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of economic trends and policies in serbia



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Analytical and Notation Conventions

Values

The data are shown in the currency for which we believe best reflects relevant economic processes, regardless of the currency in which the data are published or which is in official use in described transactions. For example, *Serbia's Balance of Payments* is shown in euros, because the majority of flows in Serbia's international trade transactions is valued in euros, and because this comes closest to the measurement of real flows. A different example – the analysis of banks' credit activity in specific is shown in euros because the banking sector indexes it in euros in the majority of cases, but banks' credit activity in the *Monetary Overview of Serbia* is shown in dinars, because the aim of the analysis of the monetary flows is to describe the generation of dinar aggregates.

Abbreviations

GDP - Gross Domestic Product

EU - European Union

FREN - Foundation for the Advancement of Economics

MAT - Macroeconomic Analyses and Trends, Edition of the Economics Institute in Belgrade

IMF - International Monetary Fund

NBS - National Bank of Serbia

GDP f.c. - GDP at Factor Cost

OECD - Organisation for Economic Cooperation and Development

VAT - Value Added Tax

QM - The Quarterly Monitor

FDI - Foreign Direct Investment

FFCD - Frozen Foreign Currency Deposits

SITC - Standard International Trade Classification

WTI - West Texas International – oil and derivatives quotations

Q1, Q2, Q3, Q4 - 1st, 2nd, 3rd and 4th Quarters

Definitions of Aggregates and Indices

In cases where local use and international conventions differ, we attempt to use international definitions wherever applicable, for reasons of international comparison.

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

Flows - In monetary accounts, original data are stocks. Flows are taken as balance changes between two periods.

Traditional Economy - Economic subjects which are/were state-owned or public companies.

New Economy - Economic subjects formed through private initiative.

Notation

y-o-y - Index or growth in relation to the same period of previous year.

Cumulative - It refers to incremental changes of an aggregate in more periods within one year, from the start of that year.

H - Primary Money (High-Powered Money)

M1 - Cash in Circulation and dinar Demand Deposits

M2 in dinars - In accordance with IMF definition: cash in circulation, dinar demand and saving deposits. The same as M2 in accepted economic methodology in Serbia.

M2 - In accordance with IMF definition: cash in circulation, demand and saving deposits both in dinars and in foreign currency. The same as M3 in accepted economic methodology in Serbia.

NDA - Net Domestic Assets

NFA - Net Foreign Assets

A Note From the Editor



How is the Serbian economy doing? is the central question on which *Quarterly Monitor (QM)* will be focusing from issue to issue. Regular and insightful responses to the seemingly simple question require not only thorough knowledge of the problems standing in the way of progress, but also the data needed to interpret the developments. So, although *QM* will have a quarterly perspective, we felt the need to deal with a longer period (January-July) in this first issue in order to lay the groundwork on the basis of which we will be delineating further economic developments in Serbia. *QM* will not take the form of a serialized novel - we can only hope for, but not expect such a faithful readership.

QM's aim is to scrutinize macroeconomic, corporate and financial flows and policies in Serbia in an independent, integrated and, above all, **thoroughly researched** way. Our target groups are the professional community, economic decision-makers and those who formulate policy. We leave business cycle analysis to *MAT* (Macroeconomic Analyses and Trends), a publication of the Institute of Economics, to which we owe a debt of gratitude for many ideas. To *Ekonomski pregled NBS* (Economic Review of the National Bank of Serbia) we leave the comprehensiveness and weight of an official publication. With time, as we become more knowledgeable and experienced and gain more associates, we will more boldly offer projections, and delve deeper into policy advice. Nonetheless, our primary goal is to provide as clear and complete as possible information on the basis

of which the professional community in Serbia can hold analytic debates. We retain the right, and pleasure, to present our stands in a straightforward way, without too much formality, but with the utmost respect for the logic of research: assumptions will be called assumptions, facts will be called facts, and proof will be called proof - although, as any good researcher knows, very little can be incontrovertibly proved.

In this first issue it is also necessary to point up the challenges facing all who wish to analyze the trends in Serbia's economy, and to give an "instruction manual" for *QM*. In a somewhat different form, our principal question was borrowed from an article in the British magazine *The Economist*, excerpts from which are carried in the International Environment section. However, our approach must necessarily differ from the approach adopted by *The Economist*. While their challenge was to uncover the cause-and-effect links between the economic indicators they had at their disposal, our researchers had to start with determining the indicators themselves. Is economic growth really 6.1%? Are exports really recording an increase? Are interest rates rising or falling? These questions inevitably demanded our attention in this issue. Though it may sound immodest, taking a stand on reality is courageous and necessary. Courageous because, sooner or later, the developments will contradict you; necessary because economic policies are formulated in accordance with a stance on reality, whether explicit or not. Besides scholarship, it also requires spadework and a measure of ingenuity.

At least three difficulties stand in the way of gauging the real state of the Serbian economy. First, its **structure is extremely heterogeneous**. This means that indicators, which are inevitably averages, are extremely sensitive to errors in the estimates of components and, at times, simply do not make sense. For instance, the drop in business recorded by the major department store chain Robne kuće Beograd was accompanied by a rise in a series of small private stores. The chain is a part of what *QM* has dubbed the "**traditional economy**" i.e. companies that existed prior to the 1990s. The small stores are part of what we are calling the "**new economy**," i.e. everything that has been created since 1990, either *de novo* or an offshoot of some relatively insignificant kernel of the traditional economy. So, viewed in terms of averages, is the retail trade increasing or decreasing? The answer is that one kind is decreasing and the other increasing.

Second, in spite of the great strides made in recent times, our **statistics** is still not reliable enough in measuring all the phenomena it endeavors to cover; indeed some on which we need information are not covered at all. The problems are both the quality of the primary data and the huge amount of time and resources required to effect a complete methodological transition from observing a socialist economy in which the all-powerful Social Accounting Service covered the overwhelming majority of all business operations, to scrutinizing economic processes that often leave no visible traces. Serbia's statistics has not yet been provided with the funding to carry out such a

transition. The problem is particularly significant in view of the heterogeneous structure of the economy. To use the example cited above: only incredibly precise statistics can properly estimate the trend of a particular aggregate, e.g. employment, in two divergent contexts such as the demise of the department store chain and the emergence of the small private stores. If the methodology used to measure employment gives just slightly more weight to employment in the chain, the indicators would considerably underestimate the trend of total employment, while giving slightly more weight to the small stores would result in a considerable overestimation. Such divergences are naturally of little importance when there are many processes and when they are minor compared to the universe of processes. However, in our case, the traditional and new economies frequently move along orthogonal paths, and these aggregates are large compared to the universe. Official statistics gives more weight to the traditional economy for both historical and practical reasons - traditional companies are fewer in number and larger in size - and are consequently easier to monitor. Moreover, these are the companies with which statistics producers have a long-standing relationship. We take this into account when we cannot solve a dilemma in any other way.

Third, though the **accessibility of data** was the chief problem in the good, old days when the economy was homogeneous and the statistics precise, it is still very much in evidence to this day. Our economics continues concentrating on uncovering aggregates and indicators rather than on analyzing them. Monopoly over access to data sources in Serbia is still a sinecure, according those researchers who have it a privileged position. It is high time for knowing the data to stop being a **science** in itself and become just being **well informed**. Fortunately, this seems to be changing, but full access for the interested researcher is still a challenge. The key

producers of statistics are making great efforts to broaden and facilitate access. The Serbian Statistics Office (RZS), the National Bank of Serbia (NBS), and the Finance Ministry are publishing more and more data. The goals of the Foundation for the Advancement of Economics (FREN) include placing the acquired, methodologically documented and cross-referenced data at the disposal of the economic community. The openness statistics producers have demonstrated so far in cooperating with FREN, which we gratefully acknowledge, will contribute to upgrading the work of the economic community, as well as statistics itself.

We hope to make *QM* a “**user-friendly**” and **useful** publication. To this end, we will endeavor to standardize its structure, though we do not expect to attain this fully in the first few issues. For the time being, *QM* will consist of two sections and an analytic appendix. The first, entitled Trends, will consider economic trends - prices, exchange rates, growth, the external sector, and the fiscal and monetary sectors - in the preceding quarter. In coming issues we plan to introduce two subsections: Finance and Wages, and Employment. The groundwork for the Finance subsection is laid in this issue with an in-depth article in the second section - Spotlight on:. A similar article is being prepared for the Wages and Employment subsection in the next issue. Spotlight on: features articles designed to provide a deeper insight into the economic structure and processes in the country, especially through quantitative or comparative methods. The corresponding subgroup of statistical series used in the Trends section is presented in the Analytic Appendix for the convenience of readers. Longer, methodologically documented series, will be posted on the FREN web-site, now under construction, by the end of the year. Our goal is to spare economists from each investing their own time and effort in unearthing the data they need for analysis.

A survey of the trends in the Serbian economy is given at the beginning of the Trends section. However, this being the first, somewhat panoramic, issue, we will allow ourselves some remarks about the broader perspective. The trends described in this *QM* show how **the part of the economy demonstrating élan and vitality is clashing with the ossified, monopolized and unrestructured part. Hence the high inflation in spite of the growth being insufficient for our needs.** Until the ossified portion is restructured, the Serbian state must, above all, create conditions for the rest of the economy to thrive. And this can be accomplished only by saving and achieving a genuine and significant fiscal surplus. Accompanied by restructuring, this kind of policy could turn Serbia into an economic tiger. If, however, it does not materialize, we are doomed to merely survival and risk sliding backwards. Unfortunately, the institutional capacities for implementing such a policy are not yet apparent. This is particularly worrying in view of the fact that the successful conclusion of the program with the IMF is awaiting signals of this will and capacity.

On the move, although with high risks! is the answer to our question in this first issue. **The first piece of good news is that exports are recording serious growth. The second is the boom in the banking sector that indicates the existence of a robust profit potential in the country. And, third, though fiscal policy has not yet caught the bull by the horns, it has at least stopped running from the beast, helping this year to cool domestic demand a little.** If only it can resist the temptation to spend some of the resources saved, inflation may start going down gradually, though not sufficiently. This is the short-term story on which this issue of *QM* concentrates.



TRENDS

1. Review

Three indicators are used to take the macroeconomic pulse of an economy: the growth of the gross domestic product (GDP), inflation, and the current account balance. GDP growth plays a multiple role: it measures the achievement of the main policy goal, but is also important for analysis since it has a crucial effect on both the other indicators. Inflation measures the internal balance, i.e. the pressure of domestic demand on domestic production. The current account balance measures external balance, i.e. the ability to finance imports and payments with current revenue (mainly from exports) over the longer term. These two balances secure the sustainability of growth. Inflation was high (17% on a y-o-y base) in the first seven months, which usually bespeaks high domestic demand. The current account deficit dropped rapidly from 1,119 to 628 million euros, which usually indicates a sudden shrinking of domestic demand. And, according to the statistics, in constant prices, GDP increased 6.1% (in the first six months), a rate that usually goes together with high demand. Industrial production, however, fell 2.6%, which does not tally with such a high overall growth rate.¹

On the move, although with high risks! could be a reasonable interpretation of the pulse of the Serbian economy in the first seven months of 2005, when several layers of doubt as to the effects of extraordinary circumstances and just how representative the data is are peeled away. The tendencies in different segments of the economy are divergent. On the one hand, after the surge in 2004, production in the traditional sector fell in 2005, led by the acceleration and then deceleration of the investment activity of many companies privatized in the 2002-2003 period; its restructured parts, however, continue to grow. On the other hand, production in the new economy is increasing at a lively pace, but its poorer, "grayer" part, is probably in difficulties owing to the introduction of value added tax (VAT). Because of the insufficient restructuring of the traditional economy, any significant acceleration of growth generates inflation and spills over into increased external imbalance.

When it is taken into account that about one-third of this year's inflation was caused by exogenous factors - VAT and the hike in oil prices - and that the real improvement in the current account balance was far below the recorded (probably around 2 percentage points of the annual GDP), the apparent shift in domestic demand becomes more probable. The improvement in external balance was primarily the result of the growth of exports owing to the effect of the supply-side factor, and the decrease in imports was caused by imported goods becoming relatively more expensive, i.e. a radical reduction of disloyal competition owing to the introduction of VAT. Only after these two factors comes a third, the reduction in domestic (especially investment) demand, which certainly cut back capital goods imports, but not enough to come to grips with inflation in a meaningful way.

The banking boom deserves special mention. If things are as bad as we tend to believe, why are foreign banks so eager to do business in Serbia? Not even the NBS's direct restrictive

Judging by the key indicators, the pulse rate of the Serbian economy is unusual.

On the move, although with high risks! is the only reasonable interpretation.

The improvement in external balance is real ...

... and the banking sector is booming ...

¹ The described set of indicators is not impossible (nothing is impossible in economics) but not very probable. High growth of domestic demand coupled with a rapid improvement in the trade balance is possible if there is a sudden change in domestic prices relative to foreign prices, e.g. a sharp devaluation. However, the extent of the shift shown by our indicators could have been produced only by massive administrative measures, which, of course, was not the case.

measures have curbed the credit activity of banks, which increased the purchasing power of companies and households in the first seven months of the year by 5.4% of GDP. More than half this growth was directed at increasing the purchasing power of companies, whose borrowing is increasing at a high rate of 50% annually. In this context, though it created a surplus, fiscal policy was not tight enough. With the reduction of its net dinar debt to banks, the state increased savings by approximately 1% of GDP.

... but the introduction of VAT dominates the entire picture.

The introduction of VAT had a major impact on the 2005 figures, affecting both real trends and the credibility of the data. To mention only the most significant: VAT affected prices, increasing them by 2 to 2.3 percentage points, imports (and, to an extent, exports), which were stockpiled in December 2004 in anticipation of VAT. This resulted in a sharp drop in imports in the first quarter of the year, and probably had an effect in later months, too. It also gave an impetus to the legalization of the gray economy and to diverting capital from gray into official channels, which certainly contributed to the expansion of monetary flows. And, finally, we believe the practice of over-invoicing has been somewhat stemmed by the introduction of VAT.²

Domestic factors still have a strong impact on inflation ...

Domestic demand and increase in cost are still strong, as a closer look at the price trend and its determinants shows (inflation and the exchange rates are the first topics in Spotlight on:, and the third in Trends.) For eight months now, inflation has persisted at a high 17% compared to last year. In September it dipped slightly because both core and non-core prices grew at a slower pace than in 2004. At present, we see no reason for a repetition of the acceleration recorded last year, in which case a mild fall in y-o-y inflation could be expected by the year-end. Still, a serious turnaround with regard to prices can be expected only if the present, mildly restrictive, fiscal policy is tightened. The exchange rate has slowed down depreciation, both nominal and real, and bankers evidently expect the tendency to continue. Investment in repo-transactions³ is at an all-time high, even though interest rates have fallen below the level of current inflation. Bankers are obviously arbitraging a gap in the interest rate parity. (Repo-transactions and interest rates are considered in the last two parts of Trends, and the financial markets are analyzed as the fourth topic in Spotlight on:)

... though the pressure of investment demand on the traditional economy has abated.

Conclusions on the trends in the traditional and new economies are based on analysis of the indicators of growth of production and GDP in constant prices (fourth part of Trends), contrasting them with a detailed analysis of foreign trade trends (fifth part of Trends and second topic in Spotlight on:) and the existence of a vibrant credit activity by banks (seventh and eighth parts of Trends dealing with the monetary sector and interest rates). Both the drop in the output of traditional manufacturers of investment goods, and the declining imports of these goods testify to the slackening of investment demand. The brisk growth of the new economy is evident from the high growth rate of services, the surge in exports not only of major privatized companies (US Steel Serbia, the Sevojno aluminum mills, Tigar rubber products plant) but also a much broader spectrum of goods such as garments, shoes, chemicals and the like, and a significant growth of exports of intermediate goods, even when groups of products directly impacted by the demand of major privatized exporters are excluded. Nonetheless, the drop in imports of non-durable consumer goods shows that a part of the new economy was hit quite hard by the introduction of VAT.

The growth of export supply was the main reason for the improvement in foreign trade.

Particular attention is devoted to analyzing foreign trade flows as we believe much can be learned from them since relatively few go unrecorded by customs nowadays. In order to eliminate the effect of the increased imports in late 2004 in anticipation of VAT, we concentrate on the May-July period this year. However, because of the doubts mentioned earlier, we analyze the credibility of reported foreign trade flows in the second article in Spotlight on:.

² Stojan Stamenković has written about this practice in several issues of *MAT* this year.

³ More on repo-transactions in Section 4 in article in Spotlight on 4.

Our conclusion is that there are no grounds to suspect the recorded exports flows, and that the real drop in imports was most probably somewhat lower than registered. In any event, all the indications are that imports are slowly but steadily reverting to the previous trend.

The balance of payments and the trade balance really did improve in the first seven months of the year, though far less than shown by the statistics. This was due primarily to the long-awaited expansion of exports and the deceleration of imports caused by both market conditions and the change in the relative prices of domestic and foreign goods after VAT was introduced. However, still more important is that this year's increase of exports is in fact a continuation of a surge that started at the beginning of 2004 and which is apparently a reflection of more lasting supply side factors.

The appearance of foreign banks in the preceding period has dramatically changed the financial face of Serbia. These banks have access to the world capital market so at least that part of the Serbian economy which does business with them is integrating with the rest of the world. FREN's survey of banks, the preliminary results of which are summed up in this issue (in the part of Trends dealing with interest rates), suggests the existence of a deep gulf between segments of the economy that have or do not have access to the foreign banks. The inflow of foreign capital enabled by the integration referred to above indicates an increasing number of profitable projects in Serbia, and that someone recognizes this. Detailed information on the components of the capital balance is not yet available, but it is clear that the inflow consists primarily of both short- and long-term credits taken by the private sector, in particular banks. Foreign currency is obviously flowing in from the gray economy, so that this year saw a higher rise in foreign currency deposits than has ever been recorded in any seven-month period since 2000. Considering the process in detail in the part of Trends devoted to monetary flows, we show that neither the efforts of the National Bank nor the success of the competent Serbian authorities in collecting VAT have been able to drain the resultant excess liquidity.

The conclusion of the analysis of fiscal policy (sixth part of Trends) is that it is significantly more restrictive than last year but not enough to create a potential for the kind of upswing in investments the country needs. Last year, the investment demand of 767 companies privatized in 2003 was coupled with the demand generated by the fiscal expansion in the first half of the year, and the consumer demand of many people who sold their shares to foreigners at very good prices. At the time, such demand produced high economic growth, but also a widening of the trade deficit and higher inflation. Further fiscal tightening must be primarily through the reduction of spending, not increased taxation. And this reduction must be effected in a substantively restructured public sector, which requires concerted and long-term institutional preparations of the kind that are not yet apparent on our political horizon. It would appear that the reform of the pension system (the last topic in Spotlight on:) was not thus prepared.

In spite of the lack of homogeneity and the transitional difficulties, the macroeconomic pulse of Serbia is surprisingly similar to the world situation we describe in the next part: some segments are overheated and some are stagnating - and this is a picture that does not appear sustainable. Where Serbia is concerned, tightening of the fiscal reins by further increasing the surplus in fiscal accounts would create a potential for non-inflationary growth and, even more, help to fundamentally restructure the traditional economy. Since there was no privatization in 2004, this year did not see any autonomous investment demand by privatized companies. But it seems that banks are prepared to pick up the slack with credit financing. When the National Bank reins them in, which it is bound to do as inflation is still high, it directly affects the prospects for the growth of the Serbian economy. Continuing to correct the balance on the fiscal side, no matter how little but persistently, would improve the macroeconomic picture and make it more sustainable than it was last year.

Integration with the world capital market is changing the financial face of Serbia.

Fiscal policy is restrictive but not tight enough.

Serbia's pulse is surprisingly in sync with the rest of the world.

2. International Environment

The international environment is favorable, with a very high growth rate ...

As the British *The Economist* encapsulated it so well in the paragraphs below, the world economy is growing at a very high rate, but this is accompanied by very high risks. The growth is spearheaded by the burgeoning and highly indebted US economy and East Asia. As for Europe, it can on the whole thank its new member states for the growth it is recording, while the “old” Europe continues to stagnate. The economic conditions are not bad where our other trade partners in south-east Europe and Russia are concerned.

... of the world economy, in particular the US ...

“Is the world economy in good or bad shape? Judged by the pace of growth, it is in rude health. Despite soaring oil prices, the IMF’s latest *World Economic Outlook* reckons that global output will grow by 4.3% both this year and next, well above its trend rate. But by other measures, the risks are also growing. Inflation is picking up. America’s current-account deficit is now above 6% of GDP, an eye-watering level. And with the saving rate of American households now negative, consumers there look ever more financially stretched. The world economy, in short, is both surprisingly buoyant and worryingly imbalanced.

... but the risks are high.

“As a result, the outlook is more uncertain than the healthy rate of global growth indicates. Some big sources of today’s growth are ultimately unsustainable because even America’s consumers cannot forever spend more than their income, nor America’s foreign borrowing rise indefinitely. Eventually, global balance must be restored through slower spending-growth in America compared with that in the rest of the world. But no one is sure where the limits lie, nor how painful the ultimate adjustment will be. Will American consumers slow their spending first, or will foreigners first tire of lending America money? Will the shifts be sudden or gradual? And will spending elsewhere pick up the slack.”⁴

Europe is mainly stagnating.

On the other side of the Atlantic, the European Union faces an annual inflation rate of 2.6%,⁵ half a percentage point higher than in the first nine months last year. But GDP is growing, primarily because of the growth recorded by the new member states. Consumer spending is also rising, but, again, only in the new member states. The situation is similar with investments, exports, and imports. Where this country is concerned, what is important

The world economy is speeding but the EU is generally stagnant.

Table T-1. Global: Economic Outlook Summary, 2004-2005

In %	real BDP					consumer prices	
	over a year ago		over a year ago, saar			over a year ago	
	2004	2005	Q1 2005	Q2 2005	Q3 2005	Q2 2005	Q3 2005
Global	3,8	3,0	3,5	3,3	3,0	2,5	2,9
o/w:							
USA	4,2	3,5	3,8	3,3	3,5	2,9	3,7
Canada	2,9	3,0	2,1	3,2	3,8	1,9	2,7
Latin America	6,2	4,2	2,4	5,0	3,1	6,8	6,1
Japan	2,6	2,4	5,8	3,3	2,4	-0,1	0,1
Australia	3,3	2,4	2,1	5,2	1,6	2,5	2,8
China	9,5	9,0	9,5	6,7	8,5	1,7	2,7
India	6,9	7,2	6,9	10,0	4,0	4,0	2,6
Euro area	1,8	1,2	1,5	1,2	1,5	2,0	2,3
Germany	1,1	0,9	3,0	0,0	1,5	1,6	2,0
United Kingdom	3,2	1,6	1,0	2,0	1,5	1,9	2,3
Russia	7,2	5,9	3,2	9,9	7,0	13,4	12,4

Source: JPMorgan.

⁴ „Restoring the balance“, *The Economist*, September 24, 2005, p. 14

⁵ Growth of GDP in EU countries in the first half of 2005 as against the same period last year.

is that, despite the drop in consumer spending in Germany (-0.3%) and Italy, our exports to these countries are rising. Does this indicate that our products have become competitive? The answer cannot but be affirmative since the rise is taking place in spite of the fact that those economies are highly export-dependant (Germany's foreign trade surplus stands at 4% of GDP), and that they need to switch output toward domestic consumers.

The rise in oil prices on the world market certainly helped to maintain the GDP growth rate of Russia, our leading foreign trade partner, at a high level. Nonetheless, as a result of internal market instability and political problems, it increased at slower pace in the first half of the year than in 2004. The rise in exports to our region, the result primarily of the relatively stable political and economic situations here in the preceding period, is important in view of the fact that the bulk of Serbia's trade is with the former Yugoslav republics. The establishment of a free trade area in south-east Europe would contribute to improving the economic position of the countries in the region and ease their way toward the European Union.

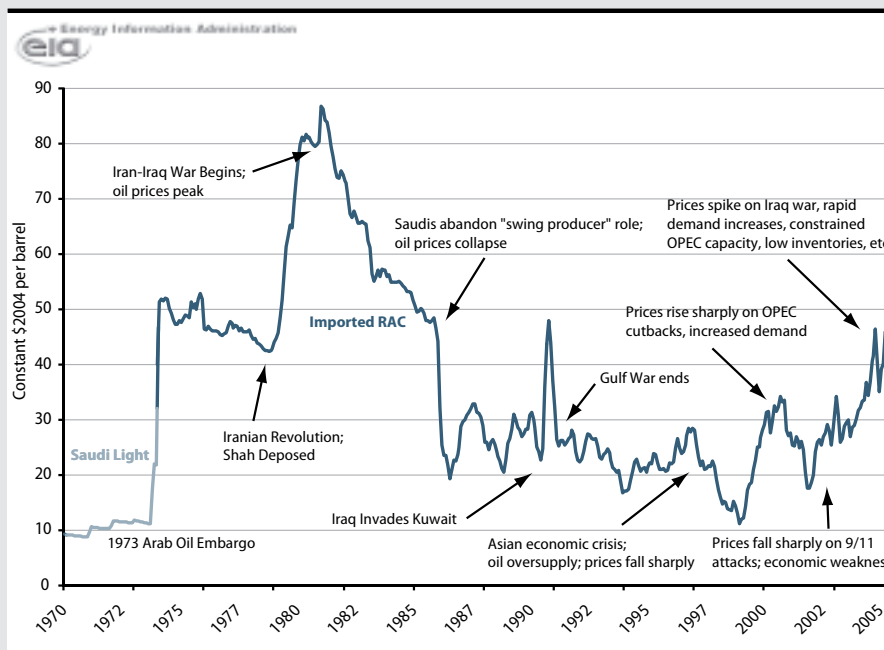
And Russia and our neighbors are mostly doing well.

Box 1. Soaring oil prices in 2005 have not yet impacted global economic growth

The price of crude oil (WTI) soared 39% in the first seven months of the year. The concern is whether this sharp rise will cause upheavals in the world economy, as was the case during the two earlier oil crises. The answer depends on long-term supply-demand trends, which have affected and still affect the prices of crude and oil products.

Oscillating supply. Oil prices began to rise in 2003 after a sudden drop in total production (see Graph T-1). This was compounded by the general strike in Venezuela in December 2002 and the **wars** in Iraq and Nigeria. On top of this, **old oil wells**, such as those in the North Sea¹, are producing less and less; Iran is also confronted with a sharp fall in production (9%). In addition, **Russia's** exports slowed down in the past two years following the Yukos scandal

Graph T-1. Major Events and Real World Oil Prices, 1970-2005
(Prices Adjusted by Quarterly GDP deflator, 2Q 2005 Dollars)



Source: Energy Information Administration.

Oil price hikes have been usually triggered by supply shocks.

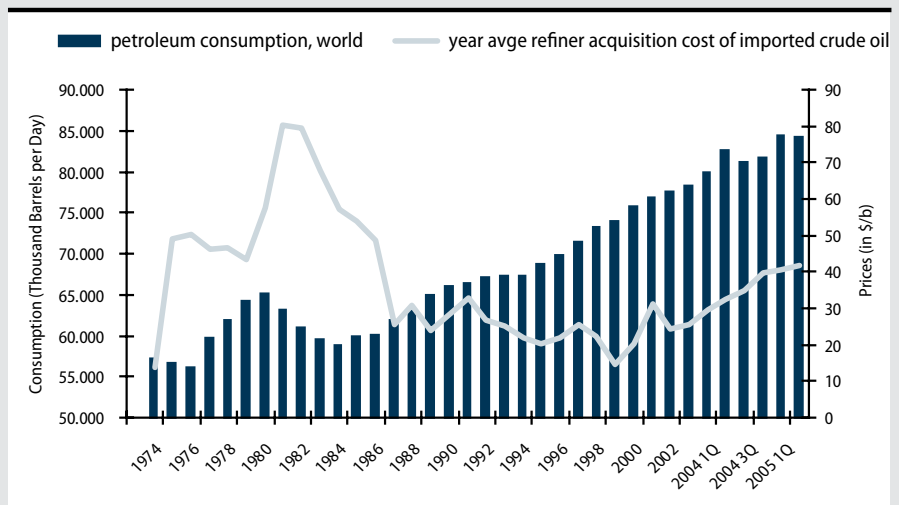
1 Norway produced 3.4 mb per day in 2001, which fell to 3.1 mb per day in 2004.

Oil consumption adjusts only to big swings in the real price.

and there have been no new investments owing to the high taxes levied on oil production and export,² as well as oil companies' uncertainty as to the safety of their investments. And, finally, hurricanes severely damaged oil rigs in the Gulf of Mexico, and devastated two main oil-distribution ports.

Demand continues strong. As a result of increased oil imports, primarily by China (38.9%) and the US (19.4%), demand grew sharply to 2.8 million barrels per day. The response to this rise was a 3-million barrels per day increase in total supply. Since excess capacity in 2004 totaled only one million barrels per day, the inability to meet the growing demand emerged as a problem.

Graph T-2: Crude oil consumption and real prices, 1973-2005¹⁾



Source: Energy Information Administration.

1) Prices deflated with CPI for Urban Consumers, June 2005=100.

Market reaction. In spite of everything, the market did not react to the sudden jump in prices as it did in 1974 and 1982, and there has been no rapid reduction in demand. There are two reasons for this. Firstly, although the current oil price has reached the highest-ever level recorded, in real terms it is considerably below the price in the 1979-1986 period when, in today's dollars, it reached 86 dollars per barrel (see Graph T-2). Secondly, following the 1982 oil crisis, the world improved production and consumption technologies and, as a result, the share of energy in total costs and, consequently their increase, is now far smaller. Hence, sensitivity to energy prices was reduced owing to a significant increase of productivity in the developed countries, the OECD countries' shift to alternative energy (nuclear, solar, wind, water), the tax system in most developed countries (although high, taxes on oil decline as the price increases and this mitigates the effect of the hikes), changes in oil production (increasing use of bituminous shale), and rationalizing fuel consumption (rising demand for hybrid vehicles), and the like.

Prospects: The price rise in 2004 attracted many investors. The result was speculative trading, especially in futures. Immediate delivery was cheaper than delivery agreed at some future date. This indicates that a further rise in oil prices is anticipated. Two things are certain: despite the soaring price of crude on the world market in 2005 (close to 70 dollars per barrel in September), total consumption continues to grow (the estimate for 2005 stands at 84 million barrels a day), and the market has not manifested any signs of being hit by this price trend.³

² This year's growth of oil production in Russia is estimated at only 260,000 barrels per day.

³ The average daily consumption of oil in 2001 was 77.7 million barrels.

3. Prices and Exchange Rate⁶

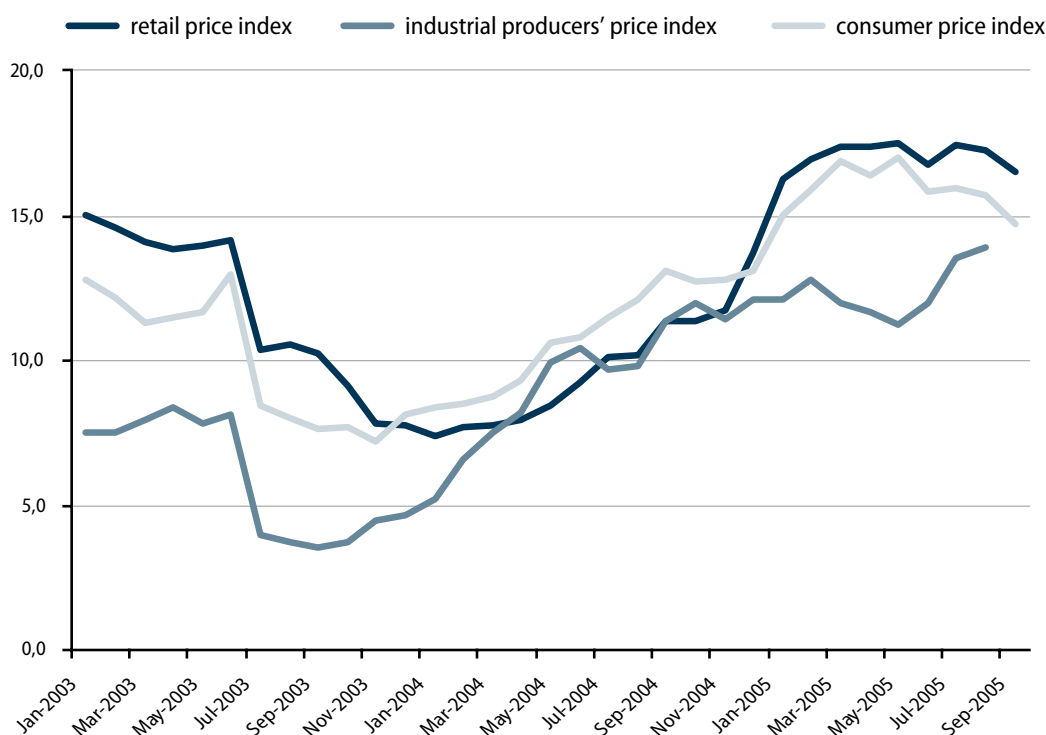
After rising sharply and persistently over seven months, prices in September finally showed signs of slowing down. Compared to the same month last year, the rise of retail prices dropped in September to 16.5% from 17.2% in August. In the past seven months, the increase was above 17% (the June inflation rate of 16.8% was an exception – see Box 2). The factors contributing to the fall were the prices of agricultural products and core prices whose y-o-y rise fell to 14.3% from over 15% in the preceding months (NBS).⁷ The increase in the y-o-y cost of living index also showed a mild fall in September (to 14.7%), but the index of industrial products prices recorded an acceleration from 13.9% in August to 15% in September. (See Graph T-3) . The rise in the prices of industrial manufacturers is at a lower level than the rise in retail prices since this index was not affected by the introduction of VAT at the start of the year and, as expected, is now manifesting a tendency to converge with retail prices.

Prices finally showed signs of slowing down in September ...

The slowing down of y-o-y inflation might only have been relative to the base, a consequence of the fact that it started accelerating precisely in September last year, rising from 11% to 17% in just a few months (See Table-2). Even if there is no such acceleration this year, the projected goals of economic policy will not be achieved. However, considering the acceleration of growth apparent in Q2 and Q3, and in the absence of tighter fiscal policies, inflation may well accelerate.

It is still too early for optimism.

Graph T-3. Serbia: Selected Price Indices, 2003-2005, y-o-y growth (in %)



Consumer prices, retail prices and industrial producers' price growth rates converge.

Source: Table P-2. in Analytical Appendix.

⁶ Detailed monthly indices in tables in Analytical Appendix.

⁷ See definition of core inflation in article on inflation in "Spotlight on 1" QM does not yet have data on price weights.

Box 2. Administrative fixing of electricity prices is again an instrument of inflation control

The July adjustment of the price of electricity is said to have contributed to inflation - in July the y-o-y rise in prices jumped from 16.8% to 17.5%. However, June 2005 was the eleventh consecutive month in which the price of electricity remained the same in spite of the accelerating inflation. In fact, the July increase of 9.4% was insufficient to maintain the price of electricity in real terms. Had the correction been made in accordance with the rise in the prices of industrial manufacturers (12%), which would have roughly maintained the purchasing power of the Serbian Electric Power Company, retail prices would have increased by another 0.3%. Had it been made in accordance with the rise in retail prices, which would have maintained its relative level, retail prices would have gone up by another 0.8%.

Table T-2. Serbia: Retail Price Index (RPI), 2003-2005

After accelerating early in the year, price growth did not slow down until September. Prices of services continuously grow faster than goods prices.

	RPI			RPI components				
	Dec. 2002=100	y-o-y index	cumulative index ¹⁾	GOODS	Agricultural products	Food	Non-food	SERVICES
				cumulative index ¹⁾				
2003								
March	101,8	114,1	101,8	100,4	104,6	99,1	100,5	105,8
June	103,7	114,2	103,7	101,9	118,0	99,0	101,2	108,8
September	105,6	110,2	105,6	104,4	90,1	101,1	106,9	109,0
December	107,8	107,8	107,8	106,6	93,6	106,0	107,8	111,1
2004								
March	109,7	107,8	101,8	101,0	105,1	101,6	100,4	103,9
June	113,3	109,3	105,1	105,1	125,6	104,6	103,8	105,3
September	117,6	111,4	109,2	109,4	105,7	110,7	109,3	108,5
December	122,6	113,7	113,7	112,8	108,1	113,9	113,2	116,1
2005								
March	128,8	117,4	105,1	103,8	115,0	104,7	109,6	106,6
June	132,4	116,8	108,0	107,0	147,8	107,1	104,6	110,7
July	135,0	117,5	110,1	109,3	133,0	107,6	109,2	112,6
August	135,6	117,2	110,6	109,3	126,0	108,3	109,2	114,3
September	137,1	116,5	111,8	110,7	119,2	110,1	111,2	115,3

Source: Table P-1. in Analytical Appendix.

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

As components of the retail prices index, prices of services grew faster than those of goods. Table T-2 shows the growth dynamic of the retail price index and its largest components. In the first nine months of the year, the prices of goods rose 10.7%, while services rose 15.3%. The high rise in services can be explained by the increasing costs of transport and utilities in connection with expenditures for oil and its derivatives. In accordance with the usual seasonal rhythm, prices of agricultural products peaked in June and have been falling since then. They can be expected to rise over the remainder of the year.

Fundamental factors spurring inflation

A detailed analysis of inflation presented in the Spotlight on: section warns against ascribing the increase in prices to the sliding of the exchange rate or exogenous factors. The conclusion is that the introduction of VAT and the hike in oil prices account for about one-third of the 2005 inflation, and that the rest is due to fundamental factors, i.e. domestic market conditions.

Exchange rate appreciates in real terms

The dinar-euro exchange rate nominally depreciated 12.9% from January to September, and appreciated 2.5% in real terms. The nominal depreciation was mildly accelerated in the last three months, but not enough to preclude real appreciation (see Table T-3). Taking into account the price rises in the euro-zone (see footnote in Table T-3), the real exchange rate against the euro continues to appreciate mildly, following the sharp appreciation in the first quarter. At present, the real rate is at exactly the same level as at the end of July 2004 (see Table T-3 and Graph T-4).

Table T-3. Serbia: Euro/Dinar Exchange Rate, 2003-2005

	nominal			real			EUR/USD rate	
	exchange rate (FX) ¹⁾	base index (Dec. 2002=100)	y-o-y index	cumulative index ²⁾	real FX ³⁾ (Dec. 2002=100)	y-o-y index		cumulative index ²⁾
2003								
March	64,3829	104,7	106,8	104,7	103,6	95,7	103,6	1,0698
June	64,2679	104,5	106,0	104,5	101,6	94,4	101,6	1,1444
September	65,9556	107,2	108,2	107,2	103,0	100,2	103,0	1,1459
December	68,3129	111,1	111,1	111,1	104,9	104,9	104,9	1,2503
2004								
March	69,8000	113,5	108,4	102,2	105,9	102,2	101,0	1,2199
June	72,1759	117,3	112,3	105,7	106,9	105,2	101,9	1,2166
September	75,0001	121,9	113,7	109,8	107,2	104,1	102,2	1,2330
December	78,8850	128,2	115,5	115,5	108,9	103,8	103,8	1,3616
2005								
March	81,0520	131,8	116,1	102,7	107,0	101,0	98,2	1,2970
June	82,5172	134,1	114,3	104,6	106,8	99,9	98,0	1,2180
July	82,9982	134,9	113,7	105,2	105,2	98,9	96,6	1,2040
August	84,2574	137,0	114,3	106,8	106,6	99,7	97,9	1,2357
September	84,4958	137,4	112,7	107,1	106,2	99,1	97,5	1,2295

The dinar depreciates nominally but in real terms it appreciates.

Source: Table P-3, Analytical Appendix.

1) Month average, official daily NBS mid rate.

2) Please see footnote 1 in Table T-2.

3) Included Euro area inflation. Index calculation: $RE = (NE/p) \times p^*$, where:

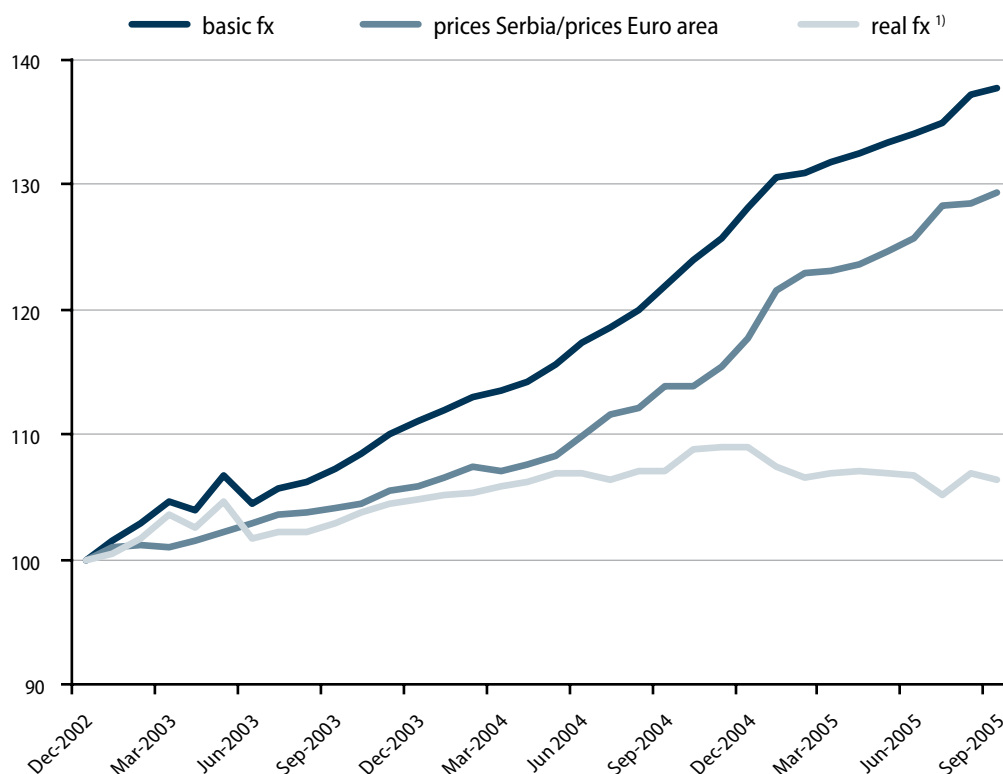
RE - real fx index;

NE - nominal fx index;

p - Serbia RPI index;

p* - Euro area CPI index.

Graph T-4. Serbia: Nominal and Real Dinar/Euro Exchange Rate (FX), 2003-2005



The real exchange rate of the dinar against the euro is lowest at end 2004.

Source: Table P-3. in Analytical Appendix.

1) See definition of real fx in Table T-3.

4. Economic Growth

Production is growing at a solid pace, although more slowly than last year.

Adverse views in the public notwithstanding, production increased at a solid pace in the first six months, albeit more slowly than last year. On the average, this conclusion is supported by the RZS indicators, though we believe that the real trends, both positive and negative, are less extreme than indicated by RZS data. The negative impression was created by the 2.4% drop in industrial production compared to the same period last year. However, the growth rates of GDP in 2002 prices, which the RZS started publishing this year, are very high (6.1% compared to the same period last year, see Table T-4). In any case, the production of those sectors that recorded a fall, which was at its steepest in the first quarter, started picking up as the year progressed.

4.1. GROSS DOMESTIC PRODUCT

The real GDP grew 6.1%.

According to the statistics, real GDP in the first half of 2005 was up 6.1% on the same period last year, but the rate is an average of very divergent tendencies that are hard to explain. On the one hand, the agriculture and the manufacturing and construction industries fell several percentage points (construction by 12.5%) compared to the same period in 2004. On the other, trade and transport went up by over 20% (see Table T-4). If material production is falling while imports are stagnating, who is doing so much trading? What is being transported? On the whole, it is hard to understand why industrial production is declining if both total imports and imports of intermediate products are increasing. We believe the answer lies in the growth of production by small manufacturers who are not properly encompassed in the industrial production index. It is noteworthy that the tax component net of subsidies, which was up 13.8% on the same period last year, contributed in a major way to GDP growth; gross value added (GVA) before taxes rose two percentage points slower than total GDP (4.4%). This discrepancy in the growth rates of tax collection and GVA is a sign of problems with statistical coverage (see Box 3).

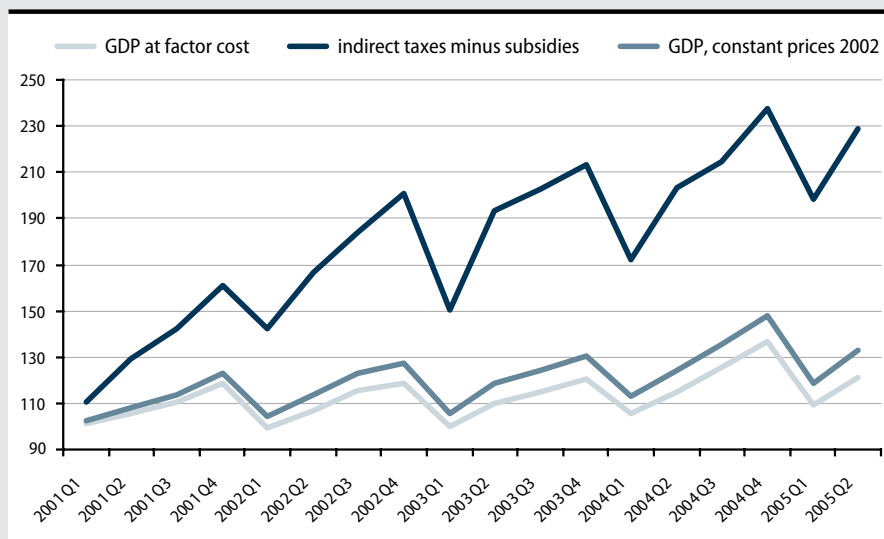
Box 3. Statistical coverage is not on a par with improved tax collection

The very high rise of the tax component in GDP has been manifested in the whole period from 2001 to the present. This reflects the increasingly successful broadening of the tax base and improved collection of taxes. Indirect taxes are included in GDP when it is calculated from the aspect of production - indirect taxes are added to GDP at factor cost, whereby the products' value is expressed in market prices. If tax rates are not changed, the proportion of indirect taxes and the value of the production of all taxable products must be constant. A similar stability in proportion can also be expected with respect to GVA and indirect taxes.

In the first half of 2005, the tax component of GDP was up 78.5% in real terms on the corresponding period in 2001 (in contrast to the GVA rise of only 11.3% in the same period), and their share in total GDP in 2005 rose to 18.7% as against 10.9% in the first quarter of 2001 (Table T-4). Since there were no significant changes in the tax rates in the period, this is clearly the result of the broader tax base and rising collection, which was the objective of tax policy in the first place. The question arises, however, whether statistics increased its coverage of production in accordance with the level achieved by the tax authorities. Assuming that the collection rate of indirect taxes is completely proportionate to the formal economic activity, a rise in the share of taxes in total GDP is possible only under two scenarios. First, that statistics covered production in the country in its entirety, including the gray area, even before tax collection was improved. Second, that the statistical coverage of the economy is not keeping pace with its formalization. The latter scenario is more plausible in our case. Of course, the assumption that indirect taxes are fully proportional to GVA in the entire economy (particularly before the introduction of VAT) must be relaxed as they are proportional only to the value of the

production of goods on which indirect taxes are payable. Nonetheless, the real difference in the growth of production of goods subject to indirect taxes and total GVA in the economy cannot explain such a wide divergence in the growth of taxes and GVA as shown by the statistics. The conclusion that statistics is not increasing its coverage at the same pace as the tax authorities therefore holds.

Graph T-5. Serbia: GDP at Factor Cost and Net Taxes, 2001-2005 ¹⁾



Source: Republic of Serbia Statistics Bureau.

1) Constant prices, 2002.

Real indirect tax collection grows much faster than GDP at factor cost.

Table T-4. Serbia: GDP in Constant 2002 Prices, 2003-2005

In %	y-o-y indices					base index (Q1+Q2) ₂₀₀₅ / (Q1+Q2) ₂₀₀₁	share in GDP 2004
	2003	2004	2005				
			Q1	Q2	Q1+Q2		
Total	102,4	108,6	105,3	106,8	106,1	119,6	100,0
Taxes minus subsidies	109,5	109,0	115,3	112,6	113,8	178,5	17,2
VA at factor cost	101,1	108,5	103,1	105,6	104,4	111,3	82,8
Agriculture	93,0	118,9	97,1	101,6	99,5	96,7	17,2
Manufacturing	94,0	108,9	93,0	96,5	94,9	92,9	20,0
Construction	110,8	103,5	80,8	92,7	87,5	86,2	4,1
Transport	109,5	115,6	119,7	122,4	121,1	145,7	10,6
Wholesale and retail trade	111,5	109,2	118,9	121,3	120,2	167,7	10,2
Other	103,0	102,9	104,0	104,6	104,3	108,7	37,9

Source: Republic of Serbia Statistics Bureau.

Real GDP growth is an average of extremely high growth of services and a decline in goods production.

4.2. INDUSTRIAL PRODUCTION

The industrial production index, shown in Table T-5, fell 2.4% in the first half of 2005, but is now on an upward trend following the sharp decline at the beginning of the year. Analysis of industrial production is hindered by the characteristically lumpy and uneven behavior of the corresponding index, both because of the large divergences in performance across different sectors and their sudden fluctuations from period to period. While the pace of growth in the course of 2004 was quite stable and rapid (7.1% over the entire year), the beginning of 2005 saw a steep fall. The greater part of this unevenness

Industrial production is picking up following the sharp decline in the first quarter.

After suddenly picking up in 2004, manufacturing suddenly suffers a decline in 2005.

is probably the consequence of the low starting points of some sectors, owing to which relatively minor changes are expressed through major (either positive or negative) growth rates (see Box 4).

Table T-5. Serbia: Industrial Production Growth, 2003-2005

U %	y-o-y growth indices								base index (Q1+Q2) ₂₀₀₅ / (Q1+Q2) ₂₀₀₂	share in total 2004
	2003	2004				2005				
		Q1	Q2	Q3	Q4	Q1	Q2	Q1+Q2		
Total	97,0	109,3	105,8	105,4	108,2	96,9	98,4	97,6	100,7	100,0
Mining and quarrying	100,8	117,6	94,2	93,4	95,9	96,8	100,9	98,8	97,3	6,8
Manufacturing	95,4	111,0	111,0	106,0	110,7	93,8	95,9	94,9	96,4	74,3
Electricity, gas and water supply	102,1	100,7	84,2	112,5	104,1	105,8	112,3	109,0	103,2	18,9

Source: Republic of Serbia Statistics Bureau.

A variety of factors explain the growth/fall of industrial sectors

The trends in some sectors are clearly conditioned by the specific factors affecting them. The rapid growth of basic metals production followed the sale of the Sartid plant in Smederevo in late 2003. In the first half of 2005, the growth was a huge 65% compared to the same period in 2003; production in the petrochemical sector is increasing owing to the rise in exports; the drop in production recorded in the construction materials industry was the result of the decline of construction; where electricity is concerned, it is clear that production depends on seasonal factors and the schedule of overhauls of plants.

On the whole, the trend in the manufacturing industry is the result of different tendencies in the demand for investment and consumer goods (see Graph T-6). For the purposes of analysis, we have aggregated the sectoral production indices in three groups: investment, intermediate, and consumer. We have not used the official classification by type as we excluded from the analysis those sectors cited above which, because of privatization or other reasons, had specific and very pronounced patterns of production in the preceding period. The results are shown in Table T-6.

Table T-6. Serbia: Components of Manufacturers Production Index, 2003-2005¹⁾

In %	y-o-y growth indices						base index (Q1+Q2) ₂₀₀₅ / (Q1+Q2) ₂₀₀₂	share in total 2004
	2003	2004		2005				
		Q1+Q2	Q3+Q4	Q1	Q2	Q1+Q2		
Investment goods ²⁾ o/w:	85,4	119,9	100,9	82,1	82,1	82,1	87,7	12,4
Metal, except machinery	97,2	114,5	109,5	84,7	100,8	92,7	98,0	2,2
Machinery and equipment, except electrics	90,0	168,4	114,2	67,0	47,4	57,2	85,4	3,8
Intermediate goods ³⁾	83,0	99,3	116,6	81,3	86,0	83,6	78,7	3,1
Consumer goods ⁴⁾ o/w:	97,4	105,4	104,7	97,2	102,3	99,7	107,6	44,7
Food and beverages	97,9	105,8	102,4	99,5	107,6	103,5	106,5	22,5
Chemicals and chemical products	114,6	118,6	118,4	100,5	101,3	100,9	136,1	8,3

Source: Republic of Serbia Statistics Bureau.

1) The classification is made for the analysis purpose and does not correspond to the official one.

2) Includes: metal products, except machinery; machinery and equipment, except electric products; office machinery and computers; electrical machinery and appliances; radio, television and communication equipment; precision and optical instruments; and motor vehicles and trailers.

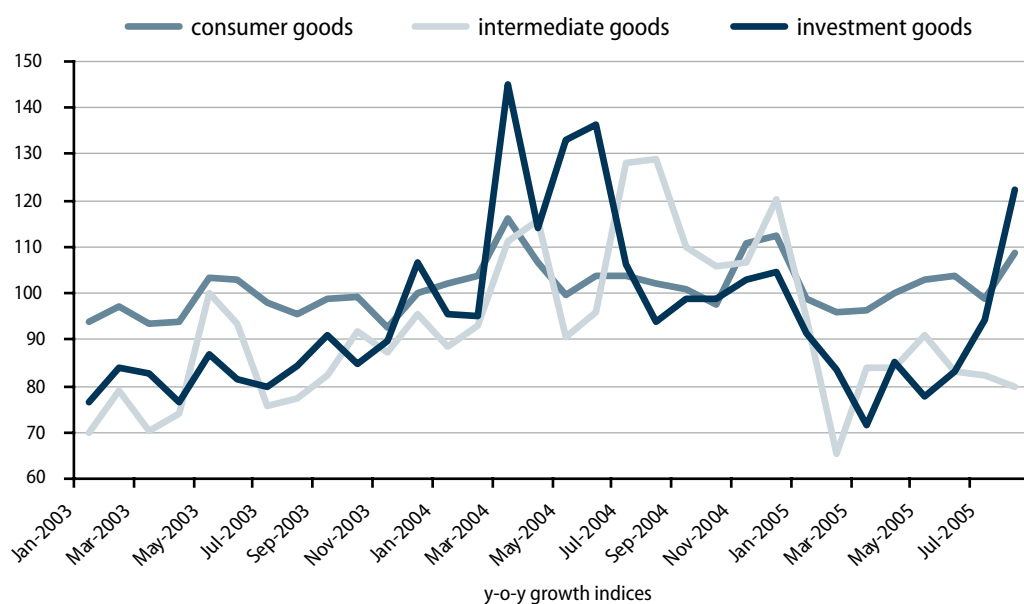
3) Includes: wood and cork products, except furniture; pulp, paper and paper products; and recycling. Excludes basic metals, construction material and petrochemicals, separately discussed in the text.

4) All consumer goods, excluding tobacco manufacture. For more details on tobacco please see Box 4.

Production of investment goods declines faster than that of consumers' goods...

...but the production of consumers' goods is recovering.

Graph T-6. Serbia: Components of Manufacturing Production Indices, 2003-2005



Investment demand leads intermediate goods demand—maybe that bodes a turnaround?

Source: Republic of Serbia Statistics Bureau.

The drop in the investment demand of companies privatized before 2004 is the most plausible explanation for the sudden slowdown of industrial production in the first half of 2005, after a period of accelerated growth in 2004. The new owners of companies privatized in the course of 2002 and 2003 undertook to invest over 700 million euros in the period ahead. Significant investment started in the second half of 2003 and continued in 2004.⁸ The level of investment in 2004 was negligible. New investments in the course of 2005, especially those that create a demand for goods made by the major traditional producers, were probably also much lower than in the preceding year. This led to a drop in sectors that produce investment and intermediate goods (Table T-6). Any over-representation of traditional producers in the index would only make this relationship even more pronounced as the traditional producers of capital goods were probably the main suppliers of the major privatized companies.

Traditional producers are keeping pace with investment demand

Production of consumer goods is at approximately the same level as in the same period last year, though it increased in the second quarter, probably because of the demand shifting from imported to domestic products. The food industry has the biggest share in the production of consumer goods, with the behavior of its output being quite even in the preceding period. This does not hold for the chemical industry, which recorded an increase on the average in the first half of 2005, but has major production fluctuations. The reason for this is unclear, especially since pharmaceutical producers claim that their sector is growing at a stable rate (about 15% a year), and the pharmaceutical industry accounts for some 40% of the chemical industry.

Other production is more stagnant than expected

The trend in the production of consumer goods suggests that the “new economy” is not sufficiently represented in the coverage of the industrial production index. It is surprising that the indices of textiles, shoes and furniture production were on a steep decline in the first seven months of the year, while exports of textiles and shoes (which account for almost half the production of these sectors) were rising. The level of imports of intermediate products for furniture production is quite stable, and we see no reason for any fall in output.

⁸ QM does not have information on what proportion has been invested or is required to be invested in the first year. Experience has shown that major foreign buyers (those whose investment obligations exceed 60% of the total) have invested significantly more than obliged to do in the first year.

The question is whether the inadequate coverage of small companies, which more often than not are part of the “new economy,” in the production of consumer goods contributes to overemphasizing the decline.

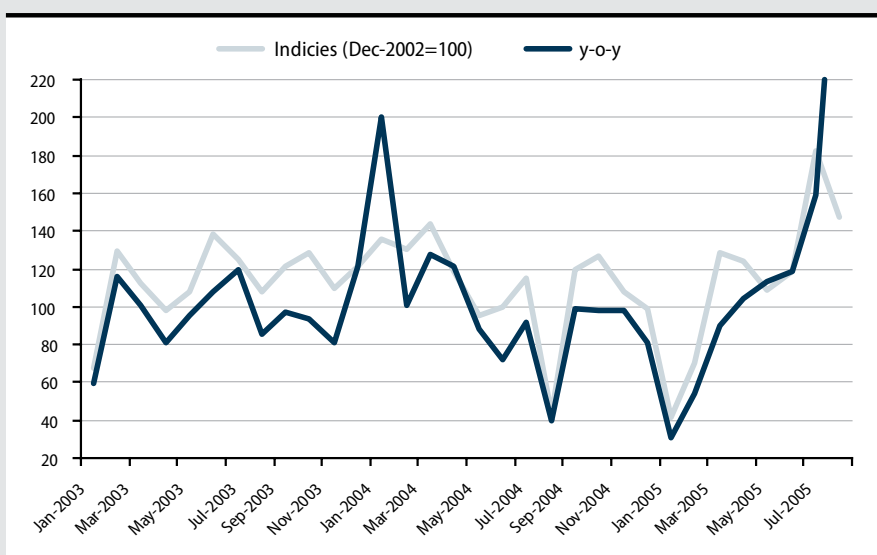
In any event, the drop shown by the indices of industrial production is not primarily the result of decreasing liquidity owing to the introduction of VAT. First, it would be necessary for some time to pass from when VAT was introduced to the appearance of a slowdown, and this started at the exact time VAT was introduced, in January 2005. Secondly, the structure of the sectors which are declining or growing does not correspond to the pattern that could be expected had the shock been caused by the introduction of VAT. Small producers who bought their raw materials from a larger number of middlemen would have been the hardest hit by VAT, as well as the middlemen themselves, whose presence increases prices. However, the industrial production index shows exactly the opposite - a drop in the production of major producers.

Box 4. Index of tobacco industry production - example of behavior determined by the logic of privatization

Tobacco products, a promising sector of the Serbian processing industry (accounted for 1.73% of total industrial production in the first half of 2005, but this is expected to increase) is a typical example of a sector that has been plagued by sharp swings in production over the past few years (see Graph T-7), and contributed to the steep decline of the industry in the first half of 2005.

After declining steadily for almost a year, production started rising in the second half of 2005. This was the consequence of the privatization of the two biggest producers in late 2003. In the second half of 2004, the new owners started major investments in new machinery to manufacture their own brands of cigarettes. As the majority of existing capacities were not in use during that time, production of tobacco products fell to almost zero. Before that, in the first few months of 2004, production was for stocks and the y-o-y index reached 200%. When the investments were completed in early 2005, production of the new brands started and, since demand is very high and imports have been reduced, output rose. As a result, exports are also expected to increase in the period ahead, as well as the importing of tobacco owing to the poor supply on the domestic market. The importing of tobacco as a raw material could rise also because of the emergence of two new producers in late February 2005.

Graph T-7. Serbia: Tobacco Industry Production - Monthly Indices, 2003-2005



Tobacco industry production reaches a minimum early this year, and then soars to record levels in Q2.

Source: Republic of Serbia Statistics Bureau.

In the first six months of 2005, sectors that recorded growth accounted for 57.5% of the total output of the manufacturing industry. The figure rose to 69.2% in July and August, and their recovery can be expected by the end of the year.

4.3. CONSTRUCTION INDUSTRY

Judging by the official indicators, the construction industry recorded a fall in the first half of 2005, though probably not as severe as indicated, and as a consequence of temporary factors (weather and the introduction of VAT). The winter was very severe, with below zero temperatures from mid-January to mid-March, in contrast to the preceding winter when daytime temperatures were above zero. The second factor contributing to the fall, especially in residential construction, was certainly the introduction of VAT. Several sources confirmed that completion of apartments was speeded up in the last quarter of 2004.⁹ As in many other areas, this resulted in unusually high activity in the last three months of that year and, then, an unusually sharp drop in the first quarter of 2005.

The fall measured in the construction industry (Table T-4) should be taken with reserve as the RZS's quarterly surveys encompass only the larger construction companies. Furthermore, the gray area accounts for a major share of the sector's production, almost one-third, according to an estimate by the G 17 Institute.¹⁰ Although the gray area's share has been reduced in the past few years, it certainly still impacts overall construction activity.

Cement production figures confirm a severe but temporary fall of production in the construction industry. We therefore analyzed the production of construction materials (cement in particular) in the first half of 2005 in order to check out the data on the drop. The production of cement fell rapidly in the first three months, but then recovered swiftly in the second quarter of the year. However, if the first two quarters are viewed together, it is still at a lower level than in the same period of 2004. The foreign trade balance of the construction materials sector remained at last year's level over the entire period. This means that the production of construction materials can be taken as a reliable indicator of the use of these materials, i.e. of construction activity.

The construction industry recorded a severe but temporary fall.

Cement production figures indicate that the construction industry is recovering swiftly.

⁹ For more details on residential construction, see study on investments in Serbia.

¹⁰ See study „Siva ekonomija u Srbiji“ (Gray Economy in Serbia), G 17 Institute, December 2002.

5. Balance of Payments and Foreign Trade

5.1. BALANCE IN TOTAL

Foreign currency reserves accumulation is at record level.

The NBS achieved a record seasonal accumulation of net foreign currency reserves in the first seven months of the year. Both the current and capital accounts contributed to improving significantly the balance of payments. Apart from temporary factors, the biggest contribution came from the record increase in exports, further borrowing abroad by domestic residents, and a high inflow of direct foreign investments. Several factors suggest that a good part of the inflow can be ascribed to cash flows being directed into formal channels due to the combined effect of VAT and the integration of the banking sector into the world capital market.

Exports are growing at a faster pace than imports...

Exports are growing much faster than imports, and this made the biggest contribution to the improvement in the current account balance. In addition, the introduction of VAT resulted in a sharp but temporary reduction of imports in the first quarter of the year, and in a more lasting reduction of those imports made costlier by VAT. The current account balance deficit in the January-July period was half of what it was in the same period last year (628 million against 1,119 million euros - see Table T-7), primarily because exports of goods and services over the entire period reviewed were almost 700 million euros up on the corresponding period last year (2,818 million against 2,129 million euros), and the value of merchandise imports in the first quarter of 2005 was down 400 million euros (see Table P-4 in the Analytical Appendix). The sudden drop in imports in the first quarter is ascribed to the stockpiles made in December 2004 in anticipation of the introduction of VAT. In January, VAT raised the tax burden on imports in the amount of at least 300 million euros (see article in Spotlight on:).¹¹ However, in the May-July period, when the December stockpiles were probably running out, the current account deficit was still over 30% smaller than in the same period in the last two years, again thanks to the better trade balance.

There has been a fundamental improvement in foreign trade flows since the growth of exports is not abating, although there have recently been signs of an acceleration of imports. Though it is hard to speak of more durable tendencies in growth until more time has passed from the shocks caused by VAT, it may be concluded that the deficit will continue narrowing for as long as exports grow over 2.4 times faster than imports. In our opinion, this is the case. The foreign trade trends in May-July (analyzed in the next subsection) translate into an approximately 10% reduction of the trade deficit, or over two percentage points of GDP at annual level. Narrowing of the deficit is naturally welcome at whatever pace, since that would indicate a reversal of the negative trends in previous years.

... as export supply has improved, and demand has slightly shifted.

Such a major turnabout in foreign trade is the result of a number of factors, and only to a lesser extent of the desired contraction of domestic demand. In our view, the export growth can be attributed to supply factors. Exports are steadily increasing in branches that have been extensively privatized, and in sectors in which administrative barriers to exports to the EU have been removed (garments, shoes). The next factor is the relative increase in the prices of some imports because of VAT, either because tax exemptions have been abolished (e.g. IT products), or because the VAT system makes it harder to evade tax (e.g. on goods imported through long chains of middlemen). Eliminating the price disparities will have a durable effect on the level of imports of these goods, but probably not on their growth.

¹¹ The growth of exports is much higher when the first quarter of 2005 is included in the analysis although anticipated exports were not so pronounced since the base for comparison, the first quarter of 2004, was extremely low - the lowest quarterly export over several years.

And, finally, the drop in capital goods imports was in all probability caused by the slowing of investment activity, i.e. of domestic demand, compared to 2004, though the seemingly sharp fall may also be ascribed to the fact that the practice of overstating invoices has been cut back.

The balance of other items in the current account has not recorded a change, though an interesting process has been observed. This process indicates that the demand for liquidity following the introduction of VAT has stimulated monetization and accelerated the circulation of financial resources between the informal and formal financial systems. On the one hand, the NBS increased the volume of foreign currency purchases from exchange offices (1,016 million euros in the period to July 2005 compared to 750 million euros in the same period a year ago) while, on the other, the outflow of remittances abroad as well as payments for imports of services have increased, leaving the balance of transfers unchanged. It would appear that the entry of foreign banks and the introduction of VAT have encouraged legalization of payment flows. The jump in imports of services is certainly linked to VAT, as some services on which sales tax was payable are now exempt (e.g. if the provider is based abroad). This means that at least some of the money domestic residents illegally held in foreign accounts for similar payments is now returning to the country

Balance of other current transactions is unchanged

Table T-7. Serbia: Balance of Payments, 2003-2005 ¹⁾

	2003		2004		2005	
	Dec.	Mar.	July	Dec.	Mar.	July
	cumulative, in euro millions					
CURRENT ACCOUNT	-1535	-596	-1119	-2343	-268	-628
Goods and services	-3789	-1192	-2727	-5328	-733	-2074
Exports of goods and services	3385	869	2129	4294	1020	2818
<i>Growth rate (12-m, in %)</i>	11,0	9,9	12,3	26,9	17,4	32,4
Imports of goods and services	-7174	-2061	-4856	-9623	-1754	-4892
<i>Growth rate (12-m, in %)</i>	-10,5	-23,2	-20,3	-34,1	14,9	-0,8
Factor income, net	-178	-34	-68	-170	-55	-128
Current transfers	2011	552	1463	2737	450	1485
o/w: F/X purchases, net	1091	244	750	1496	322	1016
Official grants	421	79	213	418	33	94
ERRORS AND OMISSIONS	370	75	2	372	-121	-344
CAPITAL ACCOUNT	2032	287	952	2489	468	1642
Foreign direct investments (FDI)	1177	172	318	766	260	641
Other investments	856	115	634	1722	207	1000
Medium and long-term loans, net ²⁾	625	60	503	1203	-26	672
Other ³⁾	231	55	131	519	233	328
NBS Reserves, net, (increase,-)	-868	234	165	-517	-79	-670
MEMORANDUM ITEMS	in % of GDP					
Exports of goods and services	20,2	5,0	12,3	24,8	5,4	15,0
Imports of goods and services	42,7	11,9	28,1	55,6	9,3	26,0
Balance of goods and services	-22,6	-6,9	-15,8	-30,8	-3,9	-11,0
Current account	-9,1	-3,4	-6,5	-13,5	-1,4	-3,3
GDP in euros ⁴⁾	16.786	17.306	17.306	17.306	18.795	18.795

The current account deficit has been halvened...

...while the surplus on the capital account nearly doubled.

Source: P-4. Analytical Appendix.

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

2) Net disbursements: principal disbursements minus principal repayments.

3) Short-term trade credits, Unpaid imports of oil and gas, Short-term loans, Other assets and liabilities, Gross reserves of commercial banks.

4) GDP converted into euros using annual average of monthly rates, please see footnote 1 in Table T-3.

and being used openly for payments through our banking system. Also noticeable are the significant increase of interest payments, which is understandable in view of the fact that the debt of domestic residents has risen in the previous period, and the halving of official donations compared to the same period last year, in accordance with the already manifested and expected trend.

Capital account inflows show major increase as well.

The capital account has recorded an increased inflow of almost 700 million euros compared to the corresponding period last year, with inflow totaling 1.6 billion euros in the January-July period. Two factors made an almost equal contribution to the increase - financing of domestic residents through mid- and short-term credits, and direct foreign investments. Although the foreign debt continues to increase, the pace is slower than last year, and the debt servicing burden is rising. The inflow of direct foreign investments has doubled compared to last year (641 million against 318 million euros from January to July).¹² The key role this year was certainly played by the sale of several domestic banks to foreigners,¹³ a process that can be expected to conclude in the course of the coming year. Unfortunately, FREN still does not have details that could say more about the processes underlying less visible direct foreign investments.

Is domestic capital returning?

A major question to which *QM* does not yet have a response is how much domestic capital there is in inflows recorded as borrowing from foreign residents. The information we have gathered indicates that a proportion of the medium-term foreign debt, or non-residents' deposits, are in fact a manner of returning domestic capital to the country. Namely, foreign residents connected to domestic persons make deposits abroad or in non-residents' domestic accounts to guarantee bank credits taken by domestic persons. In this way, capital is repatriated without the real owner being identified. We are not yet able to estimate the size of this flow. If it turns out to be of major proportions, this would be an additional sign of the vitality of economic activity and the growth potential of the new economy, and a reason for less concern about the increase in foreign borrowing. Whatever the size of these flows, they probably rose this year owing to liquidity needs connected with VAT.

Reserves accumulation is lower than balance of payment surplus

The accumulated reserves of 670 million euros are considerably below the recorded surplus in balance of payment flows, which amounts to slightly more than 1,000 million euros. This indicates that a proportion of the increase in flows is not real. The difference between the reported balance of payments and the accumulation of net reserves is formally expressed in the sharp reduction of the Errors and Omissions (E&O) item, which for the first time in several years is negative - 344 million euros. The change in E&O can denote one of two things: either a proportion of the improvement in the balance of payments does not reflect reality or, in parallel with the recorded change in the balance of payments, there has been some other, unregistered, change in flows. In view of the findings set out in the next sub-section and the second article in Spotlight on:, we are more inclined to believe that a part of the improvement in registered trade flows is the result of the repatriation of capital, which is effected through reduced over-invoicing/under-invoicing of imports/exports. In other words, a business person who wants to take capital out will understate exports or overstate imports. And one who wants to return capital will do the exact opposite - reducing his import and increasing his export invoices. This change in presenting invoices might have been caused either by the alteration of tax incentives or a real need to bring capital into the country to pay VAT.

¹² No monitoring system exists that could ensure that the recorded direct foreign investments cover all the inflows.

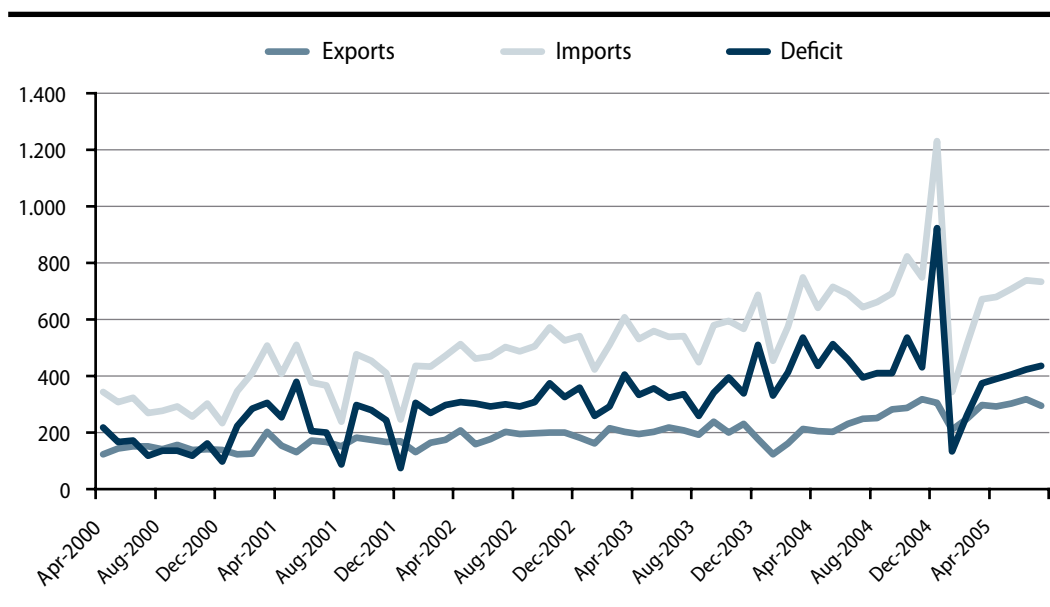
¹³ The exact contribution of the banks' sale to total direct foreign investments cannot be estimated on the basis of accessible data as a part of the income from these sales contributes to the balances of payments of the countries whose residents are the formal owners of some of the banks.

5.2. FOREIGN TRADE IN MAY-JULY 2005

The May-July period was selected for review as we believe whatever stockpiles of imported products were made in December 2004 to avoid paying VAT when it was introduced in January 2005, were mostly depleted by May, and that the foreign trade flows were back to normal by that time. We compare these flows with the same period last year, though the mentioned strong indications that this underestimates growth or overestimates the fall in imports of capital and, possibly, other goods, must be borne in mind since the system of tax incentives introduced at the beginning of the year inhibits importers from overestimating imports. A more reliable assessment of import trends will be possible only when enough time has passed to estimate the new trend in the growth of imports after December 2004. An in-depth discussion of the possible underestimation of imports and their growth this year may be found in Spotlight on:.

In the May-July period, exports grew at a rate of 34% and imports at 6.3% compared with the same period last year. The percentage by which exports covered imports increased from 29% to 42%, and the trade deficit was reduced in absolute terms, by approximately 100 million euros compared to the same period a year ago.

Graph T-8. Serbia: Merchandise Exports, Imports & Trade Deficit, 2000-2005 ¹⁾



Imports soar ahead of the introduction of the VAT in 2005.

Source: Republic of Serbia Statistics Bureau.

¹⁾ NBS merchandise trade figures in Table P-4 (Analytical appendix) and RSSB figures differ. QM will endeavor to document the reasons for this.

A detailed analysis of exports suggests that their growth is the result of two parallel processes: the revitalization of major export-oriented facilities after their privatization, and the growth of exports of a wider range of industrial products with a smaller individual share in the total. Table T-8 shows export performances by SITC divisions classed in three groups of products. The first group - *leading performers* - consists of only three divisions (iron and steel, non-ferrous metals, and sugar) which have a very strong impact on exports because of both their bulk and fast growth; the second - *strong performers* - consists of eight divisions whose individual contribution to the rise of exports is notable (clothing, cereals, footwear, rubber manufactures, plastics, petroleum and petroleum products, organic chemicals products, and vegetables and fruits), and others make up the third group. What is important is that all three groups are recording significant growth.

Exports of a wide range of goods increase...

The *leading performers* individually account for the largest share of total exports (together 23.6% in 2004), and have the largest growth rates relative to last year of all the divisions (non-ferrous metals 87.5%; iron and steel 82.0%; and sugar 2,136%). Finally, they account for the largest proportion of the growth of exports this year compared to 2004 (together 54.2%). The expansion of metal exports began following the privatization of Sartid, which was sold to US Steel, the Seval aluminum mill, and other companies back in the first quarter of 2004. For its part, sugar started picking up again in August 2004, after a total standstill from June 2003.

We have called the second group of divisions *strong performers*. Firstly, they are individually of lesser significance for the export results (from 2.1% to 6.8%); secondly, they are recording marked though more modest growth rates than the leading performers; and, thirdly, after the *leading performers*, they give the largest contribution to the rise of total exports. Together, the *strong performers* account for 28.9% of total exports, while their contribution to their growth in 2005 is 29.1%. The third group of divisions, *others*, accounted for almost half of the 2004 exports but contributed to their growth by only 16.7%. Nonetheless, even the exports of this group are increasing at an appreciable rate of 13.4%, confirming the impression of a recovery on a broad front of products.

Table T-8. Serbia: Merchandise Exports Growth Analysis, 2004-2005

ln %	2004		2005		
	exports share	y-o-y growth	y-o-y growth		growth contribution ¹
		Aug-Dec	May-July	Jan-July	Jan-July
Total goods	100,0	39,1	34,3	41,6	100,0
<i>The Leading performers grow very fast...</i>					
Leading performers	23,6	312,7	89,9	123,2	54,2
Iron and steel	13,1	297,8	36,2	82,0	23,3
Non ferrous metals	5,8	76,1	58,5	87,5	13,0
Sugar, sugar products and honey	4,7	4116,7	2639,6	2135,9	18,0
<i>...but fast is the growth of other merchandise exports, as well.</i>					
Strong performers	28,9	27,8	28,6	40,4	29,1
Clothes	4,2	-6,8	80,1	75,1	7,9
Cereals and cereal produce	2,9	94,7	142,1	101,1	5,6
Footwear	2,1	-11,4	85,0	91,1	4,7
Rubber products	4,7	21,7	27,7	24,4	3,3
Plastics in primary forms	3,2	130,3	-13,4	32,2	2,4
Petroleum and petroleum products	2,2	56,1	7,9	34,1	2,1
Organic chemicals	2,8	90,4	-15,8	28,7	1,8
Fruits and vegetables	6,8	6,3	1,9	7,0	1,2
Others	47,4	0,6	15,6	13,4	16,7

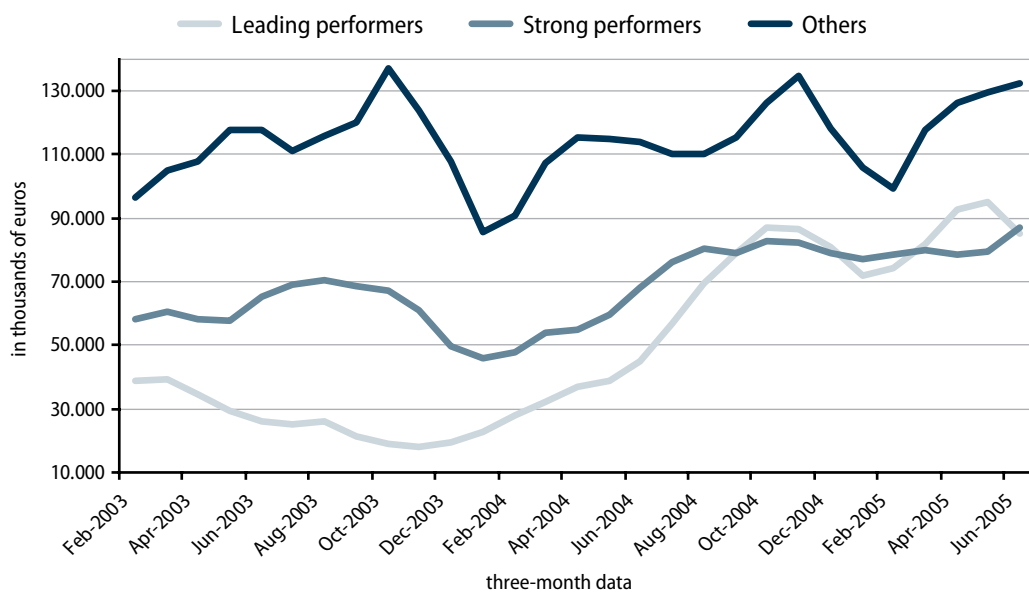
Source: Republic of Serbia Statistics Bureau.

1) Sector contribution to the total exports growth in the first seven months of 2005 ($\Delta Xi/\Delta X$).

... and it is not an illusion.

Our findings quite conclusively reject the view that the growth of exports of a broad spectrum of goods is an illusion, i.e. that the exports of the *strong performers* have only seemingly risen as the result of increased invoicing since the introduction of VAT at the start of the year. Testing of the hypothesis on a structural break in the export series in early 2005 produced negative results (see second article in Spotlight on:) and direct examination of export series by groups of products suggests that the growth began to accelerate as early as mid-2004 or even the beginning of that year. The increase compared to last year is definitely the result of a trend that was established before the turn of the year. Rather than any breaks in the export series of the *leading performers* and *strong performers* as well as other divisions in 2005, Graph T-9 shows that, with the exception of December, they rose over the whole of 2004.

Graph T-9. Serbia: Merchandise Exports Growth, 2003-2005



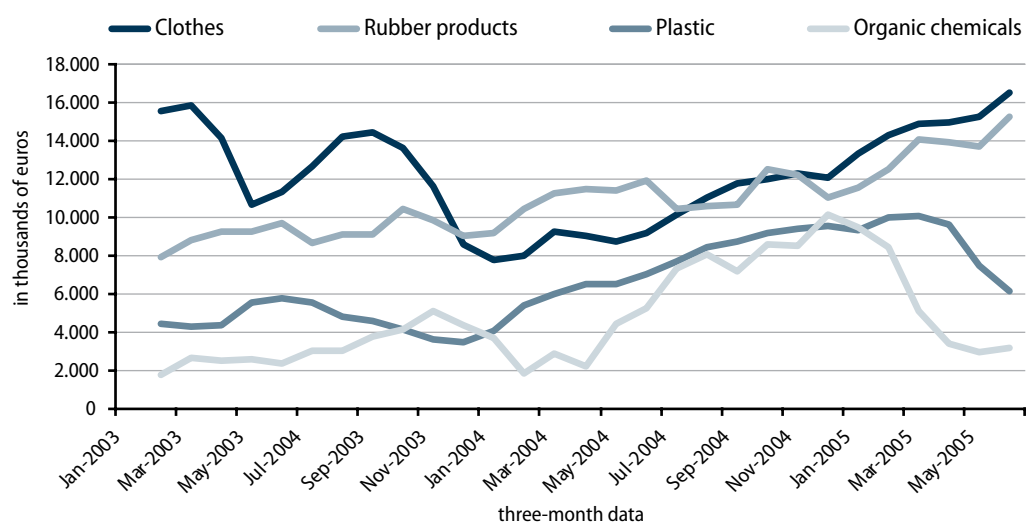
Exports reach their lowest point in early 2004 and growth accelerates since.

Source: Republic of Serbia Statistics Bureau.

What the majority of divisions in the group of *strong performers* share in common is that the rise in exports started in the first quarter of 2004 and lasted at least until the year-end. Graph T-10 shows the export trend of characteristic divisions of the *strong performers*: clothing, rubber manufactures, plastic in primary forms, and organic chemicals. There is no common pattern in the behavior of the exports of the cited division over the whole period - from January 2003 to July 2005; only the export of rubber manufactures grew continuously, while the exports of other divisions fluctuated.

The surge started back in early 2004

Graph T-10. Serbia: Selected Strong Performers - Exports, 2003-2005



No particular pattern of behavior can be identified at the turn of 2005.

Source: Republic of Serbia Statistics Bureau.

In view of the behavior of exports at the level of groups of divisions, and the level of selected divisions, it may be concluded that they started expanding in early 2004, and that this trend continues this year.

Further growth of these divisions' exports depends on different factors. The growth rates of the *leading performers* will continue for some time, particularly as long as world demand for metals is high. The *strong performers* can be grouped in three categories: agriculture-food (cereals, vegetables and fruits), chemicals (petroleum products, rubber, organic chemicals, plastic materials), and clothing and footwear. In the short term, the export of agricultural products (and sugar from the *leading performers'* group) depends mostly on weather conditions. A larger number of successful foreign and domestic privatizations have made the chemical division one of the most propulsive. Finally, the growth in the export of clothing and footwear, which started picking up in early 2004, can be ascribed in good measure to the liberalization of access to the EU market (see Box 5). The fact that this growth is not reflected in the statistics on industrial production indicates the possibility of rising exports by small and medium private companies in the textiles complex, which in previous years was hidden by the much larger drop in the value of production and exports of major textile companies that have not been privatized.

Box 5. Clothing and footwear exports help to eliminate administrative barriers

Clothing and footwear are a typical example of a division whose exports were strongly impacted by administrative factors. Exports fell and came to an almost complete standstill during 2003 because the authorities of Serbia-Montenegro were unable to meet the administrative requirements for export to the European Union while the two constituent republics of the state-union were adjusting their relations. The gradual recovery that began in late 2003 accelerated from 31 March 2005 when Serbia and the EU signed an agreement on textiles, and intensified when the agreement came into force on 1 July this year. Under the agreement, quotas were abolished and it appeared that all the barriers to export to the EU countries had finally been removed. Even after the administrative problems were resolved, the approved quotas were either soon filled, or some companies announced (reserved) deliveries they were subsequently unable to make. The administrative procedure to prove the provenance of export goods, which became particularly complex following the "sugar affair," i.e. suspicions as to the origin of the sugar Serbia was exporting to the EU, became even more so after the lifting of quantitative limits on exports from Serbia. Exporters say they find it less costly to pay customs duties than to go through the procedure for obtaining preferential status. Moreover, for a domestic producer to qualify for preferential status, he must use either domestic raw materials and intermediate products or those originating from the EU. If he has to import them from the EU, the prices of his products become too high and are not competitive in the EU countries. However, the growth of exports is evidence that the Serbian economy and administration are learning to overcome the administrative barriers to doing business with the developed markets.

The export trend of the *strong performers* in July, when the exports of the *leading performers* slowed down, further suggests that the surge in this group of products is steady, and that the healthy growth and expansion of exports in 2005 cannot be attributed solely to the large privatized divisions. In July, the export of sugar ceased and iron and steel exports dropped. Nonetheless, the exports of the *strong performers* as a group were 30% above the average in the first six months. Most prominent was the increase in shoe exports (more than 100% higher in July compared to the average in the first six months), followed by vegetables and fruits (77% higher in July), organic chemicals (44%), rubber manufactures (39%), and clothing (21%).

Imports are increasing, but remain lower than last year for some products.

Imports of intermediate and durable consumer products recovered fully in May-July, while imports of capital goods and consumer non-durables continues to be below last year's. Total imports in the May-July period were up 6.3% compared to last year. To understand the behavior of imports, we examined the categories by economic destination in the May-July period (Table T-9). Imports of fuels and electricity increased 35%, intermediate products went up 16.7%, durable consumer products 5.2%, while imports of capital goods were down 11.2%, and non-durable consumer goods 10.1% compared to the same period last year.

Evidently, fuel imports were strongly impacted by the price of oil, but, interestingly, imports of intermediate products grew strongly, even when divisions connected with the production of the leading performers are excluded: non-ferrous metals, iron and steel, ores, and sugar. Excluding the *leading performers*, imports of intermediate products increased 5% in the May-July period compared to the same period last year.¹⁴ This casts even more doubt on the statistics, which suggests that industrial production continued to fall in the second quarter. Imports of durable consumer goods reached last year's level in the summer months.

Table T-9. Serbia: Merchandise Imports by Economic Destination, 2003-2005

In %	2003		2004			2005			contribution to growth Jan-July
	Import share	Import share	y-o-y growth rates			y-o-y growth rates			
			Jan-Apr	May-July	Aug-Dec	Jan-Apr	May-July	Jan-July	
Total	100,0	100,0	16,9	25,0	44,3	-8,8	6,3	-1,9	100,0
Energy	14,6	15,3	3,8	27,2	79,4	25,1	35,8	29,5	19,8
Intermediate goods	34,2	33,2	16,7	22,3	37,4	0,1	16,7	8,0	36,7
Capital goods	26,6	28,8	27,8	30,6	56,5	-29,9	-11,2	-20,9	22,3
Durable consumer goods	4,8	4,6	24,6	23,0	26,0	-24,9	5,2	-11,2	4,1
Non durable consumer goods	16,5	15,4	13,7	28,3	25,5	-16,5	-10,1	-13,5	14,3
Other	3,4	2,6	16,3	-18,3	-1,6	-28,3	21,8	-14,4	2,8

Source: Republic of Serbia Statistics Bureau.

After a sharp decline in the first four months of the year, all import groups are recovering.

There are at least four explanations for the decline in capital goods imports. First, it partly reflects the drop in imports of goods that were exempt from sales tax but on which VAT is now payable (e.g. IT equipment). Second, capital goods imports were extremely high last year, which makes the base for comparison high. To check this out, we extrapolated the growth of capital goods imports in 2003 to 2004. Imports of capital goods in May-July continued to be lower than the extrapolated imports in 2004, but by only 5%, which is less than half of the drop relative to the actual figures in 2004. Third, VAT makes all imported capital goods more expensive until the importers are reimbursed, owing to which many of them are putting off importing and endeavoring to find ways to minimize or evade the expense. Finally, a part of the decline can be explained with the change in the extent to which imported capital goods are overstated (see Spotlight on: 2).

Imported capital goods are more expensive and investment demand has decreased

The fall in imports of non-durable consumer goods can probably be ascribed to the increase in the prices of those goods on which payment of sales tax was earlier evaded, and to the poorer liquidity of importers as the result of VAT, which results in a change in relative prices of domestic and imported non-durable consumer goods. A large proportion of these goods was imported to Serbia through long chains of small middlemen. One trader would deliver goods to another and both were exempted from sales tax on the basis of their "declarations" that the goods were purchased to be sold on. At some point along the chain, many goods would slip out of the formal economy into the gray area without tax ever having been paid on them. The introduction of VAT hit these traders in two ways: few of them have the liquidity to pay VAT and wait to be reimbursed, and the goods themselves become costlier and less competitive when VAT is paid. Explanations that imports of consumer goods have dropped because of the reduced purchasing power of the population are not convincing. For, if that were the case, imports of durable consumer goods would also have dropped, and this has not happened.

Imported consumer goods are also costlier, but imports of durable consumer goods are growing

¹⁴ The analysis is approximate since the observed SITC divisions include goods from various groups, not only intermediate products.

Analysis of imports by divisions brings out that the most propulsive export divisions are also the largest and most dynamic importers. The high production and exports of the *leading performers* has resulted in high imports of intermediate products. There is a need to estimate the net effects these divisions have on the foreign trade balance, but this requires more disaggregated data than *QM* has at its disposal. By examining divisions that account for the dominant share in total imports, divisions that are recording the highest growth in imports, and those to which this year's fall in imports can mainly be ascribed, we come to the following conclusions.¹⁵ First, in addition to petroleum and petroleum products, road vehicles and types of capital equipment, iron and steel, non-ferrous metals and chemical products made up the bulk of imports. Second, owing to the soaring of imports in 2005 (161.5%), the ores, minerals and scrap metals divisions emerges as the largest importer. This divisions is the most responsible for the year-on-year increase of imports in the April-July period. The expansion of manufacturing and exports of iron and steel and non-ferrous metal products evidently led to the importing of large quantities of raw materials for the division's needs. Third, similar tendencies are noticeable in other divisions of importance for the metalworking industry: iron and steel and non-ferrous metals head the list of divisions with the largest share and fastest growth of exports, and gave the biggest contribution to the negative import results from April to the present.

¹⁵ Only divisions accounting for more than 2% of total imports are taken in account. To isolate the influence of VAT on the 2005 import results (we assume that the effects of VAT faded away after the first quarter), we also compared the year-on-year value of imports for only the April-July period.

6. Fiscal Flows and Policy

The implementation of fiscal policy in the first half of 2005 was marked by a successful introduction of the VAT, owing to which for the first time Serbia's budget managed, despite a slight increase in public expenditure, to run a small surplus in this year. In the first half of the year, consolidated general government revenue¹⁶ increased by 5 percent in real terms, expenditure by 1.5 percent relative to the same period last year¹⁷, while savings of the consolidated public sector amounted to around 1 percent of GDP.¹⁸

The actual and anticipated further overperformance of tax revenue has been earmarked through the revision of the budget for increasing the planned budget surplus by about 10 billion dinars according to the old budget classification (or 32.2 billion dinars according to the new one) and for increasing budget expenditure by 11 billion dinars. Fiscal savings, i.e. the surplus, will restrain aggregate demand, but it will not be sufficient to put it under control and compensate for a shortfall in private savings – which would create room for higher investment financed out of bank loans. To that effect, the Belgrade City Council has also adopted a decision on expenditure cuts worth 3.5 billion dinars.

In the first six months public finance ran a surplus in the amount of 8 billion dinars. The amounts of surplus in the budget of Serbia and surpluses in local budgets were approximately at the same level. To meet the surplus target set by the budget revision, the Serbian budget should run an additional surplus of 28 billion dinars in the second half of the year. Total public revenue increased in nominal terms by 23 percent, with significant contribution to this growth coming from the VAT, whose share in total public revenue now exceeds 30 percent. In Serbia's revised budget the annual projection for the VAT revenue has been increased from 179 to 206 billion dinars. The increase in excise revenue was low due to a reduction in excises on petroleum products, aimed at mitigating the consequences of the crude oil price increases and the application of the Government Decree on the alignment of retail prices of petroleum products.¹⁹ Revenues from contributions and customs duties grew in line with the annual plan and movements in the basic macroeconomic aggregates.

Public spending was increased relative to the plan from the beginning of the year by 11 billion dinars. These additional expenditures were caused mainly by higher transfers to pension funds (on account of higher-than-expected pension increases driven by higher inflation and real wage growth), while other expenditure items in the budget were not commensurately reduced. In the structure, current expenditure grew at a slower pace than capital expenditure, which remains at a very low level. A significant decrease in subsidies was not accompanied by cuts in other categories of current expenditure, in particular wage expenditures, although this was expected. The most substantial wage growth happened at the level of local self-governments.

The VAT has generated the first surplus in public finance...

...but expenditure is also growing.

Surpluses are run in both Republican and local budgets.

Pensions account for the bulk of public spending.

16 In this issue, QM will not present its estimate of consolidated fiscal accounts, because essential dilemmas regarding the coverage of data have not yet been eliminated. Still, the estimate of the total result is sufficiently reliable to be used in analysis.

17 Real terms have been arrived at through dividing by the rise in the RPI in the relevant period.

18 Regarding the estimate of public savings we have relied on a rough but reliable estimate based on the movements in government deposits and credit in monetary accounts (Table T-11). Namely, we have proceeded from the assumption that these savings are reflected in the change in the net government position in dinars. Of course, the possibility cannot be excluded that a rise/fall in savings is also reflected in a part of the change in the net foreign exchange position of the government, but we are certainly not making a big mistake if we assume that the government foreign exchange position is under the predominant influence of the change in government assets: inflows are mainly from privatization proceeds, and outflows are related to the FFCD repayment.

19 Excises on petroleum products were reduced twice, in May and in August, by 3 billion dinars each time. The Ministry of Finance estimates that this will reduce the excise revenue by 6 billion dinars in 2005.

Box 6. Repayment of Frozen Foreign Currency Deposits is no Longer Expenditure

Based on a new budget classification, the repayment of frozen foreign currency deposits (FFCDs) and of the Loan for Economic Recovery of Serbia has become a financing item in the budget, classified as debt amortization, and it is no longer treated as expenditure. Bearing in mind that this item increases every year, its reclassification creates an impression that the improvement in the budget is faster. In strict legal terms, such classification is proper, because the repayment of FFCDs does reduce government debt. However, the analytical convention to treat debt amortization separately from interest and other current expenditure was adopted within the framework of the assumption that every debt can be flexibly refinanced, reduced or increased on the financial market, as well as that creditors were voluntarily lending to the government. In the case of FFCDs, it is a liability which was not generated in the process of budget financing, and the government's creditors did not voluntarily become creditors. Instead, the government's borrowing happened in extraordinary and non-economic circumstances. Bearing in mind that creditors are holding these bonds involuntarily, the state cannot refinance its debt just like that. Moreover, the creditors have so far been inclined to spend a good portion of the repayment as soon as they received it, hence in practice, the economics of these repayments is such that have more characteristics of subsidies than of financing for the time being. In time, with the shift in the repayment toward creditors who have higher claims, and with the development of the market as such, the repayment of FFCDs will really start to assume the character of a financial operation.

Changes in arrears are not known.

Data on arrears of the Serbian budget are not included in the regular report of the Ministry of Finance on the stock and composition of public debt and it cannot be said whether they are rising or falling. On the basis of public statements of government officials, companies and independent economists, the amount of arrears is highest in the pension fund for employees (1.5 unpaid pensions), the pension fund for farmers (around 22 unpaid pensions), the health fund (arrears to suppliers), as well as arrears of different ministries for delivered goods and services which have not been paid, with the SM Army and the Road Fund being at the top

Table T-10. Serbia: Public Revenues and Expenditures by Institution in 2005 (non consolidated)

Surpluses are attained by both the Republic and local governments.

	Serbia Budget	S&M Budget	The Fund for Employees	The Fund for the Self Employed	The Farmers' Fund	Health Fund	Labor Market Unemployment Insurance	Vojvodina	Local government ¹⁾
January-June 2005, in millions of dinars									
Total revenue	189,058,9	24,920,4	105,483,0	3,981,5	4,264,7	45,549,2	8,093,6	9,332,1	44,811,9
Customs	16,293,0	-	-	-	-	-	-	-	-
Personal and corporate income tax	28,556,9	-	-	-	-	-	-	2,207,3	17,929,0
Retail sales tax/VAT	99,393,4	-	-	-	-	-	-	-	-
Excises	31,522,9	-	-	-	-	-	-	-	-
Contributions	-	-	57,392,8	3,791,9	783,3	31,821,8	3,853,5	-	-
Other tax and nontax revenue	13,292,7	-	8,032,1	113,6	36,6	1,034,1	76,2	838,6	19,719,6
Other transfers	-	24,920,4	40,058,0	75,9	3,444,8	12,693,4	4,163,9	6,286,2	7,163,3
Total expenditure	185,288,4	24,922,4	105,815,9	4,132,7	4,150,3	44,966,5	8,107,9	8,442,4	42,009,3
Current expenditure	177,873,2	23,927,5	105,718,7	3,598,9	4,148,5	44,950,8	8,058,5	8,415,3	36,201,8
Wages and salaries	40,014,5	12,652,1	772,7	70,8	1,3	21,005,2	373,9	6,681,2	10,783,4
Expenditures on goods and services	7,949,6	3,838,0	664,4	56,1	129,0	18,575,7	223,2	404,6	8,011,9
Interest payment	6,662,6	74,6	7,121,6	-	-	1,245,1	-	0,0	132,8
Subsidies	14,069,5	-	-	-	-	-	-	863,6	9,576,0
Subsidies and other current transfers	20,127,6	5,643,0	87,615,0	3,104,4	3,643,9	3,923,6	5,090,7	17,8	5,721,7
Other transfers	87,058,3	-	9,525,0	367,6	374,2	-	2,334,7	-	-
Other current expenditure	1,991,3	1,719,9	20,1	-	-	201,2	36,0	448,1	1,976,0
Capital expenditure	7,415,2	994,9	97,2	533,8	1,7	15,7	49,4	27,1	5,807,5
Overall balance	3,770,5	-2,0	-333,0	-151,3	114,4	582,7	-14,3	889,7	2,802,6

Source: Ministry of Finance of the Republic of Serbia: *Public Finance Bulletin*.

1) Other than Vojvodina: cities and municipalities.

of the list. The estimates of the amount of these unpaid obligations go as high as 60 billion dinars.²⁰ The Minister of Finance has announced that the clearance of arrears to pensioners by means of bonds will begin next year.

The achievement of the adopted fiscal targets and budget by the end of the year will be difficult, in particular if we take into account the level of the surplus which should be attained in the second half of the year. On the revenue side of the Serbian budget, the highest risk is associated with other and non-tax revenues, which seem too ambitiously projected, as well as with the excise revenue after the change in excise policy on petroleum products. On the expenditure side, higher-than-planned inflation increases those budget expenditures indexed by law or regulations. This applies first and foremost to pensions and other social transfers, but other types of expenditure are affected too, since it is not very likely that they can be kept at the planned level due to pressures from trade unions.

The objectives of fiscal policy unlikely to be achieved.

²⁰ Equals 4 percent of GDP.

Monetary flows are buoyant due to inflows of foreign capital.

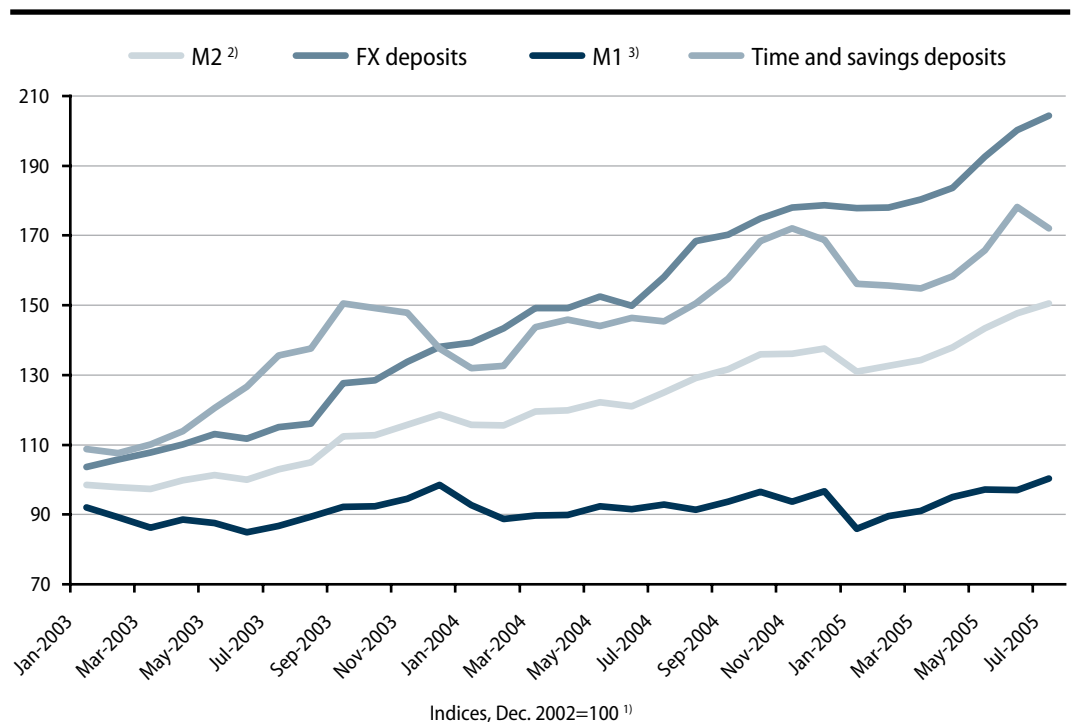
7. Monetary Flows and Policy

The monetary flows are buoyant despite the efforts the NBS has been investing since late last year to rein them in, due to inflows of foreign capital, visible in the balance of payments as well. In all likelihood, the main factor setting off money creation is banks' interest in extending credit to the non-government sector, which they fund with foreign resources and autonomous deposits of funds shifted from the grey economy into the formal financial sector. Dinar liquidity is also extremely high, clearly demonstrating that liquidity shortages created by the VAT are limited only to the part of the economy which has difficulties in accessing bank loans. The state managed to sterilize only a smaller portion of capital inflows. Within the present structure of the sector and high degree of euroization the NBS can only be reactive, except when managing the reserve requirement.

An increase of M2²¹ in July 2005 relative to the same month of the previous year remains very steep, 41.4 percent, (in real terms²² 20.4 percent) while bank loans to the non-government sector grew even faster, by 50.8 percent (in real terms 28.4 percent), as presented in Table T-11. Such increase constitutes an acceleration relative to December 2004 for monetary growth, while credit expansion, though somewhat decelerating in real terms, exceeds the one from the previous year in euro terms.

Graph T-11. Serbia: Money and Component Aggregates, Real Stocks, 2003-2005¹⁾

Monetary growth is lead by foreign exchange deposits, while M1 is stagnant.



Source: Table P-5. in Analytical Appendix.

1) Stocks deflated with RPI index.

2) M2 refers to M3 in accepted methodology in Serbia, and it includes: currency outside banks; demand deposits of households and enterprises; time and savings dinar deposits of households and enterprises; and time and savings fx deposits of households and enterprises. Enterprises also include non-profit and other non-government economic entities.

3) M1 includes: currency outside banks and demand deposits of households and enterprises. Enterprises also include non-profit and other non-government economic entities.

21 The M2 definition under the IMF methodology refers to M3 in the accepted methodology in Serbia and includes currency in circulation, sight deposits, dinar time deposits and foreign exchange deposits.

22 The real terms were arrived at by applying the retail price index (December 2002=100).

The rise in credit to non-government from January to July 2005 (21.6 percentage points of opening M2) exceeded the rise in money supply as such. In all likelihood, two processes outside the direct control of the NBS have initiated the monetary multiplication process: bank borrowing from foreign residents²³ and an autonomous increase in foreign currency deposits of the non-government sector. Both involve foreign exchange inflows which are either spent on imports or converted into dinars. The resources were not fully spent on imports even after the multiplicative process, so the NBS purchased them. The system as a whole has accumulated net foreign assets (NFA) in the amount of 4.3 percent of the opening M2 (see Table T-11). As pointed out in the *Balance of Payments* section, the accumulation of foreign exchange reserves in the course of the first half of this year was radically higher than traditionally recorded in the first half of a year.

Credit to the non-government sector drives the rise in money supply.

Table T-11. Serbia: Monetary Survey, Selected Indicators, 2003-2005

	2003		2004		2005	
	Dec.		July	Dec.	Mar.	July
	y-o-y, in %					
M2 ¹⁾	27,9		33,7	31,9	31,8	41,4
Credit to the non-government sector ²⁾	33,8		39,5	51,6	54,8	50,8
Households	78,8		90,4	125,0	115,7	103,6
Enterprises ³⁾	27,4		30,8	37,1	42,1	37,6
	cumulative, in % of opening M2⁴⁾					
M2 ¹⁾	27,9		12,4	31,9	2,5	20,5
M2 dinar ⁵⁾	7,3		1,6	8,9	-0,8	6,3
Foreign deposits (households and enterprises)	14,3		7,0	13,4	1,8	10,8
Net Foreign Assets (NFA)	12,2		-15,4	-8,6	1,6	4,3
Commercial bank foreign liabilities	-2,7		-7,6	-16,7	-2,1	-11,2
Net domestic assets (NDA)						
Credit to the non-government sector ²⁾	22,9		19,3	36,6	8,4	21,6
Net credit to government ⁶⁾	-2,7		6,8	5,4	-3,9	-4,3
	cumulative, in % of GDP⁷⁾					
Net credit to government ⁶⁾	-0,6		1,4	1,0	-1,0	-1,1
o/w: dinar credits	-0,3		0,3	0,1	-0,6	-0,9
Credit to the non-government sector ²⁾	4,0		4,0	7,1	2,1	5,4

Credit growth slowed down slightly...

...but in absolute terms it continues to be larger than growth of M2...

...and it is higher than last years' in terms of GDP.

Source: Table P-5. in Analytical Appendix.

1) Please see footnote 2 in Graph T-11.

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

3) Enterprises also include non-profit and other non-government economic entities.

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

5) M2 dinar refers to M2 in accepted methodology in Serbia, and it includes: currency outside banks; demand deposits of households and economy; and time and savings dinar deposits of households and economy.

6) Net credit to government: difference between government credits (dinar and fx) and deposits (dinar and fx).

7) Estimated centered GDP on an annual basis.

Sterilization by means of government deposits has reduced money growth by 4.3 percentage points of the opening M2, while NFA made a slight positive contribution to money creation. A slightly less than half of the sterilization is government savings of high privatization proceeds, while the rest constitutes genuine dinar sterilization. An accumulation of government dinar deposits is unexpected for the first half of the year, when tax collection is seasonally low due to lower turnover. This time it is, of course, a result of the increase in

Government has sterilized part of money growth.

23 A precise and reliable breakdown between deposits of non-residents in the country, deposits of foreign banks in domestic banks and bank borrowing abroad, for the time being cannot be made on the basis of publicly available data and are treated together.

tax collection which followed the introduction of the VAT, and it should not be expected to constitute a permanent change in the behavior of government liquidity. The buildup of foreign currency government deposits is unusual for the first half of the year as well, but it actually depends on irregular factors – the timing of privatization or disbursements of foreign loans to the government. This time, privatization of banks was completed in the first half of the year and used, though not entirely, for the payment of FFCDs.

Table T-12. Serbia: Monetary Survey, 2003-2005

The financial system balance is growing fast and changing its structure.

	2003		2004		2005	
	Dec.		July	Dec.	Mar.	July
STOCK						
	in millions of dinars, end of period					
Net foreign assets (NFA)	152.011		122.110	151.093	160.396	173.709
o/w: NBS gross reserves	193.700		197.102	244.837	272.654	329.752
o/w: commercial bank foreign liabilities	-22.554		-43.871	-73.252	-82.251	-115.230
Net domestic assets (NDA)	92.855		153.112	171.989	170.916	215.475
Net credit to government ¹⁾	-13.052		3.373	-424	-13.394	-14.795
o/w: net dinar credit	3.896		7.683	4.557	-2.704	-7.150
o/w: net fx credit	-16.948		-4.310	-4.981	-10.690	-7.645
Credit to the non-government sector ²⁾	173.687		220.956	263.292	290.513	333.113
Other items, net	-67.780		-71.217	-90.879	-106.203	-104.438
M2 ³⁾	244.866		275.222	323.082	331.312	389.184
M2 dinar ⁴⁾	124.886		128.696	146.584	144.128	166.796
Fx deposits (households and economy)	119.980		146.526	176.498	187.184	222.388
MEMORANDUM ITEMS						
Currency outside banks / Dinar deposits (households and economy) (%)	52,5		41,5	44,5	37,6	37,1
Fx deposits (households and economy) / M2 (%)	49,0		53,2	54,6	56,5	57,1
Velocity (GDP ⁵⁾ /M2)	4,5		4,3	3,9	4,0	3,7
FLOW						
	in mil. of EUR, cumulative from the beginning of the year ⁶⁾					
NBS gross reserves	598,8		-134,7	268,2	260,2	869,3
Foreignliabilities of commercial banks	-85,2		-271,0	-598,4	-86,2	-459,8
Fx deposits (households and enterprises ⁷⁾)	446,2		251,4	481,1	72,0	442,0
Government - fx deposits	-64,1		183,8	152,1	-97,3	-64,3

Source: Table P-5. in Analytical Appendix.

1) Please see footnote 6 in Table T-11.

2) Please see footnote 2 in Table T-11.

3) Please see footnote 2 in Graph T-11.

4) Please see footnote 5 in Table T-11.

5) Please see footnote 7 in Table T-11.

6) Eg. December 2003 figure refers to the change in the stock (in euros) for December 2002-December 2003.

7) Please see footnote 3 in Table T-11.

Growth in commercial bank credit potential is higher than last year.

Since the beginning of the year, banks have secured a significantly higher growth in their loanable funds²⁴ compared to the same period last year (by 105.3 billion dinars, or 1051 million euros), owing to both a sudden rise in household deposits and the inflow of foreign financing which is not subsiding relative to last year. Table T-13 shows banks' sources of financing by type of source in the year 2005 through July, and in the previous two years, in millions of euros. It shows that growth in household deposits and growth in enterprise deposits are several times higher in the period to July this year (429.8 and 161.8 million euros,

²⁴ Loanable funds means available sources for extending loans to clients – foreign exchange and dinar deposits, as well as foreign denominated liabilities of banks to foreign entities (including non-resident accounts).

Box 7. A New Wave of Financial Flows Formalization is Underway

In all likelihood, Serbia is experiencing a new wave of financial flows formalization, i.e. of entry into the financial system of resources which have previously circulated through the cash-based economy and connected companies abroad. The previous formalization wave happened in parallel with remonetization: initiated with political and economic changes in 2000, it was given a powerful boost with the euro conversion in 2002, and was abruptly interrupted with Prime Minister Zoran Đinđić's assassination. In the present wave deposits remain denominated in foreign exchange, hence we do not call it "monetization". It is driven by new factors. The strongest among them is certainly the effect of integration of our banking system in international flows, whose influence was twofold: it strengthened confidence in the banking system, in bringing out the practical advantages of direct conduct of business with the world through the domestic financial system; and it increased the supply of capital and hence of credit, encouraging economic agents to more realistically present all their economic activities (including financial flows) in order to become creditworthy. Furthermore, last year's regulatory changes also had a positive effect (extending audit requirements to a larger number of companies, cutting the corporate income tax, introducing international accounting standards), acting as an incentive to legalization of actual economic flows. Finally, the VAT was also effective as it encouraged legalization of the gray economy.

It is a separate issue to which extent the transfer of foreign exchange from under the mattresses to the banking system was prompted by the need of businessmen to buy dinars and pay tax in advance. Is a high level of exchange operations of the NBS a result of demand for dinars to pay for the VAT? We are inclined to conclude that the need for liquid assets to make advance payments of the VAT is not the crucial factor in this phenomenon. Firstly, the government debt to enterprises for VAT refunds has stabilized at around 10 billion dinars. It approximately equals the amount "pumped out" of the financial system (unreleased data of the Ministry of Finance): the increase in government dinar deposits in the first quarter of the year amounted to around 8 billion dinars. This, as was previously said, was not enough to "restrain" liquidity flows. Consequently, exchange activities exceed the amounts needed to make VAT payments. Similarly, the "flood" of foreign currency from exchange operations was concentrated in the second quarter, when the VAT effect had been stabilized.

respectively) than in the same period last year (168.5 and 46.6 million euros, respectively). Furthermore, the growth in banks' credit potential based on foreign borrowing, non-residents' deposits and increases in capital of banks is also considerably higher than last year. Foreign borrowing has been somewhat reduced, but, judging by balance sheet data, banks have brought in another 96 million euros of capital from abroad. It is a logical consequence of the measures by means of which the NBS is seeking to decelerate bank borrowing abroad (see Box 8). Publicly available balance sheet data on an individual basis for the period to June 2005 clearly indicate a rise in capital of the following banks: Meridian, Hypo-Alpe-Adria, Delta, Continental and Raiffeisen, in similar amounts of about 20 million euros. Finally, in the first quarter of the year, there is an accelerated use of bank reserves, indubitably connected with higher foreign trade activity in the last quarter of 2004. The latter was fully normalized by July.

The funds raised have been invested in loans to enterprises and households, as well as in a record quantity of government securities through repo transactions. Loans to enterprises and households have increased by 673.9 million euros since the beginning of the year, which is significantly higher than in the same period last year (484.7 million euros). The growth in credit to enterprises was accelerated considerably in the course of 2004, from around 25 percent y-o-y in March, to around 50 percent in December, remaining stable at that level until July of the current year (see Graph T-12). Loans to households had a similar path, with the exception that their growth rate reached its maximum of more than 120 percent late last year, when consumer lending was suddenly slowed down by NBS measures. Since then, new credit to households has been slowly recovering, and in July it stood at 103.6

Credit to households is catching up with credit to enterprises.

percent y-o-y (Table T-11). Such high growth rates are different from the growth achieved in the course of 2002 and early 2003, when the “main culprit” for high rates was a low base, i.e. when the trigger was monetization and legalization of the financial system (in early 2003 loans to households were growing at a rate of 250 percent). Apparently that a slightly different process began as of mid-2004, which is certainly connected with privatization and the opening of the Serbian economy. Unfortunately, *QM* is not in the position to verify the influence of individual major economic agents on financial flows.

Table T-13. Serbia: Funding, Credit and Investment Activity, Flows, 2003-2005

	2003		2004		2005	
	Dec.		July	Dec.	Mar.	July
	in millions of euros, cumulative from the beginning of the year					
Funding (increase in liabilities, -)	-1.472,2	-473,4	-1.166,8	-27,9	-955,4	
Households deposits	-284,4	-168,5	-347,8	-122,1	-429,8	
o/w: household savings	-274,0	-183,8	-382,6	-127,7	-400,4	
Enterprise deposits ¹⁾	-240,7	-46,6	-172,7	106,0	-161,8	
o/w: dinar deposits	-78,0	21,3	-76,1	50,7	-120,5	
Foreign liabilities	-85,2	-271,0	-598,4	-86,2	-459,8	
Capital and reserves	861,8	-12,7	47,9	-74,4	-95,9	
Gross foreign reserves (decline in assets, -)	16,2	-104,8	-38,5	-104,4	-107,2	
Credits and Investment	704,2	576,0	938,1	294,7	862,2	
Enterprises ¹⁾	298,6	300,1	397,6	202,1	411,2	
Households	155,9	184,6	398,6	44,0	262,7	
Repo transactions	8,8	14,7	-13,5	20,4	202,9	
Government, net ²⁾	240,9	76,6	155,4	28,2	-14,6	
MEMORANDUM ITEMS						
Net claims on NBS ³⁾	100,6	-50,9	206,6	-10,0	515,7	
Required reserves and deposits	124,7	24,4	206,8	37,6	329,4	

Source: Table P-6. in Analytical Appendix.

1) Please see footnote 3 in Table T-11.

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

3) Net claims on NBS: difference between claims on NBS (cash, required reserves and deposits) and liabilities to NBS.

Repos are mopping up short-term excess liquidity.

However, there was also excess liquidity which was invested in a record quantity of government securities, and now of NBS bills as well, through repo transactions. Since the introduction of repo operations in January 2005, repo purchases have reached unexpected proportions (18,426 million dinars, i.e. 222 million euros). The purchases of NBS bills for the whole of the last year ranged between 20 and 80 million euros.²⁵ In all likelihood, excess liquidity is generated on the short end, in dinar amounts at that. One of the causes might be the fact that companies are obliged to keep the financial resources raised by borrowing abroad (directly or through borrowing by a commercial bank which is the mediator) in dinars upon their transfer to the country. But it is interesting that a large leap of investment in repo operations coincides with the faster pace of purchases from

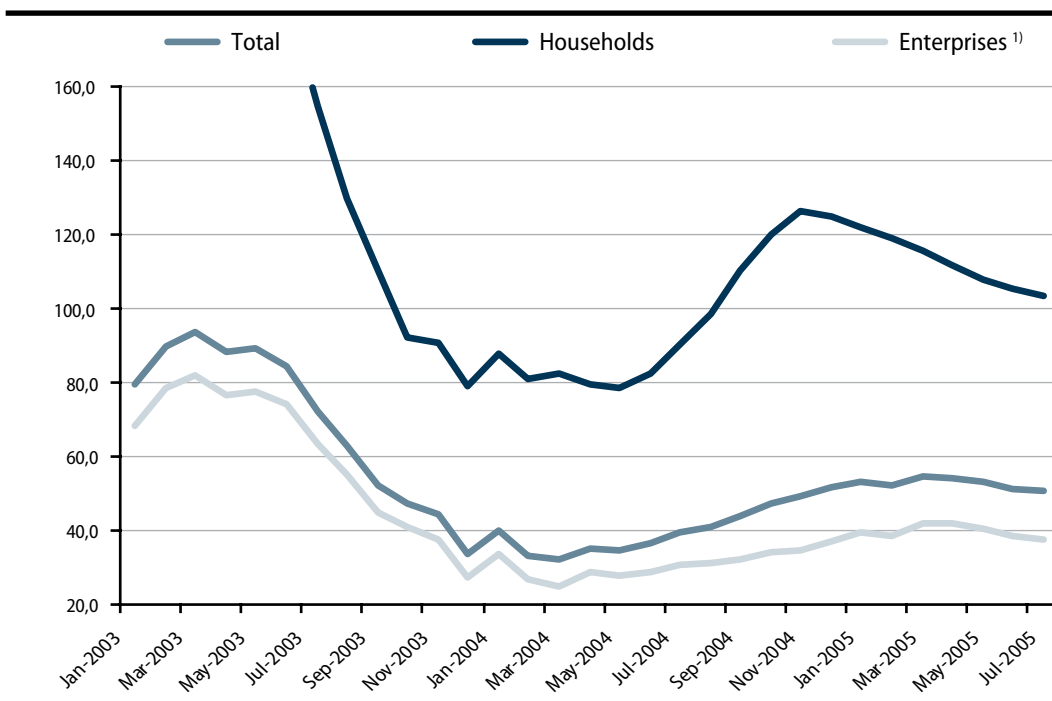
²⁵ The upward trend in sales of repos is unabated, and the holdings of government bonds that the NBS had disposed of were exhausted recently. Therefore, the NBS has resumed, as of 23 September, the sale of its bills, this time through repo auctions.

exchange operations by the NBS in the second quarter of the year. The role of, and the movements in, the purchases of foreign exchange from exchange operations by the NBS will be the subject of a separate study by *QM*.

Box 8. Bankers' earnings more powerful than NBS' measures

A significant increase in banks' foreign borrowing can be noticed as of the third quarter of 2004 (by as much as 250 percent, a twelve-month growth rate). Bearing in mind the negative impact on inflationary developments of such growth, the NBS's monetary policy responded by using required reserves, on several occasions: at the very end of 2004, the base for the calculation of required reserves (whose ratio is 21 percent) was extended to include foreign exchange loans as well (before that, banks were allocating reserve resources only on the basis of deposits). Since this step did not give the expected effects, in early June this year the reserve requirement ratio on foreign exchange resources was increased to 26 percent, (while on dinar resources it was reduced by 1 percentage point), only to be further increased to 29 percent just two months later. Despite such policy, the NBS did not succeed in achieving a more significant reduction in the inflow of foreign capital through these channels. The failure is explained by the existence of an extra profit margin in Serbia's banking, which rising competition has not yet "wiped out". The increase in the price of capital due to higher required reserves has reduced the margin, but not to such an extent as to make banks raise their lending interest rates (see the next section). There can be no constraining of demand for credit without increasing the rates.

Graph T-12. Serbia: Net Claims on Non-government Sector, 2003-2005, in dinars, y-o-y growth (in %)



Growth of credit to enterprises and households accelerates again since mid-2004.

Source: Table P-5 in Analytical Appendix.

1) Please see footnote 3 in Table T-11.

The growth in reserve money has been accelerated and, in all probability, it exceeds the needs of the economy, although the NBS has endeavored to mop up excess liquidity through sterilization via repo operations. Table T-14 shows the accumulation of NBS net foreign reserves (after excluding the effects of banks' obligatory foreign exchange deposits

The growth in reserve money exceeds the needs of the economy.

and government foreign exchange deposits), other balance sheet transactions of the NBS and the resulting growth in reserve money. It can be seen that in July reserve money grew 23.4 percent y-o-y, while December that same indicator amounted to a mere 10 percent. Such growth in reserve money is particularly high if one takes into account that, due to the boom in the use of payment cards, demand for cash is declining. In July this year, the ratio between currency in circulation and dinar deposits fell to 37.1 percent relative to July last year, when it stood at 41.5 percent (Table T-12). The NBS and the government have sterilized ample effects of foreign exchange purchases (33 billion dinars) by all available means (repo operations – 16.6 billion dinars, a buildup of government deposits – 6 billion dinars, etc.), so that reserve money remained almost unchanged from December to July, but a sharp decline in reserve money is typical for the first part of the year. Therefore the news that all government bonds in the NBS's portfolio were sold until the end of the summer through repo operations and that in September the NBS started to issue new bills does not come as a surprise.

Table T-14. Serbia: NBS - Foreign Exchange Purchases and Dinar Sterilization, 2003-2005

This year high-power money did not contract as is usual for first half of the year.

	2003		2004		2005	
	Dec.	July	Dec.	July	Mar.	July
FLOW						
	in millions of dinars, cumulative from the beginning of the year					
Foreign assets, net ¹⁾	13.304,2	-4.772,9	19.363,7	7.491,7	33.015,8	
<i>Foreign assets, net (in euros)</i>	203,9	-67,5	265,2	92,9	404,8	
Net domestic assets (NDA)	-12.631,2	-2.879,1	-12.390,7	-18.760,7	-33.035,8	
Government, dinar credits	-1.669,0	-401,0	2.376,0	-192,0	-4.864,0	
Government, dinar deposits	-7.983,0	32,0	-9.974,0	-7.268,0	-5.976,0	
Repo transactions ²⁾	-674,0	-1.307,0	471,0	-1.454,0	-16.634,0	
Other items, net ³⁾	-2.305,2	-1.203,1	-5.263,7	-9.846,7	-5.561,8	
Reserve money (H)	673,0	-7.652,0	6.973,0	-11.269,0	-20,0	
o/w: currency in circulation	-740,0	-930,0	2.186,0	-5.797,0	-51,0	
GROWTH						
	cumulative, in % of opening H ⁴⁾					
Foreign assets, net ¹⁾	27,2	-0,8	44,0	13,2	50,1	
Net domestic assets (NDA)	-26,3	-10,1	-34,0	-27,8	-50,1	
Government, dinar deposits	-11,5	0,0	-14,2	-9,4	-7,8	
Repo transactions ²⁾	-1,0	-1,9	0,7	-1,9	-21,6	
Other items, net ³⁾	-13,8	-8,3	-20,4	-16,5	-20,7	
Reserve money (H)	1,0	-10,9	10,0	-14,6	0,0	
o/w: currency in circulation	-1,1	-1,3	3,1	-7,5	-0,1	
MEMORANDUM ITEMS						
Gross fx reserves (flow, cum. from the begin. of the year, in euros)	627,6	-134,7	268,2	238,6	869,3	
Gross fx reserves (in % of opening H)	83,5	4,9	73,1	33,9	110,3	
Reserve money (growth rate, y-o-y, in %)	1,0	3,8	10,0	14,3	23,4	
Currency in circulation (growth rate, y-o-y, in %)	-1,7	10,8	5,1	3,6	7,3	

Source: Table P-7. in Analytical Appendix.

1) Netted of NBS liabilities and government fx deposits in NBS.

2) Up to end December 2004, includes NBS bills; from January 2005 to February 2005 includes NBS bills and repo transactions; and from March 2005 onwards it includes only repo transactions.

3) Other items, net include: Domestic credits (Net claims on banks, excluding NBS bills and repo transactions; Net claims on the rest of the economy) and Other assets and liabilities (i.e. capital and reserves, other assets and other liabilities), and it is adjusted for valuation changes.

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

For monetary policy, it is an important issue whether the circumstances on the repo market give rise to inflow of short-term capital, or the growth in repo operations is a response to some other, exogenous flows. When sterilization efforts give rise to capital inflows, then monetary policy becomes totally helpless. It is *QM's* assessment that repo operations provide good opportunities for arbitrage, through conversions euro-dinar-repo-euro, but that they nevertheless have not yet generated an inflow of foreign capital on their own. As previously said, the growth in repo sales coincides with a sudden surge in purchases of foreign exchange from exchange operations by the NBS, while banks' reserves (which could have been used on repos) were drawn in the first quarter of the year. In all likelihood, banks are investing dinars built up in enterprises' dinar deposits. These deposits have been growing since the beginning of the year at an annualized rate of around 40 percent, which is several times higher than the rates achieved since the end of remonetization in the first quarter of 2003.

Repo sales are still a consequence, rather than a cause of capital inflow.

8. Interest Rates

Interest rates are falling despite restrictive monetary policy pursued by the NBS.

Despite the NBS's restrictive monetary policy, interest rates on bank loans have fallen in this year relative to the previous year. The main reason is tougher competition due to the integration of our capital market with the international ones, owing to the entry of foreign banks in our market. Interest rates on foreign exchange deposits are also growing, which is an indication of the fact that banks are also fighting for domestic sources of financing. A drop in interest rates is happening despite the measures the NBS has undertaken as described in Box 8, which increase the so-called regulatory costs of banks on foreign currency sources. Still, the assessment in this section should be taken very cautiously, because there are no reliable indicators of the behaviour in interest rates.

There are still no reference interest rates...

There are still no reference interest rates because the normalization of maturity and risk structures of interest rates has not been completed. The market of deposits and loans is still segmented. Interest rates on various types of loans and different repayment periods widely differ from bank to bank (see Box 9). Unfortunately, not even weighted averages of interest rates on different types of loans, which the NBS publishes in its *Statistical Bulletin*, are indicative enough precisely because of their very heterogeneous structure²⁶, hence they cannot be the basis for drawing more reliable conclusions.

Box 9. FREN Survey on Fixing Bank Interest Rates Found a High Market Segmentation

Bearing in mind the limitations with regard to available data on interest rates in Serbia, and for the purpose of providing more complete information on the movements in the prices of banking services, FREN has carried out a survey on the manner in which commercial banks' interest rates are fixed and on their levels. Considering that the processing of the collected data is under way, a detailed analysis of the survey findings will be published in the next issue of *QM*. The processed data and performed analyses, for the time being, point to the following:

1. The general level of interest rates in Serbia, apart from interest collected from best clients, remains high.
2. There are significant differences among banks in the levels of their interest rates, which probably reflect the actual quality of their clients, too.
3. Long-term interest rates are lower than short-term ones, even after excluding loans at subsidized rates from international financial assistance. That could lead us to three conclusions, which are not mutually exclusive: that a drop in short-term interest rates is expected; that banks have monopolistic power which enables them to discriminate among clients in line with the elasticity of demand (short-term demand is more inelastic), which would mean that banks are earning extra profits on short-term loans, while profits on the long term ones are "normal" (or "more normal!"); and, finally, that long-term loans are extended only to the least risky clients.
4. Deposit remuneration rates act differently, depending on whether they are on dinars or foreign currency. A slight rise in rates on foreign currency deposits can be observed, which corroborates the thesis on growing competition for attracting foreign currency savings deposits, with a simultaneous slight fall in rates on dinar deposits, which is probably a response to excess dinar liquidity in short terms.
5. Savings are becoming an ever cheaper source of credit, because of the declining trend of the NBS reserve requirement ratio on foreign exchange savings deposits and an increase in reserve requirement on foreign borrowing.

²⁶ For example, the interest rate of 14 percent a year on a six-month loan indexed to a foreign currency levels for a certain period with the interest rate of 23 percent a year on that same loan which is not foreign-currency indexed. It is clear that by averaging out such non-homogeneous rates (the same to the beneficiary of the loan, anyway) no indicative average can be obtained.

On a brighter note, at least the process of money market integration is underway. On the basis of data on movements in short-term interest rates an increasing correlation can be observed between interest rates on NBS repo transactions and rates on inter-bank liquidity loans (Table T-15).

Unfortunately, the developments on the money market cannot serve as a basis for drawing conclusions on the movements in all interest rates. The differences in liquidity depending on the maturity structure of sources are very large, even within the range of relatively short maturities. For example, BEONIA²⁷ at an annual level ranged between 5 percent and 7 percent in August and September (one day maturity), while BELIBOR with 2-week maturity²⁸ in that same period was between 13 percent and 16 percent annually, as was the repo rate of the NBS²⁹. With respect to very short maturities, the system is facing the problem of excess liquidity, but with respect to maturities longer than a year, lack of sources is very evident with domestic banks. However, this does not apply to the same extent to banks which have access to the international capital markets.

Table T-15. Serbia: Short-term Interest Rates - Overview, 2004-2005

	Interest rates (p.a., in %)	
	Repo NBS (maturity: 2 weeks and 1 month)	Interbank liquidity credits ¹⁾
December 2004	16,30	12,86
January 2005	16,26	12,17
February 2005	17,72	13,56
March 2005	17,59	13,22
April 2005	17,21	13,55
May 2005	16,46	11,13
June 2005	14,82	10,05
July 2005	14,12	11,52

Source: NBS - Statistical bulletin.

1) Average interest rate on different interbank credits. Includes interest rates on overnight deposits, which lowers the level of the average interest rate.

...except, maybe, on the money market.

The interbank market rates follow closely those on repo auctions.

27 BEONIA (Belgrade Overnight Interest Average) is calculated on a daily basis as of August this year as an average interest rate on approved overnight inter-bank loans. Source: the Serbian Bankers' Association.

28 BELIBOR (Belgrade Inter-Bank Offered Rate) – the average offered interest rate on cash loans on a panel of 11 most active banks on the money market (Raiffeisen, Hypo-Alpe-Adria, HVB, Komercijalna, Delta, Kulska, National Savings Bank, NBG, Vojvođanska banka and Jubanka). Source: the Serbian Bankers' Association.

29 A more detailed analysis of the inter-bank market will be tackled in the following issue of QM.

SPOTLIGHT ON:

Inflation in Serbia: Exogenous Shocks and Fundamental Determinants

Pavle Petrović
Zorica Mladenović * *Inflation this year was only to a smaller degree caused by exogenous shocks – oil prices and the VAT. Even without them, inflation would have been high – almost 11% annually. The most important factors driving inflation are internal economic factors – high demand and/or labor costs. A breakdown of their respective effects requires more in-depth research, which is ongoing. At this point, it would be very risky to conclude that the main culprit is the exchange rate depreciation.*

1. Introduction and Main Findings

Over the past several months of 2005, inflation in Serbia has stood at around 17% on a twelve-month basis and it is certain now that it will exceed last year's figure. The reasons for high inflation are sought predominantly in exogenous influences such as: the introduction of the value added tax (VAT), oil price increases and administrative price adjustments, as well as in the floating exchange rate policy (dirty float),¹ which, in the opinion of the Serbia's Minister of Finance, should be seriously reexamined. The causes of high inflation have to be identified with a high degree of certainty in order to formulate an adequate policy response. If exogenous shocks are the problem, one should leave policies unchanged and wait for deceleration of inflation. If the problem is in the floating of the exchange rate, then the NBS should allow the exchange rate to appreciate in real terms, but this would further aggravate the problem of the external deficit. If the problem, however, is in fundamental factors such as labor costs or domestic demand, then one has to respond by formulating an economic policy that will address these problems.

More in-depth research into the causes of inflation in Serbia, particularly in 2005, is underway. However, the preliminary findings already clearly indicate that they are related

to fundamental factors, namely the internal economic imbalance, generated by overly high demand, for instance, or growing labor costs. The above points to the conclusion that a policy response to high inflation at this point cannot be to wait for disinflation or to appreciate the currency.

This article will analyze the impact of exogenous shocks on inflation, on the one hand, and of fundamental economic determinants, on the other. For examining the impact of shocks, the year 2005 is relevant (see Section 2), while the discussion of fundamental inflation determinants requires an analysis of the period from 2001 to mid-2005 (see Section 3).

The findings indicate that inflation in this year has been driven by exogenous shocks only to a smaller degree. If the impact of these shocks was eliminated, inflation in 2005 would nevertheless remain high – almost 11%, according to our estimate. The estimate of core inflation for 2005 is similar. Since core inflation is freely determined on the market, its level points to the fact that internal economic factors are a significant cause of inflation.² Namely, estimated core inflation in 2005 is almost two times higher than in 2002 and 2003, and approximately equal to the 2004 core inflation.

* The authors would like to express their gratitude to Aleksandra Nojković, MSc, for valuable research assistance and to Miloško Arsić, MSc, and Dr. Kori Udovički, for comments.

1 IMF, 2005, Country Report 05-232, *Inflation Determinants in Serbia*, July 2005.

2 According to the NBS methodology, the retail price index is divided into core and non-core components. The non-core component includes all the prices which are in any way controlled (the weight is 45%) and agricultural products (the weight is 3%). Controlled prices include the prices of electricity, petroleum products, various services: utility, PTT, transport, and then prices of certain foodstuffs, drugs and the like. The core component includes other prices which are freely set on the market (the weight is 52%). It does not cover prices fixed administratively or prices of agricultural products, because they are dominantly influenced by exogenous factors.

The above suggests that the economic imbalance underlying the high inflation in 2004 has persisted in 2005 as well.

Inflation in Serbia after October 2000 has followed a **U-shaped** pattern (see Graph L1-1). After a hike in late 2000, it gradually declined and was put under control in 2003. Yet, in 2004 the trend was reversed and price growth has been accelerating since, including during 2005. The findings of the research (see Section 3) suggest that an extraordinary surge in aggregate demand (and not the depreciation of the dinar or labor cost increases was the main trigger of the new inflation growth in 2004). This growth was primarily the result of increased public spending - from late 2003 through to mid-2004, on the one hand, and large credit expansion, on the other.

The fundamental factors of the 2005 inflation probably include a still present high demand - although decelerating in the first quarter, as well as rising labor costs in real terms. Furthermore, preliminary conclusions based on available data for the first half of 2005, indicate that slower depreciation of the dinar does not constitute a factor of inflation.

2. Inflation in 2005: The Role of Shocks and Core Inflation

An indicator of high and rising inflation in Serbia in 2005 is the September increase in retail prices by 16.5% compared to September last year. Generally speaking, inflation (on a twelve-month basis) stands at around 17% (see Graph L1-1), which is higher than the 2004 inflation rate of 13.5%, indicating its upward trend.

Since a range of exogenous shocks is offered as an explanation for high inflation in 2005, it will be examined whether the impact of shocks on inflation is dominant, or core inflation in 2005 is high irrespective of shocks.

Methodologically, the above question will be discussed first by exploring the impact of exogenous shocks on the rise in the overall retail price index (RPI). This will be followed by an examination of the part of retail prices which are freely formed on the market, i.e. the core price index. Its behavior reflects the effect of internal economic imbalance on inflation, hence it basically indicates what would be the level of inflation without external shocks.

The main exogenous shocks underlying the price increases in 2005 were the introduction of the VAT and a hike in petroleum product prices. Administrative price changes in the course of 2005 mainly constitute adjustments to the past inflation. A good illustration is the adjustment of the electricity price, which was increased by 9.4% in July 2005 relative to July 2004, while retail prices went up by 17.4%

over the same period. In this case the administrative price adjustment acted as an impediment rather than as an incentive to the acceleration of inflation.

The effects of shocks were estimated by using autoregressive models of inflation. The thus obtained estimates were partly verified and then supplemented by a procedure which calculates a direct effect of the rise in certain prices on the overall retail price index.³

VAT was introduced in January 2005. Its introduction coincided with a considerable rise in retail prices in January (2.7%) and February (1.5%), followed by a period of subsiding inflation (0.8%). We estimate that the contribution from the VAT introduction to inflation was 2.0 to 2.3 percentage points. The estimated autoregressive model of inflation shows that 61% of inflation cumulatively in January and February was a result of one-off events, first and foremost the VAT introduction. Since January saw an increase in utility prices as well, together with a fall in energy prices, we made a downward adjustment of our estimate from the model and arrived at the above mentioned interval of 2.0 to 2.3 percentage points. In determining the interval, the NBS estimate was also taken into account⁴, which indicates that the VAT introduction contributed to the rise in inflation by 2 percentage points. Our finding corresponds with the experiences of transition economies, which had introduced VAT earlier on. In those countries, the effect of VAT introduction on inflation ranged between 2 and 3 percentage points.

We have estimated the contribution from higher prices of petroleum products to inflation in the year through September 2005 at around 2 percentage points⁵.

The adding up of the contributions from the VAT introduction and petroleum products price increases has yielded the total effect of external shocks on inflation. Up to September 2005 it ranged from 4 to 4.3 percentage points.

Overall inflation in the first nine months of 2005 amounted to 11.85%. After making an adjustment for the previously established effect of external shocks, an inflation rate has been obtained, which ranges from 7.6% to 7.9%. For a period of nine months, these are high rates. Annualized, they amount to 10.1% and 10.5%, respectively. Consequently, inflation in Serbia, even after

³ This is a procedure which is normally used at the NBS and presented in its publication *Economic Review*.

⁴ National Bank of Serbia, 2005, *Economic Review*, April 2005.

⁵ We made the estimate on the basis of the NBS data in the year through July, and for the period after that on the basis of our own information on movements.

the effects of external shocks have been excluded, remains high – around 10.3% at an annual level.

An alternative method of investigating whether inflation was caused by exogenous shocks or the internal imbalance is to analyze the movements in core inflation. Since the core index comprises prices which are freely formed on the market (with a share of 52% in the RPI)⁶ it can be said that this index is determined by internal economic factors, rather than administrative changes. On the other hand, the VAT introduction has produced a rise in core inflation as well.

Core inflation in the year through September 2005 was also high: 9.8%⁷. The autoregressive model for core inflation estimated that the VAT introduction contributed to core inflation by 1.3 percentage points. This result is also confirmed by a simple comparison of the movements in core inflation. Namely, monthly core inflation hiked with the introduction of VAT to 2.4% in January 2005, and after that it immediately dropped to below 1%. Before January 2005, it had been rising at a rate of slightly more than 1%, hence also in this manner, it can be roughly estimated that the effect of the VAT introduction amounts to $2.4 - 1 = 1.4$ percentage points.

Even after adjusting core inflation for the VAT introduction in the year through September 2005, the obtained rate of 8.5% ($9.8 - 1.3 = 8.5$) is still high. At annual level, this rate amounts to 11.3% and is similar to the corresponding estimate obtained above for retail prices: 10.3%.

The above analysis shows that the 2005 inflation is high even when impacts of exogenous shocks are eliminated. It follows that the shocks have not been the main causes of inflation in the course of this year, and that it has been driven by fundamental economic factors.

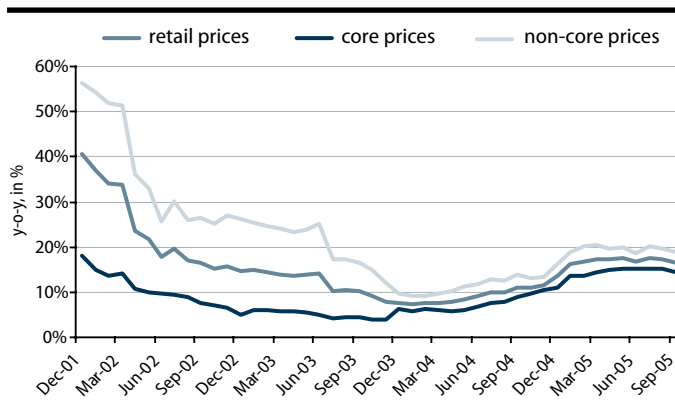
High core inflation is of special concern, because it is formed on the market and therefore it is a direct reflection of the imbalance in the economy. It is interesting that the estimated rate of core inflation of 11.3% is the same as the 2004 rate, and that it is two times higher than the core inflation rates in 2002 and 2003.

The above suggests that also in 2005 the trend of high inflation of 2004, caused by the internal imbalance, has persisted. For that reason, the next part will examine potential fundamental factors of inflation in Serbia.

3. Basic Determinants of Inflation: Core Inflation Analysis

The movements in inflation at a twelve-month level, depicted in Figure L1-1, show a clear declining trend until end-2003 and its renewed growth after that.

Graph L1-1. Serbia: Retail Prices and Components: Y-o-y Growth, 2001-2005



Source: NBS, Republic of Serbia Statistics Bureau.

A standard analytical framework for examining inflation determinants proceeds from the impact of costs, on the one hand, and aggregate demand, on the other. On the side of costs are labor costs, as the main non-tradable good, and the exchange rate, thus including the costs of tradable goods. The pressure from aggregate demand, however, can hardly be covered by a single variable. In research it is often approximated by the output gap, which constitutes the difference between actual GDP growth and macroeconomically sustainable growth. The assumption is that high aggregate demand results in an increase in output above a sustainable level. Therefore, in this section, the GDP movements will be analyzed and on that basis the output gap will be estimated. Table L1-1 presents the growth rates of relevant variables.

3.1. Unit Labor Costs

Growing labor costs are the main candidate for an explanation of core inflation in 2001 and 2002. In 2001, the exchange rate was constant for all practical purposes, while GDP grew by 5%, hence these two factors could not lead to the high core inflation of 18%. On the other hand, average nominal wages adjusted for productivity growth, i.e. unit labor costs⁸ significantly increased: by 52% in nominal terms or by 20% in real terms. The same trends in

⁶ Source: the NBS.

⁷ Source: the NBS.

⁸ Unit labor costs in nominal terms were calculated by multiplying average nominal gross wages by total employment and then dividing the result by non-agricultural GDP.

Table L1-1. Serbia: Inflation and Its Potential Determinants, 2002-2005

	Core inflation	Unit labor costs, nominal ¹⁾	Unit labor costs, real	Fx rate	GDP	Non-agricultural GDP
	y-o-y growth rates					
2002 Q1	0,1315	0,5405	0,2238	0,0181	0,0162	-0,0159
2002 Q2	0,0922	0,4906	0,3199	0,0182	0,0472	0,0146
2002 Q3	0,0721	0,3170	0,1807	0,0202	0,0745	0,0511
2002 Q4	0,0498	0,2696	0,1572	0,0273	0,0360	0,0233
2003 Q1	0,0557	0,2123	0,0975	0,0592	0,0135	0,0060
2003 Q2	0,0477	0,1926	0,0779	0,0701	0,0468	0,0343
2003 Q3	0,0445	0,1707	0,0931	0,0740	0,0142	0,0254
2003 Q4	0,0606	0,1588	0,0844	0,0995	0,0216	0,0395
2004 Q1	0,0587	0,1655	0,0836	0,0857	0,0682	0,0619
2004 Q2	0,0665	0,1662	0,0692	0,0969	0,0467	0,0560
2004 Q3	0,0863	0,1574	0,0412	0,1252	0,0840	0,0604
2004 Q4	0,1046	0,1200	-0,0021	0,1451	0,1240	0,0762
2005 Q1	0,1356	0,1608	0,0123	0,1493	0,0502	0,0401
2005 Q2	0,1413	0,1697	0,0165	0,1421	0,0656	0,0552

Source: Republic of Serbia Statistics Bureau, NBS.

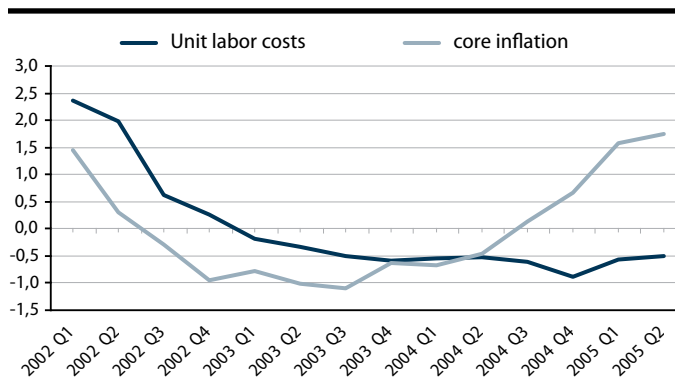
1) Unit labor costs - authors' estimate, please see footnote No. 7.

the movements of unit labor costs, the exchange rate and GDP continued in 2002 as well (see Table L1-1).

The movements in core inflation and unit labor costs, on the basis of standardized series, are presented in Graph L1-2⁹.

Core inflation and unit labor costs followed the same downward trend until the end of the third quarter of 2003, then diverged in the course of 2004, only to once again start following the same, this time upward, trend in the first two quarters of 2005. This indicates that unit labor costs probably contributed to inflation in the course of 2001 and 2002, as well as in the first half of 2005. On the other hand, one can see (Graph L1-2) that labor costs were not the cause of the surge in inflation in 2004. This, of course, does not rule out the possibility that wage increases in certain sectors contributed to inflation in 2004 through higher demand.

The observed rise in unit labor costs, as an inflation factor, is predominantly determined by increases in average wages, since the corrective effect of productivity growth has had considerably less influence. High expectations, pressures from trade unions, and the need to adjust not only relative prices, but also relative wages, has exerted a strong influence on increases in the inherited low salaries in the public

Graph L1-2. Serbia: Unit Labor Costs and Core Inflation¹⁾, 2001-2005

Source: Table L1-1.

1) Standardized growth rate series.

administration, health and education sectors after the October 2000 political change. This led to wage increases in other sectors. Thus, increases in real wages of 19% and 30% were statistically registered in 2001 and 2002, respectively. It is possible that wage growth is overestimated, i.e. that there is an error in measuring¹⁰, but even if an adjustment was made, real growth would nevertheless remain high.

9 The corresponding series from Table L1-1 were standardized by deducting the relevant mean and dividing the result by standard deviation. This constitutes a normal procedure in comparing series with very different growth rates and variability.

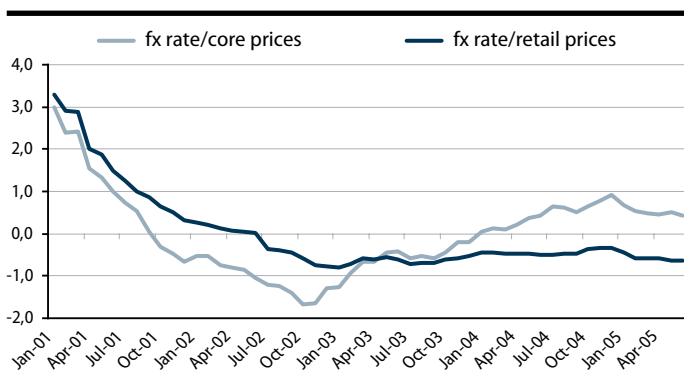
10 A possible source of errors, although the RSO has made adjustments, is the June 2001 grossing up of wages, which now include cash benefits for hot meals, commuting expenses, etc. previously not included in the wage. On the other hand, a rise in the average wage is also a result of the capture of part of the gray economy, as well as of the closing down of enterprises and lay-offs of workers with very low average wages.

3.2. Exchange Rate

Until end-2002, the exchange rate was used as a nominal anchor to curb inflation, after its sudden surge in the last quarter of 2000. The fixing of the exchange rate had a significant impact on the creation of expectations that inflation would be reined in. As of 2003, the exchange rate has started to depreciate in nominal terms (see Table L1-1).

The impact of the exchange rate is reflected primarily in core inflation, because it is freely formed. In addition, the core index includes mainly tradable goods, the prices of which are directly influenced by the exchange rate. On the other hand, the effect of the exchange rate on retail prices is weaker, because they comprise controlled prices, as well as the prices of non-tradable goods. The weight of controlled prices in the RPI amounts to 45%¹¹.

Graph L1-3. Serbia: Exchange rate, Retail Prices and Core Prices¹⁾, 2001-2005



Source: NBS, Republic of Serbia Statistics Bureau.

1) Ratios, logarithm.

Graph L1-3 presents the logarithm of the ratios of the exchange rate and core price and retail price indices respectively, thus depicting their combined movements. The presented ratios also constitute a measure of the real exchange rate, because foreign inflation is considerably lower and can be ignored.

If the prices were determined predominantly by the exchange rate, the real exchange rate would be relatively stable, i.e. the path of the real exchange rate (see Graph L1-3) would fluctuate around the horizontal line. It is obvious that this is not the case, particularly with respect to core prices which are freely formed, hence they are directly exposed to the influence of the exchange rate.

Namely, the ratio between the exchange rate and core price index had been falling in the course of 2001 and 2002, pointing to the real appreciation of the dinar, while in the

two subsequent years this trend was reversed. As the impact of the exchange rate on prices is expected to show within several months rather than years, the presented movements do not point to the stability of the real exchange rate. This implies that the exchange rate is not the only or the main cause of core inflation¹².

The above is not to say that the exchange rate has no influence on inflation. As previously stated, its fixing contributed to disinflation in 2001 and 2002. However, in 2003, when the exchange rate started to depreciate it did not bring about an increase in core inflation. Namely, core inflation in that year was close to, and somewhat above, the minimum level reached at end-2002 (see Table L1-1, Graph L1-3). Core inflation began to grow in the course of 2004, yet at a slower pace than the exchange rate depreciation. These movements indicate that the exchange rate depreciation was not the main cause of inflation in 2004. On the other hand, the dinar depreciation from 2003 to date has undoubtedly contributed to a certain rise in inflation.

It is interesting that the dependence between core inflation and the exchange rate is much weaker than the relationship between the overall RPI and the exchange rate. Graph L1-3 shows that retail prices and the exchange rate have moved in a synchronized manner after 2002, i.e. after the exchange rate started to depreciate. There are at least two explanations for that. One is that the NBS's exchange rate policy is to follow RPI inflation thus avoiding significant real exchange rate appreciation. An alternative is that the exchange rate depreciation causes a commensurate rise in retail prices, but not in core prices at the same time. The latter, i.e. low pass-through to core inflation makes the second explanation harder to defend. Namely, if the prices were following the exchange rate on a *pro rata* basis, that would have to be reflected first in the ratio between core prices and the exchange rate (since these prices are freely formed), and only afterwards in the ratio between retail prices and the exchange rate. It should be recalled that the weight of controlled prices in the retail price index is 45%¹³.

The econometric testing of the hypothesis "Does the exchange rate depreciation precede an increase in retail prices or vice versa?" has not confirmed either of the two possible answers. The reason for this could also be a small sample (the period March 2003 – August 2005), which was available for testing.

12 When tested, the exchange rate and core prices are not co-integrated, i.e. the corresponding real exchange rate is not stationary. This result also holds in the case of the exchange rate and retail prices.

13 Hypothetically, it is possible for the state to index controlled prices to the exchange rate in a more regular and uniform manner than the economy, but then again the problem is not in the exchange rate policy, but in the policy of administrative price controls.

11 Source: the NBS.

3.3. Aggregate Demand and GDP

GDP growth in the period from 2001 to mid-2005 had a specific path, which indicates that the rise in aggregate demand could be the main cause of the surge in inflation in 2004. Output growth in 2003 (2.4%) was below the medium-term trend, while in 2004 it leapt above the trend (8.5%). The above coincided with low inflation in 2003 and the its sudden surge in 2004.

There are different indicators pointing to significant resurgence in aggregate demand in 2004. One of the basic indicators is considerable widening of the trade deficit in 2004, which points to a high rise in domestic consumption. The trade deficit grew from 24% of GDP in 2003 to 31% in 2004. Some research shows that aggregate demand in 2004 was fueled through two main channels. The first was expansionary fiscal policy in late 2003 and in the first half of 2004, and the other a major boom in retail and corporate lending.

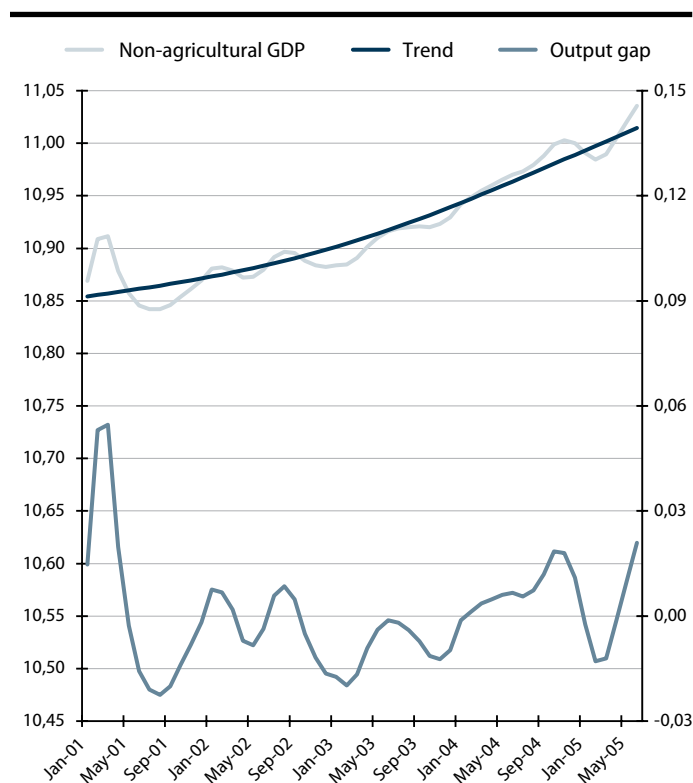
The pressure of aggregate demand on inflation is often approximated with the output gap. It shows to what extent the economy deviates from the sustainable path of economic activity. The output gap is empirically estimated as a deviation of the actual output from its long-term trend component. In doing so, the trend component is often estimated by using *Hodrick-Prescott's* filter (HP trend), putting a higher weight on the more recent past, which is relevant in the case of Serbia. We shall follow the above procedure, while noting that the available sample is relatively small and that the filter can produce imprecise estimates at the end of the sample. Future research will be focused on more precise determination of movements in aggregate demand and the resulting output gap.

The non-agricultural GDP is used for estimating the output gap, i.e. the deviation of output from its trend level caused by changes in demand. Namely, the variations in agricultural production are primarily determined on the supply side; hence they should be excluded when the impact of demand is analyzed. Table L1-1 presents growth in the non-agricultural GDP, indicating deceleration of growth in 2003 and considerable acceleration in 2004. Graph L1-4 presents the estimated HP trend for the non-agricultural GDP and the corresponding deviation from the trend. The latter constitutes an estimate of the output gap.

The estimate of the output gap shows that economic activity was below the trend throughout 2003, and above the trend during the whole of 2004. This coincided with the relevant movements in inflation: it was the lowest in

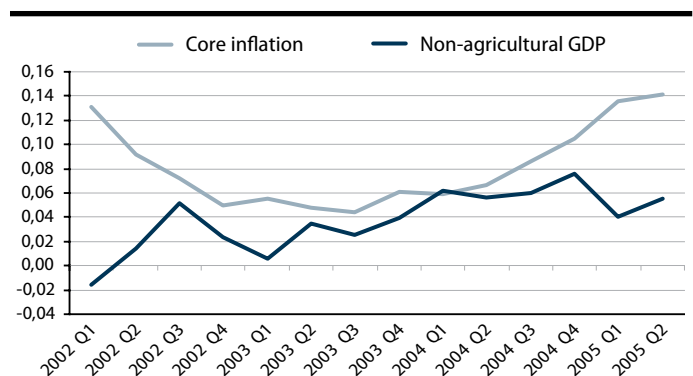
the third quarter of 2003, when economic activity was below the trend, and began to grow suddenly in 2004, with a steep rise in economic activity (see Graph L1-5 and Table L1-1). The above can also be seen in Graph L1-5 (and in Table L1-1), which shows that core inflation had reached its minimum level in the third quarter of 2003 and began to rise after that, together with output, in the course of 2004.

Graph L1-4. Serbia: Non-agricultural GDP, Trend and Output Gap, 2001-2005



Source: Republic of Serbia Statistics Bureau and authors' estimates.

Graph L1-5. Serbia: Non-agricultural GDP and Core Inflation ¹⁾, 2002-2005



Source: Table L1-1.

1) Growth rates.

The above estimates of the output gap are in line with the presented basic indicators of the growth of Serbia's economy and the available *ad hoc* indicators of movements in aggregate demand. Together, these results suggest that relatively low aggregate demand in 2003 kept inflation at a low level despite the dinar depreciation which began at that time. On the other hand, strong growth in aggregate demand in 2004 raised output above the trend and thus, in all likelihood, became the main cause of the renewed acceleration of inflation.

The effect of the fundamental factors presented here on inflation in 2005 may be analyzed on the basis of Table L1-1 and the attached figures. We can see that unit labor costs were going up in the first two quarters of 2005 (Table L1-1), thus exerting cost pressure on prices. The deviation of output from its trend level (Graph L1-4)

shows that economic activity, after a slowdown in the first quarter, was again above the trend in the second quarter. Therefore, it is possible that aggregate demand contributes to inflation in 2005 as well. Finally, the dinar depreciation is decelerating relative to core inflation (Graph L1-3), and therefore did not constitute a significant inflation factor in the first half of 2005.

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Reliability of Foreign Trade Figures

Vuk Đoković * *In the first seven months of 2005, Serbia's trade balance improved dramatically in comparison with the same period last year. The understanding of whether this improvement is realistic or just an illusion produced by the introduction of VAT is of great importance for Serbia's economic policy. Both a priori and econometric analyses point to a conclusion that VAT did not have an impact on the reliability degree of the registered value of exports, whereas in the case of imports, it most likely did.*

1. Introduction

In this text we will examine whether a sharp decrease of the foreign trade deficit actually occurred or whether it simply appeared to have occurred because of the changes in data reliability caused by the effect the introduction of VAT had on invoicing of imports and exports. It is evident that the introduction of VAT caused a shift of imports from the early months of 2005 to December 2004, that is, creation of stocks at the end of 2004, and a consequential fall at the beginning of 2005. This effect is analyzed exhaustively in Box 1 of this text. However, the subject of our analysis is the possibility that the introduction of the VAT had an impact on reporting practices by Serbia's businesses, producing an apparent, but not real, reduction in the trade deficit. It is widely believed that Serbia's businesses overinvoice imports and underinvoice exports in order to take capital out of the country. Many believe that the VAT has fostered an improvement in the accuracy of the reported data. The assessment of this possibility is very important for a country with such a large trade deficit because it matters for policy whether a thorough change in foreign trade flows is underway, as the available data indicate, or not. Has the competitiveness of Serbia's exports finally begun to improve, and to what extent? And have imports really contracted, which would be a sign of Serbia's macroeconomic adjustment making progress? Or are all these improvements just an illusion?

We will first mention some historical and logical reasons to believe that the foreign trade deficit is overstated through the practice of submission of false import and export documents. After that, we will concentrate on the possibility that VAT may have affected such a practice. First, we will analyze how the introduction of VAT stimulates the practice of false valuation of imports and exports. Then, with the aid of econometric methods, we will check whether export, that is,

import series have shown shifts in their trends at the start of 2005. Both *a priori* and econometric analyses suggest that VAT did not have an effect on the reliability of the invoiced value of exports, whereas, in the case of imports, it probably did have some effect. Establishing the extent to which the practice of over-invoicing of imports documentation and under-invoicing of exports documentation is generally present is a complex issue, outside the scope of this analysis.

2. Practice of Overinvoicing Imports Documents and Underinvoicing Exports Documents

It was common for companies in the former Yugoslavia to hold capital in bank accounts of connected legal entities abroad. This became particularly apparent when, in 1990, after the reformist government of Ante Marković sharply tightened monetary policy, all observers were surprised by the size of foreign exchange reserves which the National Bank of Yugoslavia (NBY) accumulated. Companies seeking dinars used their foreign currency holdings from these foreign bank accounts to purchase dinars in short supply. The practice of holding capital abroad and operating with it became considerably more sophisticated during the 1990s. Serbia's economy had to find a way to conduct international business operations under economic and political sanctions, and companies found loopholes in the international economic system, particularly tax havens. Capital was partly drained abroad, and partly it circulated back and forth. In other words, during the 1990s Serbia's economy developed semi-legal business practices as well as the infrastructure needed to support such practices, despite the international trade embargo.

We consider the network of companies - international intermediaries-- created in this period to be an infrastructure which is probably still used today, at least to some extent. An enterprise which wants to conduct business with connected international intermediaries must "invest" in learning about the legislation of a particular country, and must also create a sufficient number of confidential links

* I would like to extend my gratitude to Dr Zorica Mladenović, whose suggestion and help significantly upgraded the quality of this econometric analysis. Of course, the responsibility for any errors or deficiency of analysis is entirely mine.

through which it will conduct business in that country. This requires resources and money, but once established, these links are not too costly to maintain. Maybe today's incentives are not sufficient to prompt investments into the creation of such a network, but, since it already exists, we can assume that it is still used today. This makes it possible to conduct more indirect, semi-legal business than it would be the case with some other economy with a similar economic and regulatory structure to Serbia's, but without the network inherited from the past.

Taking capital out of the country either with the intention to keep it abroad, or to freely make payments with it abroad and return it to the country afterwards, is one of the two main motives for over-invoicing of imports, that is, under-invoicing of exports. As we explain below, in conditions when capital transactions from the country are sharply restricted, the easiest way to take capital out of the country, besides payment of fictitious imports, is by over-invoicing of imports and under-invoicing of exports. Another motive is tax evasion. Namely, depending on tax structure, over-invoiced imports and under-invoiced exports can reduce tax payments.

Before closer consideration of these motives, let us consider an example of the kind of transaction that we are referring to, and suppose that it is an import transaction. A domestic legal entity registered for foreign trade will first establish a company abroad, for instance in Cyprus. This company may, but does not need to be, formally connected to the domestic legal entity, which will, of course, make every effort to have complete formal and informal control over the foreign company. Then, when goods are imported, for instance from Russia, the company in Cyprus will be an exporter which sells these goods to our buyer. The country of the goods' origin is Russia, but the payment is made to Cyprus. The company in Cyprus will charge more, even considerably more, than the price at which the goods were really purchased. When such an overvalued invoice is paid to the company in Cyprus, and when that company settles its debt to the Russian exporters, the difference remains in the Cyprus company's bank account, controlled, of course, by the domestic legal entity.

(1) There are several reasons why a domestic company would be interested in taking capital out of the country:

a. Embezzlement of public /state property

This criminal motive is mentioned first not because we believe it is the most important one, but because it is the most present in the public consciousness. In this case, an individual in charge of a public/socially-

owned¹ company can decrease its profit or increase its losses by paying a higher than actual price, in line with the practice described above. The connected enterprise abroad is most probably his personal secret, and the foreign account is probably under his personal control, rather than under the control of the public/state-owned company which pays for the invoice. Without venturing into an assessment of the extent of this practice in the past, suffice it to say that as public/social property is being phased out, this motive is becoming less important.

b. Avoidance of restrictions in handling foreign and domestic cash currency, and of restrictions in international capital flows.

We consider this to have been the dominant reason for taking capital out of the country in former Yugoslavia, and still today, despite the considerable trade and capital liberalization of the past several years. A legal entity which earns foreign currency (from exports) can keep its proceeds in foreign currency in a domestic bank account, but payments or investments cannot be made from this account, except for imports of goods, investment in real estate and repayment of foreign debt². Therefore, a legal entity that needs to make a payment in foreign currency, will usually obtain the currency by claiming to need to pay for imports, even in cases when the real purpose is quite different. This problem actually does not concern only foreign currency. For each payment transaction from a gyro account and into a gyro account – the legal entity conducting it must submit detailed documentation, while certain transactions are simply banned. Even if the goal is not to conceal business operations or evade taxes, a legal entity that can find a way to take capital abroad will be motivated to do it, because it will dispose with it more freely.

c. More confidence in foreign than the domestic financial system, and more confidence in the stability of foreign currency

A domestic legal entity which generates income will want to invest it in a "safe place", which often means a foreign country and in foreign currency. However, there are extensive restrictions, even prohibitions, on the purchase of shares in foreign capital markets, purchase of real estate abroad, and possession of foreign

1 Social ownership is a heritage of former Yugoslavia's self-management. It is really public ownership in which the state shares key property rights with the employees of the company, and some rights are not clearly assigned to anyone.

2 See Law on Foreign Exchange Operations.

Box L2-1. "Shift" of imports on the eve of VAT introduction

VAT is paid immediately after registration of goods arriving in the country. Although it is returned in the majority of cases, it requires a high solvency of importers, because it increases their financial expenses. In addition, some goods which were previously tax exempt, are now subject to VAT. For this reason, importers had a strong motive to import everything they could at the end of last year, that is, the import was shifted back in time, from 2005 to 2004. Accumulation of stocks contributed to the increase of imports and a higher deficit last year, whereas in the first quarter of 2005 (particularly in January) it contributed to a decrease of imports and a lower deficit.

Sales tax was not paid on "imports of raw materials and imports of products for the purpose of further sale" (*Law on Sales Tax, Article 3, Line 4*). Besides that, a greater part of equipment was tax exempt (*Article 11 of the Law*). With the introduction of VAT, importers pay the tax immediately and so have an additional burden – the financial cost of captured capital in the account of tax authorities until the moment of reimbursement. Having in mind the high annual inflation, and the fact that the tax administration does not pay interest on this capital, the value of the VAT returned is lower than what was initially paid.

If imports are observed according to their economic purpose, various oscillations are visible at the end of last as well as this year. In December last year, compared to the preceding month, imports of capital goods were more than doubled (increase by 104.4%), imports of consumer durables increased by 81.8%, imports of non-durable consumer goods increased by 43.5%, and imports of intermediary goods increased by 40.7%. Equally intensive changes, but in the opposite direction, took place in January 2005.

The estimated value of the excessive growth of imports in December must be arbitrary, considering the fact that, during the past several years, it was not possible to ascertain typical seasonal behavior of imports, which would give us an answer to the question regarding the usual increase of imports in December. However, if the year 2003 is accepted as a reliable pointer, it can be assumed that, in December 2004, the imports would have increased by 20% without the additional discrepancies. As they increased by 64%, we assume that the difference (of circa 300 million euros) can be attributed to the effect of VAT introduction. Other analysts made similar assessments (for example - *MAT*, 2/2005).

bank accounts for residents – legal entities. Hence, the investor may take his/her capital out through false reporting of export proceeds or import payments.

(2) Over-invoicing imports can be a way to avoid or reduce tax payments.

a. Evasion of corporate tax

Customs duties for a majority of capital goods range from 1% to 10%, which is lower than corporate tax which, until last year, amounted to 14%. It is currently 10%. If a domestic legal entity comes to the conclusion that it is making a profit, it can conceal it by increasing invoices for capital goods on which custom duties are lower. Capital goods are suitable for this practice not only because of lower customs duties, but also because it is difficult for the custom authorities to determine their real value, and they can therefore easily be considerably overvalued. If, in doing so, the importer can prove that equipment imports are a part of a foreign investment, or are paid for from capital investment of a foreign investor, equipment imports will be fully exempt from customs. Later on, the capital which was taken out of the country in this way can be used for additional capitalization of the domestic enterprise.

It is even easier to conceal profit by under-invoicing exports. Exports documentation is simply reduced by the amount of profit which needs to be concealed. In this case the money stays abroad. The motives for such actions have become weaker lately, since the corporate tax was reduced and the need to report profit is increasing because of credit rating. However, another motive has been very intensified recently in the light of dividend payments and profit to foreign shareholders.³ Namely, if a foreign shareholder comes from countries with which Serbia has not concluded agreements on avoidance of double taxation, the profit share of such a shareholder is taxed additionally by the so-called "tax after deduction".

b. Evasion of other dues

Suppose that a domestic legal entity wants to pay part of its employees' wages in cash, in order to avoid payment of high labor dues. Overinvoicing imports or undervicing exports are the ways in which the

³ See Addendum to Law on Corporate Tax, adopted on July 23, 2004, where various rates of tax after deduction for residents and non-residents are defined.

domestic legal entity will “sneak out” the money from the strictly controlled system of payments, and then return it to the country for the purpose of illegal payment of wages to its employees⁴.

3. Registration of Exports and VAT

There are views in Serbia that the introduction of VAT in January 2005 resulted in overestimation of exports growth. There are two ways in which the introduction of VAT could have caused an increase in invoicing of exports, but, in the case of Serbia, we do not consider either of them to be probable.

Firstly, experience in some countries tells us that, after the introduction of VAT, they recorded a large increase in false invoicing of exports. The reason is that exports are VAT exempt. Thus goods intended for the domestic market are reported as export goods, exempted from VAT and then sold through gray channels on the domestic market. However, this practice existed even before the introduction of VAT, when domestic consumption was subject to a sales tax; therefore, replacing of the sales tax by VAT would not affect such behavior.

The second possibility is even less convincing. Let us suppose that some segment of production in the gray economy was intended for export, and that these exports remained unregistered in order to keep the production in the gray zone. Let us also suppose that, due to introduction of VAT, this production was legalized. In that event, it is only logical that the respective exports will be legalized as well, that is, they will be registered. Nevertheless, it is highly improbable that (even before the introduction of VAT) a considerable portion of exports could have been realized without being registered by Customs. It is possible that the public is also under the impression that legalization of production stimulated by VAT will simply force the same producers to report exports more realistically. Nevertheless, there is no direct connection between the reported value of production and the registered exports of a producer. If the exports of an enterprise which produced in the gray zone could have been underestimated before the introduction of VAT, we see no reason why they should not be underestimated after the introduction of VAT.

Exporters are motivated to under-invoice exports even after the introduction of VAT, because they are exempt from payment of VAT on their products, as they were previously exempt from paying sales tax. However, in

contrast to sales tax, an exporter pays VAT upon purchase of material, equipment and additional services. This can later be reimbursed by the exporter up to the amount of tax which would hypothetically be paid on the entire export.⁵ Moreover, since post-dated payments (e.g. up to 60 days) are a common practice between companies today, the exporter will be able to return the VAT paid for raw materials and services, even before the real payment is effected. In this case the introduction of VAT will not affect in any way the export price, regardless of whether the importer undervalues or does not undervalue the invoice.⁶ Therefore, it is logical that enterprises which previously under-invoiced their exports will continue to do this in the same volume, even after the introduction of VAT.

In order to substantiate whether the micro analysis of underinvoicing of exports coincides with real export trends after the introduction of VAT, we will analyze time series of monthly exports in euros in the period from January 2000 - August 2005. We modeled export (Y_t) so that it depends on 3 variables: time (t), export realized during the previous month (Y_{t-1}) and a dummy variable which models the seasonality of export in January (dummy_jan=1 in January, and 0 in other cases):

$$(1) \quad Y_t = \beta_0 + \beta_1 t + \beta_2 Y_{t-1} + \beta_3 * (\text{dummy_jan})$$

Box L2-2. Recursive coefficient estimates

Recursive coefficient estimates is obtained in the following way: in the first place the model is estimated for a certain shorter period of time, and then the parameters are estimated for each new observation. In other words, individual estimation of parameters is performed for sub series up to observation t inclusive, after which the other estimation of parameters is performed for sub series up to observation $t+1$, and this is repeated for the entire series. For example, in May 2002 we would have had a series with 24 observations, and using this series we would evaluate the parameters; For June we would have had a series with 25 observations and we would have estimated the vector of parameters, and so on successively. At the end we obtain the series of estimated parameters. Of course, estimations of parameters for the first several observations are not relevant. In this way we obtained a series of estimates where the one which differs from others should point to the moment of potential structural break.

4 In this case the capital might not actually circulate from the country abroad and back, but the capital can be secured locally, through multiple squaring of accounts with someone who needs capital abroad.

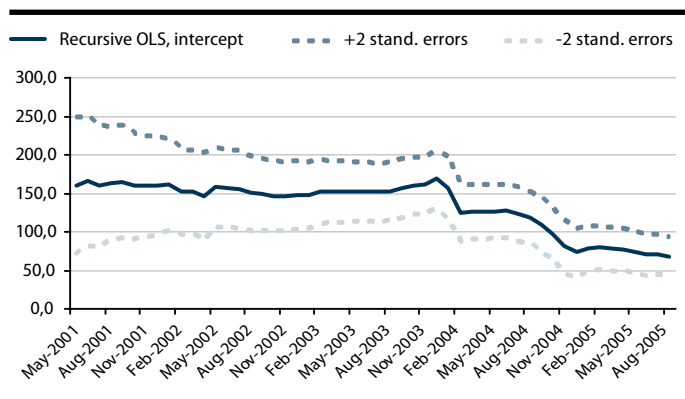
5 See Law on Value Added Tax (VAT), article 28, item 3.

6 It definitely is not in exporter's interest to reduce the amount on an invoice below the level of material costs, because, in that case, he still would not be able to return the complete tax paid for these costs. Nevertheless, it is very unlikely that such drastic reduction of export invoices were practiced even before the introduction of VAT.

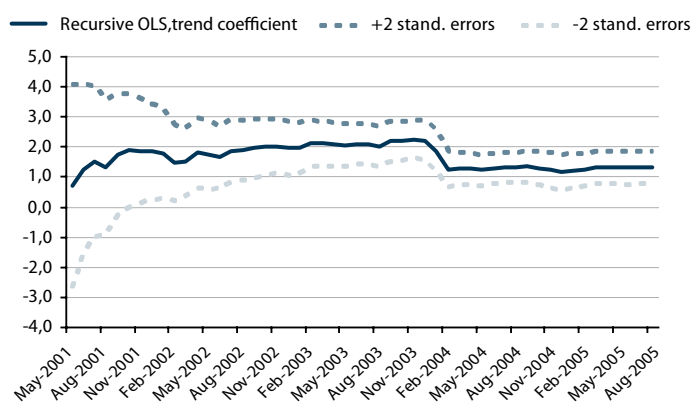
Autocorrelation was entered into the model since autocorrelation function (ACF) and Ljung-Box test confirm its existence. Using the ordinary least squares method (OLS) we estimated the parameters with independent variables:

$$(2) \quad Y_t = 68,24 + 1,32 * t + 0,47 * Y_{t-1} - 54,13 *(dummy_jan)$$

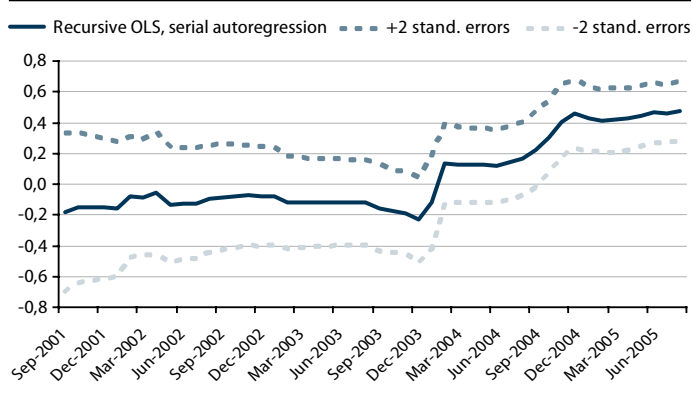
Graph L2-1. Serbia: Recursive Coefficient Estimates, Intercept β_0 (equation 1)



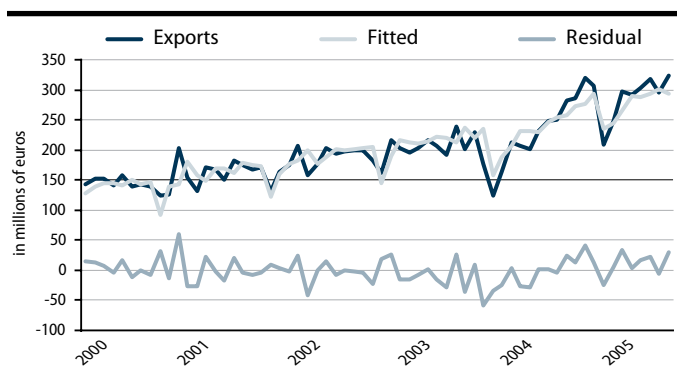
Graph L2-2. Serbia: Recursive Coefficient Estimates, Trend Coefficient, β_1 (equation 1)



Graph L2-3. Serbia: Recursive Coefficient Estimates, Serial Autoregression β_2 (equation 1)



Graph L2-4. Serbia: Regression Model of Exports (equation 1)



Source: Republic of Serbia Statistics Bureau.

Graph L2-4. shows that the model is well adjusted to export series ($R^2=0,84$). In order to check whether VAT caused permanent changes in export series, we analyzed the parameters by the method of recursive coefficient estimates (more detailed explanation of recursive coefficient estimates is given in Box 2).

The econometric analysis of the effect of VAT on exports does not indicate that a permanent break in export series has taken place since the beginning of this year. Graphs L2-1 — L2-3 indicate some changes at the beginning of 2004, when an abrupt rise in the value of the autoregressive parameter occurred as well as a partly compensating decrease in the value of the intercept and the trend coefficient. However, in January 2005, the estimate of the intercept slightly changed, while the estimate of the trend coefficient has remained stable for the entire period - from 2004 to the present. If the hypothesis that VAT would force exporters to present the value of exports more realistically were correct, a permanent rise in time series would have occurred. However, both the econometric analysis and the analysis of motives reject such a conclusion. Consequently, we can conclude that **VAT did not have an effect on the change in invoicing of exports.**

4. Registration of Imports and VAT

When goods physically enter the country, importers are obliged to pay VAT. The tax paid for goods imported for use in production processes or further sale in the country can be returned⁷. This is a novelty for exporters because these goods were previously exempt from taxation if they presented a “declaration” stating that the goods were not intended for final consumption. Nevertheless, the time which these resources spend “captured” in the account of tax authorities increases the import costs of such goods, and if the importer has solvency problems, and no access to bank

7 According to the Law on Value Added Tax (VAT), articles 28 and 52.

credits, this relatively small cost can become an obstacle to imports. In these circumstances, over-invoicing of imports increases the amount of VAT which will be “captured” for some time, that is, VAT makes over-invoicing of imports more costly. Therefore, there are reasons to assume that VAT causes a decrease in over-invoicing of imports, at least to some extent, or at least temporarily, until importers achieve the necessary solvency.

Econometric analyses which we describe below give ambivalent findings about the behavior of monthly series of imports in the period from March to August 2005. On the one hand, total imports in each of these 5 months was by circa 6 percentage points below the level which would be expected on the basis of behavior of imports until November 2004. On the other hand, the recursive econometric analysis does not indicate a permanent break/change in behavior of import series after January 2005. The most probable explanation is that a temporary disruption has occurred in import series, but not a permanent one. Decrease of imports can be explained by various reasons, of which some are pointed out in the section *Trends* of this publication. However, a possibility that the decrease was caused to some extent by changes in the proportion of real and registered exports cannot be excluded. The other reasons (as mentioned in the section *Trends*) are: increase in the prices of goods on which VAT must be paid now, but on which tax was previously evaded legally or not levied; and continued spending of import stocks from December 2004.

Although the introduction of VAT probably decreased the volume of over-invoicing of imports⁸, it is necessary to point out that this could have happened only to a lesser extent. Our analysis shows that motivation to reduce this practice will have the biggest influence on a more correct registration of import in cases when the sum of a customs duty on the overvalued part of the invoice and the cost of VAT starts to exceed the benefit obtained from overinvoicing imports.

In order to test the hypothesis that over-invoicing of imports has decreased after the introduction of VAT, we will analyze the time series of monthly imports in euros in the period from January 2000 - August 2005. Import (U_t) can simply be modeled as a function of time:

$$(3) \quad U_t = \alpha_0 + \alpha_1 t + \alpha_2 * (\text{dummy_jan}) + \alpha_3 V_December2004 + \alpha_4 V_January2005$$

where:

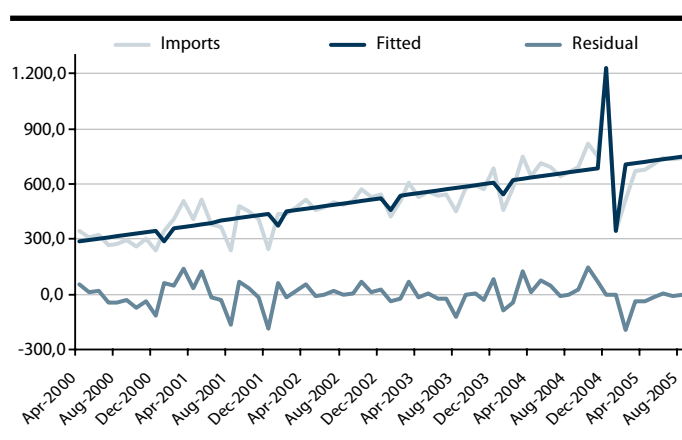
- dummy_jan – a dummy variable with which we model seasonality in January,

- V_December and V_January – dummy variables with value 1 for December 2004 and January 2005, and zero for any other observation.

By entering these dummy variables into the model we achieve that the extreme results in December 2004 and January 2005 do not affect the trend coefficient or the intercept. Using OLS we estimated the following values of coefficients:

$$(4) \quad U_t = 290.40 + 7.13 * t - 67.99 * (\text{dummy_jan}) + 539.84 * V_December2004 - 285.05 * V_January2005$$

Graph L2-5. Serbia:
Regression Model for Imports (equation 3)

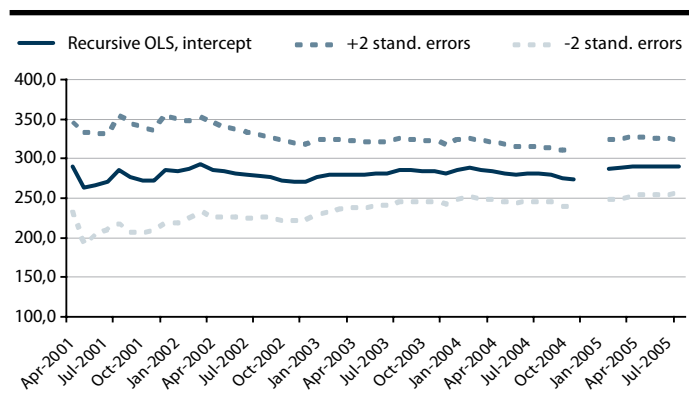


Source: Republic of Serbia Statistics Bureau.

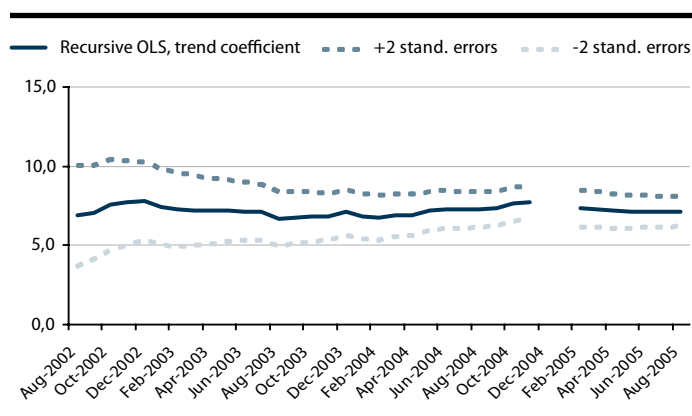
Graph L2-5. clearly shows that our model is well adjusted to time series of imports ($R^2=0,85$). In order to analyze whether a break occurred in the series, we applied the method of recursive coefficient estimates (a detailed explanation of this method is presented in Box 2). The analysis shows that the coefficients are stable. It is observable on the graph of recursive estimates of coefficients that values for December 2004 and January 2005 are missing. The reason for this are the two dummy variables which we used in the regression, that actually excluded these two observations from the OLS coefficient estimates. Whatever the case may be, the graphs do not show significant changes in recursive estimates of either the trend coefficient or the intercept in February and subsequent months in comparison with November. Therefore, recursive estimates of intercept and trend parameters do not indicate the existence of structural break. Further testing for additive outliers proves the existence of a single break in imports series in December 2004 and January 2005. A simple glance at the imports series plot suggest that these two observations are “extreme.” On the other hand, the significance of dummy parameters confirms that VAT implementation caused a shock in December 2004 and January 2005. It is clear that this shock is the result of anticipating of 2005 imports in December 2004.

8 The key tax change in terms of fight against this practice was a decrease of corporate tax in July 2004, from 15% to 10% .

Graph L2-6. Serbia: Recursive Coefficient Estimates, Intercept, α_0 (equation 3)



Graph L2-7. Serbia: Recursive Coefficient Estimates, Trend Coefficient, α_1 (equation 3)



The time series of imports indicates an abrupt rise in December 2004, caused by the “accumulation” of imports prior to the introduction of VAT, and a fall in January and February 2005. We also tried to find out how much imports really decreased in the first half of 2005. In order to answer this question we estimated the model which explains the behavior of imports in the period January 2000 - November 2004, and then we compared the real figures with the estimate provided by the model for the period December 2004 – August 2005.

We defined the model in the following way:

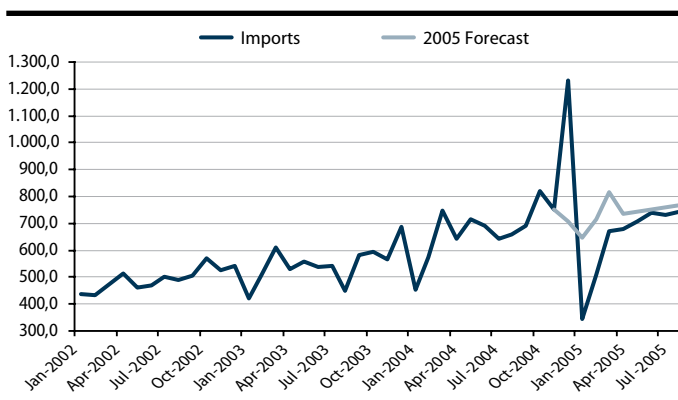
$$(5) \quad U_t = \alpha_0 + \alpha_1 t + \alpha_2 * (\text{dummy_jan}) + \alpha_3 * (\text{dummy_feb}) + \alpha_4 * \text{dummy_march}$$

where dummy_jan/feb/march – are dummy variables which model seasonality in these three months (e.g. dummy_jan has the value 1 for January, and 0 in other cases)

Using OLS we estimated the following parameters ($R^2=0,81$):

$$(6) \quad U_t = 273.78 + 7.71 * t - 67.25 * \text{dummy_jan} - 8.06 * \text{dummy_feb} + 86.54 * \text{dummy_march}$$

Graph L2-8. Serbia: 2005 - Imports Forecast



Source: Republic of Serbia Statistics Bureau.

Graph L2-8. shows that imports in 2005 are still below the level which the model forecasts, but it is clear that they are slowly coming closer to their long-term trend. If we omit December, January and February from the analysis, since the values are really atypical, we can calculate the average decrease of imports for the period March - August. The difference between the forecast of the model and real data is 6.6% on the average. Consequently, we can conclude that, in the period March - August the level of import was 6.6% below the expected level, but we should bear in mind that this decrease did not have a permanent character.

5. Conclusion

With the above analysis we tried to find out what econometrics can tell us about our foreign trade in 2005. Were there any disruptions? If yes, what kind of disruptions were in question? Permanent or transient disruptions? If there were any disruptions, what was their magnitude?

The answer is evident. The introduction of VAT has not resulted in permanent changes either in imports or in exports. The decrease of imports is the result of importers adjusting to the tax burden introduced by VAT (the December 2004 stockpiling of imports should be viewed in this sense). A decrease with respect to expected imports of circa 6% took place. However, the analysis suggests that this decrease was of a temporary character. In time, the long-standing imports trend will recover. The introduction of VAT had no influence on increasing exports. A change in the exports trend occurred as early as at the beginning of 2004.

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- Law on Value Added Tax (VAT)
- Republic of Serbia Statistics Bureau

What Is Actually the Size of the Pension System Deficit in Serbia?

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Lack of clarity regarding the causes of the growing deficit in the Serbian pension system make its difficult situation seem even worse. In this analysis, the current factors on the revenue and expenditure side are differentiated from those inherited from the past, the effect of which is expected to cease to burden the system in the near future. This kind of understanding is a prerequisite for the adoption of valid recommendations for the reform of the Serbian pension system.

1. Introduction

In December 2001, a radical reform of the pension system was carried out in Serbia. As a result, in the past three years, parameters which are directly related to the financial state of the pension system have been improved: the replacement rate significantly decreased (from more than 75% to 65%); the overall number of pensioners is stable and the number of employed has not dropped significantly. Therefore, it is surprising that the participation of pension expenditures and the deficit of the pension fund in the GDP are not diminishing.

Our starting assumption is that the pension system reform so far should have brought about an improvement of its financial condition. The aim of this paper is to draw attention to the misconceptions pertaining to the pension system in Serbia as well as to different factors affecting its condition, based on analysis of the relevant macroeconomic indicators and income and expenditure data of the Pension and Disability Insurance (PDI) of Employee Fund¹. Proper understanding of the pension system is a prerequisite for making valid policy recommendations for its reform.

The basic finding is that on the expenditure side, along with the current pensions, other expenditures also influence the deficit of the pension fund: health insurance of pensioners, the servicing of debts inherited from the past, as well as various expenditures mainly related to disability insurance. When it comes to revenues, a disparity was observed between the growth of contributions and wages (to which pensions are indexed). The disparity might be a consequence of inadequate collection of contributions, but problems with the statistical measurement of salaries is likely to be a factor as well. Consequently, the pension reform in Serbia should be considered in

a context that is broader than simply changing the retirement age and indexation formula for pension benefits, as has been the case so far.

2. The Basic Characteristics of the Serbian Pension System

Along with the typical problems all PAYG systems² in the world encounter (such as maturity of the system and demographic trends), the crisis the Serbian pension system has fallen into was to a large extent caused by the economic crisis during the 1990s and government policies that used the pension system to solve social problems.

Difficulties in financing pension benefits in Serbia started in the mid 1980s, and reached a climax during the economic decline in the 1990s³. However, considering the cash flow balance sheets, up to 2001 the pension system (that is, the PDI Employee Fund) was not in a cash deficit, for three reasons.

First of all, payments simply did not meet the pensioners' entitlements⁴. Thus, for example, in the 1995-2000 period, all the 12 monthly pension benefits were paid in only in 1996, while 10.5 to 11.5 pensions were paid in the rest of the period. In this manner a delay in payment of pension benefits was caused, which saved⁵ a lot of money in the high inflation circumstances. In addition to the delay, due to the *Decree on Payment of Pension and Pecuniary Benefits During the Sanctions*, retirees received only 83.3% of their pensions from April 1994 till June 1995. This created the so called "big debt" amounting to 2.4 monthly pensions.

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1 Although the pension system comprises three funds (a PDI Fund for the Unemployed, a PDI Fund of Self-employed, and a PDI Employee Fund), data which refer to the PDI Employee Fund were used, since it represents 90% of revenues and expenditures of the overall system.

2 "Pay-as-you-go" (PAYG) are systems where current employees finance the pensioners.

3 Matković Gordana, 2005, *Reforma penzijsko-invalidskog sistema*, in Četiri godine tranzicije u Srbiji, CLDS, Beograd, pp. 337-346.

4 Not paying entitlements is considered paying less than 12 pensions per year, as well as paying all 12 pensions with a time shift (e.g. a pension legally due in October is paid up in January of the following year).

5 The "new" government from 2001 inherited the arrears in the payment of pension benefits of 2 months.

Table L3-1. Serbia: Parameters of the Pension System (PDI Employee Fund), 2001-2004

	2001	2002	2003	2004
Demography				
Employees in enterprises, organizations, institutions and within entrepreneurs (period average)	1.919.259	1.876.393	1.841.216	1.841.653
Number of pensioners in the Employee Fund, period average	1.220.740 ¹⁾	1.251.689	1.251.808	1.243.067
Employees/Pensioners ²⁾	1,3	1,2	1,1	1,3
Wages and pensions				
Contribution rate (annual average), in % ³⁾	24,7	19,6	20,3	21,3
Net wage (monthly average) CSD	5.381,0	9.208,0	11.500,0	14.208,0
Amount of paid pension benefit (monthly average)	4.107,0	6.546,0	7.844,0	9.244,0
Real growth of paid pension benefits, %	18,4	36,7	9,0	5,7
Replacement rate ⁴⁾	76,3	71,1	68,2	65,1
Expenditures				
Expenditures of PDI Employee Fund, % GDP	10,6	13,0	13,3	14,2
Budgetary transfer to PDI Employee Fund, % GDP	3,3	5,5	5,7	5,2
PRO MEMORIA				
GDP real growth, %	5,5	4,0	3,0	8,0
Inflation (CPI), period average	93,3	16,6	9,9	11,4

Source: Republic of Serbia Statistics Bureau and PDI Employee Fund.

1) One can often find a number of 1.297.004 pensioners in 2001. This data comprises pensioners from Kosovo to whom pension benefits were not disbursed.

2) The official data of the PDI Employee Fund.

3) The contribution rate was calculated as an annual average, since the rate changed: until July 2001 the collective rate amounted to 32% when it was decreased to 19.6%, and then on May 1, 2003 it was increased to 20.6%, and in July 2004 to 22%. The decrease of the rate in 2001, from 32 to 19% is nominal – the increase of the base for holiday allowance, meal allowance etc. was not taken into consideration, which means that the drop in 2002, from 24.7 to 19.6% was nominal and not effective and therefore somewhat overstated.

4) The information about the replacement rate (RR) was calculated in relation to the actually paid average pension benefit which is lower than the average pension benefit according to the law, due to the lateness in disbursement of pension benefits. Considering the pension benefit indexed by the law, RR in 2001 amounted to 91% and 68% in 2004.

Second, the contribution rate was many times increased, to reach no less than 32%, at the end of 2000.

And finally, part of the shortfall was financed from extrabudgetary levies – like a part of the Payment System tariff, tobacco fee, postal service fee etc. – not transiting the budget, and hence not recorded as a deficit covered from the budget⁶.

In 2001 several factors resulted in a cash deficit of the PDI Employee Fund amounting to 3% of GDP: the regular payment of entitlements to pensioners, the high growth in wages pensions were indexed to, and an effective decrease in the contribution rate in June 2001.

In December 2001, a reform of the pension system was initiated which was rounded out in 2003 with the adoption of a new Law on Pension and Disability Insurance. The basic goal of the reform was to contribute to the creation of a

fiscally viable pension system, with regular payment of pension benefits. Numerous changes were introduced as regards the previous system, among which the most important:

- Instead of indexing pension benefits solely to wages, the Swiss formula⁷ was introduced which gives equal weight to wages and costs of living growth.
- The retirement age was raised by three years (63 for men and 58 for women).
- Instead of the most favorable ten-year average salary, pension benefits are determined according to earnings during the whole working span⁸.
- Stricter conditions for disability retirement were introduced.

Such a large number of changes in the system should have led in the following years, beside the long term effects, to the improvement of the financial state of the PDI Fund and halting the growth of the pension fund deficit.

6 On November 1, 1997 the Government adopted a Decree on special fee for crude oil and oil derivatives to cover the deficit of the PDI fund; afterwards, at the end of 1998, a Law on resources for the social program of the Republic of Serbia was adopted, etc.

7 Pension indexation: 50% with growth of costs of living and 50% with growth of wages.

8 The counted period is the part of working span realized from 1970 onwards.

Data on the basic parameters of the pension system influenced by the previous measures (see Table L3-1) indicates that it is realistic to expect an improvement in the financial situation of the Fund: the replacement rate has significantly decreased - from 76,3% in 2001 to 65% in 2004⁹, and the growth of the number of pensioners came to a halt. However, the cash deficit has increased and has been standing at over 5% of GDP since 2002.

Paradoxically, it turns out that the position of pensioners - measured by the replacement rate - has deteriorated and that the pension expenditures as a share of GDP and budgetary appropriations for covering the pension fund deficit are not diminishing.

3. What Affects the Deficit of the Pension System?

One of the causes of the increase of the pension fund deficit in 2001 was the tax reform of June of that year. This reform induced the pension system to suffer significant financial losses on two grounds - directly, on the revenue side but also indirectly, with the expenses.

Although the tax base was broadened for various earnings of employees for which, until then, no taxes were payable (meal and holiday allowances, field allowance etc.), the nominal contribution rate was significantly decreased (from 32% to 19.6%). This led to a decrease of the Fund's revenues - revenues from wage contributions were cut by more than 0.8 percentage points of GDP (from 7.6% in 2000 to 6.8% in 2001).

This one-off decrease of the fiscal burden on wages was used to increase net wages of employees (nominally 125% in 2001)¹⁰, which automatically brought about an increase in pension expenditures, which were at the time indexed to growth of net wages only. Thus the expenditure for (net) pension benefits, in relation to 2000, grew by 0.27 percentage points of GDP. The supplemental funding of the PDI Fund, which had been legally regulated until then (and in 2000 amounted to 1.4% of GDP) was discontinued, and the Fund's deficit is now financed directly from the Republic's budget. The Fund's deficit and the total budgetary transfer in 2001 amounted to 3% of GDP.

A surprising fact is that, notwithstanding the pension system reform which soon ensued (December 2001), the deficit of the Fund did not diminish, but kept constantly

growing in the following year and remained at the level of more than 5% of GDP. This raises a question: how it is possible that indexation of pension benefits according to the Swiss formula leads to the expected decrease of the replacement rate, but on the other hand it does not add up to the decrease of the pension fund deficit, bearing in mind the fact that the number of pensioners in 2002 was stable and the number of employees did not drastically decrease¹¹. The answer should be sought in the structure of revenues and expenditures of the PDI Employee Fund.

Table L3-2 shows the dynamics of the expenditure structure of the PDI Employee Fund for the period 2001- 2004.

When analyzing the factors which influence the deficit of the fund from the *expenditure side*, it is necessary to differentiate between the pension fund(s) overall expenditures and expenses which directly relate to financing of pensions (pensions expenditures/pension outlays)¹² (see current pensions in Table L3-2).

The pension expenditures, pertaining to payment of pension benefits, grew significantly in 2002 in relation to 2001 - by more than 2 percentage points of GDP. The increase is only partly a consequence of the higher number of pensioners (by around 0.23%) and the exceptionally high growth of gross wages (by around 0.56% in GDP). The highest contribution to the increase of the pension expenditures was actually given by the significant decrease of inflation (the average annual inflation in 2002 was 21.5% compared to 91.8% in the preceding year). The inherited delay in payment of pensions does not lead to a significant devaluation of pension benefits anymore, which influenced the real growth of pensions. This, however, increased pension expenditures in 2002 and hence the Fund's deficit of almost 1.5 percentage points of GDP (see Table L3-3).

In the following years the current pension expenditure remained at the same level (10.65% of GDP in 2004).¹³ Its decrease in GDP has not occurred due to the high statistical growth of wages. Although the Swiss formula was introduced for indexation, the nominal 51.7% growth of gross wages in 2002 was so high that pensions also grew

9 For the actually paid pension benefits; considering this relation if all the entitlements were regularly paid than the drop becomes even more drastic - from 91% in 2001 to 68% in 2004.

10 Source: Republic of Serbia Statistics Bureau.

11 For explanation of the number of employees and the dependency ratio see the original version of the document Bajec, Jurij and Stanić, Katarina, 2005, *Assessment of Pension System in Serbia*, Bearing Point and Foundation for the Advancement of Economics, Annex 2.

12 For details on expenditures of the PDI Fund and the difference between the overall pension expenditures and pension expenses see Bajec, Jurij and Stanić, Katarina, 2005, *Assessment of Pension System in Serbia*, Bearing Point and Foundation for the Advancement of Economics, Annex 1.

13 For more details on current pension expenditures see Bajec, Jurij and Stanić, Katarina, 2005, *Assessment of Pension System in Serbia*, Bearing Point and Foundation for the Advancement of Economics, Annex 1.

Tabela L3-2. Serbia: Deficit of the PDI Employee Fund 2000-2004

	2000	2001	2002	2003	2004
	in % of GDP				
FUND'S REVENUES	8,20	7,43	7,94	8,40	9,16
Fund's revenues according to its entitlements	8,15	7,36	7,54	7,84	8,25
Wage contributions	7,62	6,78	6,81	6,79	7,05
Accelerated service contributions	0,15	0,14	0,13	0,14	0,16
Contributions - youth, service contract, authorship fee	0,00	0,00	0,00	0,11	0,24
Contributions - sick leave, maternity leave, labour	0,10	0,16	0,22	0,17	0,34
Other contributions	0,06	0,04	0,05	0,06	0,11
Budget – according to special entitlements	0,21	0,24	0,33	0,57	0,36
Compensation from DF ¹⁾ and reimbursement	0,00	0,00	0,00	0,02	0,68
Other Revenues of the Fund	0,05	0,07	0,40	0,54	0,23
FUND'S EXPENDITURES	10,07	10,59	13,04	13,35	14,19
Current pension benefits ²⁾	8,21	8,48	10,70	10,76	10,65
Repayment of the big debt to pensioners	0,00	0,00	0,03	0,34	0,35
Compensations to other PDI funds	0,09	0,12	0,12	0,13	0,12
Foreign pensions, pensions according to the Decree and the difference ³⁾	..	0,15	0,02	0,10	0,13
Health care of pensioners	0,74	0,84	1,17	1,16	1,32
Other (social) benefits	0,38	0,39	0,54	0,53	0,56
Financial expenses	0,26	0,32	0,16	0,04	0,82
of which: compensation					0,66
Administrative and operational expenses	0,38	0,29	0,30	0,28	0,24
DEFICIT	1,88	3,17	5,10	4,94	5,03
Financing	1,90	3,01	5,20	5,14	4,99
Budget – subsidies	0,52	3,01	5,20	4,45	4,84
Revenues stemming from the Law on resources for implementation of the social program of the RS	1,39	0,00	0,00	0,00	0,00
Income from domestic credits	0,00	0,00	0,00	0,68	0,15
Difference ⁴⁾	0,03	-0,15	0,10	0,19	-0,04
ARREARS ⁵⁾	-	1,57	0,29	0,35	0,38

Source: PDI Employee Fund.

1) DF – Development Fund of Republic of Serbia.

2) Number of pensioners × average annual pension benefit.

3) Difference between above current pension benefits and old age, disability and survivor benefits according to financial statements.

4) Excess or a deficiency which remains in the Fund after financing the deficit.

5) Arrears are the difference between the actually paid pension benefits and the pensions indexed according to the law.

significantly, more than the nominal GDP (31.8% of growth is attributable to the growth due to the Swiss indexation, while the nominal GDP growth was 29.8%). In 2003 and in 2003, the growth of gross wages of around 25% brought about an increase of pensions at the level of the nominal growth of GDP (around 18%), and thus their participation in GDP remained stable.

However, in addition to the current pension expenditures, at the end of 2002 the PDI Employee Fund commenced payment of the so called “big debt” inherited from the previous system. This represents an additional expense for the PDI Fund, which amounts to some 0.35% of GDP annually.

What is more, *The Law on Social Insurance Contributions* of July 2004 increased the contribution rate for health insurance of pensioners from 10.4% to 12.3%. This led to a rise of pensioner health insurance costs (covered from the revenues of the PDI Fund), from around 1.16% of GDP in 2002 to more than 1.3% in 2004, that is, by 0.16 percentage points of GDP¹⁴.

In 2004, financial expenses, i.e. obligations inherited from the previous period increased. The major part of these expenditures is only accounting (8.5 billion dinars, or 0.66%

14 An increase in GDP is also expected in 2005 since pensioners were insured according to the lower base in the first half of 2004.

Table L3-3. Serbia: Contributions to the Change of the PDI Employee Fund Deficit, 2001-2004¹⁾

	2001	2002	2003	2004
	in % of GDP			
DEFICIT	1,29	1,93	-0,15	0,09
FUND'S REVENUES	0,77	-0,51	-0,46	-0,76
Wage contributions	0,84	-0,03	0,02	-0,26
Contributions - youth, service contract, authorship fee	0	0	-0,11	-0,12
Other revenues	-0,07	-0,48	-0,37	-0,37
FUND'S EXPENDITURES	0,52	2,44	0,31	0,85
Current pensions	0,27	2,22	0,06	-0,11
Number of pensioners	-	0,23	0	-0,08
Pensions	-	1,99	0,06	-0,03
Average pension due to the increase in wages (swiss) ²⁾	-	0,56	0,12	-0,001
Average pension - regularity of payments/inflation ³⁾	-	1,43	-0,06	-0,033
Repayment of the big debt to pensioners	0	0,03	0,31	0,01
Health care of pensioners	0,1	0,33	-0,01	0,16
Financial expenses	0,05	-0,16	-0,11	0,78
of which: Compensation				0,66
Other expenses	0,09	0,03	0,06	0,01

Source: PDI Employee Fund.

- 1) The negative sign in both cases (both with revenues and expenditures of the Fund) points to a positive tendency – that is, a contribution to the decrease of the deficit for a percentage point.
- 2) Pension benefits growth due to the increase in real wages, i.e. Swiss formula indexation. This actually shows how much the expense for pension benefits would grow in GDP if the last year paid out pension was the subject of indexation.
- 3) Contribution due to regularity of pension payments (all 12 monthly pensions per year) and decrease in inflation. Delay in benefits payment represents actually repayment of last year's 2.5 pensions debt (as well as acquiring the new debt amounting to 2.5 current year pensions). Repayment of debt is increasing in real terms with the decrease in inflation.

of GDP), since it represents a compensation between the Development Fund and companies, and therefore does not actually affect the deficit (the same amount is in the Revenues too). But for the remaining approximately 0.16 % of GDP, the Fund's expenditures have increased.

When it comes to the *revenues side*, the deficit of the Fund was influenced, as mentioned, by a decrease of the contribution rate in 2001. The GDP still has not attained the 2000 level of 7.6%.

When we consider the isolated revenues of the PDI Fund based on contributions from gross wages, it can be seen that the growth of revenues from wage contributions does not concurrently follow the statistical growth of wages, to an extent which cannot be completely explained by the fall in employment¹⁵. There are two possible explanations, which point to two possible problems. The first is *under collection*, failing to collect contributions that pertain to the officially paid wages¹⁶. The second is *inadequate statistical monitoring of wages* and therefore their growth¹⁷.

15 See Bajec, Jurij and Stanić, Katarina, 2005, *Assessment of Pension System in Serbia*, Bearing Point and Foundation for the Advancement of Economics, Annex 5 for details.

On the other hand, introduction of the obligation of paying contributions on income realized on the basis of authorship contracts, services contracts and the like, has proved to be quite significant – more than 0.25% of GDP revenues are generated in this way.

16 When it comes to revenues, there are several reasons why the contribution revenues are lesser than possible: for a large number of employees payments into the pension fund are not effected at all because these are companies which operate with losses and often do not pay even the salaries; there are numerous cases where contributions are paid to the lower base than the actually paid salary (under-reporting); possibilities of tax evasion are huge since there is no adequate control of collection (and which is separate from pension fund control). The problem of under-reporting, which certainly exists, is not discussed in this analysis. The assumption is that the official statistics records only formally paid salaries, and not the actually paid ones, so that the difference in the statistical growth of wages and the growth of contributions based on them is not seen. This is a special problem, the solution of which would add up to the enhancement of the financial status of the pension system in Serbia, and especially of the PDI Employee Fund.

17 By law, statistics authorities have to register average paid wages per employee in their personnel records, instead of recording employees which received wages. This subject as well as the methodology of monitoring the number of employees falls out of the scope of the present paper and it will be considered in the study: *Makroekonomska struktura i prilagođavanje privrede Srbije: 2000-2004*, 2005, Fond za razvoj ekonomske nauke.

Table L3-4. Serbia: Pension System Deficit, Various Aspects, 2000-2004

	2000	2001	2002	2003	2004
	in % of GDP				
Total fund revenues - Total fund expenditures	1,88	3,17	5,10	4,94	5,03
Total fund revenues - Expenses for social insurance entitlements ¹⁾	1,23	2,56	4,64	4,62	4,63
Contributions - Current pension expenditures	0,27	1,51	3,49	3,49	2,76
Fund revenues per its entitlements - Current pension expenditures	0,06	1,27	3,16	2,91	2,40
Total fund revenues ²⁾ - Current pension expenditures	0,01	1,21	2,76	2,35	2,15

Source: PDI Employee Fund.

1) Revenues without Development Fund compensation; Expenditures - current pension benefits, repayment of the debt to pensioners, compensation to other funds, health care contribution, other social benefits.

2) Without Development Fund compensation.

* * *

When it comes to the level of the PDI Employee Fund deficit (irrespective of its behavior), the previous analysis indicates that, to a large extent, it depends on the manner of financing the overall social insurance system. Currently, the PDI contribution rate (22% of the gross wage) is used to finance pension expenditures and the Fund's administrative expenses, as well as health care for pensioners and some other social insurance expenses (assistance and care benefits, bodily impairment benefits, disability insurance benefits, etc.)¹⁸. Table L3-4. illustrates how the deficit varies depending on decision as to what is to be financed from the PDI contribution rate.

Thus for example, if we look at the "cleaned" pension system, that is, contribution revenues and expenditures for current pension benefits, the deficit of the pension system decreased in the period 2002-2004 from around 3.5% to 2.76% of GDP. This calculation is in line with the projection of the World Bank (PEIR, 2003), according to which the deficit of the Fund in 2002 was 3.5% and in 2004 should have fallen to 2.9%. If we look at the "clean" pension system, that is, revenues of the Fund per entitlements pertaining to the PDI and expenditures for current pension benefits, the deficit of the pension system decreased in the period 2002-2004 for 0.8% of GDP (from around 3.2% to 2.4%).

18 Also, it should be noted that pensioners do not pay income tax. For comparative analysis of the fiscal burden on salaries and the amount of contribution rates in Serbia see Bajec, Jurij and Stanić, Katarina, 2005, *Assessment of Pension System in Serbia*, Bearing Point and Foundation for the Advancement of Economics, Annex 3.

4. Conclusion and Recommendations

In the above analysis, two questions, i.e. two aspects of the pension system deficit, were answered: why its share in the GDP is not decreasing, i.e, which factors affect the behavior of the deficit, and which factors influence its level.

When it comes to the behavior of the deficit, i.e. the fact that in 2002 it amounted to more than 5% of GDP and that this is not decreasing in spite of the implemented reform of the pension system, the reasons are the following: the "stability" of the deficit was influenced by the statistically recorded exceptionally high growth of wages, which, notwithstanding indexation according to the Swiss formula, led to growth of pensions at the level of the growth of GDP. This growth was not accompanied by the expected increase of wage contribution revenues. In 2004, expenditures for health care of pensioners increased due to an increase in the health care contribution rate (by around 0.16% of GDP in 2004). Also, in 2004, financial expenses increased too, i.e. repayment of credit (by around 0.12%). And finally, starting in 2003, pension expenditures increased owing to the repayment of the "big debt" to pensioners (around 0.35% GDP annually). Still, there have been some "savings" because of the delay of two months in payment of pension benefits (also around 0.35% GDP).

Consequently, some of the factors that influenced the behavior of the Fund's deficit in the preceding period are "exogenous" in the sense that they do not represent the logic of the pension system (repayment of debts and credits, increase of the health care contribution rate) and some factors are not exclusively in the realm of the pension system measures. Clear identification of the key causes of the

pension system deficit is important since it enables the real problems to be addressed: reform of the tax administration to deal with under-collection, and an adequate wage statistic for its measurement.

When it comes to the level, i.e. the amount of the deficit, we hold that financing of the pension system should not be considered fragmentarily, but as a constituent part of social security and public expenditures. When analyzing the condition of the state pension system in Serbia, it is necessary to keep in mind all the costs envisaged to be financed from the contribution rate for the PDI (currently 22% of gross wages), and taking into consideration comparative experiences, examine the manner of financing some of the expenditures of the Fund.

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Serbia's Financial Market: 2000-2005

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This description of Serbia's financial market gives an overview of its structure and dynamics, with emphasis on the initialization and functioning of continuous trading in company shares and normalization of yields on the bonds market. The basic behavior model of key sizes corresponds to the expected outcomes of an emerging market, and special attention is given to the process of its normalization.

1. Introduction

Quarterly Monitor (*QM*) starts with the monitoring, description and analysis of the processes in the financial sector from its youngest and most dynamic segment – the financial market. The main reason for this choice lies precisely in the mentioned dynamism. It is the authors' intention to present in the first few issues of *QM* a general overview of each individual segment of the financial sector, in order to enable readers to follow an analysis of the distinctive phenomena and processes in the sector.

The text below will describe Serbia's financial market and provide a brief overview of its dynamics. Bearing in mind the circumstances in which this market emerged and evolved in the course of the 1990s, the authors have primarily monitored the processes of its normalization. Especially monitored were two most significant developments: the beginning and operation of continuous trading in shares and normalization of yields on the bond market. The basic patterns of behavior of key market characteristics correspond to the anticipated outcomes of a young emerging market.

Serbia's financial market has three institutionally recognizable segments: the capital market - organized as a classic stock exchange, the money market - institutionally structured as an inter-bank market, and the foreign exchange market - under the auspices of the central bank (which will be discussed in more detail in one of the coming issues of *QM*). The most active market is the capital market, with which we open the description and analysis of Serbia's financial sector.

2. Capital Market

The Belgrade Stock Exchange was the first re-established stock exchange after the Second World War in East Europe (1989). Nevertheless, up until early 2002, it existed as an organization without normal rules of the game. Only during that year the market began to operate in a more or less standard manner. The main classes of assets traded

on this market are shares issued as a result of a process of insider privatization model, and bonds issued for the purpose of repaying frozen foreign currency deposits.

If the development of the market were measured by means of the standard indicator, namely, market capitalization, the logical conclusion would be that the Serbian market has experienced a strong expansion since early 2002 as the market capitalization has been growing very dynamically over the past four years. Unfortunately, the growth in market capitalization is not proof of expansive development of the capital market, because a large portion of the total capitalization is illiquid. This is typical of almost all economies in transition, yet the Serbian market, in comparison with many other transition markets, is even more illiquid.¹

Table L4-1. Market Capitalization and Trade in the Free Exchange (OTC) Market for Shares

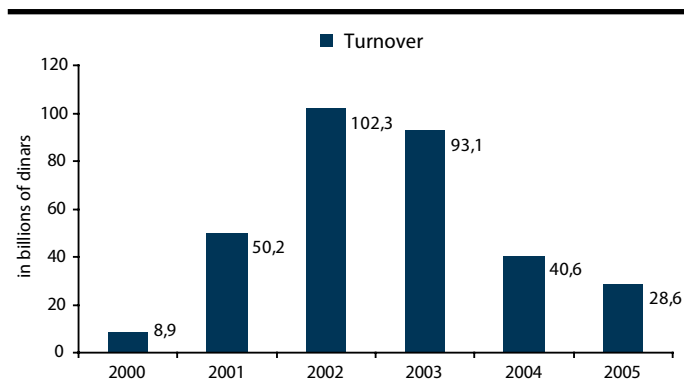
	Market capitalization in mil. of dinars	Trading volume in shares in mil. of dinars	Ratio: trading volume/ capitalization (in %)
January 2003	36.645.000	938.000	2,56
December 2003	77.443.000	5.148.000	6,65
December 2004	190.064.000	4.295.000	2,26

Source: www.belex.co.yu

A methodological consequence of the low liquidity of the Serbian financial market is reflected in the fact that the change in the level of capitalization is not a representative measure of its growth. For that reason, instead of this standard indicator, trading volume (turnover) should be used as it is a more reliable measure of activity in the market. Graph L4-1 shows an obviously different pattern of behavior of the Serbian market. Over the previous four years, its development was uneven.

¹ In 2000, the ratio between the total trading volume (measured in monetary units) and market capitalization was 101% in Hungary, 61% in the Czech Republic, 49% in Poland and 54% in Russia. See Lemierre, Jean, *Regional Development in the Securities Markets*, www.exchange-handbook.co.uk.

Graph L4-1. Turnover on the Belgrade Stock Exchange, 2000–2005¹⁾

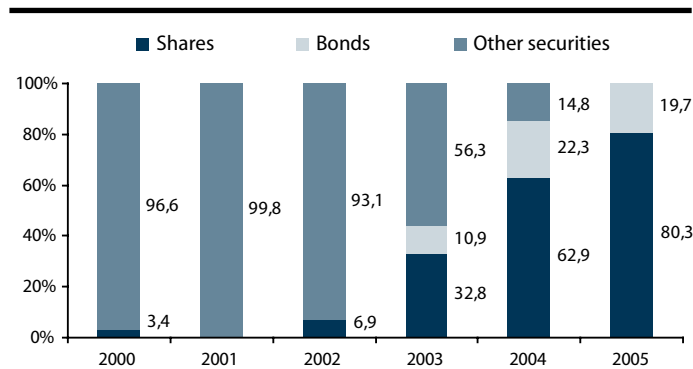


Source: www.belex.co.yu

1) Data for 2005 refers to the first 8 months.

The main cause of the cyclical behavior of the turnover on the financial market is the change in the structure of instruments that are traded on it. In the course of the 1990s there was no trade in shares or bonds on the Exchange. Instead, the main assets included commercial papers of companies and central bank bills. This structure was also maintained in 2000 – 2002 period (in Graph L4-2 commercial papers of companies and central bank bills are marked as *other securities*). The changes in the regulatory framework in the course of 2003 crowded out the transactions in these instruments from the Exchange and directed them towards the money market. In the period from 2003 to 2005, trading in these instruments on the Exchange practically faded out, and the focus shifted to shares and frozen foreign currency bonds (FFCBs).

Graph L4-2. Change in the Belgrade Stock Exchange Turnover Structure by Instrument (in % of the trading volume)

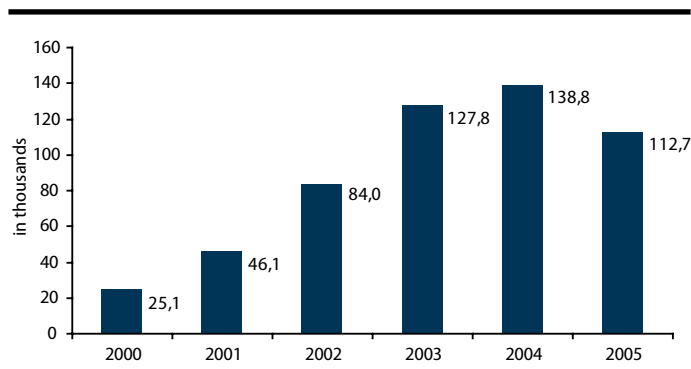


Source: www.belex.co.yu

While the turnover in money terms has had a cyclical character (see Graph L4-1), the turnover measured by the number of transactions has been steadily rising over the past 3-4 years (see Graph L4-3). Furthermore, the break-

down of the number of transactions by instrument has also changed (Graph L4-4). Company shares have become dominating assets on the Exchange both in terms of the trading value and in terms of the number of transactions.

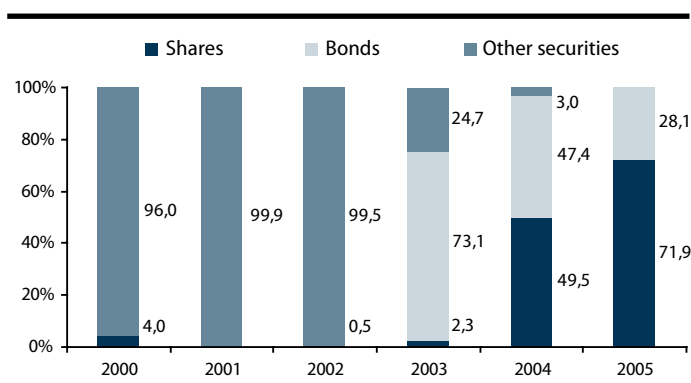
Graph L4-3. Number of Transactions on the Belgrade Stock Exchange, 2000–2005¹⁾



Source: www.belex.co.yu

1) Data for 2005 refers to the first 8 months.

Graph L4-4. Change in the Structure of the Number of Transactions by Instrument (in %)



Source: www.belex.co.yu

3. Share Market

The above testifies to the fact that the trade in company shares has constituted a dominant segment of the capital market in Serbia over the past two years. Therefore, it is of particular importance to have a good understanding of the basic behavioral patterns on that market. First and foremost, according to the trading method, it can be divided into discontinuous and continuous markets. These two markets differ widely.

The discontinuous market is a one-way market. The main sellers of shares on the discontinuous market are individual owners who have obtained shares, often for free, within the mass privatization procedure. The main buyers of shares on this market come from the enterprise sector. The central

goal of the buyers is to take over companies or to form substantial stakes in companies. This leads to the significant concentration of ownership and, in a particular sense, to emptying of this market. The emptying mechanism on the discontinuous share market operates the following fashion: during the period of concentration, the trade in given shares gains speed and the number of transactions increases up to the point where a sizeable or a controlling stake is formed; after that the trade in these shares declines. Since demand is falling, the price of the shares is falling as well. The main reason for this phenomenon is the fact that this market essentially does not operate as a share market, but as a market for companies, i.e. as a market for corporative control. The anticipated outcome, after a sufficient level of concentration of ownership has been achieved, is that the demand, trade and, consequently, the price start falling, because the new owner is not selling his stock of shares. Such shares are, for all practical purposes, withdrawn from the stock exchange. This mechanism also explains the huge difference between the level of capitalization and the value of trading in Serbia.

Table L4-2. Market Capitalization and Trade in Shares of 20 Largest Issuers on the Discontinuous Market ¹⁾

Company	Market capitalization	Trade in shares	Ratio (in %)
	1	2	2/1
end December 2004 stock (in thousands of dinars)			
1. DIN, Niš	43.552.261	6.842	0,0157
2. Apatinska pivara	23.010.000	-	0,0000
3. Hemofarm	11.594.000	81.283	0,7011
4. Cem. N.Popovac	9.671.500	-	0,0000
5. Coca cola HBC	8.700.592	6.581	0,0756
6. DIV, Vranje	6.872.984	228	0,0033
7. DDOR	4.863.175	71	0,0015
8. Imlek	4.056.287	11.855	0,2923
9. Energoprojekt	3.498.932	104.507	2,9868
10. Tehnogas	3.280.564	601.714	18,3418
11. Cementara Kosjerić	2.981.199	128.131	4,2980
12. Putnik	2.590.066	34	0,0013
13. Zorka farma	2.462.338	4.708	0,1912
14. Potisje Kanjiža	2.024.280	-	0,0000
15. Velefarm	1.906.969	3.622	0,1899
16. Alfa	1.872.620	271.225	14,4837
17. Henkel Merima	1.814.144	13	0,0007
18. Metalac, GM	1.785.000	18.816	1,0541
19. Bambi	1.674.800	615.643	36,7592
20. Čačanska banka	1.553.398	18.855	1,2138
Total for the first 20	139.765.109	1.874.129	1,3409
Share of the first 20 (in %)	73,54	48,37	

Source: *Survey Serbia and Montenegro, "Changes in the Financial Sector of Serbia"*, Vol XLVI 2005.

1) Companies ranked according to the level of total market capitalization.

The consequence of this finding is that the discontinuous trading market (which is still prevailing in Serbia, although its market share keeps shrinking both because of

its emptying and because of the development of the continuous market) serves purposes which are completely different from the standard ones: instead of going public in order to raise additional capital, it serves the purpose of going private and taking over companies. This process is evolving against the backdrop of low informational and price efficiency. In such an environment, the market tends to undervalue shares, thus further accelerating the process of its emptying. The discontinuous market is emptying at high speed also because dominant sellers come from the retail sector, who were given these shares free of charge in the mass privatization procedure. These minority owners have low protection and are exposed to massive expropriation by majority owners or managers, which also includes the abolition of the right to dispose of one's own property. A low quality of corporate governance additionally accelerates the conversion of this market into a corporative control market.

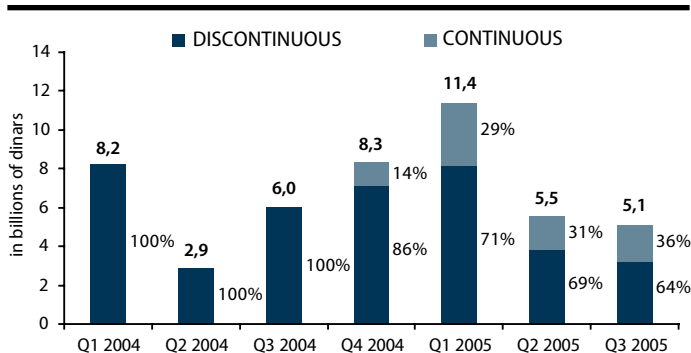
If this process continued without any interruptions, the equity market would gradually degenerate into an auxiliary mechanism of the company market, that is, the takeover market.

A significant change, which slows down the process of emptying of the equity market was registered in October 2004. Another segment, whose importance is on the rise, has been activated on the equity market - the continuous market. It behaves differently from the discontinuous market. The key difference relative to the discontinuous market is in the manner in which supply and demand are created. Individual owners of shares from the privatization process remain a dominant source of supply. However, in addition to them, another source of supply is gradually being activated from among portfolio investors. Many of them bought the shares earlier and are now selling them in order to realize capital gains or to restructure their investment portfolios. This group of investors consists of both institutional and individual investors. The liquidity of the continuous market is for that reason considerably higher than the liquidity of the discontinuous market.

The emergence of the continuous market (which, however, still does not constitute an official listing on the Exchange) slows down the process of market emptying, producing both an increase in the number of transactions and an increase in the value of trades.

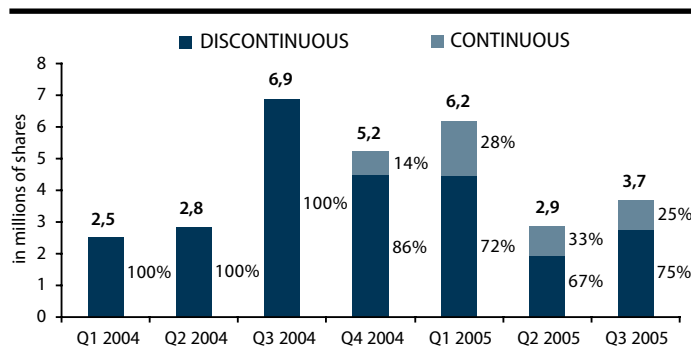
Since the opening of the continuous equity market, the market share of this segment in total turnover expressed in money terms has been steadily growing - from the initial 14 percentage points in the last quarter of 2004 to the 36 percentage points in the third quarter of 2005 (Graph L4-5). On the other hand, the share of the continuous market in the total number of shares sold follows a fluctuating path (Graph L4-6).

Graph L4-5. Changes in the Volume and Structure of Share Trading in the Course of 2004 and 2005



Source: www.belex.co.yu

Graph L4-6. Turnover Measured by the Number of Shares Sold in 2004 and 2005



Source: www.belex.co.yu

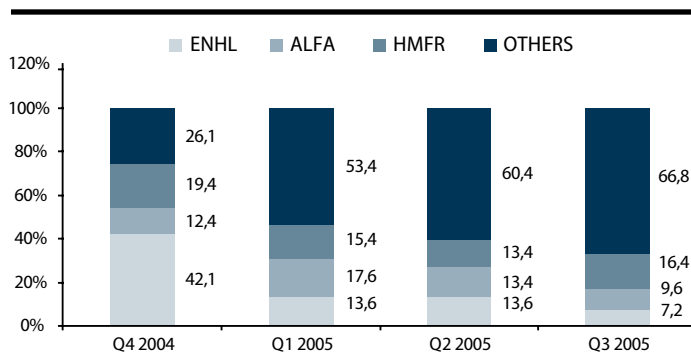
In the first quarter of 2005, the total turnover on the equity market reached a record level of 11.4 billion dinars. This period can be considered the first demand boom on the Serbian equity market. Also registered was a record increase in the Belgrade Stock Exchange index (BELEXfm), whose value rose from the initial 1,135.67 index points (19 October 2004) to a historical high of 1,595.54 points on 29 March 2005 (this constitutes a growth of around 40 percentage points).

Several events contributed to higher demand for shares. In the autumn of 2004, Serbia received B+ credit rating from the agency *Standard and Poor*, which was followed by a budget surplus in the first quarter of 2005. A crucial influence on the rise in demand was exerted by shares on the continuous market. In that segment, a number of new, high quality shares have been introduced. The number of shares on this segment of the market quickly rose as well, from the initial 7 shares in October 2004, to 21 shares in March 2005. All this has contributed to the warming up of the investment climate, particularly on the part of foreign institutional investors. Their entry into the Serbian market was an incentive to domestic individual investors to start buying the most attractive shares on the continuous market as well.

An increased activity of foreign investment funds led to a quick rise in demand. This group was joined by domestic institutional and individual investors. Both were mainly buying, but they were also selling previously purchased shares. The inflow of demand resulted in higher prices. In this period, the prices of shares of some of our leading companies (Energoprojekt Holding, Alfa Plam, Hemofarm) reached all-time highs. An important event in the evolution of the market was the emergence of small individual investors who for the first time appear as relevant buyers of shares on the continuous market. These changes are obviously in contradiction to the mainstream developments on the discontinuous market, where small individual investors do not buy shares in any significant quantities.

In the second quarter of 2005, the share of foreign investors in equity trading fluctuated. In April it was 56

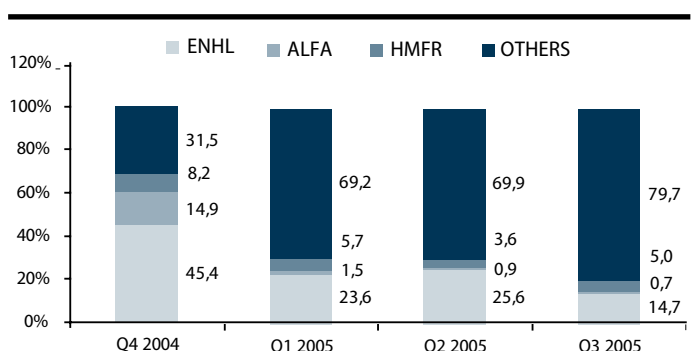
Graph L4-7.1. Structure of Continuous Trading in the Most Active Shares on the Belgrade Stock Exchange in the Past 12 Months: Turnover in Monetary Units



Source: www.belex.co.yu

Key: ENHL - Energoprojekt Holding, ALFA - Alfa Plam, HMFR - Hemofarm, OTHERS - other companies on the continuous market.

Graph L4-7.2. Structure of Continuous Trading in the Most Active Shares on the Belgrade Stock Exchange in the Last 12 months: Turnover in Terms of the Number of Shares



Source: www.belex.co.yu

Key: ENHL - Energoprojekt Holding, ALFA - Alfa Plam, HMFR - Hemofarm, OTHERS - other companies on the continuous market.

percentage points, then it rose in the first two weeks of May and reached 67 percentage points, only to gradually go down after that. In July, it stabilized at 59 percentage points of total demand for shares. Such behavior of foreign investors was followed by fluctuations in share prices of the major continuously traded stocks as well as the stock market index.

In the third quarter of 2005 turnover revived again, particularly in August 2005. Namely, in that month the total value of turnover was around 3.2 billion dinars, which is an increase of 25 percentage points relative to July. The value of the composite BELEXfm index was increased in August by 3.7 percentage points relative to its last July level. A particularly dramatic rise was seen in the trading volume measured in shares traded: in comparison with July, it grew in August by as much as 36 percentage points. Although the share of foreign investors in total turnover was reduced to the level of around 54 percentage points in this same period, it is a result primarily of the rise in demand by domestic investors, rather than of disinvestment by foreign investors. A more detailed analysis of the influence of institutional traders on the price formation process and volatility of prices will be discussed in one of the coming *QM* issues.

4. Fixed Income Market

Frozen foreign currency savings bonds (FFCSBs) are the most liquid and the least risky fixed income securities on the financial market of Serbia. They are issued by the government and are euro-denominated. Presently, the FFCSBs in circulation are those from series A2006–A2016, namely those with maturities from one to eleven years. These are discount bonds, that is, zero coupon bonds. Each individual series falls due for payment on May 31st of the maturity year, but it can be traded on the Exchange only before and on May 21st, due to the settlement of concluded and withdrawal of unexecuted trading orders. Their risk has been diminishing primarily because the credit rating of the country is improving. The mere announcement of the credit rating for Serbia has positively affected the supply and demand behavior for this instrument. These bonds, although not directly convertible, may be used for the purchase of shares of companies slated for privatization, which increases the potential interest of investors in these papers. Their introduction in the trading on the stock exchange (in September 2002) has significantly influenced the level of market capitalization, turnover and liquidity. Unfortunately, this market is not particularly deep. The daily turnover is on the order of 500,000 euros on average, with monthly turnover around 10 million euros. Irrespective of these circumstances, this security will, over a relatively long period (as late as 2016), remain a significant part of total

turnover, because the value of the issue is relatively high (4.2 billion euros) and the liquidity is satisfactory. On the Exchange, this security is traded continuously.

The market for FFCBs is segmented. There are three basic markets.

The first market is within banks. Banks convert deposits into bonds, and owners have the right to choose between this conversion and a payout in cash. The discount for the repayment of frozen foreign currency savings in cash is probably deep in real terms. Based on a free estimate, it ranges between 2 and 3 percentage points (i.e. 200 to 300 basis points), which in the case of bonds with later maturities significantly affects the level of real yield. The dominant seller on this market is Nacionalna Štedionica (National Savings Bank), because it converts foreign currency deposits into bonds for all large state-owned banks that are in the process of liquidation. This segment of the market is burdened with deep information asymmetry between the buyer and the sellers. On the one hand, owners of foreign currency savings accounts have a high preference for cash and, on the other hand, they do not have enough information about the alternative, namely, about the possibility of selling bonds on the Exchange. In this manner, they accept relatively unfavorable terms for the payout of their entire savings deposits in cash. From this market and its “natural corner”² the bulk of the supply of bonds comes to the inter-bank market and the Exchange.

The second market has been formed among banks. The prices on this market, as on the first market, are not publicly available. One can realistically assume that the bulk of trade in these securities is carried out on this market.

The third FFCSB market and probably the smallest one in terms of turnover volume is the Belgrade Stock Exchange³. These bonds appeared on it for the first time on 9 September 2002. Since March 24, 2003, FFCSBs have been traded on the Belgrade Stock Exchange on a continuous basis.

The yields on the FFCBs were relatively high at the beginning of the operation of the market, but they have gradually normalized. This normalization is registered both in the level of yields (through their decline) and in the temporal structure of the rate of return. Namely, the yield curve, after initial deformations, has taken a standard form of a normal yield curve, on which investment in long-term bonds generates higher yield than investment in short-

2 The type of a monopoly situation on the securities market in which one or more market players control most of the supply of securities.

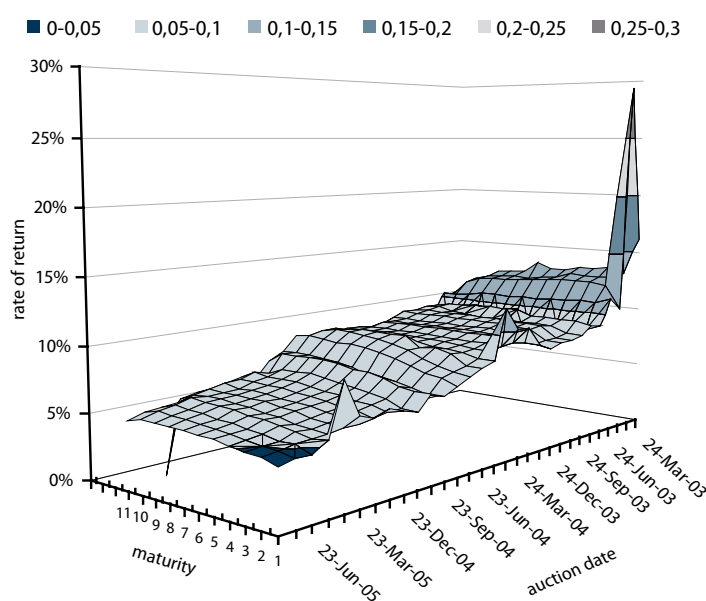
3 Around 25 % of the value of total trade in FFCBs is carried out through the Belgrade Stock Exchange, and the rest is transacted on the OTC market. Source: www.mvi.co.yu.

term bonds. The *QM* analysts consider this phenomenon to be an important developmental milestone of Serbia's financial sector. (In contrast to the bond market, this type of normalization is not yet visible on the credit market).

In the last two and a half years, during which period FFCSBs have been continuously traded, their yields have been constantly falling. The prices of bonds with shorter maturities (series A2003, A2004 and A2005) were determined mainly on the basis of demand. Correlation coefficients between trading volumes and rates of return, in the two months before the maturities of these series, ranged between -0.21 and -0.36. This means that a higher trading volume brings about an increase in the price of these bonds, i.e. a fall in the yield, and vice versa. This indirectly confirms the assumption that there is a "natural corner" on the market, which is controlled by the National Savings Bank, because the level of supply is relatively stable and stands at around 10 million euros a month.

Graph L4-8 is a presentation of the first conclusion: the yield curve has the expected slope of the so-called normal yield curve. At the beginning of continuous trading the yield curve had different slopes for different maturities. The normalization was first registered in 2003, and the full stabilization of the maturity structure was visible already in 2004. The second central conclusion is that the yields have dropped from the level of 9.5 -16.2 percent-

Graph L4-8. Surface of Yield Curves for FFCSBs with Different Maturities for the Period 24/03/2003 – 23/08/2005 ¹⁾



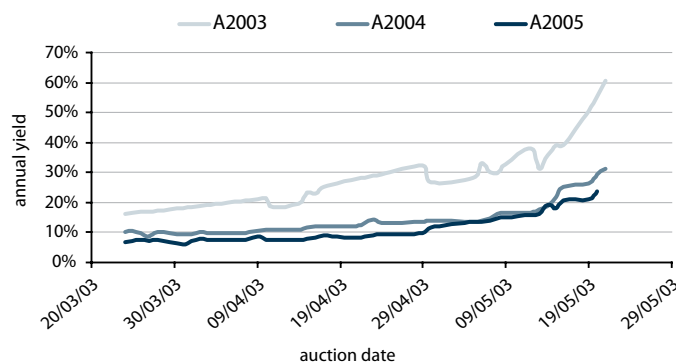
Source: www.belex.co.yu.

¹⁾ Changes in the curves of rates of return on FFCBs for the period 24/03/2003-23/08/2005. The time to maturity is expressed in years. Rates of return have been calculated by applying the method of permanent capitalization, by the 365-day year, and are presented at an annual level.

age points on an annual basis (in 2003) to the levels of 4.5 – 5.5 percentage points (in 2005). Both changes allow a conclusion that the government bond market in Serbia is normalizing.

On the market, in addition to the "hump" in the middle of the time schedule (with respect to which it is assumed that it will be normalized), another interesting anomaly has been observed (presented, in details, in Graph L4-9). This anomaly was particularly remarkable in 2003. Namely, the bond prices due for payment in that year (Series A2003) in the last ten trading days ranged between 98.05 percentage points and 98.47 percentage points, and in the last three trading days stagnated at 98.35 percentage points level, instead of traded at close to 100 percentage points, as theory would have predicted. Perhaps even more remarkably, in those ten days yields grew from 30 percentage points to as much as 61 percentage points, on an annual basis. One of the main causes of this anomaly are very high transaction costs. Namely, brokerage fees were in the range of 0.6–1 percentage points of the transaction value. In 2004, and in particular in 2005, this effect is still in evidence although much less pronounced. As a result, the discrepancy from the theoretical value is steadily getting close to the level of transaction costs.

Graph L4-9. Changes in Annual Yield over the Period Immediately Preceding the Maturity Date of FFCSBs ¹⁾



Source: www.belex.co.yu

¹⁾ Yields on FFCSBs marked as A2003, A2004 and A2005 bonds two and a half months before their maturity. The auction date implies the maturity year of the analyzed security. An example: If rates of return on A2003 are analyzed, the year is 2003.

The money market in Serbia is still thin and underdeveloped. The main characteristic of its operation are relatively high nominal interest rates. Operations on this market are performed with government securities denominated in the local currency, dinars. Following the passage of the *Law on the Fulfillment of Obligations of the Republic of Serbia Toward the National Bank of Serbia*, the central bank gained the possibility of using repo transactions as a monetary policy instrument.

Treasury bills (T-bills) are issued by the Republic of Serbia for the purpose of financing the budget deficit and bridging the current account problems. The first three-month T-bills were offered in an auction on 15 April 2003, and the first six-month T-bills on 4 November 2003. The nominal value of offered T-bills per auction ranges between 250,000,000 and 700,000,000 dinars, while the nominal value of an individual T-bill amounts to 10,000 dinars. As is the case in repo auctions, T-bills are sold by applying the method of multiple interest rates.

The NBS held the first repo auctions in January 2005. Initially, there were two basic objectives in launching these operations at the NBS: controlling the liquidity of the banking sector and generating signals regarding a target interest rate.

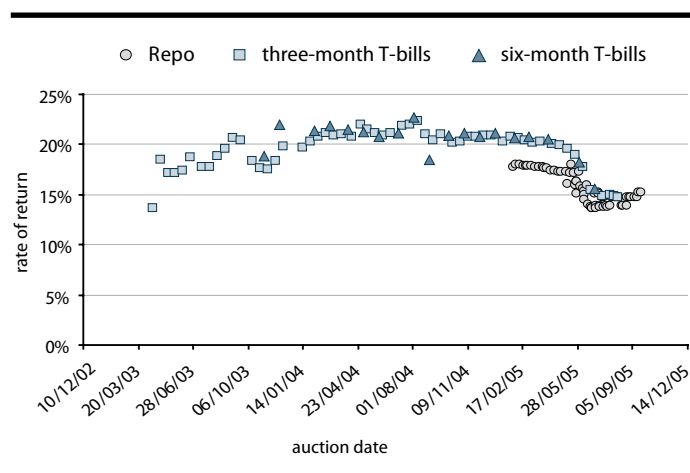
In the first repo auction, the NBS was selling long-term bonds of the Republic of Serbia by applying the method of multiple interest rates, with maturity of 14 days. The weighted average repo rate, at which the bonds were sold, was 17.61 percentage points. The highest accepted repo rate was 18 percentage points. The expectations were that the NBS would completely substitute the issue of its bills with repo operations. This did not happen, because excess liquidity in the system surpassed the value of securities which served as a basis for repo operations.

The second expected result of the launch of repo operations is normalization of interest rates. Prior to that, an attempt to identify the lowest, risk-free interest rate through auctions of Republic of Serbia's T-bills was not too successful. The yield at which government bills were sold was higher than the yields on NBS bills with a spread of 3 to 6 percentage points. The yields on this market bore little correlation with the basic fundamental factors. In some situations, the yields were higher than the commercial rates on loans. Trade was carried out in an atypical manner, through the trading platform of the Central Registry.

Graph L4-10 presents yields on three-month and six-month T-bills of the Republic of Serbia, as well as on NBS repo transactions. In the course of 2004, treasury bills produced yields of more than 20 percent a year, with the exception of August 31, 2004, when the rate of return on six-month T-bills was 18.5 percent annually. In the middle of the second quarter of 2005, a slump in yields on T-bills was registered, and from mid-July 2005 they fell below 15 percentage points. Even in such a situation auction reports did not show a downward trend in demand for these instruments and the execution ratio (sold/issued) has remained at 100 percent. A similar situation was registered with respect to NBS repo transactions, for which yields have dropped from 17.41 percent (February 14, 2005) to the level of

13.55 percent (September 2, 2005). Their execution ratio also stands almost invariably at 100%. All the rates on the money market have been falling since the middle of the second quarter of 2005, and yields on T-bills are getting closer to the yields on repo transactions, meaning that the market for these securities is steadily normalizing as well. It is important to note that investors in these securities, despite a drop in nominal rates and a rise in the anticipated and actual inflation rate in 2005, are acting in a rational manner. Namely, an alternative portfolio – the purchase of euros – has had a lower rate of return, because anticipated and actual nominal appreciation rates of the euro are lower than the yield on the money market.

Graph L4-10. Yields on the Money Market ¹⁾



Source: National Bank of Serbia and Ministry of Finance of the Republic of Serbia.

¹⁾ Yields on dinar denominated fixed income government securities from the beginning of their issuance to 20/09/2005.

APPENDIX L4: HOW TO READ THE BELGRADE STOCK EXCHANGE INDEX (BELEXfm)

In December 2004, the Belgrade Stock Exchange index was constructed and it is published under the official name *BELEXfm*. The main features of this index have been determined by the properties of the market as such. Since there is no official listing on the Belgrade Stock Exchange, and only a relatively small fraction of stocks trades on continuous trading, the concept of a composite index was chosen that measures changes in the prices of all shares on the so-called free exchange market, i.e. includes both the shares traded on a continuous basis as well as those shares from the discontinuous market, some of which are not traded at all. The index is descriptive, in the statistical sense, and not investible. The index weighting is based on market capitalization, with the weight for each index component being limited to a maximum of 10 percentage points.

Box L4-1. Description of the Experimental IQM10 Index (the first working version)

The experimental IQM10 index is an index weighted with market capitalization of 10 domestic companies with the highest average annual yield, which are on the continuous market of the Belgrade Stock Exchange. In addition to being a very important economic indicator, IQM10 can also meet investors' needs.

Calculation of the Index

The calculation of the experimental IQM10 index has been modeled on the basis of the *NASDAQ Composite Index* and as such it is an index weighted with market capitalization. The value of the index is obtained by first calculating the aggregated value of the results of the total number of all issued shares (*Total Shares Outstanding – TOS*) of each company included in the index basket (10 shares with the highest average annual yields) and the respective closing price of each share. This sum actually constitutes total market capitalization of all shares included in the index basket, where the weight for each share has been set on the basis of the quotient of its market capitalization and total market capitalization of the index basket. The index is then obtained by dividing the current total market value of all shares in the index basket by the adjusted total market capitalization in the base period (PTVUBP) and by multiplying the thus obtained result by the base value. The calculation of the index began on 31 January 2005, and, as the base value, the value 1000 was chosen (for the sake of easier comparison with the BELEXfm index).

The formula for the calculation of the index is as follows:

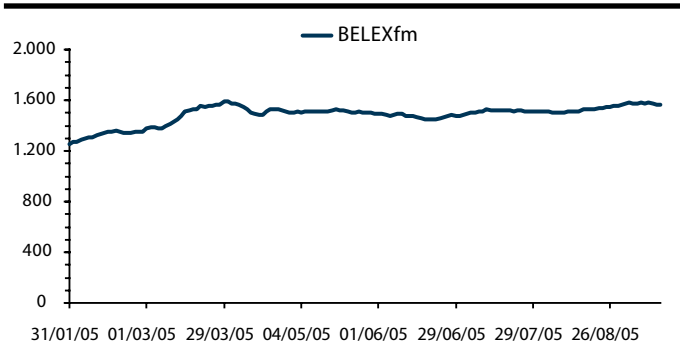
(Aggregated market capitalization of all shares in the index basket / PTVUBP) x base value

Maintenance of the Index

In general, when a change occurs in the number of shares issued by a company (changes in the value of TSO), then due to addition, exclusion or modification of a component in the index basket, IQM10 index adjusts PTVUBP in order to avoid discontinuity in the index value. Therefore, PTVUBP can be defined as:

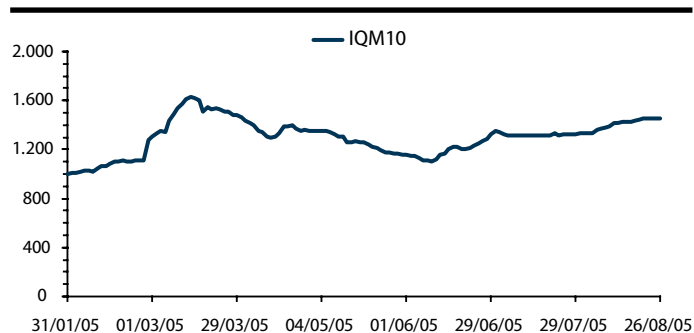
(Market value after adjustment / (Market value before adjustment) x PTVUBP before adjustment

Graph L4-11. Movements in the BELEXfm Index



Source: www.belex.co.yu

Graph L4-12. Movements in the Experimental IQM10 Index



Source: www.belex.co.yu

In one of its next issues, *QM* will devote more space to the problem of the construction and analysis of the features of a proper stock market index. For the time being, an experimental alternative to the BELEXfm index has been constructed - IQM10 index (Graph L4-12). This index has two important advantages over the BELEXfm. It is investible and includes only those shares which are actively traded on the Exchange.

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ANALYTICAL APPENDIX

Table P-1. Serbia: Retail Price Index (RPI), 2003-2005

	RPI			RPI components				
	Dec. 2002=100	y-o-y index	cumulative index ¹⁾	GOODS	Agricultural products	Food	Non-food	SERVICES
				cumulative index ¹⁾				
2003								
January	100,8	115,0	100,8	100,2	102,7	99,5	100,3	102,6
February	101,5	114,6	101,5	100,2	102,9	99,2	100,4	105,1
March	101,8	114,1	101,8	100,4	104,6	99,1	100,5	105,8
April	102,5	113,9	102,5	101,1	109,9	98,7	101,4	106,3
May	103,0	114,0	103,0	101,3	112,1	98,5	101,5	108,0
June	103,7	114,2	103,7	101,9	118,0	99,0	101,2	108,8
July	104,4	110,4	104,4	103,2	100,3	99,1	105,0	107,6
August	105,0	110,5	105,0	103,6	88,7	100,2	106,1	108,7
September	105,6	110,2	105,6	104,4	90,1	101,1	106,9	109,0
October	106,1	109,1	106,1	105,0	93,2	103,2	106,6	109,1
November	107,0	107,9	107,0	105,8	95,8	103,9	107,3	110,5
December	107,8	107,8	107,8	106,6	93,6	106,0	107,8	111,1
2004								
January	108,3	107,4	100,4	100,3	103,9	100,3	100,1	100,7
February	109,3	107,7	101,4	100,6	104,0	100,9	100,3	103,4
March	109,7	107,8	101,8	101,0	105,1	101,6	100,4	103,9
April	110,6	107,9	102,6	102,0	106,7	102,6	101,0	104,4
May	111,7	108,4	103,7	103,3	120,4	103,4	101,9	104,6
June	113,3	109,3	105,1	105,1	125,6	104,6	103,8	105,3
July	114,9	110,1	106,6	107,0	104,8	106,1	108,0	105,7
August	115,7	110,2	107,3	106,9	102,1	107,6	107,0	108,3
September	117,6	111,4	109,2	109,4	105,7	110,7	109,3	108,5
October	118,2	111,4	109,7	110,0	105,0	112,1	109,6	108,8
November	119,6	111,8	111,0	111,7	107,6	113,2	111,8	109,1
December	122,6	113,7	113,7	112,8	108,1	113,9	113,2	116,1
2005								
January	125,9	116,3	102,7	100,9	103,1	102,1	100,2	107,8
February	127,8	116,9	104,2	102,7	108,1	103,1	102,1	108,5
March	128,8	117,4	105,1	103,8	115,0	104,7	109,6	106,6
April	129,8	117,4	105,9	104,7	125,6	105,5	103,1	109,3
May	131,3	117,5	107,1	106,2	143,5	106,2	104,0	109,7
June	132,4	116,8	108,0	107,0	147,8	107,1	104,6	110,7
July	135,0	117,5	110,1	109,3	133,0	107,6	109,2	112,6
August	135,6	117,2	110,6	109,3	126,0	108,3	109,2	114,3
September	137,1	116,5	111,8	110,7	119,2	110,1	111,2	115,3

Source: Republic of Serbia Statistics Bureau.

1) As mentioned in footnote 1 in Table T-2: ratio of given period and December of previous year.

Table P-2. Serbia: Selected Price Indices, 2003-2005

	RPI		industrial producers' price index		consumer price index	
	Dec. 2002=100	y-o-y index	Dec. 2002=100	y-o-y index	Dec. 2002=100	y-o-y index
2003						
January	100,8	115,0	100,20	107,5	100,3	112,8
February	101,5	114,6	100,20	107,5	101,0	112,1
March	101,8	114,1	100,40	107,9	101,2	111,3
April	102,5	113,9	101,00	108,4	102,1	111,5
May	103,0	114,0	100,70	107,8	102,5	111,7
June	103,7	114,2	101,00	108,1	104,0	113,0
July	104,4	110,4	102,82	104,0	104,1	108,4
August	105,0	110,5	103,03	103,7	103,9	108,0
September	105,6	110,2	103,23	103,5	104,8	107,6
October	106,1	109,1	103,54	103,7	106,3	107,7
November	107,0	107,9	104,37	104,5	107,2	107,2
December	107,8	107,8	104,68	104,7	108,1	108,1
2004						
January	108,3	107,4	105,42	105,2	108,8	108,4
February	109,3	107,7	106,79	106,6	109,5	108,5
March	109,7	107,8	107,96	107,5	110,1	108,7
April	110,6	107,9	109,26	108,2	111,6	109,3
May	111,7	108,4	110,68	109,9	113,3	110,6
June	113,3	109,3	111,56	110,5	115,3	110,8
July	114,9	110,1	112,79	109,7	116,1	111,5
August	115,7	110,2	113,13	109,8	116,5	112,1
September	117,6	111,4	114,94	111,3	118,6	113,1
October	118,2	111,4	115,97	112,0	119,8	112,7
November	119,6	111,8	116,32	111,4	120,9	112,8
December	122,6	113,7	117,37	112,1	122,4	113,1
2005						
January	125,9	116,3	118,19	112,1	125,1	115,0
February	127,8	116,9	120,43	112,8	127,0	115,9
March	128,8	117,4	120,92	112,0	128,7	116,9
April	129,8	117,4	122,00	111,7	130,0	116,4
May	131,3	117,5	123,10	111,2	132,6	117,0
June	132,4	116,8	124,93	112,0	133,5	115,8
July	135,0	117,5	128,07	113,5	134,7	116,0
August	135,6	117,2	128,85	113,9	134,8	115,7
September	137,1	116,5	-	-	136,1	114,7

Source: Republic of Serbia Statistics Bureau.

Table P-3. Serbia: Euro/Dinar Exchange Rate, 2003-2005

	nominal				real			EUR/USD rate	CPI in Euro area ⁴⁾ (Dec. 2002=100)
	exchange rate (FX) ¹⁾	base index (Dec. 2002=100)	y-o-y index	cumulative index ²⁾	real FX ³⁾ (Dec. 2002=100)	y-o-y index	cumulative index ²⁾		
2003									
January	62,4138	101,5	103,7	101,5	100,5	92,0	100,5	1,0799	99,8
February	63,2918	102,9	105,4	102,9	101,7	94,1	101,7	1,0790	100,3
March	64,3829	104,7	106,8	104,7	103,6	95,7	103,6	1,0698	100,8
April	63,9864	104,0	105,9	104,0	102,5	94,8	102,5	1,0971	101,0
May	65,6918	106,8	108,5	106,8	104,6	96,9	104,6	1,1885	100,9
June	64,2679	104,5	106,0	104,5	101,6	94,4	101,6	1,1444	100,9
July	65,0318	105,7	106,9	105,7	102,1	98,7	102,1	1,1439	100,8
August	65,2911	106,1	107,1	106,1	102,2	98,9	102,2	1,0902	101,1
September	65,9556	107,2	108,2	107,2	103,0	100,2	103,0	1,1459	101,4
October	66,7753	108,6	109,3	108,6	103,8	102,0	103,8	1,1675	101,5
November	67,6892	110,0	109,9	110,0	104,4	103,9	104,4	1,1930	101,5
December	68,3129	111,1	111,1	111,1	104,9	104,9	104,9	1,2503	101,8
2004									
January	68,8832	112,0	110,4	100,8	105,1	104,6	100,2	1,2393	101,6
February	69,5171	113,0	109,8	101,8	105,3	103,5	100,4	1,2388	101,8
March	69,8000	113,5	108,4	102,2	105,9	102,2	101,0	1,2199	102,4
April	70,3046	114,3	109,9	102,9	106,2	103,6	101,2	1,1833	102,8
May	71,1423	115,6	108,3	104,1	106,8	102,2	101,9	1,2260	103,2
June	72,1759	117,3	112,3	105,7	106,9	105,2	101,9	1,2166	103,2
July	72,9793	118,6	112,2	106,8	106,4	104,2	101,4	1,2052	103,0
August	73,7439	119,9	112,9	108,0	107,0	104,7	102,0	1,2043	103,2
September	75,0001	121,9	113,7	109,8	107,2	104,1	102,2	1,2330	103,4
October	76,2549	124,0	114,2	111,6	108,8	104,8	103,7	1,2758	103,8
November	77,3467	125,7	114,3	113,2	109,0	104,4	103,9	1,3267	103,7
December	78,8850	128,2	115,5	115,5	108,9	103,8	103,8	1,3616	104,1
2005									
January	80,2868	130,5	116,6	101,8	107,4	102,2	98,6	1,3051	103,6
February	80,5195	130,9	115,8	102,1	106,5	101,1	97,8	1,3192	103,9
March	81,0520	131,8	116,1	102,7	107,0	101,0	98,2	1,2970	104,6
April	81,4979	132,5	115,9	103,3	107,1	100,9	98,4	1,2925	105,0
May	82,0400	133,4	115,3	104,0	106,9	100,1	98,2	1,2518	105,3
June	82,5172	134,1	114,3	104,6	106,8	99,9	98,0	1,2180	105,4
July	82,9982	134,9	113,7	105,2	105,2	98,9	96,6	1,2040	105,3
August	84,2574	137,0	114,3	106,8	106,6	99,7	97,9	1,2357	105,5
September	84,4958	137,4	112,7	107,1	106,2	99,1	97,5	1,2295	105,9

Source: NBS, Eurostat (www.epp.eurostat.ec.eu.int).

- 1) As mentioned in footnote 1 in Table T-3: Month average, official daily NBS mid rate.
- 2) Please see footnote 1 in Table P-1.
- 3) As mentioned in footnote 3 in Table T-3: Real fx calculation include Euro area inflation.
- 4) Harmonized indices of consumer prices.

Table P-4. Serbia: Balance of Payments, 2003-2005¹⁾

	2003			2004			2005	
	Mar.	July	Dec.	Mar.	July	Dec.	Mar.	July
	cumulative, in euro millions							
CURRENT ACCOUNT	-496	-1005	-1535	-596	-1119	-2343	-268	-628
GOODS AND SERVICES	-882	-2141	-3789	-1192	-2727	-5328	-695	-2079
Goods	-963	-2305	-4045	-1303	-2854	-5651	-672	-2120
Exports, f.o.b.	578	1395	2502	587	1478	3104	808	2091
Imports, c.i.f.	-1541	-3699	-6547	-1891	-4332	-8755	-1480	-4211
Exports/Imports (%)	35	35	35	25	28	29	42	38
Services	81	164	256	111	127	323	-61	45
Receipts	213	501	883	281	651	1191	213	727
Expenditures	-132	-336	-627	-170	-523	-868	-274	-681
Balance of goods and services	-882	-2141	-3789	-1192	-2727	-5328	-733	-2074
Exports of goods and services	791	1895	3385	869	2129	4294	1020	2818
Imports of goods and services	-1673	-4036	-7174	-2061	-4856	-9623	-1754	-4892
Income, net	-33	-62	-178	-34	-68	-170	-55	-128
Earnings	14	26	60	17	33	63	12	38
Payments	-47	-89	-238	-51	-101	-233	-68	-166
Current transfers	296	978	2011	552	1463	2737	450	1485
Private remittances, net	93	216	331	107	309	359	41	159
Inflow	149	388	682	188	451	829	185	505
Outflow	-56	-173	-352	-81	-141	-471	-144	-346
F/X accounts of non-residents	19	140	304	153	282	640	38	181
F/X purchases, net ²⁾	132	465	1091	244	750	1496	322	1016
Other ³⁾	52	157	285	49	122	243	49	129
Official grants	123	219	421	79	213	418	33	94
ERRORS AND OMISSIONS	102	488	370	75	2	372	-121	-344
CAPITAL AND FINANCIAL ACCOUNT	174	621	2032	287	952	2489	468	1642
Financial account	174	621	2032	287	952	2489	468	1642
Foreign direct investment (FDI)	7	162	1177	172	318	766	260	641
Other investment	167	459	856	115	634	1722	207	1000
Unpaid imports of oil and gas	87	1	43	2	-38	141	43	6
Medium/long-term loans	-30	246	625	60	503	1203	-26	672
Disbursement	-10	296	800	86	595	1496	25	851
o/w official disbursements excl IMF	0	0	0	29	56	249	20	-3
Amortization	-20	-50	-175	-25	-92	-293	-51	-179
o/w official amortization excl IMF	0	0	0	4	13	22	22	37
Short-term loans	9	11	14	32	39	163	38	87
Other assets and liabilities	10	169	254	-10	50	227	73	97
Commercial banks fx reserves (increase,-)	91	33	-81	31	80	-12	79	138
NBS Reserves, net, (increase,-)	220	-104	-868	234	165	-517	-79	-670
o/w: IMF disbursements	64	122	243	87	87	199	138	138
o/w: IMF amortization ⁴⁾	0	0	0	-33	-81	-187	-47	-102
MEMORANDUM ITEMS	in % of GDP							
Exports of goods and services	4,7	11,3	20,2	5,0	12,3	24,8	5,4	15,0
Imports of goods and services	10,0	24,0	42,7	11,9	28,1	55,6	9,3	26,0
Balance of goods and services	5,3	12,8	22,6	6,9	15,8	30,8	3,9	11,0
Current account	3,0	6,0	9,1	3,4	6,5	13,5	1,4	3,3
GDP in euros ⁵⁾	16.786	16.786	16.786	17.306	17.306	17.306	18.795	18.795

Source: NBS, Republic of Serbia Statistics Bureau.

1) As mentioned in footnote in Table T-7: Original US dollars monthly data are converted to euros using monthly averages of official daily NBS mid rates.

2) Net purchases of cash foreign exchange from the public by the NBS.

3) Includes payments settlement with Montenegro and Kosovo.

4) Principal repayments.

5) As mentioned in footnote 4 in Table T-7: GDP converted into euros using annual average of monthly rates.

Table P-5. Serbia: Monetary Survey, 2002-2005

	2002		2003		2004			2005		
	Dec.		Mar.	July	Dec.	Mar.	July	Dec.	Mar.	July
STOCK										
in euro millions, end of period ¹⁾										
Net Foreign Assets (NFA)	113.527	100.942	112.135	152.011	135.376	122.110	151.093	160.396	173.709	
<i>Net Foreign Assets (NFA) (in euros)</i>	<i>1.846</i>	<i>1.568</i>	<i>1.724</i>	<i>2.225</i>	<i>1.939</i>	<i>1.673</i>	<i>1.915</i>	<i>1.979</i>	<i>2.093</i>	
Assets	181.027	171.534	186.340	243.044	233.980	242.168	298.778	319.616	377.606	
<i>Assets (in euros)</i>	<i>2.943</i>	<i>2.664</i>	<i>2.865</i>	<i>3.558</i>	<i>3.352</i>	<i>3.318</i>	<i>3.788</i>	<i>3.943</i>	<i>4.550</i>	
NBS	137.589	130.038	144.097	193.700	187.951	197.102	244.837	272.654	329.752	
<i>NBS (in euros)</i>	<i>2.237</i>	<i>2.020</i>	<i>2.216</i>	<i>2.835</i>	<i>2.693</i>	<i>2.701</i>	<i>3.104</i>	<i>3.364</i>	<i>3.973</i>	
Commercial banks	43.438	41.496	42.243	49.344	46.029	45.066	53.941	46.962	47.854	
<i>Commercial banks (in euros)</i>	<i>706</i>	<i>645</i>	<i>650</i>	<i>722</i>	<i>659</i>	<i>618</i>	<i>684</i>	<i>579</i>	<i>577</i>	
Liabilities (-)	-67.500	-70.592	-74.205	-91.033	-98.604	-120.058	-147.685	-159.220	-203.897	
<i>Liabilities (-) (in euros)</i>	<i>-1.097</i>	<i>-1.096</i>	<i>-1.141</i>	<i>-1.333</i>	<i>-1.413</i>	<i>-1.645</i>	<i>-1.872</i>	<i>-1.964</i>	<i>-2.457</i>	
NBS	-52.429	-53.574	-58.675	-68.479	-69.036	-76.187	-74.433	-76.969	-88.667	
<i>NBS (in euros)</i>	<i>-852</i>	<i>-832</i>	<i>-902</i>	<i>-1.002</i>	<i>-989</i>	<i>-1.044</i>	<i>-944</i>	<i>-950</i>	<i>-1.068</i>	
Commercial banks	-15.071	-17.018	-15.530	-22.554	-29.568	-43.871	-73.252	-82.251	-115.230	
<i>Commercial banks (in euros)</i>	<i>-245</i>	<i>-264</i>	<i>-239</i>	<i>-330</i>	<i>-424</i>	<i>-601</i>	<i>-929</i>	<i>-1.015</i>	<i>-1.388</i>	
Net Domestic Assets (NDA)	77.964	88.958	93.782	92.855	115.933	153.112	171.989	170.916	215.475	
Domestic credits	123.655	140.287	158.489	160.635	180.151	224.329	262.868	277.119	318.318	
Net credits to government	-6.172	-1.706	118	-13.052	-7.544	3.373	-424	-13.394	-14.795	
Credits	25.169	30.508	27.822	26.742	27.926	28.194	37.376	40.230	35.219	
Dinar credits	22.904	27.524	24.766	21.726	22.021	22.452	28.991	29.304	23.466	
NBS	20.720	23.253	20.743	19.051	18.904	18.650	21.427	21.235	16.563	
Commercial banks	2.184	4.271	4.023	2.675	3.117	3.802	7.564	8.069	6.903	
Fx credits	2.265	2.984	3.056	5.016	5.905	5.742	8.385	10.926	11.753	
<i>Fx credits (in euros)</i>	<i>37</i>	<i>46</i>	<i>47</i>	<i>73</i>	<i>85</i>	<i>79</i>	<i>106</i>	<i>135</i>	<i>142</i>	
NBS	-	-	-	-	-	-	-	-	-	
<i>NBS (in euros)</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	
Commercial banks	2.265	2.984	3.056	5.016	5.905	5.742	8.385	10.926	11.753	
<i>Commercial banks (in euros)</i>	<i>37</i>	<i>46</i>	<i>47</i>	<i>73</i>	<i>85</i>	<i>79</i>	<i>106</i>	<i>135</i>	<i>142</i>	
Deposits (-)	-31.341	-32.214	-27.704	-39.794	-35.470	-24.821	-37.800	-53.624	-50.014	
Dinar deposits	-15.508	-17.136	-14.318	-17.830	-16.073	-14.769	-24.434	-32.008	-30.616	
NBS	-5.009	-1.134	-4.798	-12.992	-13.769	-12.960	-22.966	-30.234	-28.942	
Commercial banks	-10.499	-16.002	-9.520	-4.838	-2.304	-1.809	-1.468	-1.774	-1.674	
Fx deposits	-15.833	-15.078	-13.386	-21.964	-19.397	-10.052	-13.366	-21.616	-19.398	
<i>Fx deposits (in euros)</i>	<i>-257</i>	<i>-234</i>	<i>-206</i>	<i>-322</i>	<i>-278</i>	<i>-138</i>	<i>-169</i>	<i>-267</i>	<i>-234</i>	
NBS	-6.159	-4.287	-3.763	-18.108	-15.402	-6.837	-9.989	-18.088	-12.891	
<i>NBS (in euros)</i>	<i>-100</i>	<i>-67</i>	<i>-58</i>	<i>-265</i>	<i>-221</i>	<i>-94</i>	<i>-127</i>	<i>-223</i>	<i>-155</i>	
Commercial banks	-9.674	-10.791	-9.623	-3.856	-3.995	-3.215	-3.377	-3.528	-6.507	
<i>Commercial banks (in euros)</i>	<i>-157</i>	<i>-168</i>	<i>-148</i>	<i>-56</i>	<i>-57</i>	<i>-44</i>	<i>-43</i>	<i>-44</i>	<i>-78</i>	
Credit to the non-government sector	129.827	141.993	158.371	173.687	187.695	220.956	263.292	290.513	333.113	
Households	16.020	17.745	23.137	28.643	32.383	44.061	64.441	69.844	89.722	
Enterprises ²⁾	113.807	124.248	135.234	145.044	155.312	176.895	198.851	220.669	243.391	
Other items net ³⁾	0	0	0	0	0	0	0	0	0	
o/w Capital and Reserves	-45.691	-51.329	-64.707	-67.780	-64.218	-71.217	-90.879	-106.203	-104.438	
NBS	-138.577	-130.809	-127.936	-95.373	-93.974	-102.841	-118.891	-127.754	-141.106	
Commercial banks	-2.173	-1.326	-9.292	-2.770	-2.767	-2.983	-15.738	-15.735	-22.542	
<i>Commercial banks (in euros)</i>	<i>-136.404</i>	<i>-129.483</i>	<i>-118.644</i>	<i>-92.603</i>	<i>-91.207</i>	<i>-99.858</i>	<i>-103.153</i>	<i>-112.019</i>	<i>-118.564</i>	
Broad money M2 ⁴⁾	191.491	189.900	205.917	244.866	251.309	275.222	323.082	331.312	389.184	
Dinar denominated M2 ⁵⁾	110.900	101.457	109.160	124.886	119.341	128.696	146.584	144.128	166.796	
M1	93.815	82.302	84.968	99.544	92.382	100.156	111.235	110.049	127.089	
Currency outside banks	43.719	36.917	37.955	42.979	38.004	42.049	45.165	39.368	45.114	
Demand deposits (households and economy)	50.096	45.385	47.013	56.565	54.378	58.107	66.070	70.681	81.975	
Time and savings deposits (households and economy)	17.085	19.155	24.192	25.342	26.959	28.540	35.349	34.079	39.707	
Fx deposits (households and economy)	80.591	88.443	96.757	119.980	131.968	146.526	176.498	187.184	222.388	
<i>Fx deposits (households and economy) (in euros)</i>	<i>1.310</i>	<i>1.374</i>	<i>1.488</i>	<i>1.756</i>	<i>1.891</i>	<i>2.008</i>	<i>2.237</i>	<i>2.309</i>	<i>2.679</i>	
o/w: households ⁶⁾	45.941	51.557	56.280	69.738	76.985	87.916	110.714	124.107	149.717	
<i>o/w: households ⁶⁾ (in euros)</i>	<i>747</i>	<i>801</i>	<i>865</i>	<i>1.021</i>	<i>1.103</i>	<i>1.205</i>	<i>1.403</i>	<i>1.531</i>	<i>1.804</i>	

Source: FREN, NBS: *Statistical bulletin*.

1) Unless otherwise indicated.

2) As mentioned in footnote 3 in Table T-11: Enterprises also include non-profit and other non-government economic entities.

3) Includes: Other assets; Capital and reserves; Other liabilities; and Interbank, net.

4) As mentioned in footnote 2 in Graph T-11: M2 refers to M3 in accepted methodology in Serbia, and it includes: currency outside banks; demand deposits of households and enterprises; time and savings dinar deposits of households and enterprises; and time and savings fx deposits of households and enterprises. Enterprises also include non-profit and other non-government economic entities.

5) As mentioned in footnote 5 in Table T-11: M2 dinar refers to M2 in accepted methodology in Serbia, and it includes: currency outside banks; demand deposits of households and economy; and time and savings dinar deposits of households and economy.

6) Household savings.

Table P-6. Serbia: Commercial Banks Balance Sheet, 2002-2005

	2002		2003		2004			2005		
	Dec.		Mar.	July	Dec.	Mar.	July	Dec.	Mar.	July
STOCK	in millions of dinars, end of period ¹⁾									
Net foreign reserves	28.367		24.478	26.713	26.790	16.461	1.195	-19.311	-35.289	-67.376
<i>Net foreign reserves (in euros)</i>	<i>461</i>		<i>380</i>	<i>411</i>	<i>392</i>	<i>236</i>	<i>16</i>	<i>-245</i>	<i>-435</i>	<i>-812</i>
Gross foreign reserves	43.438		41.496	42.243	49.344	46.029	45.066	53.941	46.962	47.854
<i>Gross foreign reserves (in euros)</i>	<i>706</i>		<i>645</i>	<i>650</i>	<i>722</i>	<i>659</i>	<i>618</i>	<i>684</i>	<i>579</i>	<i>577</i>
Gross reserve liabilities (-)	-245		-264	-239	-330	-424	-601	-929	-1.015	-1.388
<i>Gross reserve liabilities (in euros) (-)</i>	<i>-245</i>		<i>-264</i>	<i>-239</i>	<i>-330</i>	<i>-424</i>	<i>-601</i>	<i>-929</i>	<i>-1.015</i>	<i>-1.388</i>
Net Domestic Assets (NDA)	-28.367		-24.478	-26.713	-26.790	-16.461	-1.195	19.311	35.289	67.377
Domestic credits	22.180		30.911	35.747	43.129	48.139	67.626	100.117	122.974	153.761
Net claims on government	-15.724		-19.538	-12.064	-1.003	2.723	4.520	11.104	13.693	10.475
Claims	4.449		7.255	7.079	7.691	9.022	9.544	15.949	18.995	18.656
Dinar credits	2.184		4.271	4.023	2.675	3.117	3.802	7.564	8.069	6.903
Fx credits	2.265		2.984	3.056	5.016	5.905	5.742	8.385	10.926	11.753
<i>Fx credits (in euros)</i>	<i>37</i>		<i>46</i>	<i>47</i>	<i>73</i>	<i>85</i>	<i>79</i>	<i>106</i>	<i>135</i>	<i>142</i>
Liabilities (-)	-20.173		-26.793	-19.143	-8.694	-6.299	-5.024	-4.845	-5.302	-8.181
Dinar deposits	-10.499		-16.002	-9.520	-4.838	-2.304	-1.809	-1.468	-1.774	-1.674
Fx deposits	-9.674		-10.791	-9.623	-3.856	-3.995	-3.215	-3.377	-3.528	-6.507
<i>Fx deposits (in euros)</i>	<i>-157</i>		<i>-168</i>	<i>-148</i>	<i>-56</i>	<i>-57</i>	<i>-44</i>	<i>-43</i>	<i>-44</i>	<i>-78</i>
Net claims on NBS	57.347		62.525	59.010	70.556	66.835	71.661	97.771	99.644	145.669
Claims	62.668		67.962	62.945	74.406	70.546	75.884	99.526	101.397	146.212
Cash	1.742		3.653	3.202	4.097	3.451	3.626	4.281	3.812	4.876
Required reserves	11.525		19.639	14.934	16.241	13.321	15.248	20.953	20.676	23.058
Excess reserves	11.879		2.988	2.100	6.720	2.732	1.472	6.569	1.766	3.859
Deposits (-)	36.056		40.469	41.318	45.118	48.814	52.086	66.214	71.937	95.993
o/w: dinar deposits	1.161		833	2.119	375	264	263	357	338	211
NBS bills/repo ²⁾	1.466		1.213	1.391	2.230	2.228	3.452	1.509	3.206	18.426
Liabilities (-)	-5.321		-5.437	-3.935	-3.850	-3.711	-4.223	-1.755	-1.753	-543
Net claims on the rest of the economy	-19.443		-12.076	-11.199	-26.424	-21.419	-8.555	-8.758	9.637	-2.383
Claims	128.228		140.845	156.729	173.443	187.452	220.664	263.094	290.265	332.744
Households	16.020		17.745	23.137	28.439	32.182	43.857	64.283	69.616	89.439
Enterprises ³⁾	112.208		123.100	133.592	145.004	155.270	176.807	198.811	220.649	243.305
Liabilities (-)	-147.671		-152.921	-167.928	-199.867	-208.871	-229.219	-271.852	-280.628	-335.127
Dinar deposits	-67.080		-64.478	-71.171	-80.532	-77.471	-83.363	-96.251	-94.335	-113.717
Households	-11.436		-11.487	-11.978	-13.411	-14.200	-13.212	-12.737	-12.634	-15.845
Enterprises ³⁾	-55.644		-52.991	-59.193	-67.121	-63.271	-70.151	-83.514	-81.701	-97.872
Fx deposits	-80.591		-88.443	-96.757	-119.335	-131.400	-145.856	-175.601	-186.293	-221.410
Households ⁴⁾	-45.941		-51.557	-56.280	-69.738	-76.985	-87.916	-110.714	-124.107	-149.717
<i>Households (in euros)</i>	<i>-747</i>		<i>-801</i>	<i>-865</i>	<i>-1.021</i>	<i>-1.103</i>	<i>-1.205</i>	<i>-1.403</i>	<i>-1.531</i>	<i>-1.804</i>
Enterprises ³⁾	-34.650		-36.886	-40.477	-49.597	-54.415	-57.940	-64.887	-62.186	-71.693
<i>Enterprises ³⁾ (in euros)</i>	<i>-563</i>		<i>-573</i>	<i>-622</i>	<i>-726</i>	<i>-780</i>	<i>-794</i>	<i>-823</i>	<i>-767</i>	<i>-864</i>
Other items, net ⁵⁾	-50.547		-55.389	-62.460	-69.919	-64.600	-68.821	-80.806	-87.685	-86.384
o/w: capital and reserves	-136.404		-129.483	-118.644	-92.603	-91.207	-99.858	-103.153	-112.019	-116.495

Source: FREN, NBS: *Statistical bulletin*.

1) Unless otherwise indicated.

2) As mentioned in footnote 2 in Table T-14: Up to end December 2004, includes NBS bills; from January 2005 to February 2005 includes NBS bills and repo transactions; and from March 2005 onwards it includes only repo transactions.

3) Please see footnote 2 in Table P-5.

4) Household savings.

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

Table P-7. Serbia: National Bank of Serbia Balance Sheet, 2002-2005

	2002		2003		2004			2005		
	Dec.		Mar.	July	Dec.	Mar.	July	Dec.	Mar.	July
STOCK	in millions of dinars, end of period ¹⁾									
Foreign assets, net	52.795	41.229	49.064	81.859	71.146	70.017	104.530	124.514	145.960	
Foreign assets, net (in euros)	858	640	754	1.198	1.019	959	1.325	1.536	1.759	
Gross foreign reserves	137.589	130.038	144.097	193.700	187.951	197.102	244.837	272.654	329.752	
Gross foreign reserves (in euros)	2.237	2.020	2.216	2.835	2.693	2.701	3.104	3.364	3.973	
Gross reserve liabilities (-)	-84.794	-88.809	-95.033	-111.841	-116.805	-127.085	-140.307	-148.140	-183.792	
Gross reserve liabilities (in euros) (-)	-1.378	-1.379	-1.461	-1.637	-1.673	-1.741	-1.779	-1.828	-2.214	
o/w: fx deposits of commercial banks	-32.365	-35.235	-36.358	-43.362	-47.769	-50.898	-65.874	-71.171	-95.125	
o/w: fx deposits of commercial banks (in euros)	-526	-547	-559	-635	-684	-697	-835	-878	-1.146	
Net Domestic Assets (NDA)	18.298	21.891	11.882	-11.863	-13.643	-7.671	-27.561	-57.058	-69.011	
Domestic credits	16.520	25.304	18.317	-10.843	-10.991	-1.748	-13.944	-39.936	-49.106	
Net claims on government	9.552	17.832	12.182	-12.049	-10.267	-1.147	-11.528	-27.087	-25.270	
Claims	20.720	23.253	20.743	19.051	18.904	18.650	21.427	21.235	16.563	
o/w: dinar credits	20.720	23.253	20.743	19.051	18.904	18.650	21.427	21.235	16.563	
Deposits (-)	-11.168	-5.421	-8.561	-31.100	-29.171	-19.797	-32.955	-48.322	-41.833	
Dinar deposits	-5.009	-1.134	-4.798	-12.992	-13.769	-12.960	-22.966	-30.234	-28.942	
Fx deposits	-6.159	-4.287	-3.763	-18.108	-15.402	-6.837	-9.989	-18.088	-12.891	
Fx deposits (in euros)	-100	-67	-58	-265	-221	-94	-127	-223	-155	
Net claims on banks	5.470	6.386	4.527	2.337	2.899	2.391	2.554	-2.672	-16.240	
Claims	7.147	7.772	6.030	5.490	5.329	5.970	4.594	3.644	2.678	
Recourse to required reserves	-	-	-	-	-	-	-	-	-	
Other dinar credits	4.978	5.550	4.041	3.774	3.507	4.040	3.007	1.576	360	
Fx credits	2.169	2.222	1.989	1.716	1.822	1.930	1.587	2.068	2.318	
Fx credits (in euros)	35	35	31	25	26	26	20	26	28	
Liabilities (-)	-1.677	-1.386	-1.503	-3.153	-2.430	-3.579	-2.040	-6.316	-18.918	
o/w: NBS bills	-1.549	-1.288	-1.450	-2.223	-2.378	-3.530	-1.752	-	-	
o/w: repo transactions	-	-	-	-	-	-	-	-3.206	-18.386	
Net claims on the rest of the economy	1.498	1.086	1.608	-1.131	-3.623	-2.992	-4.970	-10.177	-7.596	
Claims	1.599	1.148	1.642	244	243	292	198	248	369	
Dinar and fx credits	1.599	1.148	1.642	244	243	292	198	248	369	
Liabilities (-)	-101	-62	-34	-1.375	-3.866	-3.284	-5.168	-10.425	-7.965	
Dinar deposits	-101	-62	-34	-1.375	-3.866	-3.284	-5.168	-10.425	-7.965	
Other items, net ²⁾	1.778	-3.413	-6.435	-1.020	-2.652	-5.923	-13.617	-17.122	-19.905	
Reserve money (H)	69.323	62.951	60.035	69.996	57.501	62.344	76.969	65.700	76.949	
Currency in circulation	43.719	36.917	37.955	42.979	38.004	42.049	45.165	39.368	45.114	
Commercial banks' reserves	25.604	26.034	22.080	27.017	19.497	20.295	31.804	26.332	31.835	
Required reserves allocated	11.466	19.500	14.999	16.212	13.321	15.248	20.953	20.676	23.058	
Excess reserves	14.138	6.534	7.081	10.805	6.176	5.047	10.851	5.656	8.777	
Overnight deposits	2.850	1.295	2.987	5.695	2.280	1.570	5.076	2.825	3.480	
Giro account and cash	11.288	5.239	4.094	5.110	3.896	3.477	5.775	2.831	5.297	

Source: FREN, NBS: *Statistical bulletin*.

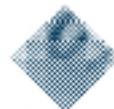
1) Unless otherwise indicated.

2) Includes: Other assets; Fx deposits of other financial institutions; Deposits of banks undergoing liquidation; Capital and reserves; and Other liabilities.

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Excerpt from the review:

*When a new publication emerges on the professional horizon, which looks at both current economic developments and underlying factors that determine them, then the most appropriate word of response to this encouraging event– in all probability is the word **welcome**.*

*The economy is still in the whirlwind of transition turbulence, oriented more toward tearing down inherited institutions and regulatory mechanisms, and less toward creation of new arrangements which would finally transform it into a genuine market structure. Such an economy is very complicated and truly rich in its short-term trends and longer-term tendencies. More than many other economies, it offers room for systematic monitoring of everything that is going on in it, as well as for deeper analytical submergence into the sets of factors which determine these developments. This is the approach taken by the present **research endeavor, casting a different research light on our economy, and reporting on it on a regular basis and in a systematic manner.***

*Judging by how it has been structured concept-wise and how its individual parts have been shaped in the first issue, the Quarterly Monitor strongly suggests that research challenges have been taken seriously, that the intention behind this undertaking is to launch an ambitiously designed and very serious publication, to make a marked, clearly discernible contribution to the extant understanding of how our economy behaves and which patterns it reveals. There is a clear **intention to link carefully measured and as reliably as possible empirically established economic developments with economic policy**, including its sometimes unpredictable and inconsistent measures and actions. Furthermore, irrespective of the effectiveness of economic policies, one should always insist on that link, which constitutes a research imperative that the authors have at heart and, as it appears, have understood well. It would be difficult to find something of true relevance that has not found, already in the first issue of the Quarterly Monitor, its skillfully chosen and functionally really appropriate place in the form of large thematic blocks; and vice versa, what has been selected immediately creates an impression that it is significant and useful, as a set of components which neatly fit into a coherent picture of the macroeconomic landscape observed in its sometimes perplexing entirety.*

*The Quarterly Monitor is a finely conceived **periodical**, and its first issue shows that it will cut a recognizable furrow in our professional field. **It has been set at a high professional level and is turned toward truly major and economically and politically relevant characteristics of the entire corpus of our economy.** In all likelihood, it will be **interesting to a broad readership:** to professional researchers, economic policy-makers, the businesses and administration which implement policies, and to a wide circle of students and curious people, who will see in it a chance to understand the Serbian economy and learn many relevant things about it.*

Ljubomir Madžar