

quarterly monitor

OF ECONOMIC TRENDS AND POLICIES IN SERBIA

Issue 14 • July–September 2008

Belgrade, December 2008

PUBLISHER

The Foundation for the Advancement of Economics (FREN)

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250 copies

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This publication is made possible by the support of the American People through the United States Agency for International Development (USAID). The contents of this publication are the sole responsibility of FREN and do not necessarily reflect the views of USAID or the United States Government.

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Table of Contents

From the Editor	5
----------------------------------	---

TRENDS

1. Review	7
----------------------------	---

Selected Indicators – Table	9
---------------------------------------	---

2. Prices and the Exchange Rate	10
--	----

Inflation still at a high 10%, but slowing; dinar has seen a major fall in value, and may be approaching sustainable levels.

3. Employment and Wages	15
--	----

Positive signs in employment; wages have seen moderate growth.

4. Economic Activity	20
---------------------------------------	----

Economic growth at a high 7% in 2008; a substantial slowdown expected for 2009.

5. Balance of Payments and Foreign Trade	25
---	----

Foreign trade deficit remains high, with current account deficit standing at 18% of GDP in 2008: these remain key risks for 2009.

6. Fiscal Flows and Policy	32
---	----

Agreement with the IMF, a move toward greater restrictiveness.

7. Monetary Flows and Policy	38
---	----

Loans to the economy expanding, credits to households curtailed; the financial crisis has reduced the volume and raised the price of foreign borrowing.

8. Financial Market	47
--------------------------------------	----

Belgrade Stock Exchange indices in a major fall.

9. International Environment	52
---	----

The financial crisis has culminated, leading to a global slowdown in economic growth.

SPOTLIGHT ON

Spotlight on: 1

What Triggers Inflation in Transition Economies?	60
---	----

Pavle Petrović, Aleksandra Nojković

Episodes of inflation in the 1990s and 2000s. Inflation was driven by general elections, the fiscal deficit, growth of production above existing means, oil and food prices, and a rigid exchange rate. As transition countries mature, drivers of inflation shift: from loose fiscal and monetary policies in the 1990s, to cost impacts from oil and food prices in the 2000s.

Spotlight on: 2

Gender Gap in the Serbian Pension System	70
---	----

Nenad Rakić, Rosa Chiappe

Legislation favors women in the pension system, but their pensions are nonetheless lower by almost 20% than men's. Unlike most European countries, demographic indicators and statistical data show that women do not live much longer than men, and thus benefit from their pensions for less time than is generally thought.

HIGHLIGHTS: Global Financial Crisis and Serbia

<i>Highlights 1: Serbia: Sudden Stop in Capital Inflows and Medium-Term Consequences of the Financial Crisis</i>	81
--	----

<i>Highlights 2: How High Will Inflation Be in 2009?</i>	85
--	----

<i>Highlights 3: The Financial Crisis: Does Serbia Face a Recession?</i>	87
--	----

<i>Highlights 4: The First Wave of the Financial Crisis Hits Serbia: the Banking Sector Suffers a Blow, the Dinar Depreciates</i>	90
---	----

<i>Highlights 5: Global Financial Crisis: Causes and Consequences for Serbia and the Region</i>	94
---	----

<i>Highlights 6: The 'Extended' General Collective Agreement – an exercise in the social partners' collective irresponsibility</i>	98
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Analytical and Notation Conventions

Values

The data is shown in the currency we believe best reflects relevant economic processes, regardless of the currency in which it is published or is in official use in the cited transactions. For example, the balance of payments is shown in euros as most flows in Serbia's international trade are valued in euros and because this comes closest to the measurement of real flows. Banks' credit activity is also shown in euros as it is thus indexed in the majority of cases, but is shown in dinars in analyses of monetary flows as the aim is to describe the generation of dinar aggregates.

Definitions of Aggregates and Indices

When local use and international conventions differ, we attempt to use international definitions wherever applicable to facilitate comparison.

Flows – In monetary accounts, the original data is shown in stocks. Flows are taken as balance changes between two periods.

New Economy – Enterprises formed through private initiative

Traditional Economy – Enterprises that are/were state-owned or public companies

Y-O-Y Indices – We are more inclined to use this index (growth rate) than is the case in local practice. Comparison with the same period in the previous year informs about the process absorbing the effect of all seasonal variations which occurred over the previous year, especially in the observed seasons, and raises the change measure to the annual level.

Notations

CPI – Consumer Price Index

Cumulative – Refers to incremental changes of an aggregate in several periods within one year, from the beginning of that year.

H – Primary money (high-powered money)

IPPI – Industrial Producers Price Index

M1 – Cash in circulation and dinar sight deposits

M2 in dinars – In accordance with IMF definition: cash in circulation, sight and time deposits in both dinars and foreign currency. The same as M2 in the accepted methodology in Serbia

M2 – Cash in circulation, sight and time deposits in both dinars and foreign currency (in accordance

with the IMF definition; the same as M3 in accepted methodology in Serbia)

NDA – Net Domestic Assets

NFA – Net Foreign Assets

RPI – Retail Price Index

y-o-y – Index or growth relative to the same period of the previous year

Abbreviations

CEFTA – Central European Free Trade Agreement

EU – European Union

FDI – Foreign Direct Investment

FFCD – Frozen Foreign Currency Deposit

FREN – Foundation for the Advancement of Economics

GDP – Gross Domestic Product

GVA – Gross Value Added

IMF – International Monetary Fund

LRS – Loan for the Rebirth of Serbia

MAT – *Macroeconomic Analyses and Trends*, publication of the Belgrade Institute of Economics

NES – National Employment Service

NIP – National Investment Plan

NBS – National Bank of Serbia

OECD – Organization for Economic Cooperation and Development

PRO – Public Revenue Office

Q1, Q2, Q3, Q4 – 1st, 2nd, 3rd, and 4th quarters of the year

QM – *Quarterly Monitor*

SBS – Serbian Bureau of Statistics

SDF – Serbian Development Fund

SEE – South East Europe

SEPC – Serbian Electric Power Company

SITC – Standard International Trade Classification

SME – Small and Medium Enterprise

VAT – Value Added Tax

From the Editor



The world economy has reached a watershed: the cycle of major inflows of foreign capital to the developing countries, including transitional economies, is coming to an end because of the financial crisis in the developed world. Many countries, including Serbia, credited themselves for the major foreign investments and loans they received and behaved as if the bonanza would last forever. The result was splurging on public spending instead of saving for a rainy day, surging public debts, high foreign trade deficits and overvalued national currencies. This period of capital inflows was only one of the similar cycles, albeit a strong one, that have taken place over the last 40 years. And past experience tells us that when they dry up, many developing countries find themselves with some kind of crisis on their hands, either exchange rate, debt, banking, or inflation.

Serbia is among those transitional countries where the large foreign trade deficit will be the main channel through which the global crisis will hit hardest. We are spending 20% more than we produce, and then offset this by selling our enterprises and with (private) foreign borrowing. Now that foreign inflows are shrinking everywhere, we too shall have to curb our spending, both private and public. That is inevitable. What is not certain is whether our economic policy will be able to make the downward adjustment in an orderly fashion, or if it will be chaotic, resulting in a plunging exchange rate and surging inflation. In the latter case, the drops in spending and production would most probably be steeper than necessary.

Economic policy has three options in this situation. First, to cut public spending through a restrictive budget; second, to raise interest rates and thereby reduce private spending by making credit expensive; and, third, to allow a controlled depreciation of the dinar. Fortunately, we did not unilaterally introduce the euro as that would have ruled out the possibility of depreciation, and the entire burden of adjustment would be shifted to major cuts in spending and recession. The Baltic countries, with their rigid exchange rate regimes, are already living this scenario.

Where public spending and fiscal policy in general are concerned, it became clear that the necessary turnaround

would be impossible without an outside arbiter – the International Monetary Fund. With the revised 2008 budget and, even more, what was promised for 2009, public spending took a sharp upward turn. The projected 2008 deficit was to jump from 1.7% of GDP to 2.7%, and public spending to a high 45.4% of GDP. As a result, the 2009 deficit could easily have reached 3.5% and public spending over 47% of GDP, all of which would have been completely inappropriate for the Serbian economy.

The good news is that the spending increases envisaged by the revised budget most probably will not be realized in full. We therefore estimate (see Section 7, Fiscal Flows and Policy) that the real deficit in 2008 will be between 1.5% and 2% of GDP. As it amounted to 1.5% in the first nine months of the year, this means there will be only a moderate rise in the growth of public spending in Q4 2008. It is nonetheless a paradox that Serbia is confronting the global crisis with a growth of public spending instead of savings.

The agreement with the IMF envisages a fiscal deficit of 1.5% of GDP in 2009, which does not seem to be much less than the probable 2008 deficit of 1.5% to 2%. But the real benchmarks for comparison are the expectations and promises for 2009: growth of pensions, wages, subsidies, etc., which would have resulted in a deficit of at least 3.5%. Hence the planned spending cut amounts to a hefty 2% of GDP. Even more important is that the trend of public spending growth has been reversed.

Like other developing countries, Serbia has conducted a procyclical fiscal policy, meaning that in good times the government increases its spending as if such times will last forever. Thus public spending rose from 39.7% of GDP in 2005 to 42.8% of GDP in 2007, or by more than 3 percentage points. Now that harder times lie ahead, there are no reserves to increase public spending (anticyclical policy) and halting the growth trend becomes a painful political issue. Furthermore, there have been too many elections in Serbia over the past period. Research shows (see Spotlight on: 1, Petrović, P., Nojković A.) that elections in transition countries give a major impetus to inflation. This is exactly what happened in Serbia in the 2004 and 2008 election years

– which both saw a surge in public spending just before the vote.

In all, the budget agreed with the IMF will not substantially cut back public spending relative to 2008 and will only partly contribute to the necessary curbing of overall spending in Serbia. If the inflow of capital is lower than projected and, consequently, also the growth of production, it will be necessary to further cut public spending next year.

High interest rates on credit are another channel through which spending will be reined in. Interest rates on foreign loans are rising primarily because of the tripling of the risk premium on investing in Serbia (Highlights 4, Kokotović S., Table 1). On the other hand, dinar loans are getting more expensive due to the high NBS reference interest rate (17.75%). This high rate has another function too: to make holding of dinars more attractive than holding of foreign exchange and thereby prevent the national currency from plummeting in value.

The developed countries – USA, the euro zone, UK etc. – conduct economic policies that are the reverse of those in Serbia as they aggressively lower interest rates, increase public spending and introduce tax cuts. But they suffer from a different illness since their problem is a general reduction of consumption and scarcity of new credit, which results in a downward spiral of the economy and a potentially substantial fall in production. Therefore, their measures are designed as stimuli for production. Serbia's problem, however, is its immoderate spending, which spills over into inflation and increased imports (foreign trade deficit), which it simply cannot finance any more. It follows that what is needed here are measures to dampen the excessive spending.

A sudden stop of foreign capital inflows, something that Serbia is experiencing now, as a rule leads to a sharp and swift drop in the real value (corrected for inflation) of the domestic currency (Highlights 1, Petrović P., Vasiljević, D.) When the exchange rate is flexible, as it is in Serbia, adjustments are made through a nominal depreciation of the currency, which has been happening with the dinar over the last two months. When the exchange rate is fixed, or the euro is used, the necessary decline in the real value of currency can be achieved only through nominal falls in prices and wages. And to cut back prices and wages, a sharp recession is required, i.e. a substantial reduction of production and employment. This is what is happening at present in the Baltic countries.

Thus far, the fall in the dinar's value has shouldered part of the burden of the Serbian economy's adjustment, shielding production and spending from the full impact.

Also, the dinar has considerably reduced its real value (corrected for inflation) and has probably gone more than half-way toward its sustainable medium term value (Highlights 1). But this adjustment costs. The NBS has spent over half a billion euros of its reserves, and will be spending more, in an effort to prevent a sharp drop in the dinar's value that could cause panic and push the national currency lower than the economic fundamentals warrant. Another part of the cost has fallen on those who took euro-indexed loans, which the majority of loans are. The continuing challenge for the NBS will be to engineer a controlled reduction in the dinar's value to its medium-term sustainable level while at the same time ensuring that the depreciation is not so slow as to swallow up a large proportion of the foreign exchange reserves, or too fast to hit those who took foreign currency loans or trigger a panic.

The required downward adjustment of the Serbian economy, although alleviated by the dinar's depreciation, will also reduce economic growth in 2009. We estimate that growth will fall from 7% in 2008 to about 3% in 2009 (Highlights 3, Brčerević, D.). The depreciation will push up inflation, which is still high in Serbia. But in our view, other factors, the falling prices of oil on the one hand and reduced consumption on the other, will result in inflation slowing down to some 8% next year (Highlights 2, Vasiljević, D.)

This issue of QM features a new section, Highlights, in which we wish to offer brief comments on topical issues. At present, the most topical issue is certainly the global financial crisis and its impact on Serbia. The section also contains a critical analysis of the General Collective Agreement signed by the trade unions, employers and the Serbian government which, if and when applied, could substantially undermine the competitiveness and stability of the economy (Highlights 6, Arandarenko, M., Arsić, M.).

The articles in the Spotlight section are empirical examinations of the inflation triggers in transitional countries, including Serbia (Spotlight on: 1, Petrović, P., Nojković, A.), and the position of women in the Serbian pension system (Spotlight on: 2, Rakić, N., Chiappe, R.). Besides elections, major inflation triggers are fiscal deficits, the output growth above its potential rate, rises in food and oil prices, as well as rigid exchange rate regime. The basic finding of Spotlight on: 2 is that in spite of favoring of women, the difference between the average pension received by men and women in Serbia is not at all negligible and amounts to close to 20%.



TRENDS

Review

The global financial crisis has brought about substantial changes in the Serbian economy. There has already been a steep depreciation of the dinar, while slowing of inflation, reduction of the current account deficit and a major slowdown in economic growth is expected in 2009. This review of macroeconomic trends focuses on Q3, the period just before the global crisis escalated, provides an analysis of the initial effects and mechanisms of the impact of the crisis, and closes with the probable outcome and an estimate of macroeconomic trends in 2009. The review follows the arrangement of *QM* sections.

The apparent strong slowing of **inflation** in Q3 and the second semester of 2008 in general can be ascribed primarily to the major fall in the prices of oil and agricultural goods. Core inflation, however, continued growing and, from the beginning of the year to November reached 9.7%, far above the 3% to 6% band targeted by the NBS. Due to the declining prices of oil and agricultural goods, total inflation in 2008 will be in the single digits.

Inflation will probably slow mildly in 2009 and be single-digit and lower than in 2008. In contrast to the second semester of this year, when supply-side factors had the biggest impact on slowing inflation, demand-side factors will most likely affect it next year – slower economic growth, reduced credit activity, lower wage rises and a more restrictive fiscal policy. Uncontrolled depreciation of the dinar is the chief danger that could drive inflation in 2009 higher than *QM* expects.

In Q3 2008, the **exchange rate of the dinar** appreciated strongly against the euro, which reached its lowest value of 75.75 dinars on 7 August. Until the end of Q3, the rate moved in a narrow band of 76-77 dinars for a euro. In October the dinar started to plunge, depreciating against the euro by some 15% by the end of November. This brought the real exchange rate back to where it had been at the end of last year. The reason for the weakening of the dinar was the high current account deficit (some 18% of GDP in 2008). The reduced inflow of foreign capital due to the global financial crisis unmasked the Serbian economy's major external imbalance and also contributed to the weakening of the dinar.

The dinar can be expected to go down further in the coming few months. *QM's* analysis brings out that the real exchange rate at the end of 2009 could be what it was in 2004. It should be borne in mind that exchange rate adjustments are highest in the first year after foreign capital ceases flowing in, which would mean that following the first stage of swift adjustment, a more restrained adjustment of depreciation on this basis may be expected over the coming years. Still, predictions with regard to future movements of the exchange rate are fraught with uncertainty.

Positive movements were recorded in **employment**, although a precise assessment is hindered by the different and not quite concerted SBS surveys – the regular monthly employment survey and semi-annual Labour Force Survey. The y-o-y real growth of wages remained low and amounted to about 5% in Q3.

Though the global financial crisis will have a negative impact on employment trends in Serbia, *QM* sees no reason for any substantial loss of jobs, especially since slower but still positive economic growth is expected in 2009.

Economic activity retained a high growth rate of an estimated 6.5% in Q3. Two different trends were observed in the quarter – the slowing of non-agricultural GVA, which is an indication of the real movements in the economy, and acceleration of the growth of agricultural production, which covers up the deceleration of the rest of the economy. Similar trends are expected up to the end of the year, with 2008 economic growth standing at between 6.5% and 7%.

In spite of the risks, *QM* believes that, most probably, there will be no descent into “chaotic scenario” in 2009, which would mean rampaging depreciation and inflation and, ultimately, a y-o-y drop in production. Rather, GDP growth, although substantially slower, will still be positive. The most probable figure for 2009 is about 3%.

Where the current account of the **balance of payments** deficit is concerned, the Q3 indicators point to an exceptionally high external imbalance (a current account deficit of 16.7% of GDP). Capital inflows – foreign credits and FDIs – were higher than this deficit; hence Q3 saw a growth in the foreign exchange reserves and appreciation of the dinar.

The escalation of the global crisis since September is reflected in the reduction of capital inflows, which highlights the current account deficit – the external imbalance. Dynamic changes in foreign economic relations are expected to take place by the end of the year and into 2009. Imports have slowed significantly because of the fall in domestic demand and lower oil prices. On the other hand, however, the decline in international demand and metal prices has slowed down exports. *QM* expects the current account deficit to be cut from over €6 bn in 2008 to between €5bn and €5.5bn in 2009.

Fiscal policy is gradually becoming more restrictive. In Q3, the consolidated budget deficit amounted to about 1.1% of quarterly GDP. Although the revised 2008 budget envisages a total deficit of 2.7% of GDP in 2008, it appears that a much lower deficit of 1.5% to 2% of GDP will be recorded.

Fiscal policy’s best response to a financial crisis is saving. The rise in public spending in Q4 because of the extraordinary increase in pensions is not in accordance with an optimal economic policy. Even more dangerous is that the increased public spending for this purpose will be carried over into 2009. It is encouraging, however, that a consensus seems to be emerging among economic policymakers on the necessity of making a sharp turn toward cutting public spending. The recent agreement with the IMF and initial reports on the draft 2009 budget indicate that such a turn will in fact be made.

Q3 saw a strong expansion of credit to companies, but loans to households virtually ceased. **Monetary policy** in Q3 was restrictive and attempted to slow down the over-high capital inflows from abroad (high reserve requirement). The situation changed in mid-September: foreign credit became scarcer and more expensive, and the NBS adopted measures to facilitate the inflow of foreign credit. The public’s lack of trust in the banking sector emerged as a problem and led to a major withdrawal of foreign exchange deposits, which additionally weakened the capacity of the banking system to alleviate the effects of the financial crisis. The NBS correctly assessed that macroeconomic instability was a greater hazard for the domestic economy than a fall in economic activity, and raised the reference interest rate to 17.75% in early November. Nonetheless, in spite of the hike, banks found that yields on repo operations in euros were no longer attractive because of the major depreciation of the dinar, and a major reduction of the repo stock was recorded, with the capital most probably being converted into euros.

No major changes in the monetary sphere are anticipated in 2009. Since the availability of credit has been substantially reduced and it has become very expensive, liquidity in the quarters ahead will be the most serious problem many enterprises will face. The troubles with the functioning of the foreign exchange and capital markets, i.e. reduction of the volume of inter-bank lending, can be expected to continue. The first indications in Q4, however, are that although it has slowed substantially, credit activity has not ground to a halt, so similar trends are expected in 2009, too.

The **financial market** was directly impacted by the financial crisis. Q3 saw activity on the Belgrade Stock Exchange decline measured in both terms of the volume of trading, which was halved relative to Q2, and the number of transactions performed, which went down by one-third. The indices also recorded a major drop in value in the same period. BELEX15, the index of the most liquid shares, lost 43% of its value in the preceding quarter, while the broader exchange index, BELEXline, fell by 36.4%. The fall continued in Q4 so that BELEX15 lost 80% of its value from Q2 2007 to early November 2008. There are no signs that the Belgrade Stock Exchange could make any major recovery in 2009. But since the indices are at all-time lows, no major changes are expected in 2009 relative to 2008.

Serbia: Selected Macroeconomic Indicators, 2004–2008¹⁾

	Annual Data				Quarterly Data						
	2004	2005	2006	2007	2007				2008		
					Q1	Q2	Q3	Q4	Q1	Q2	Q3
Prices and the Exchange Rate											
Retail Price Index - total	10.1	16.5	12.7	6.8	5.8	4.7	6.5	9.1	11.3	12.0	10.7
Retail Price Index - core inflation ³⁾	7.9	14.8	10.3	3.9	4.7	3.0	2.9	4.6	6.4	9.1	10.2
Real fx dinar/euro (avg. 2005=100)	100.5	100.0	92.1	98.4	86.2	86.3	83.2	80.8	82.5	79.7	75
Nominal fx dinar/euro (period average) ⁴⁾	72.62	82.92	84.19	79.97	79.98	81.07	80.03	78.81	82.65	81.07	77.12
Economic Growth											
GDP (in billions of dinars)	1,388	1,692	1,988	2,274	...	...	...	...	...	...	...
GDP	8.2	6.0	5.6	7.1	7.8	7.7	6.6	6.4	8.4	6.2	6.5
Non-agricultural GVA	6.6	7.3	7.9	8.8	8.3	9.0	8.7	9.2	8.3	7.0	6.5
Industrial production	7.1	0.8	4.7	3.7	4.8	5.2	3.5	0.4	6.0	2.3	1.0
Manufacturing	9.7	-0.7	5.3	4.2	8.5	4.9	3.3	-0.1	4.4	3.7	0.4
Average net wage (per month, in dinars)	14,108	17,478	21,745	27,785	25,103	27,165	28,019	30,855	30,007	32,452	33,053
Registered Employment (in millions)	2.047	2.056	2.028	1.998	2.002	1.999	1.997	1.995	1.995	2.002	1.998
Fiscal data											
Public Revenues	41.2	42.1	42.4	42.1	15.2	8.4	7.9	6.2	6.5	1.6	1.7
Public Expenditures	40.0	39.7	42.7	42.8	13.9	6.2	10.9	6.3	5.5	17.1	2.1
Overall fiscal balance (GFS definition) ⁵⁾	17.5	11.5	-36.5	-43.0	1.7	18.2	-8.8	-54.2	3.4	-21.6	-7.6
Balance of Payments											
Imports of goods	-8,302	-8,286	-10,093	-12,858	-2,829	-3,098	-3,236	-3,695	-3,507	-3,995	-4,025
Exports of goods	2,991	4,006	5,111	6,444	1,383	1,594	1,731	1,736	1,665	1,974	2,057
Current account ⁶⁾	-2,197	-1,805	-3,137	-4,994	-1,186	-806	-1,346	-1,656	-1,299	-1,736	-1,551
in % GDP ⁶⁾	-11.6	-8.6	-12.9	-17.2	-18.8	-11.5	-18.0	-20.1	-17.4	-20.1	-16.7
Capital account ⁶⁾	2,377	3,863	7,635	7,635	1,161	1,233	1,705	2,027	1,376	1,536	1,474
Foreign direct investments	773	1,248	4,348	1,942	614	-5	539	795	755	564	133
NBS gross reserves (increase +)	229	1,857	4,240	941	-191	407	465	260	29	-310	257
Monetary data⁶⁾											
NBS net own reserves ⁷⁾	103,158	175,288	302,783	400,195	327,997	348,471	361,861	400,195	420,508	417,579	440,936
NBS net own reserves ⁷⁾ , in mn of euros	1,291	2,050	3,833	5,051	4,021	4,410	4,589	5,051	5,109	5,287	5,757
Credit to the non-government sector	342,666	518,298	609,171	842,512	666,007	732,402	786,873	842,512	908,598	953,977	1,018,307
FX deposits of households	110,713	190,136	260,661	381,687	293,195	307,783	336,109	381,687	410,836	419,824	431,261
M2 (y-o-y, real growth, in %)	10.4	20.8	30.6	27.8	35.4	30.7	29.7	27.8	26.2	19.2	12.2
Credit to the non-government sector (y-o-y, real growth, in %)	27.3	28.6	10.3	24.9	15.2	17.8	19.1	24.9	22.0	16.2	16.6
Credit to the non-government sector, in % GDP	23.9	29.6	28.6	35.0	30.5	32.6	33.0	35.0	36.9	37.4	38.3
Financial Markets											
BELEXline (in index points) ⁸⁾	1,161	1,954	2,658	3,831	4,220	4,456	4,431	3,831	3,068	3,092	1,942
Turnover on BSE (in mil. euros) ⁹⁾	423.7	498.8	1,166.4	2,004.4	529.4	644.8	386.7	443.5	210.8	365.7	176.9

Source: FREN.

1) For more details (monthly series) see web page www.fren.org.yu.

2) Unless otherwise indicated.

3) Core inflation measures the price movements of goods and services that are not under administrative control, but formed freely on the market.

4) Calculation based on twelve-month averages for annual data and three-month averages for quarterly data.

5) Overall fiscal balance (GFS 2001 methodology) - Consolidated fiscal surplus/deficit adjusted for "budgetary loans" (lending minus repayment according to old GFS methodology).

6) In Q1 2008, NBS changed Balance of Payments methodology. Due to this change, there is a drop in current account deficit, and an increase in the capital account. Q1 has seen a year-on-year worsening of the current account deficit. For a more detailed explanation, see Textbox 1 in Section 6.

7) NBS net own reserves = NBS fx reserves, net - (foreign deposits of commercial banks + government foreign deposits). For details see Trends' section Monetary Flows and Policy.

8) Index value at the last day of the given period.

9) Total turnover on Belgrade Stock Exchange, includes turnover of stocks and FFCD bonds.

2. Prices and the Exchange Rate

Underlying inflation (inflation excluding agricultural produce and petroleum products) was high in Q3, standing at an annualized rate of 10%. This was slightly lower than in the previous quarter, when the figure was 12%. Total inflation in Q3 (an annualized rate of 2.4%) was, at first sight, significantly lower than in the previous quarter, but the slowdown was not a trend change; it was rather the consequence of a significant fall in the prices of oil and agricultural products. Core inflation was also very high in Q3, as much as 9.9% annualized. The biggest contribution to core inflation was by food products and construction materials. October again saw very high inflation, both core and total. Core inflation reached 8.9% from the beginning of the year until October, far above the upper limit of the NBS target band (3% - 6%). The dinar was stable in Q3; it appreciated by 8% in real terms against the euro from the start of 2008 until September. However, under the influence of the global financial crisis, it suddenly plunged against the euro, depreciating by over 15% during October and November. This means that the real exchange rate is now weaker than it was in late 2007.

On the face of it, inflation in Q3 is very low...

Inflation in Q3 seemed to have decelerated strongly. The inflation rate in this quarter stood at a mere 2.4% annually, whereas it was as high as 13.4% in the preceding quarter (Table T2-1). The y-o-y retail price growth rate in Q3 amounted to 10.7%, relative to 12.0% in the preceding quarter. Total price growth from the start of the year to the end of Q3 was 6.7%.

Table T2-1. Serbia: Retail Price Index and Core Inflation, 2005–2008

	Retail Price Index					Core Inflation				
	base index (avg. 2005 =100)	y-o-y growth	cumulative index ¹⁾	monthly growth	3m moving average, annualized ²⁾	base index (avg. 2005 =100)	y-o-y growth	cumulative index ¹⁾	monthly growth	3m moving average, annualized ²⁾
2005										
Dec	107.6	17.6	17.6	2.2	22.5	106.3	14.6	14.6	0.9	18.6
2006										
Mar	110.0	14.4	2.2	0.3	9.1	108.1	11.7	1.7	0.8	7.0
Jun	113.7	15.1	5.7	0.0	14.4	110.4	11.3	3.9	0.6	8.7
Sep	114.1	11.6	6.1	-0.2	1.4	112.1	10.1	5.5	0.6	6.6
Dec	114.7	6.6	6.6	0.1	2.1	112.5	5.8	5.8	0.0	1.2
2007										
Mar	116.1	5.6	1.2	0.8	5.1	112.4	4.0	-0.1	0.1	-0.4
Jun	119.5	5.1	4.2	0.6	12.0	113.4	2.7	0.8	0.5	3.7
Sep	122.6	7.4	6.9	0.8	10.9	115.9	3.4	3.1	1.0	9.4
Dec	126.3	10.1	10.1	1.3	12.6	118.6	5.4	5.4	0.9	9.5
2008										
Jan	127.5	10.7	0.9	0.9	14.2	118.9	5.7	0.3	0.3	7.7
Feb	128.3	11.3	1.6	0.7	12.2	119.6	6.5	0.8	0.6	7.1
Mar	129.8	11.8	2.8	1.2	11.6	120.3	7.0	1.4	0.6	5.8
Apr	131.2	12.0	3.9	1.1	12.2	121.7	8.1	2.6	1.2	9.7
May	132.6	11.7	5.0	1.1	14.1	123.0	9.0	3.7	1.1	12.0
Jun	134.0	12.1	6.1	1.0	13.4	124.7	10.0	5.2	1.4	15.7
Jul	134.2	11.6	6.2	0.1	9.3	125.3	10.3	5.7	0.5	12.5
Aug	134.5	10.6	6.5	0.2	5.8	126.6	10.2	6.7	1.0	12.1
Sep	134.8	9.9	6.7	0.2	2.4	127.7	10.2	7.7	0.9	9.9
Oct	136.4	10.6	8.0	1.2	6.8	129.2	10.7	8.9	1.1	12.7

Source: SBS.

1) Cumulative index: ratio of given period and December of previous year.

2) Moving averages of monthly price increases for three months, annualized (e.g., the value for March was obtained through annualization of the average of monthly price increases in January, February and March).

...but the underlying inflation trend remains high

Still, this major slowdown of inflation was primarily the consequence of major falls in the prices of petroleum and agricultural produce, rather than of changes in mid-term trends. When the retail price index (the official measure of inflation) excluding prices of agricultural produce and oil products, is considered, it becomes obvious that the underlying inflation trend over the past two years has always been in the 8% to 10% range, as was the case in Q3 (Graph T2-2).

The drop in prices of petroleum products was directly linked to falling crude oil prices in the global market (Graph T2-3), which is a consequence of (1) the worldwide economic crisis and the cooling of the global economy which has been driving oil demand down, (2) the strengthening

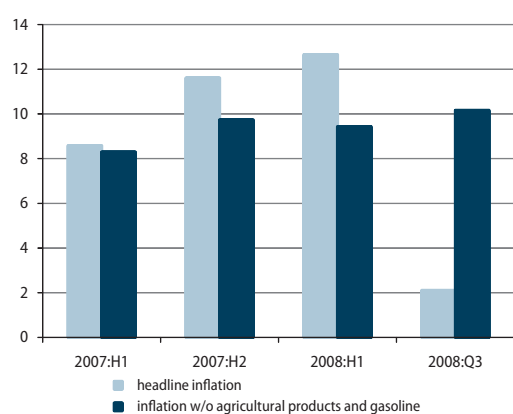
dollar, and (3) is also probably connected with the withdrawal of speculators who had initially contributed to high oil price growth. The fall in prices of agricultural produce was caused by, among other factors, a much better harvest in Serbia and seasonal produce price trends, but also by the fact that global food prices have been dropping significantly over the past several months.

Construction material and tobacco record highest price growth in Q3...

...and food prices continue to increase

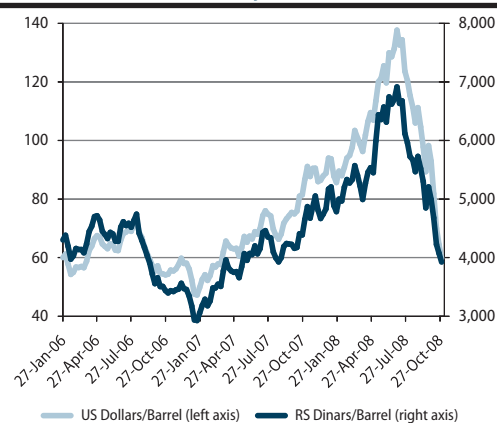
Price growth in Q3 amounted to a mere 0.5%. Nonetheless, Q3 did see the relatively high price growth of several groups of products and services. Construction materials deserve special attention, with their prices having gone up by 11.1% in Q3 alone, thereby contributing by over 40% to total price growth. These were closely followed by tobacco products, which rose by 9.5% and contributed to total price growth by over 60% (Table T2-4). In addition, the prices of transport services increased in the quarter, by 4.4% in total, a contribution of 46.8% to total price growth. In spite of significant drops in the prices of agricultural produce, Q3 saw prices of industrial food products rise. Food product prices went up by 2.1% in Q3, and accounted for over 60% of total price growth. Of this category, the highest rises were recorded by fresh meat and meat products, sugar, and confectionery.

Graph T2-2. Serbia: Headline Inflation and Inflation Excluding Agricultural Produce and Gasoline, 2007–2008



Source: SBS.

Graph T2-3. World: Weekly Ural Crude Oil Prices in USD and RSD, 2006–2008



Source: Energy Information Administration, U.S. Department of Energy.

Table T2-4. Serbia: Retail Price Index, Contribution to Growth by Selected Components, 2008

	Share in RPI	Contribution to RPI growth in Q3	Contribution to RPI growth in October	Contribution to RPI growth in Q2	Contribution to RPI growth in 2008, through October
		in %			
Total	100.00	100.0	100.0	100.0	100.0
Goods	72.34	-7.6	64.1	87.1	78.5
Agricultural products	3.63	-137.2	36.5	-1.6	0.0
Industrial products	68.71	129.8	30.5	89.5	78.5
Industrial food products	19.71	65.3	17.5	40.7	31.7
Fresh meat	1.94	16.7	2.1	10.6	7.1
Processed and canned meat	3.21	23.8	11.3	5.5	6.1
Beverages	4.42	19.9	3.8	3.6	5.7
Tobacco products	4.15	62.3	0.0	0.0	4.9
Industrial non food products	40.43	-18.0	8.5	44.2	35.7
Electricity	7.62	106.9	0.0	0.2	12.2
Liquid fuels and lubricants	8.74	-143.1	-4.8	24.2	6.9
Construction materials	2.46	42.9	2.6	6.4	8.3
Services	27.66	107.6	35.9	12.9	21.5
Public services	9.14	28.3	31.0	2.0	7.9
Transportation services	5.60	46.8	1.2	6.9	8.8

Source: SBS.

October sees higher inflation again

Inflation accelerated again in October, this time as a consequence of a surge in prices of agricultural produce (as much as 12.1% in October) and utilities (Table T2-4). The October inflation rate was as high as 1.2%. The October rise in prices of agricultural produce was in line with seasonal trends, but was unusually steep. It is interesting to note that, when agricultural produce and petroleum products are excluded, October actually saw a mild slowdown in the underlying inflation trend. Still, this situation has been observable for just one month, and it is still unclear whether a trend change is in the offing.

Core inflation remains high in Q3...

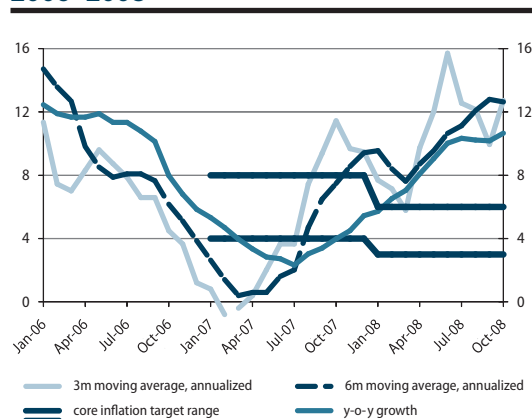
Core inflation continued to rise steeply in Q3, although it was somewhat lower than in the preceding quarter. After a mild deceleration in July, August and September again witnessed high growth rates of core prices. Thus core inflation in Q3 amounted to as much as 9.9% annually (Table T2-1), far above the NBS target band (Graph T2-6). Core inflation from the start of the year up to the end of Q3 reached 7.7% (Table T2-1).

The third quarter saw somewhat lower growth of the food and non-food component of core inflation than Q2. However, the mild drop notwithstanding, the non-food component of core inflation was still high, amounting to almost 10% annually (Graph T2-7). This bears out the fact that the price growth spread to virtually all segments of core inflation, and that high core inflation was no longer a consequence of the rising prices of a narrow group of food products. The greatest contribution to core inflation in Q3 was made, in addition to the prices of food products, by those of beverages and construction materials (Table T2-5).

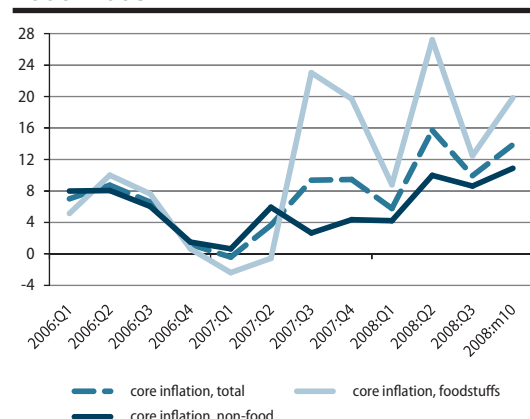
Table T2-5. Serbia: Core Inflation, Contribution to Growth by Selected Components, 2008

	Share in Core Inflation	Contribution to Core Inflation growth in Q3	Contribution to Core Inflation growth in October	Contribution to Core Inflation growth in Q2	Contribution to Core Inflation growth in 2008, through October
			in %		
Core inflation	100.0	100.0	100.0	100.0	100.0
Goods	85.6	88.6	96.6	92.9	92.8
Industrial food products	34.5	41.6	52.7	59.6	52.4
Fresh meat	4.3	9.5	5.8	21.3	14.4
Processed and canned meat	7.1	13.5	30.4	11.0	12.3
Beverages	9.2	10.6	9.6	6.8	10.7
Industrial non food products	41.9	36.4	34.4	26.5	29.8
Textile products	9.5	-0.6	16.0	9.2	6.4
Construction materials	5.1	22.7	6.4	11.9	15.5
Services	14.4	11.4	3.4	7.1	7.2

Source: SBS.

Graph T2-6. Serbia: Core Inflation (in %), 2006–2008

Source: SBS.

Graph T2-7. Serbia: Core Inflation and Components (annualized rates, in %), 2006–2008

Source: QM.

...as well as in October October again recorded a high core inflation rate of 1.1%. The overall rise in core prices from the beginning of 2008 to the end of October amounted to as much as 8.9% (Table T2-1). Rising core prices in October were mainly caused by hikes in the prices of meat and textile products. These two groups, making up slightly under 17% of the core inflation index, accounted for just under 50% of October's core inflation rise (Table T2-5).

The Exchange Rate

Dinar appreciated during Q3...

The dinar nominally appreciated against the euro by 3% in Q3. The Serbian currency continued gaining against the euro throughout July and into early August, reaching a record value of 75.7543 dinars for one euro on 7 August. The dinar thereafter generally fluctuated within the narrow band of between 76 and 77: €1 (Graph T2-7). It nominally strengthened against the euro by 4% since the beginning of 2008; in real terms, it gained 8% (Graph T2-8).

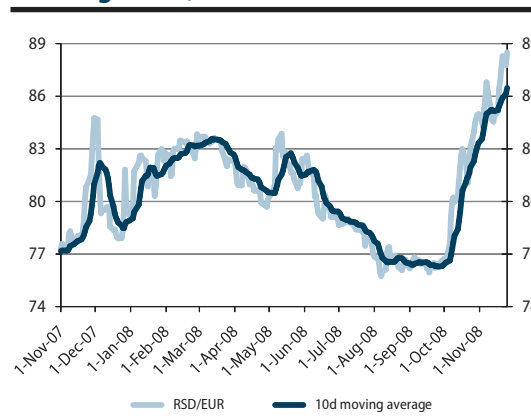
...but sharply loses value in October and November

From early October, however, and throughout November, the dinar rapidly lost in value. Over these two months – from late September to late November – it lost over 15% of its value against the euro (Graph T3, Column 2).¹ The real exchange rate of the dinar against the euro is now weaker than it was at the end of 2007.

Dinar's slide is a consequence of the global financial crisis

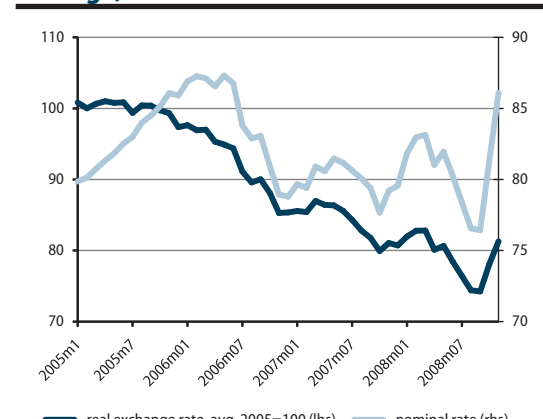
The dinar's slide in October and November was a direct consequence of the global financial crisis and the hold-up in capital inflows, but the deeper cause behind the weakening of the national currency was Serbia's high current account deficit. The financial crisis served as the catalyst for a change in perception of how the high deficit can be financed. The drying up of capital inflows that had until recently covered the deficit was a rude awakening that unmasked the Serbian economy's large external imbalance and, consequently, led to the major slide of the dinar. The dinar can be expected to lose more value over the coming months. How long its slide will last, and how far it will go, is impossible to say at this time, since this depends primarily on when global capital flows will normalize. The reasons behind the dinar's weakening and exchange rate expectations for the future are covered in much more detail in Highlights 1 and 4.

Graph T2-8. Serbia: Dinar/Euro Daily Exchange Rate, 2007–2008



Source: NBS.

Graph T2-9. Serbia: Nominal and Real Dinar/Euro Exchange Rate, Monthly Average, 2005–2008



Source: NBS, Eurostat.

¹ The dinar slid even lower against the dollar, losing almost 30% of its value.

2. Prices and the Exchange Rate

Table T2-10. Serbia: Dinar/Euro Exchange Rate, 2005–2008

	Nominal				Real			USD/EUR Rate ⁶⁾
	exchange rate (FX) ¹⁾	base index ²⁾ (avg.2005 = 100)	y-o-y index ³⁾	cumulative index ⁴⁾	real FX ⁵⁾ (avg.2005 = 100)	y-o-y index ³⁾	cumulative index ⁴⁾	
monthly exchange rate								
2005								
December	85.9073	103.6	109.3	109.3	97.4	94.9	94.9	1.1861
2006								
December	78.7812	95.0	91.7	91.7	85.4	87.7	87.7	1.3210
2007								
March	80.8968	97.6	92.9	102.7	87.0	89.7	101.9	1.3246
June	81.1665	97.9	93.6	103.0	85.6	90.7	100.3	1.3420
September	79.3999	95.8	95.6	100.8	81.8	90.9	95.8	1.3884
December	79.5669	96.0	101.0	101.0	80.7	94.6	94.6	1.4563
2008								
January	81.8460	98.7	102.7	102.9	82.0	95.8	101.5	1.4719
February	82.9685	100.1	104.5	104.3	82.8	96.9	102.6	1.4755
March	83.1319	100.3	102.8	104.5	82.8	95.2	102.6	1.5516
April	81.0287	97.7	100.6	101.8	80.1	92.7	99.2	1.5770
May	81.9403	98.8	100.6	103.0	80.6	93.4	99.9	1.5569
June	80.2460	96.8	98.9	100.9	78.5	91.7	97.2	1.5556
July	78.3728	94.5	97.2	98.5	76.4	90.7	94.7	1.5773
August	76.5517	92.3	95.6	96.2	74.4	89.8	92.2	1.4987
September	76.4226	92.2	96.3	96.0	74.2	90.8	92.0	1.4387
October	81.2956	98.0	104.7	102.2	78.1	97.7	96.7	1.3309

Source: NBS, Eurostat.

Source: NBS, Eurostat

1) Month average, official daily NBS mid rate. 2) Ratio of fx in Column 1 and average fx in December 2002. 3) Ratio of fx in Column 1 and fx for the same period in previous year. 4) Cumulative is the ratio of given month and December of previous year. 5) Includes Eurozone inflation. Index calculation: RE = (NE/p) x p*
RE - real fx index; NE - nominal fx index; p - Serbia RPI index; p* - Euro area CPI index. 6) Period average.

Note: 12-m averages are used for annual data; 3-month averages are used for quarterly data.

3. Employment and Wages

Registered unemployment fell between March and September 2008, primarily because of loss of jobs in the manufacturing industry. This was particularly bad news, coming as it did after the recent slight rise in employment by legal entities, which was expected to continue. The number of employees in the public sector remained generally stable, while figures on the number of entrepreneurs are still unavailable. Registered unemployment continued to decline: thus, since formal employment failed to grow while unemployment continued to fall, it is the ranks of the formally inactive population that have swelled. The Labor Force Survey, which monitors the informal economy as well as the formal, however, indicates a rise in total employment – mainly due to the rise in the number of agricultural workers and unpaid family members. Based on the observed trends, we conclude that the drop in employment is concurrent with a rise in “low quality” employment, mainly in agriculture and the informal economy, while the number of “better quality”, i.e. paid jobs in the private and public sectors, has been stagnating. Real wages have risen by 5% y-o-y in Q3, which is higher than the 3.1% y-o-y increase in Q2, while October saw an even greater acceleration of real wage growth, which now stands at 6.5%. The highest y-o-y real wage growth was in agriculture, commerce and construction. In addition to these sectors, which continue to see higher-than-average growth, October was also noted for higher-than-average real wage growth in the public administration, which was not the case in Q3.

Employment

Formal employment drops by about 8,000.

The largest drop, of 7,000 jobs, is recorded in the manufacturing industry, followed by commerce

Employment in the public sector remains mainly stable

Based on preliminary data for the period March to September 2008, employment dropped by about 8,000 during the semester¹ (Table T3-1). The fall can be ascribed in entirety to the drop in employment by legal entities, since data is still unavailable on the number of entrepreneurs after March 2008. Although this analysis is based on preliminary data for September 2008, the drop in employment with legal entities is particularly bad news, coming as it does after a semester that saw a rise in employment for the first time since 2005, which raised expectations of a more permanent trend.

The largest drop of 7,000 jobs was in manufacturing (about 2% of the entire sector). Commerce shed some 2,000 jobs, which translated into a drop in employment of about 1% of the sector as a whole (Table P5 in the Analytical Appendix).

The number of employees in the public sector remained generally stable, except for the seasonal drop in the education sector (Table T3-2).

¹ The most recent data available at present covers July 2008.

Table T3-1. Serbia: Registered Employment,¹⁾ 2003–2008

		Total no. of employed (employees and entrepreneurs)	Employees in legal entities	Entrepreneurs			Total no. of employees
				Total	No. of entrepreneurs	No. of employees with entrepreneurs	
				1 (=2+3)	2	3 (=4+5)		4	5	6 (=2+5)
in thousands							
2003	March	2,046	1,628	418	198	220	1,848
	September	2,036	1,595	441	202	239	1,834
2004	March	2,065	1,601	464	208	255	1,856
	September	2,037	1,560	477	210	267	1,827
2005	March	2,070	1,557	513	228	285	1,842
	September	2,067	1,536	531	230	300	1,836
2006	March	2,032	1,496	536	228	308	1,804
	September	2,019	1,447	572	242	330	1,777
2007	March	2,004	1,438	566	239	327	1,765
	September	2,001	1,428	573	245	328	1,756
2008	March	2,006	1,432	574	245	329	1,761
	September ²⁾	1,998	1,424	574	245	329	1,753

Source: SBS Semi-annual Report on the Employed and Wages RAD-1/P; Additional Survey to the Semi-annual RAD-1 Report; Semi-annual Report on Small Businesses and Their Employees RAD-

Notes:

1) By registered employment, we refer to the formal economy, i.e. those employees with employment contracts and for whom social security contributions are being paid.

2) Data on employees in legal entities are uncorrected data for July 2008 and data on entrepreneurs and their employees are from March 2008. These are the most recent data available.

Notes by column:

1) The total number of employed (employees and entrepreneurs) includes those employed by legal entities (enterprises, organizations, institutions) - Column 2, and small businesses i.e. entrepreneurs - Column 3 (including store owners, self-employed professionals, etc., and those working for them). Employees of the Ministry of Defense of Serbia, and the Serbian Ministry of Internal Affairs are not included.

2) Employees in legal entities (companies, organizations, institutions).

3) Owners of small businesses and self-employed persons (entrepreneurs) and their employees (Column 4 + Column 5).

4) Owners of small businesses and self-employed persons (entrepreneurs).

5) Employees of small businesses (entrepreneurs).

Table T3-2. Serbia: Employees in Legal Entities, Disaggregated, 2003–2008

		Employees in legal entities						Other ¹⁾
		From the budget			Public enterprises		Public sector - total	
		Administration - all levels	Education and culture	Health and social work	National public	Local public		
in thousands								
2003	March	60	116	147	129	54	506	1,122
	September	62	114	147	127	55	505	1,090
2004	March	63	117	147	125	57	509	1,092
	September	63	116	148	124	57	508	1,052
2005	March	63	119	148	122	61	513	1,044
	September	61	117	147	112	61	498	1,038
2006	March	60	118	141	105	61	485	1,011
	September	58	117	138	102	60	475	972
2007	March	58	121	138	100	59	476	962
	September	59	120	139	100	58	476	952
2008	March	60	124	140	99	58	481	951
	September	61	122	141	100	58	481	942

Source: SBS.

Note: Those employed in the Ministry of Defense and the Ministry of the Interior, even though financed from the budget do not enter the total balance of the employed persons presented in this table. Their numbers are estimated at around 80,000, and they add another 4% to the total number of employed in Serbia. The data on their exact numbers and wages are not published by the SBS because of national security concerns.

Footnotes:

1) Private, socially-owned and mixed ownership enterprises (without entrepreneurs). This column is not disaggregated further due to data availability limitations. The number presented in column 7 is calculated by subtracting the total number of employees in public enterprises and those financed from the budget from the total number of employees in legal entities from Table T3-1.

Table T3-3. Serbia: Official and Real Unemployment, 2004–2008

		Official number of unemployed 15-64 (NES)	Official unemployment rate 15-64 (NES & RAD, SBS) ¹⁾	Number of unemployed 15-64 (LFS, SBS)	Unemployment rate 15-64 (LFS, SBS) ²⁾
2004	March	...	26.0	...	...
	September	842,775	23.9	664,002	19.5
2005	March	884,111	25.0	...	...
	September	897,724	25.3	718,773	21.8
2006	March	920,031	26.6	...	...
	September	914,564	26.6	691,877	21.6
2007	March	913,299	26.7	...	...
	September	808,200	24.5 ²⁾	585,472	18.8
2008	March	795,081	24.1	432,730	14.0
	September	726,465	21.4 ²⁾

Source: National Employment Service (NES); Labor Force Survey (LFS), SBS

Notes:

1) Labor Force Survey was, until 2008, conducted once per year - in October, thus the September data are in fact October data for that year. Since a pilot LFS was conducted in April 2008, March 2008 data (columns 3 and 4) are in fact LFS data for April 2008.

2) Population aged 15-64 is considered working-age population.

3) RAD survey and LFS are equally official sources of data and they both come from SBS, but LFS is the only source of internationally comparable data on the labour market sectors and indicators.

Footnotes:

1) The SBS unemployment rate stems from dividing the number of unemployed with the total active population, where the active population consists of the total number of employees from the SBS statistics (column 1 in Table T3-1), the number of unemployed 15-64 from the NES statistics (column 1 in this table) and the number of agricultural workers from the LFS.

2) The SBS unemployment rate for September 2008. was based on data for agricultural workers from the April 2008 LFS. If we would have used the data on agricultural workers from October 2007 LFS, this rate would have amounted to 22.5%.

The Labor Force Survey, which also takes the informal economy into account, shows total employment growth, i.e. a rise in the number of agricultural workers and unpaid family members. As formal unemployment has not grown, while unemployment has dropped, the ranks of the formally inactive population have swelled. The number of registered unemployed falls by some 70,000 between March and September 2008. Y-o-y real wage growth rate rose from 3.1% in Q2 2008 to 5% in Q3

The number of registered unemployed persons was lower by some 70,000 in relation to March, which resulted in a drop in the administrative unemployment rate (Table T3-3).²

Data from Serbia's labor market analyzed in this section of *QM* may at first glance seem to show contradictory, even asymmetrical trends. Employment has been stagnating, or even recording a slight drop, while unemployment has witnessed a major fall. These trends, however, can be explained: the employment monitored in Table T3-1 (employment with legal entities and entrepreneurs) relates to the segment of population holding "good quality", i.e. paid jobs. This includes employees in the public and private sectors (excluding agricultural workers); unfortunately, their numbers have generally been stagnating. The conclusion, therefore, is that people "disappearing" from NES records are joining the ranks of the formally inactive population.

Further, having analyzed data from the LFS, which also takes into account informal and agricultural employment, it may be concluded that the number of agricultural workers and unpaid family members has generally been growing, and that it is this stratum that has contributed most to the reduction in the unemployment rate as recorded by the LFS (Table T3-3, Columns 3 and 4). Due to the informal nature of agricultural employment, especially as regards unpaid family members, these jobs are classed as "bad quality". Therefore, if paid employment, especially in the private sector, were to start growing, this would be the real indicator of a rise in the quality of employment, as well as a sign that the formal labor market was starting to encompass a growing segment of the population. However, this has yet to happen in Serbia, which leads to the conclusion that the economy has still not attained the level at which it begins to boost its productivity by creating new jobs.

2 Although administrative data indicates a drop in unemployment, we cannot rely fully on these trends, since significant one-off drops occur when individual persons are struck off the unemployment registry for some reason. For instance, a significant drop was recorded between March and September 2007 when health insurance on the National Employment Service was abolished, and a large number of people who had been registered only to take advantage of this benefit ceased regularly to report to the NES.

3. Employment and Wages

Wages

The y-o-y real wage growth rate rose from 3.1% in Q2 2008 to 5% in Q3. As nominal wage growth slowed by some 1.5 percentage points, this acceleration of real wage growth may be ascribed to a y-o-y slowing of the growth in the cost of living (from 15.8% in Q2 to 12.3% in Q3).³ The same period saw significant appreciation of the dinar, which in turn led to substantial growth of wages expressed in euros (Table T3-4).

Table T3-4. Serbia: Average Monthly Wage and Real Y-o-y Indices, 2004–2008

	Average Monthly Wage				Average Gross Monthly Wage Index ²⁾	
	Total labour costs ¹⁾ , in dinars	Net wage, in dinars	Total labour costs, in euros	Net wage, in euros	nominal	real
2004	24,234	14,108	334	194	123.7	111.4
2005	30,142	17,478	364	211	124.4	107.1
2006	37,493	21,745	445	258	124.4	111.3
2007	45,723	27,785	572	347	121.9	114.6
2007 Q1	41,319	25,103	517	314	124.2	118.5
Q2	44,684	27,165	551	335	122.6	118.6
Q3	46,108	28,019	576	350	121.7	114.1
Q4	50,781	30,855	644	392	119.8	108.2
Dec	56,736	34,471	713	433	116.5	104.1
2008 Q1	49,291	30,007	596	363	119.3	105.2
Q2	53,369	32,452	658	400	119.4	103.1
Q3	54,372	33,053	705	429	117.9	105.0
Oct	56,454	34,311	694	422	119.5	106.5

Source: Serbian Bureau of Statistics (SBS).

Footnotes:

1) Total labour costs include employer's total average expense per worker, including all taxes and social security contributions. TLCs amount to around 164.5% of the average net wage.

2) Gross wage indices are equal to total labour cost indices, because the average TLC is larger than the average gross wage by a fixed 17.9%.

Table T3-5. Serbia: Labor Costs and Real Y-o-y Wage Bill Indices, 2004–2008

	Labour Costs			Wage Bill Index ⁴⁾	
	Wage bill, in 000 din ¹⁾	Unit labour cost (GDP) ²⁾	Unit labour cost (GVA) ³⁾	nominal	real
2004	534,767,841	38.7	41.5	124.7	112.3
2005	661,108,425	40.2	40.0	123.6	106.5
2006	805,517,464	41.5	39.2	121.8	109.1
2007	963,045,978	43.6	38.8	119.6	112.4
2005 Q3	162,339,457	39.2	40.0	123.3	106.8
2006 Q1	218,080,843	46.4	40.5	121.0	115.4
Q2	235,889,439	44.3	38.6	120.1	116.2
Q3	242,525,692	41.8	38.4	119.3	111.8
Q4	266,550,004	42.2	37.6	118.2	106.7
2007 Q1	218,080,843	44.6	40.6	121.0	115.4
Q2	235,889,439	42.8	38.5	120.1	116.2
Q3	242,525,692	40.1	38.3	119.3	111.8
Q4	266,550,004	40.0	37.3	118.2	106.7
2008 Q1	258,727,651	44.7	38.0	118.6	104.6
Q2	281,252,596	42.9	36.6	119.3	103.0
Q3	285,944,115	41.2	37.7	117.9	105.0

Source: Serbian Bureau of Statistics (SBS).

Note: The presented data suffer from methodological imprecisions because SBS does not collect data on wages with entrepreneurs. This is why the values in Table T3-6 should not be observed in nominal terms, but rather their general trends should be followed as realistic indicators of wage mass movements.

Footnotes:

1) The wage bill is an inferred value representing the multiple of the total number of employed and the average total labour cost, including all taxes and social security contributions. Data on employment and wages with legal entities are from SBS, whereas the average wage of the employed with entrepreneurs was gauged from the taxing authorities data.

2) Wage bill participation in total GDP.

3) Wage bill participation in GVA, without agriculture and government.

4) Gross wage indices are equal to total labour cost indices, because the average TLC is larger than the average gross wage by a fixed 17.9%.

3 For more details on inflationary trends, see Section 2, Prices and the Exchange Rate, in this issue of QM.

October sees nominal wage growth accelerate in relation to Q2, to 6.5%

In October, nominal wage growth accelerated in relation to Q2 and returned to Q2 2008 levels, which meant that the real y-o-y growth rate increased by 1.5 percentage points. As the dinar suffered significant depreciation in October in relation to Q3, October nominal wages expressed in euros were lower than those recorded in Q3.

Unit labor costs continue falling in relation to the same period the year before

Unit labor costs have continued falling, from 41.9% in Q3 2007 to 41.2% in Q3 2008 (Table T3-5, Column 2). When government and agriculture are excluded from GVA, it is seen that ULCs have dropped from 38.4% in Q3 2007 to 37.7% in Q3 2008, although they did rise somewhat in relation to Q2 2008 (Table T3-5, Column 3).⁴

Table T3-6. Serbia: Average Gross Wages by Activities, Y-o-y Real Indices, 2005–2008

	2005	2006	2007	Q1 2007	Q2 2007	Q3 2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Oct-08
Total	106.8	111.3	114.6	118.6	118.6	114.2	108.2	105.2	103.1	105.0	106.5
Agriculture, forestry and water works supply	112.2	114.7	107.6	110.2	105.6	108.2	106.3	113.0	113.0	110.3	110.8
Fishing	116.2	92.6	86.7	78.8	63.6	101.5	103.0	118.0	179.7	87.8	163.6
Mining and quarrying	100.4	113.5	118.5	135.4	121.1	111.3	106.4	91.9	98.9	105.7	110.3
Manufacturing	109.1	113.7	111.6	114.9	114.7	109.7	106.8	108.3	103.2	105.6	107.6
Electricity, gas and water supply	104.1	106.3	118.7	143.0	117.7	110.1	103.8	82.4	98.8	102.7	105.4
Construction	104.5	112.9	117.2	123.9	126.0	112.9	106.1	108.7	105.0	107.5	107.8
Wholesale and retail trade, repair	111.6	114.5	113.1	118.7	115.1	113.5	105.1	109.4	107.4	108.0	110.6
Hotels and restaurants	108.3	109.5	112.9	112.0	114.7	115.6	109.2	110.0	104.1	102.9	102.2
Transport, storage and communications	104.2	108.5	108.9	108.5	111.9	108.4	106.9	105.8	102.6	104.6	99.0
Financial intermediation	110.5	112.4	109.1	112.9	111.4	105.2	106.7	93.4	95.6	103.9	105.2
Real estate, renting activities	111.6	103.4	119.6	122.0	120.8	116.6	119.0	105.2	95.3	97.6	100.4
Public administration and social insurance	105.0	109.2	111.3	111.5	118.3	113.2	102.2	98.3	100.6	101.3	107.2
Education	108.2	108.9	114.3	111.9	118.5	116.3	110.5	110.2	106.1	104.9	104.5
Health and social work	100.0	108.5	123.9	125.5	130.8	127.2	112.0	105.6	99.4	100.9	104.3
Other community, social and personal service	102.6	105.0	107.4	106.2	111.7	110.6	101.0	102.1	100.5	101.2	101.7

Source: SBS, RAD-1 Survey.

The highest y-o-y real wage growth in Q3 is recorded in agriculture, commerce and construction

The highest y-o-y real wage growth in Q3 2008 was recorded in agriculture (10.3%), commerce (8%) and construction (7.5%). An above-average y-o-y growth rate was also seen in mining and quarrying (5.7%) and manufacturing (5.6%). Real estate and renting was the only sector to see a y-o-y drop in real wages (-2.4%) (Table T3-6).

In October, in addition to the sectors seeing above-average growth in Q3, higher-than-average growth of real wages is recorded in public administration

October saw even greater y-o-y growth of real wages in all sectors that experienced above-average growth in Q2. In addition, the public sector also recorded above-average growth of real wages (7.2% for public administration), a departure from Q3 levels (Table T3-6).

Table T3-7. Serbia: Gross Wages in the Public Sector 2004–2008, Y-o-y Real Indices

	From the budget			Public enterprises		Other ¹⁾	Serbia average
	Administration - all levels	Education and culture	Health and social work	National public	Local public		
2004	107.4	107.7	110.9	107.9	113.4	113.7	111.4
2005	105.9	106.0	100.8	100.5	103.0	106.9	107.1
2006	109.1	107.2	109.4	110.8	102.9	113.7	111.3
2007	111.1	114.7	123.8	116.7	105.0	114.1	114.6
2005 Q3	103.5	108.0	98.1	100.2	102.6	110.5	107.6
2006 Q1	111.5	111.1	102.2	108.9	97.0	115.0	111.0
Q2	102.2	100.8	103.1	109.6	102.8	111.3	108.1
Q3	108.0	104.2	105.0	108.4	102.7	112.4	109.7
Q4	110.5	106.4	98.2	103.4	98.8	116.0	116.6
2007 Q1	111.5	112.6	125.4	129.8	113.8	117.3	118.5
Q2	118.6	119.2	131.5	118.9	104.5	117.4	118.6
Q3	114.1	116.7	127.5	112.5	104.1	112.5	114.1
Q4	100.1	110.3	111.0	105.8	97.4	109.0	108.2
2008 Q1	99.2	109.5	105.6	94.3	98.5	107.3	105.2
Q2	99.6	104.8	99.4	103.0	89.0	104.2	103.1
Q3	100.8	104.7	101.1	103.6	91.7	106.3	105.0

Source: SBS.

Footnotes:

1) Column 6 includes private, socially-owned and mixed ownership enterprises (excluding entrepreneurs).

2) Column 6 represents the value for each time period inferred from difference between the total wage bill and the public sector wage bill, which is then divided by the number of employees in the economy (Column 7, Table T3-2).

No significant y-o-y real wage growth in Q3 in the public sector

The public sector did not see significant y-o-y real wage growth in Q3, remaining slightly above the real wage growth in Q2. This slight growth is attributable to a slowdown in the growth of costs of living between Q2 and Q3, rather than to higher nominal wage growth (Table T3-7).

⁴ For more details on labor costs, see Section 5, Economic Activity, in this issue of QM.

4. Economic Activity

As a consequence of the global financial crisis, economic activity growth will decelerate sharply. The pass-through of the financial crisis to the real sector takes place through two “channels”: (1) diminished ability to borrow and (2) lower exports and domestic demand. Since data for the period after September is not available, we have opted for a more in-depth analysis of economic activity in the period for which data is available, and on that basis attempt to forecast the sequence of events in the period ahead and to quantify them. Serbia’s economy faced the height of the financial crisis with a fairly high economic growth. We estimate growth of both GDP and non-agricultural GVA in Q3 at around 6.5%. Although domestic demand in Q3 was contained significantly in relation to GDP, it was still disproportionately high relative to production. Under the influence of high domestic demand, the production of non-tradables - services - drove economic growth. Appreciation of the dinar rate in Q3 resulted in a serious deterioration of competitiveness measured by unit labor costs denominated in euros. As early as Q4 the macroeconomic environment changed significantly – at least from the standpoint of the exchange rate – but the question is to what extent short-term adjustments can contribute to the elimination of long-term structural imbalances and help avoid a recession. We consider the estimate according to which GDP growth in 2009 should stand at around 3.5% to be realistic – if slightly optimistic - but even this scenario will depend on the length of the financial crisis, as well as on the resolve and ability of economic policymakers to meet the current challenges.

Gross Domestic Product

GDP growth in Q3 is estimated at about 6.5%

Growth of non-agricultural GVA is around 6.5%

According to QM’s preliminary estimate, based on the available data on the results of economic activity¹, the y-o-y real GDP growth in Q3 stood at 6.5 % (Table T4-1). The actual GDP growth in Q3 was similar to the achieved level of growth in Q2 (6.2%). Non-agricultural GVA, which, in our opinion, is a more reliable measure of economic activity, in Q3 grew at a rate of 6.5%, which constituted a slight deceleration relative to Q2 when it stood at 7%.

Table T4-1. Serbia: Gross Domestic Product, 2005–2008¹⁾

	Y-o-y indices									Base index (jan-sep) _{08/} (jan-sep) ₀₂	GDP share 2007	
	2005	2006	2007	2007				2008				
				Q1	Q2	Q3	Q4	Q1	Q2	Q3 ²⁾		
Total	106.0	105.6	107.1	107.8	107.7	106.6	106.4	108.4	106.2	106.5	142.7	100.0
Taxes minus subsidies	110.2	99.8	109.5	110.6	107.8	112.5	107.5	109.1	103.1	103.0	154.1	15.5
Value Added at basic prices	105.4	106.8	106.7	107.4	107.8	105.6	106.2	108.2	106.6	107.0	140.8	84.5
Non agricultural Value Added	107.3	107.9	108.8	108.3	109.0	108.7	109.2	108.3	107.0	106.5	146.8	89,2 ³⁾
Agriculture	95.1	99.8	92.2	99.5	98.2	88.3	87.6	106.4	103.4	110.0	105.2	10,8 ³⁾
Manufacturing	99.9	105.6	104.8	109.4	104.9	104.6	101.6	103.9	104.4	101.4	116.6	15,7 ³⁾
Construction	102.0	107.7	108.3	117.7	110.3	105.1	102.0	104.3	107.9	108.0	145.5	3,5 ³⁾
Transport, storage and communications	123.4	129.3	119.4	113.7	117.2	120.1	125.7	120.2	117.6	115.0	277.9	15,1 ³⁾
Wholesale and retail trade	122.0	110.3	119.5	122.6	120.0	117.7	118.5	111.4	105.8	107.0	229.0	12,7 ³⁾
Financial intermediation	117.1	117.0	117.9	117.1	117.5	117.4	119.6	116.9	116.0	115.0	223.9	8,4 ³⁾
Other	102.1	100.6	101.5	99.9	102.3	101.8	102.0	103.3	102.1	102.8	110.1	33,7 ³⁾

Source: SBS.

1) In constant prices in 2002.

2) QM estimate.

3) Share in VA.

When observed from the production side, the overall growth of economic activity in Q3 was driven by transport and telecommunications, financial intermediation and agriculture. Relative to Q2, a somewhat sharper *growth deceleration* was registered in the manufacturing industry,

1 The methodology used for estimating GDP is based on the estimates of real growth of gross value added in individual sectors of the economy according to the production principle, which were then summed up and the tax component was added. The modifications in relation to the SBS are partly connected to the indicators on the basis of which we estimate sectoral growth, and which we consider more reliable indications of actual sectoral growth in certain cases (e.g. cement production in construction). Likewise, bearing in mind that we have fewer available indicators than the SBS, we include in the estimate indirect indicators that are not an integral part of the official methodology, and we also carry out more in-depth analyses of trends in individual sectors as well as a demand analysis.

slightly stronger *growth acceleration* occurred in agriculture, while other sectors continued at similar y-o-y growth rates (Table T4-1).²

Growth in services leads...

If the economy is divided into two segments: (a) services and (b) material production³ – it can be observed that the y-o-y growth of services is still in the lead. In Q3 the real y-o-y growth of services stood at around 7.9%, while material production growth was about 5.3%. Comparison with the same period last year indicates that significant changes have, after all, taken place, since back then services grew at a rate which was by as much as 12.2 percentage points higher than the growth of material production. In Q3, that difference was reduced to only 2.6 percentage points, primarily due to the deceleration in the growth of services and growth of agricultural production.

...but material production is not far behind

The purpose of such a method for observing the economy is related to the fact that services are under the dominant influence of domestic demand, while material production is very much affected not only by domestic demand, but also by export demand, and that part of material production is also exposed to competition from imported products⁴.

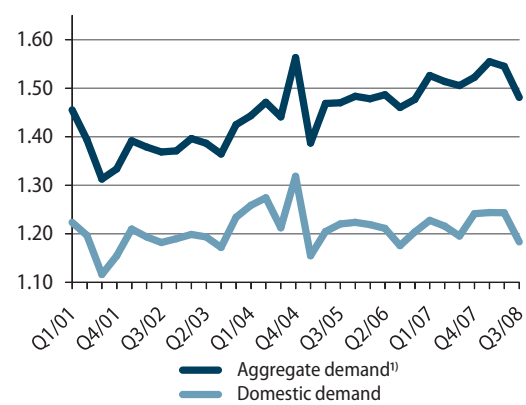
The high services growth over the past several years indicates that domestic demand was the main factor driving Serbia's high economic growth. The rise in domestic demand resulted in accelerated consumption of both tradables and non-tradables. However, while *non-tradable goods* – predominantly services – had to be produced locally, *tradable goods* could be easily imported. As a consequence, in the structure of economic growth, services and material production had almost diverging growth trends, with external imbalances sharply deteriorating.

These trends also point to the lack of competitiveness of the domestic economy, which was not able to increase the production of tradables commensurate with a rise in imports. But the fact that exports recorded double-digit growth rates over the entire period of transition, i.e., that there is also a part of the domestic economy which is competitive and expanded, should not be ignored.

Domestic demand is lower in Q3

Table T4-2 presents the movements of domestic and aggregate demand, which point to a concerning structural imbalance – high domestic demand relative to production – with which Serbia faces the escalation of the global financial crisis. Domestic demand was by about 20% higher than production in the whole period of transition. Graph T4-2 also indicates a long-term trend of fairly high export growth.

Graph T4-2. Serbia: Aggregate and Domestic Demand Ratio to GDP, 2001–2008



Source: QM based on SBS data.
1) Aggregate demand = domestic demand + export

Q3 saw an abrupt deceleration of both domestic and export demand relative to GDP. The slowdown of domestic demand was much sharper than of export demand. Although domestic demand was a bit lower in Q3, its usual seasonality, its value in Q3 2008 was low, even after taking the seasonal component into account. For the first time in two years, domestic demand in Q3 did not exceed GDP by more than 20%.

The following factors contributed to the decline in domestic demand in Q3: low real wage growth, deceleration of the part of lending operations related to consumer and cash loans, and a relatively balanced fiscal policy⁵. Still, in

2 This group of sectors includes economic sectors with somewhat lower shares in GVA: production and distribution of electricity, gas and water, mining and quarrying, tourism and catering and other services.

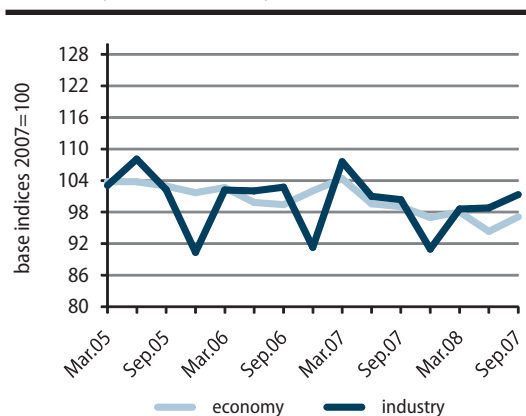
3 Services – wholesale and retail trade, transport, storage and telecommunications, financial intermediation, hotels and catering, real estate transactions and other services. Material production – agriculture, industrial production and construction.

4 Material production is very susceptible to various exogenous impacts, too (primarily agriculture and construction).

5 For more details see Section 3 Employment and Wages, Section 6 Fiscal Flows and Policy and Section 7 Monetary Flows and Policy in this issue of QM.

Unit labor costs go up

Graph T4-3. Serbia: Real Unit Labor Cost in Economy and Industry, 2005–2008



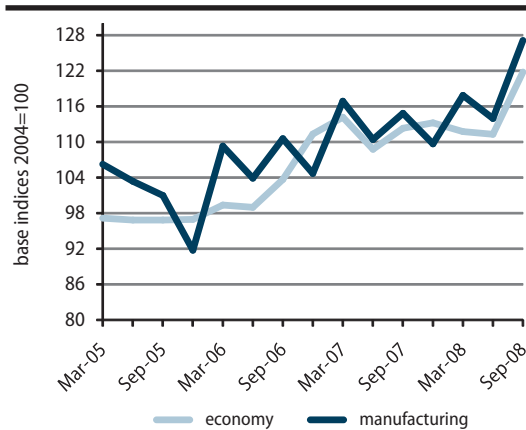
Source: QM based on SBS and NBS data.

Unit labor costs (ULCs) measured in dinars recorded a slight growth, while euro-denominated ULCs rose significantly in Q3. The rise in dinar-denominated ULCs was a consequence of a mild slowdown in productivity growth and a slight acceleration in the real wage growth. Graph T4-3 shows ULCs in the economy (excluding the government sector and agriculture) and industry. ULCs are still, with seasonal fluctuations⁶, on a multi-year downward trend (Graph T4-3).

Euro-denominated unit labor costs (euro-ULCs) are an indicator of the international competitiveness of the domestic economy because they define the largest domestic cost component (labor costs) relative to added value. Euro-ULCs are calculated for the manufacturing industry, which produces by far the largest portion of tradables, and for the total economy⁷. It should be stressed that such analysis monitors only the relative change in competitiveness (ULCs) relative to the average of 2004 and that no assessment is made of whether or not the domestic economy is competitive on the international market.

Euro-ULCs went up by around 25% in the period from 2004 to Q3 2008 (Graph T4-4) – which at the same time also quantifies a decline in the competitiveness of the domestic economy in the period. Q3 saw an abrupt fall in competitiveness, by around 10 percentage points, caused by the strong appreciation of the dinar which was not, nor could it be, accompanied by an adequate increase in productivity and/or wage cuts. The dinar, however, started to depreciate again as of October, which rendered the loss of competitiveness of the domestic economy in Q3 temporary.

Graph T4-4. Serbia: Real Unit Labor Cost in Euro, Economy and Manufacturing, 2005–2008



Source: QM based on SBS and NBS data.

If the movements of euro-ULCs are compared with the real appreciation of the exchange rate,⁸ it is seen that the real appreciation of the dinar since 2004 was much higher than the growth of euro-ULCs. The movements of euro-ULCs in the past several years indicate that the domestic economy still managed to cushion a considerable portion of the negative impact of the long-lasting trend of dinar appreciation on competitiveness by means of market mechanisms – a rise in productivity and deceleration of wage growth. This finding is important, since the recent dinar depreciation “restored” the bulk of the lost competitiveness of the domestic economy. Continued strong depreciation of the dinar – similar to that of October and November – will bring a higher risk for macroeconomic stability, rather than contributing to a rise in the competitiveness of the domestic economy.

6 In Q1, ULCs recorded seasonal growth, which can also be seen in Graphs T4-3 and T4-4, because a seasonal drop in economic activities occurred, which was not accompanied by a drop in wages. In Q4 the situation was reversed.

7 Excluding general government and agriculture.

8 For more details see Section 2 Prices and the Exchange Rate of this issue of QM.

Competitiveness declines temporarily

Euro-ULCs went up by around 25% in the period from 2004 to Q3 2008 (Graph T4-4) – which at the same time also quantifies a decline in the competitiveness of the domestic economy in the period. Q3 saw an abrupt fall in competitiveness, by around 10 percentage points, caused by the strong appreciation of the dinar which was not, nor could it be, accompanied by an adequate increase in productivity and/or wage cuts. The dinar, however, started to depreciate again as of October, which rendered the loss of competitiveness of the domestic economy in Q3 temporary.

In 2009, it will be impossible to avoid a sharp deceleration of economic activity. The impact of the global financial crisis will be directly reflected in the reduced activity of the financial intermediation sector, whose share in Serbia's economy stands at around 8%. Other sectors will be indirectly affected through a reduced ability to borrow and deceleration of domestic and export demand. It is difficult to precisely quantify the deceleration of economic activity. The estimates that GDP growth in 2009 will be around 3.5% are, after all, in line with our expectations⁹.

Industrial Production

Industrial production growth decelerates sharply

Industrial production recorded a growth of 1% in Q3 relative to the same period last year (Table T4-5). The y-o-y growth of industrial production in Q3 was by 1.3 percentage points lower than in Q2, and a slowdown also occurred in the manufacturing industry.

Table T4-5. Serbia: Industrial Production Indices, 2005–2008

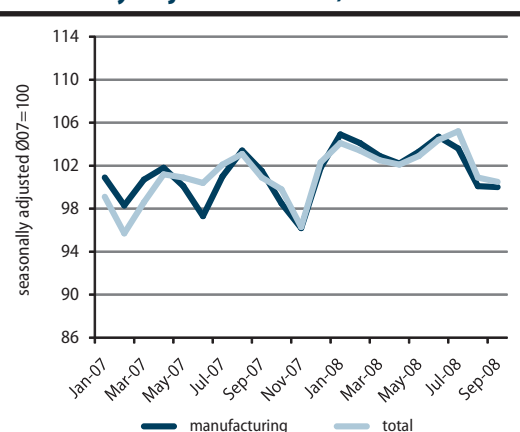
	Y-o-y indices										Share 2007
	2005	2006	2007	2007				2008			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Total	100.8	104.7	103.7	104.8	105.2	103.5	100.4	106.0	102.3	101.0	100.0
Mining and quarrying	102.1	104.1	99.4	102.1	101.4	99.2	95.6	106.0	101.8	103.0	6.0
Manufacturing	99.3	105.3	104.2	108.5	104.9	103.3	99.9	104.4	103.7	100.4	75.8
Electricity, gas, and water supply	106.6	102.2	102.8	94.2	108.7	106.5	104.3	112.0	96.1	103.2	18.2

Source: SBS.

Deceleration in the manufacturing industry

Production and distribution of electricity, gas and water, as well as mining and quarrying, grew slightly faster in Q3 relative to Q2, but within the expected fluctuations. Much more important for the analysis is the manufacturing industry sector, which actually has the highest share in total industrial production. The y-o-y growth of the manufacturing industry in Q3 was lower than in Q2, and it currently stands at 0.4% (deceleration relative to Q1 by 3.3 percentage points).

Graph T4-6. Serbia: Industrial Production, Seasonally Adjusted Indices, 2007–2008



Source: SBS.

Investment goods production is in the lead

When observed by purpose (Table T4-7), very even production growth rates of all specified-purpose product groups are noticeable. Production of investment goods in Q3 had the highest y-o-y industrial production growth rate of 5%. Energy generation also had a positive y-o-y growth in Q3 of 2.4%. The production of consumer goods remained at an unchanged level relative to the same period last year, while the production of intermediary goods declined slightly relative to 2007, by 0.3%.

⁹ For more details see Highlights in of this issue of QM.

¹⁰ Despite the cited temporary impact of appreciation on containment of domestic demand, it is obvious that domestic demand in Q3 declined earlier since a slowdown in the growth of services was registered that was not caused by appreciation, but primarily by domestic demand. A decline in exports points to the reduction in export demand.

Table T4-7. Serbia: Components of Industrial Production, 2005–2008

	Y-o-y indices										Share ⁵⁾	
	2005	2006	2007	2007				2008				2007
				Q1	Q2	Q3	Q4	Q1	Q2	Q3		
Total	100.6	104.7	103.7	104.8	105.2	103.5	100.4	106.0	102.3	101.0	100.0	
Energy ¹⁾	103.9	102.5	101.2	93.0	104.9	105.6	103.0	110.2	98.2	102.4	26.6	
Investment goods ²⁾	74.2	90.0	105.4	97.1	99.1	117.8	103.3	106.5	118.3	105.0	6.0	
Intermediate goods ³⁾	104.9	106.7	104.9	113.6	108.4	102.4	95.7	106.0	106.8	99.7	30.4	
Intermediate goods without basic metals	101.5	101.3	107.3	113.1	108.3	105.9	101.5	105.1	107.1	95.3	22.6	
Consumer goods ⁴⁾	101.6	112.0	107.1	122.4	109.1	102.3	97.2	99.4	97.5	100.0	37.0	
Consumer goods without food industry	96.3	128.3	109.2	138.7	111.4	99.3	91.8	95.8	96.5	103.4	14.2	

Source: SBS.

1) Extraction of coal, crude oil, natural gas, electricity and water supply.

2) Manufacture of metal products excluding machines (sections 281, 282 and 283 Classification of Activities), manufacture of machines and equipment (excluding electric), manufacture of office machinery and computers, radio TV and communications equipment, precision and optical instruments, manufacture of motor vehicles and trailers, manufacture of other transport equipment.

3) Mining of metal and non-metallic ores, stone quarrying; manufacture of textile yarns and fabrics, wood and cork products (except furniture), cellulose, paper and paper products, rubber and plastic products, chemical products (except pharmaceuticals and home chemicals products), petrochemicals, construction materials, basic metals, sub-sector of metal goods production except machines (sectors 284, 285, 286 and 287), electric machines and appliances, and recycling sub-sector.

4) Food industry products, tobacco products, clothing, leather products and footwear, publishing products, pharmaceutical products and home chemicals products, furniture and various other products.

5) Share in total industrial production.

Construction

Construction activity records high growth in Q3

Construction activity in Q3 was by some 8% higher relative to the same period in 2007. Among several unadjusted indicators that describe the developments in the construction industry, the cement production index is observed as it is considered the most reliable¹¹ (Table T4-8). Cement production in Q3 was by 8.1% higher than in the same period last year.

Table T4-8. Serbia: Cement Production, 2001–2008

	Y-o-y indices				
	I quarter	II quarter	III quarter	IV quarter	total
2001	89.5	103.5	126.9	148.1	114.2
2002	83.6	107.9	115.6	81.6	99.1
2003	51.1	94.4	92.7	94.4	86.6
2004	118.8	107.4	98.5	120.1	108.0
2005	66.1	105.0	105.8	107.4	101.6
2006	136.0	102.7	112.2	120.2	112.7
2007	193.8	108.9	93.1	85.0	104.4
2008	100.1	103.7	108.1	...	...

Source: SBS.

Growth in construction in 2008 will range between 5% and 10%

Construction activity in 2008 will have a fairly high growth, which we estimate at 5% to 10%. In all likelihood, the impact of the financial crisis will not be felt in construction activity until the end of 2008, so we do not expect any major changes in Q4 of the current year. A certain slowdown in construction activity in 2009 is very likely. This slowdown will be driven mostly by the limited ability to borrow, on the part of both developers and potential real estate buyers.

A slowdown in construction activity is expected in 2009 but it is difficult to make any forecasts at this point

The expected deceleration of construction activity may be somewhat contained through the announced government investment in major infrastructure projects (Corridor 10) for which funds from international institutional creditors have been secured.

¹¹ The proper indicator would be the consumption of cement, but it is not available on a quarterly basis. Studies have shown that cement production is a relatively reliable approximation for consumption.

5. Balance of Payments and Foreign Trade

Data indicates that Q3 seems to have been yet another successful quarter: the current account deficit dropped from 20.1% of GDP in Q2 to a still high but more moderate 16.7%. After having stagnated over the first two quarters of 2008, funding from abroad resumed. The financial account covers the current account deficit. Foreign currency reserves grew by an additional €257 mn. However, the global financial crisis hit Serbia in late September and early October. Due to lower foreign exchange inflows, and a wave of foreign currency deposit withdrawals by the public, the dinar depreciated against the euro by 15% between late September and late November. Although the panic abated by late October, the risk of insufficient financial inflows from abroad still remains. The monetary and fiscal policy measures taken thus far will have a positive impact on dampening the effects of the global crisis and the Serbian economy's external imbalance.

The current account deficit drops to 16.7% of GDP in Q3

In Q3 Serbia's current account deficit stood at €1,550 mn, or 16.7% of quarterly GDP (Table T5-1). In relation to Q1 and Q2, when the current account deficit stood at 17.4% and 20.1% of GDP respectively, the Q3 figure was a slight improvement. The lower share of the current account deficit in GDP recorded in third quarter can partially be explained by the appreciation of the dinar against the euro that marked this period. However, in addition to the apparent drop in the current deficit – due to changes in the exchange rate – a fall in real terms also occurred, primarily owing to a slowdown in imports growth and a recovery of current transfers, mainly remittances.

The balance of goods deficit is also lower relative to the first half of the year, standing at 21.2% of GDP

The balance of goods deficit amounted to €1,968 mn, and, expressed as percentage of GDP, recorded a fall in relation to the deficit recorded in the first half of the year. In Q1 it amounted to 24.6% of GDP and 23.4% in Q2, only to decline to 21.2% of GDP in Q3 (Table T5-1). Goods worth a total of €2,057 mn were exported in Q3, or 22.1% of quarterly GDP, while imports totalled €4,025 mn (43.3% of GDP).

The current account records a y-o-y growth of 48.8%...

When growth trends for the balance of payments deficit are taken into account, it becomes apparent that its absolute level in Q3 2008 stood 48.8% higher in relation to the same period in 2007. Although the deficit has been growing at the y-o-y level, it has nonetheless seen a drop of 10.5% in comparison with the preceding quarter. This quarterly reduction was the consequence of a moderate improvement in all of its components: the balance of goods and services recorded a lower deficit; the negative difference between net interest paid and received was slightly lower; while the positive current transfer balance rose in relation to Q2.

...which is still a quarterly fall of 10.5%

Improvements in foreign trade in Q3 are additionally supported by the recovery of the current transfer balance

The balance of goods deficit grew by 25.7% y-o-y in Q3. Both imports and exports simultaneously decelerated. Exports of goods grew at a y-o-y rate of 20.0%, while the growth of total imports of goods slowed appreciably, to a y-o-y rate of 22.7% in Q3¹.

The improvements in foreign trade, a hallmark of Q3, were additionally supported by the stronger inflow of current transfers relative to Q2. Over the preceding quarter (Q2), current transfers recorded a significant y-o-y drop (-14.4%), thereby making a major contribution to the record current account deficit. Transfers amounted to €649 mn in Q3, the same as last year, but this was still a major recovery relative to Q2.

Foreign currency reserves grow by €257 mn...

After the stagnation in the first half of 2008, Q3 recorded major financial inflows from abroad. The financial account (excluding foreign currency reserves)² amounted to €1.730 mn in Q3, which was enough to cover the current account deficit and increase the NBS foreign currency reserves by €257 mn. However, the structure of these significant financial inflows underscores the weaknesses of the Serbian economy's external position.

¹ Corrected NBS data on imports and exports (f.o.b.) calculated in accordance with IMF methodology were used in the analysis of the balance of payments (Balance of Payments Manual, Fifth Edition, IMF: <http://www.imf.org/external/np/sta/bop/BOPman.pdf>), whereas SBS data was used for the analysis of imports and exports. The SBS data differs methodologically from NBS data; hence the discrepancies in the imports and exports figures and growth rates.

² According to IMF methodology, changes to foreign currency reserves are recorded in the financial account (Balance of Payments Manual, Fifth Edition, IMF: <http://www.imf.org/external/np/sta/bop/BOPman.pdf>).

5. Balance of Payments and Foreign Trade

...but noticeably lower FDI and significant borrowing from abroad, primarily short-term, indicate the poor structure of financial inflows

Foreign direct investments were very low in Q3, a mere €133 mn. This was the first time such low FDI inflows have been recorded since Q2 2004. In the absence of major privatizations, very low FDI reflects risks that the Serbian economy will face over the coming period. Low FDI in Q3 were also linked to the recession in West Europe, as well as the reluctance of foreign investors to take risks, and the low rate of greenfield investments in Serbia.

Inflows recorded by the financial account were in Q3 mainly composed of loans to enterprises (a record €1,060 mn)³ and loans to the banking sector (€335 mn), while the inflow of cash and rise in foreign currency deposits amounted to €333 mn (Table T5-1). Long-term foreign borrowing by the banking sector amounted to €27 mn, while short-term credits totalled €307 mn, almost all of the amount in September. It is noteworthy that the share of short-term loans in total foreign borrowing has increased. Enterprises that so far did not take short-term loans in any significant amount, borrowed €300 mn in short-term loans.

Table T5-1. Serbia: Balance of Payments¹⁾, 2007–2008

	2007			2008		
	Q1	Q2	Q3	Q1	Q2	Q3
	in millions of euros					
CURRENT ACCOUNT	-1,031	-1,031	-1,042	-1,299	-1,736	-1,551
Goods	-1,482	-1,542	-1,566	-1,841	-2,021	-1,968
Export f.o.b	1,383	1,585	1,714	1,665	1,974	2,057
Import f.o.b	-2,865	-3,127	-3,280	-3,507	-3,995	-4,025
Services	-56	-54	-82	20	-76	-107
Export	500	534	645	663	628	733
Import	-556	-589	-727	-643	-705	-840
Income, net	-55	-114	-70	-76	-220	-125
Receipts	106	127	144	143	132	158
Payments	-161	-241	-214	-218	-352	-283
Current transfers, net	562	679	676	598	582	650
o/w grants	36	36	50	43	63	52
o/w private remittances, net	404	480	487	412	351	425
CAPITAL ACCOUNT	-322	1	6	5	9	0
FINANCIAL ACCOUNT	1,421	757	1,043	1,376	1,536	1,474
Direct investment, net	666	-191	429	755	564	133
Portfolio investment, net	269	185	119	-44	-38	26
Other investments	257	1,179	877	694	700	1,572
Trade credits	-5	93	89	119	-86	-167
Loans	317	1,044	743	204	766	1,406
NBS	-33	-23	-9	0	0	0
Government	50	19	39	1	17	11
Commercial banks	-177	-89	46	-516	-86	334
Long-term	43	-200	-42	-163	-90	27
Short-term	-220	111	88	-353	4	307
Other (enterprises)	477	1,137	667	719	835	1,060
Currency and deposits	88	-3	34	371	20	333
Other assets and liabilities	-143	45	12	0	0	0
Reserves Assets (- increase)	229	-416	-382	-29	310	-257
ERRORS AND OMISSIONS, net	-68	273	-7	-82	192	77
OVERALL BALANCE	-229	416	382	29	-310	257
PRO MEMORIA	in % of GDP					
Current account	-16.4	-14.7	-13.9	-17.4	-20.1	-16.7
Balance of goods	-23.5	-22.0	-20.9	-24.6	-23.4	-21.2
Exports of goods	22.0	22.6	22.9	22.3	22.9	22.1
Imports of goods	-45.5	-44.6	-43.8	-46.9	-46.3	-43.3
Balance of goods and services	-24.4	-22.8	-22.0	-24.4	-24.3	-22.3
Current transfers, net	8.9	9.7	9.0	8.0	6.7	7.0
GDP in euros ²⁾	6,302	7,014	7,490	7,479	8,627	9,288

Source: NBS.

1) Original US dollars monthly data are converted to euros using monthly averages of official daily NBS mid rates.

2) GDP 2008: QM estimate.

3 Data on borrowing by the economy differs from that published in Section 7, Monetary Flows and Policy. This difference is the result of different data sources: for Balance of Payments we consider data provided by the NBS Balance of Payments Division, while for Monetary Flows and Policy the data is supplied by the banking sector balance. The difference between these two sets of data is in their reach. Monetary accounts classify non-resident foreign currency accounts as "borrowing", while the balance of payments lists them as "financial account cash and deposits." rather than foreign borrowing.

Foreign Debt

As of 30 September 2008, Serbia's foreign debt stands at €20,530 mn (61.1% of GDP)

Serbia's foreign debt amounted to €20.5 bn, or 61.1% of estimated GDP (Table T5-2). Over the course of Q3, the foreign debt rose by as much as €1,883 mn. This pace of borrowing led to a y-o-y increase in the foreign debt by €4,170 mn, an increase of one-quarter relative to the same period in 2007. Exchange rate fluctuations, especially the depreciation of the euro against the dollar, did not impact these changes to any significant degree, as most of the foreign debt (80.5%)⁴ is indexed in euros. This quarterly and y-o-y increase was mainly the consequence of the growing private debt, especially greater long-term borrowing by companies.⁵ The growth of private borrowing contributed to the growth of the foreign debt by 87.5% at the quarterly level, or 98.3% at the y-o-y level. Long-term borrowing by the business sector contributed to y-o-y foreign debt growth by 83.6%.⁶

Table T5-2. Serbia: Foreign Debt, 2005–2008

	2005	2006	2007			2008		
			Mar	Jun	Sep	Mar	Jun	Sep
stocks, in EUR millions, end of the period								
Total foreign debt	13,064	14,884	14,858	15,689	16,361	17,957	18,647	20,530
(in % of GDP)	61.9	59.8	58.3	58.8	59.0	59.4	58.6	61.1
Public debt	7,714	6,420	6,241	6,253	6,210	6,035	6,047	6,282
(in % of GDP)	36.5	25.8	24.5	23.4	22.4	20.0	19.0	18.7
Long term	7,630	6,363	6,185	6,197	6,157	6,003	6,016	6,247
o/w: to IMF	732	185	0	0	0	0	0	0
Short term	84	57	56	56	53	32	32	35
Private debt	5,350	8,464	8,617	9,436	10,151	11,922	12,599	14,248
(in % of GDP)	25.3	34.0	33.8	35.4	36.6	39.5	39.6	42.4
Long term	4,156	7,263	7,669	8,532	9,152	10,883	11,482	12,366
o/w: Banks debt	1,260	2,929	2,906	2,704	2,628	2,660	2,333	2,357
o/w: Enterprises debt	2,895	4,334	4,763	5,828	6,524	8,223	9,149	10,009
Short term	1,194	1,201	948	904	999	1,039	1,118	1,882
o/w: Banks debt	924	942	701	808	875	770	769	1,118
o/w: Enterprises debt	271	259	247	96	123	269	349	764
Foreign debt, net ¹⁾ (in% of GDP)	38.5	23.6	23.7	24.1	24.6	27.8	30.0	32.2

Source: NBS

1) Total foreign debt excluding NBS reserves.

The foreign public debt stood at €6,282 mn in late September, or €235 mn more than in June 2008. At the annual level, bearing in mind the drop in Q1 and the slight rise in Q2, the growth of the public debt has been negligible in real terms.

Private borrowing continues to grow

The foreign private debt continued to grow in the quarter. In late September, it reached €14,248 mn, or a significant 42.4% of GDP. The rising private debt was, for the most part, a consequence of more long-term borrowing by companies. After repaying long-term liabilities in Q1 and Q2, banks increased the amount of these liabilities in Q3 for the first time since the beginning of the year.

Q3 is characterized by major short-term borrowing, indicating increased external vulnerability

The marked rise in short-term borrowing by banks and enterprises (Table T5-2), a negative distinction of this period, led to the growth of the share of the short-term debt in gross foreign currency reserves. This ratio, indicating the vulnerability of an economy,⁷ shot up from 0.13 in June to 0.20 in late September, notwithstanding the growth of the NBS gross foreign currency reserves. Although the level of this indicator is still below that recorded by countries in the region, its high growth in just three months highlights the growing external vulnerability of Serbia's economy.

4 Late 2007 NBS data.

5 For more on the reasons for greater foreign borrowing by companies see Monetary Flows and Policy in earlier issues of QM.

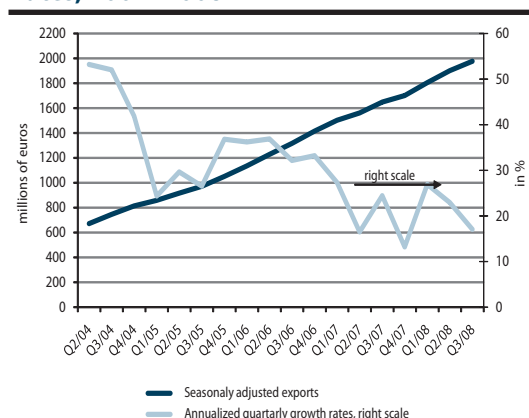
6 We calculate contribution to a rise in debt as the share of absolute changes of its components in its overall absolute change.

7 See Section 6, Balance of Payments and Foreign Trade, in QM 13.

Exports

Export growth
slowed noticeably

Graph T5-3. Serbia: Seasonally Adjusted Exports and Annualized Quarterly Growth Rates, 2004–2008



Source: SBS, QM.

Exports of goods grew at a y-o-y rate of 19.6% in Q3. If the seasonally adjusted export series (Graph T5-3) are considered, a trend of deceleration of growth since early 2008 becomes apparent. In relation to Q2, exports were higher by 4.0%, or 17.0% annualized. The graph below shows that the nearly linear trend of the seasonally adjusted export series has continued, indicating a continuing slowdown of export growth due to the rising base.

Table T5-4. Serbia: Merchandise Exports, Growth Rates, 2007–2008

	Exports share in 2007 (%)	2008			2007			2008		
		Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3
	%	mil.euros			y-o-y growth rate (%)					
Total	100.0	1,676	1,973	2,066	34.6	29.8	27.3	20.5	23.8	19.6
Bulky exports	29.7	463	548	601	36.1	29.1	19.4	1.9	13.8	8.0
Iron and steel	12.5	220	311	300	61.5	29.1	9.7	3.6	40.6	36.0
Non ferrous metals	7.9	125	128	135	11.9	18.6	17.6	4.5	-0.9	-1.2
Fruits and vegetables	5.3	65	64	109	30.3	59.2	29.7	13.9	-14.5	-8.0
Cereal and cereal products	3.9	53	44	57	26.6	23.2	40.7	-19.1	-20.3	-29.6
Underlying exports	70.3	1,213	1,425	1,465	33.9	30.1	31.5	29.6	28.0	25.0
Core	32.7	549	585	611	30.9	35.2	28.6	23.5	13.7	9.3
Clothes	5.1	89	82	88	31.6	31.0	28.1	15.5	12.0	2.4
Miscellaneous manufactured articles, n.e.s.	4.3	77	80	86	6.0	17.1	34.2	50.7	25.4	9.1
Manufactures of metals, n.e.s.	4.8	76	82	82	76.6	60.5	33.1	26.9	1.3	-0.5
Rubber products	3.3	57	57	64	16.2	17.9	4.8	3.3	5.5	27.8
Electrical machinery, apparatus and appliances	3.6	63	71	82	77.6	81.2	66.7	50.9	21.7	30.3
Organic chemicals	3.0	47	48	47	42.8	71.4	46.3	7.9	25.7	-5.3
Plastics in primary forms	2.2	40	40	38	-7.4	8.2	8.3	34.4	10.1	6.7
Footwear	2.3	41	41	45	34.9	18.1	10.9	15.8	8.4	9.0
Paper, paperboard and articles of paper pulp	2.0	33	39	35	12.3	35.6	23.0	21.4	13.5	1.9
Non-metal mineral produce	2.1	28	45	45	55.3	32.0	28.1	10.3	19.9	16.7
Other	37.6	664	840	854	36.7	26.0	34.2	35.0	40.4	39.4

Source: SBS.

The slowdown in total exports was a consequence of a major downturn in several of its components. If, as in the previous issues of *QM*, exports are disaggregated into *bulky* and *underlying* components, with *underlying exports* further subdivided into *core* and *other exports*, a better insight is gained into the reasons behind this trend (Table T5-4).

Bulky exports have particularly slowed...

...due to the unfavourable prices of this group of products in the global market

The growth of *bulky exports* slowed to a y-o-y rate of 8.0%. Iron and steel were the only products from the *bulky* group to see positive growth. US Steel Serbia, the largest exporter, had significantly reduced production because of the overhaul of one of its blast furnaces. Beginning with early 2008 when the work was completed, production – and consequently exports – of iron and steel started recovering. Still, the Q3 growth of 36.0% y-o-y has not been substantial, taking into account last year's low base. When the quarterly data series was seasonally adjusted, the results confirmed that the 36% y-o-y growth was deceptive. Based on the seasonally adjusted data, this quarter recorded a drop of 8.4% relative to the preceding quarter. Additionally, the announcement that one of the two blast furnaces at US Steel had been shut down because of falling global demand serves to corroborate *QM*'s conclusion on the negative growth trend of iron and steel exports,

and anticipates lower exports of these products in the future. The other components of *bulky exports* – non-ferrous metals, fruit and vegetables, and cereals – have retained the negative trends from the previous quarter.

The global drop in metal prices made an exogenous contribution to the negative growth of non-ferrous metal exports (-1.2% at the y-o-y level). According to the metal price index, expressed in dollars and published by the International Monetary Fund, these prices fell by 8.1% in Q3 relative to Q2. Prices in euros have dampened this effect, bearing in mind the depreciation of the euro against the dollar, so the average price in euros dropped by 4.4% compared to the preceding quarter. This price drop aside, quantities of non-ferrous metals exported in Q3 may have been the largest since the beginning of the year. Thus, the fall in value was caused exclusively by the falling prices of metals. Assuming metal prices in euros had remained the same as in Q2, the value of exports of this group of products would have risen to €141 mn, a y-o-y increase of 3.3%. And assuming metal prices in euros were the same as in Q3 2007, exports would have grown by 13% y-o-y.

Fruit and vegetable exports continued falling (-8.0%). Although seasonal factors mean the value of these exports is almost twice as high as in Q2 or Q1, the figures showing a slight slowdown in this quarter are due to last year's exceptionally high base. This year's production and the average yield of Serbia's cereal crop were higher than last year, primarily thanks to favorable weather. The ban on wheat and corn exports was lifted on 15 June 2008, but the y-o-y downward trend of wheat and wheat products is even more marked in this quarter (-29.6%). The reason is the Q3 2007 level of exports – an exceptionally high comparison base, and a period that saw the export of a record quantity of cereals (June 2007 recorded cereal exports worth €42.337 mn. Thus, even though Q3 2008 exports were robust, they stand at just above two-thirds of last year's. In addition, the lower exports may be explained by the somewhat inferior quality of this year's crop, and the traditionally poor organization of the export of these products. The appreciation of the dollar against the euro and the appreciation of the euro against the dinar in Q3 both had an additional impact on the quantity of Serbian exports. Future cereal exports will be affected by less than favorable global factors. It has been estimated that global production of wheat and wheat products will reach record levels in 2008-09, which is partly to blame for the drop in prices. The price of cereals has continued to drop globally owing to downward trends in other markets, especially the energy and financial markets. In early October, EU wheat prices reached their lowest level in the past 15 months. The global financial crisis has been exerting additional pressure on the market, and the dropping prices of these products is an indicator of a possible further decline in the value of Serbia's cereal exports.

As for underlying exports, the growth of the core component slows appreciably...

...to be replaced by an exceptional growth of the other exports group...

...which shows great promise for the future

Underlying exports continued to enjoy robust growth at a rate of 25.0%, whereas the *core* component of that group continued to record low y-o-y growth (9.3%). The *other* group has been exhibiting exceptionally high rates since the beginning of the year (35.0% in Q1, 40.4% in Q2, and 39.4% in Q3). Certain *core* product groups – metal products not categorized elsewhere, and organic chemicals – have had negative growth rates. The *other* component, making up 37.6% of total exports, comprises products with low individual shares. The characteristically strong growth of this component began a year ago and has since been making a major contribution to overall export growth. The contribution of this group of products to overall export growth has exceeded 60% since the beginning of 2008, only to reach as much as 71.4% in Q3.

The *other* group comprises export products with low individual shares in overall exports. This year, however, the group accounted for a significant share in the growth of Serbian exports. The positive and noteworthy pace of growth of export sectors that have hitherto not performed well, and are also insensitive to external impacts such as fluctuating metal and cereal prices, points to a possibility of robust growth of domestic exports in spite of negative global trends and unfavorable circumstances. Deserving of special mention are the growth rates of the following product groups: telecommunication sets and equipment (y-o-y growth of 333%), fertilizers (excluding raw) – 526.6%, live animals – 309.6%, fish and processed fish products – 179.3%, as well as the “uncategorized goods” section, which recorded exceptionally high growth relative to Q3 last year.

5. Balance of Payments and Foreign Trade

Bearing in mind the downward trend of metal prices, the low growth rates of *bulky exports* can be expected to continue. *Underlying* exports do not seem to be set to achieve high levels in Q4. Only products from the *other* category, which have shown extraordinary growth potential, might make a major contribution to furthering overall export growth.

Imports

Imports slow markedly

According to SBS data, the growth rate of imports was lower than that of exports in Q3 2008, or 19.1% at the y-o-y level (Table T5-5). This was the first time since Q2 2007 that exports grew at a lower y-o-y rate than imports.

The slowdown in imports is also borne out by the seasonally adjusted data, which shows imports higher by 3.7% than in the preceding quarter, an annual rise of 15.6%. The quarterly growth of seasonally adjusted imports is significantly lower than imports growth recorded in Q2.⁸

Table T5-5. Serbia: Imports, Y-o-y Growth Rates, 2007–2008

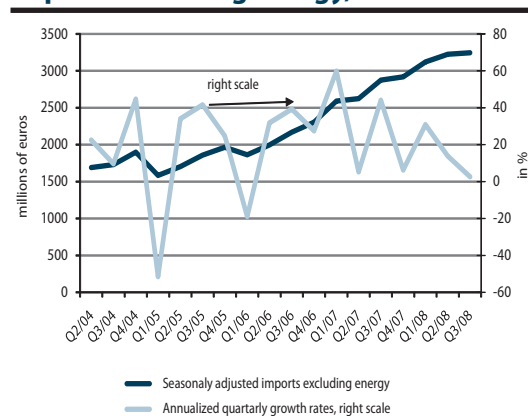
	Imports share (2007)	2008			2007			2008		
		Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3
		in %	mil.euros			y-o-y growth (%)				
Total	100.0	3,613	4,105	4,009	32.9	24.4	27.8	22.8	27.5	19.1
Energy	17.4	788	764	796	14.3	-3.0	7.0	32.5	53.2	51.2
Intermediate products	36.4	1,201	1,440	1,464	36.3	34.0	31.0	16.2	16.0	12.8
Capital products	25.8	850	1,104	985	55.1	34.8	41.9	19.5	32.6	10.4
Capital products excluding road vehicles	17.6	557	723	664	66.0	33.1	32.6	9.3	29.3	13.1
Durable consumer goods	3.8	133	157	144	29.6	35.0	42.2	31.3	34.8	13.5
Non-durable consumer goods	14.2	517	542	545	25.0	21.3	18.8	26.6	21.1	19.5
Other	2.5	124	97	74	29.6	12.7	37.4	32.4	16.6	12.3
Imports excluding energy	82.6	2,825	3,340	3,213	38.6	31.2	32.6	20.3	22.8	13.1

Source: SBS.

Energy imports saw high y-o-y growth in Q3, of 51.2%. The rise in the value of energy imports in Q3 was due to the high global energy prices.

When the primary energy price index published by the International Monetary Fund is considered, it is evident that energy prices in dollars dropped by 2% in Q3 relative to Q2, but have at the same time risen by 62% compared to last year. The euro appreciated against the dollar over the past year, which compensated somewhat for the rise in energy prices in euros – with the result that the price of oil in euros increased by 48.1% y-o-y. The rise in the quantity imported relative to both the preceding quarters and 2007 was approximately the same, some 2%. This implies

Graph T5-6. Serbia: Seasonally Adjusted Imports Excluding Energy, 2004-2008



Source: SBS, QM.

that the rise in the value of energy imports was caused by growing energy prices worldwide. The fall in prices, primarily of oil, that has been in evidence since August 2008 will lead to a slowdown, but not to negative energy import growth rates in Q4.

A clearer picture of the slowdown in imports in Q3 will emerge if the seasonally adjusted imports series, excluding energy⁹, is observed. Graph T5-6 shows that imports excluding energy are only slightly higher relative to the preceding quarter: 0.7%, or an annual 2.6%. This was an appreciable deceleration of imports. The quarterly growth of seasonally adjusted imports stood at 3.3% in Q2, or an annual 13.8%.

⁸ When data is altered, the use of seasonal adjustment methods results in correspondingly slightly altered seasonally adjusted values.

⁹ This will discount the exogenous factors of fluctuating oil prices, and seasonal factors affecting the remaining groups of imported goods.

The y-o-y growth rates of all import components excluding energy indicate a slowdown in imports growth

Except energy imports, all other components of imports have seen their growth slow down dramatically. Only imports of non-durable consumer goods recorded somewhat faster growth (an annual rate of 20%), while the y-o-y growth of all other groups of imported products slowed significantly to between 10% and 14%. All this together led to a slowdown in overall imports, and especially a marked deceleration of imports excluding energy to a y-o-y level of 13.1% in Q3.

Notwithstanding the fact that Q3 2008 saw export rates higher than those of imports, the trade deficit continued to grow (bearing in mind the low exports/imports coverage ratio of 51.5%). Imports can be expected to slow markedly in Q4, in view of the falling energy prices; however, the drop in international demand and price of metals, which could adversely impact Serbia's exports, does not seem to signal positive changes that could lead to an improvement in the foreign trade balance by the end of 2008.

6. Fiscal Flows and Policy

Fiscal policy expansiveness was significantly reduced in Q3 2008. The consolidated fiscal deficit in Q3 amounted to 7.6 bn dinars, which was approximately one-third of the deficit accumulated in the previous quarter. The annual equivalent of the consolidated deficit in Q3 amounted to 1.1% of GDP. In the course of Q3 consolidated¹ revenue and expenditure grew at a considerably slower pace relative to previously manifested trends. The y-o-y real growth of consolidated public revenue was a modest 1.7% in Q3, while consolidated expenditure in Q3 went up by only 0.4% in real terms. The real value of consolidated revenue in Q3 was approximately at the same level as in the preceding quarter, while consolidated public expenditure in Q3 was lower in real terms by 5.2% compared to the previous quarter. According to the first signs, the trends of Q3 continued in October as well, but a strong fiscal expansion is expected in the remaining two months of 2008.

In Q3 fiscal policy expansiveness is significantly reduced

General Trends and Macroeconomic Implications

The decelerating trend in the real growth of public expenditure continues

The decelerating trend of the y-o-y growth rate of the real level of consolidated public revenue continued in Q3. The y-o-y real growth of consolidated public revenue in Q3 was the lowest in the last three years. The slowdown in the growth of public revenue was relatively widely dispersed and included all major types of fiscal revenue. Contrary to the usual seasonal pattern, consolidated public revenue, as well as revenues from the majority of more relevant tax forms, was in real terms lower in Q3 than in Q2 of the current year.

The widely dispersed deceleration of the growth of the real level of public revenue points to the adverse impact of general factors, such as the slowdown in economic activity. The impact of other factors on the deceleration of the growth in the real level of public revenue, on which we reported in the previous issue of *QM* (faster export growth than GDP growth, lack of financial discipline due to the expected conditional write-off of interest on tax arrears and the like), is probably much weaker than the impact of deceleration in economic activity.

Public expenditure growth also decelerates steeply

The y-o-y growth rate of consolidated public expenditure in Q3 was the lowest since mid-2006. As with revenue – instead of the expected seasonal rise in the real level of expenditure, it dropped in Q3 relative to Q2 by 5.2%. In real terms, the cut in expenditure in relation to the preceding quarter was a result of both the trend in Q3, and of the high level of Q2 expenditure – associated with the expansion in the run-up to the parliamentary election. While the deceleration in revenue growth in Q3 was, in fact, the intensification of earlier trends, the deceleration in the growth of public expenditure was a deviation from the trend of its high y-o-y growth.

The deceleration of the y-o-y growth rate and the drop in the real level of consolidated public expenditure relative to the preceding quarter were, for the most part, a result of the developments related to wages and discretionary components of public expenditure. The y-o-y wage growth rate decelerated sharply in Q3, while the real level of labor costs in the public sector in Q3 was lower than in Q2 2008. Discretionary expenditure, such as public investment, subsidies, capital increases and budget loans, dropped sharply in real terms both relative to the same quarter of the previous year, and relative to Q2 of this year. The cut in the real level of discretionary public expenditure was a result of savings on these components in Q3 of the current year on the one hand, but, on the other, of the high level of discretionary expenditures in Q3 2007 and Q2 of the current year. The high level of discretionary expenditure in Q3 last year was a consequence of delays in the execution of the mentioned expenditures in the first semester of 2007, due to the implementation of the temporary financing regimen. In Q2 2008 high level of discretionary expenditures was caused by the parliamentary election that was held – with this becoming almost a tradition in Serbia.

¹ The Ministry of Finance adjusted consolidated revenue and expenditure for previous periods and in particular for Q2 2008. Consolidated revenue and expenditure for Q2 were increased by around seven billion dinars, hence the deficit was not significantly changed.

Table T6-1. Serbia: Consolidated General Government Fiscal Operations¹⁾, 2005–2008

	2005		2006				2007				2008			
	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3
	in billions of dinars													
I TOTAL REVENUE	721.7	185.7	211.3	218.6	250.2	865.8	226.4	240.0	251.3	290.1	1007.8	268.3	273.3	282.9
II TOTAL EXPENDITURE	-695.1	-182.9	-196.8	-214.7	-277.0	-871.4	-214.9	-220.8	-254.5	-334.1	-1024.3	-252.3	-289.8	-287.7
III "OLD" DEBT REPAYMENT, NET LENDING AND RECAPITALIZATIONS	-15.2	0.2	-0.8	-2.6	-6.4	-9.6	-9.8	-1.0	-5.5	-10.2	-26.5	-12.6	-5.2	-2.7
o/w Net lending ²⁾	-5.3	-1.8	-0.8	-1.4	-6.6	-10.7	-0.8	-1.0	-5.5	-5.8	-13.1	-7.6	-5.2	-2.7
IV TOTAL EXPENDITURE, GFS (II+III)	-710.2	-182.7	-197.7	-217.3	-283.3	-881.0	-224.6	-221.8	-260.1	-344.3	-1050.8	-264.9	-295.0	-290.4
V CONSOLIDATED BALANCE (I+IV), GFS definition	11.4	3.0	13.6	1.3	-33.1	-15.1	1.7	18.2	-8.8	-54.2	-43.0	3.4	-21.6	-7.6
VI FINANCING (FREN's definition)	5.8	7.5	-13.3	98.4	7.3	100.0	20.3	-5.3	-6.8	5.2	13.4	0.0	-12.7	0.2
VII ACCOUNT BALANCE CHANGE (V+VI)	17.3	10.5	0.4	99.7	-25.8	84.8	22.0	12.9	-15.5	-49.0	-29.6	3.4	-34.3	-7.4

Source: Table P-10 in Analytical Appendix.

1) Includes all levels of government (central, provincial and municipal) and their budget beneficiaries and social security organizations (Serbian Pension and Disability Insurance Funds, Health Insurance Funds, National Employment Service, but not public enterprises and the NBS).

2) The item corresponds to the item "Net acquisition of financial assets for policy purposes" in the PFB (in accordance to GFS 2001), i.e. to the item "net lending" or "lending minus repayment" in the IMF presentation (i.e. GFS 1986). It comprises loans to students, financing of the National Corporation for Housing Loan Insurance and the like.

Analysis of Individual Tax Instruments and Individual Public Expenditures

Deceleration in the revenue from consumption taxes is particularly significant

The growth of the real revenue level for the majority of the most important tax forms decelerated, but it is particularly serious in the case of taxes on consumption (VAT, excises and customs duties). In the case of the VAT and customs duties, a relatively sharp drop was recorded in Q3, instead of expected seasonal growth. The deceleration of the real growth of customs revenue was, for the most part, a result of a different pace of the exchange rate and that of domestic prices. While the exchange rate of the dinar relative to the same quarter of the previous year appreciated in nominal terms by around 5%, domestic prices (which serve as a deflator) went up by about 10%.

The growth of revenue from consumption taxes was much slower than the estimated GDP growth. Lower consumption tax revenue cannot be explained by changes in tax rates because these have not been altered since mid-2007. The reasons for the slower rise must be sought in the changed structure of domestic demand, i.e., in the higher share of consumption of non-taxable products (investment goods). An increase in the share of essentials in consumption, which are taxed at a lower rate, is not very likely, because real incomes grew over the mentioned period. The second possible factor of a slowdown of the rise in revenue from consumption taxes is higher tax evasion, which could also be explained as a result of relaxation of financial discipline in the first months of the new government. Finally, the possibility should not be ruled out that the final statistics could show that GDP growth in Q3 was slightly lower than what ensues from the currently available information.

Revenue from direct taxes continues to grow

Revenue from direct taxes in Q3 increased in real terms. The real level of revenue from the personal income tax was higher by 4.5% relative to the same period in 2007, while social contribution revenue in Q3 had y-o-y growth of 5.3%. However, revenue from the personal income tax was lower in Q3 than in the preceding quarter by 2.7% in real terms. The trend of high real growth of the revenue from the corporate income tax continued.

Most items on the expenditure side decelerate their growth or are decreased

Real growth of most items on the expenditure side was decelerated or they declined in real terms. The most significant exception is pension expenditure, which in Q3, even before the extraordinary increase in pensions, was higher in real terms by 16.4% than in the same period of the previous year. Such a high real increase in pensions was a consequence of the indexation of pensions to reach the level of 60% of average wages at the beginning of 2008, as well as of the regular indexation of April pensions paid out in May. The cumulative effect of these two increases in pensions amounted to more than 19%, which was much above inflation in the previous part of 2008.

Pension expenditure grows rapidly

Expenditure for goods and services also grows at a very fast pace

The growth of expenditure for employees decelerates

Besides the pension expenditure, a significant growth in real terms occurred in the case of expenditure for purchases of goods and services. This expenditure was higher in real terms by 8.7% in Q3 compared to the same period of the previous year, while remaining roughly the same relative to the preceding quarter. The high real growth of expenditure for goods and services in 2008 is particularly unfavorable since it also grew rapidly in real terms over the previous years – so its share in the 2007 GDP in Serbia was higher than in most EU member countries. Therefore, in the context of the need to slow down the rise in public spending over the coming years, this is one of the items where sizeable savings are necessary and possible. The estimates are that an appropriate first step would be a nominal freeze on this item in the course of 2009, in order to move to differentiated growth in the years to come, by sector and by type of goods and services.

A strong contribution to the deceleration of the rise in the real expenditure level in Q3 was made by subsidies, which went down in real terms relative to the same period in 2007 by 28.7%, while the decline relative to the preceding quarter amounted to 38%. The cut in the real level of subsidies in Q3 was largely a result of their high levels in the quarters to which it is compared, as well as of the savings made during the quarter. Capital expenditure rose strongly in Q3 in real terms relative to the previous quarter, but was nevertheless lower by 4.8% relative to Q3 2007. It can be concluded that savings in the fiscal sector in Q3, made on discretionary (deferrable) public expenditures, partly compensated for the high increase in outlays for pensions.

A strong contribution to the deceleration of consolidated public spending was also made by expenditure for employees, which in Q3 had a modest real y-o-y growth of 4.4%. In that context, it is relevant that the mentioned growth was almost completely a result of the high carry-over effect from the previous year. In the course of 2008, the increase in expenditure for employees was minimal in real terms, which can be assessed as a success of fiscal policy. It is estimated that such a trend will continue until end-2008, so real expenditure for employees in the whole of 2008 will be roughly unchanged. These movements of expenditure for employees during 2008 constitute an important step toward the elimination of one of the major distortions in Serbia's public spending structure.

Table T6-2. Serbia: Consolidated General Government Fiscal Operations¹⁾, 2005–2008

	2006		2007			2008					12-m			Comparing to previous period			
	Q1-Q4	Q1-Q4	Q1	Q2	Q3	2006		2007			2008			2008			
						Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3	Q1-Q3	Q2/Q1	Q3/Q2
	in bn. dinars																
I PUBLIC REVENUES	865.8	1,007.8	268.3	273.3	282.9	6.8	15.2	8.4	7.9	6.2	9.2	6.5	1.6	1.7	4.0	-1.3	-0.3
<i>o/w: Public revenues excluding VAT liabilities to enterprises and offsets with SDF²⁾</i>	855.6	1,002.2	268.3	273.3	282.9	8.9	13.5	8.3	8.6	9.3	9.9	7.2	2.9	2.1	4.8	-1.3	-0.3
1. Current revenues	855.5	996.0	265.5	270.3	279.6	6.7	14.8	8.4	8.2	6.4	9.2	7.0	1.6	1.5	4.1	-1.4	-0.4
Tax revenue	756.0	870.3	234.6	245.2	248.4	5.4	15.6	8.0	6.6	3.4	8.0	7.7	4.2	3.7	5.5	1.3	-1.0
Personal income taxes	118.6	115.8	29.7	34.1	33.6	11.9	-8.9	-8.0	-6.7	-10.1	-8.4	7.1	8.1	4.5	6.5	11.4	-2.7
Corporate income taxes	18.3	29.7	15.0	8.1	7.4	58.0	39.2	82.4	25.0	79.0	52.1	15.2	30.0	45.3	25.3	-47.4	-10.0
VAT and retail sales tax	225.1	265.5	73.2	77.0	73.8	-7.3	23.4	5.7	11.9	4.6	10.6	8.7	5.7	-0.3	4.6	1.9	-5.3
<i>o/w: Net VAT and retail sales tax³⁾</i>	224.5	260.3	73.2	77.0	73.8	0.3	16.5	5.1	6.9	7.8	8.8	11.3	10.3	1.3	7.5	1.9	-5.3
Excises	86.9	98.6	23.7	24.2	29.5	8.3	23.3	3.2	5.8	-0.3	6.5	5.7	-10.4	2.4	2.0	-1.2	9.8
Custom duties	45.4	57.4	14.8	16.9	16.3	3.9	18.1	18.3	19.4	18.3	18.6	10.5	8.8	0.9	6.5	11.1	-5.1
Social contributions	231.4	270.6	69.7	75.9	78.8	12.5	14.6	14.9	7.1	4.2	9.7	7.0	4.6	5.3	5.5	1.5	2.4
<i>o/w: contributions excluding offsets with SDF³⁾</i>	221.9	270.1	69.7	75.9	78.8	11.3	14.8	14.7	14.7	12.6	14.3	7.2	4.7	5.3	5.6	5.5	2.4
Other taxes	30.3	32.8	8.5	8.9	8.9	11.1	13.0	9.5	-9.0	-4.0	1.7	-3.9	-5.1	4.7	-1.6	5.5	-1.1
Non-tax revenue	99.6	125.7	31.0	25.1	31.2	17.4	9.7	11.6	19.7	30.0	18.4	1.7	-18.4	-13.0	-5.6	-21.5	4.4
2. Capital revenues	10.3	11.7	2.8	3.1	3.2	15.2	48.2	10.6	-13.3	-4.8	7.2	-23.8	4.1	20.0	-2.1	8.6	3.7
II TOTAL EXPENDITURE	-871.4	-1,024.3	-252.3	-289.8	-287.7	12.1	11.0	7.1	11.3	10.5	10.3	5.5	17.1	2.1	7.9	9.0	-4.4
1. Current expenditures	-790.0	-907.9	-238.5	-268.7	-262.1	8.9	6.1	6.7	10.1	7.5	7.8	10.0	17.7	2.8	9.9	6.8	-5.7
Wages and salaries	-204.4	-238.3	-64.1	-71.3	-68.8	7.0	6.2	17.3	15.5	0.6	9.4	8.0	10.2	4.4	7.6	7.8	-5.1
<i>Wages and salaries excluding severance payments⁴⁾</i>	-201.6	-237.3	-63.8	-71.3	-68.8	6.2	11.6	20.4	15.5	0.8	10.4	7.4	10.2	4.4	7.6	8.4	-5.1
Expenditure on goods and services	-135.9	-168.2	-38.1	-43.1	-49.3	12.9	9.2	14.1	8.5	26.6	16.1	13.1	6.1	8.7	13.5	9.5	0.6
Interest payment	-30.2	-17.9	-6.0	-2.5	-5.1	52.6	0.5	-37.3	-51.7	-67.5	-44.4	-12.2	-34.1	-3.1	-13.9	-59.2	88.6
Subsidies	-55.6	-63.7	-13.4	-22.2	-13.9	-10.0	-12.2	-21.6	23.1	25.0	7.6	28.0	88.2	-29.7	17.4	61.8	-38.0
Social transfers	-343.4	-395.9	-112.7	-122.4	-120.4	9.9	7.8	7.3	12.6	5.0	8.2	11.2	19.0	6.8	10.4	0.6	-2.9
<i>o/w: pensions⁵⁾</i>	-227.7	-259.9	-74.8	-81.5	-83.6	11.1	11.0	8.5	4.1	5.0	7.1	8.5	14.9	16.4	13.3	5.5	1.3
Other current expenditures	-20.5	-23.9	-4.2	-7.2	-4.5	2.9	5.8	-27.4	2.9	45.1	9.2	-17.3	56.3	-22.0	3.1	64.7	-38.4
2. Capital expenditures ⁶⁾	-81.3	-116.4	-13.8	-21.1	-25.7	57.7	20.6	12.5	24.3	28.8	34.3	-38.2	10.7	-4.8	-12.3	48.2	11.8
III "OLD" DEBT REPAYMENT, GOVERNMENT NET LENDING AND RECAPITALIZATIONS	-9.6	-26.5	-12.6	-5.2	-2.7	-54.6	-4,678.6	12.0	99.4	47.2	159.0	15.7	338.0	-63.5	59.8	-32.8	-48.4
IV TOTAL EXPENDITURE, GFS (II+III)	-881.0	-1,050.8	-264.9	-295.0	-290.4	10.2	16.2	7.1	12.3	11.3	11.9	6.0	18.7	0.4	8.6	7.9	-5.2

Source: Table P-10 in Analytical Appendix.

1) See footnote 1) in Table T6-1.

2) Retail sales tax/VAT minus new tax credits to enterprises.

3) Social contributions reduced by refunds between Pension Fund, Serbian Development Fund and enterprises that are debtors of the Pension Fund.

4) QM's estimate, for details see Table P-10 in Analytical appendix.

5) Refers to the current expenditures on pensions.

6) Capital expenditures exclude projects financed from abroad (apart in 2004, see footnote 16 in Table P-10).

7) See footnote 2) in Table T6-1.

Note: Real growth is obtained comparing 2003 constant prices quarterly data.

Budget Revision and Outlook to End-2008

The budget revision of the Republic of Serbia was adopted later than announced, but still a week or two before the second wave of the global financial crisis hit. The delay in the adoption of the budget revision contributed to the reduction in its expansiveness, but the reduction would have probably been stronger had the adverse trends in the global economy in 2008, and bleak forecasts for 2009, been known at the point of its adoption. Still, it may be expected that the government will take into account the new circumstances and uncertain outlook in its conduct of fiscal policy until end-2008, through the implementation of an austerity program.

The budget revision further increases public spending and the deficit

The budget revision has increased consolidated public spending and Serbia's fiscal deficit in 2008 by 0.6% and 0.2% of GDP, respectively. After this increase, the planned consolidated public spending is expected to amount to 45.4% of GDP in 2008, and the planned fiscal deficit to around 2.7% of GDP.

The increase in expansiveness is not significant, but is inappropriate for Serbia's economy

When a comparison is made with other European countries, it unambiguously follows that the level of public spending in Serbia is inconsistent with the development level of the country, and particularly with the ambitions for rapid development in the coming years. Likewise, the fiscal deficit of 2.7% of GDP additionally increases the already evidenced high BoP imbalances and steps up inflationary pressures. Therefore, it may be concluded that – although the increase in the expansiveness of fiscal policy is relatively small, it is inappropriate for the current circumstances in Serbia's economy. The budget revision compounds the inadequate fiscal policy inherited from previous years.

Expenditures for pensions and subsidies go up the most

In the budget revision, the most significant increase on the expenditure side was the increase in the transfer to the Pension Fund (around 11.5 bn dinars or 0.4% of GDP), followed by subsidies in agriculture (7 bn dinars or 0.25% of GDP), infrastructure investment (3 bn dinars or 0.1% of GDP), social assistance (1.5 bn dinars or 0.05% of GDP), other subsidies in the amount of around 1 bn dinars (0.05% GDP), etc. In the composition of the increased Pension Fund transfer – about 8 bn is intended for the financing of the extraordinary 10% pension increase, applicable to the last two pension payments in 2008. Moreover, the Pension Fund was granted additional resources, amounting to around 3.5 bn dinars, because the scheduled pension indexation in May 2008 was higher than planned (around 7% instead of the projected approximately 4%).

In the budget revision, certain budget items were reduced in the amount of 0.4% of GDP (budget loans, small-scale projects within the NIP, etc.). In all, the assessment can be that the changes in the budget expenditure structure are unfavorable, because the share of expenses for social purposes and subsidies was further increased relative to the share of expenses for public investment.

The estimates are that the actual deficit will stand at 1.5–2% of GDP

Based on experience from the past several years, it may be expected that the outturn of public expenditure, and thus of the fiscal deficit, will be lower than planned. The first reason is that in the budget preparation process ministries and other budget beneficiaries traditionally ask for an expenditure level which is higher than what they can execute during the budget year. To recall, budget items provide for maximum expenditure levels that may be executed, and some types of public expenditure can be considerably lower than the plan². The second reason, which is now more important, is the application of the extreme restrictiveness in the execution of public expenditure, after it has become obvious that the global financial crisis will adversely affect Serbia in the last quarter of 2008, and in the whole of the following year. It is, therefore, estimated that the consolidated general government deficit in 2008 should be between 1.5 and 2% of GDP instead of the projected 2.7% of GDP. A cut in the fiscal deficit will partially mitigate the adverse effect of fiscal policy on Serbia's macroeconomic stability.

² Naturally, a possibility to cut expenditure relative to the planned budget exists primarily in the case of the so-called discretionary expenditure, such as purchases of goods and services, public investment, some subsidies, etc. In the case of entitlements and contractual obligations, in the short run it is not possible to cut expenditure.

Many requests for higher expenditures are put on hold

The increase in public expenditure and the deficit in the budget revision was much lower than what political parties promised in the election campaign, and requested by budget beneficiaries. Some promises and requests were put off for a **short term**, thus contributing to the reduction of expenditure in 2008, but this will not help to avoid expenditure growth in 2009. Considerable “savings” relative to promises and requests were made through the two-month postponement of the extraordinary pension increase of 10% – this has yielded savings in the amount of some 8 bn dinars in 2008. Furthermore, the bulk of government obligations related to the investment by the state in Zastava, through a joint venture with FIAT, will not materialize in the current year.

However, the impact of the extraordinary pension increase and of the joint venture will have a full effect on public expenditure in 2009. The estimate is that the extraordinary pension increase of 10% will generate, *ceteris paribus*, additional expenditure in the amount of 40 bn dinars in 2009, which is about 1.2% of GDP. If pensions are frozen in nominal terms in 2009, instead of the currently applicable statutory indexation to the cost of living, it will be possible to make considerable savings, which would partially cover the effects of the extraordinary pension increase. Likewise, the estimate is that the government will invest around €200 mn, or around 0.5% of GDP, in the execution of the joint venture with FIAT.

But there is a risk that they might be reactivated in the future

Other requests were postponed for a **longer term**, and to a certain extent made conditional; hence it is not clear whether they will result in an increase in government expenditure in 2009 and beyond, and to what extent. Acceptance of requests for the application of the general collective contract to public sector employees would result in a rise in wages of around 20%, which would, at the present level of wages and employment, amount to around 80 bn dinars per year³. It is clear already now that the general collective contract will not be applied to employees in the public sector in 2008, and most probably in 2009 as well. However, the mere fact that the government signed it, despite the inbuilt restrictions on and conditionality for its application, will provide a legitimate basis for trade unions to exert constant pressure on the government in the years ahead.

Similarly, demands by military reservists for double daily war allowances for the time spent in the 1999 war have been put on hold and watered down for the time being (if applied to all mobilized persons, the result would be additional expenditure amounting to more than 50 bn dinars). Delays in resolving some other issues, such as the accumulated debts of the Serbian Roads company and restitution of property contributed to the slower growth of public expenditure in 2008 and this will continue into 2009.

Demands for raising the ratio between pensions and wages up to the level of 70% – have been temporarily toned down, but it is estimated that they will be reactivated with the improvement of the situation in the economy or in the event of new elections.

The Central Budget and Fiscal Policy for 2009

The overall fiscal policy framework is defined by the arrangement with the IMF

Since the central budget and fiscal policy for 2009⁴ were not adopted by the government or the Serbian Parliament, the assessment of fiscal policy will be based on the publicly available elements of the understandings stipulated in the agreement between Serbia and the IMF⁵. Under the agreement, the key obligation of the government in the field of fiscal policy is to cut the fiscal deficit to 1.5% of GDP in 2009. At first glance, it appears that the planned fiscal adjustment is not particularly strong, bearing in mind the estimate according to which the fiscal deficit outturn in 2008 should be much lower than planned and range between 1.5% and 2% of GDP.

³ For more details on the consequences of the application of the General Collective Agreement see Highlights 6: “The ‘Extended’ General Collective Agreement – an exercise in the social partners’ collective irresponsibility”.

⁴ Since the Memorandum on the Budget and Economic Policy, just like the budget revision for 2008, was adopted before the outbreak of the second wave of the global financial crisis, it is expected to be revised in terms of adjustment of macroeconomic projections to the changed circumstances and prospects, as well as in terms of adjustment of economic policies pursuant to the arrangement with the IMF.

⁵ The arrangement with the IMF will become effective after its approval by the IMF Executive Board, which can be expected in the second half of December 2008 – after the adoption of the Republic of Serbia’s budget.

The main objective is to cut the fiscal deficit to 1.5% of GDP

Bearing in mind, however, that the adopted regulations and signed contracts imply a strong growth of public expenditure – the fulfillment of the planned deficit target of 1.5% requires major fiscal adjustment in 2009. Thus, for instance, the growth of consolidated public spending due to the extraordinary pension increase by 10%, and the joint venture agreement with FIAT, amounted to 1.7% of GDP (1.2% of GDP for pensions and 0.5% of GDP for the joint venture with FIAT). Moreover, possible implementation of the Stabilization and Association Agreement from the beginning of 2009 would reduce public revenue by about 0.6% of GDP. Accordingly, the initial position from which fiscal adjustment in 2009 should begin implies a fiscal deficit of around 3.5% of GDP and consolidated public spending of more than 47% of GDP.

The planned deficit requires a freeze on or deceleration of a large portion of public spending...

The reduction of the fiscal deficit from the original level of around 3.5% of GDP to the targeted level of 1.5% will require strong measures, primarily in terms of expenditure cuts, but also in terms of revenue increases. The key measures to decrease the expenditure to GDP ratio include:

- wage bill growth at the rate of inflation, instead of the planned real growth of 2%,
- freeze on pensions, instead of indexation to the cost of living.
- freeze on costs for purchases of goods and services at the nominal level,
- reduction of subsidies at the central level (including subsidies in agriculture) and by local communities,
- balanced budgets of Vojvodina and local communities.

...as well as raising of certain taxes

On the revenue side, the plan is to raise excises on cigarettes and oil products, as well as to give up on or postpone most of the planned measures to reduce the tax burden (lowering the payroll tax, increasing the tax allowance), etc. Furthermore, revenue from the transfer of dividends of profitable public enterprises to the Serbian budget has also been factored in.

In the case of adverse developments in the economy further contraction of public spending will be necessary

The planned austerity measures include all levels of government from central to local and cover large population segments (1.6 million pensioners, 430,000 public sector employees, farmers, employees in companies that receive subsidies, etc.). It is estimated that the implementation of the planned measures constitutes a sufficiently strong response to the challenges of the global financial crisis, provided that macroeconomic developments in 2009 are roughly at the level of projections. This predominantly means the materialization of the GDP growth rate of around 3.5%, and of foreign capital inflows roughly at the level of the current account deficit. Possible stronger deviation of macroeconomic flows from the planned levels, in terms of more serious disturbances on the foreign exchange market, a more significant slowdown of economic growth or serious difficulties in the financial sector – would require further stepping up of fiscal policy restrictiveness.

Even if trends in the economy are more favorable, the restrictiveness of fiscal policy must be maintained

In case macroeconomic circumstances turn out to be slightly more favorable than projected (growth higher than 3.5%) – there is a serious threat of reactivation of demands for a sharp increase in public spending. This refers primarily to the renewal of demands for a gradual increase in the ratio between average pensions and average wages up to the level of 70%, as well as to the stepping up of pressures to apply the general collective contract to public sector employees, requests for higher subsidies and other types of government intervention, etc. In this way, a better economic situation in Serbia could result in higher fiscal policy expansiveness, which would in turn call into question the sustainability of the improvement.

Therefore, it is crucial, even in the case of more favorable than projected macroeconomic developments, that fiscal policy in the coming several years remains tight. This practically means that in the coming years the narrowing of the fiscal deficit relative to GDP should continue, primarily through slower growth in public expenditure than GDP growth. In that context, the materialization of ambitious development objectives necessitates that the deceleration of public spending growth in relation to GDP should be achieved through the containment of current spending (pensions, wages, subsidies, etc.), and that the public investment to GDP ratio should go up.

7. Monetary Flows and Policy

Q3 2008 saw a surge of credit to the non-government sector, with companies receiving about €1.2 bn in new loans. The growth of credit to households, however, practically ceased. Companies continued to borrow abroad, taking a new €1.6 mn in loans. Banks found sources for new credit in short-term borrowing abroad (€464 mn), the considerably slower increases in capital and reserves (€290 mn), new foreign exchange savings (€315 mn), and company deposits (€347 mn). In net terms, banks increased the amount they invested in repo transactions by about €487 mn. The NBS retained the 15.75% reference interest rate it set at the end of Q2. In the same period, the dinar appreciated strongly against the euro. Combined, this produced the effect of a tighter monetary policy, primarily through the direct impact of the appreciated dinar on some prices. Coupled with the slowing of agricultural and energy prices in the preceding period, this decelerated the growth of retail prices. The reduction of primary money enhanced the efficacy of the tighter monetary policy and occurred as the result of the growth of dinar funds invested by banks in repo operations and the growth of NBS capital.

Monetary System: Structure and Flows of Monetary Supply

The nominal growth of M2 continues slowing in Q3...

... as does also the trend since early 2007 of slower real M2 growth

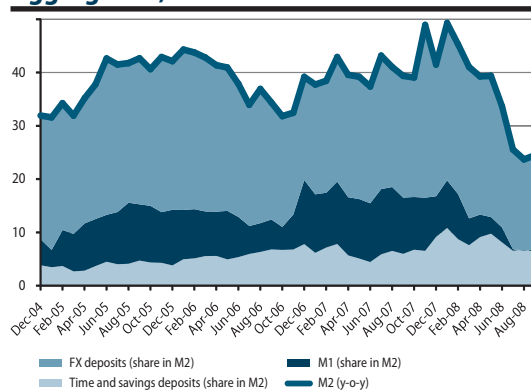
The trend of slower nominal y-o-y growth of total monetary supply (M2) was carried over into Q3 from the preceding quarter. The growth of real M2, which has been recording a slower growth rate for more than a year now, continued in Q3. Thus Q3 saw a nominal y-o-y M2 growth rate of 24.46% (33.7% in Q2) and a real growth of 12.2% (19.2% in Q2; Table T7-2). The y-o-y growth rate of credit to the non-government sector in both nominal (viewed through the change in the stock of dinars) and real terms also recorded slower rates in Q3, although they remained very high (29.4% nominally and 16.6% in real terms). But as the major proportion (in QM's estimate at least 70% of the loans are foreign exchange-indexed), application of our methodology for correction of growth rates that takes into account changes in the exchange rate¹ brings out that credits accelerated their nominal y-o-y growth to 32.2% (from 30.7% in Q2). The growth of credit to households, however, slowed to 19.5% y-o-y (35.5% in Q2), while credit to companies accelerated sharply by 39.5% (28.1% in Q2; Table T7-2). If the movement of credit is observed by category of customers – households and companies – it is clear that there was an acceleration of the y-o-y growth of credit to companies following the slowdown in Q2 (flows

corrected for changes in the exchange rate; Table T7-2), while credit to households continued the already established trend of slower growth.

As for the contribution of different forms of use of monetary supply, the growth of the share of savings and dinar time deposits in the structure of M2 growth continued in Q3, at the expense of a lower share of dinar M1. The biggest contribution to the growth of M2 continued to come from the growth of foreign exchange deposits (Graph T7-1).

The total increase of monetary supply in Q3 2008 of 4.2% of opening M2 (cumulative increase of 9% from the beginning of the year to end-Q3, less the growth of 4.8% in Q2, Table T7-2), occurred as the result of the net increase

Graph T7-1. Serbia: Money and Component Aggregates¹, 2004–2008



Source: Table P-11, Analytical Appendix

¹ The share of money components was obtained as their ratio against the value of M2 in the same period of the preceding year, whereby the sum of the obtained ratios is equal to the y-o-y growth of total money (M2).

*Monetary supply grows in Q3 ...
... due to the growth of NDAs ...*

¹ For more details on the methodology for correcting credit flows with respect to exchange rate changes in a single quarter, see Section 8, Monetary Flow and Policy, Box 2, QM6.

... and mild growth of NFAs

of NFAs in Q3 of 0.2% of M2 at the start of the year (-6.8% in Q2) and the increase in NDAs of 4.0% of opening M2 (6.1% in Q2). The 2.0% growth of NFAs was contributed to by the growth of foreign currency- denominated NFAs of 2.0% of M2 at the beginning of the year (an increase of 4.2% of opening M2 in Q2) in spite of the negative exchange rate differentials owing to the appreciation of the dinar in Q3 by -1.8% of opening M2 (-2.7% in Q2 when there was a negative foreign exchange increase). Credit to the non-government sector (whose value has been corrected for the effect of the dinar's appreciation in view of the large share of indexed loans) contributed to the total increase of NDAs in Q3 by as much as 9.4% of opening M2 (8% of opening M2 in Q2). Net credit to government increased by 0.9% of opening M2 (1.6% in Q2; Table T7-2) and refers to the running down of government deposits with the monetary sector. Finally, on the negative side, the increase in the monetary sector's capital of 1.7% of opening M2 (-1.1% in Q1; Table T7-2) contributed to the growth of NDAs.

The fast growth of credit to companies is a major contribution to the growth of M2

Growth of credit to the non-government sector speeds up again

Table T7-2. Serbia: Monetary Survey, Selected Indicators, 2006–2008

	2006		2007				2008		
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	
	y-o-y, in %								
M2 ¹⁾	39.2	42.9	37.4	39.4	41.5	41.0	33.7	24.5	
Credit to the non-government sector ²⁾	17.5	21.6	23.9	28.0	38.3	36.4	30.3	29.4	
Credit to the non-government sector ²⁾ , adjusted ³⁾	24.1	26.3	30.2	31.2	38.4	35.3	30.7	32.2	
Households	62.2	58.4	54.7	53.6	50.6	43.3	35.5	19.5	
Enterprises	11.1	14.2	20.2	21.1	32.2	31.0	28.1	39.5	
	real y-o-y, in %								
M2 ¹⁾	30.5	35.3	30.7	29.7	28.6	26.2	19.2	12.2	
Credit to the non-government sector ²⁾	10.2	15.2	17.8	19.1	25.6	22.0	16.2	16.6	
Credit to the non-government sector ²⁾ , adjusted ³⁾	16.4	19.8	24.1	22.2	25.6	21.1	16.4	19.0	
Households	52.1	50.1	47.4	43.1	36.7	28.2	20.7	7.6	
Enterprises	4.2	8.3	14.5	12.8	20.1	17.3	14.1	25.6	
	cumulative, in % of opening M2⁴⁾								
M2 ¹⁾	39.2	5.9	11.0	23.9	41.5	5.5	4.8	9.0	
M2 dinar ¹⁾	19.8	-0.1	0.8	6.8	16.8	-2.5	-2.7	-1.1	
Foreign deposits (households and enterprises) ⁵⁾	25.7	4.0	10.1	17.3	24.5	5.6	7.7	12.5	
Valuation adjustments ⁶⁾	-6.4	1.9	0.0	-0.1	0.2	2.4	-0.2	-2.3	
NFA, dinar increase	41.1	5.2	12.0	14.5	24.4	3.6	-3.2	-3.0	
NFA, fx increase	48.4	3.1	12.0	14.7	24.2	1.2	-3.0	-1.0	
Valuation adjustments ⁶⁾	-7.3	2.2	0.0	-0.1	0.3	2.5	-0.2	-2.0	
NDA	-1.9	0.6	-1.1	9.4	17.1	1.9	8.0	12.0	
o/w: credit to the non-government sector ²⁾ , adjusted ³⁾	27.3	6.6	19.6	28.3	36.6	4.8	12.8	22.2	
o/w: net credit to government ⁷⁾	-17.4	-4.1	-7.7	-7.0	-1.9	-0.6	1.0	1.9	
o/w: NBS and com. banks capital and reserves	-13.2	-2.2	-7.4	-11.6	-17.9	-3.5	-4.6	-6.3	
	cumulative, in % of GDP⁸⁾								
Net credit to government ⁷⁾	-3.4	-1.3	-2.1	-1.9	-0.5	-0.3	0.3	0.7	
o/w: dinar credits	0.6	-1.2	-2.3	-2.1	-1.1	-0.8	-1.3	-1.0	
Credit to the non-government sector ²⁾ , adjusted ³⁾	4.3	2.6	5.4	7.7	9.8	2.7	4.4	6.6	

Source: Table P-11, Analytical Appendix

1) Definitions of M2, M2 dinar, NFA and NDA - see Analytical and Notation Conventions.

2) Credits to the non-government sector: credits to households and enterprises (including cities and municipalities, non-profit and other non-government entities).

3) Flows are adjusted for exchange rate changes. Adjustments are applied under the assumption that 70% of credit to the non-government sector (both households and enterprises) are euro-indexed.

4) "Opening M2" refers to the stock of M2 from the beginning of stated year (i.e. end of previous year).

5) The contribution of fx deposits to the growth of M2 measures only the contribution of the increase in fx-denominated fx deposits so that their revalorization produces the exchange differentials.

6) Valuation adjustments refer to the difference in NFA contribution to M2 growth calculated in dinars and NFA contribution to M2 growth calculated in euros.

7) Net credit to government: difference between government credits (dinar and fx) and deposits (dinar and fx). Government does not include cities and municipalities which are considered within the non-government sector.

8) The GDP used in the calculations is annually centered.

Table T7-3. Serbia: Monetary Survey, 2006–2008

	2006		2007			2008		
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep
STOCK								
in millions of dinars, end of period								
NFA	407,565	441,048	484,388	500,302	563,524	596,215	534,403	536,102
o/w: NBS gross reserves	715,114	719,381	730,668	751,920	765,615	788,296	720,967	745,070
o/w: commercial bank foreign liabilities	-307,742	-318,598	-286,848	-290,860	-299,659	-264,865	-251,182	-279,131
NDA	231,055	234,991	224,279	291,193	340,174	357,307	412,802	448,498
Net credit to government ¹⁾	-100,061	-128,909	-149,081	-144,385	-112,290	-120,644	-103,539	-94,156
Net dinar credit	-8,776	-35,782	-62,290	-56,369	-34,251	-53,126	-67,826	-60,934
Net fx credit	-91,285	-93,127	-86,791	-88,016	-78,039	-67,518	-35,713	-33,222
Credit to the non-government sector ²⁾	609,171	666,007	732,402	786,873	842,512	908,598	953,977	1,018,307
Other items, net	-278,055	-302,107	-359,042	-351,295	-390,048	-430,647	-437,636	-475,653
M2 ³⁾	638,620	676,039	708,667	791,495	903,698	953,522	947,205	985,134
M2 dinar ³⁾	283,116	282,299	288,329	326,341	390,307	367,648	365,834	380,015
Fx deposits (households and economy)	355,504	393,740	420,338	465,154	513,391	585,874	581,371	605,119
STRUCTURAL INDICATORS								
Currency outside banks/Dinar deposits (households and economy), in %	31.9	26.2	29.1	25.1	24.6	23.7	23.5	23.2
Fx deposits (households and economy) / M2 (%)	55.7	58.2	59.3	58.8	56.8	61.4	61.4	61.4
Velocity (GDP ⁴⁾ / M2)	3.3	3.3	3.2	2.9	2.6	2.6	2.7	2.7
M2 / GDP ⁴⁾	0.30	0.31	0.3	0.3	0.38	0.39	0.37	0.37
Credits to the non-government sector / GDP ⁴⁾	0.29	0.30	0.32	0.34	0.35	0.37	0.37	0.38
Non-performing loans ⁵⁾ (in % of total loans)	4.7	4.9	4.69	5.20	5.1	4.4	5.3	6.0
Money multiplier (dinar M2/H)	2.0	2.4	2.0	2.3	2.3	2.6	2.0	2.3

Source: Table P12, Analytical Appendix

1) See footnote 7) in Table T7-2

2) See footnote 2) in Table T7-2

3) Definitions of M2, M2 dinar, NFA and NDA - see Analytical and Notation Conventions.

4) See footnote 8) in Table T7-2

5) The figure for December 2006 relates to January 31, 2007 and represents the ratio of loans with overdue payments of 90 days and more to total outstanding loans.

The source for data in this row is The Credit bureau, Association of Serbian banks. For details, see QM6, Spotlight on No.1.

Banking Sector: Placements and Sources of Financing

Banks extend about €1.2 bn in new credits to companies and households

Companies' foreign borrowing continues to accelerate...

... with about €1.06 bn in new loans taken

In Q3, banks extended some €1.2 bn in new credits to companies and households (€800 mn in Q2; Table T7-4). The bulk went to companies (€510 mn in Q2), and only €9 mn to households (€280 mn in Q2; Table T7-4).

In keeping with the trend that has been in place for almost two years, banks continued to borrow directly abroad in Q3. For the past several quarters, the amounts borrowed were almost double the amount of loans taken from domestic banks. In Q3, companies borrowed some €1.06 bn from foreign banks (about €835 mn in Q1 2008; Table T7-5).

Interest rates on bank loans were hiked in Q3, mainly because of the EURIBOR rise, which in its turn was the result of the restrictive monetary policies in the euro zone (see International Environment section). To recall, interest rates on the majority of bank loans in Serbia are explicitly (contracts on credits with variable interest rates) or implicitly linked to EURIBOR, especially in the case of foreign banks. Furthermore, a small proportion of dinar loans, as a rule very short term, are without an indexation clause; hence the NBS reference rate (repo) can be expected to have an impact on the interest rates on these loans. The NBS reference rate was kept at a high level of 15.75% in Q3, so it was only to be expected that the interest rates on these short term loans would remain high. The period, however, was characterized by an acceleration of credit to companies and a significant deceleration of credit to households. This indicates that interest rates still have no significant impact on the amount of bank credit in Serbia, while administrative and other measures do. Since demand on the market is still relatively high, which makes it impervious to the price (interest rate), only measures that limit the availability of credit and creditworthiness have an effect on slowing credit, especially where households are concerned.

Table T7-4. Serbia: Funding, Credit and Investment Activity of Banks, Adjusted¹ Flows, 2006–2008

	2006			2007			2008		
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	
in millions of euros, cumulative from the beginning of the year									
Funding(-, increase in liabilities)	-5,237	-325	-1,061	-2,574	-4,582	258	-717	-2,140	
Domestic deposits	-2,245	-339	-757	-1,819	-3,254	-162	-464	-1,134	
Households deposits	-1,200	-329	-652	-1,059	-1,652	-192	-518	-842	
dinar deposits	-124	-35	-57	-97	-135	-18	-19	-28	
fx deposits	-1,076	-295	-595	-963	-1,518	-174	-499	-813	
Enterprise deposits	-1,045	-10	-105	-760	-1,602	29	54	-292	
dinar deposits	-739	23	112	-324	-1,138	365	394	261	
fx deposits	-307	-33	-218	-437	-464	-336	-340	-554	
Foreign liabilities	-1,660	-10	266	207	114	564	601	138	
Capital and reserves	-1,331	25	-569	-962	-1,441	-144	-855	-1,144	
Gross foreign reserves(-, decline in assets)	-77	-14	5	-17	695	-333	-386	-316	
Credits and Investment¹⁾	3,100	687	1,294	2,488	3,626	697	1,175	2,888	
Credit to the non-government sector, total	1,541	575	1,508	2,315	2,945	614	1,402	2,595	
Enterprises	536	313	865	1,271	1,660	406	915	2,099	
short term	194	195	549	699	939	341	612	0	
long term	341	118	315	572	722	66	303	0	
Households	1,006	263	644	1,044	1,285	207	487	496	
short term	194	36	101	148	221	-8	87	0	
long term	811	226	543	896	1,064	215	400	0	
Placements with NBS (Repo transactions and treasury Government, net ²⁾	1,637	200	-11	438	849	116	-126	361	
	-79	-89	-203	-264	-168	-33	-101	-68	
MEMORANDUM ITEMS									
Required reserves and deposits	1,813	-146	242	349	441	-369	-275	-97	
Other net claims on NBS ³⁾	0	13	-44	-104	-44	6	246	28	
o/w: Excess reserves	-50	20	-56	-103	-92	0	207	-13	
Other items ⁴⁾	499	-110	-464	-57	-78	-202	-192	-490	
Effective required reserves (in %) ⁵⁾	36	34	37	34	31	30	29	28	

Source: Table P-12. in Analytical Appendix.

1) The increases in credits were obtained on the assumption that 70% of total credits are euro-indexed and that all long-term credits to companies and households are thus indexed. The increases in the original dinar values of deposits were calculated at the average exchange rate in the period, and in fx deposits as the difference in balances calculated at the exchange rates at ends of periods. Capital and reserves were calculated at the exchange rates at the ends of periods and do not include the effects of exchange rate differentials from revaluation of all previous items.

2) Credits to government, net: difference between credits to the government and government deposits held in commercial banks; negative sign means that deposits increase is larger than the growth of credits. Government include: Republic level and cities and municipalities.

3) Other net claims on NBS: difference between claims on NBS (cash and excess reserves) and liabilities to NBS.

4) Includes: Other assets; Deposits of enterprises undergoing liquidation; Interbank, net; and Other liabilities, excluding Capital and reserves.

5) Effective required reserve: refers to share of required reserves and deposits in total deposits (households and enterprises) and banks' foreign liabilities. The base for calculating required reserves does not include subordinated debt owing to unavailability of data.

Banks increase investment of dinars in repo operations...

... by approximately €490 mn

Banks find sources for new credit in new household foreign exchange savings...

...and deposits of financial organizations

In Q3 banks increased their investments in repo operations and 6-m NBS papers by approximately €490 mn, whereas in Q2 they withdrew €240 mn. The increase in Q1 was €116 mn. The stock of repos reached an all-time high on 26 September when the nominal stock of papers sold amounted to 248 bn dinars (€3.25 bn). The Q3 increase can be ascribed to the higher yields for foreign investors (high nominal repo rate additionally increased by the nominal appreciation of the dinar, and the elimination of political uncertainty following the formation of the new government), and the prohibitive terms for extending new credit, especially to households.

The liquidity of the banking sector increased significantly in Q3 due to recapitalization and rises in foreign liabilities, household foreign exchange deposits and all company deposits. Where company deposits are concerned, there was a very high increase in the dinar and foreign exchange deposits of other financial organizations, i.e. insurance companies, pension and investment funds, and leasing companies, which are most probably pulling out of risky operations and transferring the funds released to bank accounts. In Q3, the total banking sector increased its capital and reserves by €290 mn (as much as €710 mn in Q2; Table T7-4). New household foreign exchange savings grew by around €320 mn (€174 mn in Q1; Table T7-4). In contrast to preceding quarters, the level of company deposits with the banking sector rose by almost €350 mn in Q3, mainly due to the foreign exchange and dinar deposits of other financial organizations. Banks' sources increased through this channel, which was stagnant in the first two quarters of 2008 (reductions of €29 mn in Q1 and €25 mn in Q2).

In Q3 banks increased their foreign liabilities, mainly through short-term borrowing, by around €464 mn (reduction of €35 mn in Q2), which was a sharp departure from the previous trend of

7. Monetary Flows and Policy

reduction of the short-term debt (item Foreign Borrowing, Table T7-4). Banks most probably took advantage of the appreciation of the dinar in Q3 to increase their investments in repo operations, financing them with short-term foreign borrowing. On the other hand, capital increases slowed significantly in Q3 relative to the preceding four quarters with the exception of Q1 2008. This can be explained by the fact that the total portfolio of credits to households stagnated relative to Q2, with the level of housing loans rising considerably while all other loans were much reduced. In such a situation, banks were not compelled to additionally increase their capital, which is already at a much higher level than in all other countries in the region (the share of capital in the liabilities of the banking sector was 24.1% on 30 June 2008).

Table T7-5. Serbia: Credit to Enterprises and to Households – Impact on Aggregate Demand, 2006–2008

	2006		2007			2008		
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep
quarterly growth of stock, in millions of euros								
Total loans to enterprises and households from domestic banking sector and direct foreign borrowing by enterprises	746	1,053	2,157	1,537	1,542	1,333	1,624	2,253
Loans to enterprises and households from domestic banking sector	222	575	933	807	630	614	789	1,193
Loans to enterprises	-21	313	552	406	389	406	509	1,184
Loans to households	243	263	381	400	241	207	280	9
Direct foreign liabilities of enterprises	524	478	1,224	730	912	719	835	1,061
Direct foreign liabilities of enterprises and banks' credits to enterprises from domestic banking sector	503	791	1,776	1,137	1,301	1,125	1,344	2,244
quarterly growth of stock, in % of quarterly GDP								
Total loans to enterprises and households from domestic banking sector and direct foreign borrowing by enterprises	10.4	16.3	30.1	20.0	18.0	17.4	18.3	24.0
Loans to enterprises and households from domestic banking sector	3.1	8.9	13.0	10.5	7.4	8.0	8.9	12.7
Loans to enterprises	-0.3	4.8	7.7	5.3	4.5	5.3	5.7	12.6
Loans to households	3.4	4.1	5.3	5.2	2.8	2.7	3.1	0.1
Direct foreign liabilities of enterprises	7.3	7.4	17.0 ²⁾	9.5	10.7	9.4	9.4	11.3
Direct foreign liabilities of enterprises and banks' credits to enterprises from domestic banking sector	7.0	12.3	24.8	14.8	15.2	14.7	15.1	23.9

Source: FREN.

1) See footnote 1 in Table T7-4

2) 9,1% of GDP relates to one loan to Telekom for the purpose of acquisition of Telekom Republika Srpska

Table T7-6. Serbia: Stock of Credits to Enterprises and Households relative to GDP¹⁾

	2006		2007			2008		
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep
Total loans to enterprises and households from domestic banking sector and direct foreign borrowing by enterprises	44.8	48.2	52.5	55.5	60.0	65.3	66.3	68.8
Loans to enterprises and households from domestic banking :	27.7	29.5	31.7	33.0	34.4	36.7	36.9	37.7
Loans to enterprises	18.1	19.0	20.3	20.6	21.6	23.0	23.4	25.2
Loans to households	9.6	10.5	11.3	12.3	12.8	13.7	13.5	12.6
Direct foreign liabilities of enterprises	17.1	18.7	20.8	22.6	25.6	28.7	29.4	31.1
Direct foreign liabilities of enterprises and banks' credits to enterprises from domestic banking sector	35.2	37.7	41.2	43.2	47.1	51.7	52.8	56.2

Source: FREN, NBS - Statistical Bulletin.

1) GDP (Gross Domestic Product) used in calculations centered on annual level.

Central Bank: Balance and Monetary Policy

Primary money shrinks in Q3...

...owing to the growth of investment in repo operations and increase in NBS capital

NBS net own reserves record significant rise in Q3...

...owing to the strong appreciation of the US dollar against the euro

The level of *primary money* (H) fell by 12.2% in Q3 relative to the beginning of 2008 (Table T7-7). This was the result of the following net changes in the stocks of some of its components: a) the increase in the NBS net own reserves amounted to 27.8% of opening H; b) the drop in the NBS's NDAs was -40.2% of opening H in Q3 (Table T7-7). Where NDAs are concerned, a reduction of primary money was recorded owing to the growth of the stock of repo transactions by 27.3% of opening H as well as the reduction of other NDAs by -15.5% of opening H (Table T7-7). The latter refers to the increase in NBS capital starting in August as a result of the positive exchange rate differentials on the foreign exchange reserves the NBS holds in US dollars.

Table T7-7. Serbia: NBS: Foreign Exchange Purchases and Sterilization, 2006–2008¹

	2006		2007			2008		
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep
FLOW	in millions of dinars, cumulative from the beginning of the year							
NBS own reserves ²⁾	145,315	15,066	46,140	60,267	97,636	4,695	19,115	56,373
NBS own reserves (in euros)	1,783	188	577	756	1,218	58	237	706
NDA	-105,744	-46,278	-57,938	-72,100	-72,440	-39,752	-13,347	-66,941
Government, dinar credits	120	-710	-735	-735	-5,639	267	618	0
Government, dinar deposits	17,540	-30,939	-56,748	-44,985	-10,107	-28,386	-41,088	-36,706
o/w: municipalities	-3,500	-6,768	-13,485	-11,933	-516	-8,329	-7,405	-5,073
Repo transactions ³⁾	-132,903	-16,675	-2,094	-34,961	-67,950	-11,243	8,014	-28,597
Other items, net ⁴⁾	9,499	2,046	1,639	8,581	11,256	-390	19,109	-1,638
H	39,571	-31,212	-11,798	-11,833	25,196	-35,057	5,768	-10,568
o/w: currency in circulation	14,811	-9,792	-3,395	-3,088	8,488	-6,613	-7,454	-5,388
o/w: excess liquidity	16,516	-13,061	-3,309	-6,293	20,605	-39,840	-22,293	-39,483
INCREASE	cumulative, in % of opening H⁵⁾							
NBS own reserves ²⁾	154.0	11.2	34.5	45.0	72.9	3.5	14.3	42.1
NDA	-112.1	-34.6	-43.3	-53.8	-54.1	-29.7	-10.0	-50.0
Government, dinar deposits	18.6	-23.1	-42.4	-33.6	-7.5	-21.2	-30.7	-27.4
Repo transactions ³⁾	-140.9	-12.5	-1.6	-26.1	-50.7	-8.4	6.0	-21.4
Other items, net ⁴⁾	10.1	1.5	1.2	6.4	8.4	-0.3	14.3	-1.2
H	41.9	-23.3	-8.8	-8.8	18.8	-26.2	4.3	-7.9
o/w: currency in circulation	15.7	-7.3	-2.5	-2.3	6.3	-4.9	-5.6	-4.0
o/w: excess liquidity	17.5	-9.8	-2.5	-4.7	15.4	-29.7	-16.6	-29.5
MEMORANDUM ITEMS								
Gross fx reserves (flow, cumulative from the beginning of the year, in euros)	4,083.1	-233.3	193.9	482.7	610.4	-85.8	-533.8	64.7
Gross fx reserves (in % of opening H in euros)	307.6	3.2	11.6	27.5	37.7	14.3	-28.1	-12.9
H (growth rate, y-o-y, in %)	41.9	31.3	37.2	24.2	18.8	20.8	35.0	21.7
Currency in circulation (growth rate, y-o-y, in %)	27.6	28.0	33.0	25.5	12.4	19.9	6.8	9.5

Source: Table P-13. in Analytical Appendix.

1) Government include: Republic level and cities and municipalities.

2) Net own reserves definition - see Box 4 in QM5.

3) This category included NBS bills, and repo transactions.

4) Other domestic assets, net, include domestic credits (net claims on banks excluding NBS bills and repo transactions; net claims on enterprises together with other assets (capital, reserves and balance items; other assets and liabilities corrected by exchange rate differentials).

5) "Opening H" refers to stock of primary money (H) at the beginning of stated year (i.e. end of previous year).

The NBS retains a tight monetary policy keeping the repo rate at 15.75% in Q3

The total reduction of *primary money* by 16.3 bn dinars in Q3 was the result of the following absolute changes in its components: a) the NBS increased its own net reserves by around 37.3 bn dinars in Q3 as the result of foreign exchange transactions (sale of foreign exchange to banks, net purchases from exchange offices and from government, exchange rate differentials, etc); b) the government ran down its dinar deposit with the NBS by some 12.7 bn dinars; c) the stock of repo operations with the NBS was increased by 36.7 bn dinars in Q3 relative to Q2, which reduced dinar liquidity (Table T7-7); and d) *other NDAs* were reduced by some 20.7 bn dinars. This item refers mainly to the increase in the NBS's capital.

The dinar appreciates significantly in both nominal and real terms

Fearing the impact of the global financial crisis on European banks doing business in Serbia, depositors started withdrawing their savings in early October. This and other factors had the effect of markedly reducing the volume of trading on the interbank foreign exchange market and on the depreciation of the dinar. To facilitate foreign borrowing, the NBS changed its reserve requirement regulations; hence new borrowing was not burdened by this requirement. At the same time, the amount of the foreign exchange reserve requirements which banks calculate on the foreign exchange base but keep in dinars in giro accounts was increased from 10% to 20%. This measure led to €474 mn being refunded to banks, while banks withdrew the dinar equivalent

7. Monetary Flows and Policy

from repo operations and transferred it to giro accounts. The one-off measure in effect allows banks to calculate the base for foreign exchange savings based on 15 or 30 October, whichever amount is more favorable for the bank, instead of on the usual daily average in the past calendar month. The aim is the early return to banks of amounts set aside as the reserve requirement on savings deposits withdrawn before time and thereby to strengthen foreign exchange liquidity. In addition, the NBS raised the reference interest rate to 17.75% in a bid to maintain the major jump in dinar funds in repo transactions or even stimulate a rise in this stock. On the one hand, this would lead to fresh foreign borrowing by banks and hence to an inflow of foreign exchange and, on the other, slow down economic activity, thereby cutting inflation and imports. Unlike the NBS, the central banks of developed countries have no current account deficit problem. Their difficulty is the very slow economic activity so they do not lessen the liquidity of the banking sector but raise it with ever cheaper funding in a reverse process of repo purchases of securities from banks.

In order to protect bank customers from the growing liabilities of euro- or Swiss franc-indexed loans, the NBS reached an agreement with four major banks to make it possible, starting from 24 November 2008, for customers to make early repayment of their loans without any fees (except in the case of refinancing), extend their repayment term by up to one year, and to convert Swiss franc-indexed loans into euro-indexed, all of the above at the express request of the customer. In parallel, because of the strong depreciation of the dinar against the euro, major daily oscillations of the exchange rate and lower volume of trading, the NBS intervened in October with €269 mn on the interbank foreign exchange market and again in the first 20 days of November with at least another €200 mn. The effect of all these measures, however, was short-lived; a high volume of trading on the interbank market was recorded only in a few days in mid-October (following the refunding to banks of €474 mn), and in late October it dropped to the level recorded at the beginning of the year when the political crisis was at its height.

Table T7-8. Bank's Reserve Requirements with NBS¹, Dec. 2004-Feb. 2008

	12/2004	05/2005	07/2005	10/2005	11/2005	03/2006	04/2006	05/2006	11/2006	12/2006	10/2007	10/2008
Rate on:												
DINAR DENOMINATED BASE	21	20	20	18	18	18	18	18	15	10	10	10
more than 1 month dinar time deposits											5	5
non-resident accounts with maturity up to 2 years:								60	60			
non-resident accounts with maturity over 2 years:								40	40			
FX DENOMINATED BASE	21	26	29	35	38	40	40	40	40	45	45	45
thereof: new external bank borrowings novo zaduženje banaka after septmeber 2008 ^{d)}												0
NEW FX SAVINGS DEPOSITS ³⁾	47	47	45	41	38	40	40	40	40	40	40	40
SUBORDINATED CAPITAL						20	20	20	20	20	20	20
thereof: new external bank borrowings novo zaduženje banaka after septmeber 2008 ^{d)}												0
Key regulation changes:	Introduction of required reserves on foreign borrowing		Separation of the dinar denominated from the fx denominated base			The 38% ratio applies to new fx savings deposits		Introduction of required reserves on subordinated debt				

Source: NBS.

1) Applied to average daily book value of the base from the previous calendar month. Effective from the 17th of the next month. Bank is obliged to hold average daily reserve balance at the level of the accounted reserve during the entire accounting period.

2) Up to April 2006 and since December 2006, banks' foreign borrowing was treated equally, irrespective of the repayment period. This sub-category therefore is invalid until March 2006, i.e. the uniform fx base was applied to all foreign inflows on the basis of commercial banks' borrowing.

3) Up to December 2005, reserve requirements on new fx savings of households (fx deposits collected after 30 June 2001) were regulated by a special NBS decision. In December 2005, the regulation became uniform since the NBS introduced a unique reserve requirement rate for all commercial banks' fx accounts

Note:
Under current regulations, banks' reserve requirements with the NBS include:

- dinar base: dinar deposits (including the government), dinar credits (including the government), securities and other dinar liabilities;
- fx base: fx deposits (including the government), fx-indexed dinar deposits, fx credits (including the government), subordinated capital, securities, other fx liabilities and other fx funds received from abroad for bank services on behalf and for the account of third persons.

Excluded from the dinar/fx-denominated base are: liabilities to the NBS; up to December 2005 – liabilities arising from household fx savings deposited after 30 June 2001; the amounts generated with the settlement of debts for FFCDs, and those arising in the rescheduling of debt to creditors from the Paris and London Clubs. Amount of long-term housing mortgage credits insured with the National Corporation for Housing Loan Insurance is deducted from the required reserves base.

From 17th of May 2008, 10% of calculated fx based reserve is required to be held in dinars countervalue.

Government did not make any significant contribution to increasing the NBS net own reserves...

... converting only about €20 mn from its foreign exchange deposit

The NBS net own reserves increased in Q3 by about €470 mn (€180 mn in Q2; Table T7-9). This was only in small part the result of NBS transactions on the foreign exchange market – the purchase of foreign exchange from banks and exchange offices totalled €88 mn (€29 mn in Q2; Table T7-10). As in Q2, the NBS again did not sell foreign exchange, with positive exchange rate differentials accounting for the major part of the increase in its net own reserves of some €390 mn. The government deposit with the NBS dropped by around €20 mn (€400 mn in Q2; Table T7-9).

Table T7-9. Serbia: Structure of Foreign Exchange Reserves – Stocks and Flows, 2006–2008

	2006		2007				2008	
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep
	stock, in millions of euros							
NFA of Serbia	5,164	5,413	6,130	6,347	7,116	7,246	6,768	7,000
Commercial banks, net	-3,188	-3,213	-2,918	-2,998	-2,379	-2,147	-2,163	-2,557
Gross foreign reserves	707	693	712	690	1,403	1,070	1,017	1,087
Foreign liabilities	-3,895	-3,906	-3,630	-3,688	-3,782	-3,218	-3,180	-3,644
NBS, net	8,352	8,626	9,048	9,345	9,495	9,394	8,931	9,557
Gross foreign reserves	9,052	8,819	9,246	9,535	9,662	9,577	9,129	9,727
Foreign liabilities	-700	-193	-198	-190	-168	-183	-198	-170
IMF	-181	6	1	3	4	3	1	1
Other liabilities	-519	-200	-199	-193	-171	-186	-199	-171
NBS, NET RESERVES-STRUCTURE								
1. NBS, net	8,352	8,626	9,048	9,345	9,495	9,394	8,931	9,557
1.1 Commercial banks deposits	-3,210	-3,358	-3,478	-3,584	-3,409	-3,411	-3,166	-3,343
1.2 Government deposits	-1,309	-1,247	-1,160	-1,172	-1,034	-874	-478	-457
1.3 NBS own reserves	3,833	4,021	4,410	4,589	5,051	5,109	5,287	5,757
(1.3 = 1 - 1.1 - 1.2)								
	in millions of euros, cumulative from the beginning of the year							
NFA of Serbia	2,620	249	967	1,183	1,952	131	-348	-116
Commercial banks, net	-1,737	-24	270	190	809	232	216	-178
Gross foreign reserves	-77	-14	5	-17	695	-333	-386	-316
Foreign liabilities	-1,660	-10	266	207	114	564	601	138
NBS, net	4,357	274	696	993	1,143	-101	-563	62
Gross foreign reserves	4,083	-233	194	483	610	-86	-534	65
Foreign liabilities	274	507	502	510	532	-15	-30	-2
IMF	567	187	182	184	185	0	-2	-3
Other liabilities	-294	320	320	327	348	-15	-28	1
NBS, NET RESERVES-STRUCTURE								
1. NBS, net	4,357	274	696	993	1,143	-101	-563	62
1.1 Commercial banks deposits	-1,485	-148	-269	-374	-200	-2	243	66
1.2 Government deposits	-1,089	63	149	137	275	161	557	578
1.3 NBS own reserves	1,783	188	577	756	1,218	58	237	706
(1.3 = 1 - 1.1 - 1.2)								

Source: NBS.

Note: NBS fx liabilities are treated differently in the monetary survey and in NBS balance sheet. In the monetary survey, this category includes IMF credits and other foreign liabilities. In the NBS balance sheet, however, it also includes commercial bank's fx deposits (reserve requirements funds and other fx deposits).

Table T7-10. Net Monthly Transactions on Foreign Exchange Market, NBS, Banks and Exchange Offices, Nov. 2006-March 2008

	Interbank fx market (NBS-commercial banks)	Exchange offices	Total	
(-, net sale of foreign currency by NBS)				
in millions of euros				
Monthly average January-October 2006	-64	151	87	
November 2006	260	131	391	}
December 2006	154	86	240	
January 2007	-412	42	-370	
February 2007	-14.8	86	72	-238 in Q1 2007
March 2007	-54.1	114	60	}
April 2007	0	137	137	
May 2007	-75.9	160.1	84	
June 2007	-19	85.7	67	+288 in Q2 2007
July 2007	-22	93.9	72	}
August 2007	-23	106	83	
September 2007	-20	60	40	
October 2007	-4	72	68	}
November 2007	-20	76	56	
December 2007	-40	128	88	
January 2008	-57	63	6	}
February 2008	-129	39.6	-89	
March 2008	-105	20.6	-84	
April 2008	-64	31.2	-33	}
May 2008	-38	54.3	16	
June 2008	0	45.3	45	
July 2008	0	26.8	27	}
August 2008	3	33	36	
September 2008	0	24.7	25	

Source: NBS.

8. Financial Markets

The activity on the Belgrade Stock Exchange declined in Q3 2008, measured by both the volume of reported trading, which was halved relative to Q2, and by the number of performed transactions, which was lower by one-third. The indices recorded a sharp drop in value over the same period. The index of the most liquid shares, BELEX15, lost 43% of its value in the previous quarter, while the broader exchange index, BELEXline, fell by 36.4%. This fall continued in Q4, for which reason BELEX15 lost 80% of its value between Q2 2007 and early November 2008. Domestic investment funds also recorded a fall in the value of the investment unit; however, in percentage terms, that fall was lower than the fall of the Belgrade Stock Exchange indices. The NBS did not change the reference rate on 2w repo operations in Q3, so real repo yields grew considerably due to the dinar appreciation in early Q3, measured relative to the euro/dinar rate, reaching almost 70% at one point. Since inflation decelerated in Q3, real yields measured relative to inflation also went up. This trend, however, did not continue in Q4, because real yields in late October dropped to -23% due to the strong and abrupt weakening of the domestic currency. On the FFCD bond market there were no major changes relative to Q2. The volume and turnover recorded a slight decrease, and the average yield curve remained at approximately the same level, though a bit steeper than in the preceding quarter. Foreign investors' participation in the total turnover on the stock market also recorded all-time lows, while on the bond market it went up slightly relative to Q2.

Both the trading volume and the number of performed transactions on the stock market of the Belgrade Stock Exchange decline in Q3

The Belgrade Stock Exchange activity decreases by three-quarters relative to Q2 2007 when it peaked

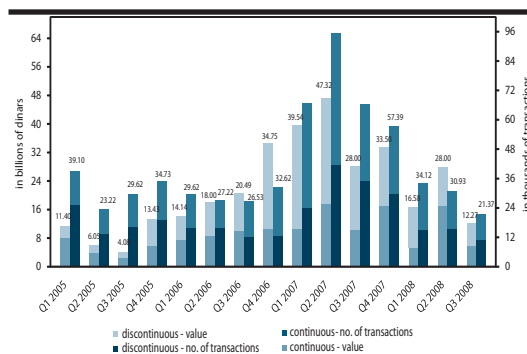
Activity on the Belgrade Stock Exchange decelerates on both the continuous and the discontinuous market segments

Q3 sees a sharp drop in the values of the Belgrade Stock Exchange indices

Data indicates that the trend of activity deceleration on the Belgrade Stock Exchange, which started after Q2 2007, continued in Q3 2008 (Graph T8-1). The value of the trading volume denominated in dinars declined by 56.16% relative to the previous quarter and amounted to around 12.3 bn dinars. Thus, the value of the trading volume from Q2 2007, when the all-time high of 47.3 bn dinars was achieved, went down by 74%, which, despite several quarters in which the volume value recorded growth, indicates a clear downward trend in the trading volume.

The number of performed transactions in Q3, as another measure of the activity on the domestic capital market, also recorded a fall. In Q3, some 21.4 thousand transactions were performed, which was by about 30.9% less than in the preceding quarter. From Q2 2007, when the number of performed transactions also peaked at 95.3 thousand, this level fell steadily and by Q3 2008 amounted to 77.6%.

Graph T8-1. Stock Trading Volume, Value and Structure, 2005–2008



Source: www.belex.co.yu.
 Legend: SPM – Single price method, MPMQ – Minimal price minimal quantity, BLOCK – Price of block transactions.

From the structure of the trading volume and the number of performed transactions, it is obvious that a fall was recorded on both the continuous and the discontinuous parts of the market. Thus, relative to the previous quarter, the dinar-denominated value of the turnover on the continuous market was reduced by 41.5%, and on the discontinuous segment by 65.4%. The number of performed transactions on the continuous market decreased by 30.3% from Q2, and on the discontinuous segment by 31.5%.

After a slight rise in the indices of the Belgrade Stock Exchange in the preceding quarter, Q3 saw a sharp drop in all the indices, which continued into October and November (Graph

T8-2). The index BELEX15¹ lost almost 43% of its value during Q3 and fell to its new all-time low of 1,003.77 index points on the last day of the quarter. Over the same period the BELEXline² and SRX³ EUR indices lost 36.4% and 43.3% respectively, and the minimum values of 1,941.76

¹ Index of the most liquid shares of the Belgrade Stock Exchange.

² Overall stock index of the Belgrade Stock Exchange

³ Index of the 8 most liquid shares of the Belgrade Stock Exchange calculated by the Vienna Stock Exchange (Wiener Börse).

From Q2 2007 to November 2008 the BELEX15 index loses 80% of its value

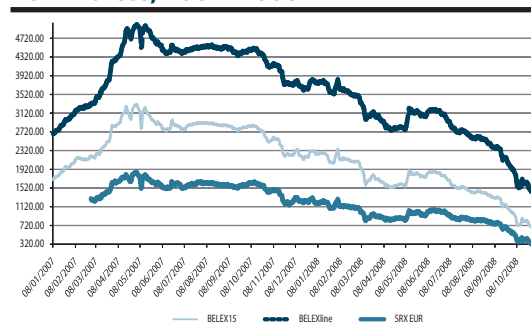
and 563.78 index points respectively were recorded, also on the last day of the quarter. All-time highs in the values of all the indices were attained on the first day of Q3 and amounted to 1,759.29, 3,052.86 and 994.27 for BELEX15, BELEXline and SRX EUR, respectively.

The decline in the value of the indices continued in Q4 2008 as well, with BELEX15 falling below 700 index points in early November - a new all-time low. When observed from March 2007, when the Belgrade Stock Exchange was at its all-time high, to early November 2008 – BELEX15 lost about 80% of its value.

In times of crisis, such as the current global financial crisis, investors are wary of risks and seek to put their money in tested and safe investments, such as the most developed countries' bonds or gold. From the perspective of international investors, the Serbian market, like all transition markets, is seen as high risk; hence the trend of decelerated activity and a further decline in the values of indices on the Belgrade Stock Exchange can be expected to continue for as long as interest in riskier investments remains low. The fact that similar scenarios are being played out on stock exchanges across the region, which too belong to transition economies, shows that this is among the decisive factors that currently influences the developments on the Belgrade Stock Exchange.

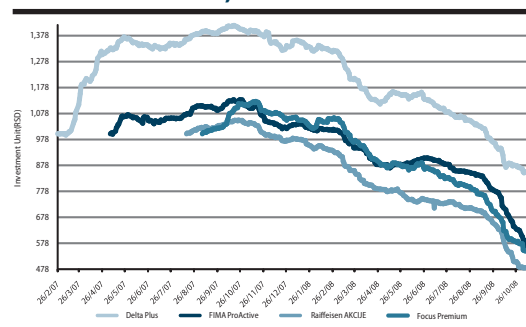
The indices of the stock exchanges in the region also recorded a sharp drop in value in Q3, though less than those of the Belgrade Stock Exchange. The steepest fall was that of the Sarajevo SASX-10 and the Romanian BET, which fell by 32.72% and 31.41%, respectively. On the other hand, the MBI-10 index of the Macedonian stock exchange recorded the smallest drop in Q3, of 10.74%. The Montenegrin NEX20 and MOSTE indices lost 13.24% and 14.89% respectively. The Bulgarian SOFIX, the Croatian Crobex and the Banja Luka BIRS lost 29.78%, 14.76% and 19.83% respectively.

Graph T8-2. BELEXfm, BELEX15 and SRX EUR Indices, 2007–2008



Source: www.belex.co.yu, www.wienerborse.at.

Graph T8-3. Delta Plus, FIMA ProActive, Raiffeisen AKCIJE and Focus Premium investment funds, 2007–2008



Source: www.deltainvestments.co.yu, www.fimainvest.com, www.focusinvest.biz, www.raiffeiseninvest.co.yu.

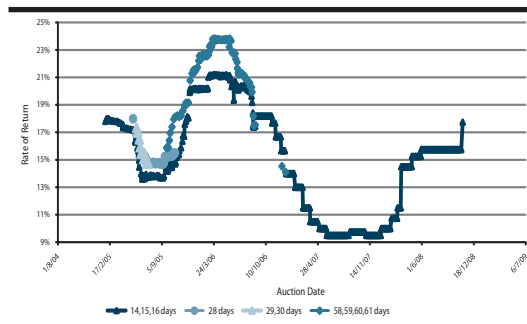
In percentage terms, domestic investment funds decline in Q3 between two and three times less than the Belgrade Stock Exchange indices

The sharp fall of the Belgrade Stock Exchange indices in Q3 also had an impact on the performance of domestic investment funds (Graph T8-3). Over the observed quarter, the funds recorded a steep fall in the value of their investment units, though in percentage terms the fall was between two and three times lower than the fall of the Belgrade Stock Exchange. The best performance in Q3 was that of the investment fund Raiffeisen AKCIJE, which posted a loss of 13.05%, which was by about 1 percentage point better than the FIMA ProActive fund that lost 14.23% over the same period. In this quarter, the poorest performance was that of the fund Focus Premium, whose investment unit lost 20.43% of its value, while the fund Delta Plus had a loss of 15.74%. If the movements in the value of investment units of the funds from the beginning of the year to end Q3 are observed, the lowest fall was recorded by the FIMA ProActive fund, which lost 24.65%, while the funds Delta Plus, Raiffeisen AKCIJE and Focus Premium lost 28.99%, 33.85% and 34.93% respectively. In the same period the Belgrade Stock Exchange indices BELEX15 and BELEX Line lost 56.15% and 48.95% of their value, respectively.

The NBS retains its reference rate in Q3 2008, only to raise it by 200 basis points, to 17.75%, in early November, after an abrupt and steep depreciation of the dinar

In Q3, real yields on repo operations, measured relative to the movements in the EUR/RSD exchange rate and relative to inflation, go up

Graph T8-4. Repo Yields by Maturity, 2004–2008

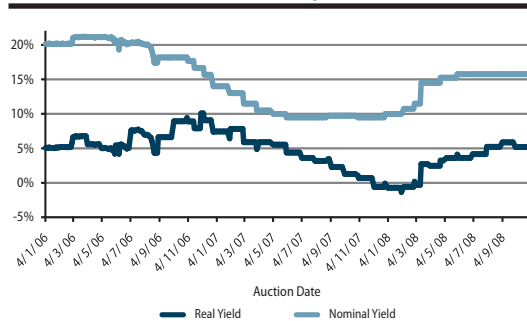


Source: NBS.

new all-time highs in Q3 (Graph T8-5). Although the nominal rate on 2w repos did not change in Q3, the dinar appreciation in July and its stability during August and September resulted in the growth of real yields, which moved within a band from 26.65% to a maximum of 69.34%. However, as the dinar started to slide suddenly in October, real yields on repo operations also fell dramatically. Up to mid-October, yields fell to 10%, and then even became negative, only to fall to -23% in late October. Even after the increase in the reference rate to 17.75%, real yields on repo operations remained negative.

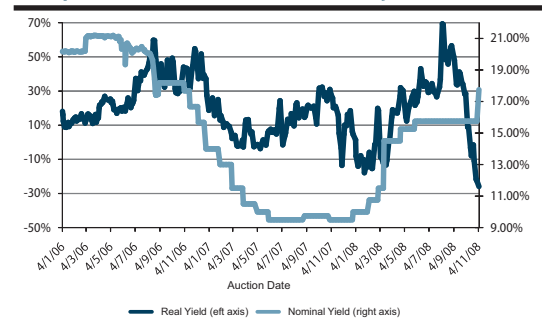
As for real yields measured relative to the inflation rate, they also grew and moved within a band ranging from 4.17% to 5.86% (Graph T8-6). Since the NBS reference rate was not changed in Q3 – the reason for stronger real yields, when measured in this manner, was the deceleration of inflation. The peak of 5.86% was reached in September, precisely when the monthly inflation rate was the lowest in Q3 and stood at around 9.89%. As October saw a rise in the inflation rate to 10.56%, and the nominal rate on 2w repos was not changed, real yields dropped to 5.19%.

Graph T8-5. Real (with regard to inflation) and Nominal REPO Yields, 2006–2008



Source: NBS.

Graph T8-6. Real (with regard to exchange rate) and Nominal REPO Yields, 2006–2008

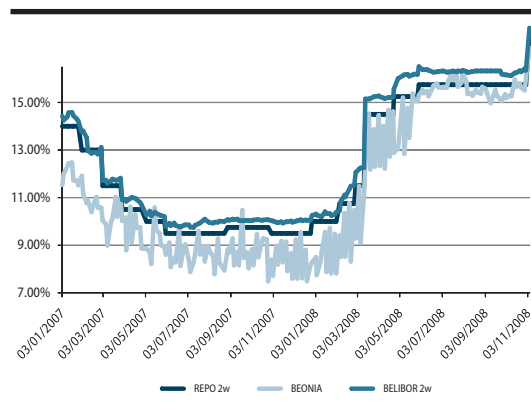


Source: NBS.

Q3 saw a decline in spreads on the money market (Graph T8-7). The average spread between the repo rate and the BELIBOR rate with two-week maturity (the same maturity as repo contracts), was reduced by 16 bp to 56 bp, while the average spread between the repo rate and the overnight BEONIA rate was reduced by 56bp to 18bp, relative to the preceding quarter.

4 A detailed rationale for such an approach to the calculation of the real return rates is provided in the article by K.Udovički i V.Đoković: “The Exchange Rate and NBS Policy in Serbia: 2002–2006”, QM 5.

Graph T8-7. REPO, BEONIA i BELIBOR 2W rates, 2007–2008

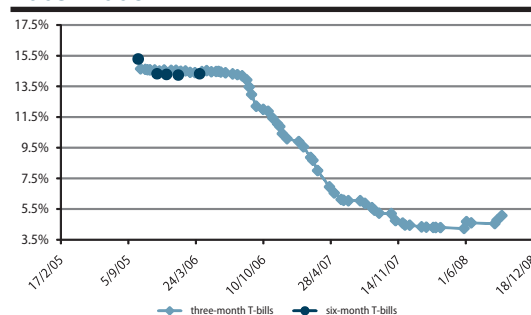


Source: NBS and Reuters.

Yields on Treasury bills (T-bills) of the Republic of Serbia, after a long descending trend, which was reversed in Q2, continued to grow in Q3 2008⁵. In the last two auctions in Q3 interest rates reached 4.78% and 5.08% (Graph T8-8), while average yields went up relative to the previous quarter by 30bp. The total nominal value of auctions in Q3 was the lowest so far and amounted to around 1.9 bn dinars. In the previous quarters the total value of T-bill auctions ranged between 4.5 and 3.1 bn dinars.

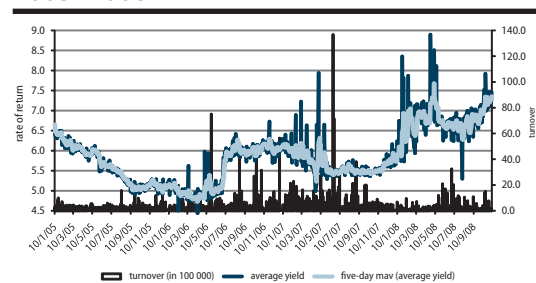
Graph T8-8. Yields in T-Bill Market, 2005–2008

Yields on Treasury bills of the Republic of Serbia continue to grow in Q3



Source: MoF.

Graph T8-9. Average Yield on FFCD Bonds¹⁾, 2005–2008



Source: www.belex.co.yu.

1) The graph does not depict extraordinary yield of A2006 bond of 42% on March 10, 2006.

Note: The graph was derived as the weighted average yield on securities from A2006 to A2016. The turnover values for each of securities were used as weights. Left axis refers to average yield, while the right axis refers to total FFCD trade volume.

The volume and turnover on the FFCD bond market goes down relative to the preceding quarter

In Q3 2008, a fall was recorded in the volume and turnover on the FFCD bond market relative to the preceding quarter (Graph T8-9). The reported volume amounted to around €25.7 mn euros, and turnover to €17.7 mn euros, which was slightly lower than in Q2 2008. More precisely, the volume declined relative to Q2 by 5.76%, and turnover by 12.9%. (in Q2 2008 the volume and turnover were doubled relative to Q1 2008). If the y-o-y change is observed relative to Q3 2008, the volume and turnover remained considerably lower. The volume on the FFCD bond market fell relative to the same period last year by 50%, while turnover dropped by 52%.

On the FFCD bond market, average yields on all maturities moved negligibly in Q3 2008.

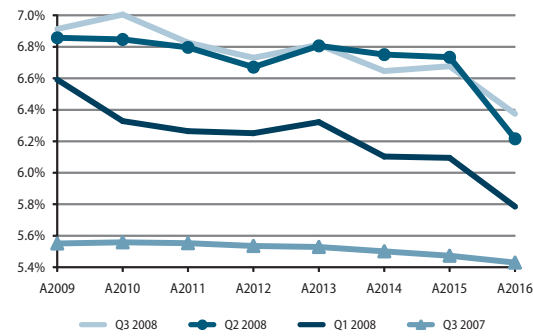
In Q3 2008 a small shift occurred in the average yield curve on FFCD bonds (Graph T8-10). The average yield curve moved within a band ranging from 6.37% to 7%. Yields on bonds with shorter maturities grew slightly, within a band ranging from 1 bp do 16 bp. A2014 and A2015 bonds had a drop in average yields of 11bp and 6bp respectively, while the A2016 bond had a rise of 16 bp in its yield. Accordingly, the average yield curve stayed at almost the same level as in Q2, but was a bit steeper while remaining downward sloping, i.e., bonds with shorter maturities recorded higher yields than those with longer maturities.

Relative to Q3 2007, the curve made a parallel shift upward, i.e., the prices of FFCD bonds of all maturities went down over the last year between 94bp and 145 bp. Such a development was only to be expected as the NBS reference interest rate was hiked over the same period from 9.5% to 15.75%, or by as much as 625bp.

5 In Q2 2008, average yields on T-bills went up by 20bp.

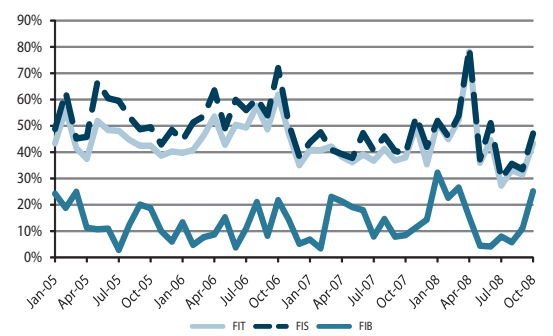
Graph T8-10. FFCD Bonds Average Yield Curves

The average yield curve on FFCD bonds slopes downward in Q3 2008 and is steeper than in Q2



Source: www.belex.co.yu.

Graph T8-11. Foreign Investor Participation in Turnover, 2005–2008



Source: www.belex.co.yu.

Legend: FIT- Foreign Investors Participation in Total Turnover, FIS-Foreign Investors in Equity Market, FIB- Foreign Investors in Bond Market.

Foreign investors' participation in the turnover on the stock market and in the total turnover in Q3 reaches all-time highs, while a slight growth is recorded on the bond market

Relative foreign investors' participation in the turnover on the stock market (*FIS* curve, Graph T8-11), as well as in the total turnover on the Belgrade Stock Exchange (*FIT* curve; Graph T8-11) in Q3 2008 dropped to all-time lows. The lowest participation occurred in July, when on the stock market and in the total turnover it amounted to 29.92% and 27.30%, respectively. In August and September, a slight growth was recorded; however, relative participation on the respective markets remained lower than in the months preceding Q3 2008. On the bond market (*FIB* curve; Graph T8-11) steady growth was recorded, so foreign investors' participation after its all-time low of 4.14% in June went up to 10.97% in September. These trends indicate that foreign investors were withdrawing from the Belgrade Stock Exchange markets in Q3 2008, with some investors shifting from stock, as a riskier instrument, to the safer bonds. In October, relative foreign investors' participation on all the Belgrade Stock Exchange markets went up again.

9. International Environment

The world's major economies contracted in Q3. The United States saw a negative growth rate, of -0.5%, as did the euro zone (-0.8%) and Japan (-0.7%); all these countries are now in recession. Although developing countries recorded an annual growth of 3.3% in Q3, this group of countries also experienced a substantial slowdown after the 5.9% growth rate of Q2. Surveys indicate that the global economy will continue to slow, and that the next quarter will see a negative growth rate at the global level. This will probably be the deepest recession since World War II. Under pressure from falling demand, along with the slide of the dollar and a downturn in speculative activity, oil prices continued to fall, to below \$50/barrel. The drop in oil prices eased the inflationary pressures, enabling the central banks of developed countries to cut reference interest rates in a bid to boost economic activity.

Table T9-1. World: Economic Growth and Inflation, 2006–2008¹⁾

	Real GDP						Inflation			
	real growth		real growth, seasonally adjusted				y - o - y			
	2006	2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2007	Q1 2008	Q2 2008	Q3 2008
World total	3.6	3.4	2.7	2.6	1.9	0.3	3.5	4.0	4.4	5.0
of which:										
USA	3.0	2.2	0.6	0.9	3.3	-0.5	4.0	4.1	4.3	5.3
Canada	2.8	2.5	0.8	-0.8	0.3	1.0	2.4	1.8	2.4	3.4
Japan	2.2	2.1	3.7	3.2	-2.4	-0.7	0.5	1.0	1.4	2.2
China	11.1	11.4	9.1	11.7	11.5	6.4	6.6	8.0	7.8	5.3
India	9.4	8.7	5.3	8.8	5.9	6.0	5.5	5.8	7.8	9.0
Euro area	2.9	2.7	1.4	2.9	-0.8	-0.8	2.9	3.4	3.6	3.8
Germany	3.1	2.6	1.1	5.2	-2.0	-2.1	3.1	3.1	3.0	3.3
France	2.2	1.9	1.4	1.6	-1.2	0.6	2.5	3.3	3.7	3.6
UK	2.8	3.1	2.4	1.1	0.8	-2.0	2.1	2.4	3.4	4.8
Italy	1.9	1.7	-0.8	2.0	-1.1	-2.0	2.6	3.3	3.8	4.1
Russia	6.7	8.1	13.0	0.9	9.0	5.1	11.5	12.9	14.0	14.9
Bulgaria	6.0	6.1	6.9	7.0	7.1	5.6	11.2	12.4	15.0	13.7
Romania	6.9	6.0	6.6	8.2	9.3	1.0	6.7	8.0	8.6	8.1
Hungary	3.8	1.3	0.4	1.3	2.0	-0.4	7.1	6.9	6.8	6.3
Croatia	5.0	5.6	3.7	4.3	3.4	...	4.9	5.9	6.5	7.4
FYR Macedonia	4.0	5.0	5.1	5.4	6.5	...	4.9	9.5	9.9	8.4
BIH	6.2	5.8	...	...	...	...	4.5	6.5	8.4	8.5
Serbia	5.6	7.1	6.4	8.4	6.2	6.0	9.1	11.3	12.0	10.7

Source: Eurostat, JPMorgan, National Bank of Bulgaria, National Bank of Romania, National bank of Republic Macedonia, National bank of Croatia.

¹⁾ GDP rates for Serbia, Macedonia, Bosnia and Croatia are year-on-year rather than seasonally adjusted annual.

World

The developed countries have slid into recession, but growth in the developing countries has also been lower than forecast, refuting the belief that these economies would remain largely immune to the financial crisis. The IMF has corrected its 2009 growth rate forecast for the developed countries to -0.3%, the first annual contraction since World War II. The developing countries are expected to record an annual growth rate of 5.1% over the same period. Although global growth will not be negative – and should stand at some 2.2% in 2009 – a global slowdown has obviously started. As global issues call for global measures, international action has already been taken – witness, for instance, the agreement reached at the G-20 summit meeting.¹

The financial crisis culminates after the collapse of Lehman Brothers

The financial crisis peaked in September, with investment bank Lehman Brothers going into bankruptcy. The money market froze, and the 3-month LIBOR rate rocketed to over 5%. Capital injections by central banks failed to solve the problems on the market, and shares nosedived in

¹ As early as the end of October, Jeffrey Sachs proposed an international action plan ("The best recipe for avoiding a global recession", *Financial Times*, 27 October 2008). Most of these measures have now been put in place, including China's fiscal package; chances are also good of his forecasts of expansive fiscal measures in the US and Europe coming true.

October. A plan (the Troubled Assets Relief Program, or TARP) was adopted in the US; this involves the purchase of sub-prime mortgage bonds and heightening confidence among banks.

Inflationary pressures weakened after oil prices dropped, meaning that inflation does not pose an immediate threat. On the contrary, fears of deflation have emerged in the developed countries – which is why their central banks have been able to embark on a coordinated and aggressive campaign of cutting reference interest rates to stimulate the economy.

China has been playing a major role in resolving the crisis, thus affirming its political and economic clout in today's world. A fiscal package amounting to some \$600 bn has been unveiled; the money is to be spent on infrastructure and boosting domestic demand in order to reduce the negative effects of falling external demand and to attain an annual growth rate above the potential 8%.

United States

The US is now in recession

The US economy recorded a drop of 0.5% in Q3,² less than had been expected (BNP Paribas had forecast a fall of 1.3%). The crucial factor adversely impacting growth was the drop in spending of 3.1% in real terms, the highest in the past 28 years. Public spending gave the greatest contribution to putting growth over the forecast threshold (with a quarterly growth of 5.8%), while the growth in construction of office space was surprisingly high, at 7.8%. Although this rate was lower than in the preceding quarter, it was still relatively high, especially if viewed in the context of all the current economic troubles.

The reference interest rate is cut aggressively, to 1%

Total annual inflation stood at 5.3% in Q3. It decelerated after July; in August, the drop amounted to 0.1% at the monthly level, while there was no rise in the inflation rate in September. Thus the rate fell from an annual 5.6% in July to 3.8% in October, with that month's drop of 0.8% being the largest in 60 years. There is a risk of deflation, and the US Federal Reserve has envisaged measures in its agenda to prevent a repeat of the scenario seen in Japan in the 1990s. The Fed's position has changed considerably since the summer. While oil prices were high the primary danger was inflation, and no change was expected in reference interest rate in the foreseeable future. However, after the credit crunch and the steep drop in global stock market indices, the reference interest rate was cut from 2% to 1.5%, and fears of recession came to the fore. In late October, the rate was further slashed to 1%. This aggressive reduction of the reference rate by as much as one percentage point in the space of just one month underlines the seriousness of the situation and the grave risk of a deep recession.

Recent employment data has subsequently seen large-scale corrections, which showed that the situation was actually worse than expected. Instead of a loss of 160,000 jobs, September actually saw 284,000 jobs going. This fact is particularly significant, as the survey was carried out in September, before Lehman Brothers went under, indicating that the labor market had been weak even before events in financial markets spilled over into the real sector. October saw the loss of another 240,000 jobs, or more than a million cumulatively at the annual level. The unemployment rate rose from 6.1% to 6.5%, a very high leap. The labor supply has remained the same, as people are willing to do anything to recover losses in personal wealth caused by falling real estate and share prices.

The current account deficit fell from \$56.6 bn in August to \$59.1 bn in September, but only because the cost of imports dropped due to falling oil prices. Nominal exports were 6% lower in September in relation to August, the largest drop since 2001; if real growth is considered, this fall is the steepest since 1994. Weakening exports are yet another problem for an economy that has entered a recession. Not all factors behind the numbers are long-term, however, so not everything is as bad as it may seem from the statistics. The strike at Boeing reduced aircraft exports by 67% in relation to Q2, while hurricanes drove oil and oil product exports down. Although total imports also slowed by 6% at the monthly level in September, imports of Chinese

² Seasonally adjusted annual rate (SAAR). All growth rates below conform to this definition.

**Congress enacts
TARP, after the
first attempt failed**

goods saw a slight rise. This indicator is in all likelihood temporary as well, and Chinese imports are expected to decline as the US enters deeper into recession.

After the collapse of Lehman Bros and the takeover of AIG, activity in the money market petered out. It became clear that economic measures introduced hitherto (boosting liquidity, injecting capital, facilitating lending to banks, etc) would not suffice. The plan Paul Krugman had proposed almost a year ago was thus put into effect;³ it is based on the idea that it is solvency, rather than liquidity, that is at the root of the problem. Experience with the 1998 crisis, which saw the bankruptcy of the Long Term Capital Management Fund lead to panic in the financial markets, is not relevant here. During that crisis, capital injections increased liquidity, and, when it became apparent that the losses were not enormous, mutual trust between financial institutions returned, and the market got back to business as usual. In the present crisis, such a measure cannot yield results, because, as long as losses remain unknown, the fear that someone else might go bankrupt – like Lehman Bros – will not be assuaged. To assure creditors that their future debtors' portfolios do not contain mortgage bonds, the state undertook to purchase these securities. A law was enacted to institute the TARP, a program worth an astronomical sum of \$700 billion. A total of \$250 bn has been made available immediately; another \$100 bn can be used with Presidential approval, while a final \$350 bn requires the consent of Congress. The first \$350 bn package has already been used up almost completely, and a debate is currently underway about how to use the remainder – whether to buy bank stocks, help the auto industry, or stimulate lending to households to reinvigorate demand.

Economists' views on the TARP were divided, with different groups signing letters of support or opposition for publication in the *Wall Street Journal*. The basic premise of the TARP, upon which the plan's success hinges, is the fact that mortgage bonds are currently very cheap because of irrational panic among investors. According to most asset price models,⁴ these bonds are quite undervalued, but the models used in the estimate have also been widely off the mark (their price is now often just 20% of what it was before the crisis); only the market will be able to give a definitive answer over the coming months. The resolution of this problem remains to be seen, but the TARP certainly cannot increase the budget deficit by all of \$700 bn, or jeopardize inflation. If mortgage bond prices go below current levels – which US officials claim are undervalued – the government will run up a loss and the deficit will rise. Still, the budget deficit can rise only up to the sum lost, which cannot be that great as the prices of these derivatives are most certainly not “too high” after losing 80% of their value. Inflation is not thought to pose a danger, because money supply will not increase – the money used to purchase mortgage bonds will first be withdrawn from circulation through the sale of government bonds.

However, after the \$350 billion is spent, the rest of the money may be reallocated to a purpose other than the purchase of mortgage bonds; in this case there are risks of inflation and a rise in the budget deficit. Criticisms levelled against the scheme by “market fundamentalists” may ultimately prove right, if the rest of the money is used to bail out companies that are untenable in the long run, or unduly stimulate the public's purchasing power.

Euro zone

**The euro zone is in
recession, exports have
slumped**

The euro zone saw a negative growth of -0.8% in Q3, its largest contraction since the early 1990s. The slump was caused by weak exports, adversely affected over the summer by two negative factors: reduced external demand, and a strong euro. After two quarters of negative growth back-to-back, this region too meets the technical criteria for recession. Economic activity has been lackluster everywhere except in France, which, surprisingly, recorded a mild growth of 0.6% at the quarterly level. This growth was attained thanks to unexpectedly high exports, completely at odds with the situation in Germany, whose exports performed worse than expected. Germany recorded a drop in economic growth of -2.1% in Q2 due primarily to the weaker exports.

³ “After the Money's Gone”, Paul Krugman, *Washington Post*, 14 December 2007.

⁴ Mathematical models used to estimate the value of shares, bonds or financial derivatives.

Investments in the euro zone have underperformed, businesses are bracing themselves for recession, and even those interested in investing have had their hands tied by the situation in the money market. Public spending has grown. The general economic activity indicator, PMI,⁵ stood below the Q3 level in all major euro zone economies in October, indicating a probable deepening of the current contraction. The results of the survey were close to or identical to early 1990s levels. This indicates that the looming recession will be more like the one that struck Europe in the early 1990s,⁶ which saw negative growth over four quarters, than the one in the early 2000s, when stagnation lasted for a year.

Exports are now impacted by two contradictory factors: a weak currency, and falling external demand. The exchange rate had a negative effect on exports in Q3, as €1 was worth \$1.60 in late July, an all-time high. The euro has since undergone a significant depreciation. The question is whether the impetus given by the weak currency will compensate for the loss of demand. In all likelihood, the answer is no, a view underscored by the latest figures, but the weak euro will absorb some of the negative effects. Major exporters of goods and services to East Europe (Germany, Austria, Greece) will not be able to use this factor as a dampener to its fullest extent, since the euro has gained in value in relation to most currencies in the region.

The risk of inflation has gone down, with ECB prioritizing growth stimulation

Total inflation has gone down dramatically in the euro zone, from an annual 4% in June to 3.2% in October, primarily due to falling oil prices. Core inflation at the annual level remains stable, at about 1.9% over the previous several months. In addition to falling prices of raw materials and fuel, this drop in inflation was positively impacted by the economic slowdown. Capacity utilization stood at 81.6% in October, the same level seen in the early 2000s, when growth was low. If a recession worse than current predictions does materialize, Europe could also face deflation issues. The ECB has now made a U-turn in its monetary policy. Not so long ago, in July, the ECB increased the reference interest rate by 0.25 percentage points out of fear of inflation; at that time, the risk of recession was secondary, and a restrictive monetary policy was the approach of choice. Interest rate forecasts published over this period put the average reference interest rate in 2009 at around 4%. The turbulence on the financial markets and the instability of Europe's banking system, coupled with the probable start of a recession, have all led to a drastic change in monetary policy. Western countries' central banks took concerted action, and the ECB, like the Fed, aggressively cut the interest rate by 1 percentage point in one month. Forecasts now put the average interest rate at about 2% over the coming year, twice as low as just a few months ago. Current monetary policy is active and expansionistic, as agreed with other Western countries, since the global crisis requires a resolute global response.

Employment has so far proven resistant, but will certainly drop in the next quarter

The unemployment rate rose slightly in Q3, from 7.4% in July to 7.5% in September. Employment has thus far been immune to economic shocks, especially in Germany, where unemployment stands at its lowest level since 1992. However, the fact that employers have not begun to lay off workers yet does not mean that current employment levels will continue into the future. The absence of any response to the recession has carried over into the beginning of Q4; still, this trend will soon change, and unemployment is set to rise.⁷ According to this criterion, Europe's reaction to the contraction is belated when compared with the US.

Several European financial institutions have collapsed

The loss of confidence in the banking system following the bankruptcy of Lehman Brothers has had substantial consequences for Europe, with many financial institutions rescued by intervention, bought out, or nationalized. In the first week of October, the British bank Bradford & Bingley was nationalized; the assets of Fortis were purchased by Benelux governments and BNP Paribas; the Icelandic government took control of Giltinir; three European governments recapitalized Dexia; while Germany's Hypo Real Estate had to be bailed out by the government.

These events spread panic through financial markets, as did rumors that EU members were drafting a pan-European plan of action intended to calm markets down. The plan failed to materialize, though, since both coordination and adequate mechanisms were lacking. Ireland

⁵ The Purchasing Managers Index.

⁶ EcoWeek, BNP Paribas, 7 November 2008.

⁷ BNP Paribas.

rushed to guarantee all deposits after the country's stock market plunged 13% in one day. Other countries were quick to follow suit with similar measures, but actual reactions varied. Some countries extended guarantees to cover all deposits, while most raised the bar to from 50,000 to 100,000 euros. Some guarantees were given in political statements, while others were the result of amendments to legislation. Several countries placed time limits on these measures, while others did not, or rather only defined them as "temporary". Media attention focused on the dispute between German and British politicians after Germany decided to guarantee all deposits without consultation with other EU partners. This resulted in a short-term outflow of assets from the UK – lacking such measures – and a drop in the (already low) value of the pound against the euro. British politicians condemned this action, taken without consultation or discussion, as reprehensible. Relations between member states, bickering, the lack of coordination and rules – all serve to bear out the fact that the European Union, the first "post-modern state", regardless of all of its institutional shortcomings, has nevertheless managed to react relatively successfully to the collapse of several banks, relying solely on the goodwill of financial institutions and member state governments.

East, Central-east, and South-east Europe

East European countries have felt the financial crisis more than had been expected

Forecasts had generally predicted that the slowdown of economic growth in the West would have a relatively mild impact on East Europe. However, these analyses focused primarily on the influence of falling external demand, and it was assumed that East European supply would have space to reduce costs and enhance competitiveness. Not much attention was devoted to a possible reduction in lending (which countries in transition sorely need) as a result of the credit crunch. East European economies exhibit a combination of factors that make them very vulnerable to the drying up of capital inflows from abroad:⁸ current account deficits, high levels of foreign debt, lack of control over public spending, and the influence of immature political institutions on consumer and saver confidence.

The IMF concludes stand-by arrangements with Ukraine and Hungary

The IMF has had to conclude arrangements with two countries – Ukraine and Hungary – in order to prevent serious economic crises. Hungary's public debt amounts to slightly more than 60% of GDP, as the state has run up excessive debts over a number of years. The country's current account deficit stands at some 5.5% of GDP, or about €7 bn. Government bond auctions were practically suspended for lack of interested buyers. The past two years have seen a sudden rise in lending to households; these loans total 20% of GDP, and nine-tenths of them are indexed in euros. In case of an appreciable devaluation of the forint, many debtors would be unable to service their debts. It was necessary to raise the reference interest rate and enter into an agreement with the IMF to prevent a further deterioration of the macroeconomic situation. The Hungarian central bank raised the interest rate by as much as three percentage points, to 11.5%. The government has shown resolve over the past two years, and has managed to reduce the budget deficit to under 4% of GDP, but this has slowed down the economy. Most banks are foreign, which has thus far served to introduce stability into the financial system, but may now be a risk. These foreign banks have been repatriating their capital – where it is, after all, more secure – which has in turn reduced their lending capacity. There is a danger that neither solvent companies nor members of the public will be able to get credit due to the reduced systemic liquidity and stricter lending criteria.

Ukraine is confronted with a much more difficult situation. Inflation has exceeded 30% at the annual level, the economic growth rate has been plunging, the currency stands at a seven-year low against the dollar, while the country's credit rating has been slashed. The banking system is unstable. The political system is in a state of constant turmoil, to a great extent because of influence from abroad, both from the West and Russia. It would be dangerous to allow economic collapse to occur in such an environment, which is why Ukraine signed the arrangement with the IMF, with an urgent investment of some \$14 billion to cover the current account deficit and

⁸ "Who's next?", *The Economist*, 23 October 2008.

interest on government debt. These measures, however, will only be a temporary solution if the authorities fail to follow through with the steps agreed with the IMF. As new elections are also in the offing, the resolution of this complex political and economic situation remains to be seen.

Although Ukraine, like most East European countries, has recently been recording positive economic results, the risks associated with the current economic crisis have gone up substantially. Ukraine has seen significant economic growth since the start of the decade, with GDP growth on average reaching 7% per year. Excess capacity was utilized, while productivity was boosted by structural reforms. This trend intensified after 2005 with an inflow of foreign capital and rising domestic demand, as the country redistributed the income from raw material exports to the public. Under the cycle theory, since the economy had seen growth in these circumstances, while capacities were not increased, overheating was bound to happen. In 2008 credit growth exceeded 70% per year, wages rose by more than 30%, imports rocketed by over 50%, inflation crossed the 30% threshold, while real estate prices increased wildly.

There are also other indicators of rising risk in addition to macroeconomic factors: the unfavorable ratio of short-term foreign debt and foreign currency reserves; banks' dependence on external financing; and the imbalance between company revenues and liabilities. Falling steel prices cut into export revenue, while external funding fell because of the financial crisis. The real sector weakened in September, with manufacturing recording a steep drop in production over the month. It then became clear that problems had spilled over from the financial into the real sector, and that the already high risk had risen further.

After the collapse of Lehman Bros, banks were no longer able to refinance debt, and Ukraine's financial system was shaken to its foundations. In consequence, Prominvest, the country's sixth-largest bank, paid out \$3 bn over the first three weeks of October under pressure from panicking depositors. Trust in the banking system evaporated, and the central bank had to intervene in the foreign exchange market. Foreign currency reserves went down by 20% (\$6 bn) over the first three weeks of October; administrative measures were put into place to stem the outflow of foreign exchange. Prominvest Bank was sold to a strategic investor.

With the situation now critical, Ukraine signed a stand-by agreement with the IMF, which, in addition to financing, involves commitment to changes to exchange rate policy, fiscal reengineering and discipline, as well as an improvement to banks' capital base. A total of \$16.4 bn has been approved; of these, \$4.5 bn will be drawable immediately. The plan should reduce the risks and imbalances of the current unstable economic environment.

A flexible exchange rate regime is being implemented; this will help to dampen external shocks and prevent imbalances in the foreign exchange market. A single exchange rate will now be used, in an abandonment of the practice of using two rates, the administrative and the market rate.

An important part of the plan is a proactive measure of bank recapitalization to reduce the adverse impacts of the credit crunch on an already weakened economy and a fragile banking system. There will be stricter oversight of bank operations, with particular emphasis on cross-border loans, with more frequent ad hoc controls.

The third element of the plan is fiscal reform, leading to a balanced budget for 2009. Expenditure will be revised downward; as for revenue, gas and electricity prices will be raised gradually in several phases. Ukraine already has a well-developed safety net:⁹ as the economy slows, the unemployed will be protected; measures are already in the pipeline to aid the groups most at risk.

For now, there is support for the plan in the media and institutions. IMF support is based on confidence in Ukrainian political parties, which have given their effective and complete backing to the agreement. The country's parliament has enacted emergency legislation to help in preventing a crisis. Key political parties have achieved consensus on a crisis resolution platform, but it remains unclear how long this agreement will last, bearing in mind internal political conflicts.

⁹ Support measures for the population at risk (unemployment benefits, minimum wage, etc).

Japan

The auto industry has been cutting production

Japan saw negative growth in Q3 (-0.7%), which means it is technically in recession, although the government has yet to officially announce this. The main reason behind the slowdown is falling external demand. The car industry has the greatest impact on activity across other sectors; as this has seen its steepest drop since 1978, there will be widespread negative effects on economic growth. After a major drop in exports over the previous quarter, Q3 recorded a slight export growth of 2.8% at the quarterly level. If the low Q2 base is taken into account – when exports fell by 10.2% – it becomes clear that the Q3 export growth has not been high. Exports of goods have been particularly poor in Q3, with a quarterly growth of a mere 0.7%. In complete contrast with Q2, when all components of domestic demand witnessed a sharp drop, they have all risen now, with the exception of companies' capital investment. Personal consumption went up by 1.1% at the quarterly level, with sales of consumer goods rocketing by as much as 15% in relation to Q2. Unlike the US and European public, the Japanese have no problems getting credit. The drop in oil prices has had a positive impact on consumer confidence, with a fiscal package in the works to stimulate spending and cushion the effects of recession.

China

China's economy has slowed to below its potential level in Q3

The Chinese economy is no longer immune to global events, and Q3 has seen a substantial slowdown. The economy grew at a rate of 6.4%, which was below its potential level and the is the lowest growth since Q2 2005. The main reason for the slowdown can be found in the manufacturing industry. Personal spending and fixed investment remain robust, but exports and stocks have slumped. Total inflation saw an appreciable fall in Q3, and stood at just 4.6% annually in September.

After the global economy fell by more than had been expected, and the financial markets saw large-scale upheavals, the Chinese authorities took aggressive steps to prevent the country's growth from slipping behind for longer: they cut the reference interest rate on 29 October – the third cut in five weeks – and reduced the banks' reserve requirement. Western economists are worried as to the effect expansive central banks' measures will have on developed countries facing the credit crunch. Reduced liquidity and stagnation in the interbank market will certainly reduce the effectiveness of monetary mechanisms. China, though, does not need to worry about this: the money market is functioning as usual, since there is no liquidity crisis. As total inflation is dropping, the reference interest rate is expected to be cut further.

A large fiscal package has been unveiled, and is expected to have a positive impact on global growth

The Chinese authorities have announced an enormous fiscal package, amounting to \$586 bn – as much as 15% of China's GDP – and involving stimulation measures for both the public and the private sectors. The measures will focus on infrastructure, housing construction, environmental protection, raising healthcare levels, and improving education. VAT is to be cut to encourage private investment. The package will have a two-year lifespan, but a detailed agenda for the measures has yet to be published.

China accounted for about 27% of global growth in 2007, so the effects of this package will be akin to those of a global anti-cyclical instrument – since it was adopted by the Chinese authorities, and supported by Western countries. The timing of the package's publication was probably politically motivated, coinciding as it did with the G-20 summit, and thereby reaffirming and underlining China's global economic strength.

Currencies and Commodities

The dollar has strengthened...

The VXY Index, measuring the volatility of G7 currencies, peaked in October, nearly reaching the level of 25. As early as September, the market was undecided between whether the dollar would prove to be the last resort because of fear of recession, or whether concern over the possible collapse of another large bank would lead to mass flight from this currency. The first view has

so far proven more attractive, and the dollar has strengthened, helped by the banking crisis in Europe. However, the “double deficit” issue remains, aggravated by the fact that the US budget deficit will double next year. Many analysts claim that this problem will come to the fore when the dollar’s value is determined – and that a slide in the currency is to be expected. In contrast, economists with BNP Paribas forecast that the reduction in ECB reference interest rates, as well as many countries’ need to refinance dollar debts and withdraw assets held in funds, will cause the euro to decline further, to a level of \$1.20 to €1 in the second half of 2009.

...while oil has lost two-thirds of its value since peaking in the summer

After a record price of \$147.27/barrel in July, which sparked forecasts of the price exceeding \$200, oil has slipped to below \$50/barrel. The dollar has strengthened, recession has dampened demand for oil, while speculators and hedgers have entered a reverse spiral, leading to a massive supply of oil in the markets. The summer’s high prices were not sustainable in the long run, since excessive oil prices made many alternative energy sources cost-effective. Many exporter countries used the high oil prices to buff up their economies and cement political elites in place by redistributing export income to the public. However, after oil prices fell, these countries’ current account deficits on other levels of consumption may prove to be unsustainable, which will cause a drop in the redistribution of wealth to the population. In this regard it will be especially interesting to observe the positions of Iran, Russia and Venezuela, whose economies will weaken, which will in turn make it more difficult to continue pursuing their current domestic and foreign policies. Their political influence had been rising on account of the oil crisis (and with it the so-called “anti-American bloc”), but the fall in oil prices will not only have an adverse impact on their economies, but also inevitably lead to a shift in the global balance of power.

SPOTLIGHT ON:

What Triggers Inflation in Transition Economies?

Pavle Petrović*

Aleksandra Nojković**

The results obtained show that statistically significant inflation triggers in transition countries include: growth above the long-term trend (the positive output gap), fiscal deficits, supply side “shocks”, i.e. hikes in the prices of oil and food, tighter control of the exchange rate, and, finally, political factors, that is, the holding of general elections. At the early stage of transition, the demand side triggers were dominant – the output gap and the fiscal deficit, thus indicating loose monetary and fiscal policies. Later on, in the 2000s, these factors were replaced by those on the supply side – rises in oil and food prices. Our results confirm that the latest inflation episode, 2007–2008, in transition countries was triggered by rising food prices. Throughout the period, the holding of elections constituted an extremely strong factor in triggering inflation in the observed transition countries, including Serbia.

1. Introduction

After a prolonged period of relative price stability, global inflation is rising again, particularly in the developing countries, including the transition countries. A recent IMF World Economic Outlook report unambiguously points to that, by devoting a separate chapter to new inflation¹. Re-adapting to a life with inflation in this set of countries would cost dearly, as shown by the experience of the developed countries with their high inflation in the 1970s. Namely, once firmly established, inflationary expectations require a deep recession in order to do away with inflation and restore the credibility of low inflation policy.

As for the transition economies, they, as a rule, experienced the first inflationary shock when they liberalized prices at the very beginning of their reforms. However, many of them had occasional periods of high inflation even after that. Therefore, it is important to examine the following: which are the main inflation triggers in transition countries, does their relative significance change with the advancement of transition and finally – do the same or similar inflation triggers appear in the developed countries and/or developing countries. It is obvious that such findings would provide an important basis for designing credible economic policies which aim at low inflation.

In order to give answers to the above questions, in this paper we shall econometrically estimate and then analyze triggers of inflation episodes in the transition countries. A framework for the empirical analysis is provided by economic theory, which suggests the following as inflation triggers: demand side factors, followed by supply side “shocks”, political determinants and finally, some *ad hoc* factors such as the exchange rate regime, the openness of an economy, the impact of foreign inflation, etc. Our studies also rely on already published studies in both the developed countries (see Boschen and Weise, 2003 and Bowdler and Nunziata, 2006) and the developing countries (see Domac and Yucel, 2005). With respect to the definition of inflation episodes as such, the estimation method, etc., we have used the same methodology as Boschen and Weise (2003), on the one hand, and on the other – we compare our findings for the transition countries with the findings for the other two groups of countries.

The examined sample comprises 12 transition countries in the period 1993–2008 (see Table L1-2). Also added to that sample is Serbia in the period after 2000, because it *de facto* only then seriously embarked upon transition.

In the second part of the paper we shall define what an inflation episode is and provide an overview of episodes by transition country over the observed period. *e third part* provides a theoretical framework for the empirical analysis

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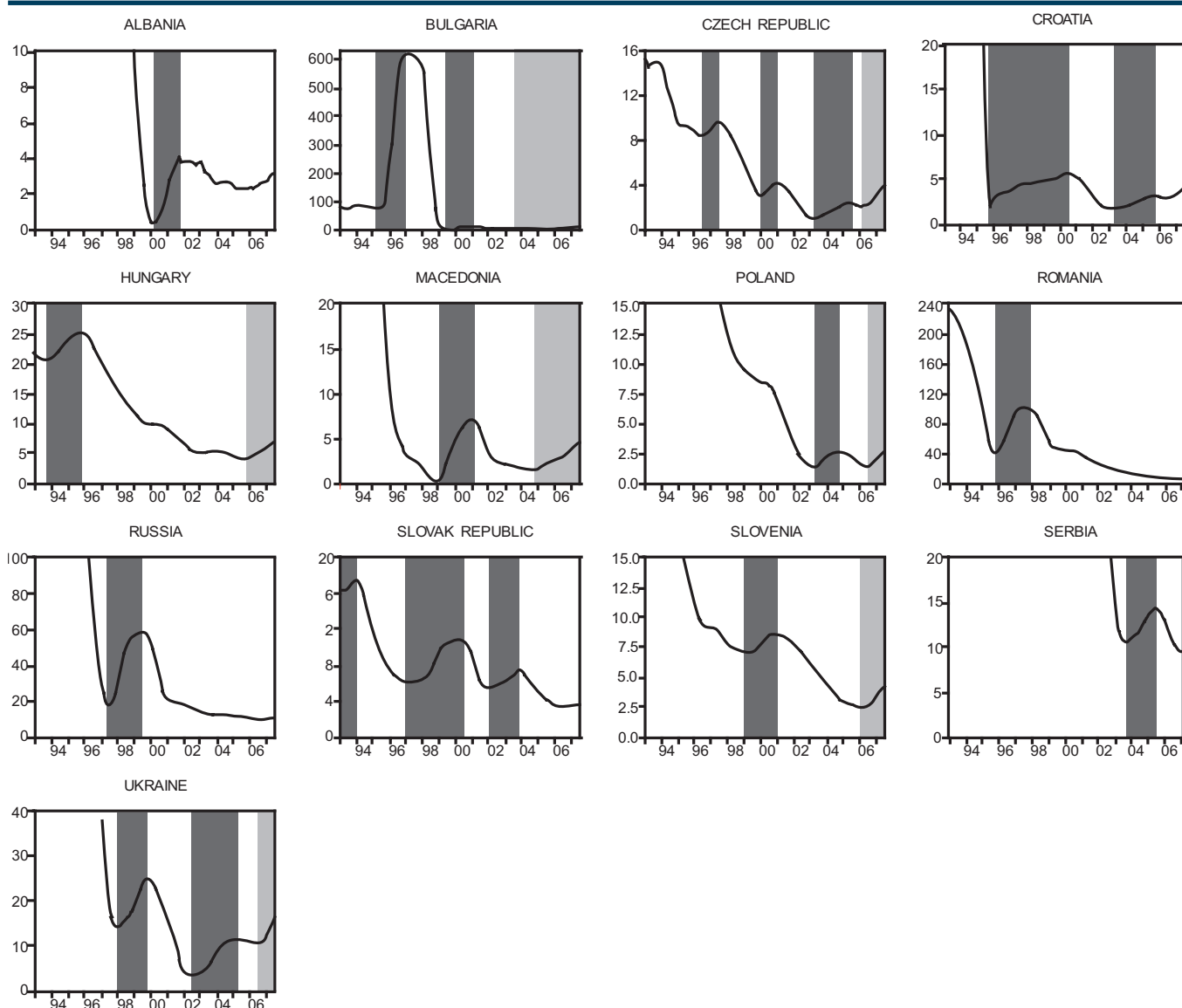
¹ See IMF World Economic Outlook, October 2008, Chapter 3.

by suggesting potential inflation triggers, and examines whether they actually appear in the transition countries. The identified inflation triggers are then compared to those in the developed countries and developing countries. *The fourth part* examines the relative contribution of each of the identified factors to the triggering of an inflation episode, taken collectively, as well as by sub-period and by groups of episodes, thus enabling us to answer the question of whether the relative significance of factors is changed in the triggering of inflation as countries progress from the early to the advanced stage of transition. Finally, *the fifth part* of the paper presents the main conclusions of the analysis.

2. Inflation Episode

When inflation keeps steadily and strongly rising over a period, it can be treated as a potential inflation episode. This further implies that a difference – between the peak, i.e., a local maximum level of inflation and trough, or a local minimum level of inflation – must exceed a certain level in order for us to be able to talk about an episode. If this requirement is met, then the local minimum inflation level indicates the start of the episode and its local peak the end of the given episode.

Graph L1-1. Inflation episodes in Select Transition Countries: Trend Inflation 1993–2008



Note: The dark part of the trend function correspond to the identified inflation episodes. The lighter color denotes ongoing inflation episodes, and/or episodes recorded at the end of the observed period.

What Triggers Inflation in Transition Economies

Methodologically, instead of actual inflation, in the analysis we use the trend inflation² constructed on the basis of nine-quarter moving averages. The local inflation minimum or trough then constitutes a magnitude which is lower than (trend) inflation magnitudes in the preceding four and succeeding four quarters. The start date of an inflation episode is considered to be the year following the quarter in which the minimum level was achieved. By way of analogy, the local inflation maximum is a magnitude higher than the one in the preceding four and subsequent four quarters, while the end of an inflation episode is considered to be the year in which the local maximum was attained. Finally, in order for a rise in inflation to be qualified as an inflation episode, its trend must rise by at least one percentage point from the trough to the peak³.

Our sample comprises the following transition countries: the Czech Republic, Slovakia, Poland, Hungary, Slovenia, Croatia, Bulgaria, Romania, Russia, Ukraine, Albania and Macedonia. The analysis includes those transition countries for which the necessary data was available for an econometric analysis and the entire transition period is covered. After estimating a model on the basis of the 12 cited transition countries, Serbia, for which we had data from 2001, was added to the sample. The robustness of the estimation results obtained on the sample of 12 countries was confirmed after the inclusion of data for Serbia, that is, the estimates remained practically the same.

By using data for the mentioned 13 transition countries in the period: Q1 1991– Q3 2008⁴, we identified 28 inflation episodes.⁵ Derived functions of trend inflation in transition countries are presented in Graph L1-1, where the dark parts of the Graph correspond to the identified inflation episodes.

Table L1-2. Overview of Inflation Episodes Recorded in the Sample

	Trough date	Peak date	Trough inflation percent	Peak inflation percent	Length (quarters)
1. Czech Republic	3Q1996	3Q1997	8.45	9.69	4 Q
	1Q2000	1Q2001	3.13	4.24	4 Q
	2Q2003	3Q2005	0.99	2.48	9 Q
	1Q2006	3Q2007	2.13	4.06	6 Q
2. Hungary	4Q1993	4Q1995	20.84	25.34	8 Q
	4Q2005	3Q2007	3.98	6.94	7 Q
3. Poland	2Q2003	4Q2004	1.41	2.67	6 Q
	3Q2006	3Q2007	1.47	2.87	4 Q
4. Russia	3Q1997	3Q1999	17.81	58.54	8 Q
5. Slovak Republic	2Q1993	1Q1994	16.14	17.57	3 Q
	1Q1997	3Q2000	6.11	10.98	14 Q
	1Q2002	4Q2003	5.53	7.50	7 Q
6. Romania	4Q1995	4Q1997	40.00	102.15	8 Q
7. Bulgaria	2Q1995	1Q1997	73.96	620.64	7 Q
	3Q1999	1Q2001	5.27	8.78	6 Q
	3Q2003	3Q2007	4.14	9.66	16 Q
8. Croatia	4Q1995	3Q2000	2.10	5.67	19 Q
	2Q2004	3Q2006	1.69	3.14	10 Q
9. Slovenia	1Q1999	1Q2001	7.20	8.59	8 Q
	1Q2006	3Q2007	2.46	4.28	6 Q
10. Ukraine	1Q1998	4Q1999	14.13	24.91	7 Q
	3Q2002	2Q2005	3.30	11.23	11 Q
	3Q2006	3Q2007	10.54	16.55	4 Q
11. Albania	2Q2000	4Q2001	0.37	4.00	6 Q
12. Macedonia	1Q1999	1Q2001	0.31	7.19	8 Q
	4Q2004	3Q2007	1.49	4.54	11 Q
13. Serbia	4Q2003	3Q2005	10.63	14.42	7 Q
	3Q2007	*	9.52	*	*

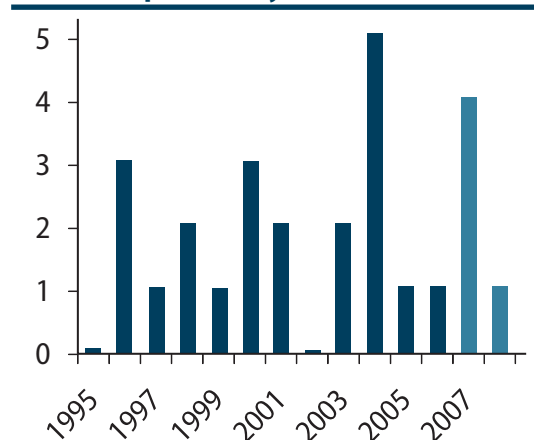
Note: The lighter color denotes ongoing inflation episodes, and/or episodes recorded at the end of the observed period. The sign (*) denotes the 2008 inflation episode recorded in Serbia, for which it is possible to define, on the basis of available data, only the point where it started.

2 See Ball (1994) and Boschen and Weise (2003). We further followed Boschen and Weise (2003); see also Nojković (2007).

3 In defining an inflation episode we opted for the threshold of at least one percentage point of a rise in inflation from the dip to the peak, as did Domac and Yucel (2005) in examining developing countries. Boschen and Weise (2003), in analysis of developed countries, accepted as a threshold a rise higher than 2 percentage points.

4 As already mentioned, the inflation trend function for Serbia was obtained by using a slightly shorter series of quarterly data on the CPI movements—from Q1 2000 to Q3 2008.

5 In a number of countries the function of the long-term inflation trend recorded the local minimum level in 2005 or 2006, so we take the year that follows as the start of the inflation episode. In those cases, the peak of the inflation trend function is not strictly defined, but with the last available piece of data in the sample the rise which exceeds one percentage point has already been achieved. The exception is the 2008 inflation episode in Serbia, which has just a precisely defined local minimum level in 2007. The estimation results are relatively stable even if we exclude inflation episodes recorded at the very end of the observed period, with the exception of food prices which are, in fact, the most responsible for the start of these episodes.

Graph L1-3. The Number of Triggered Inflation Episodes by Year

Note: The lighter color denotes ongoing inflation episodes, that is, episodes recorded at the end of the observed period.

An in-depth analysis of the identified inflation episodes (Graph L1-1 and Table L1-2) shows that, in our sample of transition countries, an inflation episode lasted on average about eight quarters. The bulk of inflation episodes lasted less than 10 quarters, with the exception of two episodes recorded in Bulgaria and Croatia, which were characterized by a modest increase in inflation over a period longer than 15 quarters. The average rise in inflation from the trough to the peak amounted to around 27 percentage points, while for the duration of the episode inflation went up on an annual basis, by about 3.5% per quarter). In comparison with similar studies carried out on a sample of developing and OECD countries, inflation episodes recorded in the transition countries were almost twice as short, but while they lasted inflation grew faster. The average rise in inflation per quarter in the developing countries was 2.18%⁶ per year, while in the OECD countries the rise was considerably slower and amounted to a mere 0.36%⁷.

3. What Triggers Inflation: Determinants

Potential inflation triggers may be grouped around factors on the aggregate demand side, followed by supply side “shocks”, the openness of an economy, the exchange rate regime, transmission of foreign inflation and political factors.

High aggregate demand increases output growth above the trend, creates a positive output gap and exerts pressure on price increases. This may be a result of the government’s wish to incentivize output growth, for political reasons, above the potential growth, hoping for a trade-off determined by the Phillips curve. Naturally, an increase in demand may also be caused by exogenous factors, such as, for example, a strong inflow of foreign capital. On the aggregate demand side is also public spending, that is the fiscal deficit, which can emerge as an inflation trigger irrespective of the output gap.

On the supply side, potential triggers include hikes in the oil price and, as a new phenomenon, food price hikes.

The exchange rate regime, ranging from flexible to extremely rigid, constitutes the next potential inflation trigger, as demonstrated by some results for the developed countries⁸. The degree to which the economy is open has proved to be an important factor inhibiting the start of an inflation episode in developed economies, too⁹; hence, we shall investigate its influence in transition countries as well.

Politics can also emerge as a factor which triggers inflation, and its impact can be analyzed through the holding of general elections or, alternatively, as a political orientation of the government.

Proceeding from the above framework, relevant variables have been defined and applied to estimate the model. This was done on a panel of annual data for 13 transition countries. What is involved is the specification of a *pooled probit model* of panel data which assumes the constancy of all regression parameters in the model. The dependent variable is defined as binary, so that it takes on a value of one (1) in the year in which the start of an inflation episode was identified (the year following the quarter in which trend inflation has a local minimum), and the value zero (0) in the years of stable or declining inflation for each of the countries in the sample. The years in which inflation episode is already ongoing, as usually done in such studies,¹⁰ have been excluded from the sample and treated as missing observations. The model estimates the values of conditional probability for triggering an inflation episode in a transition country (j), in the year (t), and these values range within an interval from 0 to 1. If the value of the forecast probability is higher – it follows that the estimated model better describes the triggering of the relevant inflation episode. The parameter significance testing in the estimated model will show which factors, from among those cited above, have a significant impact on the probability of triggering an inflation episode.

6 Domac and Yucel, (2005).

7 Boschen and Weise (2003).

8 See Boschen and Weise (2003).

9 See Bowdler and Nunziata (2006).

10 See Boschen and Weise (2003).

What Triggers Inflation in Transition Economies

As an inflation start in the current year occurs mostly as a response to the changes in the movements of macroeconomic variables from the preceding year, all potential determinants in the model have been introduced with a lag of one period, but also alternatively as current values. Different specifications of the probit model were estimated, and the analysis below is based on an econometrically best model, in which statistically significant variables have been retained (Table L1-4). The results obtained show that all factors significant for triggering inflation in transition countries enter the model with a lag of one period, that is, they influence the probability of an inflation start in the succeeding year, with the exception of “shocks” in the movement of the food price, whose impact is materialized in the current year. A detailed description of variables used in the econometric analysis is provided in Appendix 1 (Table D-1.).

Table L1-4. A Comparative Overview of Estimate Results in Three Groups of Countries

Factors associated with the start of inflation episodes	OECD economies (N=19)	Emerging market economies (N=15)	Transition economies (N=13)
	sample: 1960 - 1995	sample: 1980-2001	sample: 1993-2007
Increase in GDP growth above trend, output gap (gdp_gap)	(+)	(+)	(+)
Fiscal policy, budget surplus (bs)	*	(-)	(-)
Occurrence of general elections (elect)	(+)	/	(+)
Other political factors	*	*	*
Oil price shocks (oil)	*	*	(+)
Food price shocks (food)	*	(+)*	(+)
Openness to international trade, (various measures of openness)	(-)	/	*
International transmission of inflation	(+)	/	*
exchange rate regime (exr_regime)	(+)	/	(+)

Note: The effects of Table L1-4 marked with (+) or (-) are factors which in a statistically significant manner increase or decrease the probability of triggering inflation. The sign (*) refers to the factor which is not statistically significant for determining an inflation episode, while the sign (/) corresponds to the factor whose impact was not analyzed in the observed sample of countries. In the first column, in brackets, abridged names of variables are listed, for which the relative contribution to the triggering of individual inflation episodes in transition countries is calculated further (Table L1-5). In developing countries the variable that was used was the food production index, with an assumption that its decline leads to a rise in food prices. Therefore, the obtained statistically significant, negative impact of output (Doac and Yuce, 2005) indicates a positive impact of the food price, sign (+). Results for the OECD countries have been taken from Boschen and Weise (2003), and for the developing countries from Doac and Yuce (2005).

The results presented in Table L1-4 indicate that the majority of presented potential inflation triggers are statistically significant, and that they appear with the expected sign.

Thus on the demand side, a positive output gap, that is, a rise in output above the potential one, has a statistically significant impact on an increase in the probability of triggering an inflation episode. The alternative measure of the economic activity level – the unemployment rate – has not, however, proven to be statistically significant. On the other hand, a restrictive fiscal policy which is manifested through a budget surplus, has a statistically significant impact on reducing the probability of triggering an inflation episode.

Supply side “shocks” – an increase in the prices of oil and food – have proven, respectively, as statistically significant inflation triggers. Their rise increases the probability of triggering an inflation episode.

A change in the exchange rate regime from flexible to an increasingly high degree of control, appears as a statistically significant factor which increases the probability of an inflation start. The regimes that we observed are, *de facto*, regimes,¹¹ which can be differentiated from a *de jure* regime in a country, and we classified all of them in four groups. The first comprises the *flexible exchange rate and the managed float* (=0), the second includes *the intermediate regime* (=1), the third is *soft peg* (=2) and the fourth a *hard peg* – the *currency board* (=3). The openness of an economy, measured as a share of imports in gross domestic product (GDP), has not shown to have a statistically significant impact on the probability of an inflation start. Not even euro zone inflation had an impact on raising the probability of inflation triggering in the observed set of transition countries.

11 Source: the IMF and the authors' classification for Serbia.

The political factor, in the form of parliamentary elections, has proven to be a statistically significant factor of increasing the probability of triggering an inflation episode. On the other hand, the orientation of the government—left or right of center—has not proved to be statistically significant.

The results presented in Table L1-4 also enable a comparison of our results for transition countries, with those of the developing and developed countries, respectively. We can see that the factors important in transition countries sometimes coincide with the results in developed economies, and sometimes with those in the developing countries. Above-trend-growth, i.e., the positive output gap—is a common factor for all three groups of countries, and operates in the same direction. The fiscal surplus is a significant factor in transition economies and developing countries, but not in the developed economies. Oil and food prices are not statistically significant inflation triggers¹² in the other two groups of countries, most likely because of the different observation period relative to our sample. The exchange rate regime is statistically significant and operates in the same direction in both the transition and the developed countries. In the latter case the exchange rate has only two regimes—*fixed* exchange rate—for the period of validity of the Bretton Woods Agreement, and—*floating*—thereafter. The holding of parliamentary elections contributes to triggering inflation both in transition and in developed countries, while other political factors have not proven to be statistically significant in any of the three groups of countries. Finally, in developed economies, its openness contributes to reducing the probability of triggering inflation, just as expected, while the international transmission of inflation, in this case from the U.S., contributes to increasing it.

4. Analysis of Selected Inflation Episode Triggering – Relative Contribution of Individual Factors

The obtained estimates enable the calculation of the relative contribution of each of the previously identified factors to the triggering of a given inflation episode. On that basis, it is possible to determine whether the given episode, or set of episodes, was caused, and to what extent, by the factors on the side of supply, demand, elections or the exchange rate regime.¹³ The breakdown was carried out in a manner which enabled us to obtain the relative impact of factors, i.e., to sum up the effects up to one.

The reliability of the breakdown results for each individual episode depends on the extent to which the estimated model properly explains it. For that reason, out of a total of 28 inflation episodes we have chosen 15 for which the model gave the best results.¹⁴ The calculated relative contributions are shown in Table L1-5.

Results in Table L1-5, in addition to individual episodes, also apply to groups of episodes, sub-periods and the whole period; hence they will be analyzed in such a manner.

By observing all 15 episodes together, i.e., the whole 1993–2008 period (Table L1-5, Panel C), we can see that elections contributed the most to increasing the probability of triggering the observed inflation episodes. Thus, the holding of parliamentary elections increased the probability of an inflation start in the subsequent year on average by 41%. They are followed, in terms of significance, by demand side factors, such as excessive aggregate demand, that is, above-trend-economic growth and a fiscal deficit, which each raise the probability of inflation triggering by 13%. In terms of significance, supply side “shocks”, come right after demand. This is so throughout the observed period, with food price growth raising the probability of inflation triggering by 10% on average, while the impact of oil price increases was 7%. The exchange rate regime contributed to raising the probability with 12%, which implies that on average by country and by year some sort of exchange rate controls was dominant.

A comparison of the first phase of transition, i.e., episodes in the 1990s, with advanced transition, i.e., with inflation in the 2000s, suggests that these are two different periods and indicates a change in the pattern with a switch from the conditionally early to advanced transition (Table L1-5, Panels A and B).

12 In developing countries the food production index was used, instead of its price, and it only indirectly suggests a significant positive impact of the food price (see Table 2 and Domac and Yucel, 2005).

13 On the basis of the estimated probit model, the index function is broken down and the relative contribution is thus calculated of each of the statistically significant factors to the (*i*) increase in the probability of triggering an individual inflation episode recorded in a transition country (*j*), in the year (*t*). See Boschen and Weise (2003)

14 Those episodes were selected for which the model gives a higher probability of their triggering (column one, Table 3). That is how we took all the episodes whose probability of triggering was higher than 20%.

Table L1-5. Relative Contribution of Individual Factors to the Triggering of Selected Inflation Episodes

Country	Probability ^a	gdp_gap ₍₋₁₎	bs ₍₋₁₎	elect ₍₋₁₎	oil ₍₋₁₎	food	exr_regime ₍₋₁₎
1. Episodes 2006-2008							
Serbia 2008	0.41	0.01	-0.08	0.46	-0.01	0.82	-0.21
Czech Rep. 2007	0.32	0.06	-0.10	0.76	0.06	0.57	-0.35
Slovenia 2007	0.23	-0.03	-0.37	0	0.11	0.97	0.31
Ukraine 2007	0.49	-0.14	-0.16	0.47	0.04	0.35	0.44
Hungary 2006	0.37	-0.03	0.30	0	0.25	0.32	0.16
Average	0.29	-0.02	-0.14	0.34	0.04	0.54	0.04
2. Episodes 2003-2004							
Bulgaria 2004	0.51	-0.03	-0.15	0	0.08	0.32	0.78
Croatia 2004	0.38	-0.01	0.16	0.61	0.10	0.41	-0.28
Serbia 2004	0.33	-0.31	-0.22	0.73	0.12	0.50	0.18
Slovak Rep. 2003	0.37	-0.06	0.27	0.63	-0.14	0.13	0.15
Average	0.40	-0.10	0.02	0.49	0.04	0.34	0.21
3. Episodes 2000							
Bulgaria 2000	0.41	0.01	-0.28	0	0.29	-0.01	0.99
Slovenia 2000	0.23	0.17	-0.10	0	0.63	-0.03	0.32
Average	0.32	0.09	-0.19	0	0.46	-0.02	0.66
2000's Episodes							
Average	0.34	-0.01	-0.10	0.28	0.18	0.29	0.30
4. Episodes 1994-1997							
Czech Rep. 1997	0.27	0.35	-0.05	0.95	0.17	-0.65	0.23
Bulgaria 1996	0.33	0.50	-0.03	0.72	-0.06	0.20	-0.33
Croatia 1996	0.50	0.44	-0.10	0.46	-0.04	0.13	0.11
Slovak Rep. 1994	0.45	-0.17	1.65	0	-0.23	0.01	-0.25
Average	0.39	0.28	0.37	0.53	-0.04	-0.08	-0.06
B) 1990's Episodes							
Average	0.39	0.28	0.37	0.53	-0.04	-0.08	-0.06
C) Episodes 1993-2008							
Average	0.36	0.13	0.13	0.41	0.07	0.10	0.12

Note: (a) are fitted values of the probability from the probit model (variables included in the model are presented in the first column of Table L1-4) (b) values in Table L1-5 are calculated as percentage contributions to inflation triggering based on the difference between point probability estimate and the baseline probability (calculated for the mean values of continuous explanatory variables in the model and dummy variables are set to 0). The baseline probability calculated for our estimated probit model is 0.154.

Elections continue to be the most significant factor, also for each sub-period individually, but the impact on the rise in probability is reduced as transition countries grow mature. In the 1990s elections contributed to the rise in inflation triggering probability with 53%, while in the 2000s the figure declined to 28%. The same downward trend in the contribution of elections can be noticed in the 2000s as well: from 49% to 34% (Table L1-5, Panels 1 and 2).

In the 1990s, the dominant factors (after elections) were demand side factors – primarily high fiscal deficits with a contribution of 37%, followed by excessive aggregate demand contributing with 28%. Supply side “shocks” did not significantly raise the probability of an inflation start in this period (Table L1-5, Panel B). The result for the 1990s is intuitively clear because it implies that, during the first period of transition, fiscal and monetary policies were still loose and occasionally caused excessive demand and thus contributed to inflation triggering. The contribution of the exchange rate regime to an inflation start was neutral in the 1990s ($-6\% \approx 0$), which suggests roughly the same incidence of the flexible exchange rate, on the one hand, and some type of control, on the other.

In the 2000s, the pattern was completely reversed: supply side “shocks” became the main triggers of inflation episodes, primarily food price rises, which on average raised the probability of inflation by 29%, followed by oil price rises, which contributed with 18%. The demand side factors in this period made negligible contributions to increasing the probability of inflation triggering, such as the output gap ($-1\% \approx 0$), or alternatively contribute to its containment, as in the case of a fiscal surplus or deficit that is lower than the average for the period (-10%) (Table L1-5, Panel A).

The same result, i.e., the dominance of supply side “shocks”, is also obtained by grouped episodes in the 2000s (Table L1-5, Panels 1, 2 and 3). Thus, in individual episodes from 2000, besides the controlled exchange rate, in particular the *currency board* in Bulgaria, the main factor of the rise in the probability of triggering these two inflation episodes was the oil price rise, with a contribution of 46%. This finding is consistent with the steep hike in the world oil price of 39% in 1999. Moreover, high aggregate demand was still there as a significant factor in 2000: 9% of the rise in the

probability of inflation triggering is attributed to GDP growth above the potential level. The triggering of the two remaining groups of episodes in the 2000s was under the influence of parliamentary elections, but the contribution of the food price increase was also high: 34% in the first and 54% in the second episode, which constitutes a new phenomenon. This is in line with the accelerated growth of world food prices: 14% in 2004, and 10.5%, 15% and 32%¹⁵ in 2006, 2007 and 2008, respectively. On the other hand, excessive aggregate demand was no longer a significant factor contributing to the rise in the probability of inflation triggering, while fiscal policy in the 2000s operated largely toward reducing the probability of outbreaks of new inflation episodes (Table L1-5, Panels 1 and 2).

Results for the 2000s suggest that the quality of macroeconomic policies was considerably improved in transition countries, with fiscal policy from thereon generally operating toward reduction of the probability of an inflation start, and management of overall aggregate demand having a neutral effect after 2000. Likewise, the triggering of the latest inflation episodes in 2007 and 2008, for the most part can be attributed to a relatively new phenomenon – the rise in food prices. On the other hand, the main shock from the oil price rise occurred in 2008, when in most of the observed countries inflation episodes were under way, so that the shock led to a further acceleration of inflation in those countries, but it did not emerge as a prominent inflation episode trigger. This explains why the oil price increase does not appear in estimates as a significant inflation trigger in 2007 and 2008.

The exchange rate regime, which, on average, was shifting toward firmer control in the 2000s relative to the 1990s, became a factor which significantly contributed to the probability of triggering inflation episodes in 2000 and 2003–2004 (Table L1-5, Panels 2 and 3). Investigating the effects of a change in the exchange rate regime by an individual country over time provides an additional insight into how that factor operates. Such investigation is required also because the exchange rate regime effect has not been examined in this manner as a significant factor of inflation triggering in the previous two studies for the developed and developing countries, respectively¹⁶. Furthermore, this is a specific variable (ER_regime) which covers the exchange rate regime from flexible to rigid by means of an ordinal variable that takes on the values of: 0, 1, 2 and 3.

Among individual episodes, an extreme case is Bulgaria, which moved from the flexible exchange rate in the 1990s (ER_regime: 0) to its tight fixing in the form of a currency board in the 2000s (ER_regime:3). Consequently, in the 1996 inflation episode in Bulgaria, the flexible exchange rate contributed to reducing the probability of its outbreak by 0.33% (Table L1-5, Panel 4), while the rigidly fixed exchange rate gave a decisive contribution to increasing the probability of triggering the 2000 and 2004 episodes: 0.99 and 0.78, respectively. This case is followed by less extreme, but equally illustrative examples. Thus in the Czech Republic the ‘intermediate regime’ of the exchange rate (1) pushed toward triggering the 1997 inflation episode: -0.23 (Table L1-5, Panel 4), while the flexible exchange rate restrained the outbreak of the 2007 inflation episode: -0.35. The same pattern was obtained in the Croatian inflation episodes of 1996 (ER_regime:1) and 2004 (ER_regime:0) (Table L1-5, Panel 2). Slovakia contributed to the variations of the exchange rate regime in our sample by moving from the flexible (ER_regime:0) in the 1994 episode to an ‘intermediate regime’ (ER_regime:1) in the 2003 episode; in the first case the exchange rate restrained (-0.25%), while in the second it boosted the probability of triggering an inflation episode (0.15%). Serbia is now in this group: the relatively controlled exchange rate (ER_regime:1) contributed to the probability of inflation triggering in 2004 with 18%, while the free exchange rate (ER_regime:0) in 2008 operated toward reducing the probability of an inflation episode outbreak with -0.21% (Table L1-5, Panels 1 and 2).

The results of the breakdown presented in Table L1-5 also enable the examination of individual inflation episodes. The Hungarian episode of 2006 is interesting because, in addition to the common impact attributed to the rise in food prices, factors specific to this episode also emerged: the oil price rise and the fiscal deficit. As for oil, the hike in its world price of 33% in 2005 had its share in raising the probability of an inflation start in 2006 (25%). The effect of the high fiscal deficit on triggering an inflation episode (30%) is economically much more interesting. Namely, our estimated model with this result captures the consequences of the irresponsible fiscal policy in Hungary from that period – when the fiscal deficit amounted to as much as 9% of GDP. The consequences of such disproportionate fiscal expansion could be felt even in late 2008, when Hungary was the first among transition countries to be hit by the global economic crisis.

¹⁵ For the first nine months of 2008.

¹⁶ Boschen and Weise (2003), observed two periods for the OECD countries: the period of the fixed exchange rate, during the validity of the Bretton Woods Agreement – and after that of a flexible one, by employing a dummy with values of 0 and 1. Domac and Yucel, (2005) did not estimate the effect of the exchange rate in the sample of developing countries.

The Croatian experience, as an economy which emerged from the same institutional framework as Serbia's – is also of interest to the analysis. A rise in the probability of an outbreak of its episode in 2004 can be attributed, for the most part, to the elections, the rise in food prices and the fiscal deficit, albeit more moderate than in Hungary.

Serbia is observed only after 2000, because the 1990s are not comparable with other transition countries. Therefore, in methodological terms, the results for Serbia should be taken with some caution. Two inflation episodes were recorded in the 2000s, which started in 2004 and 2008, while the episode from late 2000, by its character, belongs to the 1990s. As in Croatia, elections in Serbia at end-2003 had the biggest impact on raising the probability of triggering the inflation episode in 2004, as much as 73%, followed by the contribution of the food price rises. Unlike Croatia in 2004, the estimates suggest that in the Serbian case the fiscal deficit was not the factor that contributed to the triggering of inflation, but that the lower flexibility of the exchange rate was (ER_regime:1) compared to Croatia (ER_regime:0); its weight in the increase in the probability of inflation triggering stood at 18% (Table L1-5, Panel 2). New inflation in Serbia in 2008 can for the most part be attributed to the food price rises and to elections, while the fiscal deficit was again not a problem.

The absence of the role of the fiscal deficit in triggering an inflation episode in Serbia seems counterintuitive. A possible explanation is that the effect of the deficit was “mopped up” by the elections, which carry high weights in Serbia: 73% and 46%. Namely, the fiscal deficit widened quickly in the quarter preceding the election, and stood at around 5% of GDP in Q4 2003, and around 7% of GDP in Q4 2007¹⁷, which certainly contributed to the triggering of inflation in the years that followed. On the other hand, the average fiscal deficits for the whole of 2003 and 2007 were considerably lower: 1.1% and 2%, respectively (moreover, considerably lower than the average in the sample), which was the reason not to capture it by the estimated model as a factor which contributed to increasing the probability of triggering the 2004 and 2008 inflation episodes.

5. Conclusion

Our econometric investigation of inflation triggers in transition economies has shown that they are mostly in line with the predictions of economic theory. Our results for the transition countries also show that they are somewhere between the results for developed countries and developing countries, sometimes coinciding with the former group and sometimes with the latter.

Output growth above the long-term trend and the fiscal deficit have proven to be statistically significant factors which contributed, through higher aggregate demand, to raising the probability of an inflation start. In both cases the role of the state in driving inflation was dominant, either due to its wish to boost growth above the sustainable level, i.e., by relying on the Phillips curve trade-off, or simply because of excessive public spending and the resulting deficit. Above-trend-growth as a factor of inflation triggering is common in transition, developing and developed countries alike. On the other hand, the fiscal policy effect was further identified only in the developing countries.

Supply side “shocks”: the oil price increase and, as a new phenomenon, the rise in food prices – appear as significant inflation triggers in transition economies, whereas they do not in the developed and developing countries (except for food prices, indirectly). Part of the explanation for these differences in estimates probably lies in different periods to which the estimates refer. Our estimates have, *inter alia*, included the most recent global inflationary wave of 2007–2008, and demonstrated that its main trigger in the set of transition countries was the rise in food prices. It is very likely that the same result would be obtained for the developed and developing countries as well.

The exchange rate regime has proven to be a significant inflation trigger in transition countries, in the following manner: a more rigid regime increases the probability of an inflation start. This result matches the result in the developed countries, where the model suggests that the probability of inflation triggering was higher in the Bretton Woods regime of fixed exchange rates than after its abandonment and switch to flexible exchange rates.

The impact of politics monitored through the holding of general elections appears as a persistent factor which makes an extremely strong contribution to an inflation start over the entire transition period. In this respect, the transition countries are similar to the developed countries, where a statistically significant impact of elections on triggering inflation was also identified.

Our results for transition countries also suggest that the contribution of identified inflation triggers changes with the advancement of these countries from the early phase of transition in the 1990s to the advanced phase in the

¹⁷ See *Quarterly Monitor* no. 11, 2008.

2000s. What is common for both periods is the strong impact of elections on the probability of inflation triggering, although their weight decreased slightly in the 2000s. The main difference appears in the relative importance of the demand side factors against those on the supply side. In the 1990s excessive demand, that is, consumption, appeared as the main inflation trigger, i.e., the dominant starters were that of above-trend-growth and the fiscal deficit. This result suggests a high prevalence of loose monetary and fiscal policies in those countries in the initial years of transition. The 2000s saw a turnaround, so the main inflation triggers were supply side “shocks” – the oil and food price increases, while demand and the fiscal deficit stopped being dominant. Our results, therefore, suggest that the transition countries considerably improved their macroeconomic policies in the 2000s.

Although the estimates obtained for Serbia should be taken with some caution, because the sample refers only to the 2000s, there still are at least two conclusive results. The first is related to the strong influence of elections on triggering inflation in Serbia. In both identified inflation episodes, in 2004 and 2008, elections from the preceding years had a strong impact on the start of those episodes. The second result is that the new inflation of 2007–2008, as in some other transition countries, was triggered primarily by the increase in food prices in Serbia too.

Appendix 1

Table D-1. Description and Sources of Data Used in the Econometric Analysis

Variable	Definition	Sources
inflation	CPI inflation rate.	WIW Handbook of Statistics Countries in Transition 2007, CD-ROM; data for Macedonia: http://www.stat.gov.mk/ ; data for Serbia: http://webzrzs.statserb.sr.gov.yu
gdp_gap	Deviation of the real GDP growth from its trend, which is computed using Hodrick-Prescott filter with a smoothness parameter of 100.	WIW Handbook of Statistics Countries in Transition 2007, CD-ROM
bs	Central government budget surplus, percent of GDP.	WIW Handbook of Statistics Countries in Transition 2007, CD-ROM; data for Serbia: Ministry of Finance, Republic of Serbia (Memorandum on the budget for various years)
debt	Total government debt, percent of GDP.	WIW Handbook of Statistics Countries in Transition 2007, CD-ROM
elect	Dummy: 1 if an election was held in that year, 0 otherwise.	Data on Elections around the world: http://www.electionworld.org
oil	Percentage change in dollar price of crude oil.	Federal Reserve Economic Data (FRED) http://www.economagic.com/ http://www.ioga.com/
food	Percentage change in index of food commodity prices (2005=100).	International Monetary Fund Data http://www.imf.org/
infdeu	Euro area CPI inflation rate minus home country CPI inflation rate.	Data on Euro area CPI inflation: http://epp.eurostat.ec.europa.eu/
openness	Share of imports of goods and services, percent of GDP.	WIW Handbook of Statistics Countries in Transition 2007, CD-ROM
exr_regime	Actual (<i>de facto</i>) exchange rate regime, four categories: from 0	IMF's Annual Report on Exchange Rate Arrangements and Exchange Restrictions, (various issues) data for Serbia: classification by authors

References

- Boschen, J. and C. Weise, (2003), “What starts inflation: Evidence from the OECD Countries.”, *Journal of Money, Credit and Banking*, 35, pp. 323-349.
- Bowdler, C. and L. Nunziata, (2006), “Trade openness and inflation episodes in the OECD.” *Journal of Money, Credit and Banking* 38, pp. 553-563.
- Domac, I. and E.M. Yucel, (2005), “What Triggers Inflation in Emerging Market Economies?” *Review of World Economies* 2005, Vol. 141 (1), pp. 141-164.
- International Monetary Fund (IMF), “Is Inflation Back? Commodity Prices and Inflation.” *World Economic Outlook*, October 2008, Chapter 3, pp. 83-128.
- *Quarterly Monitor of Economic Policies and Trends in Serbia*, no. 11 FREN, 2008.
- Nojković, A., (2007), “Models of Specific Dependent Variables in Macroeconometric Analysis of Transition Economies.”, doctoral thesis, Faculty of Economics, Belgrade.

Gender Gap in the Serbian Pension System

Nenad Rakić* Gender differences in the pension system depend on status differences in the labor market and the pension system design. Owing to their lower employment rates, women are often covered by pension insurance to a lesser extent than men, whereas their lower lifetime earnings and shorter careers result in lower pensions. Even though the Serbian legal framework favors women in the pension system, their benefits are almost 20% lower than male pensions. Were it not for protective norms, the difference would be even greater – it would equal around 30%.

Rosa Chiappe**

Unlike the majority of European countries, demographic indicators and statistical data illustrate that female retirees in Serbia do not live much longer than men, and they use their retirement income over a shorter period than usually thought. The difference regarding the life expectancy of men and women at 65 years of age is among the smallest in Europe. Therefore, regardless of the 5-year difference in the retirement age, female old-age pensioners receive pensions only 2-3 years longer than men, instead of the expected 7-10 years. Moreover, life expectancy of men who turn 65 is the shortest in Europe.

1. Introduction

Gender differences in the labor market represent a well-known and frequently examined problem. However, the position of women in the pension system is analyzed much more rarely. Given the strong link between the labor market and social insurance, women are, due to their lower participation and employment, covered by pension insurance to a lesser extent than men. Furthermore, the lower educational level of women and their lower lifetime earnings, including a shorter insurance period, result in lower pensions.

Observed by countries, gender differences in the pension system depend on differences on the labor market and type of the pension system. For instance, gender differences can be rather substantial in countries with no additional incentives for women and a close interrelation between pension contributions and benefits. This is especially manifest with systems based on individual accounts. Moreover, in the majority of countries with voluntary private pension systems, women often accumulate less on their personal pension accounts, which leaves them with lower retirement benefits.

This paper marks the beginning of our research on differences between men and women in the Serbian pension system. The second part of the article focuses on legislation that governs the status of men and women in the pension system. The third part elaborates on gender differences within the system, while the fourth part deals with the retirement age. The conclusion contains the main findings of the analysis.

Our findings suggest that even with preferential treatment of women, the discrepancy between the average pension of men and women is not negligible – it stands close to 20%. Unlike the majority of European (and other) countries, demographic indicators show that women in Serbia do not live much longer than men.

2. Serbian Pension System and Status of Women – Legal Framework

From the historical perspective, laws on mandatory pension insurance in Serbia have always bestowed upon women a more favorable retirement treatment, which is the case still today. This is justified by women usually having a lower educational background and lower earnings compared to men. Owing to deeply ingrained traditional values in society, women also have greater responsibilities in their households and families, which accounts for their more frequent suspension or postponement of active labor force participation.

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Authors would like to thank Ms Gordana Matković, PhD, from the Center for Liberal-Democratic Studies, and Ms Katarina Stanić, a BearingPoint consultant at the USAID Serbia Economic Growth Activity project, for reviewing the text.

Within the existing legal framework, women are granted certain advantageous conditions at retirement. In terms of old-age pensions, more favorable pensionable conditions are reflected in a lower retirement age and a shorter pension qualifying period for women, including the pension computation formula that is “biased” towards female pensioners.

After the conclusion of the gradual process of raising the retirement age until 2011, men will retire at the age of 65, and women at the age of 60, whereas the minimum insurance period will equal 15 years. In 2008, the retirement age for women and men has stood at 58.5 and 63.5 respectively. Entitlement to pension can also be realized at the age of 53, with 40 and 35 years of insurance period for men and women respectively, or with the insurance period of 45 years, regardless of age, which is the only precondition unique for both genders. We shall dwell more on the level of the retirement age and its possible equalization in the fourth part of the text.

Pensions are computed at the so-called *German point formula*. Wages of the retiring person are divided by the average wage in Serbia in each insurance year, whereby annual personal coefficients are gained. The sum of these coefficients is divided by the number of years, days and months that are covered by the calculation. When the personal coefficient obtained in that way is multiplied by the total retirement period of the insured person, the personal point is derived. The amount of the pension is arrived at by multiplying the personal point by the general point that is unique for the whole Serbia.

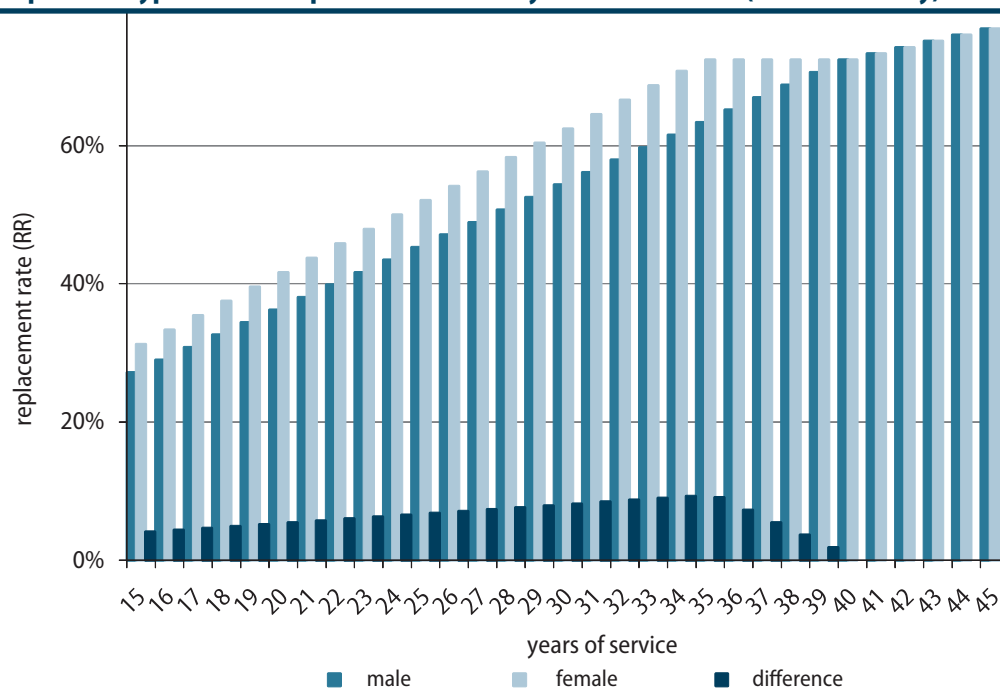
The formula links well the contributions paid and the level of pension, and stimulates the individual to stay longer in the labor market. For over 40 years of service, half a year of service is calculated, which is still stimulating for a person to stay in the labor market. After 45 years of insurance, the further increase in the years of service does not increase the retirement income.

Table L2-1. Hypothetical Replacement Rates by Gender, 2007 (% of last salary)

	Years of service									
	15	20	30	35	36	37	38	39	40	
Men	27.1	36.2	54.3	63.3	65.2	67.0	68.8	70.6	72.4	
Women	31.2	41.6	62.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
Difference (for women)	4.1	5.4	8.1	9.0	7.2	5.4	3.6	1.8	0.0	

Source: Authors' calculation. For more information on the hypothetical replacement rate see K. Stanić: Old-age Income Replacement by Pension System in Serbia - Measurement and International Comparison, Quarterly Monitor No. 13, FREN, 2008.
 NOTE: Female worker with constant average earnings
 Hypothetical net replacement rate = net pension in the retirement year that an average worker would receive (personal coefficient 1) with 40 years of service (personal point 40 general point) / net average earnings in the previous year.

Graph L2-2. Prospective Hypothetical Replacement Rates by Gender for 2007 (% of last salary) and the Difference



Source: Authors' calculation. For more information on the hypothetical replacement rate see K. Stanić: Old-age Income Replacement by Pension System in Serbia - Measurement and International Comparison, Quarterly Monitor No. 13, FREN, 2008.

Gender Gap in the Serbian Pension System

When computing old-age pensions, the insurance period for women is *raised by 15%, until 40 years at maximum*. This practically means that women with up to 35 years of service are added 15% of service. Forty years of service are automatically calculated for those with 35-40 years of service, i.e. less than 15% is added. If a person has worked for more than 40 years, the computation formula remains the same for both genders.

The formula “rewards” women, with the aim of smoothing previous differences in wages and years of service, and actually stimulates them to remain in the labor market. The longer the insurance period of a woman, the greater the influence of the added years of service, but only up to 35 years, whereafter the influence of added years of service is smaller. Gender differences do not exist in case of 40 and more years of service. The greatest incentive/protection is granted to women retiring with 35 years of service, as illustrated by Table L2-1 and Graph L2-2. Consequently, under the assumption that the wages of men and women are the same over their careers, women in Serbia are in a more favorable position than men.

Survivors' pension equals 70% of the pension of the deceased insured/beneficiary¹. Eligibility criteria for survivors' pension in Serbia are gender-specific. The retirement age for widows is five years lower than for widowers, and after its gradual increase in 2011, it will reach 50 and 55 years for widowed women and men respectively.

The retirement age and other entitlement conditions for survivors' pensions are different in each EU member country, but it is noteworthy that these conditions are *equal for both genders*. Exceptions are the Czech Republic where the retirement age for women and men is 55 and 58 years of age respectively, Estonia where pregnant women are entitled to survivors' pension if they remain widows after the 12th week of pregnancy, as well as Cyprus where men can receive survivors' pension only if incapable of fending for themselves.

Entitlement to a *disability pension* does not depend directly on gender – both men and women can qualify for the pension under the same conditions, i.e. only in case of the permanent loss of work capacity and a minimum five years of insurance. The qualifying criterion for a disability pension is the establishment of disability prior to reaching the gender-specific retirement age for old-age pension.

Maternity and child care leave are factors that significantly influence the position of women in the labor force market. The status of women in the pension system indirectly depends on the manner in which these issues have been solved. If women are not provided with maternity benefits, they will not only be in a difficult situation during maternity leave, but also in a disadvantageous position at retirement – they will have shorter years of service and therefore lower retirement income.

Maternity leave in Serbia is composed of antenatal care leave, birth leave and child care leave (can be used either by the mother or father). As the state refunds to the employer salaries and contributions for all three types of leave, leave periods are credited to the pension service. Since December 2005, antenatal care leave has equaled 65% of the woman's previous wage.

Women who have given birth to three or more children are credited additional two years of service. These years of service are not computed in the minimum service mandatory for retirement, but they affect the increase in the personal point and pension of these women. Such benefits are not unusual in other countries as well. For instance, in the Czech Republic, the retirement age for women depends on the number of children that they have borne.

3. Gender Gap in the Serbian Pension System

The pension coverage of the female part of the population equals around 70% for all women above 60, and is somewhat lower for the non-agricultural population. Although significantly lower than pension coverage among men, coverage among women is at a satisfactory level. However, when only old-age and disability pensions are observed (without survivors' pensions), coverage among women who are active in non-agricultural professions is rather low – it stands at around 35%.

¹ In case there is only one inheritor of pension. If there are more inheritors, survivors' pension can equal even up to 100% of pension of the deceased person.

Table L2-3. Pension Coverage of Old-Age Population by Gender (2007)

	Women (60+)	Men (65+)
Total population	930,814	537,056
Total pensioners	637,948	508,384
Coverage (%)	68.5	94.7
Total non-agricultural population	837,511	462,608
Pensioners (without farmers)	504,643	412,617
Coverage (%)	60.3	89.2
Total non-agricultural population	837,511	...
Pensioners (without farmers) - old-age and disability	300,879	...
Coverage (%)	35.9	...

Source: Statistica: Of ce: data on population; Pension and Disability Insurance Fund: data on pensioners

NOTE: The number of agricultural population by gender and age is estimated on the basis of the 2002 census data.

The number of pensioners by age cohorts for the Employee Fund is precise, while data by age cohorts in the Farmers and Self-Employer Funds do not exist. All pensioners are therefore placed in the observed category: 60+ for women, and 65+ for men.

Only 35% of women above 60 of the non-agriculture population receive benefits that they earned on their own. This does not necessarily mean that surviving female pensioners did not work at all. They opted for their husbands' pensions for different reasons. On the other hand, this data indicates that the old agricultural population (above 60 and 65 years of age for women and men respectively) is well covered by pension benefits. There are no gender-specific differences in that respect. Given the state of agricultural pension insurance today, the described situation cannot be expected in future. This topic, however, entails a separate analysis.

Table L2-4. Beneficiaries by Gender, the Employee Pension and Disability Insurance Fund, December 2007

	Total	Women	Children	Men			
Old-age	621.831	285.987	46.0%	-	-	335.844	54.0%
Disability	329.462	129.794	39.4%	-	-	199.668	60.6%
Survivors	308.297	257.576	83.5%	47.407	15.4%	3.314	1.1%
Total	1,259,590	673.357	53.5%	47.407	3.8%	538.826	42.8%

Source: Statistics of the Pension and Disability Insurance Fund.

The share of women in the total number of pension beneficiaries equals 53.5%². Nonetheless, when this data is classified by types of pensions, it is evident that such a high percentage stems primarily from the incomparably higher number of women among survivor pension beneficiaries. Women thus make up 46%, 39.4% and 83.5% of old-age, disability and survivor pensioners respectively³.

Female survivor pensioners account for over 20% of the total number of retirees. The number of survivor pensioners is high, but is lower than in some countries in the region (Table L2-5).

When analyzing the number of *survivor pensioners*, it should be borne in mind that the widow/widower will choose the survivors' pension only if the difference in spouses' revenues is significant, in view of the fact that the survivors' pension represents a mere 70% of the pension of the deceased insured/retiree.

The great number of female survivor pensioners can be the consequence of several factors: (a) substantially lower earnings of women and/or their shorter career length, which accounts for the very low old-age pensions of such women and the decision to receive survivor pensions after the death of their husbands;

(b) lower employment rates among women in the previous decades, which is why women are left with no other income after the death of their husbands. In this case, pension beneficiaries are housewives who have never worked or they worked for several years only (less than the minimum old-age pension qualifying number of years, i.e. less than 15 years), and

(c) the qualifying age for the survivors' pension is lower, which makes retirement and entitlement to some kind of safer income an attractive option, especially in conditions of transition, uncertain employment and wage fluctuations.

² Data refer to employees' insurance only.

³ If children as survivor pensioners are excluded, the share of women in survivor pensioners rises to 98.7%.

Table L2-5. Structure of the Number of Pensioners in Some Countries in the Region

Country	Old-age and disability	Survivors
Czech Republic	77%	23%
Croatia	78%	22.2%
Slovenia	83%	17.5%
Serbia (Employee Fund)	76%	24.3%
Serbia (total)	77.6%	22.4%

Source: For Serbia - Statistics of the Pension and Disability Fund (2008); for the Czech Republic - European Commission report (2005); for Croatia: Croatian Pension Insurance Fund (2008); for Slovenia: Statistics of ZPIZ (2008).

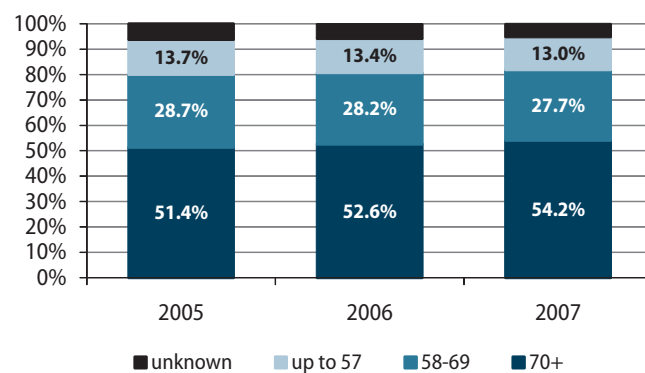
Table L2-6. Number of Survivor Pensioners by Grounds for Receiving Pension, December 2007

	Total survivors' pensions	Number of survivors' pensions				Switching			
		Total	The insured	Beneficiaries		from old-age	from disability	Share (switching in total number of pensions)	
				old-age	disability				
Total	316,471	299,132	76,819	91,761	130,552	10,626	6,713	5.5%	
Spouse	men	3,380	2,844	813	744	1,287	247	289	15.9%
	women	279,096	262,293	57,176	87,139	117,978	10,379	6,424	6.0%
Other (children, etc)	33,995	33,995	18,830	3,878	11,287	...	...	...

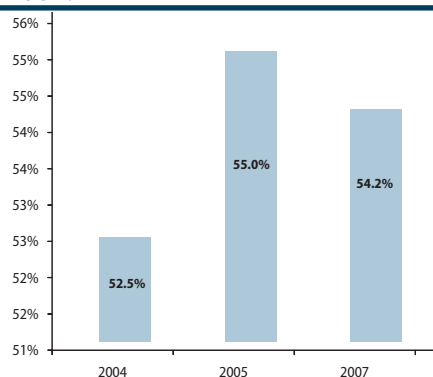
Source: Statistics of the Pension and Disability Insurance Fund.

However, only 6% of female survivor pensioners qualified for pension by deciding to give up on their old-age or disability pensions in replacement for survivor pensions. It appears that if both spouses are pensioners, differences in their revenues are not so substantial to make one spouse, in the event of death of the partner, relinquish their pension in favor of a survivor pension. Accordingly, **the majority of women in receipt of a survivor pension become entitled to it even before qualifying for their own pension, provided they were employed in the first place.**

It is interesting that the majority of survivor female pensioners, i.e. over 100,000 of them, or over 40% of the total number of female survivor pensioners, became entitled to such retirement income after the death of their partners who were disability pensioners. The explanation for this phenomenon lies perhaps in the possibility of early retirement – as the disabled live shorter, the probability that the female partner will outlive her husband and inherit his pension is greater. It should be further explored what happens with new survivor pensioners – do they also inherit disability pensions in great numbers.

Graph L2-7. Age Structure of Female Survivor Pensioners, December 2007

Source: Statistics of the Employee Pension and Disability Fund.

Graph L2-9. New Old-Age Pensioners, Share of Women in Total (%), Employee Insurance, 2004, 2005, 2007.

Source: Statistics of the Employee Pension and Disability Fund.

Table L2-8. Share of Women Among Old-Age Pensioners, 2003–2007

Year	Old-age pensioners	Women	Share
2003	542,685	227,373	41.90%
2004	545,733	232,996	42.70%
2005	565,502	249,146	44.10%
2006	591,004	265,570	44.90%
2007	621,831	285,987	46.00%

Source: Statistics of the Employee Pension and Disability Fund.

In 2007, a mere 13% of female survivor pensioners were below 58 years of age⁴. The conspicuous aging trend among these women (Graph L2-7) can be accounted for by two factors: (1) women inherit pensions more rarely because they work; (2) the effects of the retirement age raised in 2002 are becoming manifest.

The rising employment and higher wages among women make survivors' pensions less attractive. In 2007, the average survivors' pension equaled only 37% of the average wage (compared to 63% in respect of average old-age pensions). This data suggests that the number of survivor pensioners may decrease in future. However, in the last several years, their number has not declined. This aspect should be analyzed more thoroughly, as well as data from the 1990s and data on new survivor pensioners.

As regards *disability pensioners*, a high percentage of men (Table L2-8) is explained by the fact that men usually performed physically harder work and were more exposed

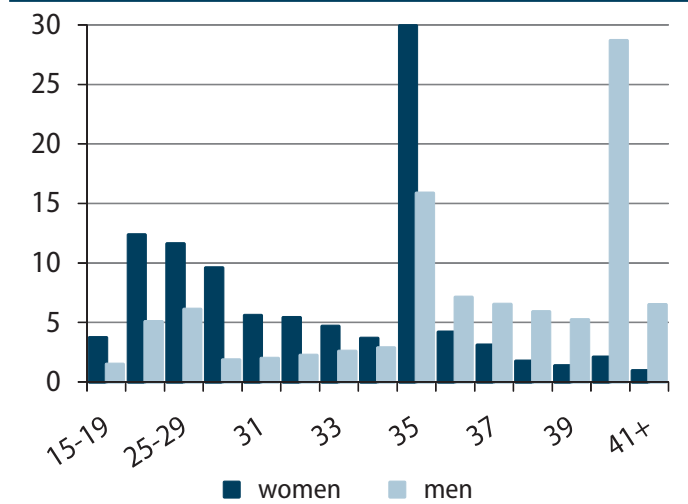
4 Until end-2007, the retirement age for women who qualified for old-age pension was 58.

to the risk of disability. Also, the greater number of men among disability and old-age pensioners results from their higher employment in the past, and probably the fact that men qualify for a disability pension in years when women have already reached their old-age pension retirement age.

The difference in the structure of *old-age pensioners* by gender is a logical consequence of lower employment rates among women, especially in the previous decades. The participation of female old-age pensioners has climbed by somewhat more than four percentage points since 2003. The trend may be justified by the greater share of women among new retirees (Graph L2-9). The rationale behind the greater number of women among new pensioners, however, should be further examined and analyzed.

Graph L2-10 illustrates the distribution of pensioners by years of service. The greatest number of female pensioners retired with exactly 35 years of service (30%). This data can be correlated with the pension computation formula - Table L2-1 and Graph L2-2 suggest that women receive the greatest incentive to retire after 35 years of service. Another reason is probably even more important - the Law envisages the possibility of retiring at the age of 53, provided the woman has worked for 35 years.

Graph L2-10. Distribution of the Total Number of Old-Age Pensioners by Gender and Length of Service, end-2007



Source: RFPDI Statistics

In the last five years, the average pensionable service of new pensioners has spanned between 36 and 38 years of service for men, and 31-32 years for women. On the other hand, the total number of men and women who have retired having completed the full service is very low - a little less than 40% of old-age pensioners in 2007. Interestingly, the share of women who retire at full service (35+) is higher than men's, although this could be partly explained by the fact that a lower number of years of full service is required for women.

Tabela L2-11. Percentage of Pensioners (full years of service) in the Total Number of Pensioners by Gender, Employee Insurance, 2003 - 2007

	Men			Women		
	40+ years of service	Total old-age pensioners men	Percentage (%)	35+ years of service	Total old-age pensioners women	Percentage (%)
2003	90,634	315,312	28.70%	84,365	227,373	37.10%
2004	96,382	312,737	30.80%	92,515	232,996	39.70%
2005	103,440	316,356	32.70%	103,497	249,146	41.50%
2006	110,389	325,434	33.90%	112,915	265,570	42.50%
2007	118,107	335,844	35.20%	123,980	285,987	43.40%

Source: RFPDI Statistics

In 2007, 43% of *old-age women pensioners* completed full years of service (35 years or more), while in 2003, the percentage was not more than 37%. The increase is therefore significant. This trend is consistent with men as well.

Table L2-12. Average Old-Age Pension Benefit - Gender Specific, Employee Insurance 2003-2007

Year	Men	Women	Percentage
2003	10,935	9,181	84.0%
2004	13,020	10,915	83.8%
2005	15,926	13,319	83.6%
2006	18,325	15,255	83.2%
2007	20,467	16,910	82.6%

Source: RFPDI Statistics

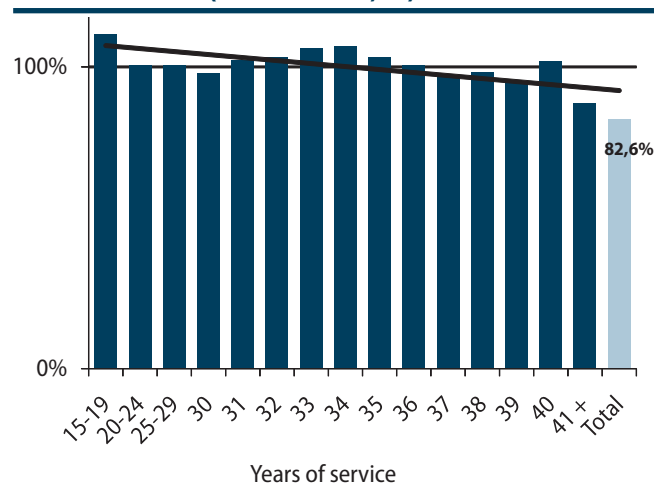
In addition to the achieved progress, it is clear that the low number of retirees with full service, regardless of their gender, is a major problem the pension system is confronted by.

Women receive lower pension benefits than men. In 2007, the old-age pension benefits of women averaged 82.6% of the average pension benefits of male recipients, and over the last few years the ratio has been on the decline.

Gender Gap in the Serbian Pension System

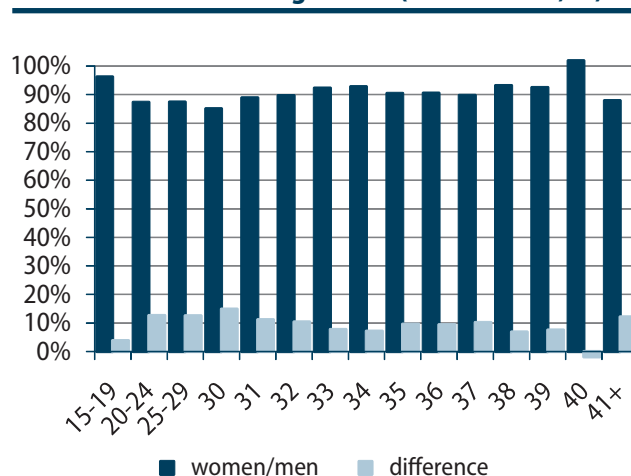
The analysis of pension income of men and women with the same number of years of service, suggests the approximately same levels. Manifestly, the wages women earned previously were lower, but the formula adding 15% to women's professional years equalized the wage differences. However, the average service of women is 5-6 years shorter than with men. Therefore, the formula is not able to equalize both the differences in previous wages and in years of service, resulting in the average pension benefit being **almost 20% lower for women than for men**. If it were not for the formula which adds 15% of years of service, the gap between the average pension entitlements women receive would be 30% lower than the pension income for men.

Graph L2-13. Differences in Pension Benefits per Years of Service (men/women, %) end-2007



Source: RPDIF Statistics

Graph L2-14. Differences in Pension Benefits per Years of Service – Isolated Wage Effect (men/women, %)



Source: RPDIF Statistics

This becomes clearer when the 15% formula effect is isolated when we can see that personal coefficients of women are lower 7% - 14% when compared to men's coefficients for different years of service⁵.

The reason for the increase in the gender gap concerning pension benefit levels over the last couple of years is still unclear. It is possible this is a consequence of an increased percentage of women retiring with full years of service, when less than 15% is added in the formula. However, this is a topic that calls for an exhaustive research.

Finally, when analyzing the state of the *private voluntary pension system* still in its infancy, at first it appears unfavorable from the perspective of well-being of women in retirement. According to the National Bank of Serbia Q2/2008 Report, 91,932 men participated in the system of private pensions, compared to only 55,680 women. Since there are more men participating in the system than women, their accumulated pension assets totaled 2.220 million dinars, while women saved 1.495 million dinars in total.

Nevertheless, as most of the contributions to private pension funds pour in from pension plans sponsored by employers, the numbers merely illustrate the structure of employees in companies which are members of private pension funds.

However, when individual contracts are viewed, women in Serbia save more than men. The average amount on private pension accounts was 24,155 dinars for men and 36,860 dinars for women.

4. Equalizing Gender Difference in the Retirement Age

Redistribution from men to women is typical of pension systems. Even with the same retirement ages for men and women, some redistribution occurs since men live shorter on average hence women receive pension benefits over a longer period. This is the case even with the system of individual accounts in private pension funds, since gender-neutral actuarial tables are used in computations of pensions, which do not differentiate between men and women and use the average life expectancy.

Such redistributive elements entailing gender solidarity are considered acceptable and they are present in all the systems. Nevertheless, if women are allowed to retire earlier than men, this would result in the creation of a

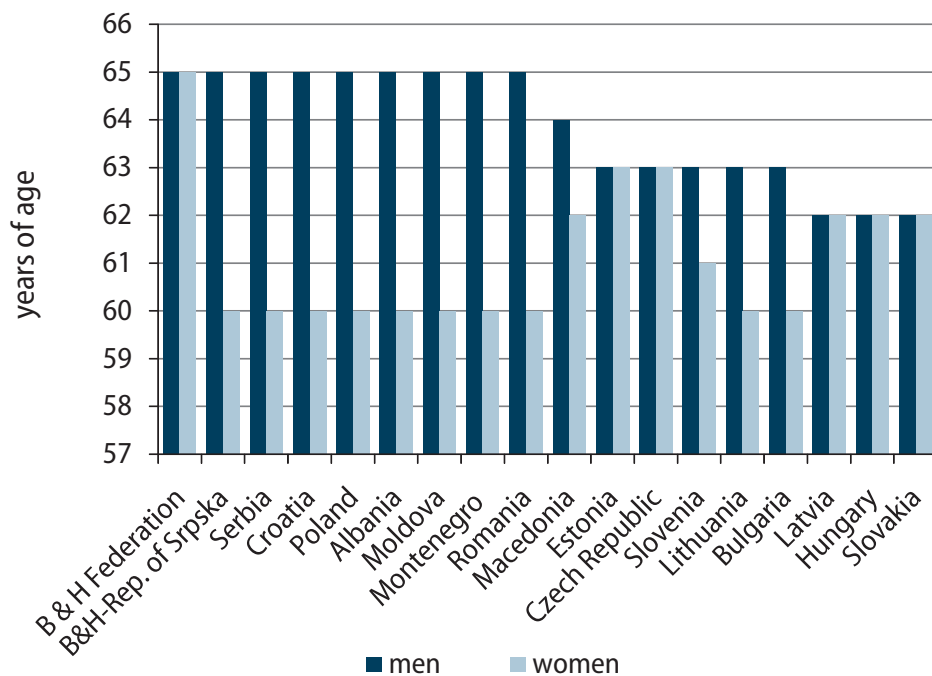
⁵ There were no gender-specific wages data available until 2003.

considerable difference in the length of the period in which pension benefits are received (retirement duration). The difference increases to almost a decade (several years of early retirement coupled with several years of longer life).

Therefore, in addition to the general trend of raising retirement ages, some countries in East and South-East Europe are working on equalization of the retirement ages for men and women, narrowing the gender gap in the retirement ages, on the model of West Europe.

Most of the developed West European countries do not have preferential retirement ages for women. The full pensionable age is generally set at 65 years (France is an exception using 60 years as the full retirement age for both genders). In some countries it is even 67 (Iceland and Norway) although some countries have announced raising the ages to 67 or 68 years and even 70 years in the near future). There are only few exceptions to having different retirement ages (Switzerland: 65 men, 64 women; Austria: 65 men, 60 women).

Graph L2-15. Retirement Ages: East and South East Europe (after having increased the retirement ages)



Source: MSSOC & MSSCEO Tables

There is a somewhat different situation in countries of East and South-East Europe. Most of the countries are gradually lifting the retirement ages, and in some the retirement ages for men and women are being equalized. Once the process is finished (**between 2011 and 2019**), the situation will be the following:

- In countries with equalized retirement ages for both genders, the ages are lower than in West Europe (Estonia and the Czech Republic – 63; Hungary, Latvia and Slovakia – 62, except for the Federation of Bosnia and Herzegovina where it is 65)⁶
- The retirement age difference of five years for men and women is retained – 65 years for men and 60 for women (Serbia is one of the countries constituting this group, see Graph L2- 15)
- In other countries the difference in retirement ages ranges from two to four years (Bulgaria, Macedonia, Slovenia, Lithuania and Turkey).

Considering the fact that there is a five-year difference in Serbia, we did expect a high level of redistribution toward women, who receive retirement benefits 7-10 years longer than men. It is therefore surprising that the Pension and Disability Insurance Fund data shows that the difference is quite minor. Women in Serbia actually receive pensions only two to three years longer than men (disability pensions four years).

⁶ Actually, the difference still exists in the Czech Republic, since the retirement age for women is 59 - 63 years, depending on the number of children the woman has given birth to. Only, women without children retire at same age condition as men, at 63 years.

Table L2-16. The Average Retirement Duration, Employee Insurance 2003–2007

Pension	Gender	2003	2004	2005	2006	2007
Old-age	men	15	15	14	15	16
	women	18	18	18	18	18
Disability	men	16	17	17	17	17
	women	19	19	20	20	21

Source: RFPDI statistics

The Pension and Disability Insurance Fund data shows that the age of death of female pensioners is on average the same as for men. Besides this, it is possible that pensioners with accelerated service, constituting one-third of the total number of old-age pensioners, and mostly men, increase the average period of receiving pensions for men and in this way narrow the gender gap. This is a topic that needs to be explored additionally.

The finding indicating that men and women old-age pensioners die at same age is surprising. However, when we look closely at the demographic statistics for Serbia, it appears there are no marked gender differences in life expectancy between men and women. At the age of 65 years, the difference is actually very slight – less than two years. This is one of the lowest differences in the life expectancy of men and women in Europe (Graph L2-18).

Graph L2-18. Gender Differences in Life Expectancy (at the age of 65 years)

Graph L2-19. Gender Differences in Retirement Ages and the Life Expectancy for the Years – Expected Retirement Duration

	Men		Women		The projected difference in retirement duration (women-men)
	Retirement age	Life expectancy at retirement - estimated retirement duration	Retirement age	Life expectancy at retirement - estimated retirement duration	
EU-15 + NO + SZ					
Austria	65.0	17.3	60.0	25.1	7.8
Belgium	65.0	17.0	65.0	20.6	3.6
Denmark	65.0	16.2	65.0	19.2	3.0
Finland	65.0	16.9	65.0	21.2	4.3
France	60.0	22.0	60.0	27.0	5.0
Germany	65.0	17.2	65.0	20.5	3.3
Greece	65.0	17.5	65.0	19.4	1.9
Ireland	65.0	16.8	65.0	20.2	3.4
Italy*	65.0	17.5	65.0	21.5	4.0
Luxembourg	65.0	17.0	65.0	20.3	3.3
Netherlands	65.0	16.8	65.0	20.3	3.5
Norway	67.0	16.1	67.0	19.2	3.1
Portugal	65.0	16.6	65.0	20.2	3.6
Spain	65.0	17.9	65.0	22.0	4.1
Sweden	65.0	17.7	65.0	20.9	3.2
Switzerland	65.0	18.5	64.0	22.9	4.4
Great Britain**	65.0	17.0	65.0	19.5	2.5
Average	64.8	17.4	64.5	21.2	3.8
EU-7 + 2 + Cr					
Czech Rep.***	63.0	16.2	61.0	21.6	5.4
Estonia	63.0	14.3	63.0	19.9	5.6
Hungary	62.0	15.3	62.0	20.0	4.7
Latvia	62.0	14.1	62.0	19.5	5.4
Lithuania	63.0	14.0	60.0	21.5	7.5
Poland	65.0	14.5	60.0	22.9	8.4
Slovakia	62.0	15.2	62.0	19.8	4.6
Bulgaria	63.0	14.4	60.0	20.3	5.9
Croatia	65.0	14.2	60.0	22.0	7.8
Romania	65.0	13.6	60.0	20.5	6.9
Average	63.3	14.6	61.0	20.8	6.2
Serbia	65.0	13.5	60.0	19.6	6.1

Source: EUROSTAT for life expectancy, Pension Panorama & MSSOC for retirement ages

Note: Life expectancy data for 2006

* data from 2004

** data from 2005

*** for women with two children, women with children retire at 59-62 years of age, depending on the number of children, women without children retire at 63

Table L2-19 attempts to project the expected retirement duration per gender for all European countries including Serbia. The life expectancy for the year which represents the standard retirement age of the country in question is used as an approximation of the expected retirement duration. This way of approximation is certainly not precise and has methodological shortcomings; nonetheless it is informative enough to allow us to draw some conclusions from it. First, notwithstanding the significantly lower retirement ages for women, the retirement duration for women is below the average compared with the EU-15 countries and the EU countries of the region. Second, the gender gap in retirement duration – which is six years according to this projection (higher than the actual), is at the level of the countries in the region and higher than in EU-15, due to the comparatively short retirement duration of 13.5 years for men compared to more than 17 years in EU-15. Therefore, it is more reasonable to conclude that the retirement age for men, at the age of 65 years, is too high considering the Serbian demographic situation.

5. Conclusion

Differences in pension income after retirement between men and women are an important issue, requiring a more extensive analysis. As a result of this preliminary research, two most important findings can be singled out. First, the pension system is designed to favor women. If men and women earned identical wages and had the same career lengths, women would be at an advantage. At the same time, the current state demonstrates that in spite of favoring women, the gender gap in pension income is not irrelevant and nears 20%. If the formula did not provide a 15% top-up for women, the difference would amount to around 30 percent.

Second, it is always necessary to analyze retirement ages in view of life expectancy. This should certainly be the case when it comes to the issue of equalization of retirement ages for men and women. Differing from most of the European (and other) countries, demographic indicators point out that women in Serbia who have attained a certain number of years (for example 65) do not live much longer than men. Pension system statistics are even more drastic. Men and women, old-age pensioners, die after reaching the same age – 75 years on average. Consequently, it appears that women in Serbia have a shorter retirement duration than what is generally held.

There are several other issues of concern demanding further research. One of the topics for consideration should be what happens with new survivor pensioners. Do new survivor pensioners inherit disability pensions in large numbers? Or is it a trend attributable to the crisis in the 1990s? How to account for the higher percentages of women in new old-age pensioners? What caused the difference in the average old-age pension benefit of men and women to broaden over the last several years? What is upsetting the subtle difference in retirement durations, besides the demographic factors – pensioners with accelerated service, different demographic trends for employed women compared to the other women, etc?

References

- The Law on Pension and Disability Insurance, RS Official Gazette no.34/03..., 101/06;
- The Statistical Report of the Serbian Fund for Pension and Disability Insurance 2004 - 2008;
- MISSCEO Comparative Tables, the Council of Europe, http://www.coe.int/t/dg3/socialpolicies/socialsecurity/MISSCEO/tables_en.asp;
- MISSOC Comparative Tables, http://ec.europa.eu/employment_social/missoc/db/public/compareTables.do?lang=en;
- The Gender Dimensions of Social Security Reform in Central and Eastern Europe: Case Studies of the Czech Republic, Hungary and Poland, edited by Elaine Fultz, Markus Ruck and Silke Steinhilber (2003), ILO;
- The Gender Dimensions of Social Security Reform in Central and Eastern Europe: Case Studies of Romania and Slovenia, edited by Elaine Fultz (2006), ILO;
- Pension Panorama, Edward Whitehouse (2007), The World Bank
- Eurostat, http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/populat/pop/demo/demo_mor&language=en&product=EU_MASTER_population&root=EU_MASTER_population&scrollto=148;
- Katarina Stanić, Old-Age Income Replacement by Pension System in Serbia, QM13, FREN 2008;
- EC Report “Adequate and sustainable pensions”, Synthesis report 2006: http://ec.europa.eu/employment_social/spsi/docs/social_protection/2006/czech_en.pdf;
- Statistics of the Croatian Pension Insurance Fund - HZMO (2008): <http://www.mirovinsko.hr/UserDocsImages/korisnici%20mirovina%202008/km9za8.htm>;
- Statistics of the Slovenian ZPIZ (2008): <http://www.zpiz.si/src/msp/200809/index.html#s01>;
- The National Bank of Serbia, Supervision of Pension Companies Report, Q2/2008.

HIGHLIGHTS: Global Financial Crisis and Serbia

Highlights 1. Serbia: Sudden Stop in Capital Inflows and Medium-Term Consequences of the Financial Crisis

QM

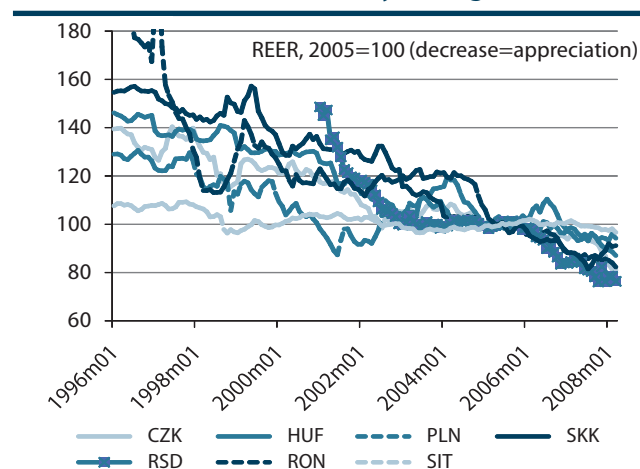
1. Capital Inflows: Effects and Risks

Serbia, like many other transition countries, has over the past several years been recording substantial capital inflows. The IMF's view is that the liberalization of banking systems led to large capital inflows into transition countries,¹ which consequently led to major current account deficits. These large capital inflows have, in short, financed growing current account deficits. These countries therefore face the risk of sudden stop of capital inflows, with nations such as Serbia, with very high current account deficits, facing particularly adverse consequences. When inflows cease, the first to suffer is the national currency; this has been happening over the past two months in Serbia, but also in other emerging economies. This article, through a comparative analysis, investigates possible consequences of a sudden stop in capital inflows on the exchange rate and other key macroeconomic indicators (current account deficit, GDP growth, and inflation), as well as possible changes to these indicators over the coming years.

High capital inflows into emerging economies are a consequence of the liberalization and globalization of the banking sector that has been in evidence since the 1990s, as well as the global trend of ever greater openness of capital accounts. The EU accession process is also noteworthy in the case of the East European nations: by embarking on European integrations, these countries became an increasingly stable and more interesting destination for investment, which additionally boosted capital inflows.

One of the most easily identifiable consequences of high capital inflows is the appreciation of the national currency. Graph 1 shows real effective exchange rates for selected East European currencies for the period from 1996 to the first half of 2008. It brings out that all these currencies appreciated markedly, with the trend accelerating since 1999. Serbia fits into this pattern, and the dinar has also seen significant appreciation in real terms over the past several years.

Graph 1. Europe: Real Effective Exchange Rates, Selected Currencies/Euro (Monthly Averages), 1996-2008



Source: Eurostat.

In addition to high capital inflows, we can identify another two key reasons for such robust appreciation. The first has to do with the fact that East European currencies had initially been undervalued. The integration of these countries into the European and global economies has seen this disparity reversed, i.e. the currencies have gained in value. The second reason, directly linked to the first, is the relatively high growth of these countries' productivity and GDP. After a transition recession in the early 1990s, they recorded growth rates of both productivity and GDP that outstripped the rest of the European Union. The higher growth in productivity in a transition country than in its trading partners causes the real appreciation of its national currency. These two factors can be considered "normal" and "desirable" reasons for appreciation.

Strong real appreciation caused by capital inflows need not be negative. The consequences depend on, among other things, *where* capital inflows are directed: into consumption, or investment in the tradable, export-oriented sector of the economy. If they are directed into investment, i.e. if capital inflows lead to a rise in productivity and competitiveness in the tradable sector of the economy, appreciation need not be a major issue. An example of this is Slovakia, where real appreciation amounted to some 70% from 1999 to 2007, while exports rose from €9.6 bn to about €42 bn.² The country's foreign trade deficit stood at about €1 bn throughout this period, but dropped from 5% of GDP to just 1.5%.

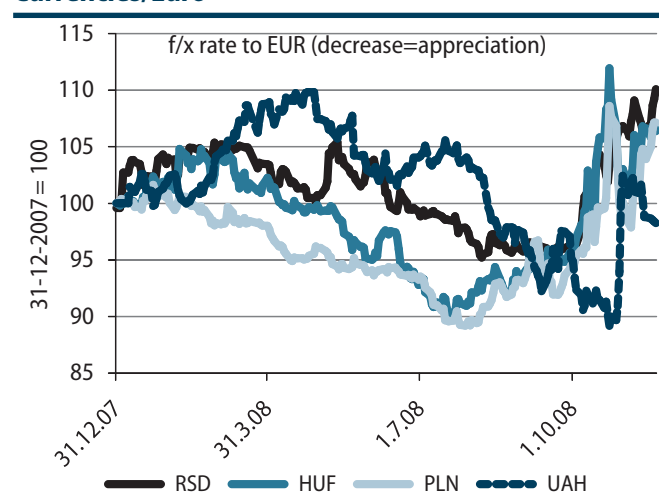
* Main authors of this part of the text are Pavle Petrović and Duško Vasiljević.

1 IMF World Economic Outlook, October 2006, Chapter 6.

2 Source: Eurostat.

Starting in mid-2008, the global financial crisis caused a sudden turn and dramatic drop in capital inflows to emerging markets. This sudden halt made its mark first on the exchange rate of many currencies, including the Serbian dinar. After these had been nominally appreciating for most of 2008, they suddenly plunged in September (Graph 2). The dinar lost some 15% of its value against the euro in October and November, while some other East European currencies suffered similar blows. For instance, the Hungarian forint fell 15% against the euro from 15 September to 23 October; the Polish zloty lost 14%. In the last week of October alone, the Ukrainian hryvnya depreciated against the euro by as much as 15%. A combination of measures put into place by governments, central banks, and international financial institutions (primarily the IMF and the European Central Bank) has led to a partial stabilization of the exchange rate in most of these countries.

Graph 2. Europe: Daily Exchange Rate, Selected Currencies/Euro



Source: European Central Bank

2. Serbia: Medium-term Consequences of the Sudden Stop in Capital Inflows

The sudden stop and reversal of capital inflows faced by Serbia and other emerging economies over the past two months raises the question of the possible medium-term consequences of changes to capital flows. The answer to this question will also provide a good indication of what will happen to the Serbian economy's most important aggregates.

In a recently published comprehensive analysis of a large sample of countries and episodes of large capital inflows, Reinhart and Reinhart (2008)³ conclude that

³ Reinhart, C, and Reinhart, V. (2008): "Capital Flow Bonanzas: An Encompassing View of the Past and Present", NBER Working Paper Series, National Bureau of Economic Research.

large capital inflows generally lead to an acceleration of economic growth, the growth of the current account deficit, a real appreciation of the currency, and a drop in inflation.⁴ Pro-cyclical fiscal policy also contributes to an acceleration of economic growth: such policies were at various times pursued by many East European countries, including Serbia, whose growth of public spending in real terms amounted to a high 12.1% and 10.3% over the course of 2006 and 2007 respectively (both election years). The same period saw GDP grow at an annual rate of 5.7% and 7.5% respectively. The share of overall public expenditure in GDP rose from 39.7% in 2005 to as much as 42.8% in 2007. Higher government expenditure at a time of already high economic growth gave an additional boost to economic activity, but also increased the current account deficit. As in other transition countries, such a fiscal policy was pursued in Serbia on the assumption that high capital inflows were the norm and will continue "indefinitely", and so could easily be used to finance the growing current account deficit.

Stylized facts, based on an analysis of the averages of episodes of high capital inflows in many medium income countries, leads to the following conclusion: after a halt in capital inflows, the processes described above are reversed. (1) The current account deficit gradually decreases and after four years, on average returns to the level it was four years before the capital inflows peaked. (2) GDP growth decelerates, but, on average, remains higher than before the inflows began. (3) The inflation rate returns to the level of before the inflow episode on average as early as the first year after the halt, and remains at approximately that level. (4) The real exchange rate depreciates suddenly; the appreciation that accumulated during the episode of high inflows is virtually annulled, on average, as early as the first year after the stop. This real depreciation typically manifests itself as nominal depreciation, rather than as a drop in price level.

Over the past several years, or rather during the period of increased capital inflows, the basic indicators of Serbia's economy have followed the pattern described above (Graphs 3 to 6). If we take 2008 as the year when capital inflows peaked and then ground to a halt, we will see that it is in 2004 that the current account deficit started to worsen, economic activity to accelerate,⁵ and the dinar

⁴ The authors discuss trends in a large number of countries, and the results obtained represent an average of individual country trends. They should therefore be taken as only a general indicator.

⁵ We use non-agricultural gross value added (GVA) as the measure of economic activity, rather than GDP. We consider this a more reliable indicator of the actual trends in economic activity, as agriculture stands under the strong influence of exogenous (primarily climatic) factors that obscure events in the rest of the economy.

to strengthen appreciably. Inflation is the only indicator not behaving in line with the average pattern of other middle income countries: inflation entered a period of substantial decline directly after the dinar started to gain value (in mid-2006). Thus, from mid-2006 to mid-2007, the y-o-y inflation rate fell from about 15% to some 5%. Over the course of this period, inflation followed the expected pattern. However, inflation picked up pace in mid-2007, and again reached double-digit levels later that year. This acceleration was not caused by deviations from the pattern seen elsewhere, but rather by exogenous factors, or supply-side shocks: significant rises in the prices of oil and agricultural produce during 2007 and part of 2008. To eliminate the influence of these exogenous factors, we have taken into account trends in underlying inflation, i.e. inflation excluding petroleum products and agricultural produce. Underlying inflation is seen to be generally following the average pattern seen in developing countries described above.

Graphs 3 to 6 show the average trends of these indicators in other medium income countries and in Serbia. The Graphs have a timeframe of four years *before* to four years *after* the peak in capital inflows. Year 0 is the peak and stop year. The Graphs also show movements in the same indicators for Serbia (as has already been noted, we have used the growth of non-agricultural GVA instead of GDP growth, and underlying inflation instead of headline inflation). Year 0 for Serbia is 2008. Based on these patterns, we can also provide a broad forecast of the movements of key macro-indicators over the coming several years.

The main conclusion of this analysis is that we can expect a shift in key macro-economic indicators over the coming several years. It is highly likely that the current account deficit will fall, the dinar will depreciate considerably, and economic growth will slow down to some extent. We have attempted to provide a rough estimate of the scale and timeframe of these changes below.

The current account deficit will gradually decrease, and could fall to below 10% of GDP by 2012. This is a major departure from 2008 (with a deficit of some 18% of GDP), but from a macro-economic balance standpoint, it would be desirable for the deficit to decrease even more, to about 8% of GDP. If we directly apply the average pattern identified in other mid-income countries, 2009 could see the CAD drop by about three percentage points of GDP, i.e. to some 15% of GDP. In our opinion, such a large adjustment would be too much for Serbia: the deficit could actually stand at some 16% of GDP. In absolute terms, it could amount to slightly over €5 bn in 2009. This would be a major reduction relative to 2008, when the deficit stood

at over €6 bn, but is still a large amount, and begs the question of where the financing will come from. A more important adjustment could occur through the foreign trade deficit, which will amount to over €7 bn in 2008 (roughly speaking, imports will amount to over €14 bn, and exports to just over €7 bn). To actually see such a cut in the current account deficit, the foreign trade deficit needs to be brought down by about €1 bn. A possible scenario is to have exports rise by 10% in 2009 (close to the 2008 growth rate, and more than twice lower than the 2007 growth rate), while imports should fall slightly (by some 2% to 3%) in relation to 2008. The large drop in oil prices will contribute greatly to the reduction in imports.

The real exchange rate⁶ could return to 2004 levels as early as next year. This would mean that the nominal exchange rate could stand at between 100 and 110 dinars for €1 by the end of 2009. Comparative analyses of other mid-income countries show that, when capital inflows are halted, the entire appreciation of the currency accumulated over years of high inflows is annulled within one year. This process takes place through rapid nominal depreciation.⁷ The dinar's real appreciation from 2004 to September 2008 amounted to slightly over 30%. This means that it would take a real depreciation of some 40% to bring the real exchange rate back to 2004 levels. Based on this, we have arrived at the conclusion that the exchange rate could stand at between 100 and 110 dinars for €1.⁸ About half of this adjustment has already taken place during October and November. The dinar has nominally weakened against the euro by slightly over 15% (and against the dollar by some 30%). To reach the nominal exchange rate of 100-110 dinars for €1 would take a depreciation of another 15% to 20%. Thereafter, the real exchange rate should remain at approximately the same level, meaning a nominal depreciation of some 6% to 8% annually.

Inflation could drop to about 8% next year, and then slowly decline over the coming several years. By directly applying the general pattern, we arrive at the conclusion that underlying inflation (i.e. inflation minus oil products and agricultural produce) should hover around nearly 12% in 2009. This would mean that total inflation would be some 10%, due to the drop in oil prices. However, for reasons we have described in detail in the Highlights article on inflation in 2009, we estimate that inflation will see a slightly steeper drop, i.e. that total inflation

6 This is the real effective exchange rate where, according to the NBS definition, the basket is made up of the US dollar, with a share of 30%, and the euro, with a share of 70%.

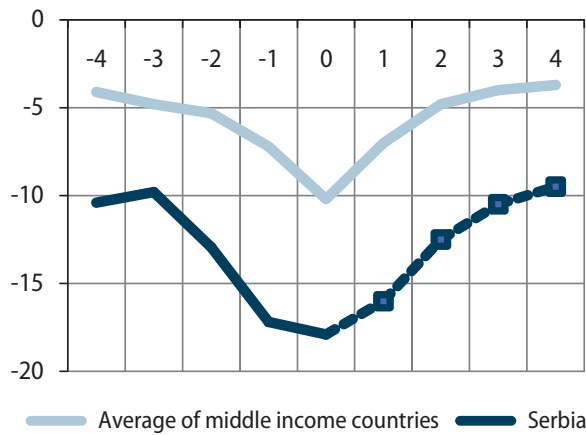
7 Goldfajn, I, and Valdes, R. (1999): "The Aftermath of Appreciations", Quarterly Journal of Economics.

8 Our assumption was that there would be no major shifts in the euro/dollar exchange rate in 2009.

will be about 8%, with underlying inflation at the level of about 9% to 10%. We believe that inflation will thereupon further decrease over the coming three years: the NBS has shifted to targeting total inflation (instead of, as hitherto, core inflation), and will take steps in its policies to curb inflation.

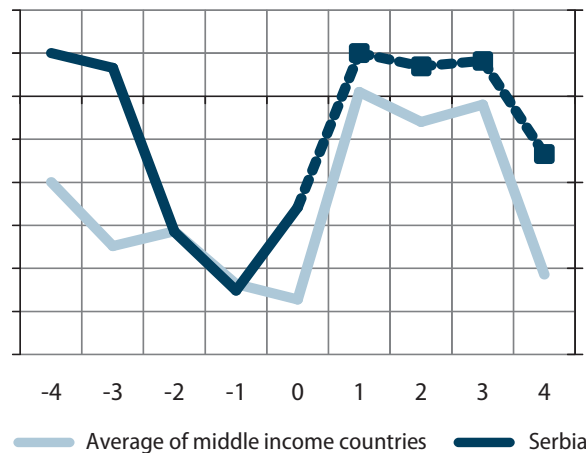
Economic growth will be significantly lower in 2009 than in 2008. Once again, a direct application of the general pattern yields the result that non-agricultural GVA should grow by about 5% to 5.5% in 2009, corresponding to GDP growth of between 4.5% and 5%. However, as we have explained in detail in a separate Highlights article on economic growth, we believe that GDP growth will be lower in 2009, and will stand at some 3%. We expect that economic growth will see a recovery as early as 2010, when GDP growth could see approximately the same levels as in 2008.

Graph 3. Current Account Deficit (in % of GDP)

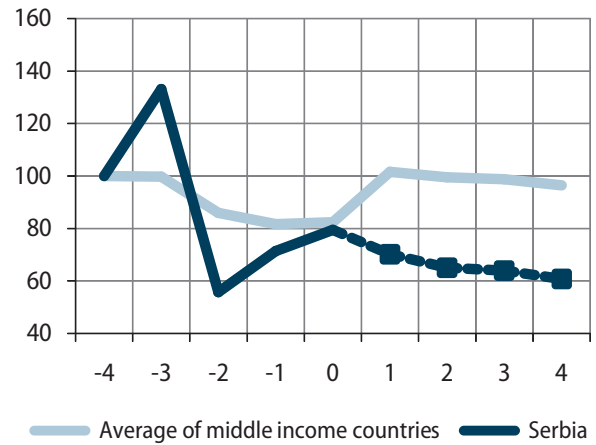


Note: Data for 2004 and 2005 have been adjusted to compensate for the effect of the introduction of VAT.

Graph 4. Changes to the Real Effective Exchange Rate

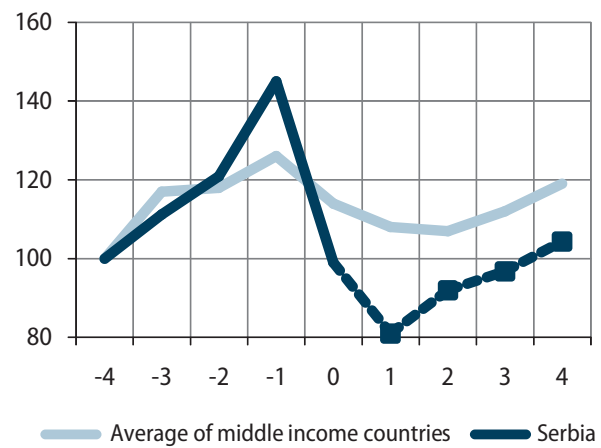


Graph 5. Inflation Rate (Inflation rate in Year -4 = 100)



Note: The rate for Serbia is underlying inflation (inflation minus oil products and agricultural produce)

Graph 6. GDP Growth Rate (GDP growth rate in Year -4 = 100)



Note to Graphs 3 to 6: The Graphs show averages for about forty medium income countries (for details, see Reinhart and Reinhart [2008]), and data for Serbia. The data is annual. Year 0 is the year of peak capital inflows and subsequent halt. For Serbia, Year 0 is 2008. Source: Reinhart and Reinhart (2008), QM.

Highlights 2. How High Will Inflation Be in 2009?

*QM**

Total inflation at end-2008 is expected to stand at below 10%. What the exact inflation rate at the end of the year will be depends for the most part on which of the announced price rises the government will go through with immediately, and which will be put off for next year. To recall, the price hikes announced were those of landline telephony and public utilities (because of the rise in gas prices), while excise duty on oil products and electricity were also set to rise. As for core inflation, it will far exceed the NBS target band, and is expected to stand at between 10% and 11%.

Serbia will be entering 2009 with a relatively high inflation rate. The y-o-y inflation rate stood at 10.7% in Q3 (Table T2-1), and will amount to some 10% in Q4. In addition, the underlying inflation trend (i.e. inflation excluding agricultural and petroleum products) stands at over 10% at the annual level (Graph T2-2). The question is, what will happen with inflation next year?

In *QM's* estimate, inflation will in all likelihood slow in 2009, and will end the year in single digits and lower than in 2008.¹ Although the high volatility of external factors (primarily the global economic crisis and the uncertainty over how long it will last and how severe it will be) makes it difficult to make accurate forecasts, we shall consider factors that will affect inflationary trends in 2009 – and that have led us to conclude that inflation will slow down.

We shall first discuss key *supply-side factors* and their probable impact on inflation.²

Oil prices will significantly contribute to a dampening of inflationary pressures in 2009. According to relevant forecasts, oil will be markedly cheaper in 2009 than in 2008. For instance, according to updated November figures from the IMF's *World Economic Outlook*, the average price of oil in 2009 will be lower by 32% than in 2008. More specifically, current estimates put the price of oil at around \$68/barrel, much lower than earlier predictions, which had estimated it in the range of \$100/barrel.³ Such a major downward revision of expected oil

prices is mainly due to the fact that developed economies are entering a recession that will drive demand and oil prices down.

Prices of other commodities, mainly agricultural produce and food products, should also contribute to a reduction of inflationary pressures. According to the latest IMF estimates, next year's prices of other commodities will be lower by about 19% than in 2008. This fall will to a great extent be the consequence of the declining prices of agricultural produce and food products. However, whether this global trend will have an impact on Serbia depends greatly on the efficiency of the goods market, and whether there are monopolies in the production and retailing of food. If there are monopolies in a market, downward pressures on prices will be negated to a large degree by the monopolies' anti-competitive behavior. However, we still believe that – even if they do not go down – the prices of agricultural produce and food products in Serbia will exert a much milder pressure on inflation than in 2007 and the first half of 2008.

The weakening dinar will, on the other hand, lead to pressure for higher price growth. Over the course of the past two months (October and November), the dinar lost some 16% of its value against the euro (and over 30% against the dollar). It is very likely that the dinar will weaken by several more percent over the coming few months. The depreciation of the dinar directly impacts higher inflation through the rising prices of imports, both consumer goods and raw materials. Its influence has been weakening of late, though, and it is our estimate that the exchange rate pass through is now not more than 0.2 to 0.3 (i.e. 20% to 30% of the rise in the exchange rate will translate into inflation). However, such drastic depreciation is bound to affect inflation; this is the strongest inflation-boosting supply-side factor.

Let us also consider the most important *demand-side factors*, and their likely impacts on inflation.⁴

Public spending will exert pressure on greater price growth over the coming few months, but this impact will lessen over the course of 2009, and likely end up neutral. The fourth quarter can expect to see a major increase in government spending, and a high fiscal deficit, which could well exceed 3% of quarterly GDP.⁵ Such a high Q4 deficit will put pressure on greater price growth in early 2009. Over the course of the next year the budget will be more balanced (the deficit forecast for 2009 is 1.5% of GDP), so government spending will in all likelihood have a fairly neutral effect on price growth for the rest of the year.

4 It was supply-side factors that drove the last period of accelerating inflation, in the second half of 2007. Still, demand-side factors accommodated this impact and contributed to an even greater rise in inflation.

5 See Section 6, Fiscal Flows and Policy.

* Authors of this part of the text are Pavle Petrović and Duško Vasiljević.

1 This discussion does not take into account a scenario of a deep foreign exchange crisis and the consequent explosion of inflation. Such a scenario is possible, but highly unlikely.

2 Over the second half of 2007 and first half of 2008 inflation accelerated primarily as a result of movements in demand-side factors. More specifically, dramatic rises in the prices of agricultural produce, food products and oil led to a sudden acceleration of inflation to relatively high levels.

3 The effect of lower oil prices may be offset to a degree by the strengthening dollar.

Much reduced credit availability will make a major contribution to curbing inflation. Over the next several months we can expect a significant reduction in credit growth due to difficulties caused by the global financial crisis. A major drop in lending to households – and especially consumer lending – has already been in evidence throughout Q3: the net growth of lending to households amounted to a mere €9 mn in Q3.⁶ A drop in credit causes a fall in demand, thereby cooling inflation. The second half of next year may still see a slightly higher credit growth rate, but this will depend on external factors and the global economy's pace of recovery.

A drop in economic activity will also influence a reduction in inflation. In all likelihood, we will over the coming quarters see a slowdown in economic activity: real GDP growth will drop to about 3% next year, and runs a real risk of being even lower.⁷ Any drop in economic activity dampens demand and, consequently, reduces inflation.

Wage and pension growth will have a neutral impact on inflation, or may even take some of the pressure off price growth. Real wage growth has, for the past year, been below GDP growth. Over the coming year, real wage growth will probably remain relatively low. Wage growth in the public sector has been capped at a nominal 8% under the agreement with the IMF, which means that there will be no growth in real terms. The public sector employs over 450,000 people, or slightly under a quarter of the total number of those employed. Even if the rest of the economy were to see wages grow by about 5% in real terms (approximately equal to the growth rate in 2008; the 2009 rate is likely to be lower), total wage growth in real terms would amount to some 3.5%, in line with GDP growth, which means wages should have a neutral effect on inflation. Pensions have been frozen for 2009, but growth will spill over into next year owing to the increase in pensions in November 2008. The y-o-y real pension growth will thus slightly exceed GDP growth in 2009. However, a dramatic rise in pensions, at one point seemingly very likely, has now been avoided; pensions will thus in all probability not have an adverse effect on the macroeconomic balance after all.

When all these factors are considered, the conclusion is that next year's inflation will in all likelihood be in the single digits, as well as that the government's estimate of 8% is realistic. Two key risks can be identified in the context under consideration here: the depreciation of the dinar, and fiscal deficit in Q4 2008. Inflation may see mild growth in early 2009 under the influence of these two factors. However, we are of the opinion that

the remaining factors will prove weightier and slow inflation down to single digits.

The NBS will in future target total inflation as measured using the harmonized consumer price index. The target for next year is an inflation rate of 8% plus or minus 2% (i.e. a band of between 6% and 10%). With a view to this, the NBS will sign an agreement with the Serbian government on cooperation in attaining the targeted inflation band. This change will lend additional credibility and weight to the policy of inflation targeting: the NBS had hitherto targeted core inflation, which is made up of only half of the prices that make up total inflation. As total inflation is, after all, much more important to the public, this change will lead to greater relevance of policies pursued by the NBS. Another positive development is the fact that both the NBS and the government will commit themselves to cooperation in achieving inflation-related goals. This will create room for necessary price corrections to take place in periods when the rest of inflation is dormant. For instance, in late 2006, inflation was practically completely reined in, making that an excellent time to raise prices of electricity and other energy sources. However, this was not done for political reasons (an election campaign was in full swing). The necessary price hikes are now much more difficult to accomplish, as inflation is already relatively high; price rises are thus further put off and toned down. This, in turn, further skews market signals, stimulating irresponsible energy use and making it impossible for certain large public enterprises to operate at a profit, which reduces their value.

In closing, let us reiterate that the new consumer price index (CPI), rather than the retail price index (RPI), will be used to officially measure inflation from next year. The new CPI is calculated using methodology identical across the European Union (it relates to HCPI used in EU), and differs from the RPI in the weighting accorded certain products and services; we will describe methodological differences between these two indexes in the next issue of *QM*. The new CPI and the RPI exhibit high degrees of correlation (Graph 1).⁸ One of the key differences is the share of food products, which make up slightly more than one-third of the new CPI and about one-fifth of the RPI.⁹ The weightings in the new CPI better reflect households' average spending, which is why we consider the switch to measuring inflation using this index a positive step in measuring price growth and its effects on the standard of living of the population.

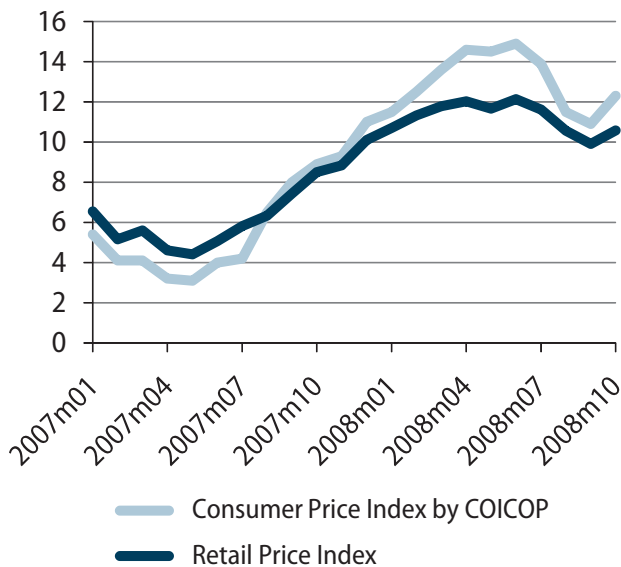
⁸ Over the past two years, the correlation factor for these two indices has been 0.99.

⁹ It was the high share of food products and the steep rise in their prices that caused the CPI to grow at a slightly higher rate than the RPI between mid-2007 and mid-2008.

⁶ See Section 7, Monetary Flows and Policy.

⁷ See Section 4, Economic Activity, and Highlights 5.

Graph 1. Serbia: Consumer Price Index by COICOP and Retail Price Index, Y-o-y Rates in %, 2007–2008



Source: SBS.

Highlights 3. The Financial Crisis: Does Serbia Face a Recession?

QM

Judging by what is known now, the financial crisis will cause a substantial slowdown in economic activity. This Highlights article deals with the impact of the financial crisis on the real sector, and endeavors to answer the following questions: (1) why has the first wave of the crisis led just to a gradual slowdown in economic growth, rather than full-blown recession, in Serbia; (2) what sort of economic growth can be expected in 2009; and (3) what are the possible risks.

We estimate that, the risks notwithstanding, a chaotic scenario – uncontrolled depreciation, inflation, and, finally, a drop in production – will not occur, and that GDP growth will remain positive in 2009, albeit substantially reduced. The most likely figure for GDP growth in 2009 is 3% – a slowdown (in relation to some 7% in 2008), but not a drop in production.

One of the conclusions of our analysis is that economic policy should prioritize macroeconomic stability – and push for a reduction in public spending and boosting of foreign capital inflows. From the point of view of economic activity there really is no other choice – expansive economic policies would cause the economy much more harm than good.

* Author of this part of the text is Danko Brčerević.

1. Serbia and the Baltic States: a Comparison

The economic crisis has led to recession¹ in the Baltic countries (Estonia, Latvia and Lithuania). Based on the *similarities* and *differences* between the economies of Serbia and those nations, we have attempted to answer the question of why a y-o-y drop in production has not yet materialized in Serbia, and how certain it is that it will happen anyway. The analysis has led to the conclusion that, although the economies in question are similar enough for Serbia to enter recession in the final outcome, there are specific circumstances that are causing a slowdown in the translation of the crisis onto Serbia's real sector. Therefore, the answer to the question of whether we are facing a fall in economic activity may be that a fall could occur if the global financial crisis lasts long enough, and if economic policies are not put into place to dampen its effects.

Serbia and the Baltic States were similar before the crisis culminated in that: (a) both had high domestic and foreign imbalances (double-digit inflation and a high current account deficit); (b) both enjoyed high foreign capital inflows; (c) both saw economic growth primarily reliant on the growth of non-tradable commodities; and (d) both employed pro-cyclical fiscal policies (budget deficit).

¹ Recession can be defined as a y-o-y drop in production. Q3 y-o-y real GDP growth stood at -3.3% in Estonia and -4.2% in Latvia; Lithuania's growth remains positive (2.8%), but is likely to become negative as early as Q4. The fall over the second half of 2008 comes after exceptionally high GDP growth in 2007 – the figure for Estonia was 6.3%, for Latvia 10.3%, and for Lithuania 8.9%. We have estimated Serbia's GDP growth in Q3 at some 6.5%, as opposed to the 2007 figure of 7.1%. Source of data for the Baltic States: Eurostat.

There are also substantial *differences*, which have meant that the Baltic countries are already in recession, while Serbia still is not. (1) The Baltic States opted for a fixed exchange rate policy, meaning that the reduction in capital inflows due to the global financial crisis has led to recession, while in Serbia a part of its impact has translated into depreciation. (2) A significant role in the financial sector of Baltic countries is played by Swedish banks, which are far less capitalized than foreign banks operating in Serbia.² Because of their low capitalization, Swedish banks pulled their investments out at the first sign of crisis, which caused a net outflow of capital from the Baltic nations. In Serbia, parent foreign banks shored up their subsidiaries by providing new money - €800 mn in October alone, unfortunately in short-term loans only. (3) The credit exposure of Baltic countries is much higher than Serbia's. The stock of loans to the economy and population in the Baltic States amounted to some 90% of GDP before the crisis struck; in contrast, the figure in Serbia was some 65%, with a correspondingly lower effect of the downturn in lending. (4) The share of agriculture in GDP is much greater in Serbia than in the Baltic States, and 2008 saw a bumper crop. The success of Serbia's agriculture in 2008 will certainly serve to conceal the downward trend of the rest of the economy, and economic growth in 2008 will be high regardless of the sudden drop in activity in sectors such as financial intermediation.

Because of these differences, the Baltic States relatively quickly saw a y-o-y drop in production that could not be countered in a satisfactory manner by economic policymakers. Their Serbian counterparts are in a more favorable position, as they have more time to take measures before the financial crisis spills over into the real sector.

The difference in the impact of the first wave of the global crisis on the Baltic States and Serbia requires different responses from their economic policies. While the primary economic problem in the Baltic nations is recession, in Serbia it is the maintenance of macroeconomic stability. Economic policy in Serbia, therefore, must act to reduce the high domestic demand that has been causing large-scale macroeconomic imbalances. As wage growth in the economy is under the control of market forces, and lending has been slowing under the direct influence of the global financial crisis, the only remaining – yet very powerful – factor that can be used to rein in domestic demand is a major cut in public spending.

On the other hand, it is also necessary to stimulate capital inflows, on which Serbia's macroeconomic stability depends in a major way. This primarily involves policies aiming at attracting FDI and loans. We consider direct government borrowing with international institutions for the purpose of carrying out major infrastructural projects as an appropriate economic policy measure, among others.

In the short term, according to our analyses, Serbia is not facing a recession. Economic activity will, however, doubtless feel the effects of the financial crisis – there we forecast a significant slowdown in GDP growth in 2009, by over three percentage points. The actual negative impact of the crisis on Serbia's economy will depend both on the duration of the crisis and the economic policies it pursues in 2009.

2. What is in Store for the Real Sector?

This part of the article will attempt to provide an insight into the possible effects of the financial crisis on individual sectors of the economy, and an estimate of how these will reflect on overall economic growth (Table 1).

Agriculture is not directly influenced by the crisis. Its 2008 growth will amount to between 10% and 15%. Agricultural production was slightly higher than average in 2008, but not exceptionally so. The most likely scenario for 2009 involves an unchanged level of agricultural production relative to 2008.

Manufacturing. Due to the slowdown in domestic and foreign demand, as well as difficulties with borrowing, a downturn is expected in this sector. On the other hand, the food industry – the segment of manufacturing with the greatest share in production – stands to gain from the high 2008 agriculture growth. As demand for food products will not be as affected by the financial crisis, it is our opinion that two divergent trends will become apparent in manufacturing in 2009: a large *drop* in production in areas such as basic metals production, and a *rise* in production in manufacturing. We expect an overall slowdown in the growth of production in the manufacturing industry of about 4 to 5 percentage points relative to 2008 (Table 1).

Construction. We expect a slowdown in construction activity due to a certain reduction in demand, but also because of less favorable conditions for borrowing, not only for developers but also for construction companies. Still, as major infrastructural projects have been announced (such as Corridor 10), and as the real estate market continues to exhibit a large imbalance between supply and demand, we do not expect construction

² French banks (also operating in Serbia) are considered the healthiest in Europe's banking sector.

to decelerate by more than 5 percentage points. Construction can be expected grow by about 3% in 2009.

Transport, storage and telecommunications. This sector's high growth is led by the growth of telecommunications services, which we do not expect to diminish drastically over the next year. The volume of transport will likely go down because of the general reduction in economic activity. Although we expect growth of the transport, storage and telecommunications sector to slow by some five percentage points, we nonetheless estimate its growth at about 10% in 2009.

Wholesale and retail trade. We do not expect a major downturn in the growth of the wholesale and retail trades, which have already seen a substantial reduction in 2008, due to the drop in real wages and consumer cash credits. Real y-o-y growth of the wholesale and retail trades, which stood at 19.5% in 2007, dropped to 11.6% in Q1 2008, only to stabilize at around 5% in the second half of 2008. Growth rates in 2009 will in all likelihood remain similar to those seen in the last quarters of 2008.

Financial intermediation. This sector of the economy will be directly impacted by the financial crisis. The latest data on trends in this sector indicates a substantial contraction, but not a complete cessation of new lending. Growth of financial intermediation is expected to slow by 10 to 15 percentage points, but with a fall in the volume of services provided by this sector unlikely.

Other. This heterogeneous grouping (production and distribution of electricity, health services, education, utilities, etc) comprises sectors with a lower share in GVA. This grouping is not expected to see a shift the trend in 2009 in relation to 2008.

Table 1. Serbia: Gross Domestic Product, Projection, 2006-2009¹⁾

	Y-o-y indices			
	2006	2007	2008 ²⁾	2009 ²⁾
Total	105.6	107.1	106.7	103.1
Taxes minus subsidies	99.8	109.5	104.3	103.0
Value Added at basic prices	106.8	106.7	106.9	103.1
Non agricultural Value Added	107.9	108.8	106.6	103.5
Agriculture	99.8	92.2	110.0	100.0
Manufacturing	105.6	104.8	102.5	100.0
Construction	107.7	108.3	107.6	103.0
Transport, storage and communications	129.3	119.4	116.0	110.0
Wholesale and retail trade	110.3	119.5	107.1	104.0
Financial intermediation	117.0	117.9	113.0	102.0
Other	100.6	101.5	102.4	102.0

Source: SBS.

¹⁾ At constant 2002 prices.

²⁾ QM estimate.

3. What are the Greatest Risks?

We estimate that, the risks notwithstanding, a chaotic scenario – uncontrolled depreciation, inflation, and, finally, a drop in production – will not occur, and that GDP growth will remain positive in 2009, albeit substantially reduced. The perceived greatest risks for the occurrence of this worst-case scenario are presented below.

An uncontrolled depreciation of the dinar would trigger high inflation, and ultimately cause a drop in economic activity. The alternative to this scenario is a controlled depreciation of the dinar that would not lead to macroeconomic instability.³ A controlled depreciation could have a positive impact on the international competitiveness of Serbia's economy.

Higher-than-planned expansion of public spending would temporarily cause higher economic growth, especially in the production of non-tradable goods, but would at the same time result in an increase of foreign imbalances and a deeper depreciation of the exchange rate. In this case, GDP would suffer a relative loss in value through the additional depreciation of the dinar, and the risk to macroeconomic stability would also rise – resulting in uncontrolled depreciation and recession. We do not consider fiscal expansion a relevant option for 2009, but experience has taught us to factor in this risk in as well.

Further escalation and prolongation of the financial crisis. The financial sector does not rely so much on domestic as on foreign savings. A new wave of the global financial crisis could cause a total halt in foreign borrowing (and bank recapitalization). The consequences would be (1) a greater deceleration of the growth of financial intermediation than projected – with a share of some 8% in GVA; and (2) increasingly less favorable borrowing terms for businesses and households. The effects of a drawn-out financial crisis are difficult to quantify,⁴ but we surmise that they could lead to stagnation of economic growth, and even, possibly, recession in 2010.

³ This is exactly the scenario we predict. For more details, see Highlights 1 and Highlights 2 in this issue of QM.

⁴ Estimates given in this paper were prepared under the premise that 2009 will not see major changes in the global economy other than those already identified in late 2008.

Highlights 4. The First Wave of the Financial Crisis Hits Serbia: the Banking Sector Suffers a Blow, the Dinar Depreciates

*QM**

1. The Banking Sector

As EU-based banks dominate the Serbian banking sector, the problems gripping European banks quickly spilled over, both directly and indirectly, into Serbia's banking system. A number of European banks doing business in Serbia saw significant losses in the sub-prime mortgage market; some were hit by the collapse of Europe's money markets and attendant liquidity problems; there are indications that some of them also suffered major losses in the collapse of three of the largest Icelandic banks. Brakes were put on cross-border lending beginning in October; the same period also saw a significant rise in the premium covering the risk of investing in Serbia (the so-called credit default swap rate): this is no longer even listed, meaning there are no vendors willing to sell this instrument of protection from the risk of not being able to collect a loan granted to Serbia or entities doing business here. The risk premium, which in late 2007 stood at 2% for loans maturing in five years, reached 6% in October 2008. This hike will have a powerful impact on the growth of interest rates in Serbia, and will likely be amplified by the effects of the reserve requirement. Below is a typical interest calculation for five-year loans taken out by many companies, which illustrates this impact rather well.

Table 1. Model Interest Rate Calculation for a Five-Year Business Loan¹⁾

	Nov-07	Nov-08
1. Euribor - 3M	4.8%	4.0%
2. Country risk premium ²⁾	2.0%	6.0%
3. Total interest rate paid to foreign creditor (1+2)	6.8%	10.0%
4. Mandatory reserve effect (3 * 0,82) ³⁾	5.5%	8.2%
5. Minimal interest rate (3 + 4)	12.3%	18.2%

Source: FREN.

¹⁾This model applies to banks that calculate interest on business loans based on the variable interest rate at which they repay their foreign loans, and the country risk premium, which they also pay their foreign creditors. Applicable to loans indexed in euros; the bank's margin and the client's risk premium have been discounted. A model loan indexed in another currency would use the relevant variable interest rate instead of the 3-m Euribor rate, while model loans indexed in dinars would have a different structure, but could not have a five-year term. There are also mixed models, which take into account total expenditure for interest on liabilities; their results, though, would not differ markedly from the above.

²⁾The country risk premium is calculated using the credit default swap rate as a basis, if there are investors willing to offer this derivative guaranteeing the buyer recovery if the country in question fails to meet liabilities from government bonds or loans. Alternatively, an approximation may be made on the basis of the difference between yield on government bonds of the country in question and those of another country perceived as non-risky (in our case German five-year government bonds, denominated in euros like Serbian FFCB bonds).

³⁾The reserve requirement has an indirect effect. As the bank must deposit 45% on any assets borrowed abroad with the NBS, and as the reserve does not earn interest while the bank pays interest on the entire sum to the foreign creditor, it follows that the bank needs to achieve interest greater by 82% on the remaining 55% of its assets to break even.

It is important to note that the repeal of the reserve requirement for new loans that the NBS announced starting on 1 October cannot affect existing loans, as for them banks still use credit lines that carry the reserve requirement. Bearing in mind that no significant new borrowing is possible at this time, banks will be unable to offer more favorable loans on a larger scale. To this should also be added the strong 12% appreciation of the Swiss franc against the euro, which will cause a large increase in the monthly rate for housing loans indexed in Swiss francs. The most serious consequences will therefore be borne by debtors because of the steep fall of the dinar.

On the other hand, the banking sector is facing powerful pressures on the part of depositors who have been reacting to even the slightest sign of instability in the banking sector. Several Serbian banks saw significant pre-term deposit withdrawals after the media reported, to some extent inaccurately, on the problems faced by their European parent banks. Although data is still unavailable, *QM* estimates that more than 10% of all deposits, or more than €500 mn, were withdrawn by the start of Savings Week in late October. Unofficial reports, though, say that fears of a mass deposit withdrawal during Savings Week were misplaced: at worst, only a small proportion of deposits were actually withdrawn, while the trend of falling deposits from early October was stopped.

The outflow of deposits and limited access to external sources of liquidity have led to a veritable war to attract new savings: banks thus began offering an incredible 9.5% in interest on euro deposits, even without NBS measures such as the repeal of the reserve requirement for savings deposited during Savings Week. Although this will make a large dent in bank profits over the coming quarters, high accumulated gains from the recent past will not be jeopardized. Still, it remains to be seen to what extent banks will pass these increased expenses on to debtors by raising interest rates on active loans.

Measures that the NBS adopted over the past months to curb inflation have had the side effects of overcapitalization, overrated reservations for bad loans, and excessive liquidity in the repo stock and reserve. This, however, turned out to be an advantage of the Serbian banking system in relation to countries in the region and farther afield – one that would ensure the banking sector's survival of the first powerful impact of the global credit crunch and financial crisis.

* Main author of this part of the text is Srđan Kokotović.

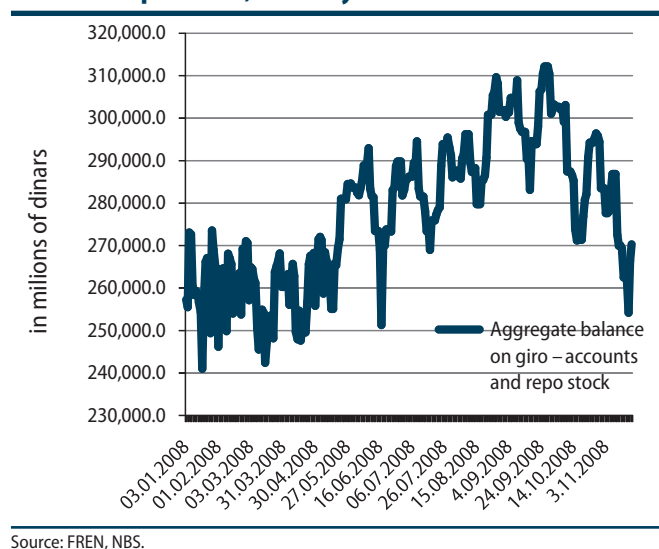
2. The Dinar Depreciates

Traits shared by all Central and East European countries, whose currencies have seen major depreciation since early October, are high foreign trade deficits and high levels of foreign debt, especially private debt, that far exceed the available foreign currency reserves. Widespread expectations of the mid-term unsustainability of national currency exchange rates led to mass withdrawals by foreign investors, who exchanged their assets for hard currency; in some places, this also prompted the public to withdraw their deposits. It is interesting to note that Central and East European countries whose currencies have come under the strongest attacks had been seeing a high volume of loans – including housing loans – indexed in Swiss francs. Among the rare countries not swept up in the crisis are the Czech Republic and Slovakia, whose degree of indebtedness had already been below the regional average, and where loans indexed in foreign currency were less widespread.

In such circumstances, most foreign banks and investors doing business in Serbia judged that the country’s balance of payments was also unsustainable in the long run. In parallel, the news spread of insolvencies and the problems faced by large European banks (HBOS, Fortis, etc), which caused unease in the Serbian public. Finally, the parent banks of a large number of European banks operating in Serbia felt the brunt of the credit crunch and faltered under the paralysis sweeping Europe’s money markets. In consequence, there was a large rise in demand for euros and a U-turn in the Serbian foreign currency market, as a result of which the dinar began to depreciate strongly against the euro. To satisfy requests of clients wishing to withdraw their deposits, banks began withdrawing their assets from the repo stock – these being their only reserve of liquidity in an environment of virtually frozen credit lines from abroad – and converting them into euros. Banks exerted additional pressure on the exchange rate as their so-called “short foreign currency positions” (situations where foreign currency liabilities exceed foreign currency assets, whereby banks stand to gain from an appreciation of the dinar) or previously balanced foreign currency positions turned to “long foreign currency positions”. This means that banks began to act exactly as the majority of the public does – they started converting all their excess dinars into euros for safekeeping, believing this to be their only defence against the dinar’s depreciation. As a result of high demand, the volume of trading on the interbank market soared in early October, which was accompanied by a powerful depreciation of the dinar. The average volume of trading on the interbank market amounted to €203 mn by 14 October, with the dinar losing 5.8% of its value.

The NBS resorted to the tried and tested measure first adopted in May 2008: it changed the structure of assets kept under the reserve requirement, allowing banks to withdraw 10% in foreign currency and replace these funds with dinars kept in the NBS account. This measure, coupled with an inflow from abroad of €830 mn, kept trading at a record high level in mid-October (on average, €228 mn daily from 15 to 24 October) – yet, in spite of this, the dinar continued to depreciate, albeit somewhat more slowly (at 1.3%). As most entities in the market expect greater or lesser depreciation of the dinar in the mid-term, the logical consequence is a gradual reduction in the repo stock and other dinar investments where depreciation outstrips yield. This is further borne out by the rapid reduction of assets in the giro account and those invested into repo stock that banks can only adjust within a very short timeframe (Graph 2).

Graph 2. Cumulative Balance of Bank Giro Accounts and the Repo Stock, January–November 2008



Source: FREN, NBS.

How insecure banks really are when it comes to the dinar/euro exchange rate over the next six months can be seen in the results of an auction held by the NBS on 24 November where 6-month T-bills were on offer. The previous 11 auctions held over the course of 2008 ended, as a rule, with 100% realization; at this one it was a mere 57%, with the bills sold amounting to a modest 2 bn dinars (not a major sum in relation to the daily liquidity of the banking sector). A possible explanation may be the insecurity as to the dinar exchange rate in the coming six months, which cannot be compensated for even by the highest interest rate offered, of 19.50%. On the other hand, at the fixed interest rate auction held on 26 November offering 2-week bills, banks bought bills worth 40 bn dinars, indicating that the two-week repo rate of 17.75% was acceptable. Therefore, banks did not find even a nearly two-percent difference in yield between 2-week and 6-month bills attractive enough –

while in 2007 the difference was, on average, some 0.25 percentage points.

Available data indicates that, when the first wave struck in early October, several factors combined to cause a large-scale depreciation of the dinar. The public first began to withdraw savings, which reduced the volume of foreign currency that could be offered for sale, and banks followed by cutting into their repo stock to free up foreign currency cash to meet depositors' demands. Banks then began to buy up foreign currency, reducing free dinar assets to change from long foreign currency positions to short ones, which additionally pushed the exchange rate up (in sum, banks began to hold much larger quantities of foreign currency, and much less dinars, than in the run-up to October – to protect themselves from the slipping dinar). However, after the first wave spent itself, the only factor at play remained the fundamental imbalance between the small quantity of foreign currency sold by exporters and the much greater demand for foreign currency on the part of importers (caused by the current account deficit) and net capital transactions (FDI, portfolio investment and loans). Estimates say foreign currency savings have stabilized, while regulations limit banks as to the amount of foreign currency they can hold in excess of foreign currency liabilities (at most 20% of capital – i.e. the sum of all foreign currency receivables may not exceed the sum of all foreign currency liabilities by more than 20% of capital) – which, at current levels of capital held by the banking sector, amounts to some €1.2 bn. Movements in the repo stock (a reduction of 75 bn dinars, or some €900 mn, from late September to 19 November, of which 50% can be accounted for by changes to the reserve requirement) indicate that banks are fairly close to reaching maximum long foreign currency position levels.

NBS foreign currency reserves fell by €347 mn net in October, primarily due to the return of €474 mn to banks from the reserve requirement under the scheme of boosting banks' foreign currency liquidity; the appreciation of the dollar against the euro had a positive effect. On the other hand, while no accurate data is yet available, banks have clearly increased their foreign currency reserves, meaning that the total foreign currency reserves of the NBS and commercial banks have not been depleted to a significant degree.

3. Effects of the Financial Crisis: the Example of Hungary*

To shed more light on the possible consequences of the financial crisis, the case of Hungary is discussed in detail. Hungary ranks among the East European countries worst affected by the crisis. Although the reasons behind the crisis and its timeframe have their individual characteristics, an analysis of events in Hungary, as well as of measures taken there, may prove very useful for Serbian economic policymakers.

Reasons Behind the Crisis

The direct cause of the crisis in Hungary was the large public debt, coupled with the vulnerability of the banking sector.

Hungary had been recording high budget deficits for nearly a decade; these reached a peak of 9.5% of GDP in 2006, an election year. The public debt had by that time grown to 66% of GDP.¹ The government of Ferenc Gyurcsány, president of the Hungarian Socialist Party, which won the 2006 elections,² implemented austerity measures and slashed the deficit to 4.9% of GDP in 2007; the planned deficit for 2008 is 3.4% of GDP, and is likely to be even lower. However, the positive effects notwithstanding, the government unsuccessfully tried to raise money by issuing bonds on several occasions in October. Therefore, to be able to borrow, the government needed to offer either higher interest or find other sources of financing.

In addition to the obvious question of whether the government would be able to cover the budget deficit, there appeared another problem. The Hungarian banking sector has faced a severe exchange rate risk ever since the forint became a likely candidate for depreciation due to budget issues. The country has experienced a consumer credit boom over the past several years; however, the vast majority of loans (especially housing loans) were indexed in Swiss francs. A major depreciation of the forint would have hindered debt repayment, thus jeopardizing the entire banking system.

These factors led, in early October, to speculative attacks on the forint; the exchange rate began to fluctuate wildly. For instance, in the course of just one day, Wednesday 15 October, the forint lost 7% of its value.³ Still, central bank interventions stabilized the Hungarian currency, but the country's foreign currency reserves were lowered by some €1.8 bn in October.

* Author of this part of the text is Ivan Rajić.

1 This indicator is much more favorable in most other Eastern European countries, standing at about 30%.

2 The same party had already been in power between 2002 and 2006, with Gyurcsány as Prime Minister from 2004 to 2006.

3 Daily variations were even greater.

According to IMF estimates, Hungary will need €20 bn in 2009 to service its foreign debt. The balance of payments deficit⁴ has hitherto been met through FDIs and loans.⁵ But the global financial crisis has caused a reduction in FDIs and loans, and a drop in exports is also expected.⁶ All of this could force Hungary to rely on foreign currency reserves to a greater extent in 2009 to service its foreign debt. Foreign currency reserves stood at about €17 bn at the end of October, which is not much – especially in view of the fact that the sum covers only about two months' worth of imports,⁷ as well as that speculative attacks could quickly melt even much greater reserves. This situation has led to fears that Hungary could also face a foreign liquidity crisis, in addition to its current banking sector and public debt problems.

Assistance to Hungary and Measures to Weather the Crisis

The IMF, the World Bank, the European Central Bank and the EU have all granted Hungary loans totalling €25 bn, which should alleviate the short- and long-term problems stemming from lack of foreign currency.⁸ Of those, the ECB loan was granted in mid-October, with the option to draw €5 bn through repo operations, making it the first country outside the euro zone to be granted an ECB loan.

To weather the crisis, Hungary adopted numerous measures aimed at cutting the budget deficit and inflation, providing support to the banking community, ensuring better supervision of the financial sector, and shoring up the real sector.

The most interesting measures were taken to eliminate exchange rate risks in the banking system. Unlike the other more or less standard measures, these could serve as precedent for the rest of East Europe. The Hungarian government signed an agreement with banks⁹ that provides for three possibilities. First, if the borrower considers that the exchange rate fluctuations pose too great a risk, the bank will, at his request, extend the loan repayment period by several months at a fixed interest rate. This should prove helpful to anybody wishing to retain loans indexed in foreign currency.

4 Standing at about 6.5% of GDP, or about €6.5 bn in 2007.

5 This type of financing, however, increased Hungary's foreign debt to about 97% of GDP.

6 Although a drop in imports is also set to occur because of the slowdown of Hungary's economy.

7 Three months' worth of import coverage is considered the minimum of security.

8 The IMF granted a €12.5 bn loan, as much as 10 times greater than Hungary's IMF quota.

9 Banks were advised in no uncertain terms that failing to agree with the proposals would result in the adoption of legislation requiring them to comply.

The second and third measures are aimed at eliminating foreign-currency-indexed loans, which would make it possible for the forint to depreciate further (since such depreciation would not jeopardize the banking system) help exporters, and reduce pressure on the foreign currency reserves.¹⁰ Under these measures, at the borrower's request the bank must convert the foreign-currency-denominated loan into forints; this will, however, raise the interest rate.¹¹ This is why the borrower can ask the bank to reduce or postpone monthly instalments – but banks reserve the right to decide on a case-to-case basis whether to offer this benefit.

The exchange rate risk is thus passed on to banks. Without indexation, bank revenue will not be adjusted for exchange rate fluctuations, but the banks' foreign debt will remain in foreign currency, with variable interest rates. Still, the Hungarian central bank (MNB) is likely to secure enough liquid assets to overcome this problem, from, among other sources, the granted loans. In addition, the problem with higher interest rates has partly been offset by the option to postpone payments outlined above, and may even prove to be only temporary, as the MNB will in all likelihood reduce the reference interest rate as the crisis ebbs and inflation is forced down. In addition, if the depreciation of the forint is taken into account, it is quite possible that even a higher interest rate would make more economic sense than retaining indexation.

Eliminating indexation has recently become a possibility in Serbia. It would be interesting to establish to what extent the Hungarian measures are applicable to the situation here. On the one hand, Serbian banks would probably only face difficulties paying their foreign currency debt in the medium term, as their reserve/debt ratio is higher than in Hungary; Serbia also lacks the high foreign currency public debt problem. On the other hand, interest on short-term loans would soar to at least 25%, but the significant depreciation of the dinar makes it quite possible that such interest rates would turn out to be more feasible than keeping indexation. An additional problem is posed by the fact that hardly any bank would be willing to offer long-term dinar loans. Serbian companies have also borrowed directly from abroad: there is no way to convert these loans into dinars.¹² In any case, it will be useful to consider Hungary's experience and, possibly, adapt their anti-crisis measures to our conditions.

10 Still, the impact of depreciation on foreign-currency-denominated public debt (some €20 bn) has yet to be fully investigated.

11 Interest rates are to be linked to the Hungarian central bank (MNB) reference rate, higher than foreign central bank reference rates that bank interest is tied to now.

12 Although, these loans are mainly long-term and do not mature in full next year.

Highlights 5. Global Financial Crisis: Causes and Consequences for Serbia and the Region

*Miloš Božović**, *Branko Urošević***, *Boško Živković****

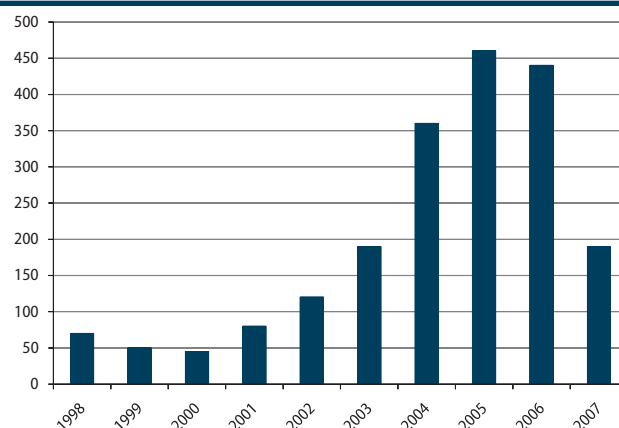
The financial crisis now shaking the world is a catalyst of significant changes in the global financial order. There is no doubt that the main victim of the crisis is investment banking: out of six leading U.S. investment banks, which were also the largest investment banks of the contemporary world, not a single one has retained that status. Two were merged with universal banks, one was taken over, one went bankrupt with huge losses, and the remaining two have changed their status and become, for all practical purposes, universal banks. U.S. investment banking practically no longer exists as a separate activity. This is the biggest structural change since the Great Depression of 1929, whose long-term consequences cannot be foreseen.

Although the crisis will affect the entire region, its effects on individual countries, or even individual firms, will vary. While it will certainly bring important problems for many, for some it will present an important opportunity to improve their market position fundamentally.

Causes of the Crisis

There were two main reasons for the eruption of the global financial crisis: the wish of financial institutions to diversify risks and turn non-performing assets (loans) into liquid securities; and the insufficient and poor information on these very often complex securities. To comprehend all the causes of the crisis, it is necessary to go back a whole decade, when the United States saw an expansion of the so-called sub-prime lending – granting of loans to individuals with a high credit risk, very often with a bad credit history.¹ The bulk of such loans, between 30% and 40%, was used to purchase real estate. Graph 1 shows the rise in the total value of extended sub-prime loans as of 1998.

Graph 1. Total Value of Sub-Prime Mortgages Issued in the United States (bn. USD)



Source: Loan Performance Database.

Part of the responsibility for the tide of these high-risk mortgage loans rests with the U.S. government. Namely, in order to implement its Affordable Housing program, the U.S. government, as of 1992, demanded channeling of a substantial portion of loans to private citizens who otherwise would not be able to afford them on market terms. These loans were issued by two specialized government-sponsored private agencies – Fannie Mae and Freddie Mac. The trend of granting mortgage loans easily was increasing gradually: in November 2000, Fannie Mae disclosed that the government had forced them to extend 50% of their loans to medium- and low-income families, with a plan to increase the total amount of such loans to \$500 bn by 2010. As part of the same program, the government also encouraged commercial banks to extend sub-prime loans.

However, neither the commercial banks nor the specialized agencies kept the sub-prime loans on their balance sheets. Rather, they securitized them by packing them into securities that they sold to investors worldwide. The inherent problem of those securities backed by mortgage loans was the informational asymmetry between the sellers and the buyers. The informational asymmetry created the moral hazard, since Fannie Mae and Freddie Mac were aware of the fact that they were backed by the government and hence willing to assume the high risks of granting the sub-prime loans. On the other hand, rating agencies unfoundedly gave a very low default-risk rating to a large number of mortgage-backed securities (MBSs) issued or guaranteed by Fannie Mae and Freddie Mac, by assigning them the so-called *investment grade* ratings (from BBB- up to AAA). Investment banks and funds, the main buyers of MBSs, share the blame, because they failed to examine whether these ratings were realistic.

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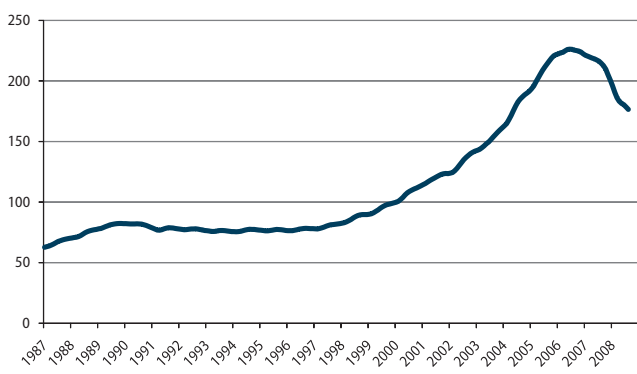
** Faculty of Economics, University of Belgrade and South European Center for Contemporary Finance (SECCF).

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¹ Such loans later became known as NINJA, an acronym of the phrase no income, no job, no assets.

This system was sustainable as long as the prices of real estate and other collateral were increasing sufficiently to cover potential losses due to defaults on mortgage loans. Graph 2 shows the growth of real estate prices in the United States from early 1987. The affordable loans created a high demand for real estate. On the other hand, the real estate price bubble was further inflated by the U.S. Federal Reserve (Fed) through a long-lasting policy of low interest rates aimed at boosting business activities.² Thus, expansive monetary policy caused cheap capital to be invested in long-term and capital-intensive investment projects, predominantly in real estate.

Graph 2. Case-Schiller House Price Index, 1987–2008



Source: Standard&Poor's.

The bubble started to deflate in mid-2007 with the first large-scale mortgage loan defaults. Under normal circumstances defaults are not a problem, because lenders assess the risk of defaulting in advance and calculate expected losses into the price of the credit. The problem for investors in the secondary market for mortgage loans was related to the fact that lenders were selling non-transparent packages of bad loans as almost risk-free securities. Standard&Poor's realized that certain securities were overrated and on July 12, 2007 downgraded a considerable portion of MBSs on the secondary market, in the total nominal value of around \$12 bn. Panic started spreading over USA and UK during August 2007, when investors realized that they had far riskier securities in their portfolios than what they initially believed and started selling them in large quantities. At the same time, demand for real estate dramatically declined as the loans with which properties were purchased dried up. The supply started to increase, since security issuers wanted to liquidate quickly a great deal of real estate taken over from those who defaulted on their mortgage loans.³ As a result, real estate prices

fell dramatically, while the secondary market for MBS became illiquid.

The magnitude and the global character of the crisis indicate that the proportion of MBSs backed by sub-prime credits in the balance sheets of investment banks and funds was immense. In the first wave of the crisis, British Northern Rock (February 2008) and the U.S. Bear Stearns (March 2008) went down. In the first half of 2008, the crisis spread to the stock and bond markets. At first timidly, and then in the second half of the year dramatically, stock prices and corresponding indices went down. Likewise, the value and liquidity of other securities, including the liquidity of derivatives, declined.

The market chain reaction followed with the bankruptcy of several big investment banks. In September 2008, Fannie Mae and Freddie Mac were nationalized, Lehman Brothers and Wachovia filed for bankruptcy, Bank of America purchased Merrill Lynch, JPMorgan took over Washington Mutual, while Goldman Sachs and Morgan Stanley were forced to change their statuses from investment banks into much more regulated and universal *bank holding companies*. The U.S. government responded with the controversial Paulson \$700 bn bailout plan, whose objective was to use taxpayers' money to purchase illiquid MBSs from troubled banks in order to restore liquidity to the secondary mortgage market.⁴

Although economists warned about the symptoms of the crisis (a rise in the speculative real-estate bubble and accelerated expansion of risky housing loans, registered as early as 2006), regulators and the political elite did not react. Disregard and shortsightedness of regulators and market participants led to inconsistent and chaotic interventions and transmission of the crisis to other sectors. In early September 2008 the crisis started to spill over to the core activity of financial intermediation – commercial (i.e. credit-deposit) banking. The crisis thus spread from the United States and the UK to European countries that rely on this "traditional" banking, primarily Germany, France, the Benelux countries, Iceland, Ireland, Spain, and eventually to the entire European Union and Russia.

The mechanism of the further evolution of the crisis changed considerably. The process accelerated, and its

2 The Fed's target interest rate amounted to 5.25% in late 2006. From that point on it kept going down, reaching the level of 2.00% at the peak of the financial crisis in September 2008. It was at the level of 1.00% when this text was written.

3 More precisely, a commercial bank giving a mortgage loan was not the formal owner of the real estate bought by the borrowed money.

The owner was typically an offshore Special Purpose Vehicle owned by the bank, so the real estate was de facto returned to the bank in the foreclosure process.

4 The accounting standard based on the mark-to-market method, introduced in the 1990s, is partially to be blamed for the formal insolvency of investment banks in critical moments of the crisis. The regulation requires that the value of assets traded in the secondary market should be based on their market, rather than book value. This is not an issue under normal circumstances, but when the secondary market for MBSs became illiquid and when it became practically impossible to sell such securities, all investment banks with significant exposures to MBSs became insolvent.

effects spread to the entire economy and society. The panic on stock exchanges was overtaken by panic in banks with accelerated deposit withdrawals, fast growing interest rates, and reduction in the value of banks' assets. However, the dramatic scenario already seen in previous episodes of the crisis did not materialize, because regulatory bodies reacted in time. The consequences of this stage of the process are huge losses of net capital in the banking sector.

The banking crisis will have long-term consequences. Losses on securities and inter-bank operations reduced the net capital of this sector, thus reducing its ability to increase credit supply. Illiquidity of banks' assets will increase demand for cash. Both processes will push the interest rates up. The shift of the yield curve will be highly unpredictable. The rise in short-term interest rates will lead to a full inversion of the normal yield curve. The higher price of cash and surrogates will discourage investment activities in the real sector.

The Impact of the Crisis on Serbia and the Region

With the withdrawal of foreign institutional investors from the market, the crisis spilled over to our region as well, affecting the most liquid part of the market – the stock exchange – first. The stock exchange indices in the region have dropped by more than 50% in the past several months, and more than 60% in case of Serbia. As a result, investment companies (brokerages, management companies) suffered substantial losses.

The disorder on the capital markets had a strong impact on the Serbian financial system. The Belgrade Stock Exchange indices were losing value much faster than their counterparts in developed markets. This is understandable, given that the foreign demand (particularly from the neighboring countries) represents more than 50% of the total demand for stocks in the national market.

The crisis in the banking sector was quickly brought to a halt in the European Union, which is why it did not have a heavier impact on Serbian banking system. Nevertheless, a faster response of the regulatory bodies could have had a preventive effect and minimized deposit withdrawals. In mid-November the behavior of deposits was stabilized. Provided that there are no new shocks, we believe that probably there will not be any new symptoms of a banking panic.

As a consequence of the contraction of banks' lending activities, capital inflows into the financial sector of the South East European region will either reduce the growth or completely cease. Bearing in mind that in Serbia, Croatia and other countries of the region

(partly with the exception of Slovenia) the financing of the current account deficit and economic growth went predominantly through that channel, it is clear that this constitutes a serious challenge to which economic policymakers and the business community will have to find an appropriate response.

The final stage of the process is the spillover of the crisis into the real sector. GDP growth rates in North America and Western Europe are entering the negative zone. Economic growth of Serbia's key export markets will dramatically decline. Despite the fact that Serbia's ratio of exports to GDP is relatively low, the impact of the reduced demand for Serbian products in the EU on economic activity in Serbia cannot be disregarded. This risk can be multiplied by the effect of a possible deterioration of the credit risk in the enterprise sector, which can reactivate the crisis cycle in the financial sector through a negative feedback.

Regulatory Responses to the Crisis Process and Medium-Term Risks

The crisis found Serbia in a situation characterized by relatively high inflation and high interest rates, which limits the room for maneuver in monetary policy. For quite a while before the outbreak of the crisis, the NBS reference rate was 15.75 percent a year. Foreign banks borrowed heavily in Euros, at an interest rate of around 5%–6% a year, purchased Dinars and invested them in repos. This operation, in the absence of any significant exchange rate risk, yielded a lucrative and practically risk-free profit of 9% to 10% annually. On the other hand, Serbia accumulated a high amount of foreign currency, increased its foreign reserves, maintaining the stability of the exchange rate of Dinar. Lately, however, we can observe a reduction of the repo stock in Serbia, as well as a lower level of interbank foreign exchange transactions. As a result, Dinar has weakened against the Euro, and the foreign exchange reserves, although still very comfortable, are gradually reducing. In order to reduce the outflow of foreign exchange and strengthen the domestic currency, thus relaxing inflationary pressures, the NBS recently raised the reference rate to 17.75%. Another important step toward preventing an uncontrolled sequence of events, primarily an abrupt decline in the value of Dinar, was the conclusion of a credit arrangement with the IMF. In this way, the government will be given an opportunity to draw certain funds, if needed, for urgent interventions on the market if stabilization is required.

In the long run, it is not likely that these measures will stop the downslide of Dinar. On the other hand, an additional increase in the already high reference rate

would further raise the price of domestic loans. Since foreign credit sources are drying up, this could create additional pressure on businesses. Companies will have to adjust to a new situation in which loans are expensive or completely inaccessible, and foreign investments are scarce. In that case, the main remaining sources of financing will be the relatively deficient domestic retail and corporate savings. Therefore, one of the main policy directions has to be the provision of attractive conditions for an increase in domestic savings. Increasing the level of deposit insurance and abolishing the tax on interest on savings would be measures in the right direction.

Still, irrespective of the efforts of economic policymakers and regulators, it seems very likely that the level of economic activity in Serbia and most of the countries in the region will at best stagnate, and probably even decline, meaning that they will enter a period of actual recession. Recession in the EU member countries, and others to which the region is exporting, the expected reduction of the liquidity of firms, as well as the increase in currency, credit, interest rate and commodity price risks, will undoubtedly be a major challenge for companies in the region.

In order to understand better what are the potential consequences of the crisis in the real sector, we will compare Slovenia and Serbia, two countries with fairly complementary and essentially different economic structures.

In Table 3, we show how, in our view, some of the major macroeconomic risks will be reflected in these two countries.

In order to survive the crisis with as few negative consequences as possible, and potentially even profit from it, individuals, companies and countries will have to formulate and implement clear sustainable development strategies. One of the necessary measures will be more rational spending, process optimization and saving. Companies, not only in the financial sector but also in many others, will merge and seek synergies, and will have to improve the efficiency of the utilization of the scarce capital. On the other hand, an opportunity will open for the companies with excess capital to buy essentially good firms with temporary liquidity problems at small prices, which would have been too expensive for them before the crisis. The consolidation of the financial and many other sectors seems to be inevitable.

Table 3. Impact of the Crisis on the Countries in the Region

Type of risk	Slovenia	Serbia
Currency risk	No major currency risk for importers since Slovenia is in the Eurozone. The exports may be vulnerable to recession in the EU, and to decrease of purchasing power in Russia and South-East Europe.	More expensive imports of goods, services and capital. Retail trading will suffer since it is predominantly based on imports. Possible consequence is an even more concentrated retail market.
Commodity risk	Slovenia will mostly benefit from the decrease in currency prices, being a net commodity importer.	Serbia will incur losses from reduced prices of its most exported commodities (steel, fruit and cereal, chemicals), but will gain from a decrease in prices of crude oil and natural gas.
Credit risk	No major increase in credit risk in Slovenia should be expected in financial sector, since ECB can easily intervene if necessary. Limited holdings of foreign financial institutions in Slovenian financial sector partly prevents the spillover effect. There is a potential problem for Slovenian banks with exposures outside Eurozone. A major potential generator of credit risk in the real sector is a reduced exporting opportunity to the countries of EU and South-East Europe, as well as Russia.	There is a danger of spillover of currency risk on credit risk. Weaker Dinar makes the foreign-denominated credits more expensive: an abrupt depreciation of Dinar with respect to Euro may lead to a significant increase of credit risk. In the real sector exporters may experience difficulties due to recession in the EU, despite the fact that their products are now cheaper.
Interest rate risk	Slovenian companies will benefit from the reduced interest rates in the Eurozone.	Both Dinar and foreign-currency-denominated credits become more expensive. This increases the input costs for companies, thereby reducing their profitability.
Real estate risk	It is reasonable to expect a gradual decline in real estate prices. However, this may not have a large impact in Slovenia since the foreign demand is not significant, while the interest rates are decreasing.	More expensive credits will have a negative impact on real estate prices. Dependence on foreign investors will also pull the prices down. A scarce supply may keep the prices on their current levels.
Liquidity risk	Possible liquidity issues for exporters, fund management companies and other financial institutions without an explicit government backing. Companies with sufficient cash have an opportunity to buy good, but financially constrained domestic or regional companies.	Possible liquidity issues for importers, exporters, fund management companies and other financial institutions without an explicit government backing. Companies with sufficient cash have an opportunity to buy good, but financially constrained domestic or regional companies.

In the period ahead, precise risk measurement, management and supervision will become increasingly important both in the financial and real sector. This is the only way to gradually restore confidence among market players. All major companies, not only financial, will have to consider ways to systematically measure and manage the risks to which they are exposed.

Companies in the business of producing information (predominantly auditing firms and rating agencies) will become more significant in the coming period but they will also face demands to adopt a fundamentally different and better approach to their work. In the restored financial system, audit and risk reporting will have to

converge. Most likely, new accounting standards will be based on the fair value of assets and liabilities (the so-called *full fair value method*), and will be supplemented by a detailed description of the methodology of assessment, as well as an estimate of the measurement error. These are just some of the changes that the future most probably brings.

States, companies and individuals that enter into this very important period well-prepared and which take good strategic decisions will have a chance to emerge from the crisis as winners. Many others will find themselves in trouble.

Highlights 6. The 'Extended' General Collective Agreement – an Exercise in the Social Partners' Collective Irresponsibility

Mihail Arandarenko*, Miloško Arsic**

The General Collective Agreement (GCA), signed by two representative trade union confederations, the Employers' Association and the government in November 2008, guarantees all employees the minimum wage plus a meal allowance (a monthly supplement amounting to 15% of the average monthly wage), and a vacation bonus (an annual payment of 75% of the average monthly wage). In addition to these supplements, the GCA promises Serbian employees significantly higher severance payments in case of being laid off, seniority premiums and holiday allowances, and other benefits in excess of those provided for by the Labor Law.

The new GCA shares many similarities with the one in force in the 1990s, which gave employees far-reaching yet essentially empty guarantees as to wages and other payments. The first GCA came into effect in January 1991, guaranteeing a minimal hourly wage of 19.5 dinars, or 3,560 dinars per month – at that time equivalent to about 350 Deutschmarks. After these provisions had been "in force" for only a year, the minimum monthly wage for 1992 was set at a level of a mere DM 80, and just six months later the GCA was indefinitely suspended, while average wages in 1993 plummeted to just a few dozen Deutschmarks. However disproportionate and excessively pessimistic a comparison of the situation then and now might seem, there is still sound reason to

ask the question, **is the new GCA appropriate to the present social and economic environment in Serbia?**

Special attention should be devoted to provisions guaranteeing the meal and holiday allowances – as **these two provisions should result in the rise by over 20% of the average monthly wage in Serbia.**¹

It is of crucial importance to estimate the **hypothetical consequences** of these provisions of the GCA on *macroeconomic stability* (inflation and the foreign trade deficit), the *competitiveness of Serbia's economy*, and *demand for labor*.

If the wages of the two million employees in Serbia were to rise by 20% of the Serbian average, the average wage would rise by about 7,000 dinars, while employers' costs (taking into account all associated taxes and social contributions) would rise by 11,500 dinars.² After this hypothetical rise in earnings, the share of labor costs in GDP would rise by about 10% of GDP, while the average net wage in Serbia would be higher by some €100, and reach nearly €500 per month. The increase in net wages would directly cause a rise in domestic consumption of nearly €2 bn, or some 6% of GDP. As pensions and social protection benefits (such as family and child benefits) are adjusted to wage growth, this would all cause major pressure on the budget, bring about a rise in the budget deficit, and additionally boost domestic demand. Such growth in demand over a short period would generate **exceedingly strong pressure on inflation and the foreign trade deficit.**

¹ Most employers in Serbia pay the vacation reimbursement in 12 monthly instalments: this would result in a pay rise of 6.25% of the average wage for the reimbursement, plus 15% for the meal supplement – or, in total, 21.25% of the average monthly wage.

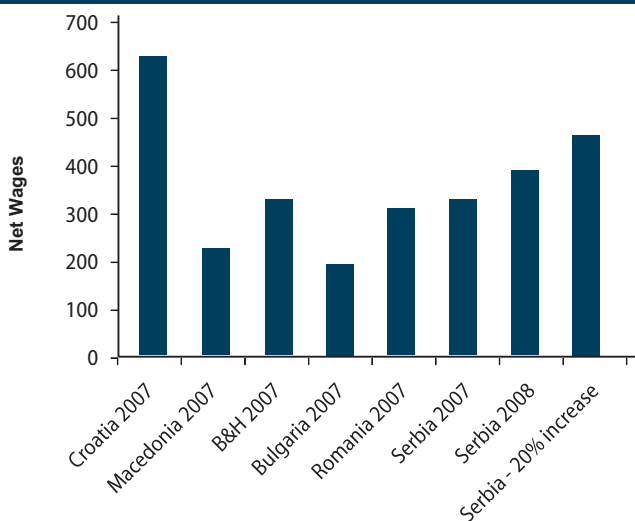
² The above is calculated using the registered net average wage in Serbia for August-September, which amounted to 33,000 dinars.

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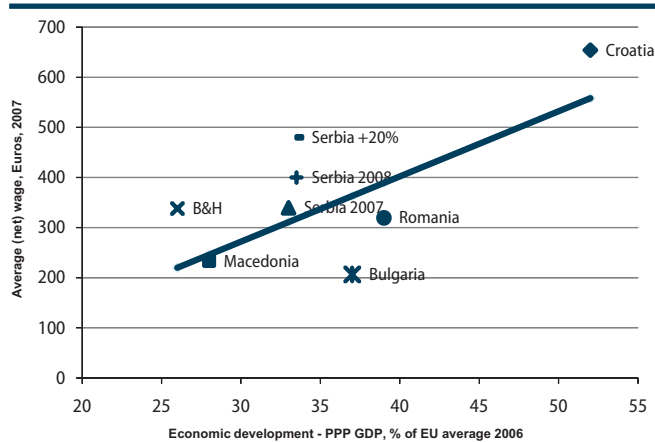
As productivity cannot grow in the short term to absorb a wage growth of 20% in sectors of the economy where product prices cannot rise due to strong import competition, this would result in a worsening of company performance, and in many cases lead to bankruptcy. In a globalized world where the prices of most goods are established on the global or regional markets, the competitiveness of an economy depends to a great extent on whether its wages are geared to competitiveness. Graphs 1 and 2 show that Serbian wages are already among the highest in the region; the picture becomes even less favorable if the level of economic development is taken into account, as Serbia is in the bottom half of the region's rankings.

Graph 1. Average Net Wages in the Region, Euros



Source: Authors' calculations based on official statistics.
 Note: Average net wage in Serbia in 2007 and 2008 was obtained by using the exchange rate of 82 Dinars for 1 Euro.

Graph 2. Relationship Between Economic Development and Average Wages in the Region



Source: Authors' calculations based on official statistics.
 Note: Average net wage in Serbia in 2007 and 2008 was obtained by using the exchange rate of 82 Dinars for 1 Euro.

A comparison with countries in the region reveals that wages in Serbia are already overrated in relation to the level of economic development, and that to raise them by 20% would additionally **undermine the regional competitiveness of Serbia's economy and reduce the inflow of FDIs, while the reduced demand for labor would increase unemployment in Serbia.** By way of an example, if the GCA were to be applied in letter and spirit, the minimum wage would rise to almost €250, which is the average wage in Bulgaria.

The preceding hypothetical analysis presents the direct economic consequences of a literal implementation of the GCA provisions concerning guaranteed meal and vacation supplements. We have, however, already underlined that the recently signed GCA resembles, to a great degree, the GCA in force in the 1990s – many of whose provisions were not in tune with the market economy that Serbia strives to establish. This begs the question of **what the actual consequences of these GCA provisions could be, and how the labor market could react to them.** Here it is necessary to differentiate between employees in the public sector, those in successful private companies, and those in less profitable small and medium-sized companies.

Of the two million formally employed people in Serbia, **430,000 work in the public sector.**³ As the state does not operate on the free market, there always remains the possibility of increasing the wages of public-sector employees, in line with the GCA, and with political support. This would, however, result in an increase in public spending by 2% of GDP, and raise the already high fiscal deficit. The macroeconomic consequences of such a public sector wage hike would follow the scenario and results already outlined in all but volume, since the overall increase in the wage bill and domestic demand would be lower.⁴

Relatively successful private companies employ over 600,000 people in Serbia; these workers' earnings are significantly higher than the minimum guaranteed wage, and are at the level of the Serbian average. As these private companies operate in the free market, their employees' wages are (more or less) set by the market, in accordance with the added value the workers produce. It is thus not realistic to expect these wages to change with the adoption of a purely administrative document such as the GCA. On the contrary, successful private companies will likely react to the GCA by formally reducing their employees' wages by the amount of

3 Some 210,000 in public administration, 120,000 in education, and over 100,000 in health services.

4 The situation of some 150,000 employees in public enterprises mirrors that of public-sector employees, as most public enterprises enjoy monopolies that allow them to pass operating costs onto consumers.

the meal and vacation supplement, which they will, also formally, start listing separately – while the **total earnings of these employees will remain unchanged.**

Some **400,000 employees are currently paid the minimum wage**, which amounts to 40% of the average Serbian wage. Another 350,000 workers are paid less than 61% of the Serbian average – which will be the amount of the minimum wage once the GCA provisions enter into force. It is obvious that **employers of more than 700,000 workers in Serbia will face financial problems in attempting to implement the GCA⁵** and pay their workers at least the minimum wage – which will amount to more than 60% of the current Serbian average! The answer to the question of how these employers are expected to meet the terms of the GCA was given by members of the government's Social and Economic Council after the Agreement was officially signed. The explanation: employers whose workers receive the minimum wage will be exempt from the GCA!

It is a well known fact that managers and key employees, as a rule, are not members of trade unions in any country – since they would be able to negotiate better terms and conditions for themselves than would the average employee. The aim of the trade union is to protect the rights of the average worker, who would never be able to attain them on his own. **What then is the purpose of adopting a GCA that will exempt the workers most at risk?**

In addition, it is to be expected that the GCA will have adverse effects on FDI and make it more difficult to attract greenfield investment, especially in labor-intensive industries, as the Agreement will cause an increase in the effective minimum wage of as much as 50% – from €165 to close to €250. By way of comparison, the minimum wage in Bulgaria, an EU member and at a higher level of economic development than Serbia, amounts to €250. Such a drastic increase in the minimum wage would undoubtedly make it more difficult for companies to do business in full compliance with legislation, while the increase in labor costs would drive down demand and further aggravate the position of Serbia's half a million unemployed.

Conclusion

The adoption of the GCA is not in tune with Serbia's current economic environment, and is an economically irresponsible act on the part of the Government, a socially irresponsible one on the part of the trade unions, and an almost suicidal one on the part of the Employers' Association. This GCA will not be able to improve the standard of living of most of Serbia's employees. The only segment of the working population that may profit from it are public-sector employees, who are already favored in the labor market in terms of the level of their earnings, working conditions and job security. Not only would these new benefits for the public administration and public enterprises be paid for, of course, by the rest of the economy: they would also be short-lived and illusory, as they would entail cutting into the healthy tissue of the private sector on which Serbia's long-term economic development depends. Many provisions of the current Labor Law designed to protect employee rights have proven to be dead letters on paper; it may be more productive for trade unions to call for consistent implementation of existing laws than to raise unrealistic hopes by insisting on the universal introduction of meal and holiday allowances.

Still, while the behavior of trade unions may be understandable, the fact that the Employers' Association has signed the new GCA again raises the issue of its legitimacy, or, rather, begs the question of whose interests it really stands for. It certainly does not represent the interests of the largest and most vital companies, employing the largest number of people, that should account for the lion's share of GDP and employment growth in the future. However, the government, as by far the most important social partner, should bear the largest share of the responsibility. To sign a document that clearly will be impossible to implement is a mark of irresponsibility, and smacks of the 1990s.

The GCA is a major step backward in reforming Serbia's labor market, among other things because of the introduction of rules that some parties will have to adhere to, while others will not. Additionally, the very fact that there will be a body assessing who may, and who may not adhere to the GCA will impair the equality of parties in the market and create a potential for corruption.

⁵ These are mainly small and medium-sized companies, socially-owned companies that are either insolvent or facing insolvency, small sole trader shops and craftsmen's stores.

CIP - Katalogizacija u publikaciji Narodna biblioteka Srbije, Beograd

33(497.11)

QUARTERLY monitor of economic trends and policies in Serbia /
Editor in Chief Pavle Petrović. - 2005, iss. 1 (january/july) - . - Belgrade
(Kameni ka 6) : The Foundation for the Advancement of Economics,
2005- (Belgrade : Alta Nova). - 30 cm

Dostupno i na: <http://www.fren.org.yu>. - Tromesečno. - Ima izdanje
na drugom jeziku: Kvartalni monitor ekonomskih trendova i politika
u Srbiji = ISSN 1452-2624 ISSN 1452-2810 = Quarterly monitor of
economic trends and policies in Serbia

COBISS.SR-ID 126940428