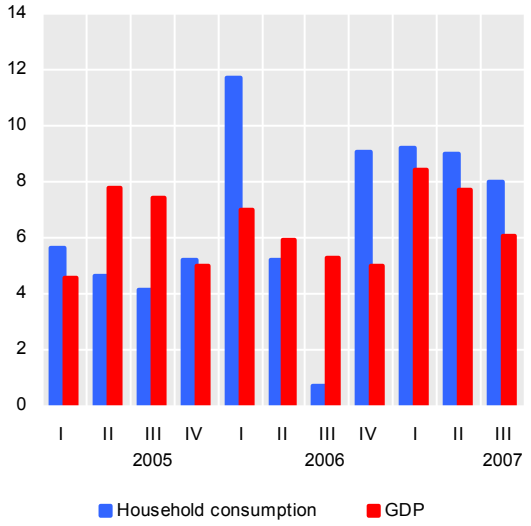
Robust household spending in Q3 was mainly driven by wages, social transfers and credits.

Based on selected indicators, the real growth rate of household demand is assessed at 8% in Q3 2007 relative to the comparable period a year earlier. Such growth in household demand resulted primarily from growth in total wages. Expansion in household lending was also a significant contributor. Nominal year-on-year growth rate of household demand stands at around 15% in Q3.

Chart III.5.5

Household demand and GDP

(y-o-y real growth rates, in %)



Sources of growth in consumer demand are as follows:

Wages. In Q3 2007, the ratio of net wages from the statistical sample to estimated GDP was 12.8%, which is 0.8 structural points more than in the comparable period a year earlier. Assuming that employees not included in the sample earn on average as much as those included in the sample, the ratio of net wages to estimated GDP was 34.7% or 3.5 structural points more than in the comparable period a year earlier;

Social transfers. In Q3 2007, social transfers accounted for 15.3% of the estimated GDP, which is 0.7 structural points more than in the same period in 2006;

Remittances. In Q3 2007, registered remittances accounted for 4.4% of the estimated GDP, the same as in Q3 2006;

Exchange offices. In Q3 2007, household income in respect of net sale of foreign exchange accounted for 2.5% of estimated GDP, which is a decline by 1.8 structural points from Q3 2006;

Credits. Borrowing provided households an additional source of financing consumption and amounted to 4.9% of estimated GDP, which is 1.6 structural points more than in Q3 2006. After hitting record levels in August, credit growth came nearly to a halt in September. However, in the third quarter as a whole, credits recorded strong growth.

At the same time, household savings rose by 4.7% of estimated GDP, which is 0.9 structural points more than in the same period a year earlier.

Household revenue, less increase in savings and plus increase in credits, accounted for 57.1% of GDP, which is an increase by 3.1 structural points. Hence, it may be concluded that household demand generated inflationary pressures in the third quarter.

Public Consumption

Q3 2007 was characterized by deficit financing of the budget. Calculated by the IMF methodology, the deficit ran at RSD 13.5 billion. Budgetary flows contributed RSD 12.8 billion to money creation.

Total consolidated revenue of the budget of the Republic of Serbia, excluding grants, reached RSD 240.5 billion in Q3 2007 (up by 15.1% in nominal and 8.0% in real terms on a year earlier), while total consolidated expenditure came to RSD 254.0 billion (up by 21.6% in nominal and 14.1% in real terms on a year earlier), resulting in a third-quarter budget deficit of RSD 13.5 billion.

Q3 2007 saw a decline in the share of revenue and a rise in the share of expenditure in GDP, primarily as a consequence of accelerated implementation of the budget for 2007.

On the revenue side, the strongest percentage growth was recorded for customs revenue (47.8% in nominal and 38.7% in real terms) and tax on profit (33.5% in nominal and 25.2% in real terms). Other revenue categories grew in line with expectations (by around 15% in real terms), except for revenue from income tax which declined as expected (due to tax rate cuts).

Analysis of Q3 as a whole reveals an appreciable increase in almost all expenditure categories. Expenditure in respect of wages rose by 31.8% in nominal terms (23.7% in real terms) relative to the same period a year earlier, social benefits rose by 19.0% in nominal terms (11.7% in real terms), outlays for subsidies climbed by 53.3% in nominal terms (43.9% in real terms), while capital investments rose by 42.5% in nominal terms (33.7% in real terms) compared to the same period a year earlier. A negligible decline was recorded for repayments of debt and interest, and for other expenditures which are customarily low.

Budget spending is still predominantly socially-oriented rather than being investment- or development-focused.

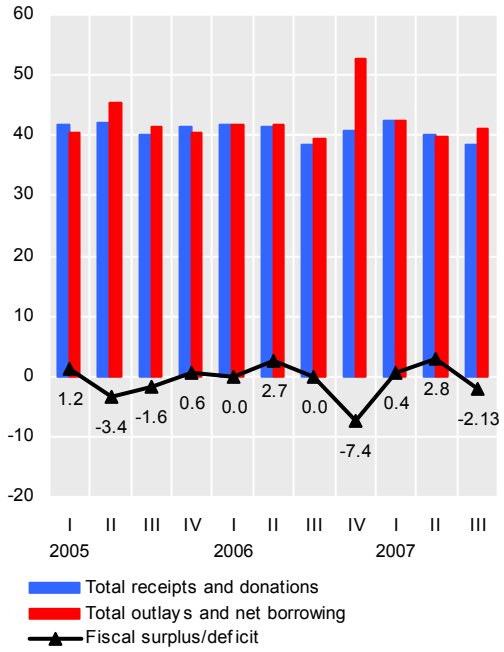
It is expected that public spending will continue to accelerate during the closing months of the year due to faster execution of the budget for 2007. Hence, deficit financing will continue, but the overall deficit for the year will not exceed 2% of GDP.

Fiscal policy is likely to be mildly expansive in 2008, above all due to high wage-related budget spending which is expected to outstrip GDP growth despite government decision to freeze wages at the November 2007 level. Furthermore, high level of capital investment is also anticipated considering the economy's needs for building infrastructure.

Chart III.5.6

Public revenue and expenditures (IMF methodology)

(as % of GDP)

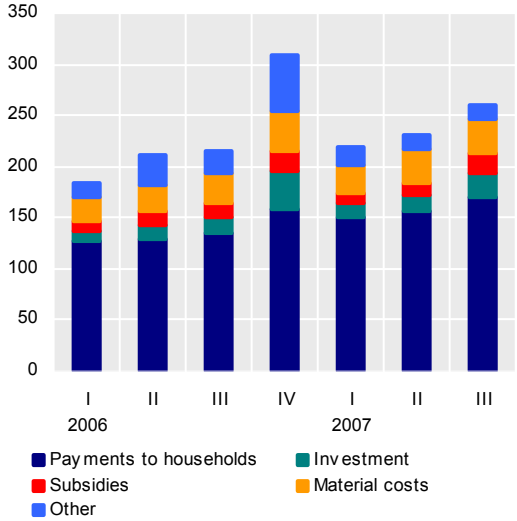


Source: Recalculated based on data provided by the RS Ministry of Finance.

Chart III.5.7

Structure of public expenditures

(in RSD bln)



Source: Recalculated based on data provided by the RS Ministry of Finance.

Memorandum on Medium-Term Fiscal Policy announces return to surplus financing of the budget in 2009, and gradual reduction in the share of public expenditures in GDP.

Table III.5.1

Fiscal balance
(by quarter, in RSD billion)

	2006				2007			Indices	Indices, real
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q3 2007 / Q3 2006	Q3 2007 / Q3 2006
I Consolidated revenues and grants	183.23	209.01	209.26	239.19	220.36	232.88	241.89	1.16	**1.08**
o/w grants	0.54	0.39	0.31	0.21	0.13	0.27	1.38	4.42	**4.15**
II Consolidated expenditures and debt repayments	184.27	210.37	214.67	309.90	219.90	230.10	259.82	1.21	**1.14**
foreign debt repayment	1.27	1.25	1.61	12.49	1.32	0.50	2.07	1.29	**1.21**
frozen foreign currency savings repayment	0.48	14.03	4.09	1.12	0.59	13.30	3.75	0.92	**0.86**
debt pre-payment	0.00	0.00	0.00	13.80	0.00	0.00	0.00		**0.00**
III Consolidated revenues without grants	182.68	208.62	208.95	238.98	220.23	232.61	240.51	1.15	**1.08**
IV Consolidated expenditures and debt repayments (excluding foreign debt repayments, pre payments and FFCD repayments)	182.52	195.09	208.97	282.49	218.00	216.30	254.00	1.22	**1.14**
Fiscal balance - IMF methodology (III - IV)	**0.16**	**13.53**	**-0.02**	**-43.51**	**2.24**	**16.31**	**-13.49**	**-**	**-**
GDP	450.48	516.30	555.95	603.07	517.23	582.56	628.63	1.13	**1.06**
Fiscal balance - IMF methodology in % of GDP	0.04	2.62	0.00	-7.22	0.43	2.80	-2.15	-	**-**

Source: Calculation based on RS Ministry of Finance data.

Table III.5.2

Consolidated public expenditure
(by quarter, in RSD billion)

	2006				2007			Indices	Indices real
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q3 2007 / Q3 2006	Q3 2007 / Q3 2006
Total expenditure and debt repayment	**184.2**	**210.4**	**214.7**	**309.9**	**219.9**	**230.1**	**259.9**	**1.21**	**1.14**
Outlays to households:	**127.9**	**129.7**	**134.6**	**158.4**	**150.5**	**156.5**	**167.1**	**1.24**	**1.16**
Net wages	43.9	43.7	45.1	57.8	53.1	57.5	59.4	**1.32**	**1.24**
Employee contributions	7.5	7.9	8.2	9.8	9.4	10.5	10.8	**1.32**	**1.24**
Social transfers	76.5	78.2	81.4	90.8	88.0	88.5	96.9	**1.19**	**1.12**
Pensions and unemployment benefits	60.7	62.9	65.6	69.8	70.2	72.1	74.6	**1.14**	**1.07**
Social benefits	13.1	12.7	13.1	17.9	15.1	13.7	19.4	**1.49**	**1.40**
Other transfers to households	2.6	2.5	2.8	3.1	2.7	2.7	2.8	**1.02**	**0.96**
Subsidies	**10.1**	**13.4**	**13.1**	**19.0**	**9.5**	**11.8**	**20.0**	**1.53**	**1.44**
Material expenses	**23.4**	**26.6**	**30.4**	**39.6**	**27.1**	**32.8**	**36.4**	**1.20**	**1.12**
Investment	**8.1**	**12.7**	**15.6**	**37.6**	**13.6**	**15.3**	**22.2**	**1.42**	**1.34**
Interest expenses	**5.7**	**4.9**	**5.8**	**18.2**	**5.7**	**3.1**	**4.2**	**0.73**	**0.68**
Debt repayment	**1.8**	**15.3**	**9.7**	**26.5**	**15.3**	**13.8**	**5.8**	**0.60**	**0.57**
Payments in respect of frozen f/c savings and pension arrears	0.5	14.0	8.1	14.0	9.6	13.2	3.8	**0.47**	**0.44**
Foreign debt repayment	1.3	1.2	1.6	12.5	1.3	0.5	2.1	**1.29**	**1.21**
Repayment of outstanding internal debt	0.0	0.0	0.0	0.0	4.5	0.1	0.0		
Other [1)]	**14.7**	**15.6**	**13.7**	**20.4**	**12.3**	**7.3**	**14.9**	**1.09**	**1.02**

[1)] Item *Other* includes: transfers to Kosovo and Metohija, net borrowing and other current expenses.

Source: Calculation based on RS Ministry of Finance data.

Assuming there is no new borrowing, the level of debt is projected to plummet to 20% of GDP by 2010, which explains announcements of potential increase in foreign borrowing. New borrowing would be used to finance infrastructure projects.

Indicators of Investment Spending

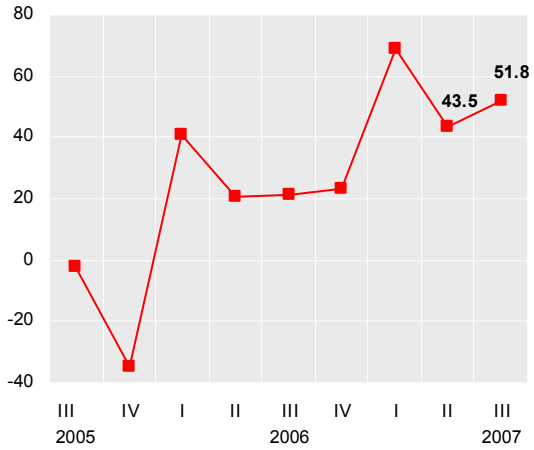
Despite economic slowdown in Q3, nearly all available investment activity indicators point to the likelihood of high economic growth in the medium and long run.

Main indicator of investment into fixed funds, i.e. long-term net domestic bank credits to enterprises, households and small- and medium-sized enterprises, increased in Q3 relative to Q2. Rise in investment is confirmed not only by high growth rates in medium- and long-term foreign borrowing by enterprises (56.5% year-on-year in Q3), but also by a considerable increase in net exports of capital goods (from 35.9% in Q2 to 50.2% in Q3). The abovementioned credit growth and increase in net exports of capital goods (year-on-year growth of 17.8% in Q3 as opposed to a 0.9% decline in Q2) point to stable economic growth outlook in the long run.

Chart III.5.8

Growth in imports of capital goods

(year-on-year growth rates)



Though slowed down, government investment spending continues to record high growth rates. In Q3 2007 government investment was higher by 42.4% than in the same quarter a year earlier. Compared to the second quarter this year, year-on-year growth in government investment is lower by 11.4 pp.

As shown by most indicators, investment in current assets is also on the rise. Namely, net export of intermediate goods recorded a notable increase of 67.6% in Q3, which represents 18.1 pp acceleration relative to Q2. Furthermore, growth in investment in current assets is confirmed by the stepped up year-on-year growth in short-term bank lending to enterprises (14.3% in Q3 vs. 7.3% in Q2).

Table III.5.3

Investment indicators

	Q1 2006	Q2 2006	Q3 2006	Q4 2006	Q1 2007	Q2 2007	Q3 2007	Q1 2007 / Q1 2006	Q2 2007 / Q2 2006	Q3 2007 / Q3 2006
Real indicators										
Physical volume of industrial production of capital goods, y-o-y indices	107.2	89.4	78	89.7	97.8	99.1	117.8	98.8	97.9	117.8
Imports of intermediate goods, in USD million	912.3	1164.3	1266.4	1418.2	1343.3	1658.7	1761.9	147.2	142.5	139.1
Exports of intermediate goods, in USD million	636.6	806.3	914.5	957.5	965.3	1123.6	1172.1	151.6	139.4	128.2
Stocks of intermediate goods, y-o-y indices	101.2	102.0	104.7	104.4	100.8	98.4	102.1	100.8	98.4	102.1
Imports of capital goods, USD million	551.5	776.6	806.0	925.3	929.9	1114.2	1223.3	168.6	143.5	151.8
Exports of capital goods, USD million	130.3	163.2	183.0	214.6	223.6	280.7	287.6	171.6	172.0	157.2
Stocks of capital goods, y-o-y indices	101.7	115.1	112.7	107.2	95.7	91.5	88.3	95.7	91.5	88.3
Financial indicators										
Short-term credits to enterprises, RSD billion	201.7	214.0	203.2	188.1	200.4	229.7	232.2	99.4	107.3	114.3
Medium- and long-term external borrowing by enterprises (net), in USD million	257.0	324.0	637.0	662.0	578.0	791.4*	997.0	224.9	244.3	156.5
Long-term credits to households, RSD billion	121.5	138.6	152.0	163.7	187.7	206.6	234.0	154.5	149.0	154.0
Long-term credits to enterprises, RSD billion	162.8	172.3	177.9	174.0	189.4	198.3	217.7	116.3	115.1	122.4
Government investment spending, RSD billion	8.1	12.7	15.6	37.6	13.6	14.1	22.2	168.0	110.9	142.4

* As the USD 806 million credit approved to Telekom Srbije a.d. by Citygroup in June was intended for purchase of Telekom Republike Srpske and did not induce a rise in investment activity in the country, it has been excluded from the calculation of long-term external borrowing by enterprises.

6. Labour Market Flows

Economic slowdown in Q3 was accompanied by slower wage growth. Movements in real wages in the industrial sector were commensurate with movements in productivity. On the other hand, very high real growth in public sector wages continues to generate inflationary pressures.

Wages

Although average wages slowed down from Q2 by 1.6 pp, year-on-year nominal net wage growth was high and amounted to 27.4% in Q3. As seasonally-adjusted data point to a negligible pick up in nominal net wage growth, seasonally-adjusted net wages are higher by 4.9% relative to the preceding quarter. Real year-on-year net wage growth was sustained at a relatively high level of 19.5% despite accelerated inflation.

Net public sector wages continue to record very high growth rates (29.6% in nominal terms and 21.5% in real terms). In view of the fact that the share of public sector wages in total wage bill rose to 57.1%, it may be concluded that high year-on-year growth in total wage bill was mainly driven by robust public sector wage growth. Since exceptionally strong real public sector wage growth produces inflationary pressures and has a negative impact on the competitiveness of domestic economy, measures will be taken in the coming period to harmonize growth in public sector wages and inflation rate with a view to curbing their growth in real terms.

Economic slowdown was accompanied by slower wage growth. Hence, the sharpest deceleration in wage growth was recorded in sectors which experienced the largest slowdown, such as electricity production, mining and quarrying, and construction. Wages in the processing industry and real estate were stable, while a rise was recorded only for wages in financial mediation and hotel and restaurant industry. Analysis of public sector wages by beneficiary shows that the fastest year-on-year growth was recorded in wages of employees in local government, education and culture, while wages in public state-owned enterprises, administration, health and social work sectors slowed down.

Chart III.6.1
Average net wages
(y-o-y growth, in %)

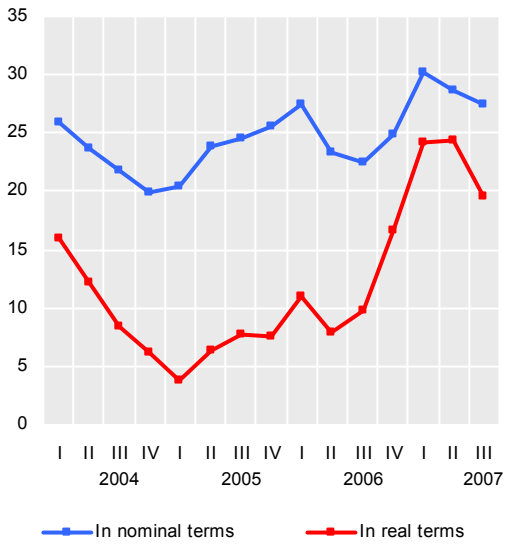
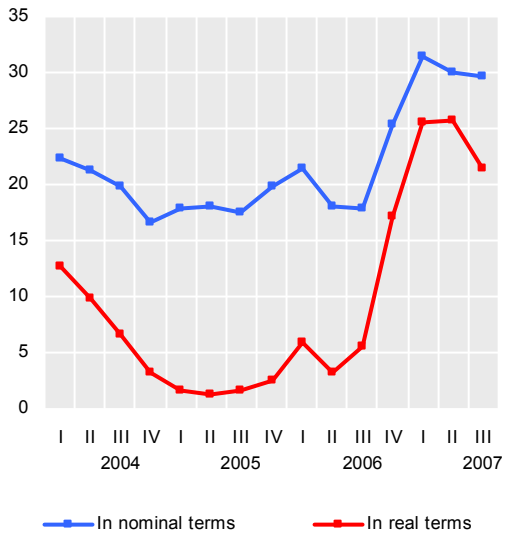


Chart III.6.2
Average net wages in the public sector
(y-o-y growth, in %)



In Q3 2007 relative to the same period a year earlier, public sector wage bill increased by 29.4% in nominal and 21.3% in real terms.

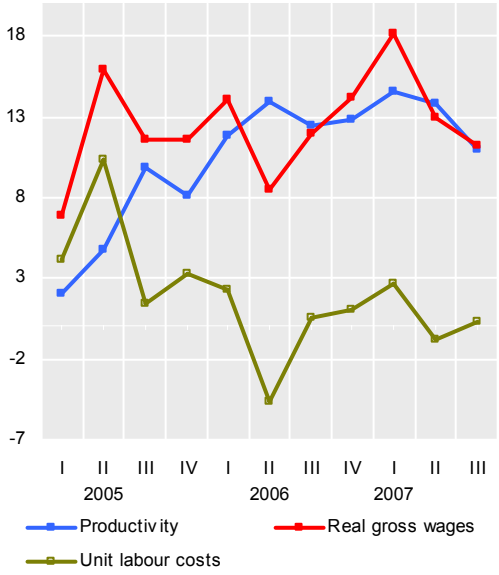
Average wages in Q3 (RSD 28,019 excluding taxes and contributions) were lower than average public sector wages (RSD 32,366), most probably due to the failure of some private sector employers to update Wage Reports.

Monitoring movements in real wages, and particularly in relation to productivity, is very important for the analysis of correlation between wages and inflation. Unit labour costs in the industrial sector in Q3 rose by 0.3% on a year earlier, as productivity gains fell behind growth in real gross wages (11.0% and 11.2%, respectively). In the processing industry, unit labour costs increased by 1.7%. Relative to Q2, unit labour costs declined by 0.4% as growth in real gross wages fell behind productivity gains (0.9% and 1.3%, respectively). In contrast to overall industrial sector, processing industry recorded a 0.9% rise in unit labour costs. Given that growth in real wages in the industrial sector is by large commensurate with productivity, it may be concluded that movements in real wages produce no significant inflationary effects. However, it should not be forgotten that public sector wage growth is exceptionally high and incommensurate with movements in productivity, thereby representing a source of inflationary pressures.

Chart III.6.3.

Movements in productivity, real gross wages and unit labour costs in the industrial sector

(year-on-year growth, in %)



Employment

Downward trends in both employment and unemployment continued, while year-on-year growth rate of new employment and employment terminations increased.

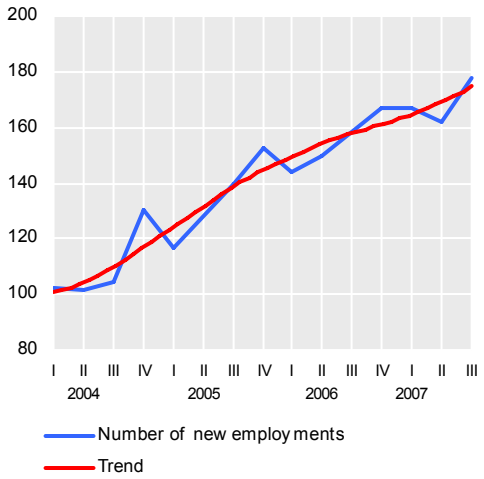
As available data indicate, total employment in September 2007 amounted to 2,435.3 thousand persons, which is 3.4% down on the same month a year earlier. Continued downward trend in employment is mainly due to the process of privatization and restructuring of enterprises.

Decline in unemployment, registered early this year, also continued. Total unemployment[13], excluding persons temporarily incapacitated or unwilling to work, amounted to 808.2 thousand in September, which is by 106.3 thousand or 11.6% less than in the same month a year earlier. This year's drop in unemployment is largely attributable to the application of the Law on Health Insurance and Law on Health Care, and consequent transfer of data on around 90 thousand persons from the records of the National Employment Service to the records of the Republic Health Insurance Bureau (see text box on p.44). Compared to end-June 2006, unemployment is lower by 4.8% or 41 thousand persons.

Chart III.6.5

New employment

(in thousand)



Source: National Employment Service.

[13] Republic Labour Market Bureau

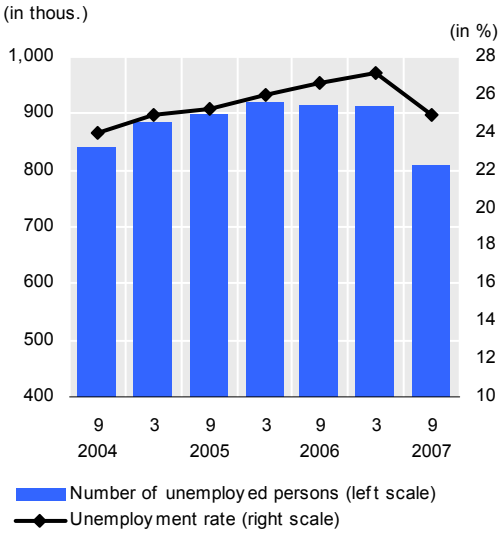
The number of first-time job seekers equalled 395.8 thousand in September, which is 15.2% down on the same month a year earlier. However, the share of first-time job seekers in total unemployment remains very high – 48.5% The number of persons seeking employment for over two years declined by 3.3% from the same month a year earlier and reached 466.6 thousand in September.

Other labour market indicators recorded a positive change. This primarily refers to new employment which rose 12.2% year-on-year and reached 177.7 thousand in Q3. Year-on-year growth rate of new employment in Q3 was higher by 4.3 percentage points than in Q2. Of the new employment figure, 81.3 thousand persons from the records of the National Employment Service gained new employment (45.7%), while 96.3 thousand persons changed jobs (54.3%). At the same time, year-on-year vacancy growth rate fell from 9.1% recorded in Q2 to 3.7% in Q3. Year-on-year growth rate of employment terminations was 16.9% and was also higher than in the previous quarter.

The estimated rate of unemployment drifted from 25.8% in June down to 24.9% in September.

Chart III.6.4

Unemployment



Source: Serbian Bureau of Statistics and National Employment Service.

Why Have Unemployment Figures Declined?

As of the beginning of application of the Law on Health Insurance and Law on Health Care early this year, data on all persons other than working population (90 thousand persons) were deleted from the National Employment Service (NES) records and transferred to the records of the Republic Health Insurance Bureau.

According to the findings of the Workforce Survey, unemployment equalled 693 thousand persons in October 2006. At the same time, however, NES records indicated unemployment of 911 thousand persons. The difference of around 220 thousand primarily relates to persons who took unregistered employment but kept their files open with the NES as the only way to exercise their health and social protection rights. This significantly distorts the real picture of the labour market. For instance, the October 2006 Workforce Survey shows unemployment rate of 20.9%, while the official registered unemployment rate is 27.8%. Enforcement of the Employment Law means significant tightening of conditions for recording unemployed persons with the National Employment Service and creates prerequisites for a more realistic monitoring of unemployment trends in the labour market.

7. Inflation Expectations

After stabilizing in Q2, inflation expectations of all sectors rose in August in response to "agricultural shock". However, September survey data suggest that inflation expectations of the financial and enterprise sectors have now subsided.

Findings of the September survey, conducted by *TNS Medium Gallup*, point to more stable inflation expectations of the financial and enterprise sectors following the August rise, and to further growth in inflation expectations of the trade unions and households.

After steadying in Q2, inflation expectations of all sectors went up in Q3. Rally in prices of agricultural and processed food products, supported by information in media on price hikes, pushed inflation expectations of households to 16.4% p.a. Despite obvious upward trend, inflation expectations are expected to decline during the remaining months of the year. Expectations of all sectors, except the financial sector, run significantly above the actual inflation outturn. This particularly applies to the sector of households which revealed unrealistically high inflation expectations.

Table III.7.1

Inflation expectations over the next 12 months

	2007						
	Mar	Apr	May	Jun	Jul	Aug	Sep
Enterprises	12.7	10.0	10.0	8.7	8.7	10.0	10.0
Financial sector	7.4	6.2	6.2	6.2	6.2	7.4	7.3
Trade unions	7.4	10.0	10.0	10.0	8.7	8.7	9.1
Households	12.7	22.4	14.0	14.0	12.7	12.7	16.4

Source: Survey (TNS Medium Gallup).

The Reuters survey, conducted in October on the sample of 13 bank dealers and one economist, pointed to expectations of further decline in the exchange rate. The exchange rate is expected to stand at 77.98 RSD/EUR at end-2007.

Bank dealers expect end of year key policy rate to average 9.93%, which is somewhat lower than revealed by the September survey (10.1%). Only one dealer expects the key policy rate to be cut to 9.5%.

Table III.7.2

Expectations of the banking sector[1)] for end-2007 key policy rate and exchange rate movements

	Key policy rate	RSD/EUR
March 2007	10.8	81.5
June 2007	9.9	82.5
September 2007	10.1	79.1

[1)] Survey includes 13 banks.

Source: Survey (Reuters).

Expectations with respect to the level of the key policy rate in October and November

Twelve out of thirteen bank dealers expect the NBS to maintain the current level of its key policy rate in October, while one dealer said he expected the rate to be raised to 10%. Assuming that banks have incorporated their inflation expectations into expectations regarding exchange rate levels, keeping the key policy rate at its current level of 9.75% would have a neutral effect on the exchange rate.

In addition, five out of thirteen bank dealers expect upward revision of the key policy rate in November.

IV. Inflation Projection

End-2008 core inflation projection ranges between 2.7 and 5.9% where central projection stands at 4.3%. During the next year, year-on-year core inflation will most likely neither undershoot nor overshoot the target corridor (3-6%). Central projection places headline inflation for 2008 at around **6%.** This projection is consistent with moderate relaxation of the monetary policy stance in the period ahead which, however, may not take place if fiscal policy is too expansionary.

Medium-term inflation projection aims to show projected movements in inflation in the period ahead, main factors behind such movements and risks to the projection. Core inflation projection is expressed as both a range and a central projection. The medium-term projection presupposes an active monetary policy which aims to maintain core inflation within the target corridor and thus fulfils its principal role as defined by the current monetary policy framework.

Initial Conditions and Assumptions

Despite nominal appreciation of the dinar, core inflation more than doubled in Q3 in the wake of the agricultural shock. The effects of the drought contributed around 1.2 pp to Q3 core inflation (of 2.2%) and are likely to exert additional pressure of around 0.6 pp on core inflation in Q4. Nevertheless, core inflation is expected to decline in Q4 to around 4.5% (see p. 9), thereby meeting the target set for this year.

Direct effects of the drought on inflation will probably not spill over into the next year. However, price persistence and heightened inflation expectations arising from the above agricultural shock will continue to have inflationary effects in 2008. The latest rise in world prices of oil and the electricity price hike announced for next year (between 10% and 15%) will also generate inflationary pressures.

The exchange rate will work in the opposite direction. Nominal appreciation of the dinar from Q3 and early Q4 induced a drop in import prices and the return to widening of the real exchange rate appreciation gap[14], which will have strong disinflationary effects in the next year. Significant influence on inflation may also come from the fiscal policy, as it is expected to ease notably late in the year while the budget planned for 2008 is still unknown[15].

The new projection is based on assumptions of moderate decline in EU inflation, minimum rise in oil prices during the next year and unchanged ECB policy rate. Non-core inflation (regulated prices and prices of agricultural products) ought to be much lower than this year, which is consistent with projections of the Ministry of Finance. Although no budget for next year has been adopted, budget deficit is expected to be somewhat lower in 2008 than in 2007.

Assumptions used in the projection

External	**2007**	**2008**
EU inflation	2.2%	1.9%
EU interest rate (end-year)	4%	4%
Ural oil price per barrel (in USD, end-year)	85	87
Internal		
GDP growth	7%	6%
Non-core inflation	13.4%	7.5%
Budget deficit (share in GDP)	–2%	–1.5%

[14] See text on the appreciation gap in *Inflation Report - August 2007,* p. 15.
[15] Draft budget has been prepared, but is yet to be adopted.

Current monetary policy decisions are taken with a view to achieving the inflation objective set for the next year, especially as the core inflation objective for 2007 will almost certainly be achieved. Therefore, the year 2008 will represent the main focus of the projection given in this Inflation Report.

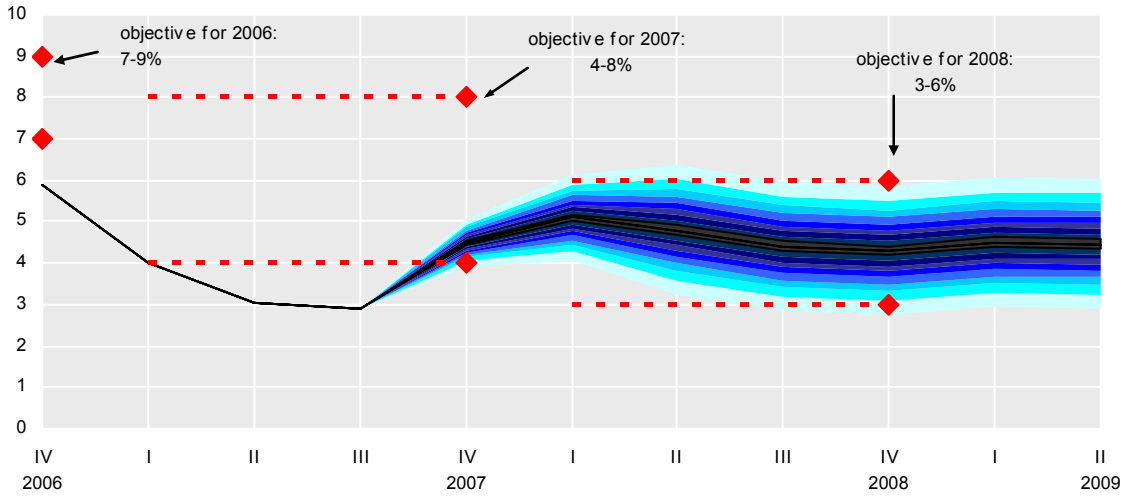
Core Inflation Projection

End-2008 core inflation will range between 2.7% and 5.9%, with central projection at around 4.3% (Chart IV.1.1). In the period ahead, both quarterly and monthly rates of core inflation will decline, as reduced import prices and appreciation gap exert their disinflationary effect and the impact of the agricultural shock is exhausted. The decline in inflation could be slowed down by the latest rise in world prices of oil and electricity price hikes announced for early next year. Despite the decline in quarterly rates, year-on-year rates of core inflation will continue to grow for some time yet and remain relatively high in the first half of 2008, as shock effects, in our case those of agricultural shock, remain in year-on-year rates for the duration of one year[16]. Nevertheless, year-on-year rates of core inflation will stay within the bounds of the target corridor throughout 2008 (3-6%).

Chart IV.1.1

Core inflation projection

(y-o-y rates, in %)



The fan chart depicts the probability of various core inflation outcomes in the next seven quarters. Central projection is within the darkest central band and the probability that core inflation would lie within 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 core inflation in the next seven quarters will lie outside the band in the chart is 10%.

This projection is consistent with a moderate relaxation of monetary policy in the period ahead, which will (most probably) be necessary in order to rein in strong disinflationary pressures generated by nominal appreciation and appreciation gap of the real exchange rate. In the near future, however, no notable relaxation is likely, due to heightened inflation expectations and possible risks relating to inflationary effects of fiscal expansion late in the year. If the fiscal policy is estimated as likely to produce significant inflationary effects, monetary policy stance will not ease, but may even tighten.

[16] Year-on-year rates show price growth for the preceding year.

Projection of Non-core and Headline Inflation

Central projection places retail price growth for 2008 at around 6.0%. This projection is based on the central projection of core inflation (4.3%) and expectations of non-core inflation which is estimated at around 7.5%.

Non-core inflation projection is based on expected growth in regulated prices (7.8%), according to projections of the Ministry of Finance, and in prices of agricultural products (4%), which is expected to be much lower in 2008.

Risks to the Projection

At this point, excessive fiscal expansion represents the major risk to the projection. Although the current inflation projection presupposes moderate relaxation of fiscal policy late in 2007, there is a danger that, in the run up to local elections, fiscal spending may expand still further, primarily on local government level. This would affect not only core inflation projection, but even more the projection of the monetary policy stance which would then have to be tightened relative to the baseline projection.

Another significant risk relates to assumptions of specific components of non-core inflation, primarily prices of petroleum and agricultural products. The latest explosive growth in world prices of oil and the effects of the August drought are the best illustration of extreme susceptibility of these prices to different kinds of shocks.

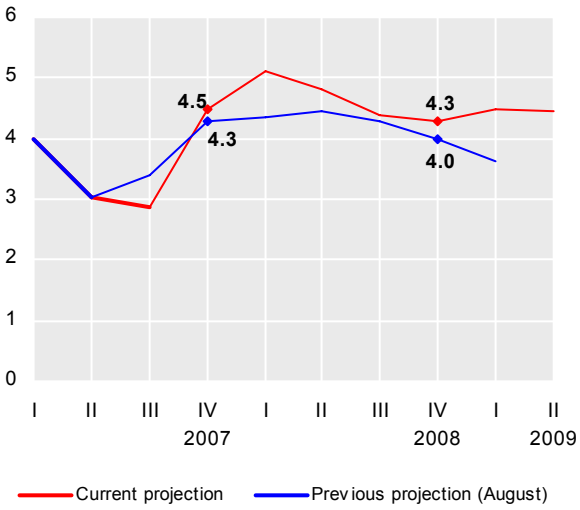
In addition, as exchange rate movements are sensitive to sudden inflows or outflows of foreign capital, they may induce deviations from projected inflation and change in monetary policy stance. Appreciation shock from September and October, for instance, led to a change in the projection.

Comparison with August Projection

Chart IV.1.2

Current and previous projecton of core inflation

(y-o-y rates, in %)



There are no significant differences between the new inflation projection and the one published in the August Inflation Report, although the trajectory of the key policy rate consistent with the projection has been revised downwards. In the new projection, short-term inflationary pressures generated by the "agricultural shock" (persistence) and rise in world oil prices are more pronounced, resulting in somewhat stronger inflationary pressures in the first half of 2008 than expected in Q2 projection. In addition, the new projection incorporates heightened inflation expectations, as a consequence of Q3 inflation growth. However, these effects are gradually counterbalanced by disinflationary effects of the appreciation gap of the real exchange rate, which are higher in the current projection. Hence, the new core inflation projection for the second half of 2008 gets closer to the August projection, reaching 4.3% at year end (compared to 4% from the August Inflation Report).

The differences are more pronounced when it comes to the monetary policy stance behind each of the two projections. Whereas the earlier projection was consistent with a moderate tightening (which took place in August), the new projection presupposes moderate monetary policy relaxation. The reason for this is to be found primarily in disinflationary pressures generated by the appreciation gap, which are much higher in the new projection and produce more medium-term downward pressure on inflation than in August projection. In addition, the projection of ECB policy rate has been was revised downwards, which also, though to a lesser extent, contributes to a somewhat looser monetary policy stance in the current projection.

Table A

Indicators of external position of Serbia

	2001	2002	2003	2004	2005	2006	2007 Jan-Sept
EXTERNAL LIQUIDITY INDICATORS (in %)							
Forex reserves/imports of goods and services (in months)	3.1	4.5	5.3	4.5	5.9	9.6	8.4
Forex reserves/short-term debt	114.1	223.5	336.3	424.9	385.9	717.3	903.7
Forex reserves /GDP	11.0	14.4	17.5	17.3	22.2	37.4	34.7
Debt repayment/GDP	0.9	1.3	2.0	3.8	4.5	6.4	8.7
Debt repayment/exports of goods and services	3.7	7.1	9.1	16.8	17.9	23.5	29.8
EXTERNAL SOLVENCY INDICATORS (in %)							
External debt/GDP	104.8	70.9	66.7	57.5	58.7	61.7	59.7
Short-term debt/GDP	9.7	6.4	5.2	4.1	5.7	5.2	3.8
External debt/exports of goods and services	456.9	379.2	343.0	253.6	234.2	228.1	211.0
FINANCIAL RISK EXPOSURE INDICATORS (in %)							
Forex reserves/M1	135.9	143.3	195.3	221.0	291.1	356.5	362.3
Forex reserves/reserve money	136.3	132.0	168.0	166.2	170.3	177.8	185.7
OPENNESS OF ECONOMY (EXPORTS + IMPORTS)/GDP	65.3	56.9	59.1	68.6	70.2	73.9	78.7
CREDIT RATING				November Standard & Poor's: B+	July Standard & Poor's and Fitch: BB-	February Standard & Poor's: BB- /positive; Fitch: BB- /stable	June Standard & Poor's: BB- /stable; Fitch: BB-/stable
MEMORANDUM:						**(in USD million)**	
GDP (in USD million)	10,619	15,840	20,340	24,509	26,355	31,760	28,954
External debt	11,125	11,230	13,575	14,099	15,467	19,606	23,173
External debt servicing	91	211	397	935	1,183	2,021	2,519
Central bank foreign exchange reserves	1,169	2,280	3,550	4,245	5,843	11,888	13,466
Short-term debt	1,026	1,020	1,056	999	1,514	1,657	1,490
Current account balance	-285	-1,247	-1,420	-2,869	-2,224	-3,656	-4,398

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.

Notes:

1. 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 which apply to all IMF member countries. We have therefore adjusted the financial risk exposure indicator.
2. Trade with Montenegro is registered within relevant transactions as of 2003.
3. Foreign debt repayment does not include early debt repayment.
4. GDP for the period under review as estimated by the National Bank of Serbia.

Table B

Key macroeconomic indicators

	2001	2002	2003	2004	2005	2006	2007 Jan-Sept
Real GDP growth (in %)	4.8	4.2	2.5	8.4	6.2	5.7	6.1[1)]
Retail prices (in %, relative to the same month a year earlier)	40.7	14.8	7.8	13.7	17.7	6.6	7.4
Core inflation (in %, relative to the same month a year earlier)	20.5	4.4	6.1	11.0	14.5	5.9	3.3
NBS foreign exchange reserves (in USD million)	1,169.1	2,280.1	3,550.1	4,244.5	5,842.8	11,887.5	13,465.7
Exports (in USD million)[2)]	2,435	2,961	4,358	5,559	6,606	8,593	8,445
- growth rate in % compared to a year earlier	17.9	21.6	47.2	27.6	18.8	30.1	39.4
Imports (in USD million)[2)]	-4,499	-6,059	-8,177	-11,853	-11,902	-14,885	14,348
- growth rate in % compared to a year earlier	28.3	34.7	35.0	45.0	0.4	25.1	37.2
Current account balance (in USD million)	-285	-1,247	-1,420	-2,869	-2,224	-3,656	-4,398
as % of GDP	-2.7	-7.9	-7.0	-11.7	-8.4	-11.5	-15.2
Unemployment, official data (in %)[3)]	21,8	24,5	26,1	23,9	25.3	25.9	24.9
Unemployment according to the Survey (in %)[4)]	12.2	13.3	14.6	18.5	20.8	20.9	/
Wages (average for the period, in EUR)	89.9	151.7	176.7	194.4	210.4	260	334
RS budget deficit/surplus (in % of GDP)	-0.2	-4.3	-1.4	-0.1	1.5	1.4	3.7[6)]
Consolidated fiscal result (in % of GDP)							
- Ministry of Finance methodology	0.0	-1.9	-2.0	0.5	3.9	-3.1	0.9
- IMF methodology	-0.5	-2.8	-4.3	-1.4	-3.2	-4.7	0.3
RS public debt (external + internal, in % of GDP)[5)]	106.5	73.7	67.9	53.7	46.2	38.8	32.3[6)]
RSD/USD exchange rate (average, in the period)	66.68	64.46	57.56	58.39	66.70	67.10	59.81
RSD/USD exchange rate (end of period)	67.67	58.98	54.64	57.94	72.22	59.98	55.68
RSD/EUR exchange rate (average, in the period)	59.78	60.68	65.05	72.57	82.92	84.16	80.37
RSD/EUR exchange rate (end of period)	59.71	61.52	68.31	78.89	85.50	79.00	78.86
Memorandum							
GDP (in USD million)	10,619	15,840	20,340	24,509	26,355	31,760	28,954[1)]

[1)] NBS estimate.

[2)] Trade with Montenegro is registered within relevant transactions as of 2003.

[3)] Source: Serbian Bureau of Statistics; before 2003, unemployment rate was calculated based on the number of job seekers, while as of 2004 it is calculated based on the number of unemployed persons.

[4)] Source: Labour Force Survey, Serbian Bureau of Statistics.

[5)] Source: RS Ministry of Finance Bulletin.

[6)] At end-August.

Appendix 1: *Changes in Reserve Requirements* and *Prudential Measures Aimed at Curbing Credit Growth*

Chronological overview of changes in reserve requirements and prudential measures aimed at curbing credit growth, which used to be integral to Inflation Report, is now available on the NBS website (www.nbs.yu/inflation_report). From this issue of Inflation Report, appendix will only contain measures issued in the quarter under review.

Changes in Reserve Requirements

No.	Legal ref.	Base	Ratio	Interest on allocated required reserves	Initial calculation	Expected effects
1	Official Gazette no. 93/07 12/10/2007	Dinar base – unchanged	Ratio on dinar deposits termed for a period over one month cut from 10% to 5%	Remunerated	10/11/2007	Release of RSD 5 billion
		Foreign currency base – does not include household term savings deposited from 31 October through 7 November 2007 for the duration of their term.	Unchanged	Unremunerated		

Prudential Measures Aimed at Curbing Credit Growth

No.	Legal ref.	Regulation	Changes	Previously
1	**Decision** Official Gazette no. 77/07 17/08/2007 **Guidelines** Official Gazette no. 79/07 28/08/2007	Decision on the Reconciliation of Gross Household Lending against Share Capital of Banks Guidelines for the Implementation of Decision on the Reconciliation of Gross Household Lending against Share Capital of Banks	Subject to this amendment, lending to be reconciled against bank share capital also includes subsidized loans (loans for housing construction supported by the RS Government's program). Banks are obligated to keep their end of month gross household lending to share capital ratio below or at 150%, beginning from the stock of lending and share capital as at 31 December 2007. Banks may not approve cash loans with a repayment period longer than 2 years.	By 30 November 2007, banks are obligated to keep their end of month gross household lending to share capital ratio below or at 200%.

List of Tables and Charts

Tables

Charts

Source of data: National Bank of Serbia and Serbian Bureau of Statistics, unless otherwise specified.

Meetings of the Monetary Policy Committee of the National Bank of Serbia and key policy rate changes in 2007

Date	Key policy rate (annual level, in %)	Change (in basis points)
MPC meetings held		
10 January 2007	14.00	0
29 January 2007	13.00	-100
9 February 2007	13.00	0
28 February 2007	11.50	-150
13 March 2007	11.50	0
28 March 2007	10.50	-100
18 April 2007	10.50	0
27 April 2007	10.00	-50
15 May 2007	10.00	0
29 May 2007	9.50	-50
11 June 2007	9.50	0
28 June 2007	9.50	0
12 July 2007	9.50	0
27 July 2007	9.50	0
15 August 2007	9.50	0
28 August 2007	9.75	+25
11 September 2007	9.75	0
1 October 2007	9.75	0
10 October 2007	9.75	0
29 October 2007	9.50	-25
Scheduled MPC meetings		
12 November 2007		
28 November 2007		
10 December 2007		
28 December 2007		

Press Releases from the NBS Monetary Policy Meetings

Press release from the MPC meeting held on 28 August 2007

The Monetary Policy Committee of the National Bank of Serbia announced today its decision to raise the key policy rate by 0.25 percentage points to 9.75%.

This decision was based on the following considerations:

- growth in August core inflation to around 3% p.a. and high likelihood of continued growth in September;
- upward trend in inflation expectations;
- further increases in government regulated prices;
- high level of current public spending, particularly wage growth, which is not conducive to lowering of inflation.

In view of significant inflationary pressures expected in the period ahead, the MPC judged that a gradual tightening of monetary policy is necessary to meet the core inflation objective for this year as well as core inflation projection for 2008 which ranges between 3 and 6%.

The rationale behind the MPC's decision to raise the key policy rate will be presented in today's press conference by NBS Governor Radovan Jelašić. The next MPC meeting is scheduled for 10 September 2007.

Press release from the MPC meeting held on 11 September 2007

Having assessed current economic flows, the Monetary Policy Committee of the National Bank of Serbia decided today to keep the key policy rate at its present level of 9.75%.

The next MPC meeting is scheduled for 28 September.

Press release from the MPC meeting held on 1 October 2007

Following discussion of current economic circumstances, the Monetary Policy Committee announced today its decision to retain the key policy rate at the level of 9.75%.

The MPC based its decision on the fact that core inflation has remained within the range of 4 to 8 percent projected for this year, despite shocks such as the rise in word oil prices and increase in prices of agricultural products and industrial foodstuffs. In addition, current degree of monetary policy restrictiveness will enable the achievement of core inflation objectives for 2008 set in the range of 3 to 6 percent.

The next MPC meeting is scheduled for 10 October 2007.

Press release from the MPC meeting held on 10 October 2007

Having assessed current economic flows, the Monetary Policy Committee decided today to keep the key policy rate at its present level of 9.75%.

On the occasion of celebrating the World Savings Day (31 October), and with a view to further encouraging household savings, the MPC adopted amendments and supplements to the Decision on Reserve Requirements. Pursuant to these amendments, termed household foreign currency savings deposited during the World Savings Week 2007 will be exempt from the calculation of foreign currency required reserves for the duration of their term.

Amendments to the above decision also aim to boost dinar savings and stimulate banks to invest more efforts in their collection. So far, banks calculated dinar required reserves by applying the ratio of

10% on all dinar liabilities, except indexed deposits and foreign credits which are subject to the 45% reserve requirement allocation. Pursuant to the amendments, the ratio applicable to bank liabilities under dinar deposits termed for a period over one month shall be halved to 5%. The fact that this measure does not apply to the Savings Week only shows that strengthening domestic currency, encouraging collection of term deposits and boosting dinar savings remain permanent and long-term objectives of the National Bank of Serbia.

Banks shall effect their first calculation of required reserves pursuant to the amended provisions of the relevant decision on 10 November 2007 against the October dinar and/or foreign currency reserving base.

Press release from the MPC meeting held on 29 October 2007

Following discussion of current economic developments, the Monetary Policy Committee decided at its session today to lower the key policy rate by 0.25 percentage points down to 9.5%.

The MPC's best collective judgment is that the October decline in inflationary pressures will continue in the period ahead as the majority of one-off effects of the drought have already fed through into higher prices, primarily of agricultural and processed food products. Strengthening of the dinar and its impact on further movements in prices provides sufficient scope for cautious lowering of the key policy rate.

The MPC will continue to keep a close eye on economic flows and will decide on the degree of monetary policy tightness based on the likelihood of continued downward trends in inflationary pressures in the month of November.

Today's decision to cut the key policy rate is in line with the objective of keeping core inflation in 2008 within the targeted range of 3-6%.

Governor Jelašić will give a more detailed explanation of the MPC's decision at a press conference to be held immediately after the MPC meeting.