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

QM – *Quarterly Monitor*

SORS – Statistical Office of the Republic of Serbia

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

Serbia is facing a period of major economic and political uncertainty, which could easily result in a slide into a maelstrom of economic instability. Inflation has been running high; at the same time, strong pressures are being exerted with the aim of achieving a substantial rise in public sector wages and pensions. This could cause prices and wages to spiral upwards, while public debt could rise to unsustainable levels. Global trends are not favorable for Serbia: food and energy prices have been seeing strong growth, which has put more pressure on domestic inflation and slowed economic recovery. On the other hand, the Government has been weakened at a time when the country is about to see an election campaign. Such an environment is conducive to unrealistic and short-sighted demands for increasing public spending that do not take into account their wider consequences.

Economic policy in 2011 therefore needs to be more conservative and cautious than usual. Most importantly, the Government must not allow any increase in public spending in excess of the level planned for in the budget. An important, if not decisive, role in ensuring this policy is put into effect would be a new arrangement with the International Monetary Fund (IMF), albeit still highly uncertain. This arrangement would serve as a guarantee against the economy's sliding into instability, and would hold especial importance for Serbia's international credibility in the eyes of both foreign and domestic investors. By entering into the two-year arrangement, Serbia could count on the IMF to provide assistance for the country to more easily weather the turbulent and uncertain election period and the global economic disruption.

Inflation in Serbia continues to run high (12.6%) – it is, in fact, the highest in the region – and will probably not fall until the middle of the year. In conditions such as these it is unlikely that the National Bank of Serbia will be able to achieve the upper limit of its inflation target band of 6% at year-end 2011, as the first half of the year will already have accounted for 5.5% of the target. There are, however, some good signs – underlying, or "market" inflation (i.e. the headline rate excluding exogenous shocks, such as rising food and energy prices, etc.) has begun to fall over the past three months, although it is still significant, standing at 5.2% at the annual level. Taking a wider view, Serbia runs the risk of seeing continued high inflation in this year, which could be contributed to by food and oil prices remaining on the increase globally. In such a volatile situation, any major rise in public sector wages or pensions would trigger another wave of inflation.

The current high growth of food prices globally is a reflection of a long-term trend, and something that Serbia should take into account. In January 2011 global food prices broke the previous record, set in June 2008, while their temporary drop in the meantime had been caused by the short-term effect of the economic crisis. The world's demand for food has increased permanently, as populous countries such as China and India have seen massive economic growth since embarking on market-oriented reforms. China's economy has grown nearly twentyfold since 1978, while that of India has quadrupled since 1991. Serbia has joined the global trend of rising food prices: quicker growth of these prices began in the second half of last year, and continued into January and February 2011. Food prices increased nearly twice as much as other prices. When compared to other products, more expensive foodstuffs cause a permanent deterioration in the position of the poorer sections of society, as food accounts for a greater share of their expenditures. Food accounts for some 55% of all spending by the 10% of Serbia's poorest, while the average share of food in spending is 41%. Therefore, any savings in the government budget during this year should be used to provide aid to those most at risk, while such aid should be made part of social policy going forward.

Curbing inflation and reining in public spending will create a favourable environment for a healthy recovery in Serbia's economy that is driven by exports and rising domestic savings. There is, though, another global trend that points to the importance of domestic savings: a recent analysis of long-term movements in capital supply and demand at the global level shows that a thirty-year period of abundant, and therefore cheap, capital is coming to an end, and that capital will be much scarcer and more expensive over the coming two decades. The resulting rise in long-term interest rates could cut global economic growth by as much as one percentage point

on average. Economies such as Serbia, with high (foreign) current account deficits, will face an even greater slowing-down of growth, as they will have to pay much more to ensure high inflows of foreign capital. Economies wishing to attain greater economic growth will thus have to turn to domestic savings.

This year is expected to see the adoption of a new social security law in Serbia, which will substantially change criteria for being entitled to receive material support for low-income households (*materijalno obezbeđenje porodice, MOP*), the main instrument of social assistance. *Spotlight on 1*, by the FREN team of authors, outlines the ex ante micro-simulation analysis of SRMOD, the first Serbian micro-simulation tax and benefits model, which showed that proposed changes to legislation will to a certain extent improve the targeting of financial social assistance, as well as its capacity to respond to the needs of the segments of society that are most at risk; the problem of low reach remains a challenge. *Spotlight on 2* (Altiparmakov, N.) details a draft automated system for the distribution of payroll taxes that would remove the existing administrative burden for employers and eliminate the current regressive distribution of tax income – thereby increasing the revenue of underdeveloped municipalities by about 10% on average. *Spotlight on 3* (Nenadović, A.) analyzes the negative implications of inequitable asset distribution under current Global Fund eligibility criteria that are especially damaging to upper-middle income countries; the article argues that this could adversely impact the fight against HIV/AIDS at the global level and goes on to outline a proposal of changes to current eligibility criteria.

TRENDS

1. Review

As Serbia's economy enters 2011, inflation remains the one pressing issue. In the medium term, the greatest challenge for the country's economy will be solving the issue of high unemployment. If any increase in employment is to be achieved, economic growth needs to shift to a sustainable growth model – in other words, greater exports, investments and savings must be achieved. Responsible fiscal policy may play a crucial role in overcoming current and medium-term challenges facing the Serbian economy.

Serbia leads Europe in inflation (see Section 5, Prices and the Exchange Rate). Prices rose by 11.2% in January relative to the same period one year before. Inflation began to accelerate considerably in the second half of 2010, spurred primarily by the high growth of food prices, although other prices also saw major growth over the same period (Table T5-4).

Price growth stood at a high 1.4% in January 2011 relative to December 2010. This fact, as well as expected movements in prices over the coming months, suggest that the National Bank of Serbia (NBS) forecast for 2011 (4.5% ± 1.5%) is not very likely to come true. Several factors would need to slot into place for inflation to remain within the NBS target band: global trends of high growth in prices of oil and food would have to be reversed, while domestic economic policy would have to stand firm against growing pressures for excessive wage increases in the public sector.

One piece of information needs to be underscored in the poor overall picture suggested by the elevated inflation: January was the third consecutive month of decelerating underlying inflation, i.e. inflation excluding food and energy prices. January saw underlying inflation stand at 0.35%, while the figure for the period from November to late January was 1.4% (5.8% when annualized). Over the coming period it will be important to rein in underlying inflation, or, rather, make sure that the current exogenous shocks caused by growing food and energy prices do not spill over into other prices as well.

Employment remained exceptionally low. According to data from October's Labor Force Survey, a mere 47% of working-age population (people 15-64 years of age) were in employment, while the unemployment rate stood at 20% (see Section 3, Employment and Wages). Formal employment declined since the start of the crisis, as more than 200,000 jobs were lost – all of them in the private sector. We did notice, however, that the employment rate all but ceased to decline in the period from April to October 2010 (seeing a drop of a mere 0.1 percentage points); we hope that this is a sign of a change in the trend and the start of growth in employment in 2011.

The increase in real terms in the average wage in 2010, amounting to 1.2%, was in all likelihood a side effect of the drop in employment rather than representing any real trend in wage movements. Employees in less-paying industries bore the brunt of the layoffs caused by the crisis, which is why the increase in the average wage was an illusion – since there are ever fewer employees earning lower wages.

Economic activity recovered from the crisis throughout 2010. We estimate 2010 GDP growth in Serbia at 1.8%, while non-agricultural GVA rose by 2.2%: Serbia's recovery was somewhat more successful than that of the neighboring countries (see Section 2, Economic Activity). The structure of economic recovery implies that there is every chance that the growth model seen in the pre-crisis period, relying as it did on rising consumption, will not be repeated again in the period after the crisis. The entire recovery in GDP posted in 2010 can be ascribed to the growth in net exports, which climbed by €400 mn in relation to 2009.

The main question, however, is this: what will drive economic growth in the coming years, since growth rates have been forecast to rise, first to 3% in 2011, and then to 5% from 2012 onwards?

Net exports are unlikely to spur such high growth, as the relative significance of exports is still slight (with the share of exports of goods and services standing at a low 35%). Further, the coverage of imports by exports stands at just 60%, which is why it needs to be borne in mind that exports must rise at least 1.7 times as quickly as imports if net exports are to see any growth at all.

Given the current structure of the economy, growth at any rate substantially greater than that seen in 2010 will be difficult to achieve without domestic demand making a significant contribution. This leads to two questions: (1) how will such an increase in domestic demand be financed in the medium term, if we can expect foreign capital inflows to be lower than before the crisis, and (2) by how much more will exports have to rise for net exports to continue having a positive contribution to economic growth, since rising consumption leads to greater imports (and thus reduces net exports). Therefore, it remains unclear whether Serbia's economy will be able as early as next year to reach high growth rates that are sustainable in the medium term, or whether restructuring will take more time after all.

The current account deficit stood at some 7% of GDP in 2010, or about €2.1 bn (see Section 4, Balance of Payments and Foreign Trade). Although the deficit was much lower than in the run-up to the crisis (when it had reached as much as seven billion euros at times), 2010 again saw issues with its financing as capital inflows declined even further. In consequence, the dinar was faced with depreciatory pressures, while the NBS sold €2.4 bn to preserve exchange rate stability.

It seems that Q4 2010 saw a reversal in the trend after all: perception of Serbia's risk by investors changed substantially over the past several months. The EMBI has fallen by over 100 basis points since September, while Fitch Ratings, an agency providing country ratings, improved its outlook for Serbia. When, in late 2010, the government first announced and then issued euro-indexed bonds, high demand for these securities, combined with a low current account deficit, led to a sudden strengthening of the dinar. From November to February, the nominal appreciation of the dinar amounted to 3%, or 5% in real terms. Since several large investments are expected be realized in 2011 (FIAT, Delta Maxi), and as Telekom is likely to be sold, the exchange rate of the dinar will probably remain stable throughout the year, or, rather, will appreciate in real terms.

Exports increased by 24% in 2010 to reach their pre-crisis levels, while imports grew by 9.7%, which was still 23% down on 2008. Serbia's import and export growth trends are very similar to those seen in neighboring countries, but, in the medium term, Serbia faces a much more favorable situation since the price competitiveness of its economy has improved greatly over the past two years owing to the depreciation of the dinar (see Section 2, Economic Activity). Unlike Serbia, most other countries in the region use fixed or slightly floating exchange rates. Euro-ULCs, used to measure international price competitiveness of the Serbian economy, indicate that the depreciation of the dinar over the past two years has offset the loss in competitiveness recorded in the period of the strengthening dinar (2005-2008).

The consolidated fiscal deficit stood at 4.4% of GDP in 2010, an outcome more favorable than the planned 4.8% of GDP (see section on Fiscal Flows and Policy). The reason behind the smaller deficit were the somewhat more advantageous fiscal movements in the last quarter of 2010, which saw income rise and expenditures stagnate (Graph T6-1). Greater-than-expected inflation contributed to a drop in the fiscal deficit, as it affected the increase in fiscal revenue more than the increase in expenditures (major current expenditure items were frozen at their nominal levels).

In 2011 the budget deficit is planned to be cut further, to 4.1% of GDP, while major budget items – salaries and pensions – are to continue being adjusted. Real growth of pensions and public-sector salaries should be slightly slower than GDP growth (Table 6-3). The formula for pension and salary increase in 2011 should involve their indexation for current inflation plus an additional one-half of GDP growth seen in the year before (about 1%). The overall growth of pensions and public-sector salaries in 2011 should, therefore, stand at between 7% and 8%. Union demands for greater increases in public-sector salaries could pose a serious threat to macroeconomic stability with inflation running as high as it does.

The government must keep a tight rein on current spending, not only as part of its response to existing challenges, but also as part of a medium-term strategy recognized in fiscal regulations ratified. The decline in the deficit will slow down the rapid growth of public debt, which exceeded 40% of GDP in late 2010, but will also make room for an additional increase in public investment to 5% of GDP by 2015, whereby the government could facilitate the shift to the new growth model and greatly encourage future economic development.

Serbia: Selected Macroeconomic Indicators, 2004-2010

	Annual Data							Quarterly Data							
								2009				2010			
	2004	2005	2006	2007	2008	2009	2010	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Prices and the Exchange Rate								y-o-y[1]							
Consumer Price Index	..	..	..	6.5	11.7	8.4	6.5	10.1	8.7	7.9	5.9	4.4	4.0	6.5	9.6
Retail Price Index	10.1	16.5	12.7	6.8	10.9	10.1	8.6	9.8	9.9	9.4	9.2	7.2	6.9	7.9	10.8
Real fx dinar/euro (avg. 2005=100)[2]	100.5	100.0	92.1	83.9	79.7	84.1	86.5	86.0	84.3	82.6	83.5	85.3	86.1	87.2	86.7
Nominal fx dinar/euro (period average)[2]	72.62	82.92	84.19	79.97	81.46	93.90	102.90	93.71	94.17	93.24	94.47	98.60	101.30	105.15	106.56
Economic Growth								y-o-y, real growth[1]							
GDP (in billions of dinars)	1,381	1,684	1,962	2,302	2,723	2,815	3,040	..	..	..	..	..	..	..	..
GDP	8.3	5.6	5.2	6.9	5.5	-3.1	1.8	-4.3	-4.5	-2.2	-1.7	0.3	2.0	2.7	1.9
Non-agricultural GVA	6.4	6.8	7.5	8.7	5.7	-2.8	2.2	-3.7	-3.7	-2.2	-1.8	0.5	2.5	3.4	2.1
Industrial production	7.1	0.8	4.7	3.7	1.1	-12.1	2.9	-17.0	-17.8	-10.6	-3.8	2.8	6.9	3.7	-1.4
Manufacturing	9.7	-0.7	5.3	4.2	0.7	-15.8	3.9	-22.6	-21.6	-14.6	-5.4	4.6	7.1	4.7	-1.9
Average net wage (per month, in dinars)[3]	14,108	17,478	21,745	27,785	29,174	31,758	34,159	30,120	31,808	31,737	33,366	31,924	34,192	34,372	36,149
Registered Employment (in millions)	2.047	2.056	2.028	1.998	1.997	1.901	1.805	1.958	1.901	1.882	1.861	1.838	1.815	1.807	1.772
Fiscal data				in % of GDP							y-o-y, real growth				
Public Revenues	41.2	42.1	42.4	42.1	41.5	38.6	-1.5	-12.6	-13.4	-4.2	-5.0	-4,0	2.5	-3.6	-1.3
Public Expenditures	40.0	39.7	42.7	42.8	43.7	42.7	-1.7	-3.4	-6.0	-0.3	-9.2	-1,4	-3.1	-3.2	0.3
								in billions of dinars							
Overall fiscal balance (GFS definition)[4]	17.5	14.8	-33.5	-58.2	-68.9	-121.8	-136.4	-12.4	-45.5	-23.9	-40.0	-24,1	-31.2	-28.8	-52.3
Balance of Payments								in millions of euros, flows[1]							
Imports of goods[5]	-8,302	-8,286	-10,093	-12,858	-15,917	-11,096	-12,215	-2,755	-2,680	-2,705	-2,957	-2,658	-3,036	-3,179	-3,342
Exports of goods[5]	2,991	4,006	5,111	6,444	7,416	5,978	7,401	1,291	1,538	1,547	1,602	1,472	1,870	1,931	2,118
Current account[6]	-2,197	-1,805	-3,137	-4,994	-7,054	-2,084	-2,074	-978	-246	-344	-516	-760	-610	-523	-181
in % GDP[6]	*-11.6*	*-8.6*	*-12.9*	*-17.2*	*-21.1*	*-7.0*	*-6.9*	*-14.4*	*-3.3*	*-4.4*	*-6.5*	*-10.9*	*-8.0*	*-6.8*	*-2.3*
Capital account[6]	2,377	3,863	7,635	6,126	7,133	2,237	..	991	275	371	608	698	603	505	..
Foreign direct investments	773	1,248	4,348	1,942	1,824	1,402	860	643	251	113	395	284	136	176	265
NBS gross reserves (increase +)	349	1,675	4,240	941	-1,687	2,363	..	-240	880	716	1,007	-367	-321	-313	..
Monetary data								in millions of dinars, e.o.p. stock[1]							
NBS net own reserves[7]	103,158	175,288	302,783	400,195	475,110	578,791	490,534	502,606	489,062	528,439	578,791	563,529	547,249	493,899	490,534
NBS net own reserves[7], in mn of euros	1,291	2,050	3,833	5,051	5,362	6,030	4,616	5,303	5,234	5,681	6,030	5,652	5,287	4,684	4,616
Credit to the non-government sector	342,666	518,298	609,171	842,512	1,126,111	1,306,224	1,660,870	1,215,843	1,218,702	1,245,735	1,306,224	1,389,783	1,523,040	1,583,687	1,660,870
FX deposits of households	110,713	190,136	260,661	381,687	413,766	565,294	730,846	450,852	461,401	482,827	565,294	604,783	651,132	681,704	730,846
M2 (y-o-y, real growth, in %)	10.4	20.8	30.6	27.8	2.9	9.8	1.3	-3.2	2.1	0.9	9.8	11.5	14.6	10.3	1.3
Credit to the non-government sector (y-o-y, real growth, in %)	27.3	28.6	10.3	24.9	25.2	5,2	13.9	21.7	16.4	11,8	5,2	6,3	17.3	16.7	13.9
Credit to the non-government sector, in % GDP	23.9	29.6	28.6	35.0	42.0	45.8	53.8	45.9	45.8	44.5	45.8	48.2	51.6	52.5	53.8
Financial Markets															
BELEXline (in index points)[8]	1,161	1,954	2,658	3,831	1,198	1,312	1,283	844	1,173	1,548	1,312	1,307	1,238	1,226	1,283
Turnover on BSE (in mil. euros)[9]	423.7	498.8	1,166.4	2,004.4	884.0	443.7	222.0	61.2	72.6	55.8	254.0	49.4	46.3	39.5	86.8

Source: FREN

1) Unless indicated otherwise.

2) The calculation is based on 12-month averages for annual data, and three-month averages for quarterly data.

3) Data for 2008 represent adjusted figures based on a wider sample for the calculation of an average wage. Thus, the nominal wages for 2008 are comparable with nominal values for 2009 and 2010, but not with previous years.

4) We monitor the overall fiscal result (overall fiscal balance according to GFS 2001) – Consolidated surplus/deficit adjusted for "budgetary lending" (lending minus repayment according to the old GFS).

5) The Statistical Office of the Republic of Serbia has changed its methodology to calculate foreign trade. As of 01.01.2010, Serbia started implementing the general system of trade, in line with recommendations from the U.N. Statistics Department, which represents a wider concept than the previous one, offering better adjustment to criteria given in the Balance of Payments and the System of National Accounts. For a more detailed explanation see *QM* 20, Section 4, Balance of Payments and Foreign Trade.

6) The National Bank of Serbia changed its Balance of Payments methodology in Q1 2008. The change in methodology has led to a smaller current account deficit and a smaller capital account balance. For a more detailed explanation see *QM*12, section 6, Balance of Payments and Foreign Trade.

7) NBS net own reserves represent a difference between net foreign exchange reserves of NBS and the sum of foreign exchange deposits of commercial banks and foreign exchange deposits of the government. See section Monetary Flows and Policy for more detail.

8) The value of index on the last day of the monitored period.

9) The total turnover value at the Belgrade Stock Exchange includes the values of traded shares and foreign currency savings bonds. The mid-exchange rate for the monitored period was used to calculate the dinar turnover values in the stock market into euros.

2. Economic Activity

Economic activity in 2010 has been recovering, but also rebalancing in relation to the pre-crisis period. Estimated GDP growth of around 1.8%, compensated for more than half of economic activity drop in 2009. The recovery of economic activity in 2010 is owed to net exports, increase by EUR 380 million in relation to 2009. Domestic demand, as the main driver of production growth in the pre-crisis period, has stagnated in 2010 in comparison to the 2009 crisis year. In Q4 of 2010, y-o-y GDP growth was estimated at 1.9%, indicating a slowdown in recovery compared to the previous quarters. The downturn of economic activity was mainly influenced by industrial production, which experienced a sharp decline in October. Unit Labor Costs (ULC) in Q4 continued to shrink, because, despite the start of production recovery, the real wage mass was declining. ULC expressed in euros, as our method for measuring the international price competitiveness of the national economy, in Q4 2010 approximated the levels of Q4 2005, i.e. before the strong increase of the dinar, and so did the related loss of price competitiveness of the national economy. In 2011 we expect a faster economic recovery than in 2010, exceeding the pre-crisis level of economic activity.

Gross Domestic Product

GDP growth in 2010 of around 1.8%...

According to *QM's* preliminary estimate,[1] based on available data on economic activity performance, nominal GDP growth amounted to about 1.8% in 2010 (Table T2-1). Non-agricultural Gross Value Added (GVA) that we consider a more reliable measure of economic activity, has realized a nominal growth of 2.2%. The pace of Serbia's economic recovery was somewhat more successful than other countries in the region (see Box 1 Serbia's Economic Growth in the Regional Context), although, even with this growth rate, Serbia did not manage to attain its pre-crisis production level.

...along with rebalancing the economy

Economic recovery in 2010 was mainly spurred by high exports growth. Exports were also the only macroeconomic aggregate that reached their pre-crisis level in 2010. As exports recorded a considerably faster growth than imports, net exports in 2010 increased by EUR 380 million and were practically the only GDP component creditable for the growth achieved, considering that domestic demand stagnated for the most part of the said year.

Slower recovery of economic activities in Q4

On a quarterly level, Q4 saw a y-o-y nominal GDP growth that we estimate at 1.9% and non-agricultural GVA at 2.2%. Economic growth slowed down in Q4 compared to the previous quarters when y-o-y GDP growth rates exceeded two percent.

Y-o-y GDP growth estimated at approximately 1.9%

The quarterly growth of the seasonally adjusted GDP index also indicates a downturn in relation to previous quarters. This index dropped by 0.7% in Q4 in relation to Q3.[2] The production decline in relation to the previous quarter was temporary, mainly due to the influence of exogenous factors (oscillation in the manufacturing industry production and decreased electric energy production[3] due to a warmer autumn), hence it is to be expected that the economic activity will resume its upward path in the first quarter of 2011.

1 The methodology used to estimate the GDP is based on the methodology of the Statistical Office of the Republic of Serbia (SORS). The real growth of gross value added of individual sectors of the economy is estimated by activity and the tax component is added to the sum of these estimates. Modifications of the SORS methodology are partly related to the indicators on the basis of which sectoral growth is estimated and which the QM authors consider to be more reliable indicators of real sectoral growth in specific cases (e.g. cement production in the construction industry). Also, given that QM authors have fewer indicators at their disposal than the SORS, their estimate also includes indirect indicators which are not a composite part of the official statistical methodology. QM authors also conduct deeper analyses of trends in individual sectors and a demand analysis

2 For comparability purposes, for making seasonal adjustments we applied the X12 ARIMA methodology also used for seasonal adjustment of industrial production.

3 Due to its small share, Electricity Supply and Distribution in Table T2-1 was integrated into "Other"

Table T2-1. Serbia: Gross Domestic Product, 2005–2010[1)]

	Y-o-y indices														Base index	GDP share
	2005	2006	2007	2008	2009	2010	2009				2010				2010/	2009
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4[2)]	2002	
Total	105.6	105.2	106.9	105.5	96.9	101.8	95.7	95.5	97.8	98.3	100.3	102.0	102.7	101.9	137.1	100.0
Taxes minus subsidies	110.2	99.8	109.5	103.8	94.3	102.4	92.0	90.4	96.4	97.8	100.5	102.7	103.2	103.0	144.5	15.8
Value Added at basic prices	105.0	106.4	106.5	105.9	97.4	101.6	96.4	96.5	98.1	98.3	100.3	101.9	102.6	101.6	131.9	84.2
Non agricultural Value Added	106.8	107.5	108.7	105.7	97.2	102.2	96.3	96.3	97.8	98.2	100.5	102.5	103.4	102.1	142.1	87,8[3)]
Agriculture	95.1	99.8	92.2	108.6	100.7	98.7	99.9	101.4	100.8	100.6	99.6	98.4	98.6	98.5	104.5	12,2[3)]
Manufacturing	99.9	105.6	104.8	101.2	84.7	102.6	79.3	79.9	86.0	93.0	102.0	105.7	105.0	98.2	99.6	13,7[3)]
Construction	102.0	107.7	110.8	101.5	85.7	88.6	90.0	86.4	83.6	82.7	86.2	87.5	92.0	90.0	110.7	3,2[3)]
Transport, storage and communications	123.4	129.3	120.1	112.5	106.5	107.1	103.8	106.7	107.8	107.4	107.4	106.6	107.4	107.0	311.7	17,9[3)]
Wholesale and retail trade	122.0	110.3	119.9	106.8	91.1	102.0	92.6	90.8	91.7	89.5	93.0	101.0	106.2	107.0	209.1	12,7[3)]
Financial intermediation	111.9	112.2	115.6	113.5	104.3	107.3	105.3	105.3	103.7	103.0	105.2	106.9	108.7	108.0	189.7	5,1[3)]
Other	102.1	100.6	101.5	103.6	101.2	100.1	101.3	101.3	101.7	100.5	100.2	100.5	100.2	99.5	113.2	35,3[3)]

Source: SORS
1) At constant prices in 2002
2) *QM* estimate
3) Share in GVA

Drop in Manufacturing Sector

Observed by *manufacturing principle*, most economic sectors saw a similar y/y growth in Q4 as in previous two quarters (Table T2-1). The biggest trend change was recorded in the Manufacturing sector whose decline had a major impact on the overall slowdown of economic activity in Q4. The Construction sector also recorded a significant y/y decline, but that decline has been increasingly slowing down from quarter to quarter. Among the economic sectors that are recovering, worth a mention is the Wholesale and Retail Trade, which, despite a strong recovery mid-year, stagnated at the level reached in Q4.

Seasonally adjusted indices indicate that GDP in Q4 was still by about 2% lower than the one achieved in the first half of 2008. Considering that economic growth is expected to reach 3% in 2011, the pre-crisis level of production (from the first half of 2008) will be achieved by mid 2011, which is in line with our estimates from two years ago.

Y-o-y increase of domestic and export demand is shown in Table T2-2. In Q4 we observed a solid recovery of aggregate demand where y-o-y real growth amounted to about 4%. Observed by total demand components, it is evident that domestic demand in Q4 was lower by 1.5% in real terms relative to the same period last year, while export grew by as much as 26.7% (Table T2-2).

Table T2-2. Serbia: Growth of Aggregate Demand and Components, 2006–2010

	2006	2007	2008	2009	2010	2009				2010			
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Y-o-y indices												
GDP	105.2	106.9	105.5	96.9	101.8	95.7	95.5	97.8	98.3	100.3	102.0	102.7	101.8
Aggregate demand	109.3	110.3	107.1	91.9	104.1	91.5	85.2	87.4	93.9	100.2	105.0	106.9	104.0
Domestic demand	106.0	106.9	105.6	94.0	100.9	94.9	86.1	89.4	94.1	98.6	102.3	104.0	98.5
Export demand	125.1	125.6	113.3	83.3	117.5	78.4	81.8	79.7	93.3	106.9	116.0	118.5	126.7

Source: *QM* based on NBS and SORS data

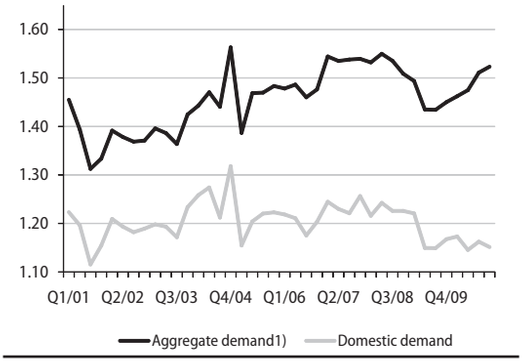
Export demand in the lead

The considerable lead export demand had over all other observed aggregates in Q4 has led the *QM* to conclude that exports are still the main driver of economic recovery. As a result of the faster growth of exports compared to that of other GDP components, the structure of the domestic economy is changing rapidly as well. Exports of goods and services increased its share in the economy in Q4 by over seven percentage points relative to the standard values in the pre-crisis period, reaching 37% of GDP.

Graph T2-3 shows the ratio of demand (aggregate and domestic) to production. Two divergent trends are evident. While the share of domestic demand in GDP is decreasing, that of aggregate demand is increasing, due to higher growth of exports. The ratio of domestic demand to GDP - the bottom line in Graph T2-3 - deserves particular attention. Domestic demand was 15% higher than production in Q4. In the pre-crisis years the difference between consumption and production was mostly over 20%, which is another indication of the changed structure of the domestic economy.

Unit labor casts declining

Graph T2-3. Serbia: Aggregate and Domestic Demand to GDP Ratio, 2001–2010

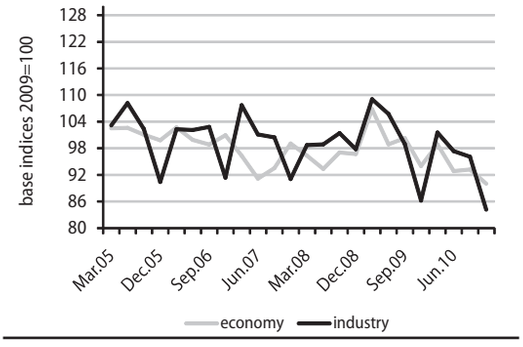


Source: *QM* based on SORS data
1) Aggregate demand = domestic demand + exports.

Unit Labor Costs[4] (ULC), both those measured in dinars and those measured in euros, declined in Q4 relative to previous quarters (Graph T2-4 and T2-5). This reduction is owed to seasonal factors, considering that ULC in Q4, as a rule, were somewhat lower than in the previous period of the year, but they are also the continuation of the downward trend which started in Q1 2009. If we compare this to the same period last year, whereby we avoid the seasonal factors, ULC in dinars are approximately 4% lower than in Q4 2009 and in euro about 6% lower.

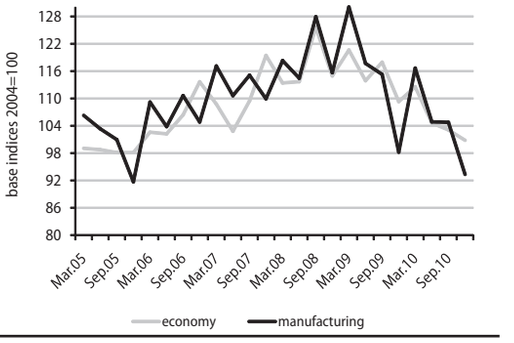
The ULC fall when the share of labor costs in the value added generated by such labor falls, which is essentially a positive trend. In Serbia's case, however, the decline of the ULC is a consequence of the fact that the economic recovery process has begun, while the real wage mass is still declining. Unfortunately, the most important reason for the reduction of the real wage mass relative to the pre-crisis level is the significant slump in employment in Serbia, which was even higher than the decline in production. [5]

Graph T2-4. Serbia: Real Unit Labor Costs in the Economy and Industry, 2005–2010



Source: *QM* based on SORS and NBS data

Graph T2-5. Serbia: Real Euro Unit Labor Costs in the Economy and Manufacturing Industry, 2005–2010



Source: *QM* based on SORS and NBS data

Price competitiveness perceptibly higher than in the pre-crisis period

Unit Labor Costs measured in euros (euro-ULC), indicate the international price competitiveness of a national economy because they define the highest domestic cost component (ULC) vis-à-vis value added. The *QM* calculated the euro-ULC for the manufacturing industry, (which produces by far the greatest share of tradable products) and in the entire economy-. [6]

Graph T2-5 shows the euro-ULC trend for the economy and Manufacturing sector. In Q4, we notice a decline of euro-ULC to a level that is significantly lower than that before the onset of the crisis. In the manufacturing sector, as well as in economy, the euro-ULC level in 2010 was similar to that of 2005. Q4 in manufacturing industry shows a growth of 1.7% and in economy amounted to 2.5% for the same period in 2005. Euro-ULC value and its return to same level as in 2005 indicates that the competitiveness of the domestic market, lost through real appreciation in the period from 2006 to the breakout of the crisis, has been regained (thanks to the depreciation of the dinar and labor market flexibility). Increased price competitiveness of the domestic economy can give a significant impetus to sustained export growth.

4 Unit Labor Costs measured in dinars are calculated for the economy (without the Agriculture and State sector) and industry.
5 For further details please refer to Setion 3 "Employment and Wages" of this QM issue.
6 Without the State and Agriculture sectors.

Box 1. Serbia's Economic Growth in the Regional Context

The latest EBRD estimates (from January 2011) of the economic growth of the countries in the region and in Serbia in 2010 were somewhat more favorable than the previous ones, that notwithstanding – the region's economic recovery is relatively slow. The economic recovery data were observed together with the data on the employment rate. Based on that, it is clearly evident that Serbia's economic activity is recovering at a somewhat faster pace in comparison to the rest of the region. However, it is also evident that the rest of the region has had a far lesser loss of employment during the crisis than Serbia (Table T2-6).

Table T2-6. Neighboring countries: GDP growth and unemployment rate (15–64), 2009–2010

	GDP growth (y-o-y, %)							Unemployment rate (15-64, in %)		
	2009	2010				2010[1)]	2011[1)]	2008	2009	2010
		Q1	Q2	Q3	Q4[1)]					
Hungary	-6.7	0.1	1.0	1.7	2.4	1.3	2.0	7.9	10.1	10.9
Romania	-7.1	-2.6	-0.5	-2.5	-1.8	-1.9	1.1	6.1	7.2	7.2
Bulgaria	-4.9	-3.2	-1.4	0.5	4.4	0.4	2.4	5.7	6.9	9.6
Albania	3.3	2.5	3.3	4.9	4.6	3.8	2.6	12.5	13.1	13.5
Bosnia and Herzegovina	-2.8	-	-	-	-	0.8	2.2	23.4	24.1	27.2
Montenegro	-5.7	-	-	-	-	0.2	3.1	10.7	11.2	12.2
Croatia	-5.8	-2.5	-2.5	0.2	-0.5	-1.3	2.0	8.6	9.3	12.7
Macedonia	-0.9	-1.3	1.1	1.3	1.8	0.8	3.2	34.0	32.3	32.3
Serbia	**-3.1**	**0.3**	**2.0**	**2.7**	**2.5**	**2.0**	**3.0**	**14.4**	**16.9**	**20.0**

Source: EBRD, IMF
1) EBRD estimate

Albania, which had not been hit by recession at all, is the only country that had a somewhat higher GDP growth rate than Serbia in 2010, while for most of the economies in the region, a more significant recovery is expected only in 2011.[1] As regards the percentage of unemployment, when Serbia was hit by the crisis, it had a somewhat larger share of unemployed in relation to the average in the region, (only Bosnia and Herzegovina and Macedonia had a higher unemployment rate). During the economic crisis that, the already high unemployment rate in Serbia, increased by 5.4 percentage points, which relativizes the faster recovery of domestic production observed in relation to the countries in the region.

1 For full comparability of data in the Table, instead of the existing FREN estimate for Serbia we used the EBRD estimate for Q4 for the entire 2010. The EBRD estimate is similar to the estimate of the author of this text.

Industrial Production

Industrial production was on the path of recovery in 2010...

In 2010, industrial production recorded a significant increase of 2.9% and the manufacturing industry 3.9% (Table T2-7). Although the growth was slightly faster than the recovery of the overall economy, one should not neglect the fact that industrial production dropped by as much as 12.1% in 2009 and that the growth recorded in 2010 compensated for only one quarter of the drop from the previous year. Also, QM estimates from the beginning of the year that industrial production growth would reach about 5% in 2010 did not materialize.

...but declined again in Q4

The somewhat poorer performance of industrial production than expected in 2010 is chiefly attributable to the 1.5% fall of industrial production in Q4 over the same period of the previous year (Table T2-7). The decline in industrial production, which had a major impact on the slowdown of the overall economic activity in Q4, occurred after three quarters of solid y-o-y growth rates.

Table T2-7. Serbia: Industrial Production Indices, 2005–2010

	Y-o-y indices														Share
	2005	2006	2007	2008	2009	2010	2009				2010				2009
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Total	100.8	104.7	103.7	101.1	87.9	102.9	83.0	82.2	89.4	96.2	102.8	106.9	103.7	98.5	100.0
Mining and quarrying	102.1	104.1	99.4	103.6	95.7	113.8	92.8	90.1	100.1	99.2	110.3	118.1	115.8	111.7	6.7
Manufacturing	99.3	105.3	104.2	100.7	84.2	103.9	77.4	78.4	85.3	94.6	104.6	107.1	104.6	99.2	72.8
Electricity, gas, and water supply	106.6	102.2	102.8	101.8	100.6	95.7	99.2	98.7	103.9	100.7	95.9	102.7	95.8	91.4	20.5

Source: SORS

Manufacturing industry and electricity supply in decline

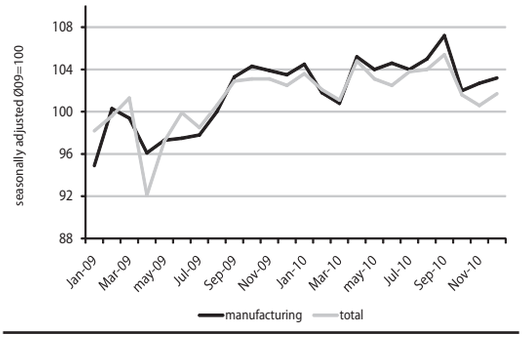
The largest y-o-y decline in Q4 of 8.6% was recorded in the Electricity, Gas, Water Supply sector (table T2-7). The first and foremost reason for this is a warmer autumn than usual, but probably also a decrease in electricity consumption by large industrial consumers, such as US Steel Serbia that temporarily halted its production. The manufacturing industry also recorded a decline of nearly 0.8% in Q4. The only sector that recorded a high y-o-y growth of 11% in Q4 was Mining and Quarrying, but this had very little impact on the overall performance of industrial production, due to the sector's significantly lower share in industrial production.

Seasonally adjusted indices declined robustly in October

Graph T2-8 shows the seasonally adjusted indices of industrial production in the entire industry and in the manufacturing industry. Seasonally adjusted data confirm the negative trends in y-o-y indices, resulting in a decrease of industrial production in Q4 of about 3% compared to Q3.

The rapid decline of industrial production already occurred in October, when the seasonally adjusted index for the manufacturing industry decreased by over five percentage points over September. This unusually large decline is, in fact, an indication that exogenous factors had a decisive impact on this change in the trend. We identified some of these in the corporate policy of several large enterprises, but also in the dairy market crisis.

Graph T2-8. Serbia: Seasonally Adjusted Industrial Production Indices, 2009–2010



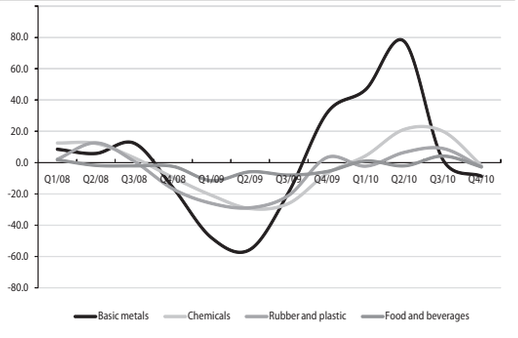
Source: SORS

The Serbian Oil Industry (NIS) launched major investment activities in October, so that the production was significantly reduced, after a period of several months of above average production (for supplies). There was a similar situation in US Steel Serbia, where there were several increases or decreases of production from the beginning of the crisis, by decision of the multinational owner. Finally, the crisis in the dairy industry undoubtedly had an impact on food sector production, reflected in the unusually high drop of this extremely heterogeneous and consequently quite inert sector of the manufacturing industry.

Graph T2-9 presents the y-o-y growth of specific sectors with sizable shares in the manufacturing industry. We noted that all of the observed sectors have approached the zone of negative y-o-y growth in Q4, which gives us an indication that, apart from the evident exogenous influences, there was a slowdown of industrial production on a somewhat wider front. Although we are more inclined to expect that industrial production will recover from its abrupt decline in Q4 already in Q1 2011, the possibility of stagnation or further decline of production cannot be ruled out if the negative trends observed so far in a limited number of sectors should expand. We will have to wait a few more months for a definite confirmation of the industrial production trend.

Recovery of the production of consumer goods

Graph T2-9. Serbia: Year on Year Growth of Specific Manufacturing Industry Sectors, 2008–2010



Source: SORS

Observed by components of industrial production (Table T2-10), three groups of products: energy, intermediate and investment products have recorded a y-o-y decline in production in Q3, while production of consumer goods continued its y-o-y growth.

Production of intermediate goods in Q4 decreased by almost 0.5% over the previous year, but this decline occurred as a result of a decrease in basic metals production, considering that the rest of the group is recording a y-o-y growth. If basic metals are excluded from the intermediate goods sector, its y-o-y growth would stand at 2% (Table T2-10). Consumer goods production

is recording a y-o-y growth of 0.3% which, as in the case of basic metals production, is the sum of two divergent trends. Namely, the food industry, which has the biggest share in this group - recorded a y-o-y drop of 2.7% in Q4, while the rest of consumer good production recorded a high growth of 11.5%.

Table T2-10. Serbia: Components of Industrial Production, 2005–2010

	Y-o-y indices														Share[5]
	2005	2006	2007	2008	2009	2010	2009				2010				2009
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Total	100.6	104.7	103.7	101.1	87.9	102.9	83.0	82.2	89.4	96.2	102.8	106.9	103.7	98.6	100.0
Energy[1]	103.9	102.5	101.2	101.5	99.4	99.5	98.3	96.5	102.0	100.5	97.2	105.8	102.3	95.1	30.1
Investment goods[2]	74.2	90.0	105.4	105.5	77.9	91.0	71.4	77.6	76.4	87.6	103.4	90.5	90.9	86.6	5.3
Intermediate goods[3]	104.9	106.7	104.9	100.0	77.8	110.8	65.1	66.0	81.4	103.2	114.1	121.4	110.4	99.5	26.9
Intermediate goods without basic metals	101.5	101.3	107.3	98.8	80.1	107.7	69.6	73.4	81.5	93.3	104.1	104.2	113.0	102.0	20.6
Consumer goods[4]	101.6	112.0	107.1	97.9	86.9	102.0	85.0	84.7	88.5	87.5	102.2	103.0	100.4	102.8	36.6
Consumer goods without food industry	96.3	128.3	109.2	96.3	78.1	104.7	79.5	69.5	82.9	76.5	104.5	112.7	93.2	111.5	12.6

Source: SORS

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), machines and equipment (excluding electric), office machinery and computers, radio, TV and communication equipment, precision and optical instruments, motor vehicles and trailers, other transport equipment.

3) Mining of metal and non-metal ores, stone quarrying. Manufacture of textile yarns and fabric, wood and pulp products (except furniture), cellulose, paper and paper products, rubber and plastic products, chemical products (except pharmaceuticals and household chemicals), petrochemicals, construction materials, basic metals, sub-sector of metal goods production excluding machines (sections 284, 285, 286 and 287, Classification of Activities), electrical machines and appliances, and the recycling sub-sector.

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

5) Share in total industrial production.

3. Employment and Wages

Negative labor market trends have considerably slowed down in the April–October 2010 period relative to the previous year. The employment and unemployment rates have remained almost unaltered, but inactivity among the working-age population has continued to grow, albeit at a slower pace than previously. The employment rate of women in the April–October 2010 period has decreased by 0.4 percentage points, while the employment rate of men recorded no significant changes. The highest unemployment rate of 46.1% was recorded in the 15–24 age group, followed by the 25–34 age group (27.5%). There was an increase of around 12,000 of the so-called discouraged persons, i.e. those who have lost their jobs, but are not looking for employment. The greatest increase in this discouraged persons' category has been recorded in the 25–34 age group. The number of self-employed and their employees has dropped by approximately 28,000 persons, or 6.7%. Annually, the growth of the average real wage amounted to 1.2%. The overall increase in wages in 2010 can be attributed to the private sector where the nominal y-o-y average wage growth amounted to 4.5%, while public sector wages remained frozen.

Employment

The employment rate of the working-age population almost stabilized and stood at 47.1% in October

The decline in employment between April and October 2010 was significantly lower than in the previous year. The employed working-age population decreased by around 9,000 persons in October 2010, i.e. by 0.4% against April of the same year. This represents a significant slowdown of the trend of declining employment, compared to the period between October 2009 and April 2010 when the number of employed decreased by about 172,000 persons (7%). The employment rate of the working-age population almost stabilized and stood at 47.1% in October 2010 (Table T3-1).

The employment rate of women decreased by 0.4 percentage points, while the employment rate of men remained at the same level

The employment rate of women dropped by 0.4 pecentage points (i.e. by about 10,000 persons) in the period April–October 2010, while the employment rate of men did not record any significant changes in the same period. The difference between the employment rate of men and women – which had been decreasing in the previous period – has now increased again, so that the employment rate of men was by 14.5 percentage points higher than the employment rate of women in October 2010, compared to 14.1 percentage points in April 2010 (Table T3-1).

The working-age population unemployment rate amounted to 20% and that of the 15–24 age group to 46.1%

The number of unemployed working-age population decreased by about 6,600 persons in October 2010 compared to April of the same year, i.e. by a mere 0.1%, while the working-age population unemployment rate amounted to 20% in October 2010 (Table T3-1). By age group, the 15–24 accounted for the highest unemployment rate of 46.1%, followed by the 25–34 cohort (27.5%). By level of education, the highest unemployment rate was recorded among persons with secondary education and it stood at 22.7%.

Table T3-1. Serbia: Employment and Unemployment According to the Labor Force Survey[1], 2008–2010

		Total number of employed 15-64[2]	Number of employed in agriculture and unpaid family workers 15-64[3]	Employment rate 15-64			Total number of unemployed 15-64	Unemployment rate 15-64		
				Total	Male	Female		Total	Male	Female
		1	2	3	4	5	6	7	8	9
2008	April	2,652,429	670,141	54.0	62.3	46.0	432,730	14.0	12.4	16.1
	October	2,646,215	589,240	53.3	62.2	44.7	457,204	14.7	12.7	17.3
2009	April	2,486,734	437,957	50.8	58.7	43.3	486,858	16.4	15.0	18.1
	October	2,450,643	411,303	50.0	57.4	42.7	516,990	17.4	16.1	19.1
2010	April	2,278,504	326,623	47.2	54.3	40.3	572,501	20.1	19.4	21.0
	October	2,269,565	352,724	47.1	54.4	39.9	565,880	20.0	19.0	21.2

Source: Labor Force Survey (LFS), SORS.
Notes:
1) The Labor Force Survey has been conducted twice a year since 2008 – in October and in April.
2) Persons between 15 and 64 years of age are considered to be of working-age.
3) Until October 2008, the LFS did not comprise the 15-64 age group classification for the number of employed in agriculture and contributing household members, only 15+.

Persons that lost their jobs remain discouraged from seeking employment

As in the previous period, we continue to monitor the difference between the people that lost their jobs and the newly unemployed, because those that were laid off turn inactive rather than seek new employment. The number of working-age individuals declaring themselves as inactive although they want to and are able to work, increased by 12,300 persons between April and October 2010, indicating that persons losing their job are still discouraged from seeking new employment. The 25–34 age group accounted for the highest increase in the category of the "discouraged". The total rate of inactivity of the working-age population continued to grow, from 39.4% in 2009 to 40.9% in April 2010 and thereafter to 41.2% in October 2010. If we look at the level of educational attainment of these persons, we see that the greatest change in activity between April and October 2010 was recorded in the population with secondary education, within which about 43,000 persons, i.e. 4.5% became inactive.

The greatest drop in employment was recorded among the self-employed and their employees

Formal employment continued to decline in the March–September 2010 period, by about 42.000, i.e. 2.4% (Table T3-2, column 1). The March–September 2010 period recorded a noticeably greater drop in the number of self-employed and their employees, against employees working in legal entities. The number of self-employed and their employees declined by about 28,000 persons (6.7%), out of which the self-employed accounted for 16,000 (8.6%) and their employees for around 13,000 (5.2%), which matches with the trends observed by the Labor Force Survey. In the same period, the number of employed in legal entities dropped by about 14,000 (1.0%) (Table T3-2, column 2), while the drop in employment in 100 selected large enterprises slowed down significantly.

The greatest drop in employment among legal entities was recorded in Manufacturing and Wholesale and Retail Trade

The Manufacturing sector accounted for the greatest decline of employment in legal entities in the April–September 2010 period, by about 12,000, i.e. 3.8% within the sector, followed by Wholesale and Retail Trade where employment declined by about 6,000 persons, i.e. 3.1% within the sector. An increase of the number of employed by about 3,000 persons, i.e. 7.3% within the sector was recorded in the Real Estate sector in the same period (Table P-5 in the Analytical Appendix).

Table T3-2. Serbia: Number of Registered Employed and Unemployed[1], 2004–2010

		Total no. of employed	Employees in legal entities[2]	Entrepreneurs			Total no. of employees	Number of unemployed (NES)
				Total	No. of entrepreneurs	No. of employees with entrepreneurs		
		1 (=2+3)	2	3 (=4+5)	4	5	6 (=2+5)	7
		in thousands						
2005	March	2,070	1,557	513	228	285	1,842	884
	September	2,067	1,536	531	230	300	1,836	898
2006	March	2,032	1,496	536	228	308	1,804	920
	September	2,019	1,447	572	242	330	1,777	915
2007	March	2,004	1,438	566	239	327	1,765	913
	September	2,001	1,428	573	245	328	1,756	808
2008	March	2,006	1,432	574	245	329	1,761	795
	September	1,998	1,424	574	245	329	1,753	726
2009	March	1,911	1,411	500	210	290	1,701	758
	September	1,868	1,383	485	211	274	1,657	737
2010	March	1,817	1,362	455	199	257	1,618	778
	September	1,775	1,348	427	183	244	1,592	721

Source: SORS - the semi-annual report on employed persons and wages of the employed persons RAD-1/P; the survey amending the semi-annual survey RAD-1; the semi-annual survey on private entrepreneurs and their employees RAD-15; the National Employment Service (NES).
Note: September data were adjusted on the basis of the semi-annual survey RAD-1/P for March 2010.
Footnotes:
1) By the registered number of employed, we refer to the formal economy, i.e. those employees with employment contracts and for whom social security contributions are being paid.
2) By registered number of unemployed, we refer to those persons that have registered with the National Employment Service (NES). In September 2004, NES switched over from monitoring the number of job seekers to monitoring the number of unemployed, which is why we do not have a series for the period before September 2004 (column 7).

The fall of the administratively defined unemployment by around 57,000 (7.3%) that we observe between March and September 2010 (Table T3-2, column 7), does not necessarily reflect the trends in economically defined unemployment, because it covers only the people using the services of the National Employment Service.

Table T3-3. Serbia: Public Sector Employment, 2004–2010

		Employees in legal entities						
		Public sector						
		From the budget			Public enterprises		Public sector - total	Other[1)]
		Administration - all levels	Education and culture	Health and social work	National public	Local public		
		1	2	3	4	5	6	7
		in thousands						
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	482	943
2009	March	64	125	142	89	57	478	933
	September	64	123	142	88	57	473	910
2010	March	62	124	142	87	56	472	890
	September	63	122	143	86	56	470	878

Source: SORS

Note: The total balance of public sector staff in the Table does not comprise the employees of the Ministry of Defense and Ministry of the Interior, although their salaries are funded from the state budget. Their numbers are estimated at around 80,000, and they account for another 4% of all employed persons in Serbia. Precise data on their numbers and average wages are not published by the SORS for security reasons.

Footnote:

1) Private, socially-owned and mixed enterprises (without entrepreneurs). This number is arrived at by subtracting the numbers of public company workers and others, whose wages are funded from the budget, from the total number of employees in legal entities.

Public sector employment remained almost unchanged

The number of workers in the public sector remained almost unchanged between March and September 2010, aside from the regular cyclic seasonal changes in the number of employed in education. Therefore, we can say that in 2010 the private sector accounted for the overall decline in employment (Table T3-3).

Box 1. Employment Policy and Institutional Factors as Causes of Low Employment in Serbia

The extremely negative trends in Serbia's labor market during the 2000s have been significantly influenced by employment policy weaknesses that have not been removed even after 10 years of transition. While labor market policies cover labor legislation, the unemployment benefits system and active labor market programs (e.g. job matching, training and subsidized employment), employment policy covers a wider framework of public policies, including all macroeconomic and sector specific policies that directly or indirectly influence labor demand and supply (e.g. fiscal policy, monetary policy, wage policy, education policy, etc.). At the beginning of transition, there was no clear employment strategy, nor were the effects of privatization and sector policies and their interaction with employment outcomes analyzed. An optimistic outlook prevailed that, in due course, the implementation of market reforms would automatically lead to employment growth. However, this did not happen. One of the main problems that the labor market faces is the high tax-burden on low earnings, which, along with the lack of progressivity (i.e. relatively higher tax burden on high earnings), hampers implementation of policies that would enhance profitability of work. Growth of public sector wages has always been very high, not only due to the influence of strong trade unions, but also as part of the deliberate policy of the government aimed at empowering the middle class. Such a policy generated growing expectations that are now reflected in the strikes of public sector workers. On the other hand, it failed to create a good environment for the autonomous development of *de novo* private enterprises and growth of private sector employment. The institutional labor market arrangements are also ridden with significant weaknesses. For instance, social dialogue is not functional and collective bargaining is practically non-existent in the private sector. Furthermore, the Labor Code prescribes high severance payments in case of termination of employment that are tied to the total work experience of the employee and not just the length of employment with that particular employer. Taking all of the above into account, it can be said that the economic crisis basically only exposed existing institutional and structural shortcomings of the Serbian labor market and flaws of the country's overall transition strategy.

Wages

In 2010 average real wage increased by 1.2% y-o-y, which can be fully attributed to the private sector

In 2010 the average real wage growth amounted to 1.2%, which is more than in 2009 when its growth stood at a mere 0.6%. The average nominal wage increased by 7.5% and its growth decreased by 1.3 percentage points relative to 2009 (Table T3-4). Total wage growth in 2010 can be attributed to the private sector where the real y-o-y average wage growth stood at 4.5%, while public sector wages were frozen.

In Q4 2010 the average real wage recorded a 1.2% drop

In Q4 2010 the average real wage recorded a 1.2% drop, following a continuous growth in the first three quarters of the same year. If we observe only December 2010, real wages recorded a 2.5% y-o-y decline. The average nominal wage approximated the same level as in the previous quarter, while its y-o-y growth amounted to 8.3% (Table T3-4).

The average net wage amounted to 339 Euros in Q4 2010

The average net wage in Q4 2010 reached 339 Euros, recording a 3.5% increase over the previous quarter (327 Euros in Q3 2010). Compared to Q4 2009 (353 Euros), the average wage in euros fell by 4.1% (Table T3-4).

Table T3-4. Serbia: Average Monthly Wages and Y/Y Indices , 2008–2010

	Average Monthly Wage[1]				Average Gross Monthly Wage Index[2]	
	Total labour costs[3], in dinars	Net wage, in dinars	Total labour costs, in euros	Net wage, in euros	nominal	real
	1	2	3	4	5	6
2008	47,882	29,174	586	357	117.8	105.5
2009	52,090	31,758	554	337	108.8	101.0
2010	55,972	34,159	543	332	107.5	101.2
2008						
Q1	43,957	26,814	532	324	119.3	105.2
Q2	47,351	28,846	584	356	119.4	103.1
Q3	48,322	29,435	627	382	117.9	105.0
Q4	51,898	31,599	602	366	115.1	104.1
Dec	56,399	34,348	637	388	112.0	103.1
2009						
Q1	49,444	30,120	525	320	112.5	102.6
Q2	52,164	31,808	552	337	110.2	102.0
Q3	52,065	31,737	558	340	107.7	100.1
Q4	54,689	33,366	579	353	105.4	99.9
Dec	60,265	36,789	628	383	106.9	100.8
2010						
Q1	52,261	31,924	530	324	105.7	101.1
Q2	55,989	34,192	548	335	107.3	103.2
Q3	56,435	34,372	537	327	108.4	101.8
Q4	59,204	36,149	556	339	108.3	98.8
Dec	64,784	39,580	609	372	107.5	97.5

Source: SORS

Notes:

1) Data for 2008 are adjusted on the basis of the expanded data sample used to calculate the average wage, which includes the salaries of those employed with entrepreneurs.

2) Y/Y average monthly gross wage indices for 2008 were calculated on the basis of average earnings in 2007 and 2008 based on the "old" sample that does not include those employed with entrepreneurs. These indices are comparable with the indices for 2009, given the fact that the expansion of the sample of earnings preserved their growth dynamics and only reduced their nominal value by about 12%.

3) Total labor costs (TLCs) comprise employer's total average expense per worker, including all taxes and social security contributions. TLCs stand at around 164.5% of the net wage. Gross wage growth indices are equal to total labor cost indices, because the average TLC is greater than the average gross wage by a fixed 17.9%.

Wages in the public sector fell in real terms, as they remained frozen in 2010

The average wages in the public sector in 2010 recorded a y-o-y decline in real terms, as a result of their general freezing as well as inflation growth (Table T3-5).

Table T3-5. Serbia: Gross Wages in the Public Sector, 2004–2010, Y/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		
	1	2	3	4	5	6	7
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
2008	100.7	105.7	101.3	101.2	95.9	105.7	105.5
2009	95.5	96.7	97.4	98.3	98.2	104.1	101.1
2010	99.1	95.1	94.3	98.1	98.0	104.5	101.2
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
Q4	103.3	103.7	99.2	103.9	104.4	105.1	104.1
2009							
Q1	99.8	97.9	99.4	98.4	100.8	105.1	102.5
Q2	94.0	97.4	98.1	99.0	99.3	104.8	102.0
Q3	93.6	96.2	96.9	98.1	95.4	102.9	100.1
Q4	93.0	93.6	93.5	96.0	95.9	104.0	99.9
2010							
Q1	95.8	96.1	96.1	102.2	98.0	103.5	101.1
Q2	101.0	96.7	95.1	102.1	98.3	106.6	103.2
Q3	100.4	95.1	94.6	94.5	99.8	106.0	101.8
Q4	99.4	92.5	91.2	93.5	95.7	102.3	98.8

Source: SORS

Notes:

1) Column 6 includes private, socially-owned and mixed enterprises (excluding the entrepreneurs, i.e. self-employed).

2) Column 6 shows the estimated value arrived at by deducting the public sector wage bill from the total wage bill and then dividing the difference by the number of workers employed in the corporate sector (column 7, Table T3-3).

3) Real y/y wage indices in columns 6 and 7 for 2008 and 2009 were calculated on the basis of the expanded sample for the calculation of the average wage, which now includes also workers employed by entrepreneurs.

4. Balance of Payments and Foreign Trade

Although the current account deficit had been expected to rise in 2010 owing to a recovery in Serbia's economy, this has failed to materialize. The current account deficit reached €2,074 mn in 2010 (6.9% of GDP), remaining at the level seen in recession-struck 2009 (when it had stood at €2,084 mn, or 7.0% of GDP). Thus the current account deficit has now for two consecutive years been substantially lower in relation to pre-crisis figures (10.6% of GDP in 2006; 17.6% of GDP in 2007; and 21.1% of GDP in 2008). The failure of the current account deficit to rise in 2010 can primarily be explained by the drop in the foreign trade balance, or rather the pace of recovery in exports and imports that led to it. While, on the one hand, imports were slow to recover (with y-o-y growth of 8.5%), the value of Serbia's exports, on the other hand, climbed steeply (at a y-o-y rate of 24.2%) – pushing the 2010 goods deficit to levels markedly below those recorded last year. Movements in imports and exports in 2010 led to a greater coverage of imports by exports, realigned the economy towards greater export orientation, and resulted in net exports making a positive contribution to economic recovery. It should, nonetheless, be borne in mind that the acceleration in exports was largely due to external factors –the rising prices of commodities (e.g. food, metals) in the global market –and that their movements in 2011 were thus far from certain. Furthermore, the future pace of export recovery is also uncertain, although exports are expected to pick up speed along with the recovery of the economy as a whole, especially since imports remain below pre-crisis levels. Although the current account deficit was relatively low in 2010, capital inflows were very modest and did not suffice to cover it, resulting in a decrease in foreign currency reserves.

The current account recorded a slight surplus in the first two months of Q4

The current account posted a surplus of €159.7 mn in November 2010, after October saw a deficit of €102.4 mn. Thus the cumulative surplus over these two months amounted to €57 mn (1.1% of two-monthly GDP). This modest surplus seen in the first two months of the fourth quarter is owed primarily to substantial inflows of current transfers, as well as to the low goods deficit.

Cumulative inflows of net current transfers in October and November greatly exceeded values usually seen in the pre-crisis period

Net inflows of current transfers amounted to €839 mn in October and November (16.2% of GDP). This two-month sum greatly exceeds usual values seen in the pre-crisis period (current transfers accounted for 7.6% of GDP in 2008, while quarterly values averaged €638 mn) and in early 2010 (€611 mn in Q1; €755 mn in Q2). In addition, such two-monthly inflows appeared-very high even in comparison withincoming current transfer levels at the time they were at their highest – in 2009 and the third quarter of 2010 (net current transfers amounted to €854 mn in Q3 2010, or 11.1% of GDP; in 2009 they accounted for 11.7% of GDP, while quarterly values averaged €880 mn). As in the past, remittances made up most of these inflows; they amounted to €673 mn in October and November. Remittances made up 13% of GDP, and stood 4.3 percentage points above the share of remittances in GDP recorded in 2009, or 36% above values posted in October and November 2009 (Table T4-1).

The goods and services deficit was down on last year…

…as net exports made a positive contribution to economic growth

The goods deficit seen in October and November 2010 amounted to €735 mn (14.2% of GDP), down 17% on the same period one year previously. Exports continued growing more quickly than imports (28% as opposed to 8%). Goods worth €1,404 mn were exported (27.1% of GDP), while imports amounted to €2,139 mn (41.4% of GDP). A slight surplus was posted in the exports of services (€29 mn). This drove the goods and services deficit 20% below the figure seen in the same period last year, indicating a positive contribution made by net exports to economic growth over the two-month period in question.

The financial account was in negative territory for the first two months of Q4

The financial account was in negative territory over the first two months of the fourth quarter (Q4). The reasons behind this were major withdrawals from the Currency and deposits account (-€387 mn) and negative balancesof the Trade credit and Loan accounts (-€94 mn and -€93 mn, respectively). The -€574 mn negative balance of the Other investments account could therefore not be met by the very modest inflows of FDIs and portfolio investments, so foreign currency reserves slumped by €313 mn.

The negative balance of loans was caused by the repayment of liabilities by business to the tune of €119 mn (€27 mn in short-term loans and €92 mn in long-term loans), while banks borrowed modestly, taking out loans of €23 mn net.

After slumping in October and November, foreign currency reserves grew in December

Foreign currency reserves fell by €313 mn in October and November, with October seeing a drop of €79 mn and November recording a further fall of €235 mn. The greatest impact on the decline in the foreign currency reserves seen in these two months was the selling of foreign currency by the NBS in defence of the dinar exchange rate in the interbank foreign exchange market. December saw foreign currency reserves rise, as borrowing increased (amounting to €268.5 mn), a tranche of the IMF loan was drawn (€55 mn), European Union grants were received, and foreign currency was purchased from banks in the interbank market after NBS intervened.

Table T4-1. Serbia: Balance of Payments

	2008	2009	2010 Oct-Nov	2009				2010			
				Q1	Q2	Q3	oct-nov	Q1	Q2	Q3	Oct-Nov
				in millions of euros							
CURRENT ACCOUNT	-7,054	-2,084	-1,836	-978	-246	-344	-328	-760	-610	-523	57
Goods	-8,501	-5,119	-4,335	-1,464	-1,142	-1,158	-891	-1,186	-1,166	-1,248	-735
Export f.o.b[1]	7,416	5,978	6,677	1,291	1,538	1,547	1,093	1,472	1,870	1,931	1,404
Import f.o.b	-15,917	-11,096	-11,012	-2,755	-2,680	-2,705	-1,984	-2,658	-3,036	-3,179	-2,139
Services	-185	19	15	-39	20	-2	13	-19	5	-1	29
Export	2,741	2,500	2,381	568	599	669	412	537	635	737	473
Import	-2,926	-2,481	-2,367	-607	-578	-671	-399	-555	-629	-739	-443
Income, net	-922	-503	-575	-123	-95	-129	-111	-167	-205	-127	-76
Receipts	558	500	380	117	149	112	71	107	108	92	73
Payments	-1,480	-1,002	-955	-240	-245	-241	-181	-273	-313	-219	-149
Current transfers, net	2,554	3,518	3,059	648	971	944.9	660	611	755	854	839
o/w grants	163	197	116	39	37	40	23	29	20	35	32
o/w private remittances, net	1,692	2,618	2,241	456	769	732	494	415	543	610	673
CAPITAL ACCOUNT	13	2	1	-1	-1	1	1	0	0	1	0
FINANCIAL ACCOUNT	7,133	2,237	1,733	991	275	371	360	698	603	505	-73
Direct investment, net	1,824	1,402	762	643	251	113	106	284	136	176	167
Portfolio investment, net	-91	-55	113	-4	-58	6	6	38	39	16	21
Other investments	3,713	3,254	-458	112	962	969	759	10	107	0	-574
Trade credits	957	660	180	264	93	257	67	-109	128	255	-94
Loans	3,499	1,412	254	-721	679	623	313	523	-270	93	-93
NBS	0	1,114	287	0	783	0	0	0	237	50	0
Government	98	252	684	13	105	68	23	167	198	315	4
Commercial banks	125	894	29	-513	22	798	339	525	-396	-123	23
Long-term	-274	492	549	19	50	279	50	558	-6	33	-36
Short-term	399	402	-520	-532	-28	519	289	-32	-390	-156	58
Other (enterprises)	3,275	-848	-746	-221	-230	-243	-49	-170	-309	-148	-119
Currency and deposits	-713	760	-892	569	190	-334	378	-405	249	-348	-387
Other assets and liabilities	-30	0	0	0	0	0	0	0	0	0	0
Allocation of SDR	0	422	0	0	0	422	0	0	0	0	0
Reserves Assets (- increase)	1,687	-2,363	1,315	240	-880	-716	-511	367	321	313	313
ERRORS AND OMISSIONS, net	-92	-155	103	-12	-28	-27	-33	62	7	18	16
OVERALL BALANCE	-1,687	2,363	-1,315	-240	880	716	511	-367	-321	-313	-313
PRO MEMORIA											
				in % of GDP							
Current account	-21.1	-7.0	-6.7	-14.4	-3.3	-4.4	-6.2	-10.9	-8.0	-6.8	1.1
Balance of goods	-25.4	-17.1	-15.8	-21.5	-15.2	-14.9	-16.9	-17.1	-15.3	-16.3	-14.2
Exports of goods	22.2	19.9	24.4	19.0	20.5	19.9	20.7	21.2	24.6	25.2	27.1
Imports of goods	-47.6	-37.0	-40.2	-40.5	-35.8	-34.8	-37.6	-38.2	-39.9	-41.5	-41.4
Balance of goods and services	-26.0	-17.0	-15.8	-22.1	-15.0	-14.9	-16.6	-17.3	-15.3	-16.3	-13.6
Current transfers, net	7.6	11.7	11.2	9.5	13.0	12.2	12.5	8.8	9.9	11.1	16.2

Source: NBS

1) Exports f.o.b. using NBS methodology adjusted to IMF BOPM-5.

Box 1. Serbia's Current Account in Comparison With Countries in the Region

If we were to compare the ratio of the current account to the gross domestic product (GDP) of Serbia and its neighbors, it would become apparent that only Hungary posted a surplus in 2010, while all the other countries ran current account deficits. This indicator shows that Serbia was one of the countries with the highest deficits, in spite of the fact that the deficit was much lower in 2010 than in previous years. Albania heads the list by deficit size. Romania and Bosnia-Herzegovina saw similar shares of deficit in GDP, while Macedonia and Croatia recorded slightly lower deficit levels (Table T4-2). At 3% of GDP, Bulgaria saw the lowest deficit.

According to data supplied by the European Bank for Reconstruction and Development (EBRD), in 2008, all of these countries, excepting Bulgaria and Bosnia-Herzegovina, sawtheir highestratios of current accounts to GDP since 2000 (Serbia 18%; Albania 15.4%; Romania 11.9%; Macedonia 12.8%; Croatia 9.2%).

Table T4-2. Current Account as % of GDP, Serbia and the Region, 2010

	Albania	Hungary	Romania	Bulgaria	Croatia[1]	Bosnia & Herzegovina	Macedonia	Serbia
					in %			
Current account balance/ GDP	-9.2	1.0	-5.1	-3.0	-3.8	-5.5	-3.9	-6,9

1) Share expressed in euros.
Source: EBRD; for Serbia, *QM*

Bulgaria ran a deficit of 23.9% in 2008, while its record deficit was posted in 2007, at 28.4%; Bosnia-Herzegovina saw its historic high in 2003 (19.5%). Before posting a surplus in 2010 and achieving a nearly balanced current account in 2009, Hungary also posted deficits. When the 2000s are taken into account, the year 2000 is seen to have recorded the highest deficit, followed by 2004. Except for Romania, all of the countries saw improvements to their current account in comparison with 2009, the year the crisis struck.

Foreign Debt

Serbia's foreign debt stood at €23.8 bn, or 79.4% of GDP, at year-end 2010

At year-end 2010 Serbia's foreign debt stood at €23.8 bn (Table T4-3). The ratio of foreign debt to GDP amounted to 79.4%, very close to the level often cited as the lower edge of the zone of high indebtedness (80%). Total foreign debt was up €671 mn on the figure seen three months earlier (by 2.3 percentage points of GDP), and up €1.2 bn euros on the amount as of year-end 2009 (a rise of 4.4 percentage points of GDP). The greatest influence on the growth of overall public debt was exerted by banks' rising foreign borrowing, while, when the year is considered as a whole, the public sectoralone is seen to havecontributed to the increase. Part of movements in foreign debt in 2010 (see Table T4-3) can be ascribed to exchange rate differences, i.e. the marked fluctuation in the value of the euro in relation to other currencies making up the currency structure of Serbia's foreign debt.[1]

Table T4-3. Serbia: Foreign Debt by Structure, 2008-2010

	2008	2009				2010			
		Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
	stocks, in EUR millions, end of the period								
Total foreign debt	21,088	20,689	20,967	21,071	22,487	22,943	23,456	23,115	23,786
(in % of GDP) [2)]	*63.1*	*69.0*	*69.9*	*70.3*	*75.0*	*76.5*	*78.3*	*77.1*	*79.4*
Public debt	6,521	6,653	7,322	6,933	7,764	8,122	8,921	8,874	9,076
(in % of GDP) [2)]	*19.5*	*22.2*	*24.4*	*23.1*	*25.9*	*27.1*	*29.8*	*29.6*	*30.3*
Long term	6,503	6,634	7,304	6,915	7,762	8,122	8,921	8,874	9,076
o/w: to IMF	0	0	771	757	1,110	1,157	1,483	1,455	1,529
o/w: Government obligation under IMF SDR allocation	0	0	0	0	422	440	469	444	449
Short term	18	19	18	19	1	0	0	0	0
Private debt	14,568	14,036	13,645	14,137	14,724	14,820	14,535	14,241	14,710
(in % of GDP) [2)]	*43.6*	*46.8*	*45.5*	*47.2*	*49.1*	*49.4*	*48.5*	*47.5*	*49.1*
Long term	12,442	12,387	12,225	12,469	12,720	12,919	13,076	12,945	12,880
o/w: Banks debt	2,201	2,170	2,170	2,451	2,597	2,867	3,195	3,279	3,362
o/w: Enterprises debt	10,241	10,217	10,055	10,018	10,123	10,052	9,881	9,667	9,518
Short term	2,126	1,649	1,421	1,668	2,003	1,901	1,459	1,295	1,830
o/w: Banks debt	1,323	855	747	1,257	1,713	1,691	1,304	1,146	1,731
o/w: Enterprises debt	803	794	674	411	290	210	155	149	100
Foreign debt, net [1)], (in% of GDP)[2)]	38.6	41.8	40.2	38.4	39.6	41.7	43.3	44.2	46.0

Source: NBS
Note: Since September 2010 methodology for the external debt statistics has been changed so that the external public debt includes obligations under the IMF SDR allocation (€443,5 mn), which was used in December 2009, as well as capitalized interest to Paris Club creditors (€86,4 mn), while the loans concluded before December 20, 2000, under which the payments have not been effected, are excluded from the external debt of the private sector (€875,4 mn of which €397 mn relate to domestic banks and €478,4 mn to domestic enterprises). External debt data given in the table are calculated according to new methodology.
1) Total foreign debt less NBS currency reserves.
2) Annual actual GDP figures in euros are used for each year. *QM* estimate of GDP is used for 2010.

1 http://www.nbs.rs/export/internet/english/90/dug/debt_III_2010.pdf

Q4 saw greater borrowing by the public sector and banks

When viewed by sector, the Q4 increase in the total public debt was mainly driven by the private sector (more specifically, by banks). Foreign public sector debt rose by €202 mn in Q4 (0.7 percentage points of GDP). Foreign private sector debt was up €469 mn (1.6 percentage points of GDP) at year-end 2010 on late September figures. Banks borrowed an additional €83 mn in long-term loans, and, more significantly, €584 mn in short-term loans, while businesses repaid both their short- and long-term liabilities.

In 2010 the public sector alone contributed to the increase in foreign debt

However, when 2010 is taken as a whole, the public sector is seen to have been the sole contributor to the rise in foreign debt. Foreign public sector debt grew by €1.3 bn (an increase of 4.4 percentage points), while foreign private sector debt remained almost unchanged. The public sector increased its foreign borrowing, making substantial use of foreign credits in 2010 (loans were taken out with the International Bank for Reconstruction and Development in Q1; parts of the third and fourth tranche under the standby arrangement with the IMF were drawn in Q2; a Russian government loan was granted and the fifth tranche of the IMF standby arrangement drawn in Q3; additional foreign loans were received, as well as a new tranche of an IMF loan designed to boost foreign currency reserves, etc.). Banks borrowed an additional €765 mn in new long-term loans in 2010, while businesses repaid their debts to the tune of €606 mn. Banks slightly increased the level of their short-term debt (by €18 mn), while businesses substantially reduced their levels of short-term loans (by €190 mn) in relation to year-end 2009.

Exports

Exports stood at €7.4 bn in 2010, up 24.2% on figures recorded in 2009

Total exports amounted to €7,401.0 mn in 2010, up 24.2% on exports seen in 2009. Such a quick recovery in exports was primarily owed to exports of metals and agricultural produce (nearly one-half of all y-o-y export growth is due to greater *Bulky exports*).[2] A third of total export growth is owed to the recovery in the exports of products making up the *Other* component, while the *Core* component contributed 23% to the increase in overall exports.

Export growth accelerated late in the year

The substantial growth of exports that was the hallmark of 2010 intensified late in the year. The fourth quarter saw exports of goods worth €2,118 mn, representingy-o-y growth of a high 32.2% (Table T4-4). Both components of total export – *Bulky exports* and *Underlying exports*–saw higher growth rates in Q4 relative to the preceding quarters (Table T4-4).

Rising global prices contributed the most to the rising value of the bulky exports component in Q4

Bulky exports stood 53.6% up on Q4 2009, and contributed by 42.4% to the growth in overall exports. As was the case throughout 2010, the rise in *Bulky exports* seen in Q4 was to a large extent the consequence of greater global prices of products that make up this group. Global cereal prices expressed in euros were higher by 40%, and those of metals by 45%, than in the same quarter of 2009. Further analysis shows that quantities of *Cereals* exported saw y-o-y growth of 30%, while those of*Non-ferrous metals*increased slightly. On the other hand, the 27% y-o-y growth in the value of exports of *Iron and steel* shown in Table T4-4 wasdue solelyto greater prices, while the quantity exported was lower than in Q4 2009. The drop in the quantity of *Iron and steel* exportswas due to lower production at US Steel Serbia as a furnace was temporarily shut down in mid-2010. Production of *Iron and steel* is expected to recover in early 2011, followed by an acceleration in the exports of these products leading to their greater contribution to overall export growth.

Underlying exportsmade a major contribution to the increase in the total value of goods exported

The fourth quarter witnessed *Underlying exports* grow by 24.8% at the y-o-y level, which contributed 57.5% to the y-o-y growth of total exports. As for components of *Underlying exports*, products grouped in the *Other*component accelerated their growth, while the *Core* component slowed (Table T4-4). The contribution of the *Other* component at both the quarterly and the annual levels was very significant, as about a third of total exports was due to the recovery in the exports of these products. Products in the *Electrical machinery, apparatus and appliances* group belonging to the *Core* component recorded a high growth rate.

2 This contribution is calculated as the ratio of absolute changes to export components and absolute changes to total exports in relation to the same quarter of the preceding year.

Table T4-4. Serbia: Exports, Y-o-y Growth Rates, 2009-2010

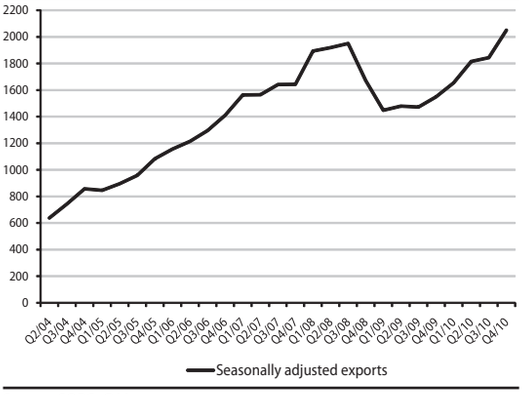
	Exports share in 2010	2010[1]				2009				2010[1]			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	%	mil.euros				y-o-y growth rate (%)							
Total	100.0	1,467	1,884	1,931	2,118	-23.8	-22.5	-24.9	-7.2	14.9	23.2	24.6	32.2
Bulky exports	28.1	422	496	537	627	-36.0	-36.1	-35.9	-0.1	42.3	41.6	39.3	53.6
Iron and steel	9.8	162	195	182	182	-54.0	-72.7	-56.3	8.0	60.2	130.4	39.0	27.0
Non ferrous metals	7.1	109	132	152	132	-48.4	-41.1	-33.4	-5.8	68.3	75.0	69.3	55.9
Fruits and vegetables	5.4	75	80	114	129	-5.2	30.0	-9.6	-10.2	21.6	-4.8	16.2	63.2
Cereal and cereal products	5.9	75	89	88	183	30.3	141.6	16.0	3.2	10.0	-16.6	33.7	82.0
Underlying exports	71.9	1,045	1,389	1,395	1,492	-19.2	-17.3	-20.4	-9.4	6.7	17.8	19.7	24.8
Core	28.8	438	522	583	592	-21.8	-20.3	-27.8	-10.8	2.1	11.8	32.1	26.5
Clothes	4.1	72	69	81	84	29.5	32.5	-9.6	-24.4	-37.7	-36.4	2.2	3.6
Miscellaneous manufactured articles, n.e.s.	3.5	47	65	72	71	-35.2	-24.0	-23.2	-7.1	-5.8	6.3	9.5	6.1
Manufactures of metals, n.e.s.	3.5	44	67	68	78	-36.4	-20.7	-24.4	-20.3	-8.0	2.2	9.2	26.7
Rubber products	2.9	54	52	55	56	-22.5	-32.2	-32.3	3.8	23.6	33.6	27.0	31.9
Electrical machinery, apparatus and appliances	6.0	78	108	122	139	-1.0	4.0	-6.1	18.3	25.5	46.8	58.7	61.0
Organic chemicals	1.4	29	27	28	18	-83.1	-88.0	-90.1	-55.2	261.5	357.9	501.2	40.0
Plastics in primary forms	1.8	29	32	37	34	-49.9	-53.1	-88.4	16.5	47.1	69.9	753.8	31.8
Footwear	2.1	38	33	44	43	-8.4	-19.5	-13.6	-19.7	0.8	2.4	14.8	41.6
Paper, paperboard and articles of paper pulp	2.2	36	42	40	42	-2.0	-3.3	4.1	9.2	12.1	11.4	11.4	20.5
Non-metal mineral produce	1.3	11	27	35	26	-54.7	-46.1	-33.5	-23.5	-9.4	12.2	17.9	4.6
Other	43.0	607	867	812	899	-17.0	-15.1	-15.2	-8.5	10.2	21.7	12.1	23.7

Source: SORS

1) Figures that are in millions of euros and y-o-y growth rates were obtained based on the data from Statistical Office of the Republic of Serbia calculated using new methodology. For details see *QM*20, "Changes to foreign trade methodology used by the Statistical Office of the Republic of Serbia".

Seasonally-adjusted data indicate a major acceleration in the growth of total exports

Graph T4-5. Serbia: Seasonally Adjusted Exports, by Quarter, 2004-2010



Source: SORS, *QM*

Seasonally-adjusted export data support the assertion that the growth of total exports accelerated in Q4 (Graph T4-5). After Q3 2010, when exports were a mere 1.6% up on the value seen in Q2 (6.7% when annualized), Q4 saw an increase of 11.2% on Q3, or 52.7% when annualized. The acceleration of exports is further borne out by monthly data, which indicate uninterrupted growth since August. After slight growth in October in relation to September (0.03%), November recorded a monthly increase in exports of 8% relative to October, while December witnessed growth of 3.6% in relation to November. Graph T4-5 clearly shows the sustained pace of export growth, while the fact that seasonally-adjusted exports stand above pre-crisis highs (Q3 2008) is an unquestionable indicator of their swift recovery.

Imports

Imports were up 8.5% on 2009, standing at €12.5 bn

Goods worth €12,481.1 mn were imported in 2010. The value of imports in 2010 was 8.5% up on the figure recorded in 2009.

Imports of goods amounted to €3,417 mn in Q4, up 11.4% on the same period one year previously (Table T4-6). Although it seems that a certain y-o-y slowdown in imports has taken place in comparison to growth seen in the preceding quarter, it should be borne in mind that y-o-y import growth in Q3 was caused by external factors (substantial imports of energy). Figures for imports less energy suggest a gradual acceleration in imports – as the y-o-y growth rate of imports stood at 11.7% in Q4, higher than the 9.7% seen in Q3.

Imports accelerated gradually

Energy imports grew by 9.9% at the y-o-y level in Q4 2010. This growth was markedly lower than that witnessed in the preceding quarter (66.6%, Table T4-6). As we reported in the previous issue of *QM*, energy imports increased in Q3 both due to the y-o-y growth in energy prices in the global market (25% expressed in euros) and the very high increase in the quantity of energy imported (33%). Unlike the preceding quarter, which saw imports of very high quantities of these products, Q4 recorded a 12% drop in their amount at the y-o-y level. The indicated rise in

energy imports in the last quarter of 2010 was exclusively the consequence of the 15% increase in global energy prices expressed in dollars (i.e. 25% when expressed in euros), while movements to quantities of these products imported in H2 2010 were probably caused by company policy.

Imports of intermediary and consumer goods continued, while the recovery in imports of capital goods remained modest

The third quarter recorded rapid growth in Intermediary goods of 22.0% at the y-o-y level. As we reported in the previous issue of *QM*, these products had the highest share in total imports (31.1%) and therefore contributed to a great extent to its acceleration. Their recovery was linked to growth in production, which is why we expect imports of these products to rise in the future, thereby accelerating total imports.

Capital goods witnessed a slow recovery. Following Q3, when the growth in imports of capital goods amounted to 1.6% at the y-o-y level (seeing the first increase in the value of imported goods after six consecutive quarters of y-o-y decline), in Q4 imports of these goods were 3% up on Q4 2009 (Table T4-6). These movements in imports of capital goods indicate that investment into production is being relatively sidelined in the overall recovery of Serbia's economy, which could affect economic growth in the long run.

Non-durable consumer goods accelerated their recovery in Q4 in relation to preceding quarters, while growth in imports of Durable consumer goods slowed slightly in Q4 (Table T4-5). In addition to recovery in the above components of imports seen in Q4, this quarter witnessed y-o-y growth in imports of the *Other* component for the first time since the crisis began (Table T4-6). According to SORS data, *Other imports* were made up of non-categorized products. Following movements in this component could prove of crucial importance in the short run, as its contribution to movements in total imports is substantial. Under the new methodology used by SORS since 2010, this component accounts about one-fifth of total imports (Table T4-6) – as opposed to making up a mere 3.2% of imported value according to the old methodology.

Table T4-6. Serbia: Imports, Y-o-y Growth Rates, 2009-2010

	Imports share (2010)	2010[1]				2009				2010[1]			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	in %	mil.euros				y-o-y growth rate (%)							
Total	100.0	2,713	3,066	3,285	3,417	-25.7	-33.8	-32.6	-18.8	-5.0	10.4	17.2	11.4
Energy	17.8	550	545	611	521	-28.3	-49.8	-47.0	-27.7	1.6	61.1	66.6	9.9
Intermediate products	31.1	737	959	1,089	1,101	-30.8	-33.6	-31.8	-16.4	1.5	15.3	23.2	22.0
Capital products	15.8	386	490	528	572	-28.0	-38.2	-35.5	-22.3	-22.2	-6.1	1.6	3.0
Durable consumer goods	2.8	83	82	85	105	-15.8	-37.1	-31.5	-23.6	-7.1	0.3	7.9	6.3
Non-durable consumer goods	12.7	344	376	390	470	-10.4	-8.7	-10.4	-6.4	-2.3	5.7	5.8	9.1
Other	19.7	614	615	581	649	-19.5	1.9	-19.9	-19.2	-5.7	-5.2	-0.6	6.9
Imports excluding energy	82.2	2,163	2,521	2,674	2,897	-25.0	-30.2	-29.0	-16.6	-6.5	3.4	9.7	11.7

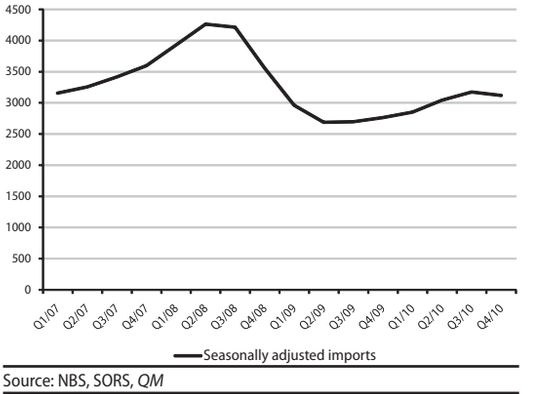
Source: SORS

1) Figures that are in millions of euros and y-o-y growth rates were obtained based on the data from Statistical Office of the Republic of Serbia calculated using new methodology. For details see *QM* 20, "Changes to foreign trade methodology used by the Statistical Office of the Republic of Serbia".

Seasonally-adjusteddata bear out the slow recovery in imports, as their values fail to reach pre-crisis levels

The fact that imports continued to recover slowly, and that their values stood significantly below figures seen in 2008, is borne out by seasonally-adjusted data (Graph T4-7): quarterly values of seasonally-adjusted imports had been growing gradually ever since 2009, only for seasonally-adjusted imports to slump by 1.7% in Q4 2010 in relation to Q3. The drop in the final quarter relative to the preceding quarter may have been caused by external factors (high energy imports in Q3). Data clearly indicate that, if imports were to continue rising at this rate, the maximum value of the seasonally-adjusted imports series would be reached only in 12 to 13 quarters (i.e. in about three years); coupled with the marked growth in exports, this would mean that the goods deficit could be brought down quickly, and the current account deficit with it, too. Nonetheless, imports are certain to accelerate as the economy recovers, and are bound to reach their pre-crisis levels much sooner.

Graph T4-7. Serbia: Seasonally-Adjusted Imports, by Quarter, 2007-2010



Source: NBS, SORS, *QM*

Rising export demand made a substantial contribution to the recovery of Serbia's economy in 2010…

The goods deficit was 6.3% down on last year, indicating a positive contribution made by export demand to the recovery of economic activity. Year-on-year changes to the level of the goods deficit differ markedly by quarter. As Q1 and Q4 2010 saw large falls in the goods deficit (-19.4% and -9.6%, respectively), Q2 saw the goods deficit stand at last year's level, while Q3 recorded an increase (8.1%). As we reported in the previous issue of *QM*, the growth in the goods deficit – and the attendant negative contribution made by export demand to economic recovery in Q3 – was exclusively the consequence of very high energy imports (see *QM* 22 for details). If Q3 and Q4 are taken together, the goods deficit is seen to be down 1.5% on last year. Thus, if it had not been for the influence of external factors (very high quantities of energy imported in Q3 and the rise in the prices of these products in the global market in 2010), the importance of export demand for economic recovery in H2 2010, and, indeed, in 2010 as a whole, would have been even more apparent.

The economy has seen a significant realignment, bringing the exporting sector to the fore

Movements to exports and imports since the start of the crisis (the rapid decline and subsequent slow recovery of imports, and the slower initial decline of exports followed by their extraordinary recovery) have led to a certain realignment of the economy, which brought the exporting sector to the fore. The share of exports in GDP thus rose from 22.3% in 2008 to 24.7% in 2010, while the share of imports fell over the same period (from 47.6% to 40.8%). The rate of coverage of imports by exports stood at 61% in 2010, significantly above values seen in the previous years (48% in 2007; 47% in 2008; 54% in 2009). As exports reached and exceeded pre-crisis values in 2010 (borne out by seasonally-adjusted export series, see Graph T4-5), and, since imports are still below pre-crisis levels, it remains unclear whether the current favorable realignment of the economy is a temporary process, one that is sustainable in the long run, or one that has just begun.

5. Prices and the Exchange Rate

Inflation stood at 10.3% at the end of 2010, substantially exceeding the upper limit of the National Bank of Serbia target band for the year (from 4% to 8%). Although it had seemed, in mid-2010, that inflation would not break through the target band, strong growth of food prices over the second half of the year led to it breaching the upper edge of the target band. Inflation again ran high in Q4, although November and December recorded a slight slowdown in underlying inflation. Overall inflation remained high in January and February, but underlying inflation recorded a further slowdown. The exchange rate nominally depreciated throughout most of 2010. The dinar, however, appreciated in December 2010, continuing this trend into January and February. Although the nominal dinar/euro exchange rate depreciated by about 11% in 2010, real depreciation amounted to a mere 1.5%, due to high inflation in Serbia.

Prices

Inflation broke through the upper edge target band in 2010

At 10.3% at year-end, overall inflation was relatively high in 2010 and significantly exceeded the upper edge of the NBS target band, as we had predicted in the last two issues of *QM*. Inflation reached 4.5%, or 9.2% annualized, over the first half of the year. The main drivers of inflation in the first semester were administratively-controlled prices (electricity and utilities), fresh fruit and vegetables, and, to a slightly lesser extent, oil and oil products. Inflation ran even higher in the second half of the year (5.5%, or 11.3% annualized), primarily owing to unexpectedly strong growth in the prices of food and agricultural produce.

Table T5-1. Serbia: Consumer Price Index, 2007-2011

	Consumer price index				
	Base index (avg. 2006 =100)	Y-o-y growth	Cumulative index	Monthly growth	3m moving average, annualized
2007					
Mar	102.5	4.1	0.7	0.6	2.8
Jun	105.5	4.0	3.7	0.4	12.7
Sep	109.5	8.0	7.6	1.6	16.8
Dec	113.0	11.0	11.0	1.2	13.1
2008					
Mar	116.4	13.6	3.0	1.6	12.7
Jun	121.2	14.8	7.2	0.7	17.4
Sep	121.4	10.9	7.5	1.0	0.9
Dec	122.7	8.6	8.6	-0.9	4.4
2009					
Jan	125.4	10.0	2.1	2.1	5.6
Feb	126.9	10.7	3.4	1.2	10.2
Mar	127.4	9.4	3.8	0.4	16.3
Jun	131.3	8.3	7.0	0.0	12.6
Sep	130.3	7.3	6.2	0.3	-2.9
Dec	130.8	6.6	6.6	-0.3	1.6
2010					
Jan	131.4	4.8	0.5	0.5	4.3
Feb	131.8	3.8	0.7	0.3	1.9
Mar	133.4	4.7	1.9	1.2	8.0
Apr	134.1	4.3	2.5	0.6	8.4
May	136.1	3.7	4.1	1.5	13.8
Jun	136.7	4.2	4.5	0.4	10.4
Jul	136.6	5.1	4.4	-0.1	7.8
Avg	138.5	6.6	5.9	1.4	7.3
Sep	140.3	7.7	7.2	1.3	10.9
Oct	141.7	8.9	8.3	1.0	15.5
Nov	143.8	9.6	9.9	1.5	16.0
Dec	144.2	10.2	10.2	0.3	11.7
2011					
Jan	146.2	1.4	11.2	11.8	13.5

Source: SORS

* Graph rates represent monthly moving averages for three months, annualized. (For instance, the March value was obtained by annualizing the average of monthly price growth for January, February and March.)

Inflation ran high in Q4…

Inflation was high in Q4 2010, similar to what it had been over the preceding two quarters. The Consumer Price Index thus rose by 2.8% in Q4 (11.7% annualized). As inflation stood at 2.6% in Q3 (10.8% annualized), and 2.5% in Q2 (10.4% annualized), the high inflation trend has now been in evidence for four consecutive quarters.

…mainly owing to rising food prices

The greatest contribution to inflation in Q4 was made by rising prices of food, clothing and shoes, heating, medicines and transport. The growth in the prices of these groups of products accounted for as much as 85% of total Q4 inflation. Food price growth alone made up half of all inflation. As for foodstuffs, the prices of bread, cereals, milk and milk products grew at the same pace as in Q3, while prices of meat stagnated, and those of fruit and vegetables rose after having dropped in Q3.

Table T5-2. Serbia: Consumer Price Index: Contribution to Growth by Selected Components, 2010

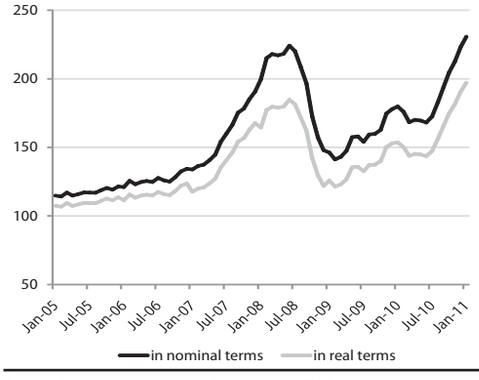
	Share in CPI (in %)	Price increase in Q4 (in %)	Contribution to overall CPI increase (in %)	Price increase in H1 2010 (in %)	Contribution to overall CPI increase (in %)	Price increase in H2 2010 (in %)	Contribution to overall CPI increase (in %)	Price increase in 2010 (in %)	Contribution to overall CPI increase (in %)
Total	100.0	2.8	100.0	4.5	100.0	5.5	100.0	10.2	100.0
Food and non–alcoholic beverages	37.8	3.8	50.4	3.2	26.6	7.3	49.7	10.7	39.3
Food	34.1	3.8	46.4	3.4	26.0	7.2	44.3	10.9	36.0
Alcoholic beverages and tobacco	5.1	0.8	1.4	9.4	10.7	5.5	5.1	15.4	7.7
Tobacco	3.8	0.0	0.0	10.1	8.6	5.6	3.8	16.3	6.1
Clothing and footwear	6.0	4.4	9.4	0.9	1.2	5.33	5.8	6.2	3.7
Housing, water, electricity, gas and other fuels	15.1	3.6	19.4	7.2	24.1	6.10	16.6	13.8	20.1
Electricity	6.6	4.4	17.5	7.5	18.8	5.5	11.2	13.4	14.7
Furniture, household equipment, routine maintenance	4.9	2.3	4.0	4.5	4.9	4.72	4.2	9.4	4.5
Health	4.3	2.5	3.7	4.3	4.0	4.06	3.1	8.5	3.5
Transport	11.0	1.2	4.7	6.7	16.4	2.61	5.2	9.5	10.2
Oil products	4.7	1.2	2.1	9.7	10.1	2.20	1.9	12.1	5.5
Communications	3.5	0.3	0.4	0.5	0.4	1.57	1.0	2.1	0.7
Other items	15.8		7.0		12.1		10.3		11.0

Source: SORS and *QM* estimates

Food prices have been rising across the globe in the past several months

High food price growth was not just a hallmark of Serbia in Q4, but was rather part of a global trend. Food prices thus exceeded the historic high seen in 2007-08. Graph T5-3 shows movements to the global FAO Food Price Index in both nominal and real terms. In January 2011 the real food price index stood 7% above the previous record high seen in June 2008. When viewed by product group, the highest price growth globally was recorded by cooking oils and cereals. Slightly lower (albeit still high) growth was seen by prices of meat, milk and milk products, and sugar. On the other hand, in relation to the previous historic highs of 2007-08, sugar prices rose the most, while, for instance, those of milk and milk products remained 20% lower in real terms in relation to their record highs.

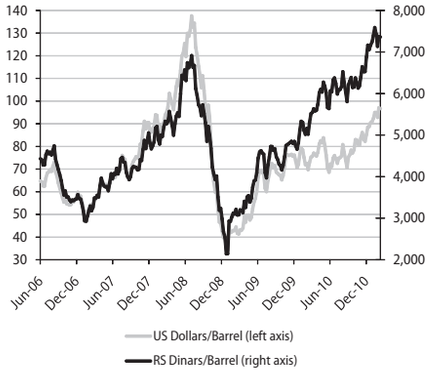
Graph T5-3. World: FAO Food Price Index, Nominal and Real Values (2002-2004 Average = 100), 2005-2011



Source: Food and Agriculture Organization (FAO)

Major growth in oil prices was also recorded

Graph T5-4. World: Weekly Urals Crude Prices, in USD and RSD, 2006-2011



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

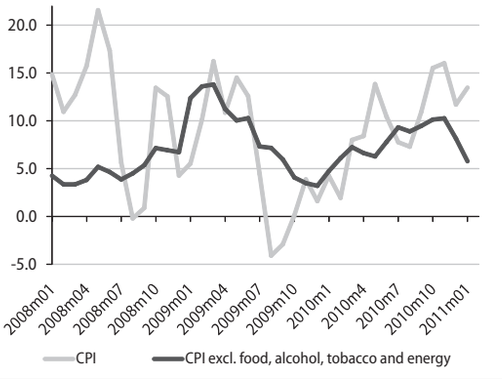
In addition to rising food prices, the past several months have also seen significant growth in the price of crude oil. When coupled with the depreciation of the dinar, this has been exerting further pressure on the price of oil products in Serbia. The price of Urals crude has come close to $100/barrel. Although the current dollar price is still lower by some 25% than the high reached in July 2008, when its price is expressed in dinars, Urals crude is some 20% more expensive than the previous historic high (Graph T5-4). As with other raw materials, the increase in the

price of oil is mainly tied to the quick recovery in the economic growth of developing countries (China first and foremost).

Although it remained high, underlying inflation slowed in Q4

The fourth quarter saw high underlying inflation,[1] although November and December saw a slight deceleration. Underlying inflation stood at 2% in Q4 (8.2% when annualized), having amounted to 2.3% in Q3 (9.5% when annualized) and 1.9% in Q2 (7.8% when annualized). When, however, November and December are considered in isolation, underlying inflation is seen to stand at about 6% when annualized. Although this still represents a high underlying inflation rate, it may be that the slowdown seen in November and December marks a turning point in the trend. The recent appreciation of the dinar may contribute to a further slowdown in underlying inflation.

Graph T5-5. Serbia: CPI and Underlying Inflation Trend, Annualized Rates, in %, 2008-2011



Source: SORS and *QM* estimates
Note: Graph rates represent monthly moving averages for three months, annualized. (For instance, the March value was obtained by annualizing the average of monthly price growth for January, February and March.)

Serbia's underlying inflation rate remains the highest in the region

It can be said that Serbia remains the sole country in both the region and Europe to see such high quarterly underlying inflation rates: most European countries are recording underlying inflation rates close to zero or are even experiencing deflation (see Table T5-4). We can conclude that Serbia's high rate of overall inflation is not just the consequence of exogenous influences or rising administratively-controlled prices, but that there are structural reasons for this as well.

Table T5-6. Selected Countries: Underlying Inflation (CPI less Food, Energy, Alcoholic Beverages and Tobacco), 2009-2010

	2009Q1	2009Q2	2009Q3	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4
	annualized rates, in %							
Bulgaria	3.1	0.9	2.5	3.2	-0.9	0.3	-0.3	2.6
Romania	13.1	1.0	2.9	2.7	1.7	5.2	9.9	2.7
Czech Republic	4.2	0.4	-1.9	-1.5	1.9	1.5	-1.1	-1.9
Hungary	4.1	7.4	9.0	0.2	3.5	2.1	0.5	0.4
Poland	4.3	5.0	0.8	0.4	0.7	1.9	0.7	0.4
Slovakia	1.5	0.1	0.5	0.6	0.3	0.2	0.7	0.7
Slovenia	1.2	3.4	-5.6	1.4	-1.0	4.6	-6.8	1.3
Estonia	-2.8	-0.1	3.0	-3.2	0.5	4.1	2.4	-1.6
Latvia	9.4	-4.4	-5.1	-6.7	-4.6	-1.4	-0.2	-4.0
Lithuania	6.8	-4.7	1.6	-3.9	-4.6	-0.3	-0.4	-0.6
Euro zone	-0.4	1.9	-0.1	3.0	-0.9	1.7	0.4	3.1
EU	0.4	2.4	0.7	2.7	-0.3	2.1	0.7	2.5
Serbia	13.8	10.3	6.0	3.2	7.1	7.8	9.5	8.2

Source: Eurostat, SORS, *QM* estimates

January again saw high inflation…

…but underlying inflation decelerated further

The NBS faces major challenges in 2011

Overall inflation was again high in January, but underlying inflation decelerated further. January inflation stood at 1.4%. As much as half of all price growth was the result of rising food prices, primarily those of fruit and vegetables, bread and cereals, and milk and milk products. A substantial contribution to January inflation was made by the rise in prices of cigarettes, the consequence of regular adjustments to excise duty. It is, nonetheless, important to note that underlying inflation continued decelerating in January, and stood at 0.4% in that month. Underlying inflation in the three months to January stood at 5.8% when annualized, noticeably lower in relation to the 10.1% recorded by underlying inflation in early Q4. February data point to a similar trend. In three months to February, underlying inflation amounted to 5.2% annualized.

1 QM defines underlying inflation as the Consumer Price Index excluding the prices of food, energy, alcoholic beverages and tobacco. This definition is in line with a price index monitored by Eurostat, and as such makes for international comparability. The share of underlying inflation in total inflation is 41%. Underlying inflation is conceptually similar to core inflation monitored by the NBS. The principal difference between underlying and core inflation is that underlying inflation excludes all foodstuffs, while core inflation excludes fresh fruit and vegetables only.

Year-on-year inflation rates are set to remain high in the first half on 2011, with inflation possibly returning to the NBS target band only at the end of the year. As the target inflation rate for 2011 was set at the level of 4.5% ± 1.5 percentage points, the NBS is faced with a rather difficult challenge. According to the current NBS central projection, the y-o-y inflation rate will hover around the 11%-12% mark in June 2011. This implies that the cumulative inflation rate will reach about 5.5% in the first half of 2011. In other words, for inflation to stay within the target band, i.e. below 6%, at the end of the year, it would have to remain below 0.5% throughout the second half of 2011 – in effect, below 0.1% per month. The NBS projection, which still sees inflation standing at about 6% at year-end 2011, is heavily dependent on an assumed relative fall in food prices in the second half of the year. More specifically, the NBS explains its projection by the fact that, as food prices saw very high growth in 2010, even with a modestly successful agricultural season in 2011, food prices can be expected to come down due to the 2010 base effect. This should lead to a drop in the overall inflation rate. By way of a reminder, the second half of 2009 (i.e. after the record price growth of 2008) did see a drop in the prices of food, of about 4%. If something similar were to occur in the second half of 2011, this would, bearing in mind the share of food in the Consumer Price Index, account for a drop in inflation of some 1.5 percentage points. Although such a scenario is not impossible, there is certainly a risk of it not coming true. Besides food prices, 2011 inflation will definitely be affected by energy prices as well (as we have already mentioned, the second half of 2010 saw a substantial increase in the price of crude oil), while, on the other hand, the stabilization of the dinar exchange rate (or the currency's further appreciation) could play a role in calming inflation.

Exchange Rate

Having depreciated for most of the year, the exchange rate began to appreciate in December…

Having depreciated sharply in Q3, the dinar exchange rate initially stagnated in October, then depreciated slightly in November, only to record substantial appreciation in December, for the first time since the start of 2010. With minor oscillations, the appreciation trend continued into January and February 2011.

…spurred by the issue of euro-indexed Ministry of Finance bonds…

The dinar's appreciation in December was triggered by the issue of euro-indexed bonds by the Ministry of Finance. For nearly all of 2010 (or, more precisely, since the Greek crisis escalated), the Ministry of Finance was facing difficulties in selling dinar bonds, despite the relatively high nominal yields offered. The most likely reason for this was the constant depreciation of the dinar in 2010, as banks, as well as other investors viewing this instrument as a potential carry trade investment, were reluctant to make any significant investments into dinar bonds faced with a depreciating exchange rate. Thus the Ministry of Finance was forced to offer euro-indexed bonds in the market. Initial unofficial announcements from the Public Debt Administration indicated that the instruments were first to be issued in mid-December. This stimulated carry trade inflows, and thus boosted demand for dinars and increased the supply of euros. That, in turn, led to the relatively sharp appreciation of the dinar around the middle of that month. When it transpired that the bonds were after all not going to be issued in mid-December, the exchange rate started creeping back to its previous level. However, this was when the Ministry of Finance officially announced its intention to issue euro-indexed bonds in late December; this again stimulated the appreciation of the exchange rate. Let us add that there was a great deal of interest on the part of investors for this issue of 200 million euros in 6-month euro-indexed bonds. It needs to be borne in mind that all of this was taking place in an environment where the current account deficit had been substantially reduced, and that moderate capital inflows were thus sufficient to create pressure for appreciation.

…while several different factors spurred continuing appreciation in January and February

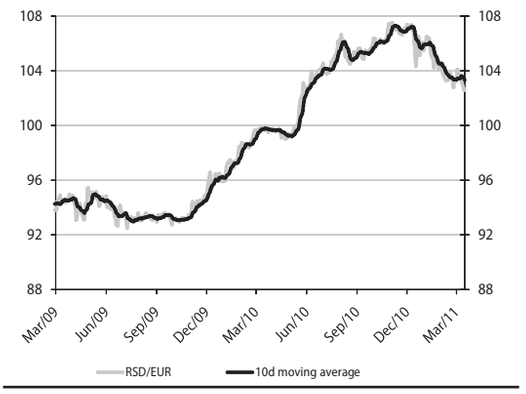
The dinar continued appreciating in January and February, which can be explained by several factors. The continuing appreciation was contributed to by rising foreign currency inflows owing to remittances and non-resident inflows; the announced issue of new euro-bonds of the Ministry of Finance (these will, however, not be indexed, but rather "pure" euro-denominated bonds); the increase in the NBS reference rate; the fall in the risk premium for Serbia seen over the past several months; the more favorable credit rating outlook; the expected substantial inflow of

euros resulting from the sale of Telekom Srbija which could lead to further appreciation within the context of a moderate current account deficit – and all this leads to the expectation that the stabilization of the exchange rate could lead to a new wave of carry investment and thereby strengthen the appreciation trend.

The real exchange rate appreciated slightly in Q4

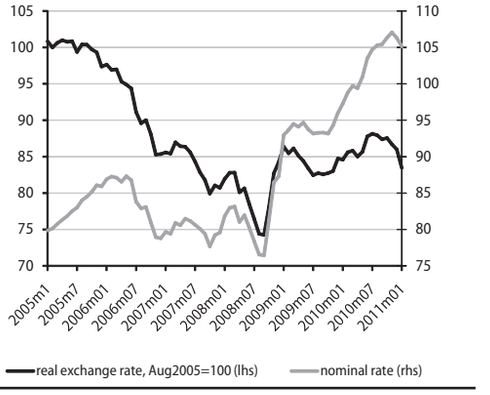
The real exchange rate of the dinar appreciated slightly in Q4, keeping to a trend of hovering around the same value seen since the beginning of 2009, which leads us to conclude that this is in all likelihood its sustainable level in the medium term.

Graph T5-7. Serbia: Daily RSD/EUR Exchange Rate, Monthly Average, 2009-2011



Source: NBS

Graph T5-8. Serbia: Nominal and Real RSD/EUR Exchange Rate, Monthly Average, 2005-2010



Source: NBS, Eurostat

Table T5-9. Serbia: RSD/EUR Exchange Rate, 2006-2011

	Nominal				Real			
	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]	USD/EUR Rate[6]
	monthly exchange rate							
2006								
December	78.7812	95.0	91.7	91.7	85.4	87.7	87.7	1.3210
2007								
December	79.5669	96.0	101.0	101.0	80.7	94.6	94.6	1.4563
2008								
March	83.1319	100.3	102.8	104.5	82.8	95.2	102.6	1.5516
June	80.2460	96.8	98.9	100.9	78.5	91.7	97.2	1.5556
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
November	86.4508	104.3	109.2	108.7	82.7	102.0	102.5	1.2726
December	87.3002	105.3	109.7	109.7	84.3	104.4	104.4	1.3482
2009								
March	94.4951	114.0	113.7	108.2	86.1	104.0	102.2	1.3041
June	93.7408	113.1	116.8	107.4	83.4	106.3	99.0	1.4027
September	93.2990	112.5	122.1	106.9	82.5	111.2	98.0	1.4554
December	95.9833	115.8	109.9	109.9	84.7	100.6	100.6	1.4597
2010								
January	97.2874	117.3	104.7	101.4	84.6	97.9	99.8	1.4281
February	98.7951	119.1	105.5	102.9	85.6	100.1	101.0	1.3698
March	99.7048	120.2	105.5	103.9	85.8	99.6	101.3	1.3576
April	99.4032	119.9	105.6	103.6	85.0	99.9	100.3	1.3424
May	100.9779	121.8	106.7	105.2	85.7	101.5	101.1	1.2538
June	103.5079	124.8	110.4	107.8	87.8	105.3	103.6	1.2219
July	104.7048	126.3	112.4	109.1	88.1	106.9	104.0	1.2761
August	105.2965	127.0	112.9	109.7	87.9	106.3	103.8	1.2909
September	105.4352	127.2	113.0	109.8	87.4	105.8	103.1	1.3043
October	106.3318	128.2	114.1	110.8	87.5	105.8	103.3	1.3891
November	107.0668	129.1	113.6	111.5	86.7	104.4	102.3	1.3675
December	106.2771	128.2	110.7	110.7	86.0	101.5	101.5	1.3222
2011								
January	105.1350	126.8	108.1	109.5	83.5	98.7	98.5	1.3368

Source: NBS, SORS, Eurostat

1) Monthly 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 pe- riod in previous year.

4) Cumulative is the ratio of given month and December of previous year.

5) The calculation of the real exchange rate takes into account Eurozone inflation. Index calculation: RE = (NE/p) x p*, where: RE - real fx index; NE -nominal fx index; p - Serbia RPI index; p* - Euro area CPI index.

6) Period average.

6. Fiscal Flows and Policy

The total fiscal deficit of the consolidated government sector in the whole of 2010 amounted to around 136.4 billion dinars or around 4.4% of GDP, which is around 0.4% of GDP less than the planned size of the gap (and than the one agreed with the IMF). The deficit was lower than planned due to modest recovery in public revenues at the end of 2010 and persistence in keeping all the main current spending items nominally frozen, the decline of which in real terms was bigger than planned due to rising inflation. In the course of Q4 seasonally adjusted revenues of the consolidated government sector continued to moderately expand compared with the previous quarter. At the same time, real seasonally adjusted public spending stagnated in Q4 compared with Q3. As a result of those developments, the consolidated fiscal gap amounted to 6.3% of the quarterly GDP in Q4, which was less than expected. In January 2011, real seasonally adjusted revenue from VAT rose by 2.3% against December, which can represent an indicator of public revenue recovery. The budget deficit of the Republic in January 2011 stood at 2.3 billion dinars, which is significantly less compared with an average monthly deficit in 2010 (of around nine billion dinars). Serbia's public debt stood at 12.2 billion euros (around 41.5% of GDP) at the end of 2010, which is around 550 million euros more than at the end of Q3. Fiscal policy pursued in 2010 is assessed as positive in terms of persistent real decline in significant public spending items, which resulted in a lower than planned fiscal deficit. Also, the preparation of the 2011 budget in line with general fiscal rules is positively assessed, because it creates preconditions to ensure medium term sustainability of the public finance in Serbia. However, an absence of an increasing share of public investments in overall public spending is assessed as unfavorable.

General Trends and Macroeconomic Implications

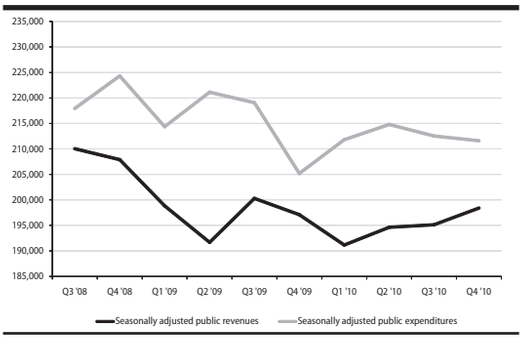
Public revenues posted a modest growth in Q4 against the previous quarter…

In the course of Q4 2010, seasonally adjusted real revenues of the consolidated state sector modestly grew against the previous quarter, by 2%, representing the continuation of a trend that began in Q2, with the rate of growth slowing down compared with the rate of growth in Q2 (in Q3 the level of public revenues *de facto* stagnated). Compared with the same quarter of the previous year, revenues of the government sector declined in real terms in Q4, just like in Q2, with the decline in the last quarter somewhat more moderate at around 1.3%.

…due to an increase in various non-tax revenues and personal income tax

An increase in seasonally adjusted real tax revenues in Q4 mainly resulted from an increase in non-tax revenues, which encompass a wide spectrum of various budget revenues, such as levies, fees, fines, revenue from renting state property, revenue from dividends, etc. As non-tax revenues generate around 15% of total consolidated revenues of the state sector, their significant growth by 10.5% against Q3 contributed to a modest growth in total (real, seasonally adjusted) public revenues in the last quarter of 2010 despite negative movements in revenues from consumption taxes. The fact that the modest growth in public revenues in Q4 is mainly owed to an increase in non-tax revenues, is unfavorable for two reasons. First, an increase in non-tax revenues, among other things, results from an increase in local taxes and fees, which further contributes to a deterioration of business environment in those local communities. Second, it speaks of an *ad hoc* increase and not of a lasting, systemic change on the public revenue side. Real seasonally adjusted revenues from all consumption taxes fell again in Q4 against the previous quarter, following an increase in the previous two quarters, with the decline in Q4 most prominent in VAT and customs duties. During the same period, movements in real, seasonally adjusted revenues from taxes on production factors diverged, because revenues from personal income tax and corporate income tax expanded, while revenues from mandatory social security contributions declined for the third consecutive quarter against the previous quarter. Divergent movements in revenues from income taxes and social contributions (which are collected against the same tax base) result from widening tax evasion, particularly in paying the mandatory social insurance contributions, as well as from various distortions related to the tax base for the personal income tax and social

Graph T6-1. Serbia: Seasonally Adjusted Real (Quarterly) Revenues and Spending of the Consolidated Government Sector in Millions of RSD (2005=100)



Source: Calculations by the author

In Q4, total public spending remain unchanged against the previous quarter

contributions, which will be analyzed in more detail as part of individual tax revenue analysis.

Real, seasonally adjusted public revenues of the consolidated state sector remained almost unchanged against the previous quarter. Considering that a trend of rising public spending from Q1 and Q2 ended in Q3 (public revenues fell in Q3 1.1% compared with Q2), and considering that pressures from direct and indirect budget beneficiaries for the fulfillment of planned spending is the strongest at the end of the calendar (and fiscal) year – the absence of a significant increase in public spending in the last quarter compared with the previous quarter of 2010 is assessed both as positive and justified.

Particular public spending items moved divergently in Q4. Thus, spending on the employees, and especially spending on subsidies, declined, while spending on purchases of goods and services, spending on pensions and capital spending posted growth. As in the course of Q4 the biggest decline was posted in spending on subsidies (the decline was 10.7% against Q3), while the biggest increase was recorded in capital spending (6.3%), such public spending restructuring is considered as positive. However, for this change to have positive economic implications it is necessary to maintain the same trend in the coming period. Besides, it is also positive that capital spending post strong growth against the previous quarter for the second consecutive quarter, which indicates an acceleration in implementing infrastructure projects.

Consolidated deficit of the government sector in 2010 is around 4.4% of GDP

As a result of abovementioned movements, the consolidated deficit in Q4 amounted to 52.3 billion dinars or close to 6.3% of (quarterly) GDP in Q4. Even though the total consolidated deficit in Q4 was significantly higher than the deficits in previous quarters, primarily due to seasonal factors, the total consolidated fiscal deficit for the whole of 2010 stood at 136.4 billion dinars, i.e. close to 4.4% of GDP estimated for that year, which is around 0.4% of GDP less compared with the planned fiscal deficit and the one agreed with the IMF. Such positive deviation of the deficit from the planned fiscal gap for 2010 resulted primarily from a nominal freeze in the most significant public spending items in the budget (wages to public sector workers and pensions), the decline of which was deeper than planned in real terms because of rising inflation and due to a moderate recovery in budget revenues of the consolidated state sector towards the end of the year.

Table T6-2. Serbia: Consolidated Balance of the General Government Sector[1], 2008-2010

	2008	2009					2010				
	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4
						in billions of dinars					
I TOTAL REVENUE	1145.9	258.8	267.1	297.0	323.6	1,147	266.6	292.9	309.5	354.4	1,223.4
II TOTAL EXPENDITURE	-1195.7	-270.3	-306.3	-315.1	-356.2	-1247.9	-286.1	-317.8	-329.7	-396.3	-1,329.9
III "OLD" DEBT REPAYMENT, NET LENDING AND RECAPITALIZATIONS	-19.1	-0.9	-6.3	-5.8	-7.4	-20.4	-4.6	-6.4	-8.5	-10.4	-29.9
o/w Net lending [2]	-19.1	-0.9	-6.3	-5.8	-7.4	-20.4	-4.6	-6.4	-8.5	-10.4	-29.9
IV TOTAL EXPENDITURE, GFS (II+III)	-1214.8	-271.2	-312.6	-320.9	-363.6	-1268.3	-290.7	-324.2	-338.2	-406.7	-1,359.8
V CONSOLIDATED BALANCE (I+IV), GFS definition[3]	-68.9	-12.4	-45.5	-23.9	-40.0	-121.8	-24.1	-31.2	-28.8	-52.3	-136.4
VI FINANCING (FREN's definition)	13.5	28.9	40.2	11.4	86.8	167.3	21.8	22.8	29.7	42.9	117.2
VII ACCOUNT BALANCE CHANGE (V+VI)	-55.4	16.4	-5.3	-12.4	46.8	45.4	-2.3	-8.4	0.9	-9.4	-19.2
VIII TOTAL REVENUE/GDP (%)	41.7	40.6	37.9	41.0	43.3	40.7	38.9	38.0	38.5	42.7	39.6
IX TOTAL EXPENDITURE/GDP (%)	(44.3)	(42.5)	(44.4)	(44.3)	(48.6)	(45.1)	(42.4)	(42.1)	(42.1)	(49.0)	(44.0)
X CONSOLIDATED DEFICIT/GDP (%)	(2.5)	(2.0)	(6.5)	(3.3)	(5.4)	(4.3)	(3.5)	(4.1)	(3.6)	(6.3)	(4.4)

Source: Table P-10 in Analytical Appendix

1) The General Government – all government levels (the Republic, province, municipalities) and their budget beneficiaries and organizations of mandatory social security (Pension Fund, Health Fund, the National Employment Service). Excludes public companies and NBS

2) The item corresponds to term "Spending for the purchase of financial assets" in PFB, i.e. to the item "net lending" in the IMF presentation. Those are credits to students, farmers, loans granted through the Development Fund, repayment of debts to pensioners, and spending on capital increase.

3) The consolidated balance (cash surplus/deficit according to GFS) represents a difference between current revenues and earnings from the sale of non-financial assets (i.e. capital revenues) and current spending and spending on the purchase of non-financial assets (i.e. capital spending). Beside those, spending also includes an item which includes repayment of domestic debts – pensions, budgetary lending and recapitalizations. Thus defined, the resultant measures a liquidity impact of the government transactions on the economy. See methodological discussion in Box 1, Quarterly Monitor No. 3 for detail.

Notes: See Table P-10 in Analytical Appendix for detail.

Due to the effects of the economic crisis (and the consequential decline in production and consumption) in the period between 2008 and 2010 – total public revenues significantly declined (by 2.1 % of GDP) even though tax rates were not reduced. On the other hand, total public spending fell only moderately (by 0.3% of GDP) so that it accounted for 44% of GDP in 2010, which is still relatively high. A relative decline in public spending resulted from the fact that it fell by a real 4.8% in 2009 (against 2008), while GDP contraction was at 3%. Besides, in 2010, public spending fell an annual 1.8% in real terms while GDP grew in real terms (by around 1.8%).

Fiscal consolidation on the spending side during the time of the crisis took place, primarily, through a nominal freeze in spending on pensions and wages in 2009 and 2010. However, in cumulative, lower spending on public sector wages mainly contributed to lower public spending, while the impact of spending on pensions was ambivalent. Namely, spending on pensions in 2009 significantly rose against 2008 (by 1.8% of GDP) as a result of one-off 10% increase in pensions in Q4 of 2008, as well as due to GDP decline in 2009. Effects of the nominal pension freeze only materialized in 2010, when spending on pensions fell by 1% of GDP against 2009. Despite the nominal freeze in pensions in 2009 and 2010, spending on pensions in 2010 stood at 12.8% of GDP, still remaining above 2008 by around 0.8% of GDP. That indicates that the nominal freeze in pensions in the previous two years was not sufficient to eliminate the impact of a one-off pension increase at the end of 2008. On the other hand, the nominal freeze in public wages in 2009 and 2010 led to a decline in spending on wages from 10.7% of GDP (in 2008) to 10% of GDP (in 2010), which is seen as positive.

If the pension and wage indexation in 2011 was conducted in line with special fiscal rules, it is expected that spending on pensions would further decline by around 0.3% of GDP in 2011 and spending on wages by 0.2% of GDP, which *ceteris paribus* would imply the reduction in overall public spending by 0.5% of GDP. Despite a prominent negative impact of the decision on a one-off increase in pensions in 2008, measures aimed at reducing spending on wages and pensions in 2009 and 2010 yielded certain results in terms of lowering public spending and improving its structure. It is therefore assessed that an increase in those spending categories beyond the amount planned by fiscal rules would in the short period offset positive effects achieved in the previous two-year period.

T6-3. Serbia: Movements of the Relative Volume of Public Revenues and Public Spending (as % of GDP) in the Period Between 2008 and 2011

	2008	2009	2010	2011[1)]
Public revenues	41.7	40.7	39.6	38.8
Public expenditures	-44.3	-45.1	-44	-42.9
- pensions	-12	-13.8	-12.8	-12.5
- staff expenditures	-10.7	-10.7	-10	-9.8

1) Ministry of Finance and FREN projections

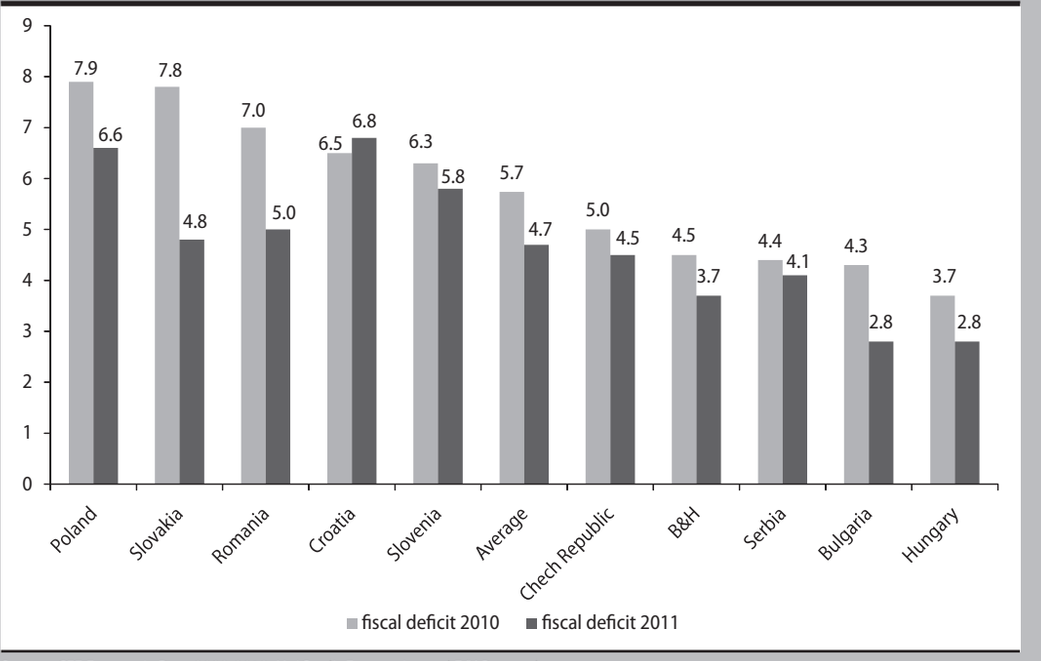
The Republic's budget deficit stood at 2.3 billion dinars in January 2011, with a high increase in real seasonally-adjusted revenues from VAT compared with December 2010

In January 2011, Republic's budget revenues fell by a real 3.3% against the same month of 2010. That decline is the result of a significant real drop in revenues from personal income tax, corporate tax, customs and not-tax revenues. In contrast, the real month-on-month growth was seen only in revenues from excise duties, which is primarily the result of several increases in excise duty rates. Even though the budget revenues of the Republic, were lower in real terms in January 2011 compared with the same month last year, real, seasonally-adjusted revenues from VAT in January 2011 were 2.3% higher than in December 2010 (equivalent to an annualized growth of around 27%). The performance of real, seasonally adjusted revenues from VAT in January could represent an indicator of a more significant real recovery in public revenues, but that assumption can be proved only if the same trend extends into coming months. The Republic's budget spending in January remained almost unchanged in real terms against the same month of 2010. A significant real decline was recorded in spending for purchases of goods and services, as well as in spending on subsidies, while spending on the employed and pensions moderately declined.

Box 1. The State of Public Finances in the Countries of the Region in 2010

Even though recession in developed countries of Western and Northern Europe formally ended in the first half of 2010 already, with modest and in some cases (such as Germany) even high rates of economic growth, such a scenario has not yet taken place in the countries of Central and Southeastern Europe. Namely, the economic recovery in those countries was on average significantly slower even in 2010, all the more so because we talk about economies which based their pre-crisis economic development on foreign direct investment inflows and external borrowing, which were significantly less available in 2010. Therefore, in some countries of the region (such as Croatia, Romania, Montenegro) the economic growth rate was negative, while in the majority of other countries the rate of economic growth, although positive, remains relatively low. Those developments in the real sector had had a negative impact on public finances of those countries, through a further decline in public revenues and divergent developments in public spending. On one side, counter-cyclical fiscal policy measures were implemented, such as the payments of subsidies to the real sector, and on the other hand, pro-cyclical measures, such as the reduction of spending on public sector wages and pensions, either through their nominal freeze or even reduction (such as was the case in Romania) or through the implementation of downsizing public administration.

Graph T6-4. Central and Eastern Europe: Fiscal Deficits in 2010 and Projected Deficits in 2011 (% of GDP)

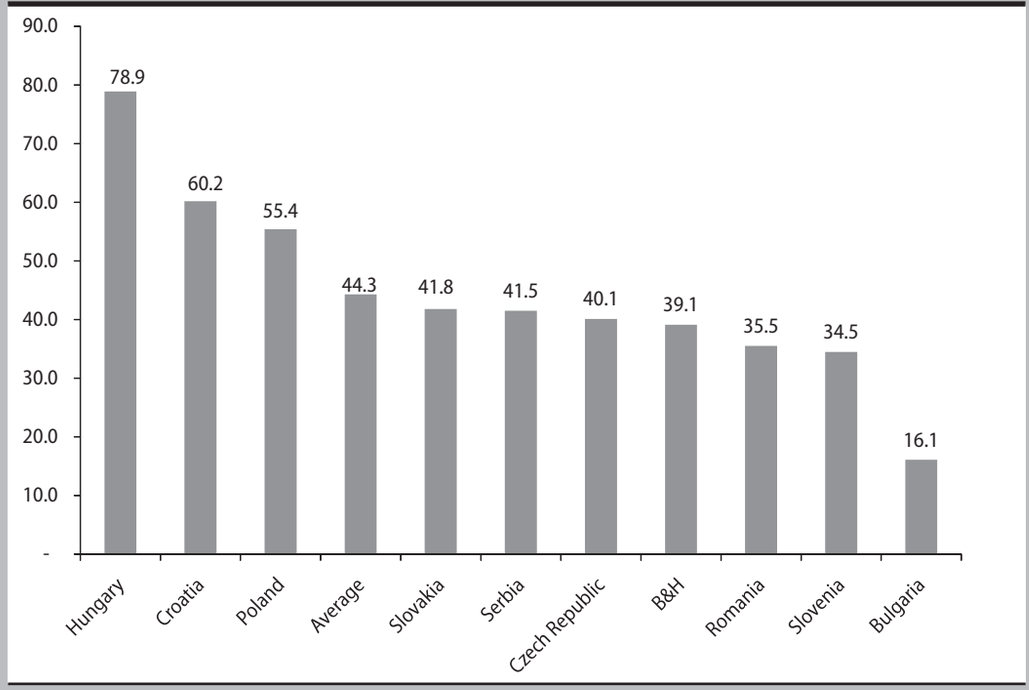


Source: CEE Economic Data 2009-2012, UniCredit Economics and F/X Research Issue 1, 2011 and IMF Fiscal Monitor CEE Economic Data 2009-2012

As a result of those developments, countries of Central and Eastern Europe had produced an average fiscal deficit of around 5.7% of GDP. Out of ten monitored countries, seven of them had a fiscal deficit bigger than that of Serbia, while two countries (Bulgaria and Hungary) had somewhat lower deficit.

The majority of the region's countries (except Hungary and Poland) entered the period of crisis with a relatively low level of public debt, because of which they were capable of financing their fiscal deficits via borrowing without major problems. However, at the end of 2010, the average size of the public debt in the region's countries was around 44.3% of GDP, the level considered to represent a moderately high indebtedness.

Graph T6-5. Central and Eastern Europe: Public Debt (as % GDP-a) at the end of 2010



Source: CEE Economic Data 2009–2012, UniCredit Economics and F/X Research Issue 1, 2011 and IMF Fiscal Monitor CEE Economic Data 2009–2012

According to its level of indebtedness, Serbia is ranked third in the group of the ten monitored countries (with Poland and Hungary the only countries with a higher level of indebtedness). Because of that, the room for any significant increase in public debt in all those countries is limited, and therefore, all the monitored countries plan to reduce their fiscal deficits in 2011 to an average 4.7% of GDP. Compared with other countries, Serbia ranks seventh by its planned fiscal deficit in 2011 (4.1% of GDP) – only Bulgaria, Hungary and BiH plan lower fiscal deficits.

On the other hand, spending on social protection, interest rate payments and other current spending, posted growth in real terms. As a result of such a performance, the Republic's budget deficit in January 2011 stood at 2.3 billion dinars, significantly lower than the average monthly deficit in 2010 (of around nine billion dinars), but higher than the deficit in January last year (when it stood at around 700 million dinars).

Analysis of Individual Tax Forms and Individual Public Spending Items

Even though total real, seasonally adjusted public revenues of the consolidated government sector posted moderate growth (of 2%) in Q4 against the previous quarter, the structure of revenues from individual sources does not indicate a systemic recovery of budget revenues, because the mentioned growth was achieved mainly due to an increase in non-tax revenues.

In Q4, revenues from all taxes on consumption decline

In Q4 of 2010, real, seasonally adjusted revenues from all taxes on consumption posted decline against Q3. The biggest decline of 3.7% was noticed in VAT and customs revenues, which indicates that the mentioned decline is partially caused by a decline in imports. At the same time, revenues from excise duties posted only an insignificant decline (of 0.3%) compared with the previous quarter, which represents a continuation of a stagnation trend which began in the previous quarter.

Table T6-6. Serbia: Seasonally Adjusted Quarterly Indexes of the Real Level of Public Revenues (previous quarter = 100)

	Public revenues	Consumption taxes			Taxes on production factors			Other tax revenues	Non-tax revenues
		VAT	Excise duties	Customs duties	Personal income tax	Social contributions	Corporate income tax		
Q1 2009	**95.6**	99.2	104.4	86.8	89.1	96.2	84.3	86.7	89.7
Q2 2009	**96.7**	89.6	104.1	88.0	96.5	99.2	87.2	100.8	96.9
Q3 2009	**104.7**	109.8	104.9	93.7	101.8	98.0	106.9	124.5	116.6
Q4 2009	**97.8**	100.6	101.6	97.1	95.5	94.3	92.1	101.7	89.2
Q1 2010	**97.1**	97.2	98.8	96.5	100.0	102.8	102.3	95.6	100.8
Q2 2010	**102.2**	99.2	102.0	99.2	99.1	97.5	99.9	112.6	110.0
Q3 2010	**99.8**	104.6	100.2	97.1	100.5	97.4	100.6	95.2	95.9
Q4 2010	**102.0**	96.3	99.7	96.3	101.7	99.4	103.1	102.7	110.5
Total index in Q4 2010 (Q1 2009=100)	**95.6**	**95.3**	**116.7**	**62.2**	**84.7**	**85.6**	**76.9**	**116.4**	**106.3**

Source: Calculations by FREN

The trend of declining revenues from social contributions and an increase in revenues from income tax continues

In Q4, a trend from previous quarter continues related to the performance of revenues from personal income tax and social contributions. Thus, real, seasonally adjusted revenues from personal income tax rose for the second consecutive quarter against the previous quarter (growth of 1.7%), while revenues from social contributions fell for the third consecutive quarter against the previous quarter (even though the decline was much lower in Q4 than in the previous two quarters, and stood at 0.6%). The divergent performance in revenues from income tax and social contributions, as well as the figures on performance of individual categories of revenues from social contributions indicate the continuation of tax evasion trends particularly when it comes to contributions for mandatory social insurance (especially contributions for pension and disability insurance). Considering that the income tax and social contributions are paid on income from working activities, while income earned from capital is only subject to income tax, it is assumed that reasons for divergent performance in revenues from those two revenue items can be found in a moderate increase in personal income from capital, as well as in other deviations from the tax base used to calculate taxes and contributions. The law establishes the lower and the upper limit for the tax base to pay social contributions (those limits are not applied to calculate tax), which is linked to the average wage in the Republic. Therefore, it is possible that the decline in revenues from social contributions is the result of the fact that the average wage in the Republic was growing at a slower pace than the inflation rate.

Real, seasonally adjusted revenues from the corporate income tax in Q4 rose by 3.1% compared with Q3. Considering that the corporate income tax is paid on a quarterly basis in equivalent amounts, until the final calculation is made in March of the following year, it is assumed that the increase in revenues from this tax form in Q4 actually resulted from an increase in revenues from taxes on interest rates and dividends which the Serbian companies and banks pay to non-resident legal entities. The tax rate of 20% (on interest rates, dividends and some other revenue forms) is paid at the time of revenue payment. Considering that the end of a calendar year is often a period when companies pay their debts for credits, an increased payment to non-residents can be the reason for a relatively high growth in revenues from the corporate income tax.

Despite a modest recovery in consolidated public revenues, the total amount of quarterly revenues of the consolidated government sector has not yet returned to pre-crisis levels. Compared with the pre-crisis period (Q1 2009), seasonally adjusted public revenues in Q4 2010 were 4.4% lower, resulting from a decline in revenues from all tax forms, except for excise duties, other tax revenues and non-tax revenues. It is necessary to note that the increase in revenues from excise duties is the result of multiple regular and extraordinary increase in excise duty rates. It is also important to point out that the increase in revenues from this tax is lower than the rate of increase in excise duty rates.

In Q4, capital spending, as well as spending on goods and services and pensions increased…

Total real, seasonally adjusted spending of the consolidated government sector in Q4 were roughly equivalent to those in the previous quarter, as a result of divergent performance in capital spending, spending on purchases of goods and services and spending on pensions, which grew and spending on the employees and subsidies which fell compared with Q3.

Table T6-7. Serbia: Seasonally Adjusted Quarterly Indexes of the Real Level of Public Spending (previous quarter=100)

	Public expenditures	Staff expenditures	Purchase of goods and services	Subsidies	Pensions	Capital expenditures
Q1 2009	94.5	92.6	95.5	73.6	101.1	74.4
Q2 2009	103.1	100.8	103.1	94.0	99.8	116.3
Q3 2009	99.0	99.0	94.7	115.8	99.8	91.8
Q4 2009	94.8	100.2	99.5	81.2	99.2	97.8
Q1 2010	102.1	96.5	105.7	111.6	97.1	108.7
Q2 2010	101.3	98.4	96.6	117.7	98.3	90.0
Q3 2010	98.9	100.6	98.4	106.2	99.1	111.7
Q4 2010	100.1	97.7	102.8	89.3	100.5	106.3
Total index in Q4 2010 (Q1 2009=100)	**93.6**	**86.4**	**95.8**	**81.2**	**95.0**	**90.2**

Source: Calculations by FREN

By individual spending categories, the strongest growth in Q4 compared with Q3 was recorded in capital spending. Since the similar result was also recorded in Q3 (against Q2), such a performance represents an indicator of accelerating implementation of investment projects by the government, which is positive. However, it is necessary to emphasize that an absolute level of public investments as well as their share in GDP, remains modest, and that it is necessary to significantly increase those public spending items in the coming period (both in absolute and relative terms).

Besides, a growth against the previous quarter (of 2.8%) was also seen in real, seasonally adjusted spending on purchases of goods and services. Considering that this category of spending significantly fell in Q3 and Q2 of 2010, such a performance is considered to be expected, and it is not expected that they can exceed planned volumes of public spending in the coming period.

After a decline in the previous six quarters, real, seasonally adjusted spending on pensions rose moderately in Q4 (by 0,5%) against Q3 2010. The growth resulted exclusively from the payment of one-off assistance to pensioners in October 2010. It refers to a payment of 5,000 dinars to all pensioners, whose average pension does not exceed 30,000 dinars. Even though the limit of 30,000 dinars is not high, the majority of pensioners qualified for the one-off assistance. Therefore, it is justified to raise a question whether a better impact on the social status of the poor could have been achieved if those funds were used to pay assistance based on the entire material standing of potential beneficiaries.

Table T6-8. Serbia: Consolidated Balance of the General Government Sector[1], 2006-2010

	real increase (in%)															
	2007	2008					2009					2010				
	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4
I PUBLIC REVENUES	**1,002.0**	**269.4**	**281.4**	**283.3**	**311.8**	**1,145.9**	**258.8**	**267.1**	**297.0**	**323.6**	**1,146.5**	**266.6**	**292.9**	**309.5**	**354.4**	**1,223.4**
1. Current revenues	995.4	268.9	280.3	282.6	311.3	1,143.1	258.3	266.2	296.2	318.3	1,139.2	266.2	292.4	308.9	348.1	1,215.7
Tax revenue	870.0	234.4	247.4	248.3	270.2	1,000.4	229.8	237.1	256.9	276.5	1,000.3	236.1	255.6	269.3	295.5	1,056.5
Personal income taxes	115.8	29.7	34.1	33.6	39.0	136.5	30.9	33.5	33.6	35.5	133.5	31.1	34.5	34.4	39.0	139.1
Corporate income taxes	29.7	15.0	8.1	7.4	8.5	39.0	12.8	5.6	6.1	6.7	31.2	11.7	6.5	6.5	7.9	32.6
VAT and retail sales tax	265.5	73.2	77.0	73.8	77.7	301.7	69.4	67.9	76.1	83.5	296.9	71.9	77.3	83.2	87.0	319.4
Excises	98.6	23.7	26.6	29.5	30.3	110.1	24.4	30.7	38.4	41.3	134.8	27.2	35.1	42.5	47.4	152.2
Custom duties	57.4	14.8	16.9	16.3	16.8	64.8	11.5	11.7	11.7	13.2	48.0	9.5	11.0	11.3	12.5	44.3
Social contributions	270.3	69.7	75.9	78.7	88.5	312.7	73.4	79.7	80.9	84.8	318.8	74.9	79.4	79.8	88.9	323.0
Other taxes	32.8	8.4	8.8	8.8	9.5	35.6	7.4	8.1	10.3	11.4	37.1	9.8	11.8	11.5	12.9	46.0
Non-tax revenue	125.4	34.4	32.9	34.3	41.1	142.7	28.5	29.1	39.3	41.9	138.8	30.2	36.8	39.6	52.7	159.2
2. Capital revenues	5.3	0.3	0.5	0.3	0.2	1.4	0.3	0.5	0.0	0.0	0.9	0.0	0.2	0.0	0.1	0.3
II TOTAL EXPENDITURE	**-1,031.5**	**-254.0**	**-295.8**	**-286.6**	**-359.3**	**-1,195.7**	**-270.3**	**-306.3**	**-315.1**	**-356.2**	**-1,248**	**-286.1**	**-317.8**	**-329.7**	**-396.3**	**-1,329.9**
1. Current expenditures	-919.5	-242.0	-272.7	-260.5	-314.4	-1,089.6	-259.0	-286.4	-292.0	-317.9	-1,155	-272.6	-300.5	-304.0	-347.7	-1,224.8
Wages and salaries	-238.3	-66.5	-74.0	-71.3	-81.4	-293.2	-70.3	-75.6	-73.8	-82.2	-302.0	-72.7	-76.0	-76.3	-83.1	-308.1
Expenditure on goods and services	-168.1	-34.0	-44.2	-45.2	-57.9	-181.2	-35.9	-47.2	-46.2	-58.2	-187.4	-39.7	-47.9	-49.0	-65.9	-202.5
Interest payment	-17.9	-6.0	-2.6	-5.1	-3.4	-17.2	-5.8	-4.5	-7.1	-5.0	-22.4	-8.0	-8.3	-8.2	-9.7	-34.2
Subsidies	-63.7	-13.3	-22.2	-13.9	-28.3	-77.8	-11.0	-14.7	-18.7	-18.6	-63.1	-11.2	-18.4	-22.1	-26.2	-77.9
Social transfers	-409.3	-117.9	-122.4	-120.4	-136.0	-496.8	-132.8	-139.1	-139.3	-145.2	-556.4	-137.1	-144.0	-142.3	-155.7	-579.2
o/w: pensions [5]	*-259.9*	*-74.8*	*-81.5*	*-83.6*	*-91.1*	*-331.0*	*-94.5*	*-96.6*	*-97.1*	*-99.2*	*-387.3*	*-97.1*	*-97.5*	*-98.2*	*-101.3*	*-394.0*
Other current expenditures	-22.1	-4.2	-7.3	-4.6	-7.3	-23.5	-3.2	-5.2	-6.9	-8.7	-24.0	-3.9	-5.9	-6.1	-7.0	-22.9
2. Capital expenditures	-112.1	-12.0	-23.1	-26.1	-44.9	-106.0	-11.3	-20.0	-23.0	-38.2	-92.5	-13.5	-17.3	-25.7	-48.6	-105.1
III "OLD" DEBT REPAYMENT, GOVERNMENT NET LENDING AND RECAPITALIZATIONS	**-15.3**	**-7.3**	**-5.2**	**-2.7**	**-3.9**	**-19.1**	**-0.9**	**-6.3**	**-5.8**	**-7.4**	**-20**	**-4.6**	**-6.4**	**-8.5**	**-10.4**	**-29.9**
IV TOTAL EXPENDITURE, GFS (II+III)	**-1,046.8**	**-261.4**	**-301.0**	**-289.3**	**-363.2**	**-1,214.8**	**-271.2**	**-312.6**	**-320.9**	**-363.6**	**-1,268**	**-290.7**	**-324.2**	**-338.2**	**-406.7**	**-1,359.8**

Source: Table P-10 in Analytical Appendix

1) See footnote 1) in Table T6-1

2) Sales tax/VAT less new tax credits of the corporate sector

3) Contributions less compensations conducted between the Pension fund, the Development Fund and companies which owe to PIO Fund.

4) FREN estimate. See table P-10 in Analytical Appendix for explanation

5) Refers only to spending on current pensions

Note: To calculate real growth, an average base index of retail prices was implemented (base December 2003) on quarterly figures.

…while spending on subsidies and public sector employees' wages declined

The biggest drop in Q4 against Q3 was noticed in real, seasonally adjusted spending on subsidies (10.7%), as a result of the Serbian Government decision to stop subsidizing cash loans to households, as well as to cut some forms of subsidies. Such an approach is justified because the impact of such measures on the level of domestic economic activity is limited and they *de facto* relocate income by non-economic and non-social criteria.

Real, seasonally adjusted revenues for public sector workers fell in Q4 against Q3 by 2.3%. That was the consequence of a further nominal freeze in public wages by the end of 2010, and the fact that in Q3 all public sector employees with a wage of below 50,000 dinars received a one-off assistance of 5,000 dinars, which made the comparison base even higher. Spending on public sector employees, accounts for more than 20% of total public spending of the consolidated government sector. Therefore, a strict control of this spending category is the precondition for the achievement of the planned fiscal deficit in 2011 of 4.1% of GDP (all the more so as the pensions move along with public sector wages). Related to that, it is especially important for the Serbian Government not to yield in to pressures of parts of the public sector in terms of wage increase, because it could lead to a domino effect and drastic increase in overall public spending as well as the planned fiscal deficit and public debt.

Box 2. Is There Room for Extraordinary Increase in Public Sector Wages?

According to fiscal responsibility rules, public sector wages and pensions were to be relaxed in January 2011 and adjusted by the inflation rate in the past six months, which would be close to 5%. As it was assessed that general fiscal rules, which set the level of the fiscal deficit and public debt enjoy a priority, and that those rules could not have been observed if such an indexation was applied – the 2011 budget envisaged a 2% increase in public wages and pensions in January so that the 2011 fiscal deficit stays within 4.1% of GDP.

Teachers' trade unions went on strike in January 2011, demanding a 25% increase in salaries. As there is no reason to treat teachers any differently than other public-sector employees (such as health care workers, police officers, and court and general public administration staff), it would be realistic to expect the same (and quite justified) demands for greater wages from other segments of the public sector. Further, as early as 2009, teachers (and health care workers) found themselves in a more favourable position relative to other public sector employees, as their salaries were exempt from the so-called "crisis tax". In 2009, the salaries of public-sector employees (except those in education and health care) exceeding 40,000 dinars were subject to additional taxation at progressive rates of 10% and 15%.

An increase in public wages for teachers by 25% would imply an increase in overall spending on public sector workers by more than 60 billion dinars for the entire year or by around 2% of GDP, which would lead to an increase in the total fiscal deficit to more than 6% of GDP. Considering that pensions are now linked to public sector wages, such an increase in wages would lead to higher spending on pensions, so that the overall increase in public spending (following an increase in wages for all public sector employees and pensions) would amount to around 150 billion dinars. Such an increase in public spending would lead to a rise in fiscal deficit from the present 4.1% of GDP to close to 9% of GDP, as well as to an increase in public debt by the same amount. Such a drastic increase in total public spending and the fiscal deficit would have negative implications on inflation, the exchange rate and overall macroeconomic stability, and is seen as unsustainable.

Besides, when we consider whether those demands are justified, it is necessary to take into account the fact that between 2002 and 2009 wages to teachers rose faster than wages of those employed in the real sector and faster than the average wages in the Republic. In 2002, the average wage of teachers and the overall average wage in the Republic were almost the same (teachers' wages were only 1.4% higher), while in 2009, the average teachers' wage was around 12% higher than the average wage in the Republic. Analyzing the difference in wages, one should also take into account the fact that the safety of jobs in schools is significantly higher than the safety of jobs in the real sector. Even though the average wages to teachers and average wages

of all public sector workers were partially devalued in real terms in the past two years because of the nominal freeze and inflation, all the mentioned arguments indicate that there is no room for any significant increase in public wages and pensions, and that a selective wage increase only to teachers would not be justified.

Fiscal consolidation in 2009 and 2010 on the spending side of the budget gave some results and in Q4 2010 the total amount of real seasonally adjusted public spending was 6.4% lower than in the pre-crisis period (Q1 2009), mainly due to savings made in spending on wages, pensions and purchases of goods and services.

Table T6-9. Serbia: Consolidated Balance of the General Government Sector[1)], 2006-2010

	Public revenues	Consumption taxes			Taxes on production factors			Other tax revenues	Non-tax revenues
		VAT	Excise duties	Customs duties	Personal income tax	Social contributions	Corporate income tax		
Q1 2009	**95.6**	99.2	104.4	86.8	89.1	96.2	84.3	86.7	89.7
Q2 2009	**96.7**	89.6	104.1	88.0	96.5	99.2	87.2	100.8	96.9
Q3 2009	**104.7**	109.8	104.9	93.7	101.8	98.0	106.9	124.5	116.6
Q4 2009	**97.8**	100.6	101.6	97.1	95.5	94.3	92.1	101.7	89.2
Q1 2010	**97.1**	97.2	98.8	96.5	100.0	102.8	102.3	95.6	100.8
Q2 2010	**102.2**	99.2	102.0	99.2	99.1	97.5	99.9	112.6	110.0
Q3 2010	**99.8**	104.6	100.2	97.1	100.5	97.4	100.6	95.2	95.9
Q4 2010	**102.0**	96.3	99.7	96.3	101.7	99.4	103.1	102.7	110.5
Total index in Q4 2010 (Q1 2009=100)	**95.6**	**95.3**	**116.7**	**62.2**	**84.7**	**85.6**	**76.9**	**116.4**	**106.3**

Source: Table P-10 in Analytical Appendix
1) See footnote 1) in Table T6-1
2) Sales tax/VAT less new tax credits of the corporate sector
3) Contributions less compensations conducted between the Pension fund, the Development Fund and companies which owe to PIO Fund.
4) FREN estimate. See table P-10 in Analytical Appendix for explanation
5) Refers only to spending on current pensions
Note: To calculate real growth, an average base index of retail prices was implemented (base December 2003) on quarterly figures.

Public Debt Analysis

Serbia's public debt rose in Q4 by around 550 million euros (to 41.5% of GDP)

At the end of Q4 2010, Serbia's total public debt stood at 12.17 billion euros (41.5% of GDP[1]), which is 550 million euros more (around 1.6% of GDP) than at the end of Q3 2010. The public debt growth in Q4 was significantly lower than the quarterly fiscal deficit in the same period, because part of the fiscal deficit was financed from other sources (e.g. spending government deposits from a previous period).

Table T6-10. Serbia: Public Debt, 2000–2010

	Public expenditures	Staff expenditures	Purchase of goods and services	Subsidies	Pensions	Capital expenditures
Q1 2009	94.5	92.6	95.5	73.6	101.1	74.4
Q2 2009	103.1	100.8	103.1	94.0	99.8	116.3
Q3 2009	99.0	99.0	94.7	115.8	99.8	91.8
Q4 2009	94.8	100.2	99.5	81.2	99.2	97.8
Q1 2010	102.1	96.5	105.7	111.6	97.1	108.7
Q2 2010	101.3	98.4	96.6	117.7	98.3	90.0
Q3 2010	98.9	100.6	98.4	106.2	99.1	111.7
Q4 2010	100.1	97.7	102.8	89.3	100.5	106.3
Total index in Q4 2010 (Q1 2009=100)	**93.6**	**86.4**	**95.8**	**81.2**	**95.0**	**90.2**

Source: The Ministry of Finance of the Republic of Serbia

Of around 12.2 billion euros in total public debt, some 10.5 billion euros refers to direct and 1.7 billion euros to indirect government liabilities. According to available figures, the greatest part of public debt growth (2/3) in Q4 refers to additional government borrowing in the local financial market, which leads to conclusion that the government financed the major part of its fiscal deficit in the last quarter of 2010 through Treasury bill issues. In Q4 for the first time since Treasury bill issuance was launched, the government issued bills index-linked to a foreign currency. Namely, this refers to securities issued by the Treasury of the Ministry of Finance, denominated in dinars, but indexed to the euro. Thus, the exchange rate risk is transferred from the creditor (bond investor) to the debtor (the state). The T-bill indexation increased the auction success rate,

1 According to Ministry of Finance calculations

which helped the government rely more on this source of financing of the fiscal deficit. Besides, as collateral, it came to additional sterilization of the part of the dinar money supply, which had led to a dinar appreciation against the euro (especially in December 2010 and January 2011). Even though this has led to a greater success of T-bill auctions, such approach to financing the fiscal deficit is not favorable, because it effectuates shortcomings of borrowing in local and in foreign currency. Namely, the government borrowing in the local currency in the domestic financial market crowds out private investments, due to rising interest rates, while eliminating the exchange rate risk. In contrast, borrowing in the foreign financial market in the foreign currency does not lead to crowding out, but negatively affects public debt sustainability because of the exposure to exchange rate risk. The issue of T-bills denominated in dinars and indexed in euros, in the local financial market leads to a transfer of exchange rate risk to the government as the borrower, and it can also lead to the crowding out effect. Besides, the issue of such securities lowers the monetary policy efficiency, because it narrows the room for its action. On the other hand, however, this method and form of issuance of securities allows the government to lower the cost of borrowing because such securities, by rule, carry lower interest rates.

Serbia's public debt rose by around 60 billion dinars in Q4 (i.e. by around 550 million euros), while capital spending in the same period amounted to 48.6 billion dinars. That means that the ratio of capital spending and public debt growth based on current financing in Q4 stood at 0.85, which is favorable, because it means that 85% of the new debt was spent on public investments. This represents the continuation of a positive trend, which began in Q3 (when the value of this ratio stood at 2.85), while in the previous quarters only one third of the new debt was used for investment and 2/3 for current spending.

In January 2011, Serbia concluded a contract on a credit with Societe Generale bank, for 400 million USD (300 million euros), with a repayment period of six years and interest rate equivalent to the sum of a six-month euro-swap, fixed fee of 1% and banking fee of 0.5%. With the six-month euro-swap calculated on the day of bid opening, the total cost of the credit is close to 3.88%. This loan was taken to finance the current fiscal deficit in 2011 and to early repay part of the government's debts. Favorable borrowing conditions were possible because of a guarantee issued by the World Bank. Considering the conditions under which Serbia borrowed in previous quarters and years in domestic and international financial and money markets, it is assessed that the conditions under which this loan contract was concluded are extremely favorable. Besides, using part of the credit to early repay some other debts (where interest rate is higher) will positively affect the sustainability of Serbia's public debt, while leading to a reduction in spending on interest rate payments. It will be advisable to further take similar steps, aimed at refinancing part of existing liabilities at higher interest rates, replacing them with new credits with more favorable conditions which can be obtained from international financial institutions or with their guarantees or from government creditors. Similarly, it would be efficient to use the Telekom Srbija privatization revenue for an early repayment of relatively expensive credits, with simultaneous government borrowing to finance infrastructure, under relatively more favorable terms.

Besides, in February 2011, the Ministry of Finance issued 200-million-euros worth of euro denominated bonds with a repayment period of 15 years and a coupon of 5.85%. The government sold only 97 million euros in the auction. Also, the government issued and sold in February 200 million euros worth of euro denominated bonds with a 53-week maturity and an interest rate of 4.48%. The mentioned borrowing conditions are seen as relatively favorable.

Credit deals with commercial banks, dinar Treasury-bill issues, the issues of dinar debt index-linked to the euro, as well as the issue of euro denominated bonds, represent sources of fiscal deficit financing in 2011 as well as sources of funds for the repayment of maturing liabilities to repay the principal of the government's existing debts. It is believed that the total borrowing needs to finance the fiscal deficit and repay existing government debt in 2011 will exceed two billion euros.

Serbia's public debt approaches the limit of 45% of GDP, set by fiscal rules

Fiscal rules set in the Law on the Budget System, set the upper limit of the public debt sustainability at 45% of GDP. Taking into consideration that Serbia's public debt at the end of 2010 already reached 41.5% of GDP[2] and that the planned fiscal deficit for 2011 is 4.1% of GDP, it is expected that Serbia's public debt will approach the limit of 45% of GDP at the end of 2011. The risk of public debt exceeding the limit could materialize in case that GDP growth rate this year falls short of the planned 3%. However, if there are no unexpected shocks, the likelihood of such a scenario is not big. However, if public sector wages and pensions significantly grow in 2011, public debt would certainly exceed the limit at the end of the year. In any case, even without undesired developments, it is necessary for the government to undertake prudential measures in public debt management, to make sure it remains sustainable in the coming period. Related to that, and as already mentioned, the government should consider using privatization revenues in 2011 and in following years to repay early part of the public debt. Also, any future borrowing should be exclusively limited to financing those infrastructure projects which are proved to be both economically justified and unambiguously profitable.

2 Although this does not include many categories of government liabilities (debts by local governments, non-allocated debt of SFRY, arrears for purchases of goods and services, etc).

7. Monetary Flows and Policy

The growth in real M2 decelerated in Q4 to 1.3% at the year-on-year level; this, however, was primarily due to the effect of the high base recorded late last year, as is further borne out by the growth of lending to the non-government sector, which has continued the upward trend of 6.9% at the year-on-year level seen in the preceding quarter. The negative contribution of savings and time deposits to M2 growth was augmented by the drop in the cash and deposits account, with foreign currency deposits still exerting a dominant influence on M2 growth. The share of non-performing loans in total loans saw no substantial changes, but one cause for concern is the growth in non-performing loans taken out by legal entities, the group with the largest single share in the total. At the end of the year banks increased lending to businesses and households by €763 mn, while the share of subsidized loans in all new lending fell to below 50%. The fourth quarter again saw negative cross-border loans, which, together with the repayment of foreign liabilities by businesses amounted to over €800 mn. The Savings Week has historically resulted in the expansion of foreign currency deposits by the public; this, together with fresh foreign borrowing by banks, now contributed to an increase in bank sources of financing for new lending amounting to over €1.4 bn. The National Bank of Serbia continued increasing its prime lending rate in Q4, which had no effect on the fall in repo stock in evidence since the beginning of the year. The sale of foreign currency in the interbank foreign exchange market, aimed at stabilizing the dinar exchange rate, did impact the drop in NBS net own reserves, but the increase in NDA due to the withdrawal of funds from repo operations and new borrowing by the government caused primary money to record a minimal drop of -0.4 of initial H.

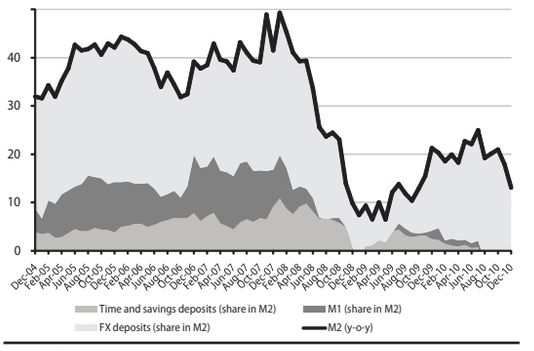
Monetary System: Money Supply Structure and Flows

Q4 saw a drop in the growth rate of year-on-year M2…

After recording double-digit growth over the preceding three quarters, real M2 slowed to 1.3% at the y-o-y level (Q3 saw real growth of 10.3% while Q2 saw real growth of 14.6%; Table T7-2). This drop in the growth rate at the end of the year was partly caused by greater M2 at end-of-year 2009, which drove the M2 growth rate down in Q4. Over the first three quarters of 2009, M2 initially declined (with growth rate standing at -3.2% in Q1), followed by a slight increase, which provided an additional boost to M2 growth rates over the first three quarters of 2010 due to the relatively low base used for comparison. This explanation is borne out by movements in lending to the non-government sector, which, after adjustment,[1] amounted to 6.9% in Q4, exhibiting no decrease in relation to the preceding quarter (6.7% in Q3). The increase in lending to the non-government sector can be broken down into the increase in lending to businesses, with y-o-y growth of 7.3% (5.9% in Q3), and the increase in lending to households, which saw y-o-y growth of 5.9%, a drop relative to the preceding quarter (8.5% in Q3).

…while lending to the non-government sector continued to rise

Graph T7-1. Serbia: Money and Its Components,[1)] 2004-2010



Source: Table P-12 in the Analytical Appendix
1) The share of money components has been calculated as their contribution to growth against the value of M2 versus the same period in the previous year, with the sum of the calculated share equivalent to the 12-month growth of total money (M2).

If M2 growth is disaggregated into individual elements (Graph T7-1), it will be seen that both savings and time deposits have continued contributing negatively to the growth of y-o-y M2.[2]

1 Based on our methodology applied for adjusting growth rates, we assume that at least 70% of these loans featured a currency clause.

2 For the first time since 2002, when comparable data first became available, Q3 saw a negative contribution by dinar savings and time deposits to M2 growth; this amounted to -2.38%.

The effects of measures brought about by the new Bankruptcy Law[3] carried through into Q4; due to these, savings and time deposits accounted for a negative contribution of -1.79% to total nominal M2 growth, which stood at 13.19% in Q4. As for the other elements, foreign currency deposits dominated overall growth, with 15.3%, which was nonetheless lower relative to Q3 (21.41%). This was the consequence of the lower growth of foreign currency savings during Savings Week in relation to Q4 2009. With a contribution of -0.42%, cash and sight deposits making up M1 repeated their negative impact on M2 growth first seen in early 2009, when the effects of the financial crisis were at their most intense.

Money supply grew in Q4…

…fuelled by increasing NDA…

…while NFA again recorded a negative contribution to overall growth

Money supply grew by 4.6% of initial M2 (cumulative growth in Q4 less growth in Q3, Table T7-2). The Q4 increase in the money supply was the result of an increase in net domestic assets (NDA) of 8.2% of initial M2 (1.9% in Q3), partly offset by negative growth of net foreign assets (NFA) of -3.6% of initial M2. The growth of NDA was dominated by lending to the non-government sector, with 7% of initial M2, while growth was also recorded by net loans to the government sector of 1.8% of initial M2 (relative to growth of 0.2% in Q3). On the other hand, negative NFA growth was to a lesser extent the consequence of negative exchange differences of 0.6% of initial M2, and primarily of NBS interventions in the interbank foreign currency market, which caused negative growth in foreign-currency denominated NDA of 3% of initial M2.

Table T7-2. Serbia: Money and Component Aggregates, 2008-2010

	2008				2009				2010			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
						y-o-y, in %						
M2[1)]	41.0	33.7	24.5	9.8	6.5	12.1	10.4	21.3	19.9	22.1	20.1	13.1
Credit to the non-government sector[2)]	36.4	30.3	29.4	33.7	33.8	27.7	22.3	16.1	14.4	25.0	27.1	27.2
Credit to the non-government sector[2)], adjusted[3)]	35.3	30.7	32.2	23.6	20.9	13.9	7.7	10.2	10.4	16.2	16.8	19.9
Households	43.3	35.5	19.5	15.7	7.4	1.5	4.4	3.7	7.9	16.1	18.7	18.9
Enterprises	31.0	28.1	39.5	28.1	28.8	20.9	9.3	13.6	11.6	16.3	15.8	20.4
						real y-o-y, in %						
M2[1)]	26.2	19.2	12.2	2.9	-3.2	2.1	0.9	9.8	11.5	14.6	10.3	1.3
Credit to the non-government sector[2)]	22.0	16.2	16.6	25.2	21.7	16.4	11.8	5.2	6.3	17.3	16.7	13.9
Credit to the non-government sector[2)], adjusted[3)]	21.1	16.4	19.0	15.7	9.4	2.7	-2.8	-0.5	2.6	8.8	6.7	6.9
Households	28.2	20.7	7.6	8.3	-2.8	-8.6	-5.8	-6.4	0.3	8.7	8.5	5.9
Enterprises	17.3	14.1	25.6	19.9	16.5	9.0	-1.3	2.5	3.7	8.9	5.9	7.3
						cumulative, in % of opening M2[4)]						
M2[1)]	5.5	4.8	9.0	9.8	2.3	7.0	9.5	21.3	1.1	7.7	8.5	13.1
M2 dinar[1)]	-2.5	-2.7	-1.1	0.5	-1.9	0.6	2.2	4.2	-2.7	-1.6	-2.8	-2.2
Foreign deposits (households and enterprises)[5)]	5.6	7.7	12.5	2.3	-0.1	2.9	4.1	11.2	1.3	3.3	4.0	8.1
Valuation adjustments[6)]	2.4	-0.2	-2.3	7.0	4.4	3.4	3.2	5.9	2.6	5.9	7.3	7.2
NFA, dinar increase	3.6	-3.2	-3.0	-8.8	2.2	0.4	3.6	8.9	-0.9	-0.6	-1.7	-5.3
NFA, fx increase	1.2	-3.0	-1.0	-14.5	-1.1	-2.1	1.1	4.5	-2.7	-4.4	-6.1	-9.1
Valuation adjustments[6)]	2.5	-0.2	-2.0	5.7	3.3	2.5	2.5	4.4	1.8	3.8	4.4	3.8
NDA	1.9	8.0	12.0	18.7	0.2	6.6	6.0	12.4	2.1	8.3	10.2	18.4
o/w: credit to the non-government sector[2)], adjusted[3)]	4.8	12.8	22.2	22.0	3.6	5.1	8.3	11.6	3.9	11.1	14.6	21.6
o/w: net credit to government[7)]	-0.6	1.0	1.9	7.0	-2.0	4.1	6.1	5.2	0.8	4.1	4.3	6.1
o/w: NBS and com. banks capital and reserves	-3.5	-4.6	-6.3	-16.4	0.7	-5.5	-9.9	-13.7	-0.2	-11.1	-6.3	-7.7
						cumulative, in % of GDP[8)]						
Net credit to government[7)]	-0.3	0.3	0.7	2.2	-0.9	1.4	2.1	1.7	0.3	1.6	1.6	2.3
o/w: dinar credits	-0.8	-1.3	-1.0	0.8	-0.5	1.7	2.4	1.7	0.6	1.3	1.8	1.9
Credit to the non-government sector[2)], adjusted[3)]	2.7	4.4	6.6	10.7	3.4	3.5	4.3	6.4	2.9	7.2	9.2	11.5

Source: Table P-12 in Analytical Appendix

1) Money supply: components – see *QM* Analytical and Notation Conventions.

2) Credits to the non-government sector – credits to the corporate sector (including local governments) and households.

3) Flows have been adjusted for the exchange rate change. Adjustments have been made under the assumption that 70% of credits to the non-state sector have been euro-indexed.

4) The starting M2 marks the M2 stock at the start of the year, i.e. at the end of the previous year.

5) The contribution of foreign currency deposits to M2 growth measures only the contribution of an increase in foreign currency denominated foreign currency deposits, so that their revaluation produces exchange rate differentials.

6) Exchange rate differentials refer to the difference between the contribution of NFA to M2 growth measured in dinars and the contribution of NFA to M2 growth measured in foreign currencies.

7) Credits to the government: net – the difference between credits (dinars and foreign currency) and deposits (dinar and foreign currency) of the state. "Government" does not include local governments, which are treated as the non-government sector.

8) GDP used in calculations is annually centered.

The share of non-performing loans saw slight changes…

…but their values remained far in excess of pre-crisis levels

The share of non-performing loans in total lending saw no significant changes in Q4 in relation to late September. According to Credit Bureau reports, the share of non-performing loans (NPLs) in the total supply of loans stood at 11.9% (as opposed to 11.88% in Q3, Table T7-3), and remained dominated by legal entities, whose share of non-performing loans amounted to 14.02% (in relation to 13.83% in Q3). The influence of growing overdue loans with legal entities on the increase in total NPLs was partly neutralized by the drop in NPLs with individuals, which fell

3 The Bankruptcy Law came into effect on 24 January 2010.

to 6.71% (from 7.04% in Q3). This drop in the share seen in lending to individuals had a limited impact owing to the relatively low share of loans to individuals in overall lending. If we were to compare the current share with figures for 2008, the last time before the non-performing loan issue became apparent, we will be able to note that the share of NPLs has been hovering around the 11.9% mark for three consecutive quarters, with this level being over twice as high as that seen in the pre-crisis period.

Table T7-3. Serbia: Share of Non-Performing Loans in Total Lending, 2008-2010

	2008	2009				2010			
	Dec.	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
					balance at the end of period				
Corporate	6.86	11.05	14.86	13.24	12.14	11.62	14.18	13.83	14.02
Entrepreneurs	3.66	5.28	8.93	10.21	11.21	12.19	13.73	15.7	15.8
Natural persons	3.78	5.36	6.19	6.63	6.69	6.37	6.79	7.04	6.71
Total	**5.79**	**9.1**	**12.1**	**11.2**	**10.8**	**10.14**	**11.99**	**11.88**	**11.9**

Source: Credit Bureau of the Association of Serbian Banks

Table T7-4. Serbia: Monetary Survey, 2008-2010

	2008				2009				2010			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
						in millions of dinars, end of period						
STOCK												
NFA	596,215	534,403	536,102	483,707	504,072	486,784	517,908	570,534	559,408	563,269	549,806	507,096
o/w: NBS gross reserves	788,296	720,967	745,070	724,755	772,902	832,817	888,389	1,022,861	1,049,068	1,103,542	1,056,399	1,063,078
o/w: commercial bank foreign liabilities	-264,865	-251,182	-279,131	-349,703	-345,733	-351,420	-419,017	-500,336	-540,076	-540,431	-544,477	-609,859
NDA	357,307	412,802	448,498	508,826	511,535	575,119	569,336	633,447	658,351	732,914	756,197	854,430
Net credit to government[1]	-120,644	-103,539	-94,156	-53,042	-76,033	-14,887	4,838	-4,340	3,916	42,404	43,258	66,656
Net dinar credit	-53,126	-67,826	-60,934	-14,199	-27,201	31,692	52,467	33,822	50,763	71,864	88,847	91,071
Net fx credit	-67,518	-35,713	-33,222	-38,843	-48,832	-46,579	-47,629	-38,162	-46,847	-29,460	-45,589	-24,415
Credit to the non-government sector[2]	908,598	953,977	1,018,307	1,126,111	1,215,843	1,218,702	1,245,735	1,306,224	1,389,783	1,523,040	1,583,687	1,660,870
Other items, net	-430,647	-437,636	-475,653	-564,243	-628,275	-628,696	-681,237	-668,437	-735,348	-832,530	-870,748	-873,096
M2[3]	953,522	947,205	985,134	992,533	1,015,607	1,061,903	1,087,244	1,203,981	1,217,759	1,296,183	1,306,003	1,361,526
M2 dinar[3]	367,648	365,834	380,015	395,088	378,094	401,120	416,996	436,784	403,722	417,948	402,995	410,172
Fx deposits (households and economy)	585,874	581,371	605,119	597,445	637,513	660,783	670,248	767,197	814,037	878,235	903,008	951,354
STRUCTURAL INDICATORS												
Currency outside banks/Dinar deposits (households and economy), in %	23.7	23.5	23.2	29.5	26.0	25.3	24.8	28.0	27.0	26.5	28.7	28.8
Fx deposits (households and economy) / M2 (%)	61.4	61.4	61.4	60.2	62.8	62.2	61.6	63.7	66.8	67.8	69.1	69.9
Velocity (GDP[4] / M2)	2.6	2.7	2.7	2.7	2.6	2.5	2.6	2.4	2.4	2.3	2.3	2.3
M2 / GDP[4]	0.39	0.37	0.37	0.38	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Credits to the non-government sector / GDP[4]	0.37	0.37	0.38	0.43	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5
Non-perofrming loans[5] (in % of total loans)	4.4	5.3	6.0	5.8	9.1	12.1	11.2	10.8	13.8	12.0	11.9	14.9
Money multiplier (dinar M2/H)	2.6	2.0	2.3	1.2	1.4	1.6	1.8	1.7	1.9	2.2	2.2	2.2

Source: Table P-13 in the Analytical Appendix
1) See footnote 7) in Table T7-2.
2) See footnote 2) in Table T7-2.
3) Money Supply: components – see *QM* Analytical and Notation Conventions.
4) See footnote 8) in Table T7-2.
5) For more details, see: J. Dimitrijević, "Non-performing loans in Serbia – What is the right measure?", *QM6*.

Banking Sector: Lending and Sources of Financing

Lending to businesses and households recovered in Q4…

Banks increased lending to both businesses and households in relation to the preceding quarter; in Q4 this amounted to €763 mn in new loans (Q3 had seen lending amounting to €405 mn, Tables T7-5 and T7-6). As of December, commercial banks had made some €2.4 bn in new loans available to businesses and households, more than doubling the figure seen in 2009. At €614 mn in Q4, lending to the commercial sector saw its highest quarterly increase since the crisis broke out, while, with €153 mn, households continued the pace of borrowing seen in the previous quarter (€159 mn in Q3). Subsidized loans made up 46% of total credits made available in Q4, a drop in relation to the preceding quarter, when subsidized loans had made up in excess of 90% of total lending. In Q4 the government increased its borrowing from commercial banks by €410 mn to meet budget requirements. Businesses continued repaying their liabilities with foreign creditors in Q4, which led to negative growth of cross-border loans to the tune of €259 mn. When this figure is added to the total, businesses are seen to have repaid €808 mn in foreign debt in 2010.

…with lending to the corporate sector seeing the highest growth…

…while households continued borrowing cautiously

Table T7-5. Serbia: Banking Sector Activity – Sources and Structure of Lending, Adjusted[1] Flows, 2008-2010

	2008				2009				2010			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
	in millions of euros, cumulative from the beginning of the year											
Funding(-, increase in liabilities)	258	-717	-2,140	-833	958	61	-1,171	-2,790	7	-117	-68	-1,495
Domestic deposits	-162	-464	-1,134	-95	235	-336	-691	-1,633	131	-233	-236	-836
Households deposits	-192	-518	-842	84	-40	-270	-551	-1,314	-137	-323	-500	-1,020
dinar deposits	-18	-19	-28	-63	46	-2	-30	-89	30	21	25	12
fx deposits	-174	-499	-813	147	-87	-268	-521	-1,225	-167	-343	-525	-1,032
Enterprise deposits	29	54	-292	-180	276	-67	-140	-319	268	89	264	184
dinar deposits	365	394	261	198	171	5	-174	-284	213	84	232	151
fx deposits	-336	-340	-554	-378	105	-72	34	-35	55	5	32	33
Foreign liabilities	564	601	138	-165	299	186	-558	-1,271	-196	40	90	-563
Capital and reserves	-144	-855	-1,144	-572	424	212	78	114	72	77	78	-96
Gross foreign reserves(-,decline in assets)	-333	-386	-316	-18	-407	-449	-5	311	53	-120	197	430
Credits and Investment[1]	697	1,175	2,888	700	156	1,057	1,980	2,844	397	1,279	1,281	2,285
Credit to the non-government sector, total	614	1,402	2,595	2,022	226	381	696	1,183	411	1,264	1,669	2,434
Enterprises	406	915	2,099	1,574	331	465	700	1,097	319	897	1,142	1,756
Households	207	487	496	448	-104	-84	-4	86	91	368	527	678
Placements with NBS (Repo transactions and treasury bills)	116	-126	361	-1,419	40	256	694	625	-125	-445	-839	-1,010
Government, net[2]	-33	-101	-68	98	-110	421	590	1,036	112	460	451	861
MEMORANDUM ITEMS												
Required reserves and deposits	-369	-275	-97	-225	-191	-225	-185	36	54	-182	-188	-115
Other net claims on NBS[3]	6	246	28	422	-385	-380	-481	-158	-287	-272	-195	-229
o/w: Excess reserves	0	207	-13	443	-409	-394	-501	-177	-279	-252	-173	-220
Other items[4]	-202	-192	-490	-330	-166	-158	-254	-99	-147	-331	-692	-565
Effective required reserves (in %)[5]	30	29	28	30	30	28	26	25	26	24	24	23

Source: Table P-14 in the Analytical Appendix

1) The calculation of the increase in lending is based on the assumption that 70% of the total lending is euro-indexed. The increase for the original dinar values of deposits was calculated based on the average exchange rate for the period. For foreign currency deposits - as the difference in balance, calculated at the end-of-period exchange rate. Capital and reserves were calculated at the end-of-period exchange rate of the euro and exclude exchange rate differentials that would have emerged from the new calculations of all other items.

2) NBS securities include treasury bills and NBS bills that sell at the repo rate and at the rate set by the market in auctions of maturities exceeding 14 days.

3) Net credits to the state: credits granted to the state less state deposits held with commercial banks. The state includes all levels of government: the Republic and local governments.

4) Other NBS claims (net): the balance between commercial bank claims against the NBS based on cash and disposable reserves, and their liabilities towards the NBS.

5) Commercial banks' balance sheet items: other assets, deposits of legal entities undergoing receivership, interbank relations (net) and other liabilities excluding capital and reserves.

6) Effective reserve requirements represent the share of mandatory reserves and deposits in the total of deposits (households, corporate) and banks' borrowing abroad. The base to calculate the reserve requirements excludes subordinated debt, due to unavailability.

Table T7-6. Serbia: Borrowing by Businesses and Households – Impact on Total Demand, 2008-2010

	2008				2009				2010			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
	quarterly growth of stock, in millions of euros											
Total loans to enterprises and households from domestic banking sector and direct foreign borrowing by enterprises	1,333	1,624	2,174	468	82	-10	71	329	311	539	271	506
Loans to enterprises and households from domestic banking sector	614	789	1,157	152	226	158	315	488	411	854	405	765
Loans to enterprises	406	509	1,162	135	331	138	235	398	319	577	246	614
Loans to households	207	280	-6	17	-104	20	80	90	91	276	159	151
Direct foreign liabilities of enterprises	719	835	1,017	316	-144	-167	-244	-159	-100	-315	-134	-259
Direct foreign liabilities of enterprises and banks' credits to enterprises from domestic banking sector	1,125	1,344	2,179	451	187	114	158	239	219	263	112	355
	quarterly growth of stock, in % of quarterly GDP											
Total loans to enterprises and households from domestic banking sector and direct foreign borrowing by enterprises	17.4	18.3	23.8	5.5	1.2	-0.1	1.0	3.9	3.7	6.8	3.6	6.5
Loans to enterprises and households from domestic banking sector	8.0	8.9	12.7	1.8	3.3	2.3	4.6	5.8	4.9	10.7	5.3	9.9
Loans to enterprises	5.3	5.7	12.7	1.6	4.8	2.0	3.4	4.7	3.8	7.2	3.2	7.9
Loans to households	2.7	3.1	-0.1	0.2	-1.5	0.3	1.2	1.1	1.1	3.5	2.1	1.9
Direct foreign liabilities of enterprises	9.4	9.4	11.1	3.7	-2.1	-2.4	-3.6	-1.9	-1.2	-3.9	-1.8	-3.3
Direct foreign liabilities of enterprises and banks' credits to enterprises from domestic banking sector	14.7	15.1	23.9	5.3	2.7	1.7	2.3	2.8	2.6	3.3	1.5	4.6

Source: FREN

1) See Footnote 1 in Table T7-5.

The repo stock continued falling in Q4…

Owing to the upper limit of the target band being breached, the NBS continued increasing its prime lending rate in Q4. Nonetheless, even this increased rate failed to make any major impact on the fall of the repo stock seen since December 2009. Banks have been withdrawing funds from repo investments for an entire year now, with repo levels shrinking by €171 mn in Q4 (following a drop of €394 mn seen in Q3, Table T7-5). As of Q4, banks had withdrawn more than one billion euros from repo investments in 2010, leaving the repo stock at the historic low of €492 mn. Excess liquidity made available to banks by exiting repos is being used for purchasing Ministry of Finance Treasury bills. The fourth quarter alone saw sales of €769 mn in Treasury

…as it made more financial sense to invest liquid assets into Treasury bills

bills[4] - some 25% more than the average sum raised in any of the previous quarters (about €2.5 bn since the beginning of the year). The trend of switching from repo investments to Treasury bills is the logical consequence of the greater yield offered by the government on Treasury bills in relation to movements in the prime rate. If the realization rate at auctions is increased for bills with longer maturities, and if secondary trading is promoted, Treasury bills could, over the medium term, become an instrument for controlling the money supply through operations in the open market.

Q4 saw an increase in the sources of financing for new bank lending…

The final quarter of 2010 again saw growth in the sources of financing for new bank lending. The total increase in these sources, amounting to €1.427 bn (as opposed to a drop of €49 mn in Q3, Table T7-5), can be attributed to growth both from domestic sources and based on banks' borrowing abroad. As is now traditional, households availed themselves of favorable terms offered during Savings Week to deposit their liquid assets, thereby increasing banks' sources of financing by €520 mn. Although NBS analyses carried out so far favour dinar over foreign-currency savings, nearly all deposit growth recorded in Q4 can be attributed exclusively to foreign-currency-denominated deposits. As for domestic deposits, corporate deposits also rose, to the tune of €80 mn (as opposed to a drop of €175 mn in Q3). In addition to domestic deposit growth, banks again increased their borrowing abroad, this time by €653 mn, having repaid their liabilities in Q2 and Q3. After slight changes were recorded by the capital and reserves account, Q4 again recorded an increase in capital by €174 mn.

…based on growing foreign-currency-denominated household deposits…

…and new borrowing abroad by banks

The share of loans to businesses fell to 68.7% in Q4 (the figure for Q3 was 69.2%, table T7-7). This change was triggered by the dinar strengthening against the euro in December, due to which the fall in cross-border loans exceeded the growth of lending from domestic sources, thereby bringing the total share down.

Table T7-7. Serbia: Ratio of Outstanding Credit Stock to Businesses and Households to GDP in %, 2008-2010

	2008				2009				2010			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
Total loans to enterprises and households from domestic banking sector and direct foreign borrowing by enterprises	65.3	66.3	70.2	80.6	84.9	81.9	80.1	81.7	83.4	86.6	86.2	85.8
Loans to enterprises and households from domestic banking sector	36.7	36.9	38.5	42.0	44.5	43.8	43.9	45.1	46.8	49.9	51.7	52.9
Loans to enterprises	23.0	23.4	25.7	27.6	29.8	29.5	29.7	30.5	31.7	33.6	34.6	35.8
Loans to households	13.7	13.5	12.8	14.5	14.7	14.3	14.2	14.7	15.1	16.3	17.0	17.1
Direct foreign liabilities of enterprises	28.7	29.4	31.7	38.6	40.5	38.1	36.2	36.6	36.6	36.6	34.5	32.9
Direct foreign liabilities of enterprises and banks' credits to enterprises from domestic banking sector	51.7	52.8	57.4	66.2	70.2	67.6	65.8	67.0	68.3	70.3	69.2	68.7

Source: FREN

The Central Bank: Balances and Monetary Policy

Reserve money dipped slightly in Q4…

The level of *reserve money* saw a slight drop in Q4, by 0.4% of initial H (after a 0.3% dip in Q3, Table T7-8). The slightly lower volume of interventions in the interbank foreign currency market caused the reduction in reserve money, caused by a decline in NBS net own assets of 3.5% of initial H, to be lower in relation to the preceding quarters (with Q3 seeing a fall of 26.3% and Q2 a drop of 15.9%). On the other hand, net domestic assets (NDA) rose by 3% of initial H in Q4, which neutralized the withdrawal of reserve money through foreign currency channels. Owing to greater inflationary pressures in Q2 2010, in addition to increasing its prime lending rate, the NBS adopted a new decision governing banks' reserve requirements in January. The changes made to the regulatory framework by this decision should reduce the effect of excess liquidity that would be created under the March 2010 reserve requirement decision, which would in turn make it more difficult to rein in inflation within the target band. The changes entail abolishing the reserve requirement for dinar sources of financing with maturity in excess of two years, while a 5% rate was retained for time deposits of under two years. Nonetheless, there are other, more substantial changes that should make monetary policy more restrictive in the run-up to April

…due to divergent movements in NDA and NBS net own assets

4 The section "Fiscal Flows and Policy" examines the balance of the state's net liabilities for issued treasury bills calculating the nominal value of sold treasury bills, while the section "Monetary Flows and Policy" monitors the market value on the issue's selling date.

2011, namely an increase in the foreign currency reserve requirement from 25% to 30% for sources of financing maturing in under two years. The changes are rounded off by a reintroduction of a maturity-dependent dinar reserve requirement – 15% for sources maturing in under two years, and 10% for funds maturing in over two years.

Table T7-8. Serbia: Currency Purchases and Sterilization, 2008-2010[1)]

	2008				2009				2010			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
FLOW	in millions of dinars, cumulative from the beginning of the year											
NBS own resreves[2)]	4,695	19,115	56,373	27,211	-5,590	-12,043	29,771	64,094	-37,703	-76,916	-141,888	-150,330
NBS own reserves (in euros)	*58*	*237*	*706*	*312*	*-59*	-128	*319*	*668*	*-378*	*-743*	*-1,346*	*-1,415*
NDA	-39,752	-13,347	-66,941	122,232	43,117	-54,266	-118,637	-126,108	-712	11,197	75,454	82,943
Government, dinar credits	267	618	0	81	-308	-310	-310	398	5	-9,946	-9,942	-9,975
Government, dinar deposits	-28,386	-41,088	-36,706	8,638	-17,155	-8,376	3,021	-40,135	6,554	11,738	19,401	7,687
o/w: municipalities	*-8,329*	*-7,405*	*-5,073*	*-909*	*-4,415*	-2,026	*2,199*	*3,130*	*1,450*	*1,322*	*2,270*	*-1,280*
Repo transactions[3)]	-11,243	8,014	-28,597	127,517	-8,455	-29,024	-69,849	-61,506	12,105	34,979	87,176	104,772
Other items , net[4)]	-390	19,109	-1,638	-14,004	-17,199	-16,556	-51,499	-24,865	-19,376	-25,574	-21,181	-19,541
H	-35,057	5,768	-10,568	149,443	-48,707	-66,309	-88,866	-62,014	-38,415	-65,719	-66,434	-67,387
o/w: currency in circulation	-6,613	-7,454	-5,388	13,007	-11,856	-9,009	-7,193	5,566	-9,663	-7,841	-5,771	-3,719
o/w: excess liquidity	-39,840	-22,293	-39,483	1,602	41,330	-41578	-51043	-14227	-33665	-30871	-21232	-16873
INCREASE	cumulative, in % of opening H[5)]											
NBS own resreves[2)]	3.5	14.3	42.1	20.3	-1.8	-3.9	9.6	20.8	-15.3	-31.2	-57.5	-61.0
NDA	-29.7	-10.0	-50.0	91.3	-14.0	-17.6	-38.4	-40.9	-0.3	4.5	30.6	33.6
Government, dinar deposits	-21.2	-30.7	-27.4	6.4	-5.6	-2.7	1.0	-13.0	2.7	4.8	7.9	3.1
Repo transactions[3)]	-8.4	6.0	-21.4	95.2	-2.7	-9.4	-22.6	-19.9	4.9	14.2	35.4	42.5
Other items , net[4)]	-0.3	14.3	-1.2	-10.5	-5.6	-5.4	-16.7	-8.1	-7.9	-10.4	-8.6	-7.9
H	-26.2	4.3	-7.9	111.6	-15.8	-21.5	-28.8	-20.1	-15.6	-26.7	-26.9	-27.3
o/w: currency in circulation	-4.9	-5.6	-4.0	9.7	-3.8	-2.9	-2.3	1.8	-3.9	-3.2	-2.3	-1.5
o/w: excess liquidity	-29.7	-16.6	-29.5	1.2	-13.4	-13.5	-16.5	-16.5	-13.7	-12.5	-8.6	-6.8

Source: Table P-14 in the Analytical Appendix

1) "State" includes all levels of Government: the Republic and local government.

2) For more details see section 8 "Monetary Flows and Policy", Box 4, *QM5*.

3) This category includes NBS T-bills and repo operations.

4) Other net domestic assets include: domestic credits (net claims against banks, excluding NBS T-bills and repo transactions, net claims against companies) together with other assets (capital and reserves; and items in the balance: other assets and other liabilities), adjusted for exchange rate differentials.

5) "Initial H" marks the stock of the reserve money (H) at the start of the stated year, i.e. the end of the previous year.

A drop in net own reserves was seen in Q4…

…due to the sale of foreign currency in the interbank market

The NBS kept increasing its prime lending rate…

…in an attempt to return inflation to within the target band in 2011

The pace of interventions by the National Bank of Serbia (NBS) in the interbank foreign currency market in Q4 slackened relative to the preceding three quarters. Aiming to eliminate excessive exchange rate fluctuations, the central bank sold €321 mn (while €595 mn was sold in Q3, Table T7-10), which, together with assets sold since the beginning of the year, totalled some €2.3 bn. These interventions drove NBS net own reserves down by €69 mn in Q4 (the drop in net own reserves in Q3 amounted to €603 mn, Table T7-9), but any major reduction was halted when government foreign currency assets were converted into dinars after a €250 mn loan was taken out late in the year. Due to strong inflationary pressure generated by rising prices of agricultural produce, the NBS kept upping its prime lending rate, beginning in October with an increase of 0.5 percentage points, and following up in November and December with hikes of one percentage point each. The last correction to the prime rate of 50 basis points was made in mid-January, bringing the prime rate to its current level of 12%.

Table T7-9. The Structure of Serbia's Foreign Currency Reserves – Stock and Flow, 2008-2010

	2008	2009				2010			
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
					stock, in millions of euros				
NFA of Serbia	5,451	5,305	5,211	5,569	5,940	5,609	5,438	5,211	4,771
Commercial banks, net	-2,562	-2,670	-2,824	-3,125	-3,519	-3,667	-3,633	-3,258	-3,628
Gross foreign reserves	1,385	978	936	1,380	1,694	1,750	1,589	1,906	2,110
Foreign liabilities	-3,947	-3,648	-3,761	-4,505	-5,213	-5,417	-5,221	-5,164	-5,738
NBS, net	8,013	7,975	8,036	8,694	9,459	9,275	9,070	8,469	8,400
Gross foreign reserves	8,180	8,155	8,913	9,551	10,657	10,522	10,661	10,019	10,003
Foreign liabilities	-167	-180	-877	-857	-1,198	-1,246	-1,591	-1,551	-1,603
IMF	-9	-14	-769	-756	-1,113	-1,160	-1,499	-1,469	-1,521
Other liabilities	-159	-166	-108	-101	-85	-87	-92	-82	-82
NBS, NET RESERVES-STRUCTURE									
1. NBS, net	8,013	7,975	8,036	8,694	9,459	9,275	9,070	8,469	8,400
1.1 Commercial banks deposits	-2,191	-2,136	-2,281	-2,471	-2,916	-3,031	-3,309	-3,293	-3,289
1.2 Government deposits	-459	-536	-521	-542	-513	-593	-474	-491	-495
1.3 **NBS own reserves** (1.3 = 1 - 1.1 - 1.2)	5,362	5,303	5,234	5,681	6,030	5,652	5,287	4,684	4,616
					in millions of euros, cumulative from the beginning of the year				
NFA of Serbia	-1,665	-146	-239	118	489	-332	-503	-729	-1,169
Commercial banks, net	-183	-108	-263	-564	-957	-148	-114	261	-110
Gross foreign reserves	-18	-407	-449	-5	309	56	-105	212	416
Foreign liabilities	-165	299	186	-558	-1,266	-204	-8	49	-526
NBS, net	-1,482	-38	23	682	1,446	-183	-389	-990	-1,059
Gross foreign reserves	-1,482	-25	733	1,371	2,477	-135	5	-637	-654
Foreign liabilities	1	-13	-710	-690	-1,031	-49	-393	-353	-405
IMF	-12	-5	-761	-747	-1,104	-47	-386	-356	-408
Other liabilities	13	-7	51	58	74	-2	-7	3	3
NBS, NET RESERVES-STRUCTURE						0			
1. NBS, net	-1,482	-38	23	682	1,446	-183	-389	-990	-1,059
1.1 Commercial banks deposits	1,219	55	-90	-280	-725	-115	-393	-377	-374
1.2 Government deposits	575	-76	-61	-82	-54	-80	39	22	18
1.3 **NBS own reserves** (1.3 = 1 - 1.1 - 1.2)	312	-59	-128	319	668	-378	-743	-1,346	-1,415

Source: NBS.
Foreign currency reserves of the NBS are treated differently in the monetary survey and in the balance sheet of the NBS. Under the monetary survey, this category includes IMF loans and other external liabilities, while the NBS balance sheet, beside the listed items, also includes foreign currency deposits of commercial banks (reserve requirements and other foreign currency deposits).

Table T7-10. Net Monthly Foreign Currency Trade NBS – Banks and Exchange Offices, 2006-2010

	Interbank fx market (NBS-commercial banks)	Exchange offices	Total	
(-, net sale of foreign currency by NBS)				
		in millions of euros		
January-December 2006	350	367.8	718	
January-December 2007	-704.8	1161.2	456	
January-December 2008	-1304	507	-797	
January-December 2009	-656.9	128.2	-529	
January 2010	-245.5	0	-246	
February 2010	-196	0	-196	-631.5 in Q1 2010
March 2010	-190	0	-190	
April 2010	-5	0	-5	
May 2010	-359	0	-359	-785.0 in Q2 2010
June 2010	-421	0	-421	
July 2010	-231	0	-231	
August 2010	-182.5	0	-183	-595.2 u Q3 2010.
September 2010	-181.7	0	-182	
October 2010	-173	0	-173	
November 2010	-185	0	-185	-321.5 u Q4 2010.
December 2010	36.5	0	37	

Source: NBS

8. Financial Markets

The fourth quarter saw an upswing in activity on the Belgrade Stock Exchange, both in the stock market and in the frozen foreign currency deposit (FFCD) bond market. At the same time, an increase was recorded in the value of Belgrade Stock Exchange indices, accompanied by a rise in the yields on FFCD bonds of all maturities, indicating greater interest on the part of investors in riskier assets. On the other hand, the yield curve remained nearly flat, signifying investor uncertainty about future economic growth and movements in the inflation rate. Yields on Republic of Serbia Treasury bills continued trending upwards in Q4, as did real repo yields, driven primarily by additional increases in the National Bank of Serbia's prime lending rate.

Activity in the Belgrade Stock Exchange increased in Q4, both measured by the value of turnover and the number of transactions realized

The dinar value of turnover on the Belgrade Stock Exchange was up in Q4 on the preceding quarter, and, at some 7.6 bn dinars, was the highest seen in the last two years (Graph T8-1). Turnover value nearly tripled in relation to Q3, with growth seen both by the continuous (211%) and the discontinuous market segment (about 135%).

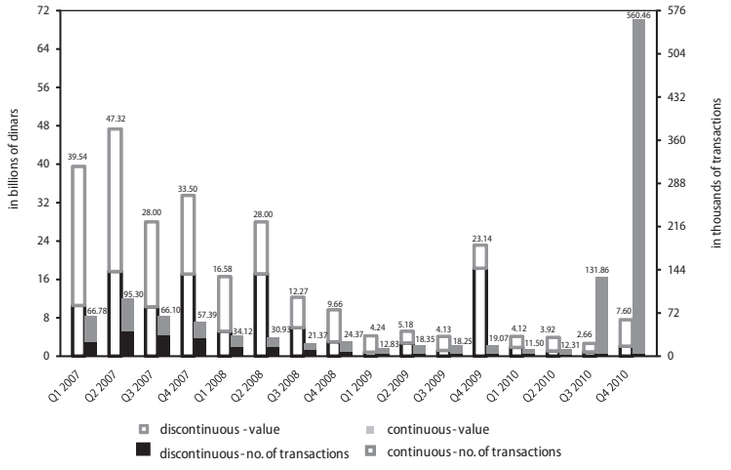
The number of transactions realized also rose in the last quarter of 2010 (Graph T8-1). Some 560.5 thousand transactions were realized: a fourfold increase on Q3 and the greatest number of transactions realized on the Belgrade Stock Exchange since 2005. In this case the continuous market segment made by far the greatest contribution to the increase in activity, with about 333% more transactions carried out, while the discontinuous segment saw a rise in the number of transactions of about 21% relative to Q3.

A look at movements in activity on the stock market at the annual level also reveals growth, if transactions linked with the takeover of Apatinska Pivara are excluded from Q4 2009 data. When viewed in this manner, the value of turnover in Q4 2010 rose by about 22% relative to Q4 2009, while the number of transactions realized grew nearly thirtyfold.

The average value of a transaction realized in Q4 amounted to some 13,500 dinars, a fall of 33% in relation to Q3. The major increase in the number of transactions, coupled with the additional drop in the value of the average transaction, indicates that small investors drove the trend of increasing activity. As greatest growth was seen in the prime market, and was not accompanied by a greater share of foreign investors in turnover, these small investors were in all likelihood Serbian nationals trading in government-distributed shares of the oil company NIS a.d.

Belgrade Stock Exchange indices rose slightly in Q4 with more robust growth following in early 2011

Graph T8-1. Volume and Structure of Share Trading, 2006-2010



Source: *QM* based on www.belex.co.rs

Belgrade Stock Exchange indices slid in 2010

Belgrade Stock Exchange indices rose slightly in Q4 (Graph T8-2). The Belex15 index[1] rose by 5.3%, while the BELEXline[2] and SRX[3] EUR saw growth of 4.7% and 6.6%, respectively. This mild growth picked up pace in early 2011. In January alone BELEX15, BELEXline and SRX EUR rose by 15.2%, 9.7% and 15.9%, respectively.

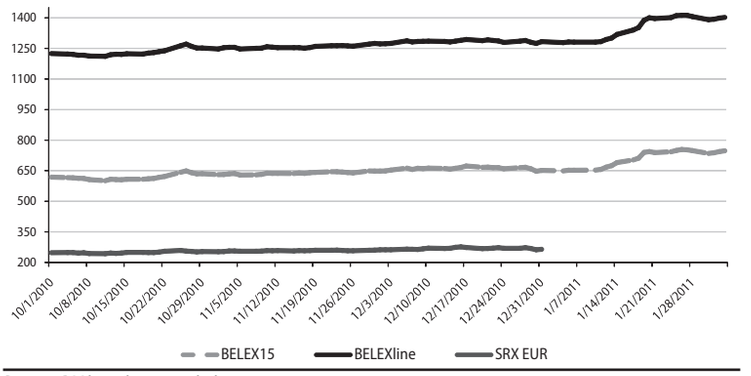
At the annual level, all indices continued trending downward. In relation to

1 Index of the most liquid shares listed on the Belgrade Stock Exchange.
2 Overall stock index of the Belgrade Stock Exchange.
3 Index of the 8 most liquid shares on the Belgrade Stock Exchange as calculated by the Vienna Stock Exchange (Wiener Börse).

year-end 2009, BELEX15 lost about 1.8% of its value, BELEXline dropped by 2.2%, while SRX EUR slid nearly 8%.

Real yields on repo operations measured relative to inflation rose in Q4 owing to NBS measures

Graph T8-2. BELEXfm, BELEX15 and SRX EUR Indices, Q4 2010 – Q1 2011



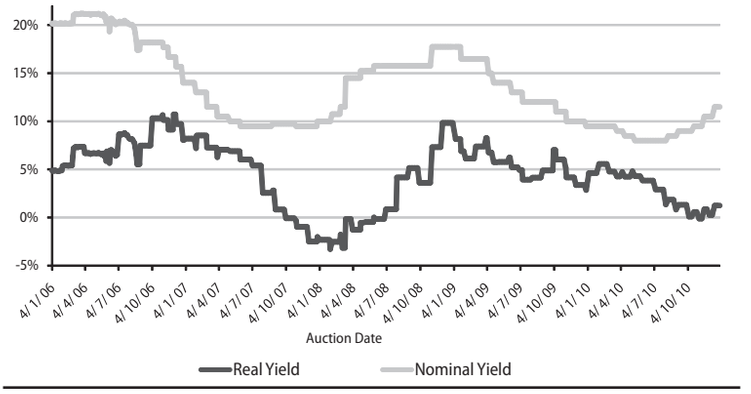
Source: *QM* based on www.belex.co.rs

Real yields on National Bank of Serbia (NBS) repo operations measured relative to inflation increased in Q4 from the 0.09% seen at the start of the quarter to 1.26% at its end (Graph T8-3). The main reason for this growth was the hike in the NBS repo rate. The nominal rate witnessed an increase of 250bp in total throughout Q4, while the inflation rate rose by some 117bp over the same period.

Real yields on repo operations with regard to the euro/dinar exchange rate increased in Q4…

…due to the increase in the nominal rate and the appreciation of Serbia's currency

Graph T8-3. Real (with regard to inflation measured using HCPI) and Nominal Repo Yields, 2006-2011



Source: QM based on NBS data

The fourth quarter saw a substantial rise in real yields on 2w repo operations measured as nominal yields adjusted for expected movements in the euro/dinar exchange rate (changes to the exchange rate over the preceding three months;[4] Graph T8-4). Yields calculated in this manner fluctuated between 2.53% and 13.57%, which can be ascribed to two factors. The first reason for the growth in real yields was the increase in NBS nominal yields recorded in Q4. However, the major cause behind such a substantial change in real yields was the appreciation of the Serbian currency in the last quarter of 2010. As the dinar continued gaining ground in 2011, real repo yields rose steadily to reach 25.69% in early February.

Q4 saw yields on Republic of Serbia T-bills continue the upward trend in evidence since Q2

The yield curve for Republic of Serbia T-bills shifted upwards during Q4, with T-bills of all maturities seeing greater yields (Graph T8-5). Yields increased by between 139bp and 250bp, and ranged from 13.5% to 15% depending on maturity. The greatest growth was recorded by short-term 3m T-bills, some 250bp, while 18m bills rose the least, by some 139bp.

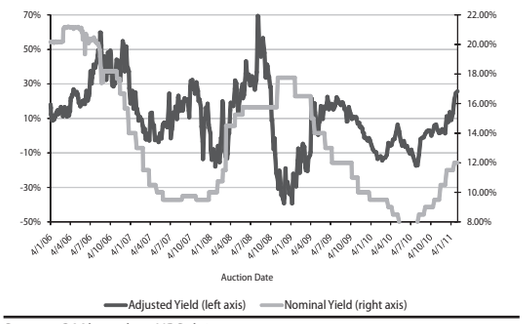
The steepness of the T-bill yield curve consequently decreased in Q4, with the difference between yields on 3m and 24m T-bills dropping by 100bp. The yield curve was normal, i.e. yields on T-bill with longer maturities exceeded yields on T-bills with shorter maturities so as to offset the greater risk of holding investments over a longer period faced by investors.

The realization rate at auctions held by the Serbian Treasury can be taken as a gauge of investor interest. The highest average rate in Q4 – some 80% – was recorded by 6m T-bills, which indicates that investors viewed long-term movements in the exchange rate with more optimism than in Q3, when 3m T-bills were in greatest demand.

4 A detailed explanation of this approach to calculating real yield rates is provided in "The Exchange Rate and Policy of the National Bank of Serbia: 2002–2006", Spotlight on: 1, QM Issue 5.

The trend exhibited by movements in T-bill yields shifted at the beginning of 2011. February 2011 witnessed a drop in yields of between 60bp and 200bp, depending on maturity. The greatest fall was seen by 24m T-bills, while 3m bills, their maturity being the shortest, recorded the smallest drop. This fall in yields is an indicator of increased demand for T-bills, which is further borne out by the robust realization rate at auctions held in 2011 so far. It seems that demand has again kindled among investors for Serbian T-bills, especially those of longer maturities. This was in all likelihood caused by the appreciation of the Serbian currency, but also suggests that investors do not expect the dinar to lose ground again in the near future.

Graph T8-4. Repo Yields Adjusted for Expected Exchange Rate Movements and Nominal Yields, 2006-2011

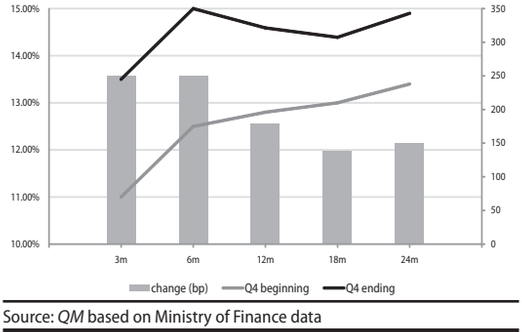


Source: *QM* based on NBS data

Investors were offered euro-indexed T-bills for the first time in late Q4. The maturity of these instruments was six months, while yield rates of 5.25% were reached at auction. The demand for these T-bills exceeded the quantity offered 1.52 times, so the realization rate was obviously 100%. A week before this auction, dinar-denominated T-bills of the same maturity saw a realization rate of 45%, again implying that the main risk taken into account by investors is currency risk.

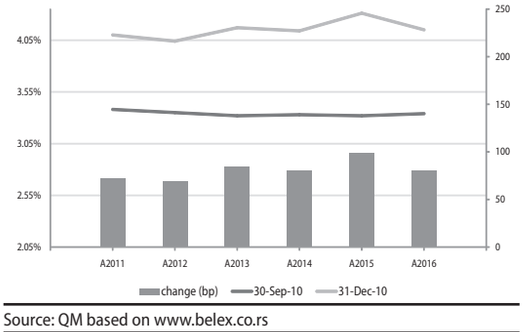
Volume and turnover in the FFCD bond market rose again in Q4

Graph T8-5. Changes to T-bill Yield Curves



Source: *QM* based on Ministry of Finance data

Graph T8-6. Changes to FFCD Bond Yield Curves



Source: QM based on www.belex.co.rs

The FFCD market witnessed growth of average yields on bonds of all maturities in Q4 2010

The upward trend in activity in the frozen foreign currency deposit (FFCD) bond market in evidence since Q3 continued into Q4. Activity in this market began to slacken in Q3 2008, as the global financial crisis escalated; volume and turnover generally fell or stagnated relative to the preceding period until Q2 2010, which saw the lowest level of activity ever recorded. Both volume and turnover climbed in Q4 relative to the preceding quarter by 9.4% and 9.1% respectively – which represented growth less marked than that seen in Q3.[5]

Average yields on bonds of all maturities grew in Q4 2010 (Graph T8-6). This represents a reversal of the trend seen in the movements in these yields, which were mainly in decline from Q4 2008 to Q3 2010. The rise in yields on FFCD bonds, taken together with the rise in the value of Belgrade Stock Exchange indexes and increasing activity in both markets seen in Q4, may suggest that investors were leaving less risky FFCD bonds in favor of riskier assets – shares.

The average yield curve on FFCD bonds remained nearly flat at the end of Q4

The fourth quarter saw the yield curve shift upwards: depending on bond maturity, yields rose by between 69bp and 99bp. The curve remained virtually flat at the end of Q4, but was no longer inverted, i.e. the yield on the shortest-maturity bond, A2011, was lower than the yield on A2016, the bond with the longest maturity. The steepness of the curve – the difference in yields between A2011 and A2016 – amounted to as little as 5bp. Such a flat yield curve generally implies that investors remain uncertain as to future movements in inflation and economic growth.

5 Q3 saw volume and turnover increase by 78% and 85% respectively in relation to Q2 2010.

9. International Environment

Despite the sustained global economic recovery, developed countries are still dealing with the problem of high unemployment, while developing countries are witnessing an increase of the inflation rate. One of the major risks to global growth is the renewed exacerbation of the crisis on the "outskirts" of the eurozone. Due to the spike in food prices, the number of people living below the poverty line has increased.

Recovery continues, IMF raises its forecast for global growth

Global economic recovery continues. The growth rates in developed countries were somewhat higher than projected, which is why the International Monetary Fund (IMF) increased its forecast for global growth in 2011 by 4.4%. This year developed countries should achieve a growth rate of 2.5% growth and developing countries 6.5%. The growth forecast for Central and Eastern Europe[1] for 2011 has been raised from 3.1% to 3.6%. East Asia still leads by the level of growth rate, while other raw material-exporting countries are in a favorable position owing to the rise in prices of goods on global stock markets.

Tabela T9-1. Developed Countries: Growth and Inflation, 2007-2010

	Real GDP								Inflation		
	Real growth (%)				Real growth (%)[3]				Consumer prices (%)[4]		
	2007	2008	2009	2010[2]	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q2 2010	Q3 2010	Q4 2010
USA	1.9	0.0	-2.6	2.8	2.4	3.0	3.2	2.8	1.8	1.2	1.3
Japan	2.4	-1.2	-6.3	4.3	5.4	3.3	4.7	2.6	-0.9	-0.8	0.1
China	14.2	9.6	9.2	10.3	11.9	10.3	9.6	9.8	2.7	3.3	..
Euro area	2.9	0.5	-4.1	1.8	0.8	2.0	1.9	2.0	1.5	1.7	2.0
Germany	2.7	1.0	-4.7	3.6	2.1	3.9	3.9	4.0	1.1	1.2	1.5
France	2.3	0.1	-2.5	1.6	1.2	1.6	1.7	1.5	1.6	1.5	1.6
UK	2.7	-0.1	-4.9	1.7	-0.3	1.6	2.7	1.7	3.4	3.1	3.4
Italy	1.5	-1.3	-5.0	1.0	0.5	1.3	1.2	1.3	1.4	1.6	1.8
Russian Federation	8.5	5.2	-7.9	3.7	3.3	5.3	2.6	..	5.9	6.2	8.1

1) Source: IMF, Eurostat, OECD, National Bureau of Statistics of China, Russian Federal State Statistics Service
2) Growth rates for 2010 are IMF projections
3) Percentage change compared with the same quarter of the previous year
4) Annual inflation

Recovery continues in the eurozone countries – annual Gross Domestic Product (GDP) growth amounted to 2% in the last quarter of 2010, while in Germany and France it was somewhat lower than expected – primarily because of the weak activity of the construction industry due to poor weather conditions. Portugal and Greece recorded a negative growth relative to Q3 2010, which hampers fiscal consolidation in these countries. Although the projected growth rates were reduced for the countries on the "outskirts" of the eurozone for 2011, forecasts on the level of the entire eurozone have remained on the same level, owing to the raise of the projected growth rate for Germany.

Inflation is accelerating in developing countries and the number of poor is growing due to increased food prices

Global indicators of financial stability reveal that there has been an improvement: in the second half of 2010, global stock markets recorded a high growth, interest rates on government bonds in countries on the "outskirts" of the eurozone have dropped and developed countries "relaxed" loan requirements for businesses. However, there is a danger that low interest rates in developed countries and investors' low risk aversion will continue to stimulate the transfer of capital to emerging markets, possibly leading to speculative share price hikes and appreciation of local currencies. US securities markets did not respond particularly to the budget deficit reduction plan in the next ten year period, (the US budget deficit should amount to 3.2% in 2015 relative to the planned 10.9% in 2011), indicating that expectations have remained unchanged. The World Bank warns that the number of people living below the extreme poverty line has increased by 44 million since June last year, as a consequence of the rise in food prices. The hike in food prices

1 According to the IMF classification (World Economic Outlook), the region of Central and Eastern Europe includes Poland, Bulgaria, Romania, Hungary, Estonia, Lithuania, Latvia, Bosnia and Herzegovina, Croatia, Macedonia, Serbia, the so called Republic of Kosovo, Turkey, Albania and Montenegro.

strained household budgets in developing countries and contributed to the growth of the overall inflation, while at the same time the real rates of economic growth approximated potential ones, indicating that some economies are showing signs of "overheating". This prompted the IMF to increase the projected inflation rate for developing countries in 2011 to 6% (by 0.75 percentage points). In developed countries the situation is entirely different, because inflation expectations are moderate, and the utilization of capacities is low, so the inflation forecast for 2011 stands at around 1.5%. As pressures on the oil price are likely to continue in this year, the IMF revised the expected average oil price for 2011 from USD 79 to 90.

Table T9-2. Indicators for Surrounding Countries[1)]

	Real growth (%)					Consumer prices (%)		Current account balance (% GDP)		Budget deficit (% GDP)	
	2009	Q2 2010[2)]	Q3 2010	Q4 2010	2010[3)]	2009[4)]	2010[4)]	2009[5)]	2010[3)]	2009[5)]	2010[3)]
Bulgaria	-4.9	-0.3	0.5	2.1	0.4	0.6	3.2	-9.6	-3.0	-3.9	-3.8
Romania	-7.1	-1.5	-2.2	-0.5	-2.0	4.7	7.9	-4.5	-5.1	-7.4	-6.8
Hungary	-6.3	0.8	2.2	2.4	0.8	5.6	3.5	0.3	1.0	-4.3	-3.9
Croatia	-5.8	-2.5	0.2	..	-1.5	1.9	2.8	-5.2	-3.8	-3.3	-4.7
FYR Macedonia	-0.8	1.1	1.3	..	0.8	-1.6	2.5	-6.9	-3.9	-2.6	-2.5
BIH	-2.8	..	..	..	0.8	0.0	2.0	-6.6	-5.5	-4.6	-5.0
Serbia(QM)	*-3.1*	*2.0*	*2.7*	*1.9*	*1.8*	*6.6*	*10.2*	*-7.0*	*-6.9*	*-4.2*	*-4.4*

1) Source: Eurostat, EBRD and *QM*
2) Percentage change compared with the same quarter of the previous year, Source: Eurostat, EBRD and *QM*
3) EBRD Projections, for Serbia *QM*
4) Inflation for year end (December/December), Source: EBRD, for Serbia: RZS and *QM*
5) EBRD estimates, for Serbia *QM*

Although the projected growth rate for Central and Eastern Europe was raised and despite the expected growth in 2011, certain risks have been pointed out, primarily in the area of fiscal policy. Despite the fact that Hungary is emerging from the economic crisis, there is increasing concern with respect to the new fiscal policy measures – the announced reform of the tax system is based on the conviction that the reduction of the tax burden will have a positive impact on economic activity. As a result of increased domestic and export demand, GDP growth in 2011 could even reach 2.75%, according to IMF estimates. The VAT increase in Romania probably already reached its maximum impact on the inflation rate which is expected to be contained within the central bank's projected targets. The economic activity continued to decline in Q4 2010, albeit at a considerably lower rate (-0.5%).

SPOTLIGHT ON:

Simulating Distributional and Poverty Outcomes of the New Draft Law on Social Welfare in Serbia

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Marko Vladisavljević
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This paper presents microsimulation results of the impact of the new Serbian Draft Social Welfare Law on income distribution and poverty outcomes across households. Microsimulations were conducted using SRMOD - a Serbian tax-benefit microsimulation model. The new Draft Law, expected to be adopted by the Parliament during 2011, introduces a number of changes into the eligibility criteria for the last-resort social assistance programme, which is expected to significantly improve the targeting of social assistance, both in terms of its expanded coverage and increases in the amounts of social assistance received by the already eligible households. Simulation results suggest that the envisaged changes in legislation will increase MOP eligibility of households in the poorest income decile by 18.4%, while the average amount of MOP they receive would increase by about 10.6% per adult equivalent. Finally, total fiscal expenditures on MOP would increase by 34.6%. Therefore, the proposed changes in legislation would, according to the microsimulations, to a certain extent improve the targeting of social assistance as well as its capacity to cater to the needs of the most deprived members of the society.

1. Introduction

This paper assesses the impact of envisaged changes of the 2004 Law on Social Welfare on income distribution and poverty outcomes across Serbian households, and it presents part of a larger research endeavour, which was financed by the World Bank. Estimates presented in this report are based on microsimulations, which were conducted using SRMOD - a Serbian tax-benefit microsimulation model based on the European Union tax-benefit microsimulation model EUROMOD.

The paper is structured in the following manner. The next two sections offer an overview of the social assistance policy debate in Serbia and the methodology used in microsimulations. Section 4 presents results of microsimulations of the effect of all envisaged changes to the Law on Social Welfare, which are linked to social assistance eligibility criteria. Chapter 5 discusses the issue of benefit non-take-up and overpayment of MOP, while the paper ends with some concluding remarks.

2. Policy Background

Between 2006 and 2008, Serbia's poverty rate declined by 2.5 percentage points, with the fraction of people living below the absolute poverty line dropping from 8.8 percent of the population in 2006 to 6.3 percent in 2008 (Household Budget Survey 2006 and 2008[1], new methodology). However, with economic activity declining by 3 percent in 2009, the number of poor increased to 6.9 percent, thus reversing the trend (Household Budget Survey 2009). Protecting the poor and vulnerable households from the effects of the crisis requires improving the access, targeting and adequacy of social benefits, as well as improving monitoring and tracking of the demand for social assistance to match the needs of the new poor who are emerging with the unfolding economic crisis. The last-resort social assistance program (referred to as MOP[2] in further text) has already started, albeit slowly and somewhat inadequately, to act as an 'automatic stabilizer' at the time of the crisis.

* FREN's team of researchers working on the development of SRMOD

1 The data are based on a new methodology for poverty calculations from HBS which now calculates a nutritional basket for 2006 and adjusts it by Consumer Price Index for each consecutive year.

2 MOP stands for "Materijalno obezbedjenje porodice" and translates into English as "Material family security".

Although public outlays on social assistance programs as a whole have increased as share of GDP from 1.3 percent of GDP in 2006 to 1.8 percent in 2008, spending on programs targeted to the poor is particularly low and allocations for the MOP and the income-tested monthly child allowances have declined. In the immediate term, the Government has been ensuring that social assistance transfers are not affected by the fiscal spending cuts needed to combat its increasing budget deficit. It managed to protect social spending on programs from the quite heavy cuts that affected other sectors in 2009 and 2010, and to pay fully all benefits despite increasing intake of the MOP. Over the medium term, however, the reform measures planned by Government of Serbia relate to increasing the coverage and improving the design of this most efficient and well-targeted social assistance program (while progressively limiting spending on selected less efficiently targeted programs).

The new Draft Law on Social Welfare, currently being debated at the Serbian Parliament, will introduce a number of changes into the eligibility criteria for MOP as well as the changes to its implicit equivalence scale. which will now assign different weights to adults and children within households (up to now, adults and children were assigned the same weight). Moreover, MOP eligibility criteria will be relaxed for large families, so that households will be entitled to social assistance for a higher number of their members. Namely, the current Law allows social assistance to be paid out to a maximum of five household members, while the suggested changed would lift the threshold to six members. The access of families (households) from rural areas to MOP will be improved by relaxing the land ownership eligibility condition from 0.5 ha to 1 ha per unit of assistance. Finally, single parent households and households in which all members are incapable of work will be entitled to higher amounts of social assistance. The purpose of the new Law is to make MOP more equitable as well as to link the 'passive' cash support to social care and employment services for the poor and vulnerable. As a result, the Government expects to increase budget expenditures on social assistance by some 70% (albeit starting from a low base).

3. Methodology

In order to assess the fiscal and the distributional implications of the proposed changes to the Law on Social Welfare, we make use of the Serbian tax-benefit microsimulation model, SRMOD, which is based on the EUROMOD platform.

EUROMOD is a tax-benefit microsimulation model for the European Union (EU) constructed and maintained by the University of Essex that enables researchers and policy analysts to calculate, in a comparable manner, the effects of taxes and benefits on household incomes and work incentives for the population of each country and for the EU as a whole. As well as calculating the effects of actual policies, it is also used to evaluate the effects of tax-benefit policy reforms and other changes on poverty, inequality, incentives and government budgets.

The construction of SRMOD - the Serbian version of EUROMOD - was initiated in October 2009 at the Foundation for the Advancement of Economics (FREN), following approval of the University of Essex. This initiative came as a response to the growing need for ex ante public policy analysis in Serbia in the wake of the global economic crisis.

SRMOD, as other tax-benefit microsimulation models, operates on micro-data for a representative sample of households within a population to be observed. Baseline data set used for SRMOD was Living Standards Measurement Survey (LSMS) from 2007.[1] This dataset was chosen since it contains detailed information on levels and sources of different types of income. This is important since using the elements of income from the survey data and combining them with simulated taxes and benefits, the model calculates disposable income for each household. Additionally, the LSMS dataset includes information about benefits from almost all social programs, which allowed us to carry out micro-validation[2] of model results with greater precision. Policy rules on taxes and benefits also date back to 2007.

It was important to distinguish in the database those persons working in the formal economy from those in the informal labour market. That way, we did not overestimate simulated values for income tax and social security contributions, while at the same time we could include earnings of those working in the informal economy into their total disposable income.

1 Year of collection: 2007. Income reference period: 2007. Sample size: 17,375 individuals in 5,557 households.
2 Amounts of taxes and benefits computed by the model are checked individually for a selection of households.

4. Simulating Changes to Social Assistance (MOP) Rules

In this section of the paper we focus on how disposable income of households in the two bottom income deciles is theoretically affected when they become eligible for MOP, *under old MOP rules* vs. when they become eligible for MOP, *under new MOP rules*. This comparison is conducted under the assumption that each household which fulfils the eligibility criteria and fully recovers the cost of obtaining it[3] actually receives MOP. Therefore, we present results on the theoretical maximum of MOP beneficiaries, i.e. we do not fully account for benefit non-take-up issues. Namely, determining the full extent of non-take-up, which frequently depends on other, unobservable household characteristics, such as the stigma of being poor, inability to understand complicated administrative procedures, or lack of information on the program, are on the whole difficult to model and simulate. (see section 5 for more detail on benefit non-take-up).

The following changes to MOP rules in the Law on Social Welfare were simulated in SRMOD:

– introduction of the new equivalence scale;

– increase in the maximum number of eligible household members from 5 to 6;

– increased MOP payments for single parent households with one or two underage children;

– increased MOP payments for households in which all members are incapable to work;

– raising the ceiling on land ownership for those households in which all members are incapable to work from 50 to 100 ares;

– increasing the number of incapable of work for those in education from 19 to 26 and those on maternity leave.

The baseline household disposable income used in simulations includes all sources of income but MOP, so we refer to it as pre-MOP disposable household income. Therefore, disposable household income amounts to the following:

Original income (gross employment and self-employment income, income from agriculture, income from additional jobs, dividend, interest, income from property (rent), remittances, alimony, lottery, imputed rent, income in kind)

+ Social benefits (veterans' benefits, one-off social assistance, pensions: old age, survivors, disability, birth grant, unemployment benefit, child allowance, caregivers allowance: pension fund and the Ministry of Labour and Social Policy)

- Social Insurance Contributions (employee, self-employed, farmers' social insurance contributions, social insurance contributions on unemployment benefits)

- Personal Taxes (tax on employment income, tax on self-employment income, tax on rental income, tax on dividend, tax on interest, tax on lottery winnings).

The first part of this chapter presents the overall distribution of those households and individuals eligible for MOP across income deciles as well as the amounts of MOP they should receive. It also throws light on some of the fiscal impacts of the new Law on Social Welfare. The second section assesses the impact of the changes in the legal framework to the income and poverty outcomes of eligible households.

4.1. Distributional Aspects of Changes to MOP Rules

Changes to the MOP eligibility criteria envisaged in the Draft Law on Social Welfare lead to an increase in theoretical MOP coverage by 22.1%, i.e. by approximately 12,000 households. Total fiscal expenditures on MOP increase by 34.6%, i.e. by around 0.05% of GDP, which is equivalent to an increase in the total consolidated government expenditures of 0.1% (Table L1-1).

Table L1-1: Main Results of SRMOD Simulation

	Number of eligible HHs	Total fiscal expenditures on MOP, in RSD
Old MOP criteria	53,444	274,347,719
New MOP criteria	65,272	369,404,612
Percentage increase	22.10%	34.60%

These estimates represent a lower bound of the total population in Serbia eligible for MOP, since the LSMS sample is based on Census data and therefore it does not provide information on people living in shanty towns (mostly Roma). Moreover, these data show the theoretical maximum

3 We estimate the cost of claiming MOP at 1,000 RSD (Serbian national currency). See section 5 of this paper for explanation.

of MOP beneficiaries (which are covered by the Census), and in that way they do not fully account for benefit non-take-up issues[4]. This is why the number of eligible households shown in Table L1-1 does not refer to MOP recipients from the LSMS database, but instead to the number of households who fulfil all eligibility criteria in the simulation, regardless of whether they take up the benefit or not.

Most of the changes to eligibility criteria in the Draft Law (except the changes in the "incapable to work" definition and those referring to the increase of the ceiling on land ownership) are affecting the minimum income level, i.e. the threshold a household needs to be under in order to become eligible for MOP. Thus, most of the households that are eligible according to new rules and were not eligible according to old rules are going to receive a low level of social assistance, since they became eligible mainly because of the jump over the threshold level (since the Draft Law envisages that they receive in social assistance only the difference between their disposable income and the minimum income threshold).

On the other hand, the changes in the Draft Law affect those who were already eligible for MOP to a greater extent, by changing the level of the social assistance they receive (again as a consequence of changes in the income threshold).

When we summarise all the changes to household eligibility and amounts received that the new rules are bringing, we observe the following. There has been a positive change (i.e. increase in the amount received) for most households (36,186 of them, i.e. 55.4%) which were eligible under both old and new rules. There has been a negative change to the amount of MOP received for 7,724 households (11.8%), while there was no change in the amount received for 14% of households. Finally, the newly eligible households represent 18.7% of all eligible households under the rules from the new Draft Law (Table L1-2).

Table L1-2. Main Results of SRMOD Simulation, detailed

		Number of HHs	Distribution of total eligible HHs (new rules)	Average increase in amount of MOP per a.e	Average MOP amount per a.e (new rules)
				in RSD	
HHs eligible for MOP under both old and new rules	Negative change in amount received	7,724	11.80%	-162	2,253
	No change in amount received	9,138	14.00%	0	2,340
	Positive change in amount received	36,186	55.40%	769	3,563
Newly eligible households		12,224	18.70%	-	1,622
Total number of eligible HHs under new rules		65,272	100%	-	2,873

We next observe how the simulated changes to MOP rules affect the distribution of eligible households across income deciles. Decile cut-offs are based on pre-MOP disposable household income per adult equivalent (based on the new equivalence scale).

Since the number of recipient households in all income deciles, except the first one, is too low, we cannot make statistically reliable conclusions about the distribution of recipient households in deciles 2-10. Therefore, the results presented in Table L1-3 represent a condensed and a more statistically reliable version of distribution of MOP recipients across deciles. Of the total number of eligible households according to old MOP eligibility criteria (53,444 households), 43,468 belong to the first income decile, while 9,976 households belong to other deciles. According to the simulation scenario which includes new MOP rules, there is an increase of 8,021 recipient households in the first decile, whereas there are 3,807 new eligible households in deciles 2-10.

Table L1-3: Distribution of HHs Eligible for MOP Across Deciles

Income deciles	Total HHs in population	Eligible HHs under old MOP rules	Eligible HHs under new MOP rules	Increase in eligible HHs
1	241,477	43,468	51,489	8,021
2-10	2,161,317	9,976	13,783	3,807
Total	2,402,794	53,444	65,272	11,828

Since 2007 LSMS results show the absolute poverty rate in Serbia at 6.6% of the population, we further analysed the poorest 10 percent of the population. For this purpose, we split the poorest decile into two parts: i) the poorest 5% of the population; i.e. households whose disposable income per adult equivalent is below the 5th percentile; and

4 See section 5 for a more detailed discussion on the original recipients of MOP from the LSMS database and their comparison to administrative records of the Ministry for Labour and Social Policy.

ii) households whose disposable income per adult equivalent is between the 5th and the 10th percentile of the income distribution. Further disaggregation within the first income decile (e.g. the impact of the changes on the poorest 1% etc), is not possible due to the limitations related to sample size.

This analysis shows that although households in the first 5% of the income distribution appropriate a significantly larger share of MOP than those households whose incomes belong to the second ventile, new rules assign MOP to a larger number of new households from the 2nd ventile (Table L1-4).

Table L1-4. Distribution of Eligible HHs, Within the 1st Income Decile

	Total number of HHs in population	Eligible HHs under old MOP rules	Eligible HHs under new MOP rules	Increase in eligible HHs
1st – 5th percentile (1st ventile)	119,814	28,724	31,406	2,682
5th – 10th percentile (2nd ventile)	120,394	14,744	20,082	5,339

Following discussion on the distribution of those households and individuals which are eligible for MOP across income deciles, we now discuss MOP coverage, i.e. the share of households within each income decile eligible for MOP.

Out of total 241,477 households which belong to the first income decile, only 18% of them fulfil all criteria to receive MOP according to the old Law, while 21.3% of them fulfil the new eligibility criteria (Table L1-5). Therefore, the change in MOP rules which we simulate leads to a 3.3 percentage points increase in MOP coverage of the poorest income decile..

Table L1-5. MOP Coverage Across Deciles

Income deciles	Total number of HHs in population	HH coverage by old MOP rules	HH coverage by new MOP rules
1	241,477	18.00%	21.30%
2-10	2,161,317	0.50%	0.60%

Further analysis of the first income decile indicates that the share of households eligible for MOP who are in the lowest income ventile is double compared with those in the second ventile. With the change of MOP rules, coverage increases by around 2.2 percentage points for the 1st ventile, and 4.5 percentage points for the 2nd ventile.

The new Law on Social Welfare also increases the average amount of MOP assigned to eligible households. We observe an increase of 10.6% in the average monthly amount of MOP per adult equivalent paid out to the first income decile, and a 15.1% increase for other deciles, albeit both from a low base (Table L1-6).

Table L1-6. Average MOP Payments Across Deciles

	Old MOP rules		New MOP rules		Increase in average MOP payments
Income deciles	Number of individuals in eligible HHs	Average MOP payment	Number of individuals in eligible HHs	Average MOP payment	
1	158,177	2,684	186.94	2,969	10.60%
2-10	38,337	2,186	49,699	2,515	15.10%
Total	196,514	2,591	236.64	2,873	10.90%

For comparison purposes, net minimum wage in May 2007, when LSMS was conducted, amounted to the 12,133 RSD. Finally, while the share of the minimum wage in the average wage was rather stable (at around 40%) in the period between 2001 and 2008, MOP payments steadily declined, to the bottom of some 15% of average wage in 2008, because they were adjusted exclusively to the Consumer Price Index (CPI)[5]. Namely, during the period 2001-2008, the subsistence minimum kept decreasing as share of the average wage, from above 23% down to 15% in 2008.

Observed in greater detail, within the first income decile, an increase of 13.3% in the average amount received per adult equivalent can be expected among the lowest 5% of income earners, albeit from a low base, while there is an increase of 6.3% for those in the second ventile. Moreover, when we apply new MOP rules, they increase the diffe-

5 Even though MOP was initially indexed to the average wage, following adoption of the 2004 Law on Social Welfare.

rence between the average nominal amount per adult equivalent paid out to individuals in the first income ventile and the average payments to the individuals in the second ventile, in favour of the first ventile. This indicates better calibration of MOP under the new rules.

4.2. Income and Poverty Outcomes of Changes to MOP Rules

This section discusses income and poverty outcomes of changes to MOP rules for households, i.e. changes to their disposable income as well as their poverty rankings.

When we observe changes in average disposable income per adult equivalent for each income decile, the following shows. MOP represents a somewhat relevant source of income only for the poorest decile of the population, while its impact on the overall household income is even greater within the lowest 5% of the income distribution (Table L1-7). Moreover, as expected, the new rules do increase the overall average significance of MOP in household disposable income (3.5% increase in disposable income per adult equivalent for the first income decile, and an even more significant 5.4% per adult equivalent for the first income ventile).

Table L1-7. Average Disposable Income

Income deciles	Average disposable income per adult equivalent			Percentage change in disposable income, old MOP vs. new MOP
	Before MOP	After MOP (old rules)	After MOP (new rules)	
1	3,849	4,333	4,482	3.46%
2	8,855	8.91	8,939	0.32%
3	11,787	11,797	11,813	0.13%
4	14,645	14,664	14,673	0.06%
5	17,393	17,393	17,393	0.00%
6	20.28	20,286	20,286	0.00%
7	23,349	23,349	23,349	0.00%
8	27,825	27,825	27,825	0.00%
9	34,324	34,324	34,324	0.00%
10	56,832	56,832	56,832	0.00%

The next analysis serves to show how many people are poor when we set the poverty line at the lowest 5% and lowest 10% of the income distribution. When the poverty line is set at the 5th percentile of the income distribution, when we introduce new rules, the relative[6] decrease in the number of poor by almost 3.4% in comparison to the scenario when old rules are used. However, the poverty index and poverty gap do not change (Table L1-8).

Table L1-8. Basic Poverty Indicators, Poverty Line at 5%

	Before MOP	After MOP (old rules)	After MOP (new rules)
Number of poor	370.55	285,118	275.431
Poverty index	5.00%	3.80%	3.70%
Poverty gap	2.10%	1.40%	1.40%

Source:
Note: Poverty line is set at the 5th percentile of the income distribution, where income is disposable income per adult equivalent before MOP.

With poverty line set at the 10th percentile of the income distribution, the new MOP rules have decreased the number of poor by approximately 15,000 people. Thus, the relative decrease of the number of poor is 2.15% (Table L1-9).

Table L1-9. Basic Poverty Indicators, Poverty Line at 10%

	Before MOP	After MOP (old rules)	After MOP (new rules)
Number of poor	740.78	714,826	699,442
Poverty index	10.00%	9.60%	9.40%
Poverty gap	4.50%	3.80%	3.60%

6 Since the analysis undertaken here represents the theoretical maximum of the beneficiaries, i.e. non-take-up is not entirely accounted for, it is more relevant to observe the relative changes in the percentage of poor when new eligibility criteria are introduced, rather than the absolute numbers.

5. Issues of MOP Non-Take-Up and Overpayment

Baseline data set used for SRMOD was Living Standards Measurement Survey (LSMS) from 2007.[7] As we can see from Table L1-10 below, receipt of MOP is underreported in the LSMS . In June 2007, according to official administrative records, 48,954 households received MOP, which is 29.3% higher than the number of households which were MOP beneficiaries in LSMS.

Table L1-10. Number of MOP Recipient HHs/Amounts Paid Out

	Number of recipient HHs (admin. records)	Number of recipient HHs (LSMS)	Total amount of MOP paid, in RSD (admin. records)	Total amount of MOP paid, in RSD (LSMS)
June 2007	48.954	34.608	253,897,376	176,921,584

The reason behind the discrepancy between the official administrative records and the LSMS data base could be explained by the fact that certain vulnerable groups, such as Roma, refugees and IDPs are underrepresented in the LSMS (Krstić, 2008). The dataset sample was mainly concentrated on interviewing households which actually resided at the address they were registered on, and leaving out those with fictional addresses (e.g. registered at a real address with friends and family, yet living in cardboard settlements).

Results presented in previous sections show that the number of people eligible for MOP according to SRMOD simulations (75,220 households according to old, i.e. currently used MOP rules) is significantly greater than the number of those that report receiving MOP in the administrative records (48,954 households). This is the so called "non-take-up" phenomenon, which is a crucial drawback of means tested benefits. Studies show that non-take-up of means tested benefits is a widespread problem in Europe and beyond. For most of European countries this indicator is higher than 50%, with the maximum value of 67% for Germany and 70% for Austria (Fuch, 2007). According to our simulation, the *non-take-up ratio*[8] is 76.9%.

Targeting benefits is not only subject to errors in the form of non-take-up. It can also take the form of overpayment of benefits to individuals/households who are not eligible for them.

Further to our SRMOD simulations, only 37.5% of households which reported to receive MOP (according to LSMS), meet all eligibility criteria to receive MOP, whereas 62.5% of households which reported to receive MOP do not meet at least one (out of six) eligibility criteria[9].

Even though we offer a rough estimate of non-take-up phenomena (as more sophisticated statistical methods are needed to determine the real size of this indicator), preliminary results are alarming. Low participation rates may distort the intended welfare impact of the MOP program. Also, non-participation results in unjustified disparities among eligible persons, if only those who are better informed claim the benefits rather than those who would benefit most.

Our analysis also suggests that overpayment is as important a problem as non-take-up of MOP is. Both types of targeting errors are problematic, although, from the fiscal perspective, overpayment of benefits is costly to the government while non-take-up actually saves public money. This asymmetry may partly explain why the latter often receives less attention than the former (Matsaganis et al, 2009).

6. Concluding Remarks

As expected, results of the SRMOD microsimulation show that the changes to eligibility criteria for last resort social assistance (MOP), envisaged by the new Draft Law on Social Welfare, increase the number of eligible households and individuals, and that the average amount of MOP received per adult equivalent increases as well. While the number of eligible households increases by 22.1%, the average amount received per adult equivalent increases by 10.9% (albeit from a low base).

7 Year of collection: 2007. Income reference period: 2007. Sample size: 17,375 individuals in 5,557 households.

8 The ratio between the number of households which are not receiving the benefit, but are eligible and the total number of households which are potentially eligible

9 A detailed list of MOP eligibility criteria is presented in Annex 1.

Furthermore, although households in the first 5% of the income distribution appropriate a significantly larger share of MOP than those households whose incomes belong to the second ventile (5%), new eligibility criteria assign MOP to a larger number of new households from the 2nd ventile. This occurs because the new criteria are more lax in terms of the income threshold. Therefore, the new criteria complement the existing subset of recipients by a subset of better off households and individuals (although they are still from the lowest deciles of the income distribution).

At the same time, out of the total of 241,477 households which belong to the first income decile, only 18% of them fulfil all criteria to receive MOP according to the old Law, while 21.3% of them fulfil the new eligibility criteria. Therefore, although MOP coverage increases, it remains low, since a significant portion of households and individuals from the lowest income decile remain ineligible. Even when we only look at the household from the lowest 5% of the income distribution, their coverage increases from 24% to 26.2%, i.e. it remains low.

Some of the most important reasons for ineligibility, when we look beyond income, are criteria related to (not) being registered as unemployed, having a larger number of persons in the tax unit than the number of rooms in the main residence of the household, owning land greater than the 0.5ha or having other immovable property. These types of criteria which are closely linked to the administrative burden, such as having to renew one's registration with the unemployment service or gathering other proofs of eligibility, have not been changed in the new Draft Law, i.e. none of the changes to the Law were related to the reduction of information and transactions costs linked to exercising one's right to social assistance. It is therefore expected that those households and individuals that were ineligible for administrative reasons will remain ineligible with adoption of the new Law, even when they fulfil the income criterion.

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Wage Tax Collection and Distribution in Serbia: Looking Forward

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The existing wage tax collection and distribution system in Serbia creates high administrative costs to employers – as they are required to disburse wage taxes to various payment accounts, depending on the municipality of residence of each worker. In addition, the existing system implicitly distributes tax revenues among municipalities according to the taxable portion of wages – implying that any increase in progressivity of wage taxation results in regressive redistribution of revenues among municipalities. Hence, the introduction of tax-exempt threshold in 2007 caused a revenue decline which was 4.4% higher in undeveloped than in developed municipalities. Employers' inconsistent implementation of existing regulations creates a systemic bias towards developed municipalities in practice. In particular, undeveloped municipalities realized revenues in 2009 which were 5.2% lower than what was expected based on Tax Administration data. In this paper we present an alternative system of wage tax collection in which the Serbian Treasury would automatically distribute tax revenues among municipalities. This system would eliminate unnecessary administrative costs for employers as well as the inherent regressivity of the existing system in distributing tax revenues among municipalities. The automated system which would distribute tax revenues according to employee's total gross wages would increase revenues of undeveloped municipalities by around 10% on average.

Introduction

Wage tax in Serbia is a joint form of public revenue shared between the central and local government levels. The Republic of Serbia is entitled to 60% of the wage tax revenues, leaving the remaining 40% of revenues to municipalities in which the employees reside. The National Alliance for Local Economic Development (NALED, 2009) has identified the present wage tax collection and distribution system as overly complicated – employers are required to disburse wage taxes to various payment accounts, depending on the municipality of residence of each worker. Such a tax collection mechanism creates high administrative costs to employers. A study of the Foundation for the Advancement of Economics (FREN) has estimated total employers' administrative costs regarding payments of wage tax and social security contributions to various payment accounts - at almost half a billion dinars in 2009 (Zelović, 2010). In this study we also demonstrate that the existing wage tax collection and distribution system is systemically biased towards more developed municipalities to the detriment of undeveloped municipalities. We intend to present an alternative tax collection and distribution system that would eliminate problematic features of the existing system - high administrative costs to employers and systemic bias toward developed municipalities.

This paper is organized as follows: *Section 1* contains methodology explanations and descriptions of the data sources used in preparation of the study; *Section 2* quantifies regressive effects on local governments' revenues caused by the introduction of tax-exempt threshold on wages in 2007; *Section 3* describes and quantifies the systemic bias toward developed municipalities inherent in the existing system and caused by employers' inconsistent implementation of existing regulations; in *Section 4* we present an alternative wage tax collection and distribution system the purpose of which is to eliminate aforementioned shortcomings of the existing system. A summary of arguments is offered in *Section 5*.

1. Methodology Explanations and Data Sources

There are two possible approaches to distributing wage tax revenues among municipalities – revenue distribution according to *employer's municipality of residence* or according to *employee's municipality of residence*. Revenue distribution by employer's municipality of residence implicitly favors the most developed municipalities in which employers are most frequently located in. On the other hand, distribution of revenue by municipality of residence of employed workers favors undeveloped municipalities on two grounds. Firstly, the number of workers from undeveloped municipalities working in developed municipalities is higher than that of the workers from developed municipalities working in less developed municipalities. Secondly, workers from undeveloped municipalities realize higher wages

(on average) by working in developed municipalities than if employed in their municipalities of origin. Therefore, the best international practice suggests distribution of tax revenues according to employee's municipality of residence – in order to stimulate a more even regional development and avoid systemic bias towards the most developed municipalities.

In accordance with best international practice, Serbian regulations prescribe distribution of wage tax revenues by employee's municipality of residence. However, standard statistical data sources of the Republic Statistics Office (RSO) are based on employer's municipality of residence. Table L2-1 illustrates the said discrepancy between the data based on employers' residence and those based on employees' municipality of residence.

Table L2-1. Comparing Data by Employer's and Employee's Municipality of Residence, Selected Municipalities, 2009

Municipality	By employer's residence		By employee's residence	
	Number of workers	Average wage	Number of workers	Average wage
Savski venac (Belgrade)	177,570	53,886	15,681	69,000
Voždovac (Belgrade)	53,404	42,955	54,134	54,805
Novi Beograd (Belgrade)	116,268	62,347	82,067	64,178
Novi Sad	138,936	50,132	114,791	48,689
Leskovac	22,906	31,510	29,177	34,273
Pirot	13,777	36,062	15,896	37,754
Zaječar	10,472	33,490	14,869	37,203
Jagodina	15,879	31,677	18,441	41,228
Smederevo	21,191	40,949	26,359	41,349
Trstenik	10,069	27,779	10,264	29,485
Apatin	5,910	45,846	7,099	37,897
Lajkovac	1,818	36,389	4,533	52,120

Source: Author's calculations based on the Tax Administration data.

The most significant discrepancies between the two data sources are found in Belgrade's municipality of Savski venac – the registered seat of numerous state institutions and public enterprises employing workers all over Serbia. However, discrepancies between the data by employers' residence and those by employees' residence are considerable in other municipalities across Serbia as well. Belgrade's municipality of Voždovac is an example of how these two data sources can happen to provide approximately the same information on the number of employees, but still provide significantly different information regarding average gross wages – due to differences in the statistical coverage. Furthermore, Novi Beograd and Novi Sad are examples of municipalities where the information from these two data sources on the number of employees are significantly different, despite the fairly good congruence of the data on average gross wages. Based on the information displayed in Table L2-1, we can conclude that RSO data based on employers' residence – is not the most appropriate for the analysis of wage tax distribution among municipalities.

Tax Administration data presents an adequate source of information for the analysis of wage tax revenues by municipalities, since they provide for each and every registered employee, information on his own residence and information on the residence of his employer – which enables the cross-comparison of the data in Table L2-1. This study is based on the Tax Administration data, the validity of which has been cross-checked with the aggregate data on wage tax revenues from the Serbian Treasury. These two sources match exceptionally well with respect to the aggregate annual data for the 2005 – 2009 period, which additionally justifies the use of the Tax Administration data for the analysis of wage tax distribution among municipalities.[1]

2. Effects of Progressive Wage Taxation on Local Government Revenues

Wage taxation in Serbia was proportional in the 2002 to 2006 period and amounted to 14% of gross wages. Reduction of the tax burden on wages has been implemented in 2007 by reducing the tax rate from 14 to 12% and introducing a tax-exempt threshold equal to RSD 5,000 a month (around 13% of the then average gross wage). The lowering of the tax rate from 14 to 12% resulted in the same percentage decrease in revenues for all municipalities (*ceteris paribus*). However, the introduction of tax-exempt threshold on wages resulted in the creation of **different**

1 For example, the difference between the Tax Administration data and aggregate Treasury data for 2009 is only 0.5%. The relative ratio of revenues among the municipalities being the only elevant information for the pruposes of this studuy, the said disrepancy between the the Tax Administration and aggregate Treasury data can be deemed absolutely acceptable.

Table L2-2. Nominal Decline in Tax Revenues in 2007 in Selected Municipalities as a Consequence of Tax Rate Reduction and Introduction of Tax-Exempt Threshold

Municipality	Decline in revenues, in %
Zvezdara (Belgrade)	-0.3%
Savski venac (Belgrade)	-6.9%
Zemun (Belgrade)	-13.5%
Novi Sad	-9.3%
Niš	-10.0%
Negotin	-10.7%
Inđija	-12.5%
Dimitrovgrad	-15.2%
Sokobanja	-16.7%
Leskovac	-17.4%
Trgovište	-18.4%
Vrnjačka banja	-19.0%

Source: Author's calculations based on the Serbian Treasury data.

effective tax rates across municipalities – depending on the level of development thereof and on the average wages of their residents. Namely, the fixed amount of RSD 5,000 accounts for a higher percentage of average wages in undeveloped than in developed municipalities. Thus, the effective tax rates have decreased the most in undeveloped municipalities, causing the highest percentage decline in tax revenues to occur in undeveloped municipalities. Table L2-2 displays the annual (nominal) decline in tax revenues in selected municipalities, based on the relevant Serbian Treasury data.

The data disclosed in Table L2-2 confirm the expectation that **progressive wage taxation causes regressive distribution of wage tax revenues among the municipalities in Serbia.** This phenomenon can be proved and quantified through formal econometric tests. For the needs of the econometric analysis, we have used the official development ranking of municipalities in the Republic of Serbia used for granting funds from the Programme for Balanced Regional Development. This ranking places the municipalities into five development level groups – the first consisting of above-average developed municipalities and the remaining four groups contain below-average developed municipalities. A detailed classification of municipalities by level of development is given in the Annex.[2]

Econometric model is designed so that the dependant variable Y_i that we are trying to explain represents the 2007/2006 y-o-y percentage change in the wage tax revenue in the municipality *i*. The only explaining variable in the model, Z_i stands for the level of development of the municipality - taking the value of 0 for the above-average developed municipalities and the value of 1 for below-average developed municipalities.[3] The econometric model also includes a constant term to quantify the average percentage decline in revenues irrespective of the development level of the municipality. The econometric relationship is estimated based on the Serbian Treasury data on 167 municipalities in Serbia:

$$\boldsymbol{Y_i = -8.7\% - 4.4\% * Z_i}\textbf{; } p\text{-statistics } (Z_i) = 0.001$$

Based on the p-statistics we can conclude that the level of development of a municipality is statistically a highly significant characteristic when it comes to explaining the percentage decline in tax revenues across Serbian municipalities in 2007, caused by the reduced tax burden on wages. The econometric model shows that **revenues of developed municipalities declined by 8.7%, while revenues of undeveloped municipalities declined by 8.7% + 4.4% = 13.1 percent, on average**. In order to ensure robustness and validity of this result, we tested the said econometric model on 2006/2005 and 2008/2007 y-o-y changes as well. The econometric results show that in such cases, the municipal development is not a statistically significant characteristic – which is in line with our expectations since the level of wage tax progressiveness did not change in either 2006 or 2008.[4]

We can therefore reliably conclude that progressive wage taxation via the introduction of tax-exempt threshold in 2007 caused a regressive redistribution of tax revenues among the Serbian municipalities. This regressivity is the result of the fact that **the existing wage tax collection system implicitly distributes tax revenues based on employees' taxable portion of wages rather than total gross wages.**[5] If the distribution of tax revenues among municipalities were to be carried out based on employees' gross wages, progressive wage taxation would not lead to regressive re-

2 The first group is comprised of above-average developed municipalities, the second of municipalities the level of development of which is 100 to 80% of the national average, the third – municipalities from 80 to 60% of the national average, the fourth – municipalities from 60 to 50% and the fifth group (devastated regions) the level of development of which is below 50% of the national average.

3 Such a simple regressive model actually represents a common analysis of variance test – whether there exists a statistically significant difference between the two subsets.

4 It is possible to use a more detailed econometric model with five levels of municipal development ranking from the Annex. In that case, the analysis shows that revenues decline by additional 1.3% per each category of underdevelopment.

5 When employers pay wage taxes, they pay the amounts which are not directly proportional to the gross wages but rather to the taxable portion of the gross wages.

venue distribution among municipalities – since the amount of gross wages is not affected by the introduction or increase of the tax-exempt threshold. This fact is explained in more detail further on in the text.

3. Systemic Bias Towards Developed Municipalities in Practice

Existing regulations prescribe that employers are to disburse wage taxes to various payment accounts - according to registered residence of their employees. However, employers in practice often fail to fully comply with the regulations. Namely, employers often do not know the municipality of residence for each and every of their employees, or they simply do not bother to fill out the paperwork required for wage tax payment to multiple payment accounts.[6] In such cases, the employers usually pay a portion or the full amount of the wage tax for their employees – to the payment account of the municipality where the employers are themselves registered. Such a practice causes a systemic bias towards more developed municipalities to the detriment of undeveloped ones – since employers are more often registered in above-average developed municipalities. This occurrence can be verified and quantified by cross-referencing Tax Administration and Serbian Treasury data, using a formal econometric test.

Table L2-3. Expected and Actual Wage Tax Revenues in 2009 for Selected Municipalities

Municipality	Actual revenues, in RSD	Expected revenues, in RSD	Difference, in %
Beograd	16,206,380,883	15,453,545,971	4.6%
Novi Sad	2,908,168,217	2,811,490,142	3.3%
Niš	1,631,197,958	1,581,847,696	3.0%
Apatin	132,430,993	127,986,354	3.4%
Sremska Mitrovica	377,443,455	369,937,432	2.0%
Trstenik	93,826,416	95,216,935	-1.5%
Leskovac	467,362,100	487,884,215	-4.4%
Majdanpek	56,800,389	60,108,491	-5.8%
Merošina	29,577,334	31,628,561	-6.9%
Žabari	15,894,223	17,001,715	-7.0%
Nova Crnja	27,950,094	30,710,018	-9.9%
Trgovište	12,812,689	14,970,124	-16.8%

Based on the Tax Administration's detailed data on residence of all registered employees in 2009, we simulated the tax revenues each municipality in Serbia *should have* realized in that particular year.[7] Next, we compared the simulated data with the actual revenues in each municipality in 2009 based on the data from the Serbian Treasury. The dependant variable in our econometric model Y_i that we are trying to explain stands for percentage departure of the simulated (expected) revenues from the actual revenues for each municipality *i* in 2009:

$$Y_i = (\text{actual revenues} - \text{expected revenues}) / \text{actual revenues in municipality } i$$

Just like in Section 2 of this paper, the only explanatory variable Z_i in our econometric model measures the level of development of the municipality *i*, taking the value of 0 to stand for the above-average developed municipalities (first development group) and the value of 1 for below-average developed municipalities (from second to fifth development group). In contrast to the econometric model from the previous Section, here the econometric relationship is estimated based on the data covering 142 towns and municipalities in Serbia. Namely, wage tax revenues belong to cities, which makes it necessary to aggregate the revenues for 17 municipalities in the City of Belgrade, 5 in the City of Niš and 2 in Novi Sad and Kragujevac each.[8] In this manner we have come up with the following econometric model:

$$\boldsymbol{Y_i = -1.6\% - 5.2\% * Z_i;}\ p\text{-statistics } (Z_i) = 0.0132,\ p\text{-statistics (constant)} = 0.3629$$

The econometric results suggest that employers' inconsistency with respect to appropriate disbursement of wage tax is highly statistically significant. Owing to this inconsistency, **below-average developed municipalities in Serbia realized 5.2% less in revenues than expected in 2009.** From Table L2-3 we can see that there are occasional dis-

6 Tax authorities check if employers pay appropriate total tax amounts, but they are not able to check the credibility of distribution of wage tax to payment accounts of eligible municipalities.

7 Annual gross wages are approximated based on the registered taxable annual wages, by assuming the workers were employed during the entire year.

8 Municipalities of Malo Crniće and Petrovac were not included in the analysis because no data on them could be found in the tax records while the municipality of Ćuprija was eliminated due to significant discrepancies (irregularities) in tax related data pertaining to this municipality.

crepancies between actual and expected revenues among the above-average municipalities as well. Thus, for instance, cities like Belgrade and Novi Sad received 3 to 4% more in revenue than expected as opposed to Valjevo and Čačak that saw 4 to 5% less than expected revenues coming their way. For the most part, these discrepancies mutually cancel each other out on average - rendering them statistically insignificant for developed municipalities (since the constant in our model is not statistically significant).[9] In light of the fact that above-average municipalities realize, in absolute terms, significantly higher revenues than their below-average counterparts, even statistically insignificant discrepancies in case of above-average developed municipalities are sufficient to make up for the statistically significant loss of 5.2% of revenue in the case of below-average developed municipalities.

Irregularity (regressivity) in public revenue distribution comes as a consequence of the fact the existing tax collection system leaves it up to employers to effectively carry out distribution of tax revenues among the municipalities in Serbia. If Serbian Treasury was to automatically conduct the appropriate distribution of public revenues among the municipalities – the aforementioned irregularity would be completely eliminated.

4. Alternative Wage Tax Collection and Distribution System

We have unveiled and quantified two problems impairing the existing system of wage tax collection and distribution among municipalities in Serbia. In Section 2 we can see that distribution of revenues is based on the taxable portion of gross wages, which means that any increase in progressivity of wage taxation inevitably brings about an increase in regressivity of revenue distribution among municipalities. Thus, as a consequence of the introduction of the tax-exempt wage threshold in 2007, undeveloped municipalities suffered a loss of revenue that was 4.4% higher than that of developed municipalities. Furthermore, in Section 3 we demonstrated that the employers' inconsistent fulfillment of existing regulations regarding the disbursement of wage tax causes regressive effects which have reduced revenues of undeveloped municipalities by 5.2% on average.

The shortcomings of the existing system can be eliminated by centralizing the wage tax revenue distribution in such a way that the Serbian Treasury would carry out automatic distribution of revenues among the municipalities based on the tax records from previous years. This would eliminate a significant administrative burden on employers in Serbia who would no longer be held responsible for the distribution of wage tax revenues among municipalities and would be enabled to pay their wage tax liabilities to a single payment account. Such an approach would also enable the consistent implementation of the existing regulations which would result in a 5.2% average increase in revenues of undeveloped municipalities.

The remaining issue is that of the regressive distribution of revenues among municipalities caused by progressive taxation of wages initiated in 2007. Since the existing level of progression in wage taxation is relatively low, one of the options would be to maintain the existing tax revenue distribution system (implicitly) based on the taxable portion of gross wages. Such an approach would mean that undeveloped municipalities would be permanently plagued by the loss of revenue of 4.4% as recorded in 2007.

However, Arsić et al. (2010) demonstrate that there are economic reasons for increasing wage tax progressivity in Serbia. Possible wage tax progressivity increase in the existing system would lead to a further increase in regressivity in distribution of tax revenues among municipalities. Based on RSO data by employers' residence, Bisić, Mijatović and Paunović (2010) demonstrate that the existing system of financing local governments would be able to absorb the regressive redistribution of tax revenues resulting from the more progressive taxation of wages – by the means of compensation transfers. The question is, however, whether the Law on financing of local governments represents the optimum framework for resolving the problem of regressive wage tax distribution - particularly having in mind the inconsistent implementation of the Law in practice during the recent economic crisis.

The said centralized distribution of wage tax revenues by the Serbian Treasury offers an alternative for effective resolution of the problem of regressive distribution of tax revenue among municipalities. This approach makes it possible to **neutralize the regressive effects of possible increase in progressivity of wage tax by implementing an appropriate formula for the distribution of tax revenues.** Thus, for instance, it would be possible to implement a formula for distributing tax revenues among municipalities solely based on the prevailing tax rate – ignoring the tax-exempt

9 In light of the partiality towards more developed municipalities in practice, we expected the regression constant to be positive. However, the econometric regression coefficient represents a non-pondered average – so the individually minor amounts by various municipalities could annul significant absolute amounts in the largest cities. In any case, the sign before the constant is not essentially relevant since the constant per se is not statistically significantly far from 0.

threshold and hypothetically treating total gross wages as taxable. In this way, the Republican budget would bear the full loss of revenues steaming from increases in the amount of tax-exempt threshold – leaving tax revenues flowing into municipal budgets unaffected.

Furthermore, it would also be possible to switch from the revenue distribution based on the taxable portion of gross wages to the distribution of revenues based on total gross wages - whereby tax revenues of each municipality would be proportional to the share of aggregate wage bill of the given municipality in the total aggregate wage bill in the Republic. In this way, the Republican and municipal budgets would proportionally bear the loss of tax revenue steaming from increases in the amount of tax-exempt threshold – but regressive distribution of tax revenues among municipalities would be avoided. Namely, the regressive redistribution would be avoided since the distribution of revenues based on total gross wages would effectively introduce a system of implicit subsidies from the most developed towards the least developed municipalities. Moreover, based on local self-governments' preferences, it would be possible to select some "intermediate solution" – between the distribution based on taxable portion of gross wages and distribution based on total gross wages – which would optimally acknowledge the economic position of both developed and undeveloped municipalities in Serbia.[10]

Table L2-4. Effects of Centralized Distribution of Tax Revenues Based on Total Gross Wages, Selected Municipalities, 2009

Municipality	Change in revenues, in %
Belgrade	-8.7%
Novi Sad	-5.6%
Niš	-3.1%
Apatin	0.2%
Leskovac	5.1%
Inđija	8.3%
Čačak	8.5%
Valjevo	8.5%
Vrnjačka banja	10.7%
Pančevo	12.1%
Mali Zvornik	16.2%
Žabari	18.0%

Source: Author's calculations

Finally, it is necessary to note that the "raw" tax data used in this study may often include statistical outliers occurring due to incorrectly filled out tax application forms by some employers. Thus, significant discrepancies were noticed in Ćuprija and Kragujevac municipalities in 2009, and in Novi Sad in 2008. With the recent introduction of the Central Register of Taxpayers, we can expect that the level of such statistical outliers will be reduced to a minimum in the forthcoming period. Still, if the centralized wage tax distribution is to be carried out based on tax records (or data from the Pension and Disability Fund records), appropriate statistical data processing would be necessary to ensure the credibility and robustness of the automatic revenue distribution scheme. Therefore, it would be desirable to exclude the data from the highest and the lowest deciles where statistical outliers most frequently occur, and to use average data for several previous years.[11]

5. Summary of Arguments

It is a known fact that the existing system of wage tax collection and distribution among municipalities is overly complicated - creating significant administrative costs to employers in Serbia. In this study we demonstrated and quantified that the existing system is inherently regressive on two grounds regarding the distribution of tax revenue among municipalities. The first cause of the regressivity is the revenue distribution formula which is implicitly based on taxable portion of employees' gross wages – which causes a regressive distribution of revenue among municipalities in case of increasing the progressivity of the wage tax. The second cause of regressivity is the employers' inconsistent implementation of existing regulations – which is creating a systemic bias in practice towards the most developed municipalities.

Automated wage tax distribution carried out by the Serbian Treasury would eliminate the high administrative costs for employers in the existing system and would also eliminate systemic bias toward developed municipalities in practice due to employers' inconsistent implementation of existing regulations. Since there is no appropriate data register to base such an automated revenue distribution upon at present, the suggested solution would require the competent state authorities to develop: either an appropriate register or appropriate procedures for the use of the existing data in Tax Administration or Pension and Disability Fund registers.

10 For instance, for the City of Belgrade, the "intermediate solution" would mean a decline in wage tax revenues between 4.6% (formula based on taxable portion of gross wages – Table L2-3) and 8.7% (formula based on total gross wages – Table L2-4).

11 For instance, eliminating the data from the highest and lowest deciles completely solves the problem of statistical outliers in case of Ćuprija municipality in 2009.

Such an automated and centralized system would also enable implementation of a flexible formula for tax revenue distribution which would take into account the economic position of both developed and undeveloped municipalities, as well as the progressivity level of wage taxation. In this manner, possible increases in wage tax progressivity in future years would not cause a regressive redistribution of revenues among Serbian municipalities.

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Annex: Ranking of municipalities by level of development

• The first group is made up of municipalities with above-average level of development: Belgrade (17 municipalities), Niš (five municipalities), Novi Sad (two municipalities), Kragujevac (two municipalities), Arilje, Čačak, Čajetina, Gornji Milanovac, Kosjerić, Kruševac, Lajkovac, Pirot, Požarevac, Smederevo, Jagodina, Šabac, Užice, Valjevo, Vrnjačka Banja, Apatin, Bačka Palanka, Bačka Topola, Bečej, Beočin, Inđija, Kanjiža, Kikinda, Kula, Pančevo, Pećinci, Senta, Sombor, Sremska Mitrovica, Sremski Karlovci, Stara Pazova, Subotica, Temerin, Vrbas, Vršac, Zrenjanin.

• The second group is made up of local governments with a level of development ranging from 80 to 100% of the national average. These are: Kraljevo, Bor, Zaječar, Vranje, Lapovo, Odžaci, Sokobanja, Ćuprija, Novi Kneževac, Kladovo, Paraćin, Požega, Šid, Aleksandrovac, Lučani, Bački Petrovac, Bač, Loznica, Titel, Topola, Ada, Ruma, Novi Bečej.

• The third group is made up of local governments with a level of development ranging from 60 to 80% of the national average. These are: Novi Pazar, Aranđelovac, Smederevska Palanka, Irig, Kovin, Ivanjica, Srbobran, Kovačica, Mali Iđoš, Leskovac, Prokuplje, Nova Varoš, Raška, Boljevac, Trstenik, Aleksinac, Majdanpek, Batočina, Priboj, Koceljeva, Dimitrovgrad, Despotovac, Bajina Bašta, Velika Plana, Ljig, Negotin, Ćićevac, Čoka, Veliko Gradište, Ub, Vladimirci, Opovo, Bogatić, Svilajnac, Žabalj, Sečanj.

• The fourth group is made up of local governments with a level of development ranging from 50 to 60% of the national average. These are: Brus, Knjaževac, Petrovac, Alibunar, Bela Crkva, Surdulica.

• The fifth group (devastated areas) is made up of local governments with a level of development below 50% of the national average. These are: Merošina, Bojnik, Trgovište, Malo Crniće, Tutin, Bela Palanka, Svrljig, Knić, Žabari, Bosilegrad, Golubac, Kuršumlija, Ražanj, Gadžin Han, Sjenica, Žagubica, Medveđa, Rekovac, Osečina, Blace, Crna Trava, Žitorađa, Vladičin Han, Mali Zvornik, Plandište, Žitište, Nova Crnja, Preševo, Bujanovac, Kučevo, Babušnica, Vlasotince, Lebane, Mionica, Prijepolje, Krupanj, Rača, Doljevac, Varvarin, Ljubovija.

Analysis and Proposal for Changing the Eligibility Criteria of the Global Fund to Fight AIDS, Tuberculosis and Malaria

Aleksa Nenadović *

This analysis aims to highlight the negative implications of the prolonged use of the Global Fund's current eligibility criteria for upper-middle income countries and proposes to change these. Because they do not fulfill eligibility criteria, many of these countries cannot apply for Global Fund support, which can decrease the efficiency of the fight against HIV/AIDS on a global level. The application of the same criteria for all upper-middle income countries leads to the unfair distribution of funding among countries. Poverty, as one of the key factors influencing the prevalence of the HIV/AIDS epidemic, is not taken into account adequately in applying the current criteria. Most of the upper-middle income countries that will not be eligible to apply for Global Fund funding in the next round, do not have a health care system in place that can independently efficiently respond to the HIV/AIDS spread risk. The lack of funding as a consequence of budget limitations imposed by the global financial crisis adds additional pressure on the state health care system. Instead of the existing criteria that set the upper limit of funding as a percentage of the domestic budget allocated to prevention and treatment of the diseases, we propose not to apply the same maximum percentage for all countries, but to continuously decrease that percentage from the poorest to the richest upper middle income country.

Introduction

In this analysis** we examine the arguments in support of the thesis that the current eligibility criteria of the Global Fund[1] for upper-middle income countries are inadequate and propose that these be changed, in order to boost the global impact of the fight against HIV/AIDS, tuberculosis (TB) and malaria. Unless the eligibility criteria are changed, a significant number of upper-middle income countries will have difficulties in funding programs for the prevention of HIV/AIDS. Some countries have transitioned from the lower-middle income group to the upper-middle income group and consequently different eligibility requirements apply to them now that they are not able to fulfill in order to apply for Global Fund funding. Some upper-middle income countries are spending the money that they were granted in the previous rounds when different eligibility criteria applied, so they are ineligible for grants too. The continued application of the present eligibility criteria will lead to lack of funds in many upper-middle income countries thus jeopardizing the fight against AIDS on a global level. Our proposal for changing the criteria would not only enable continuity in funding upper-middle income countries, but also a more rational and just distribution of funding.

According to the World Bank classification[2], upper-middle income countries have a Gross National Income (GNI) per capita between USD 3,946 and 12,195. In addition, there is a low income group of countries – below USD 995, a lower-middle income group – from USD 996 to 3,945 and a high income group – over USD 12,196. For upper-middle income countries, criteria are in place to determine whether an HIV, TB or malaria epidemic is high burden, and only countries that meet these are eligible for Global Fund support. An upper-middle income country may apply for funding allocated for combating HIV/AIDS, if the prevalence rate is greater than 5% among high risk groups (men who have sex with men, sex workers, injection drug users, etc.), or greater than 1% among the overall population. As regards the requirements for defining a tuberculosis epidemic as high burden, a country must be listed on one of the two WHO lists[3], while for malaria the percentage of fatalities in the overall mortality must be above one

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** The author would like to thank Mr Pavle Demel, JAZAS economist, for the expert suggestions that significantly contributed to the quality of the analysis.

1 The Global Fund is an international agency that funds projects for the prevention and treatment of HIV/AIDS, malaria and tuberculosis.

2 The Global Fund uses the classification of countries by GNI *per capita* published by the World Bank in its last annual report.

3 The list of tuberculosis high-burden countries of the World Health Organization (WHO), or the list of countries with 97% of new TB cases that are dependant from HIV/AIDS.

per mille. If the country is granted funds from the Global Fund, the amount thereof may not exceed 100%, 65% and 35% of the national disease program budget in the case of low, lower-middle and upper-middle income countries respectively. High income countries are not eligible to apply for Global Fund support.

We believe that the requirements defining an HIV/AIDS epidemic should be changed, unlike the requirements for TB and malaria. We propose a new method for calculating the maximum percentage of support for upper-middle income countries, while percentages for low and lower-middle countries would remain the same. As previously, the funds must be directed towards projects targeting poor and vulnerable populations. The proposal for changes to the rule on the maximum percentage of support for upper-middle income countries is the same for all three diseases, since the reasons for which the rules ought to be adjusted are unrelated to the type of disease under consideration. By accepting the new rules on the maximum percentage of support, the funding among *these* countries will be distributed more fairly, regardless of the type of disease.

The current criteria favor the richer countries in World Bank's classification based on their GNI per capita, decreasing Global Fund activity in the countries that lack the capacities to independently combat HIV, neglecting projects targeting the poor populations at a time when the consequences of the financial crisis are still being felt in many upper-middle income countries. The criteria we propose would provide to distribute the funding more equitably among these countries, focusing on the poor, ensuring the continued presence of the Global Fund in upper-middle income countries and preventing the applicable criteria from leading to an extremely disproportionate distribution of funding among the regions.

This paper was produced upon initiative of the JAZAS non-government organization (NGO) based in Belgrade, as a result of the need for upper-middle income countries to organize and, based on the arguments in this analysis, lobby for changing the Global Fund's eligibility criteria. Following the Introduction, in Section 1 of this paper, we review the weaknesses of the GNI, as one of the eligibility criteria. In Section 2 we have attempted to prove that the impact of poverty on HIV spread is underestimated, in Section 3 we present our opinion that most upper-middle income countries are unable to independently combat HIV/AIDS, while in Section 4 we emphasize the relevance of the current financial crisis. In the conclusion of this paper, we propose changes to the Global Fund's eligibility criteria.

1. Weaknesses of GNI as the Only Eligibility Criterion

One of the eligibility criteria of the Global Fund is GNI per capita, because it is believed that its growth is an indicator of the increase of a country's economic power and consequently society's capacity to allocate more funding for combating HIV and decrease dependence on foreign aid. However, this indicator fails to provide information on social relations within the society, on the percentage of poor, the level of inequality in the distribution of the national wealth, the balance of the foreign trade account, the share of military spending in the budget, grey economy and other factors that significantly determine the capacity of a state to combat HIV. This is why it is possible for two countries to have a similar GNI level per capita, while other listed factors and consequently their capacities for combating HIV differ, but the same eligibility criteria will apply to both. We agree that it is difficult to have eligibility criteria that will distribute the funding more fairly among countries that have the same GNI level per capita, but currently the same criteria are applied to all upper-middle income countries, despite the fact that they are very different from each other. By applying the same eligibility criteria to all countries with a GNI per capita between USD 3,946 and 12,195, the poorer countries are placed in an unfavorable position. We do not think that the GNI per capita, as one of the key eligibility criteria, should be replaced by some other indicator, because it is easy to understand, it is regularly updated and published, which is why it is used by many international organizations, however, we believe that new rules should be introduced that are related to this indicator. By exposing its weaknesses, we are building arguments in support of our proposal for amendments to the Global Fund's overall eligibility criteria.

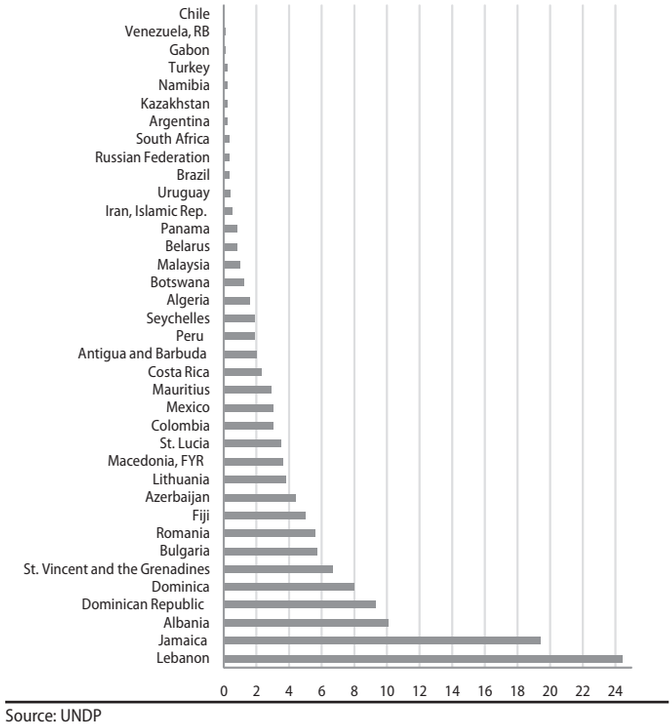
The key difference of the GNI per capita in relation to GDP per capita is that it reflects the standard of the population more accurately. The GNI is measured by adding the GDP to net income from operations and property abroad. This is how we avoid misrepresenting the capital not available to households as part of the country's economic power. A good example of that is Luxembourg, where there are 90,000 workers commuting from Germany, France, Belgium and The Netherlands. These workers are not part of Luxembourg's population, which is why it is believed that they do not contribute to the national income. This is why the GDP per capita in 2008 amounted to USD 84,713 while the GNI per capita was lower – USD 63,978. There are numerous examples of emerging economies where foreign companies account for a significant share of the domestic production, (e.g. oil extraction), but most of the

revenues are transferred to the countries where the latter are based. For this reason, the GNI per capita was selected as one of the eligibility criteria instead of the GDP per capita, as it makes no sense to include the income of foreign workers and the profit of international companies that is not spent in the host country in the classification indicators, because these are not potential funds that can be allocated to combating HIV. Aside from this difference, the GDP and GNI *per capita* are very similar, so that the standard criticism of the GDP as an indicator of economic power also applies to GNI.

National accounts do not include grey economy activities, (these are usually legal activities, unlike the "black market" ones), which go hand in hand with tax evasion, so that comparisons between countries based on GNI per capita are not exactly precise because the share of the grey economy in them differs. This share can reach high figures even in developed countries, e.g. the IRS estimates that around 4-8% of the economic activity in the US takes place within the grey economy area, and this percentage is considerably higher in developing countries. Many upper-middle income countries have serious problems with corruption, grey economy and tax evasion. If we could measure the value created by the grey economy, probably the country ranking would be somewhat different and some would move from the lower-middle to the upper-middle income group.

GDP and GNI calculations do not take into account informal labor, child care, housework and volunteering activities. The capacity of a country to successfully combat HIV depends on the network of NGOs that often function with the help of volunteers. In regions with strong social ties, HIV patients can be assisted both by relatives and friends, as well as NGO volunteers. These contributions are not registered as a part of the GNI because they are not accompanied by personal income or state costs. In countries with high social capital, the status of persons infected with HIV can be significantly improved, and the state's capacity to combat HIV increased, but this cannot be determined on the basis of GNI per capita indices.

L3-1. Value of Remittances Expressed as a GDP percentage



Source: UNDP

The funds that the expat community sends to their country of origin as financial support to their relatives and friends are called remittances. Total remittances in 2008 amounted to USD 328 billion (Ratha et al. 2009). Foreign remittances can have an important impact on the purchasing power of the population and macroeconomic balance and this category is not calculated in the GNI. By adding net current transfers to the GNI we get the Gross Disposable National Income (GDNI) indicator that gives us the most accurate information on the total disposable income that can be used either for consumption or savings. In some upper-middle income countries the percentage of foreign remittances exceeds 10% (Graph L3-1).

For instance, if we were to add the net amount of foreign remittances to the national income of Honduras, this country would probably move to the upper-middle income countries. Often the capital received through foreign remittances are spent for health care and medicines. Based on comparisons of the countries' GNI, the economic power of states with a large expat community and inflow of remittances is underestimated. The indicator of a state's risk of over-indebtedness is the public debt ratio to GDP. How important remittances are for macroeconomic stability, is best illustrated by the proposal of IMF experts (Abdih et al. 2009), to change this indicator for countries with a high percentage of remittances from abroad into public debt/(GDP + remittances).

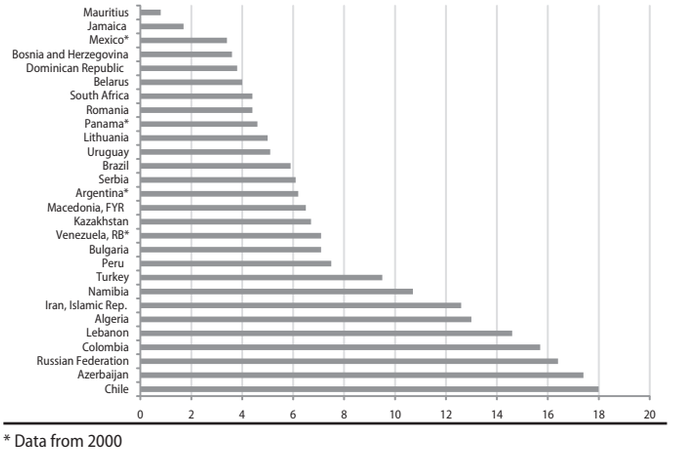
The GNI per capita indicator only provides information on the average income on the national level and not on how the total income is distributed among the population, which may provide important information on the status of vulnerable groups in the society. The inequality increases the chances for discrimination of marginalized groups, increase of poverty, crime, number of drug users etc. A country with less inequality usually has a more efficient health care system than the one in which inequalities are more marked.

The growth of GNI per capita does not necessarily lead to poverty reduction and the improvement of the status of marginalized groups. While key indicators of economic progress, such as the GDP, indicated a post-recession improvement of the economy, the average income households have not felt this. Instead of analyzing average sizes, Nobel Prize winner Stiglitz proposes focusing attention to the median, which entails using the median GNI per capita instead of the GNI per capita. This is a burning topic, so upon initiative of French President Sarkozy a Commission has been established in charge of improving the indicators for estimating the prosperity of the population with greater reliability, in contrast to the standard criteria such as GDP and GNI.

Data on GNI per capita say nothing about whether a country has macro-economic problems and these can limit the state's capacity to combat HIV. According to eligibility criteria, there is no difference between countries with the same GNI per capita that have different foreign trade deficit levels. An example of that is the controversy concerning China. Over the last eight years, China has been awarded more than USD 1 billion in grants through the Global Fund, although it has only donated USD 16 million over the same period. Thus it got 60 times more than it invested. At the same time the total foreign currency reserves of this country are estimated at around USD 2.5 trillion, as a consequence of long-term trade surpluses. China invests a significant portion of this capital into US securities, and on the other hand, it gets quite a lot of money for combating HIV/AIDS through foreign funding. Jack Chow, former Assistant Director General of the World Health Organization (WHO) and a recognized expert who has done much to bring the Global Fund idea to fruition, said that China acquired its status because of a "loophole" (Chow, 2010) in the existing eligibility criteria system. On the other hand, countries with a high foreign trade deficit are generally forced to reduce budget expenditures, in order not to jeopardize their financial rating and prevent domestic currency crisis, so the funds allocated to health care are often insufficient. As countries with a high surplus can increase health expenditures more easily, it would be more rational if support for combating HIV/AIDS were to be granted to those countries with high deficits instead. Several lower-middle income countries currently have stand-by arrangements with the IMF, due to over-indebtedness, risk of sudden depreciation and high deficit. These countries have more difficulties to set aside funds for health care because one of the usual steps and also explicit requirements of the arrangement in stabilization programs is the reduction of public spending. We know that ideal eligibility criteria do not exist, we hereby emphasize the weaknesses of the existing ones because we believe that with a minor correction of the current criteria the overall global effects of the Global Fund projects could be greater.

The GNI indicator includes defense expenditures, so it does not necessarily mean that a country with a higher GNI per capita has greater potential in relation to those with a lower one, if that second country has modest military expenditures. The situation is very often quite the opposite. It is difficult that funds will be redirected from the military budget to the health sector and often countries with a high military budget are at risk of war or have had conflicts in the recent past. A common consequence of military conflicts is discrimination of minorities, members of the opposing side in the conflict, neglect of risk groups and the general feeling within the political elite that there are more important issues than health care that the state needs to attend to. Expecting successful state action against HIV under such conditions is highly unrealistic. Thus the conclusions about the capacity of the state to combat HIV based on GNI per capita are generally overestimated in the case of those countries that have significant military budgets, or war or terrorism risks.

Graph L3-2. Military Expenditure Expressed as a Percentage of the Central Government Expenditure



* Data from 2000
Source: World Bank

These are all reasons for which the "perfect" criteria should make a distinction between countries with the same GNI per capita level instead of equating all countries in the same group. This is exactly what the current eligibility criteria are doing – treating all upper-middle income countries in the same way. The World Bank classification system classifies all countries with a GNI *per capita* between USD 3,946 and 12,195 into the upper-middle income group and countries at the top of this list are three times richer than those at the bottom. One of the eligibility criteria is the total amount of Global Fund support may not exceed 35% of the state budget for combating HIV, so that the

poorest and richest countries are treated in the same way. Thus disproportionately more funding is awarded to richer states, which is unjust, and the consequence is the reduced efficiency of invested funds. Also, when a country transitions from the lower-middle income to the upper-middle income group – this percentage is reduced from the former 65% to 35%. Thus the countries are abruptly "punished" in this transition for the marginal increase in the GNI per capita, due to taxative limits of the World Bank's classification. A good example of that are Equador and Peru, two relatively similar countries that share the same border. For Ecuador, which has a GNI per capita of USD 3,730, the requirement of maximum 65% applies and for Peru 35%, even though its GNI per capita is higher than Ecuador's by only USD 260. Our proposal for the adjustment of the criteria will partially eradicate these flaws, ease the sudden reductions of the maximum percentages as countries transition to the upper-middle income group and introduce different maximum percentages for the richer and poorer countries within this group.

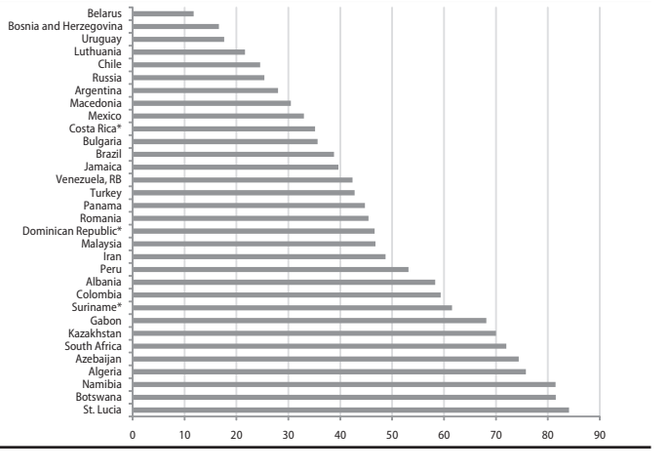
2. Poverty in Upper-Middle Income Countries and Risks of HIV Spread

The population living in poverty, as one of the HIV risk groups, is not insignificant in the upper-middle income countries and it often benefited from the Global Fund projects. The state programs in these countries seldom target the poverty-stricken population, so that foreign support played a decisive role in reducing the risk of an epidemic in this vulnerable group. Absolute poverty is not a phenomenon typical only of the low income countries, as approximately 4.4% of the population in the upper-middle income countries live on less than two dollars per day, under the pressure of inequality and lack of opportunities, resulting in the widely spread activities that precipitate the HIV epidemic, namely: prostitution, drug abuse and crime. An indolent attitude of the countries towards the poor in their programs against HIV and the concurrent decrease of the Global Fund activities will result in the formation of a new vulnerable group at the global level, comprising roughly 40 million people in the upper-middle income countries. They will be left at the "mercy" of the states, which have so far shown less than sufficient sensibility for their problems, while being completely out of the reach of the foreign assistance, which has so far been predominantly distributed through the Global Fund.

The eligibility criteria are more rigorous for the upper-middle income countries as they are considered to be relatively rich and capable of funding the HIV/AIDS treatment and prevention through their own economic capacities, while some of them are soon expected to progress to the group of high income countries. The first thing that comes to mind when thinking about people living below the absolute poverty line are low income countries. However, according to the latest estimates (Sumner, 2010), three out of four people on the planet who live below the absolute poverty line are in the lower-middle or upper-middle income countries, roughly about a billion people. That is nearly a billion poor people, who have not benefited all that much from the fact that their countries left the group of low income countries. Next year China will probably join the upper-middle income countries, which will result in the fact that approximately one sixth of the world population living on less than 1.25 dollars per day will find themselves in this group! When considering the use of the World Bank country classification, it should not be forgotten that in the upper-middle income countries there are also people who are very poor. Certainly, we are not implying that eligibility criteria are based on false presumptions but, rather, that account should be taken of the fact that economic growth in the countries failed to contribute to poverty reduction as much as it was expected to, and that the upper-middle income countries are also facing the problem of poverty.

Inequality is very strong in the upper-middle income countries, with adverse effects on the health of the population, while poverty is concentrated in a narrow zone around the national poverty lines and in the minority groups, so that the statistical data which are most often interpreted do not outline the amplitude of the problem accurately. Many countries do not publish the absolute poverty data. Instead, they are more focused on the people living below the national poverty line. For instance, upon joining the European Union, Romania started conducting surveys in line with the new standards, which do not include the measurement of absolute poverty, although the World Bank gave an estimate that more than 4% of Romania's population lived on less than two dollars per day. Given that the poorer part of the population is often concentrated around the national poverty line, a slight upward shift of the line can lead to completely different conclusions. A study in South America compared the share of the population living below the national poverty line and the share obtained by raising the line by a statistically acceptable degree (Fisher, 2009). According to the first approach, the share of population below the national poverty line was 12.7%, whereas after raising the line it shot up as high as 65.8%. As a result of the methodology applied in the poverty surveys, the number of the most disadvantaged persons, especially in the minority groups, was often underrated, as indicated by the results of the research (UNDP, 2007) conducted on the Roma population in Bulgaria and on the

Graph L3-3. Percentage of Population Living on Less Than Five Dollars Per Day in the Upper-Middle Income Countries[1)]



1) To calculate the percentage we used the PovcalNet web application.

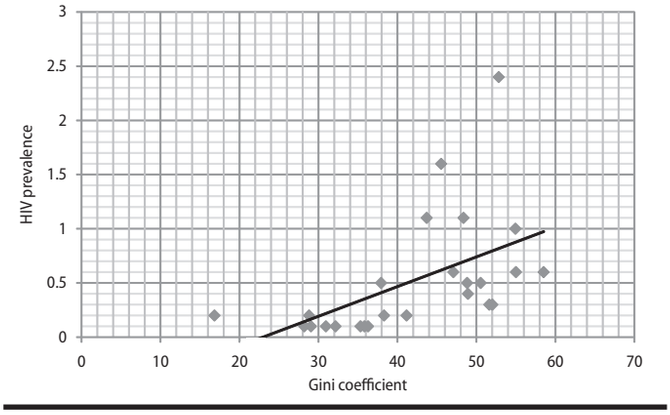
indigenous peoples of Mexico and Honduras. In one year, the percentage of those who lived in Bulgaria on less than one dollar per day was only 0.05%, whereas more than 10% lived on less than two dollars per day. About 51% of the poorest population are Roma people, who are exposed to discrimination and unequal access to healthcare services. According to the same research, in the period 1990–2006, two upper-middle income countries – Argentina and Venezuela, achieved almost no progress in decreasing the percentage of extreme poverty. In the said period, these two countries experienced considerable economic growth, which illustrates that the growth of GDP per capita need not entail improved living standard for the people in absolute poverty. Poverty is underestimated in the urban communities (Satterthwaite, 2004/Ravallion et al. 2008), which is exactly where the risks of an HIV epidemic are the highest. A significant portion of the population in the upper-middle income countries live in similar conditions to those endured by the population of the poorest low-income countries. Nevertheless, due to the effective eligibility criteria, they are unfortunately denied the required level of access to Global Fund support.

Poverty and inequality are important factors influencing the quality of health, due to the shortage of economic resources and social capital in the society. Historically, other risk factors have sometimes prevailed over poverty, but never in the long term, since poverty is still perhaps the critical factor of an epidemic (direct or indirect) outside the high risk groups, even in the most developed countries. It is difficult to disassociate poverty from the other factors over time, since its relations with and influences over the other factors are complex. The influence of the social factors, on which the level of an HIV epidemic depends, is changeable over time since they are, essentially, a complex integrated network of intertwined social structures and economic systems. Within this integrated network of factors, poverty can only temporarily be less dominant, since the burden it entails and the power to destructively influence human behaviour never end.

Deviant social behaviour is more often noticed in conditions of poverty, which are almost always accompanied by various forms of inequality and discrimination: "People that live in poverty are more likely to engage in drug abuse, become criminals and suffer from bad health. Deprivation increases the risk factors and weakens the protective factors, such as strong family and social bonds, positive self-esteem, education, employment and sufficient income." (Foster, 2000).

Effects on the overall health status include the increased risk of HIV: "Poverty and social exclusion exacerbate not only the risks for drug dependance and criminal behaviour, but also lead to an increased risk of infection with HIV and other blood-borne diseases. Persons that suffer from drug dependence are particularly vulnerable as they often share needles and have been found to be more vulberable to risky sexual behaviour." (Foster, 2000).

Graph L3-4. Relation between HIV Prevalence and Inequality in Society



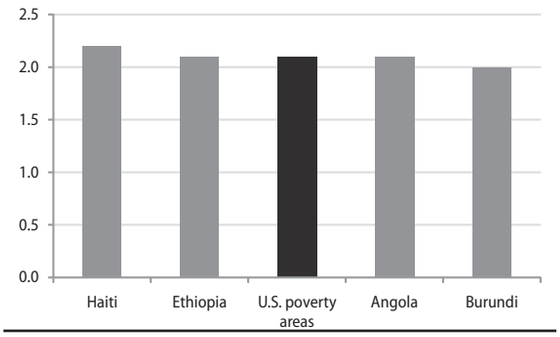
Inequality does not affect both sexes evenly and it critically influences the risk of HIV among the female population. For instance, the women who lose their job are often unable to support their families due to loss of income, which makes them resort to providing sexual services for money. For lack of power, they are not in the position to insist on using condoms during the sexual intercourse, and they are often victims of domestic violence, as well. When they lack money to buy drugs, women drug addicts engage in prostitution

and thus become a part of the vicious circle: drugs, prostitution, violence and HIV.

A meta-analysis of more than 134 studies (Kondo et al. 2009) of the effects of inequality on the overall health of the population determined that the negative effects start to appear when the Gini coefficient is above 0.3 and that the rise of the coefficient beyond this limit precipitates the increase of the negative effects on the health of the population. By following these conclusions, in order to outline the link between inequality and HIV prevalence in the population, we did a cross country regression for the *upper-middle* income countries (Graph L3-4) based on the data on the Gini coefficient and the HIV prevalence in the population aged 15–49 across different countries. It clearly illustrates that the increase of the Gini coefficient causes the increase of the HIV prevalence, which leads to the conclusion that the relevance of poverty and inequality must not be disregarded when discussing the HIV paradigm in the upper-middle income countries.

According to World Bank estimates, some 4.4% of the population is living below the "moderate" poverty line (under two dollars/day) in upper-middle income countries. Considerably more attention is paid to the national poverty line that every country calculates for itself. Some oversights are being made – for example, new EU member states do not calculate the number of the population living below the absolute poverty line, because the calculation method was adopted when such a population did not exist in "older" member states. Furthermore, the measurement of the population living below the absolute poverty line does not provide adequate information because the effects of poverty are continuous and do not cease after the line is crossed. Populations are often concentrated around the absolute or national poverty line, so the poverty lines (statistically speaking) yielded varied results depending on small shifts in the poverty line. Emerging from a group living with less than USD 1.5/day does not imply that the position of a person has changed dramatically, rather this means that multiple barriers and suffering are still present. As the population numbers in the sample are rather low, the margin of error during assessment is rather high. Polltakers have more difficulty in accessing and working in suburban settlements of the poorest population (slums), so it is possible that the numbers of the most vulnerable populations are underestimated. An additional issue lies in that different methodologies are sometimes applied in various geographic areas, yielding an imprecise summary estimate. It would, therefore, be more effective to conduct surveys of the population below the absolute poverty line separately for specific and minority groups. The poverty of the Roma in Bulgaria, as well as the indigenous population in Honduras and Mexico, is underestimated regarding the number of the poor. By applying the PovcalNet in case of Bulgaria, the author came to a conclusion that approximately 0.5% of the population is living with less than a dollar per day and as many as 10% of the population living with less than two dollars per day. The eligibility criteria should prevent the "invisibility" of the marginalized and impoverished groups of the population in upper-middle income countries, whose financial status is similar to the status of the citizens of countries with lower income. The country will fail to tackle their issues and foreign assistance will sidestep them. If the estimates are considered to be lower than those published, it is worrying that some 40-50 million people will be excluded from the global HIV/AIDS aid system, solely on the basis of the fact that these people live in countries where other citizens are "better off". As mentioned earlier, according to some authors, surveys underestimate poor urban populations (Satterthwaite, 2008/Ravallion et al. 2008). It may be concluded, based on these facts, that the issue of poverty in upper-middle income countries should be included in the paradigm of combating HIV.

Graph L3-5. HIV Prevalence in Impoverished Urban Areas in the US and Some African Countries



Source: "Communities in Crisis: Is there a generalized HIV epidemic in impoverished urban areas of United States?"

One of the latest surveys (Denning et al, 2010) in the USA confirmed our opinion that neglecting the poor as a vulnerable group may lead to an increased prevalence. Districts inhabited with more than 20% of inhabitants living below the national poverty line were analyzed based on a sample from 25 larger cities. The sample did not include members of high-risk groups (MSM, IDU, SW, CSW) so as to isolate the impact of socio-economic factors. The epidemic in this population totals 2.1% - representing a general epidemic according to the UNAIDS classification. The data distinctly indicate that the prevalence in poor districts is inversely proportional to the amount of income (Graph L3-5). The higher the income – the lower the possibility that a person gets infected. The difference is worrying: a person with income below USD 10,000 a year is seven times more likely to become infected with HIV in comparison to a person with income above

USD 50,000 a year. Due to their "invisibility", the prevalence among the urban poor population in one of the most developed countries of the world has reached the level of an epidemic among the general population of some African countries (Graph L3-5). Furthermore, the inverse relation of all socio-economic variables in the survey (education, annual income, poverty level, employment, homelessness) turned out to be statistically relevant. A heterosexual person living in a poor district is as much as 20 times more likely to get infected by HIV in comparison to an average citizen of the USA. The American administration is preparing a new strategy for preventing and treating HIV/AIDS among the poorest populations, but it is surprising that such a growing epidemic has afflicted a country with substantial financial and technical resources, including top experts, and that there was such a failure to target the most vulnerable group – the urban impoverished population. Such a scenario may easily take place (or is already happening) in some *upper-middle* income countries, and we are of the opinion that it is naïve to expect that their governments will be independent and efficient in treating vulnerable groups, in particular following the example of a developed country such as the USA.

As a relevant factor of an increased risk of HIV epidemic, the public predominantly links poverty to Africa and lower income countries, although it is evident from our study that this is more than a trivial issue in upper-middle income countries as well. In these countries, social exclusion and discrimination prevent this population from benefiting from state-financed preventive and treatment programs. The role of the Global Fund in financing and assisting projects which would directly or indirectly target the poor is probably the only way to increase the attention paid to the population and increase the respective national capacities and social capital, in order to create conditions for upper-middle income countries to continue combating HIV in the future and minimize the adverse effects of the neglect for the poor. The eligibility criteria is currently set to the maximum percentage of 35% of the national budget for funds that a country may receive from the Global Funds for all upper-middle income countries, although the levels of GNI vary considerably (3,946–12,195 dollars). The funds are thus reallocated inefficiently, poorer countries receive less than they should and better-standing countries are favored. Our proposal therefore changes the rules so that different maximum percentages apply to poorer and richer countries within the group of upper-middle income countries.

3. The Inability of Upper-Middle Income Countries to Independently Efficiently Combat HIV/AIDS

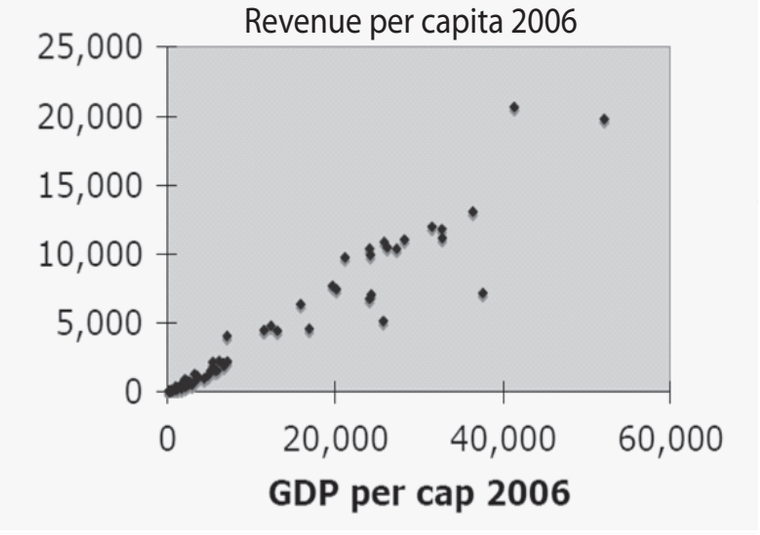
In addition to the financing issue, *upper-middle* income countries are facing a number of organizational, technical, social and political obstacles in their efforts to meet the Millennium Development Goals, wherefore it is questionable whether their public administrations and civil sector are "mature" enough and dispose of resources necessary for combating and treating HIV/AIDS efficiently. Their national health care systems are far from the development levels of the systems in *upper* income countries, raising the question whether they are able to achieve the goals without foreign assistance. Even in case of fiscal space for allocating the necessary funds, it is likely that there are no smoothly running health care mechanisms which would provide for successful prevention and treatment. Health care budgets shall be continuously, yet marginally increased in the future, leaving little fiscal space for an abrupt growth in the costs for HIV prevention and treatment. However, the prospects of successful action may depend more on institutions, social capital and political will. Currently, state systems in countries with *upper-middle* income pay extremely insufficient attention to vulnerable groups, while the prevention systems are obsolete and inadequately organized. In addition to these objective internal deficiencies of the system, costs of imported medicaments are often inadequate for the economic status of the infected, thus raising the costs of treatment and questioning the equity of setting the prices of medicaments by multinational pharmaceutical companies. The financial aid and assistance of the Global Fund are thus maybe the key components which may contribute to the effectiveness of the combat against HIV in upper-middle income countries.

There is a serious risk that the national health care systems would continue implementing inadequate policy targeting vulnerable groups should the Global Fund fail to provide assistance, which would increase the likelihood of future epidemic. Not only are vulnerable groups exposed to multiple discrimination and stigma, financial resources targeting these groups are extremely low. Of the total amount disbursed on prevention, as little as 1% of funds is allocated for vulnerable groups in countries with general epidemic, 7% where epidemic is concentrated and 6% if epidemic is low (Izazola et al, 2009). The disbursement of funds is highly uneven and does not correspond to the actual needs. According to the UNAIDS recommendations for 2010 (UNAIDS, 2009), 46% of the global budget for combating

HIV should be disbursed on prevention. However, pursuant to the survey conducted in 50 countries – only 20% of funds was allocated for prevention. A good example is Latin America (Brazil, Honduras, Panama, Columbia, Peru, Uruguay), where MSM account for 60% of the HIV infected, and only 0.5% of total funds allocated for prevention targets this particular group (Izazola et al, 2004). On average, lower-middle and upper-middle income countries disburse 10% of total funds on prevention, which is significantly below the targets recommended by UNAIDS. The Global Fund co-finances projects in a number of upper-middle countries which target vulnerable groups, and represents a cohesive factor of national and foreign funds. These projects actively involve non-government organizations, which have more extensive experience in conducting activities with vulnerable groups, in particular those stigmatized by society. If the resources of the Global Fund become unavailable, projects with vulnerable groups will be implemented ineffectively and likely reduced, despite being, on average, at a low level already. National healthcare systems in upper-middle income countries are not "mature" enough to conduct successful prevention independently targeting vulnerable groups, which shall have far-reaching adverse consequences.

The prevailing opinion is that the upper-middle income countries, their projected growth rates being relatively high, shall be able to substantially increase their expenditures on combating HIV/AIDS, however, the macro-economic barriers of future increases in the share of healthcare costs in the budget are underestimated, along with the risks of the crowding out effect. Excessive optimism, based solely on growth forecasts and combined with inefficient prevention programs and inadequate techniques for overseeing epidemic and risk groups, increases the chances for a negative scenario regarding the achievement of objectives of combat against HIV in upper-middle income countries. Thus a complex and careful approach is needed in upper-middle income countries, in order to avoid the shortsightedness and conviction that economic capacity is a sufficient condition for countries' autonomous implementation of successful strategies for combating HIV/AIDS. In order to avoid shortsighted optimism, let us recap the objectives of developed countries. How probable is it that developed countries shall meet the target of 0.7% GDP for Official Development Aid often mentioned in UN documents? There are a lot of skeptics regarding this issue, and it seems that there is significantly less care for meeting the objectives in upper-middle income countries. Before we start basking in optimism, potential financial and institutional barriers in upper-middle income countries should be taken into account.

Graph L3-6. GDP per capita (x-axis), Public Revenues per capita (y-axis), All Countries



Source: "Fiscal Space and Policy Space for Financing the Global AIDS Response to 2031"

The achievement of long-term objectives of combating HIV implies that developing countries allocate more and more funds on account of health care during their growth, so as to decrease the need for foreign grants and so that states may settle independently the most pressing needs of their citizens. However, these expectations are usually above the real levels due to intuitive feelings – and achievable only in case of the most optimistic scenario. The authors of a study (Van Der Gaag et al, 2009), who looked into the fiscal space and political capacities in the global combat against AIDS until 2031, estimate that the elasticity of costs of the health care system in relation to economic growth is on average rather low – 1.03 (Graph L3-6). More significant oscillations of the share of health care costs in the GDP, followed by heterogeneous policies are present in particular in the high income group. Middle income countries will not have sudden "jumps" in health care costs, rather the process shall take place gradually and over a longer period. It is true that middle income countries are expected to experience high growth in the future, but is this argument sufficient for achieving the ambitious objectives? It may be so, but the strict criteria of eligibility of emerging from a lower-middle into upper-middle group are not aligned with the reality of continued minor increase in the expenditures for health care on condition that the assumed economic growth takes place. The growth of costs is continued, and the eligibility criteria cause a sudden discontinuity after the "line" between lower-middle and upper-middle income countries is crossed. The costs of HIV/AIDS prevention and treatment should have a "jump" during the grey zone of crossing the "line", so that

the strategy may be continued. There is often a lack of balance between the inflow of funds (fiscal capacity) and the previous level of needs. Is the country able to ensure the necessary funds for HIV/AIDS after the cessation of foreign assistance through the rationalization of some other health-related costs? We are of the opinion that the inertia of state institutions and a lack of political will, in countries where the share of foreign assistance in the total HIV budget is not minimal, shall constitute serious barriers for the increase of costs in the said grey zone. The zone may take several years, in an environment where adverse effects of inadequate action may not be assessed. For example, the data on the infected and the prevalence among vulnerable groups are not reliable in many countries. Surveys fail or may not even be launched due to the stigmatization of marginalized groups. There is a debate on which country has the highest number of HIV infected and differences in opinion among Governments and the UN regarding this issue. In conditions of "imperfect information" (which is a mild description of the situation), the lack of adequate activities in the fight against HIV during the "grey zone" may lead to an increased number of the infected and the epidemic. Even a short-term failure to disburse adequate funds may have serious repercussions in epidemic-favorable conditions. Except for the lack of finances, countries undergoing the grey zone shall no longer enjoy the assistance of the Global Fund, which shall indicate their institutional weaknesses.

In case optimistic expectations regarding the amount of allocations for combating HIV are achieved, there is no guarantee that this shall lead to a more universal offer of health care services. The reason may lie in the crowding out effect, well-known in macro-economic studies. The increase in the health-related budget shall increase the scope of services offered by the system. However, the population which could afford the services of the private healthcare sector may redirect its demand during the process of increasing the offer of the public system. The ratio of benefits and costs in the public health sector is increased when the share of budget in GDP grows, along with the range of public system services. Then the private treatment beneficiaries find it rational to decrease their expenditures for treatment in the private sector. The crowding out effect occurs as they are in advantage over the impoverished and marginalized groups. Investments in the public sector reduce the consumption in the private sector, wherefore the total amount of investment in health care does not increase significantly. This leads to adverse social consequences and the failure to meet the initial reason for increasing the health care budget – to increase the coverage of health-related needs of the poor and other marginalized groups.

Making conclusions on the progress of countries in combating HIV/AIDS based on macro-economic indicators of growth and the percentage of health-related consumption in the budget is the result of an overly simplified concept of dealing with HIV, and the shortsightedness of such an approach may have adverse consequences. Insufficient involvement and orientation towards the poorest results in them being unequally included in the benefits of economic growth. The focus on the *scale up* concept may result in its formal achievement not being accompanied with the fundamental objectives used to accept the approach. The Global Fund plays an important role in eliminating such anomalies, and the savings of retreating from projects targeting *upper-middle* income countries may be lower than the potential costs in the future. We agree that it is necessary to keep increasing the share of national sources for covering the expenditures on combating HIV/AIDS in *upper-middle* income countries, however we also believe that even a small assistance of the Global Fund may constitute a key element of success. The Global Fund may have a decisive role in stimulating and controlling state programs to keep them focused on the poor and other vulnerable groups and minimize the *crowding out* effect. We are highly pessimistic with regard to the potential of state systems to combat HIV autonomously, and we believe that the presence of the Global Fund and non-government organizations which have thus far taken active part in their projects is necessary to avoid a potential epidemic in high-risk groups and impoverished populations in *upper-middle* income countries.

4. The Financial Crisis and its Impact

The global financial crisis that culminated with the collapse of the Lehman Brothers investment bank has led to the greatest global recession since the 30-ies in the previous century. The crisis originated in the developed countries but its effects were felt strongly in the emerging countries as well. Because of this, when talking about the fight against AIDS on a global level, one should include an analysis of the negative effects of the economic crisis, especially since it is still uncertain what future recovery will look like. The negative effects are not provisional but will be felt for years ahead. This is a sensitive moment, consequently the strategy for combating HIV/AIDS needs to be adjusted to the situation. It is only by taking into account the specific circumstances of developing countries that it can succeed. Further on in the text we will use the results of the survey conducted jointly by the World Bank and UNAIDS in 63 countries (UNAIDS, 2009), to argument our concern that the financial crisis may have a serious impact on

the continuation of the fight against HIV and the achievement of the Millennium Development Goals. Although individual country data are not mentioned in the analysis, the findings concern low and middle income countries together. However, if we observe the geographic location of the countries, it becomes evident that upper-middle income countries are jeopardized as well.

During the recession, developed countries have decreased demand for foreign goods, thereby affecting emerging country exports. This in turn decreased the level of employment that resulted in lower income for households. In cases where the state does not cover all HIV treatment costs, the poorer strata, whose income is jeopardized, often were unable to bear the financial costs for treatment and medication. Even if the state fully covers the costs of treatment, there are financial barriers limiting the poor in using public health care services. For instance, patients outside urban areas must cover travel costs, so they can give up treatment because there do not have enough money left for other expenses. This reduces demand for HIV/AIDS related services, increasing the number of ill in the future. Those who are close to the absolute poverty line have poorer nutrition due to reduced income, which in turn leads to decreased immunity in contact with HIV and a greater percentage of ill.

The offer for HIV/AIDS related services is under pressure of reduced domestic and foreign funding. As a consequence of the employment and income decrease in developing countries, the tax revenue mass has shrunk. Consequently the budgets cannot ensure pre-crisis level funding and the resources allocated for the prevention and treatment of HIV are often reduced. In Botswana tax revenues between Q2 and Q3 2009 dropped by 40%. The countries in which most of the funds for combating HIV are allocated from the state budget will be faced with the inability to continue funding at pre-crisis level. According to the aforementioned survey, 57%[4] of the countries included in the sample, will witness a decrease in state funding for combating HIV. This puts into question the goal of universal access, especially for marginal groups (MSM, SW and IDU), because funds are needed to reduce the stigma and discrimination of the poor. According to the same survey, 60 out of 63 countries will not be able to fulfill their plans for increasing the outreach of HIV patients, and in three of the countries it is expected that 26 thousand patients will be denied antiretroviral therapy. If a person stops the therapy, usually their condition deteriorates very soon and leads to death. It is increasingly more difficult for foreign donors to raise money so foreign aid is lower than before. A situation like this requires careful consideration and adjustment of the concepts of aid envisaged before the onset of the financial crisis. Neglecting the decreased demand for HIV/AIDS related services may lead to an increase of future costs and failure in fulfilling the Millennium Development Goals. This is why the time is right to re-examine past decisions and consider the fact that most upper-middle income countries are not on the path to keep on successfully combating HIV on their own.

Personal expenditures in many upper-middle income countries are dependant on the amount of foreign remittances sent by the expatriate community to cousins and friends in their homeland. As the income of expatriates in the western countries has also shrunk, foreign remittances have recorded a drop as well. It is estimated that the decline in employment in developed countries led to a decrease of about 7% in the level of foreign remittances, which is a loss of some USD 24 billion. This is a very important aspect when considering HIV and it is worth mentioning that according to a survey (Amuedo et al. 2009), the recipients of remittances from Mexico stated that 23% of these funds were used to cover treatment costs. The remittances are an important item in funding treatment in developing countries. The marginal decrease of foreign remittances can have a strong impact on HIV/AIDS related services demand.

The risks of the financial crisis relate to prevention as well, because the experiences of previous recessions indicate that governments cut prevention costs first, prior to cutting down treatment costs. According to the survey previously mentioned (UNAIDS, 2009), 59% of countries are expecting a reduction in funds for prevention during the course of 2010, and it is expected that all regions shall be affected in the future, excluding the countries in Eastern Asia and the Pacific. Non-government organizations are more efficient than state services with regard to successful prevention. However, 39% of non-government organizations have confirmed that they will cover a smaller segment of the population through prevention activities in 2009 compare to the previous year. The consequences of reduced prevention will mainly affect the stigmatized and marginalized groups, which are most often the epicenter of the epidemic.

There has been an abrupt decrease in the inflow of foreign capital into developing countries due to the financial crisis, many of which are dependent to sustain their continued economic development. The discontinuation of the inflow caused a macro-economic imbalance, including often the devaluation of national currencies. Thus the price of medi-

4 The sample includes 63 countries in which two thirds of the global number of HIV population resides.

cation was raised and became less accessible to the poorest population who are under pressure of lower income. The devaluation of national currency in the countries of Eastern Europe and Central Asia totals 20% on average, which significantly affects the price of medication in these countries. Due to the instability of the financial system caused by the economic crisis, six upper-middle income countries signed the stand-by arrangement with the IMF, one country extended the previous arrangement and two countries introduced flexible financing lines. Almost every fifth upper-middle income country established a more intensive relation with the IMF, indicating that this group of countries has serious difficulties in achieving the fundamental economic objectives. These countries are under considerable temptation, because they need significant reduction in budgetary spending to achieve macro-economic balance. On the state level, health care expenditures were reduced due to the program of macro-economic stabilization and the costs of antiretroviral drugs increased due to devaluation, thus the negative effect was "doubled".

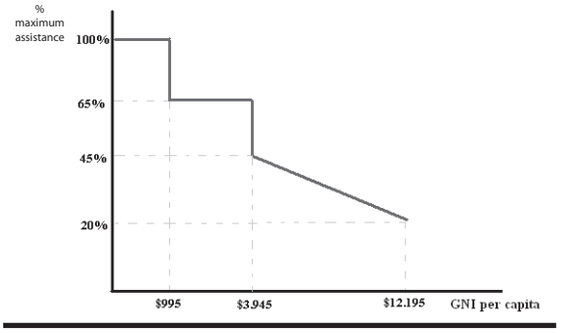
The negative impact of the financial crisis will be felt for years to come, which may jeopardize the achievement of planned HIV targets within the Millennium Development Goals. As there are fewer and fewer countries that fulfill the Global Fund's eligibility criteria, unless these are adjusted, the greatest majority of the funds will be directed to Africa and Asia, and the funding allocated to Latin America, Eastern Europe and Central Asia will be disproportionately low. *The negative effects of the financial crisis in combination with less and less funding available reinforce our argument that the eligibility criteria should be re-examined, because they were designed at a time when economic projections failed to forecast the Great Recession.*

5. Proposal for "New" Eligibility Criteria

We have thus far provided arguments in favor of the claim that eligibility criteria defining the gravity of the HIV epidemic should be "relaxed", along with those relating to changing the methodology for establishing the maximum amount of assistance expressed as a percentage of the national budget for each of the three diseases (HIV/AIDS, TB, malaria). We shall elaborate on our proposal for changing the eligibility criteria in this segment.

Fewer upper-middle income countries are competing for Global Fund funds since they do not meet the eligibility criteria defining that a state is eligible to apply for funds for combating HIV/AIDS only if the epidemic within the high-risk group exceeds 5%, or above 1% within the 15-49 age group. Some countries are currently spending the funds from the last stages of payments from previous grant rounds, received when they applied in line with the "old" criteria. Some other countries, becoming upper-middle income countries do not fulfill the requirements defining a severe epidemic, and therefore cannot apply for new rounds and continue financing their HIV programs through the Global Fund, since the "old" criteria relating to countries with lower-middle income no longer apply to them. State healthcare system do not have sufficient experience or knowledge in targeting vulnerable groups and the poor, therefore the position of the vulnerable population will be more difficult than before, while HIV programs were significantly financed through Global Fund projects. The inflow of aid funds is decreasing, while the space for state financing is growing ever tighter due to the negative effects of the financial crisis. Countries with macroeconomic problems as a result of the recession are particularly vulnerable, since a large part of their financing was met through the Global Fund programs, yet they no longer meet eligibility criteria. Unless the criteria defining a severe epidemic for upper-middle income countries are changed, we are at a risk of having the previously achieved scale up results turn into scale down.

Graph L3-7. Proposal for Changes of the Maximum Percentage Support Criterion



Early on in this analysis we listed several reasons why two countries with the same level of GNI per capita may have an unequal level of economic power, with the populations experiencing different living standards. Let us imagine two countries; one, with a GNI per capita of 12,000 dollars, a surplus on the trade balance, low levels of military spending, a developed NGO sector, a GINI coefficient below 0.3 and a high inflow of consignments from abroad, and a second country with a GNI per capita of 4,000 dollars, high military spending, a double deficit, a considerable portion of the population below the national poverty line, no high level of consignments, a GINI coefficient above 0.5 and an underdeveloped civil sector. Although the second country is, according to the GNI per capita indicator three times poorer than the first, and lacking in all the points noted, the current criterion defining the maximum

amount of aid expressed as a percentage of the national health budget is treated the same in these two countries. In addition to all the relevant differences, with the sole similarity in that they belong to the group of upper-middle income, both countries will be unable to procure funds from the Global Fund above an amount of 35% of the local budget for the specific disease. Since there are no perfect criteria to precisely measure all the advantages of the first country relative to the second, what we can do in order for the country that is poorer according to the GNI per capita criterion to receive at least relatively more aid in relation to the richer one is to change the way the maximum aid percentage expressed in the local budget for a disease is defined.

Instead of having the limitation in force for all upper-middle income countries of aid not exceeding 35% of the local budget, we propose to make this percentage variable depending on the level of GNI per capita, whereby the funds of the Global Fund would be disbursed more rationally and equitably. As evident from the Graph, the poorest upper-middle income countries may receive funds amounting to 45%, while the richest may receive a maximum of 20% of the local budget for the disease. Thus the maximum percentage continuously declines for countries with higher GNI per capita, representing a more equitable way of distributing the funds within the group of upper-middle income countries. The maximum percentage would be calculated using a simple formula[5]. The maximum percentages are fixed for other country groups – 100 % and 65 %, just as they were. The change in the maximum aid percentages with the changing level of GNI per capita is represented by the black line on the Graph. The percentage declines in steps as the country moves into the lower-middle income or upper-middle income group, then declines continuously with the growth of per capita GNI until the country moves into the high income group, thus losing the right to apply for Global Fund funds.

By "relaxing" the requirements for defining an HIV/AIDS epidemic as high burden, many upper-middle income countries will be given the opportunity to apply for the Global Fund grant programs, thus ensuring the continuity of Global Fund support to this group of countries, while the guarantee that funds will be allocated efficiently is the requirement for targeting the poor and vulnerable populations. Should the requirements for tuberculosis and malaria epidemics remain unchanged, we will be preventing upper-middle income countries to a large extent from applying for funding, because the needs and risks in low and lower-middle income countries are more significant for these two diseases. By applyng this formula for calculating the maximum percentage of support, we will avoid the sudden slump from 65% to 35% – when a country moves to the upper-middle income group, which systematically discriminates against the countries "climbing up" in the World Bank classification system. Also, the funds will be more justly distributed among countries so that the poorest countries in the upper-middle income group will be able to get up to 45% and the richest around 20%. These criteria are consistent with the principle of the Global Fund that aid to the poor is a priority and will improve the effects of the mission on a global level, as the funds will go to those who are most in need.

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5 Country maximum percentage = 56.7 – 0.3 x (GNI per capita of a country/100). For example, by applying the formula, Serbia's maximum percentage would amount to; 56.7 – 0.3 x (6000/100) = 38.7% ≈ 39% , instead of the current 35%

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