The wiiw Balkan Observatory

Working Papers | 009 | December 2001

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Macroeconomic Stabilization in the FRY

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About

Shortly after the end of the Kosovo war, the last of the Yugoslav dissolution wars, the Balkan Reconstruction Observatory was set up jointly by the Hellenic Observatory, the Centre for the Study of Global Governance, both institutes at the London School of Economics (LSE), and the Vienna Institute for International Economic Studies (wiiw). A brainstorming meeting on Reconstruction and Regional Co-operation in the Balkans was held in Vouliagmeni on 8-10 July 1999, covering the issues of security, democratisation, economic reconstruction and the role of civil society. It was attended by academics and policy makers from all the countries in the region, from a number of EU countries, from the European Commission, the USA and Russia. Based on ideas and discussions generated at this meeting, a policy paper on Balkan Reconstruction and European Integration was the product of a collaborative effort by the two LSE institutes and the wiiw. The paper was presented at a follow-up meeting on Reconstruction and Integration in Southeast Europe in Vienna on 12-13 November 1999, which focused on the economic aspects of the process of reconstruction in the Balkans. It is this policy paper that became the very first Working Paper of the wiiw Balkan Observatory Working Papers series. The Working Papers are published online at www.balkan-observatory.net, the internet portal of the wiiw Balkan Observatory. It is a portal for research and communication in relation to economic developments in Southeast Europe maintained by the wiiw since 1999. Since 2000 it also serves as a forum for the Global Development Network Southeast Europe (GDN-SEE) project, which is based on an initiative by The World Bank with financial support from the Austrian Ministry of Finance and the Oesterreichische Nationalbank. The purpose of the GDN-SEE project is the creation of research networks throughout Southeast Europe in order to enhance the economic research capacity in Southeast Europe, to build new research capacities by mobilising young researchers, to promote knowledge transfer into the region, to facilitate networking between researchers within the region, and to assist in securing knowledge transfer from researchers to policy makers. The wiiw Balkan Observatory Working Papers series is one way to achieve these objectives.

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This study has been developed in the framework of research networks initiated and monitored by wiiw under the premises of the GDN–SEE partnership.

The Global Development Network, initiated by The World Bank, is a global network of research and policy institutes working together to address the problems of national and regional development. It promotes the generation of local knowledge in developing and transition countries and aims at building research capacities in the different regions.

The Vienna Institute for International Economic Studies is a GDN Partner Institute and acts as a hub for Southeast Europe. The GDN–wiiw partnership aims to support the enhancement of economic research capacity in Southeast Europe, to promote knowledge transfer to SEE, to facilitate networking among researchers within SEE and to assist in securing knowledge transfer from researchers to policy makers.

The GDN–SEE programme is financed by the Global Development Network, the Austrian Ministry of Finance and the Jubiläumsfonds der Oesterreichischen Nationalbank.

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MACROECONOMIC STABILIZATION IN THE FRY

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We thank J.Guzijan for valuable research assistance.
The paper benefited from the comments at the GDN- SEE Workshop held in Belgrade, June 8-10, 2001.

December 2001.

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Introduction

After ten years of decaying, the Yugoslav economy faced the challenge of undertaking swift reforms to meet high expectations upon democratic changes in October 2000. Macroeconomic stabilization has been a first step and a necessary condition for the recovery. This paper deals with the first, crucial, year of stabilization by exploring challenges and sustainability of the stabilization while extensively documenting it.

At the outset of reforms, GDP per capita slightly exceeded 40% of the one in the second half of the '80s. During last decade the living standard decreased by over 50%. The average net monthly wage was less than 90 DM, while the open and hidden unemployment is estimated to be around 35%. Poverty escalated compared both to the recent Yugoslav records and the regional standards. It is estimated that the 35% of the population were below the regional poverty line, and additionally 35% just above the poverty line. All these built up large expectations for living standard improvements at the very beginning of stabilization, which by definition implies some austerity measures.

Inflation and monetary control was on the top of agenda, in order to prevent outburst of inflation upon extensive price liberalization. This task was somewhat eased by the fact that the economy was placed in 'bad equilibrium' at the start of stabilization (cf. Sachs 1994?). Namely, the economy exhibited large real depreciation of domestic currency, extremely low levels of real money holdings and a large informal sector. A credible stabilization thus offered a 'free lunch', that is a sharp increase in real money demand that has been used to build up foreign currency reserves; large real appreciation of domestic currency that restrained inflation by using nominal exchange rate as an anchor, and enhanced tax collection by broadening the tax base, which helped keeping the budget deficit under control.

Prices and wages in the public sector had to be adjusted. Utility prices, in particular electricity tariff, were well below operating costs at the start of the Program. This indicates the existence of the large quasi-fiscal deficit, which should be addressed if sustainable stabilization is to be achieved. On the other hand, wages in these enterprises were well above the average in the economy, suggesting their control thus lending opportunity to restraint over all wage increase.

Fiscal adjustments are decisive for lasting stabilization. The estimated fiscal deficit, explicit and implicit, was around 10% of GDP at the beginning of the Program. Tax reform has been enacted that broaden tax base and increased the revenues, as opposed to most other transition economies where tax base eroded (cf. Wyplosz, 1999). Strict expenditure control and higher revenues resulted into very low fiscal deficit in the first year. Prospect for the second year is higher but sustainable deficit to be accompanied,

however, with large share of public consumption in GDP. Although Yugoslavia shares the latter with CEE countries, some medium term reforms and adjustments are due.

Medium term viability is tentatively explored. Vulnerability indicators (cf. EBRD, 1999) suggest that fiscal deficit and external debt might be sustainable, while the main threat could come from the current account deficit. Structural reforms, that should also prevent reversals, are well on the way. Privatization law, with accompanying decrees, as well as Labor law has been accepted. Thus foundation for privatization and enterprise restructuring has been laid down. Three cement plants have been already sold to foreign investors. Bold measures are undertaken in bank restructuring by closing insolvent four largest banks that are state owned. These reforms are expected to eliminate soft budget constraint, hence decreasing the chances for facing crises and reversals in the future.

A. *Main Macroeconomic Imbalances*

I. Background

Upon disintegration of the former Yugoslavia, Serbia and Montenegro (FRY) experienced during 1992-93 second highest and second longest hyperinflation in economic history. It was driven by excessive money supply that monetized deficits at various levels which emerged upon disintegration of the former country, introduction of UN embargo and the war in the region (see Petrovic, Bogetic and Vujosevic, 1999). In January 1994 hyperinflation was abruptly halted and the economy underwent sharp remonetization through June 1994.

From mid 1994 through summer 1998, the economy went through cycles of short-lived macroeconomic stability and high, but not excessive inflation, i.e. around 50% per annum. In fall 1998, Kosovo conflict was pending and in spring 1999 the war broke out. As a consequence, the economy further deteriorated as the output sharply declined, domestic currency strongly depreciated in real terms hand in hand with ran away from dinar (demonetization). (See Petrovic, Arsic and Dragutinovic, 2000)

In order to identify medium term pattern and explore structural causes of instability, relevant for studying macroeconomic adjustments, one should therefore focus on 1994 – 1998 period.

Upon causing and experiencing hyperinflation, authorities were reluctant to opt for extensive money printing in this period. However unreformed economy pressed for the loose monetary policy. The resulting dynamics of the main nominal magnitudes are depicted in Table 1.

Table 1

Dynamics of Money, Prices, Exchange and Wage Rates
Growth rates

-End of period, in %

	1994[1)]	1995	1996	1997	1998	1999	2000
Money supply (M1)	1199.4	33.7	68.8	73.7	13.4	45.7	91.5
Base money (H)	545.8	71.6	63.6	70.3	9.7	38.0	117.4
Inflation	0.0	120.2	58.7	9.3	44.3	58.6[2)]	113.3
Exchange rate	50.0	126.7	14.7	28.2	63.0	157.7	42.9
Wages	984.7	63.0	91.0	9.9	37.3	39.7	132.6

1) Dec. 1994. / Feb. 1994. 2) Corrected official data

As can be seen, all nominal magnitudes grew at the average rate of around 40 to 50% in 1994-98 period, indicating macroeconomic instability. This is also demonstrated by monthly dynamics depicted in Figure 1, which clearly points to co-movement of money supply, price level and market exchange rate.

Figure 1

Dynamics of Money Supply (M1), the Price Level (P) and Market Exchange Rate (E)
(July 1994. = 100)

The Figure 1 suggests a conjecture to be tested, that money growth drove the price level and exchange rate, hence causing macroeconomic instability.

A consequence of the pursued macroeconomic policy, attempting from time to time to stabilize economy, was a low level of monetization.

Table 2

REAL MONEY DEMAND
- In percent

	1994	1995	1996	1997	1998	1999	2000	Average
M1/GDP*	9.44	5.18	5.96	7.98	5.79	5.95	5.30	6.53
H/GDP*	5.16	3.63	4.05	5.32	3.74	3.64	3.50	4.19

*) GDP end of period price level. H is monetary base.

As shown in Table 2, the share of M1 in GDP was 6%, for most of the period, which is well below 15%, that is the historical figure for the ‘80s. Low real money demand for

domestic currency indicates that public perceived economic policy, during second half of the ‘90s, as completely non-credible.

Further implication of modest real money holdings is relatively low seigniorage despite high growth of money supply.

Table 3

SEIGNIORAGE

- In percent

	1994	1995	1996	1997	1998	1999	2000	Average
ΔM1/GDP	9.32	1.86	2.83	3.58	0.80	2.42	4.00	3.55
ΔH/GDP	4.66	2.16	1.84	2.33	0.39	1.30	3.14	2.26

Thus despite high money growth, the collected seigniorage could finance only relatively small fiscal deficit of approximately 2% of GDP.

II Inflation, Wage and Exchange Rate Determination: Some Econometric Evidence

The issues that we want to explore in this section are as follows. What was the driving force behind the nominal variables: money supply, price level, wage and exchange rates. In particular whether they have been driven by money supply that monetized fiscal and quasi-fiscal deficits, i.e. fiscal view, or by exchange rate i.e. balance of payment view? Was there direct relationship between money supply and wages, indicating the presence of soft budget constraint? How nominal exchange rate was determined? Whether there is a conflict between real depreciation of currency and real wage increase? Finally, whether the Cagan type of money demand schedule can explain low monetization observed in the Yugoslav economy?

1. Testing and Estimating Long-run Relationships

Methodology used is the cointegration analysis i.e. testing and identification of long-run relationships. Monthly data for logs of M1 (m), price level (p), wage (w) and exchange (e) rates, for the period June 1994 – September 1998 are used. All four series are nonstationary, I(1). Thus we proceed to test for cointegration, and the results are reported in Table 4.

Table 4

Testing Cointegration among Price Level,
Wage Rate, Exchange Rate, and Base Money

July 1994 – September 1998

rank	*Eigenvalue*	*trace test*
R=0	0.50	78.73
r≤1	0.36	44.05
r≤2	0.26	22.06
r≤3	0.12	6.72

Note: There are 2 lags in the VAR. The 5% critical values for the trace tests are as follows: 53.42 for r=0, 34.79 for r≤ 1, 19.99 for r ≤ 2 and 9.13 for r ≤ 3 (Hansen and Juselius, 1995).

Cointegration tests indicate that there are three cointegrating vectors (long-run relationships) among the variables considered. The estimates of these vectors are reported in Table 5.

Table 5

Estimated Cointegrating Vectors

variable	b_1	b_2	b_3
P	0.10	-1.85	1
E	-1.50	1	-0.19
W	1	1.73	-0.75
M	0.51	-0.73	-0.04
Constant	-10.09	4.26	-0.27

These estimates indicate that the first vector (column) might represent a relationship between wages and money supply, the second vector (column) could be the relationship between the exchange rate and money supply, and the third vector (column) might indicate that price level depends on wage and exchange rate.

Upon imposing the restrictions above, the following estimates are obtained (Table 6)

Table 6

Estimates Under Imposed Restrictions
On The Cointegration Vectors
$Chi^2(2) = 0.77(0.68)$

variable	b_1	b_2	b_3
P	0	0	1
E	0	1	-0.21
W	1	0	-0.83
M	-0.79	-1	0

Constant	0	7.58	0

The Chi square (2) statistics indicates that restrictions imposed cannot be refuted.

2. Money Supply Caused Macroeconomic Instability

As the result of cointegration testing and estimation, the following long-run relationships are identified:

$p = 0.83w + 0.21e$ (1)

$e = m - 7.58$ (2)

$w = 0.79m$ (3)

First equation indicates mark-up pricing, i.e. the price level is determined by wage and import costs. Exchange rate is determined, in the second equation, by money supply. Third equation points to the peculiar long-run relationship between wages and money supply, as opposed to expected relation between money supply and the price level.

In order to determine endogeneity and weak exogeneity in eqs. (1) to (3) above, the corresponding Error-correction models (ECM) are estimated. They also capture the short-run dynamics of the variables.

$dp = 0.054-0.16(p-0.21e-0.83w)_{-1}+0.51dp_{-3}$ (4)

(4.64) (-3.78) (5.52)

R^2=0.45 Q (12)=14.98(0.24)

$de = 0.044-0.058(e-m+7.6)_{-1}+0.340de_{-3}$ (5)

(4.40) (-2.10) (2.50)

R^2=0.16 Q (12)=14.16(0.29)

$dw = -0.115-0.176(w-0.79m)_{-1} +0.332(p-0.21e-0.83w)_{-1}-0.324dw_{-1}$ (6)

(-2.47) (-2.97) (2.95) (-2.20)

R^2=0.46 Q (12)=10.98(0.53)

Note: t-values are in parentheses. Q is the Ljung-Box autocorrelation test of order 12 with p-values in parentheses. d stands for the first difference of variables and since they are logs, d represents growth rate.

Thus ECM (4) indicates that the price level does adjust to wage rate and exchange rate, as suggested in eq. (1), while ECM (5) confirms that exchange rate adjusts to money supply, supporting eq. 2. Wages (ECM 6) are determined by money supply, as suggested in eq. (3), but are also indexed to the price level and exchange rate.

Putting these results together, one gets that money supply is the exogenous variable in the above system of cointegrated variables, thus driving wages, exchange rate and the price level. Consequently, it is the monetization of fiscal and quasi-fiscal deficits, i.e. the fiscal view, which explains macroeconomic instability in the Yugoslav economy.

The identified relationship between wage rate and money supply (eq. 3) points to the soft budget constraint where increases in money supply spill over directly into wage increase. Namely, the loose monetary policy has led to immediate wage increase in the environment of unreformed, dominantly socially owned Yugoslav economy.

The long-run relationship between exchange rate and money supply (eq. 2) supports monetary model of exchange rate determination. In this model (Obstfeld and Rogoff, 1997) exchange rate is determined by future dynamics of money supply. Corresponding present value model (PVM) of exchange rate determination reduces to relationship between current exchange rate and money supply, i.e. eq. (2), when money supply follows the random walk (I(1)), which is exactly our case. Thus eq. (2) says that money supply, as the fundamental, determines exchange rate.

The corresponding ECM (5) shows that exchange rate does adjust (de) to its deviation from fundamental: e-m (also Mark 1995). However, the pace of adjustment is relatively slow, since the adjustment coefficient (0.058) is rather small.

The result that exchange rate is determined by money supply is a legacy of the hyperinflation that Yugoslavia experienced in1992 and 1993. In extreme case, like hyperinflation, one would expect monetary model to hold as it has been confirmed for the Yugoslav hyperinflation (see Petrovic and Mladenovic, 2000). The fact that even upon halting hyperinflation exchange rate depends directly on money supply indicates a low credibility of stabilization policy. The econometric result above is also supported by ad hoc evidence when, e.g. in December 1996, an increase in money supply in the course of weeks initiate exchange rate depreciation. The price level adjusts later on with considerable lag, and partly.

Price level (eq. 1) is dominantly determined by labor cost, with elasticity (0.83) being much higher than the one for exchange rate (0.21). Money supply affects price level only through wages and exchange rate. The eq. (1) indicates that the prices are sticky with respect to exchange rate. Additionally, real exchange rate is nonstationary, i.e. price level does not adjust directly to exchange rate. This empirical evidence indicates that the law of one price is far from being true in the Yugoslav economy, the result that could be expected in the relatively closed economy in the '90s.

Since the elasticity of the price level with respect to exchange rate (0.21) and wage rate (0.83) approximately adds to one, the long-run relationship between real wage rate (w-p) and real exchange rate (e-p) can be derived:

$$(w-p) = -0.25(e-p) \qquad (7)$$

Causation runs from real exchange rate to real wage rate, as implied in eq. 7, since real exchange rate is weakly exogenous in the cointegrated relationship above. The corresponding ECM demonstrates this:

$$d(w-p) = -0.109 - 0.407[(w-p)+0.25(ex-p)]_{-1} - 0.185d(w-p)_{-1} \qquad (8)$$

(-3.39) (-4.17) (-1.93)

R^2=0.32 Q (12)=14.80(0.25)

Thus there is the long-run trade-off (conflict) between real wage rate and real exchange rate implying that real devaluation leads to decrease in real wages. This result stems from the mark-up pricing above.

B. Macroeconomic Stabilization

I. Money and Exchange Rate

1. Background

Upon democratic changes in October 2000, the Yugoslav economy was facing large macroeconomic imbalances. Apart from the structural imbalances, the immediate concerns were those related to extensive price control and repressed inflation, sharp demonetization of economy and extreme real depreciation of dinar. This starting position threatened to explode into high inflation and possibly hyperinflation. Hence, the immediate concern was to achieve monetary and exchange rate stability in order to prevent price explosion.

Price control was widely practiced in 1999 and 2000 as a substitute for the social policy and to repress the inflation. There were direct and indirect price controls, but also unofficial one, often without any adequate legal basis.

Direct price control, was applied to staple food products, electricity, oil and oil derivatives, a majority of pharmaceuticals, basic hygiene products, some chemical products and main public services. We estimate that over 40% retail trade of goods and services were under direct price control.

Indirect price control, binding enterprises to report price changes, increased in addition the scope of control. Furthermore, during the second half of 1999 and through September 2000, unofficial price control was extensively practiced. Antimonopoly regulations are mainly misused to control directly the prices that are supposed to be freely set. In addition, pressures were exerted on enterprises not to increase prices even if they were formally allowed to do so. The informal pressures were pursued through frequent and excessive administrative control and selectively fining the companies for what in fact were “normal”, widespread operations.

Thus the government was able to influence or determine the prices of practically all products and services and it used it extensively through the end of September 2000. The main consequences were enormous price disparities, high losses in enterprise sector, shortages and expansion of gray economy.

As has been demonstrated in the section A, the Yugoslav economy exhibited the low level of monetization in the ‘90s. However, in 1999 and through September 2000 real demand for money decreased even further as a consequence of additional deterioration of the Yugoslav economy in these years.

The real money demand by the end of 1999 was 750 mil. DEM and further decreased to 650 mil. DEM by the end of September 2001. Compared to the already low level of demand by the end of 1998 (1340 mil. DEM), real money holdings halved during the first three quarters of 2000. However, part of this decrease is due to sharp real depreciation of dinar in the period considered. By September 2000, real exchange rate of dinar decreased to 56% compared to the average level for the period 1994 – 98.

Outgoing government lifted price control at the beginning of October 2000. Obviously, this was politically motivated since the measure was isolated and not a part of a stabilization package. The repressed inflation became the open one, and it surged in October and November to 27% and 19% respectively. Later on, as a consequence of monetary and exchange rate policy, inflation was put under control.

Wages reacted to this price increase and succeeded to catch up through December 2000. The wage increase was partly made possible by donations, some of which were channeled to the wages in the public sector. By the end of 2000, the real wage rate was 1% higher than the average rate for the whole year. This put some pressure on the wage increase in 2001 compared to 2000, since the level achieved in December was perceived as the starting point.

Table 7

Inflation, Nominal and Real Wage Rates

	Inflation, retail prices	Nominal wage rate	Real wage rate(deflated by CPI)	Real wage rate (2000. =100)
	Growth rates, %			
Jul-00	2.9	4.9	1.7	104.3
Aug-00	4.7	9.8	0.6	105.0
Sep-00	7.7	6.8	-4.4	100.4
Oct-00	26.6	13.5	-8.4	91.9
Nov-00	19.0	13.0	0.0	91.9
Dec-00	2.8	22.9	9.9	101.0
Jan-01	3.2	-5.9	-8.8	92.1
Feb-01	3.3	7.0	5.4	97.0
Mar-01	0.9	4.3	1.9	98.9

2. Initial Macroeconomic Stabilization: Monetary and Exchange Rate Policy

The initial macroeconomic policy of the new government, that also encompassed the Post conflict program agreed with IMF, focused on monetary and exchange rate policy and temporary fiscal adjustment that would prevent deficits and their monetization. In particular, temporary balanced budget for the first quarter has been established for Serbia;

this budget, including pension and health care funds, account for the major part of fiscal expenditure in Yugoslavia. The balanced Federal budget was also accepted.

The basic idea of the initial stabilization policy has been to regulate money supply only through foreign exchange operation, while at the same time fixing exchange rate at its black market rate and subsequently opting for the managed float.

Table 8 illustrates money supply process. Net domestic assets were kept constant in the last quarter of 2000, decreased in the first quarter of 2001, and than remain constant through August, hence being well below initial September 2000 level. At the same time money supply (M1) increased 111% and monetary base 93% from September 2000 through August 2001.

Table 8

Money Supply:
Monetary Base (H), Money Supply (M1) and Net Domestic Assets (NDA)

- Mil. dinars

	H	M1	NDA
Dec. 1999	9421.6	15986.6	32010.0
Sep. 2000	14218.4	22996.9	39857.0
Dec. 2000	19832.5	30194.7	39314.0
Mar. 2001	19815.0	34782.3	34669.0
Jun. 2001	24623.0	43010.6	35770.0
Aug. 2001	27468.4	48546.5	34108.0
Sep. 2001	31464.4	52956.5	37081.0
Nov. 2001	34698.3	56939.1	36359.0

The previous pattern implies increase in foreign exchange reserves, as demonstrated in Table 9. They were substantially raised from the start of the program through August 2001, i.e. by 219%.

Table 9

Foreign Exchange Reserves of NBY
- End of the period

	Mil. US$
Dec. 1999.	297.4
Sept. 2000.	375.6
Dec. 2000.	524.2
Mar. 2001.	586.4
Jun. 2001	878.6

Aug. 2001	950.4
Sep. 2001	1048.3
Nov. 2001	1082.8

Thus the growth in money supply simply accommodated increase in real money demand through foreign currency operation, and hence was not inflationary.

By the end of August and through September NBY started the lending to the Government of Serbia, by extending 3.2 billion dinars. This was envisaged by Stand-by agreement concluded with IMF in June 2001, thus ending a quasi currency board arrangement practiced during first eleven months of stabilization. Consequently, Net Domestic Assets increased substantially by the end of September as shown in Table 8. Additional NBY loan to the Government was extended end of October, reaching the total of 3.7 billion out of 4 billion dinars agreed with IMF for 2001.

NDA at the end of September 2001, and in fact also end of November, are still lower than those at the beginning of stabilization (September 2000), hence contributing to the decrease of base money. Thus money creation through November 2001 was exclusively due to increase in foreign exchange reserve which is partly offset by decrease in NDA. As an illustration, in the first nine months of 2001 the base money grew somewhat less than 60%; increase in foreign reserves contributed 70% while decline in NDA offset the latter by somewhat more than 10%.

As NDA decreased in 2001, it opend the room for extra NBY lending to the Government of Serbia budget in November and December, and this opportunity was realized.

Real money demand, in terms of foreign currency, sharply increased (61%) in the last quarter of 2000. This is expected both due to the extremely low level of monetization and the new monetary and exchange rate policy that immediately regained some credibility. The large shifts in real money demand, like the one above, were already observed in the second half of the ‘90s. Real money holdings in terms of foreign currency further expanded through September 2001 by 75%, indicating the huge growth during the first year of stabilization.

Table 10

Real Money Demand

	(M1/p)	M1 mil. DM
Dec.1997	126.5	1908.6
Dec.1998	99.9	1335.3
Dec.1999	96.6	751.0

Sep. 2000	100.0	647.2
Dec.2000	86.7	1006.5
Mar. 2001	93.1	1159.4
Jun. 2001	100.1	1433.7
Sep. 2001	115.6	1765.2
Nov. 2001	118.5	1866.9

Measuring real money holdings in terms of foreign currency are somewhat biased since real depreciation of the domestic currency tends to exaggerate demonetization, while real appreciation overestimates remonetization. Thus the big growth of real money holdings in the first year of stabilization (173%) is substantially due to large real appreciation of dinar.

Real money demand measured as nominal money deflated with the price level has also set backs, due to extensive price control in 1999 and through September 2000. This explains relatively high 'level of monetization' in September 2000, which is, due to price control, obviously spurious. Furthermore, the subsequent reduction in real money holdings through December 2000, is the consequence of price liberalization rather than decrease in real money demand. Therefore, in order to assess remonetization one should take December 2000 as a starting point. The resulting increase through September 2001 is 33%.

Whether we measure real money demand in terms of foreign currency or deflated with price level, it is still, after one year of stabilization, below the maximum of the pre reform 1994-2000 period. In fact this is true even for end of November 2001.

The exchange rate was fixed in October 2000 at its parallel market value (30 dinars for 1 DEM), which was five times greater than official one (6 dinars). However, this was just recognizing actual state of affairs since hardly any transactions had been done at the official rate. At the same time internal convertibility was introduced and exchange rates unified. In December 2000 managed float was introduced. All above brought back most of the transactions from parallel to official market, and led to the observed remonetization by increasing foreign currency reserves.

As explained above, dinar exhibited large real depreciation at the parallel market in 1999 and through September 2000. This opened the room for dinar to appreciate in real terms in the period of initial stabilization, which in fact happened. Thus, exchange rate was used as a nominal anchor since it hardly changed during the first year of stabilization (from 30 to 30.5 dinars for one DEM). This policy helped stabilizing inflation after it surged in October and November 2000, and prevents outburst of new inflation upon administrative increase in prices during 2001. However, this also led to large real appreciation of dinar, as depicted in Figure 2.

Figure 2. Real Exchange Rate (E*Pf/P) (average 1994-98=100)

Real exchange rate in Figure 2 is obtained by deflating nominal exchange rate by domestic price level (P) and correcting with German inflation (Pf). It shows that, upon large real appreciation in the first year of the stabilization, real exchange rate reached the average level for the period 1994-98, thus exhausting the initial space for real appreciation. Consequently, further appreciation should be supported by improvements in the economy in order to be sustainable.

Another way to asses whether the exchange rate represent a threat to balance of payment and external competitiveness, is to combine it with wage rate. As depicted in Figure 3, average monthly net wage rate reached 200 DM in September 2001. Judging from its historical levels given in Figure 3, wage rate in terms of DM reached its sustainable level, and further increase should hinge on productivity growth. International comparisons indicate that 120% increase in DM wage observed in Yugoslavia during the first year of stabilization is not extreme. Namely, in transition economies, the dollar wage increase from tough or first available data varies in the medium range from 75% to 173%, although extremes are 43% and almost 600% (cf. Halpern and Wyplosz, 1998).

Figure 3. Real wages in DEM

Comparing foreign currency reserves with monetary aggregates can also give assessment of the exchange rate sustainability. After one year of the Program foreign currency reserves are 30% greater than M1 and 80% than monetary base, indicating that current rate can be easily defended. At the same time, the reserves cover 3.4 months of import, showing that for time being there is no treat from the balance of payment to the exchange rate.

3. Assessments and Outlook

Monetary and exchange rate policy, in the first year of stabilization, took advantage of a starting position characterized by extreme demonetization and real depreciation of domestic currency. In a sense, the initial position offered a free lunch. Extremely low level of domestic money real holdings, at the start of the Program, allowed money supply (base money) more than double within a year without being inflationary. This increase in real money demand was used to build up foreign reserves.

On the other hand, excessive initial under valuation of dinar left the space to effectively fix exchange rate for one year, thus using it as a nominal anchor. This allowed keeping inflation under control upon, first, extensive price liberalization, and subsequently

administrative price adjustments and tax reform. Hence the space for real appreciation of dinar allowed pursuing price liberalization and administrative price adjustments. Large average on average real appreciation in 2001 over 2000 (60 %) will have considerable carry over effect in 2002, estimated at 13%. Namely, beginning of January 2002 the value of dinar in real terms is expected to be 13% higher than the average for 2001. Dinar will additionally appreciate during 2002 due administrative price changes, leading to overall (average on average) real appreciation of 19%.

After one year of stabilization, the advantage of the starting position is, by and large, exhausted. The level of real money demand and the real value of dinar are, respectively, in the range of maximum and average historical values in the '90s. Therefore, further improvements imply structural changes that would move the economy away from its performance in the '90s.

Following the experience of other transition economies, additional real appreciation of domestic currency could be expected in the medium term. The common pattern exhibited by transition economies (cf. De Broeck and Slok, 2001) is the initial collapse of real exchange rate and then catching up to some equilibrium level. Thereafter additional real appreciation takes place due to convergence of productivity towards those in developed economies and due to supplementary transition specific productivity gains.

The Yugoslav economy already experienced initial collapse of exchange rate in pre stabilization years and catching up phase in the first year of the Program. Productivity growth and some farther administrative increase of non-tradable prices will drive real appreciation in the medium term. We estimate that in the period 2003 through 2006, dinar could appreciate by 12% (cf. Table 29). A tentative time profile is given in Table 28 in Section V.

3.1 Explaining Remonetization: Real Money Demand

The following estimates demonstrate that real money demand during the first year of stabilization exhibits the same pattern as in the '90s. They also explain the low level of real money holdings in the '90s.

As demonstrated in the Section I, even upon halting hyperinflation low level of monetization remains in the Yugoslav economy (cf. Table 2). This is the consequence of non-credible macroeconomic policy, which only temporarily succeeded in controlling inflation (cf. Table 1). In the first year of stabilization considerable remonetization took place but real money holdings end of September 2001 have not still exceeded some historical values in the period 1994-1998.

A Cagan type of money demand, where velocity changes with expected inflation, should explain this environment of low monetization.

Figure 4 depicts the dynamics of inverse velocity of money (m-p-q), where m, p and q are the logs of M1, retail price level and industrial output.

Figure 4

Inverse Money Velocity: (m-p-q)

As seen from Figure 4, the dynamics of money velocity, upon halting hyperinflation, exhibited down and up movements indicating that the periods of remonetization were immediately followed by demonetization. Thus, no upward trend in real money demand is observed upon halting hyperinflation.

Coming to the estimation, Figure 4 suggests that (m-p-q) is stationary, which is confirmed by unit root tests reported in Table 12 below (m-p-q=mr).

The stationarity of inverse velocity (m-p-q) implies that these variables form a long-run relationship. The relationship shows that elasticity of real money demand (m-p) with respect to industrial output (q) is equal to one.

Estimate of a Cagan type real money demand, where velocity depends on inflation, reads as follows:

Period: June 1994 – October 2001

$$(m\text{-}p\text{-}q) = -0.314 - 0.82dp + 0.80(m\text{-}p\text{-}q)_{-1}$$
$$(-3.09) \quad (17.02)$$

R^2=0.80 Q(22)=68(0.00), DH = 4.65(0.10)

Note: t-values are in parentheses. Q is the Ljung-Box autocorrelation test of order 22 with p-values in parenthesis. DH is a Doornik-Hansen normality test with p-value in parenthesis. Dummy variable that takes value 1 for March, April and May 1999 and 0 otherwise is included; it captures the sharp drop in industrial output due to NATO bombing. The standard errors are estimated using the Newey-West lag window of order 12 in order to take care of autocorrelation.

Velocity depends on inflation rate and it's lagged value. The inclusion of the lagged dependent variable might imply either adaptive expectation or partial adjustments.

The corresponding steady state solution of real money demand is as follows.

$$(m\text{-}p) = -1.6 + q - 4.1dp \qquad (15)$$

Thus the long-run semielasticity of money demand with respect to inflation is equal to 4.1. As is well known, this type of money demand function exhibits Laffer curve property, where inflation tax reaches maximum for certain inflation rate, and subsequently decreases. Inflation rate for which inflation tax reaches maximum is equal to 24% per month, i.e. equal to the inverse of semielasticity of money demand (4.1).

Thus, dynamics of real money holdings is by and large determined by inflation, as is the case in high inflation environment. Therefore, it is credibility of economic policy and reforms that will increase monetization of the Yugoslav economy, since the previous prolonged periods of currency and price stability did not result in a major shift.

The estimated money demand captures well the remonetization occurred in the first year of stabilization, which however did not exceed some historical values in the ‘90s. Thus the experienced monetization is just another wave seen in the past, and the main challenges for further remonetization are ahead.

One could assess the medium term prospects for the increase of money demand in Yugoslavia by comparing current level with those achieved in successful transition economies. As shown in Table 11, the share of M1 and base money in GDP increased considerably in 2001, exceeding and approaching respectively maximum values in the ‘90s (cf. Table 2).

Table 11

	Real Money Demand	
	2000	2001
M1/GDP	5.3%	8.1%
H/GDP	3.5%	4.8%

However, the monetization in Yugoslavia is still well below the levels achieved in the advanced transition economies in their first years of reform. Thus the share of base money in GDP, in the first half of the '90s, was twice as large in Czech Republic (10.6%) and Poland (8.7%), and it was even higher in Romania (6.6%) (cf. Buiter, 1997, Table 1).

II. Prices and Wages

1. Inflation and Administrative Price Adjustments

Extensive price control and repressed inflation were inherited from the previous regime. In October 2000 all prices, apart from public utilities and some basic goods prices, were liberalized and inflation went open (cf. Table 7). Monetary and exchange rate policy, as explained above, put the inflation under control through March 2001. Thereafter, administrative price adjustments came on agenda.

The main issue concerning price policy is adjusting public utilities prices. The outstanding problem is that of the Serbian Electricity Company (EPS).

Under the price of 0.94 cents/kWh at the beginning of 2001 EPS was far from covering its operating costs. It is estimated that this price covers just one fifth of its economic cost. The subsidy needed in 2001, if price adjustment would not take the place, should be around 3% of GDP. This points to the existence of the large quasi-fiscal deficit.

The price correction included the effective price increase in April by approximately 32%, additional 40% increase beginning of June, and 15% in October, resulting into cumulative increase of 113%. As a consequence, the price has reached 2 cents/kWh by the end of 2001. This is still well below normal levels of 4.5 to 5 cents, implying again substantial subsidies in the 2002, and further price corrections in years to come.

Communal utility prices were increased in January and February 2001 by 70%. However, it is estimated that they are still below operating cots. This is particularly true for the most important item: district heating. In fall 2001, the price for district heating was raised 60% in Belgrade. After all corrections above, the prices for district heating cover only 40 to 60% of the corresponding costs in Serbia, suggesting additional price adjustments in following years.

The price of gas was increased 103% in November 2000, but domestic prices are still 25% lower than import ones. The gasoline price increased from 1.3 to 1.5 DM in December 2001 due to excise increase.

Railway tariffs were increased by 180% in 2001, but they are still below the cost. On the other hand their relative prices, i.e. compared with prices of other means of transportation, are approximately adjusted. Therefore, further increase of railway tariffs would make railway transportation noncompetitive.

The prices of postal services, through the end of May 2001, covered on average 35% of the corresponding costs. Beginning of June, these prices increased by 80%, thus reaching two thirds of the costs.

TELECOM Serbia increased prices by 2.12 and 1.8 times for household and non-households respectively; this was a first correction in three years.

The prices of bread increased by 65% to 135%. Prices of medicaments were also corrected upwards in May 2001 by 80%.

It is estimated that the end of the year inflation rate for 2001 will be around 40%. We estimate the price level increase in 2001, due to direct effects of the above relative price adjustments, at 26%. The corresponding core inflation, encompassing indirect effects of price adjustments and all other components is therefore 14%.

Substantial relative price adjustment is pursued in the first year of the Program, thus lowering quasi-fiscal deficit, but also significantly raising inflation. However, further administrative price changes and subsidies are due next year. As a consequence, we estimate that end of the year inflation rate in 2002 will be up to 20%.

2. Wage Dynamics and Policy

Upon price liberalization and inflation surge at the beginning of the Program, real wages initially dropped and subsequently caught up through March 2001 (cf. Table 7). During 2001, real wages increased 4.3%, which is above non-agriculture GDP growth estimated at 1.5%. Part of the net wage increase is due to 10% decrease of contributions to pension and health funds which than spilled over into wage growth.

In order to assess the sustainability of average real net wage rate after one year of the macroeconomic stabilization, one may compare it with historical average in the period 1994-98.

Figure 5

Real Net Wage
Average 1994-98 = 100

As shown in Figure 5, real wage rate in October 2001 exceeded historical benchmark of second half of the'90s. Another way to assess the sustainability of wage rate is to express wages in terms of foreign currency as in Figure 3 above. It can be seen that the monthly net wages reached 200 DM in October 2001, thus approaching the maximum achieved in second half of the'90s.

Thus in line with remonetization and real appreciation of currency, real wages also exhausted in 2001 the initial space for expansion. Further increase of real wages hinge on productivity growth.

One methodological remark is due. From June 2001 onwards, net wages include all fringe benefits (holiday vouchers, hot meals etc.) since they are now taxable as well. The new net wage is therefore higher, e.g. 230 DM in October, and hence incomparable with the old one. For the analytical purposes, we used above the comparable old net wages.

Wage control was introduced in the public enterprises freezing their wage bill at the January 2001 level. This was a first step towards intended restructuring of these enterprises and preceded administrative price increases. These enterprises employ more than 200 thousand, which makes almost 15% of those employed in social and public enterprises. Upon demonstrating improvements in their operations, some limited wage increases were allowed. On average, wage bill in public enterprises increased 10%

nominally, which together with 40% inflation lead to almost 22% real decrease. Thus, the wage control in public enterprises were important in containing overall real wage increase. The control also diminished relative wage dispersion, since the wages in public enterprises were generally well above the average.

Wages of those employed in public services (government, army, education, health care etc.) are by definition under control. The total number of employees in these sectors is around 400 thousand. These sectors exhibited different nominal wage dynamics, but on average they together recorded real growth of approximately 7%.

3. Price and Wage Determination: Some Econometric Evidence

The inclusion the first year of stabilization in the sample (in fact thirteen months: October 2000 – October 2001) has changed the results obtained for the second half of the '90s (see Section A, II). As already discussed the exchange rate has been kept constant through this period of stabilization, while money supply has been driven basically by an informal currency board arrangement.

Consequently, soft Central bank (NBY) loans via banks to enterprise sector have been abolished, implying the hardening of the budget constraint. Therefore one would expect that wages do not depend on money supply (eq. 3) anymore. Cointegration testing through October 2001 confirms that the relationship between wage rate and money supply breaks down.

Furthermore, since money supply has been mainly increased through foreign currency operations, resulting in growing foreign reserves, it has not affected exchange rate. Thus the long-run relationship, implied by the monetary model, where money supply determines exchange rate (eq. 2) also breaks down. This is also demonstrated by the cointegration testing.

However, mark-up pricing still holds. Cointegration tests show that there is a long-run relationship between logs of price level (p), wage rate (w) and exchange rate (e).

The results on unit root testing reported in the Table 12, indicate that p, w, and e are nonstationary, and hence could cointegrate. These tests also show that inverse velocity of money (mr = m-p-q) is stationary as stated before.

Table 12

Augmented Dickey-Fuller Tests for Unit Roots

June 1994 – October 2001

	p_t	e_t	w_t	m_t	mr_t
$H_{o:}$ I(2)	-5.54	-6.47	-4.15	-6.63	

H_1:I(1)					
H_o:I(1) H_1:I(0)	-1.52	-1.64	-1.04	-1.81	-3.27

Note: The number of correction is equal to 1 in the Augmented Dickey-Fuller (ADF) test-statistics for p, e and m, 4 for w and 12 for mr (money deflated by prices and industrial production). The critical value for ADF, that are calculated in the regression with constant and trend, equals to -3.46 at the 5% significance level and 89 observations (MacKinnon, 1991). The regression without trend is used to test for the unit root in mr, with the 5% critical value –2.90.

Cointegration testing is reported in Tables 13 – 15. Table 13 shows that the price level, wage rate and exchange rate cointegrate, and Table 15 reports estimate of cointegration vector. The estimate suggest that coefficients on exchange rate and wage rate might add to one, and this hypothesis is tested and accepted as shown in Table 15 ($Chi^2(1) = 0.55(0.46)$ does not refute the null hypothesis that coefficients add to one).

Table 13

Testing Cointegration among Price Level, Wage Rate, and Exchange Rate June 1994 – October 2001

rank	***Eigenvalue***	***trace test***
r=0	0.31	45.87
r≤1	0.10	12.97
r≤2	0.04	3.38

Note: There are 2 lags in the VAR. The constant enters the VAR unrestrictedly. The 5% critical values for the trace tests are as follows: 29.38 for r= 0, 15.34 for r ≤ 1 and 3.84 for r ≤ 2 (Hansen and Juselius, 1995).

Table 14

Estimated Cointegration Vector

variable	b_1
P	1
E	-0.23
W	-0. 76

Table 15

Estimates Under Imposed Restriction On The Cointegration Vector

$Chi^2(1) = 0.55(0.46)$

Estimated Cointegration Vector

variable	b_1
P	1
E	-0.22
W	-0. 78

The estimated long-run relationship reads than as follows:

$$p = 0.78w + 0.22e \qquad (9)$$

Both prices and wages are determined by this long-run relationship, since their short-run dynamics adjust to cointegrating vector (9). This is depicted by the their ECMs, in which cointegrating vector (9) enters significantly. On the other hand, exchange rate does not adjust to (9), i.e. it is weakly exogenous with respect of prices and wages.

Coefficients in the cointegrating relation (9) are very close to the corresponding coefficients for the shorter period (cf. eq. 1) indicating the stability of the long-run relationship between prices, wages and exchange rate.

The ECMs for prices and wages read as follows.

$$\begin{aligned} dp = {} & 0.05 - 0.08(p-0.22e-0.78w)_{-1} + 0.41dp_{-1} \\ & (3.07)\ (-2.19) \qquad\qquad (4.23) \\ & +0.12de_{-1} \qquad\qquad (10) \\ & (2.39) \end{aligned}$$

$R^2=0.54$ $Q(22)=20.87(0.52)$

$$\begin{aligned} dw = {} & -0.14 +0.42(p-0.22e-0.78w)_{-1} + 0.45dp_{-1} \\ & (-4.40)\ (5.00) \qquad\qquad (3.38) \\ & + 0.40de \ + 0.19dw_{-4} \qquad\qquad (11) \\ & (3.62) \qquad (2.90) \end{aligned}$$

$R^2=0.50$ $Q(22)=12.27(0.93)$

Note: t-values are in parentheses. Q is the Ljung-Box autocorrelation test of order 22 with p-values in parentheses. d stands for the first difference of variables, and since the levels are logs d represent growth rate.

When compared with the ECM for the '90s (eq. 4), prices now (eq. 10) adjust slower to wages and exchange rate (long-run relationship), the adjustment coefficients being -0.16 and -0.08 respectively. This could be partly explained by the fact, clarified above, that two thirds of inflation in 2001 was governed by administrative price adjustments, and one third by wages, and other factors.

As expected, wages do not adjust to money supply anymore, as previously in the eq. 6, but just to the price level and exchange rate as shown by the ECM (11). Wages adapt much faster to long-run relationship than prices, thus offsetting in less than three months (adjustment coefficient 0.42) any deviation from the long-run relationship.

Again, coefficients in cointegrting relation (9) add approximately to one, thus indicating the existence of long-run relationship between real wage rate and real exchange rate.

Cointegration tests, reported in Table 16, show the presence of cointegration between real wage rate (w-p) and real exchange rate (e-p), while Table 17 reports the corresponding estimates.

Table 16

Testing Cointegration Between
Real Wages and Real Exchange Rate
June 1994 – October 2001

rank	***Eigenvalue***	***trace test***
r=0	0.27	30.59
r≤1	0.03	2.69

Note: There are 2 lags in the VAR. The constant enters the VAR unrestrictedly. The 5% critical values for the trace tests are as follows: 15.34 for r=0 and 3.84 for r ≤ 1 (Hansen and Juselius, 1995).

Table 17

Estimated Cointegration Vectors

variable	b_3
(w-p)	1
(ex-p)	0.23

The Long-run Adjustment Coefficients

equation	***a***

d(w-p)	-0.28 (-4.03)
d(ex-p)	0.06 (1.00)

Note: d stands for the first difference. t-values are given in parentheses.

Estimated cointegration vector indicates the following long-run relationship:

$$(w-p) = -\ 0.23(e-p) \qquad (12)$$

The long-run elasticity (-0.23) is close to the one obtained for the shorter period (-0.25).

As previously, short-run dynamics of real wage rate adjust to long-run relationship (12), and hence it is determined by eq. (12), while real exchange rate is weakly exogenous. The corresponding ECM that reads as follows shows the former:

$$d(w-p) = \underset{(-4.21)}{-0.07} - \underset{(-4.61)}{0.34}[(w-p)+0.23(ex-p)]_{-1} + \underset{(5.27)}{0.44}d(ex-p) - \underset{(-3.68)}{0.33}\, d(ex-p)_{-1}$$

$$+\underset{(3.57)}{0.20}d(w-p)_{-4} \qquad (13)$$

$R^2=0.59$ $Q(22)=15.22(0.81)$

Note: t-values are in parentheses. Q is the Ljung-Box autocorrelation test of order 22 with p-values in parenthesis.

The obtained trade-off between real exchange rate depreciation, i.e. increase in (e-p), and real wage (w-p) growth (eq. 12), is also suggested by the Figures 2 and 5 where these series are respectively depicted. Thus above the average real wage rate, recorded by the end of the period (cf. Figure 5) is consistent with the higher than average real value of dinar for the same period (cf. Figure 2). They both have exhausted potential for the additional increase within given system, and their further pace of expansion is contingent on the productivity growth in the economy.

III. Output: Whether Yugoslav Economy Experienced Transition Recession?

During the 90's, due to international embargo and mismanagement of economy, output more than halved while capacity utilization in most industries dropped to one third. The issue than arise whether the Yugoslav economy, upon initiating reforms, would experience additional decrease in output, i.e. undergo transition recession. This becomes now an empirical issue.

It is estimated that GDP will increase 5.5 to 6% in 2001, i.e. the first year of stabilization and reforms. However, this high growth is by and large due to the recovery of agriculture output in 2001, which increased 20% after the big draft in 2000. Still, if one focus on non-agriculture output, the growth of approximately 1.5% is recorded. Thus there has been no drop in output upon embarking reforms. Moreover, some 4% growth of GDP is expected in 2002. Table 17 depicts growth by sectors estimated for 2001 and projected for 2002.

Table 17

Growth Rates of Output by Sectors

%

	Estimate 2001	Forecast 2002
Industry	0	3
Agriculture	20	-1
Construction	-15	15
Transport	5	10
Trade	8	8
Tourism and Catering	1	5
Other	5	4
GDP	5,9	4,1

The sharp decrease in construction output is partly overestimated since private sector is not properly covered and there is also considerable gray economy in this sector. This is suggested by the growth of construction material industry in 2001, which gives inputs for construction industry.

Nevertheless, the overall industry is of the main interest since its share in total output is around one third, and it did not exhibit any growth in 2001. Thus, one may explore whether transitional recession occurred in industry. To that end, trend-cycle component of industrial output from 1994 through November 2001 is calculated and given in Figure 6.

Figure 6, Industrial Output: Trend-Cycle Component

The trend-cycle is basically flat in 2001, indicating that industry did not experienced output decrease in the two consecutive quarters, hence avoiding recession. Table 18 documents the latter.

Table 18

Industrial Output: Trend-Cycle

	2000 = 100	Index
2000 Q4	99.2	
2001 Q1	98.8	99.6
2001 Q2	99.2	100.4
2001 Q3	99.1	100.0
2001 Oct., Nov.	100.5	101.4

In fact there are some signs in October and November that industry may has embarked on the growth path.

Looking behind aggregate industrial output, one can see that certain industries, like metal processing, automobile industry, electrical appliances etc. recorded substantial decrease in output. These industries contain large socially owned enterprises that were affected in 2001 by the absence of the soft loans from the banking sector, which were previously extended to them. Thus hardening the budget constraint in the course of stabilization led to transition recession in a number of industries, but the growth of other industries offset the recession.

In 2002, substantial growth of non-agriculture output is expected: 5% vs. 1.5% in 2001, showing that no transitional recession is anticipated. Specifically, recovery of industrial output is foreseen.

IV. Facing Structural Imbalances: Fiscal Adjustment

1. Public Revenue, Expenditure and Deficit: The Size of Adjustment

1.1 Fiscal Deficit

The public revenues in FRY in the post-hyperinflation period and before the conflict (1994-1998) varied from 41% to 45% of GDP. The share of consolidated revenues, obtained when mutual paying among social funds and state are offset, is approximately two-percentage point lower. These results are comparable with some other transitional economies. Namely, the revenue collection in FRY has neither fallen apart nor the burden was excessive.

Unconsolidated and consolidated public revenues, for the two representative years before conflict, are given in Table 19.

Table 19

Public revenues in FRY (%GDP)

	1997	1998
Unconsolidated	42.5%	45.0%
Consolidated	40.5%	43.0%

The data on public expenditure in the '90s are unavailable, while their estimates indicate that they were in the range of 43% to 46% of GDP in the period considered. These results lead to the estimated cash deficit to the tune of about 1 to 1.5% of GDP.

However, arrears were regularly recorded in the period considered representing additional deficit that was not monetized. The most important were pensions arrears, then arrears towards childcare and social security welfare, as well as wages arrears in public sector. These arrears emerged due to imbalances between entitlements and disposable funds for servicing these entitlements. The scope of the additional fiscal deficit can be assessed by the increase in the pension arrears and social care and child welfare arrears.

Table 20

	Arrears, % GDP	
	1997	1998
Pensions	1.10	1.20

Child care and welfare	1.12	1.47
Social security welfare	0.24	0.48
Total	2.46	3.15

Thus, additional deficit generated in the period considered was at least 2.5% to 3% of GDP. When added to the estimated cash deficit one gets the fiscal deficit of 4 to 4.5% of GDP.

Furthermore, in the ’90s the government neither honored its foreign debt or the debt to its citizens stemming from the frozen foreign exchange accounts. Even under favorable restructuring of foreign debt interest payments should vary around 3% of GDP, while servicing the debt due to frozen foreign exchange accounts would be around 1%. Hence, this further increases fiscal deficit to some 8%.

Finally, one should add non-covered losses in public companies, and in particular those of Serbian Electricity Company (EPS) It is estimated that the subsidies equal to 3% of GDP is needed to cover operating costs of EPS.

Although the estimates above are tentative, it might be safely concluded that the fiscal deficit, open and hidden, was somewhere between 9% and 11% of GDP. It indicates the size of fiscal adjustment that the Yugoslav economy faces.

In summary, one may look again at financing of the deficit. Money creation and loans from the banking sector financed cash deficit. In particular loans were extended to agriculture, energy sector and government among others. Arrears to pensioners were significantly reduced in 1997, when most of the proceeds from privatizing Serbian Telecom went to the pension fund. It is estimated that this amounts up to 4% of GDP. Foreign debt and frozen currency deposits were not serviced, while the losses of the Serbian Electricity Company spilled over into economy. The latter is a main cause of the huge inters enterprise arrears present in the Yugoslav economy.

2. Fiscal Adjustment in 2001.

We shall be looking at fiscal adjustments in ’Serbia’, i.e. its budget but also social funds, local communities and the Federal budget, thus excluding fiscal operation in Montenegro and Kosovo. This is because the latter two pursue independently their own sets of macroeconomic policy.

The estimated size of fiscal and quasi-fiscal deficit, i.e. 10% of GDP, strongly points to the large fiscal adjustment as the corner stone for macroeconomic stability. This was recognized early in the process and the planned adjustments of the overall fiscal revenues and expenditures resulted in a budgeted deficit of 3.3% of GDP (cf. Table 21). This deficit obviously implied big fiscal adjustment, and it looked to be a sustainable one, i.e. could be financed. The size of the fiscal deficit was also agreed with IMF.

Table 21

Serbia: Fiscal Revenue, Expenditure and Deficit in 2001

	Plan		Execution	
	Billion dinars	% of GDP	Billion dinars	% of GDP
Expenditure	301.2	46.4	298	43.6
Revenue	279.5	43.1	290	42.5
Deficit	21.7	3.3	8	1.2
GDP Serbia	649		683	

However, as also shown in Table 21, the execution of the overall fiscal operation in 2001, resulted into the fiscal deficit, which is just one third of the planned one. As compared to the plans, both revenues and expenditure have decreased in real terms, i.e. as the share of GDP. Nevertheless, expenditures decreased more than revenues relative to GDP, thus lowering the actual fiscal deficit below the planned one.

The relative size of fiscal burden (42.5% of GDP) and expenditures (43.6% of GDP) in the first year of reform is above the average for the transition economies (33% and 37.4%, respectively) but close to the EU border economies (38.4 and 43.2%, respectively). (cf. Gupta et al. 2001).

In order to assess the fiscal adjustments above, one should concentrate on fiscal budget and social funds in Serbia as they account for 85% of total expenditure, while Federal budget accounts for 15%. Also the fiscal deficit is located in budget of Serbia, while transfers from the budget cover deficits in social funds.

Revenues in 2000 and 2001, budgeted and executed, are reported in Table 22.

Table 22

Republic of Serbia: Government Revenues
In percent of GDP

	2000.	2001. Budget	2001 Execution
Tax revenues	15.3	15.8	17.8
1. Personal income tax	3.6	3.7	4.6

2. Corporate income tax	0.3	0.3	0.5
3. Retail sales tax	2.5	4.3	5.5
4. Excises	0.4	3.7	3.6
5. Other tax and revenues	2.5	3.7	3.5
6. Extra-budgetary revenues	5.7	-	-
of which quasi-excises	2.6	-	-

As compared to pre reform year 2000, the budget revenues in 2001 are two percentage points of GDP higher. This is, as explained below, primarily due to tax reform and but also measures undertaken against gray economy. The revenues from retail taxes and personal income tax increased substantially. The revenues from excises also recorded growth from 3% of GDP in 2000 to 3.6% in 2001.

Institutionally, the main change is that extra-budgetary revenues, including quasi-excises, are now openly included in the budget.

The expenditures of the Government of Serbia budget are presented in Table 23.

Table 23

Republic of Serbia: Government Expenditure
In percent of GDP

	2000	2001
Total	16.8	18.9
1. Wages and severance payment	4.9	5.0
2. Purchases of goods and services	2.3	1.8
3. Subsidies	2.1	2.8
4. Transfers to households	1.5	2.5
5. Transfers to social funds	1.6	3.8
6. Interest payment	0.1	0.1
7. Capital expenditure	1.9	0.5
10. Frozen FX deposits	0.0	0.6
11. Loans		1.4

11. Other	1.9	0.2

Expenditures for these two years are not quit comparable, since there were extra budgetary items in 2000, leading to overestimation of the relative increase in expenditure in 2001. Still the comparisons of individual items could be made.

The main differences are in expenditures related to subsidies, transfers to households and transfers to social funds.

The share of subsidies increased from 2.1% of GDP to in fact 4%, since just a fraction of the loans extended from the budget is expected to be repaid. Sharp increase in subsidies is a consequence of addressing openly the quasi-fiscal deficit, the most prominent elements being losses of public enterprises and the support of agriculture. Soft credits from Central bank and banking sector, and growing arrears were previously used to deal with the quasi-fiscal deficit.

Higher transfers to households were aimed to support adverse effects of reform, and are pursued by honoring existing entitlements and decreasing arrears. Transfers to the social funds in 2000 were, apart from the budget, also forwarded through extra budgetary earmarked charges; the latter is included in item 'Other'. Even taking the latter into account, these transfers were increased in 2001. They were covering deficits in social funds, and almost prevented the increase in arrears.

The largest item in the budget is the wage bill in the public services, and a main challenge facing expenditures adjustment has been to keep it under control. Namely, high expectations were risen upon overthrow of Milosevic regime, and hence it was quite hard to come out with only 5% real increase in wage bill, i.e. as expected GDP growth. As shown in Table 23, wage bill was successfully kept under control because its share in GDP recorded just a small increase. Taking the revised estimate of GDP growth of 5.5%, the wage bill should record 6.6% growth in real terms. The relative shares within the total wage bill have changed, specifically by above average increase of wages in Education and decrease, in real terms, of those in Police.

Nominal expenditures in the Government of Serbia budget are to be executed as planned. However, since actual inflation is somewhat higher than the one used for determining nominal expenditures, real expenditures are approximately 5% lower than budgeted. The expenditure adjustment was achieved by skipping or partially executing certain items. Thus the servicing of the external debt has been postponed for 2002, as the agreements with the creditors are yet to be achieved. Some budgeted reform related expenditures have been delayed or partly executed since the full scale privatization and restructuring of enterprises and banks are to start in 2002. On the other hand, deficits in social funds turned to be higher than envisaged leading to larger transfers from the budget.

In conclusion, the lower expenditures than budgeted and consequent drop in fiscal deficit to only one third of envisaged one in 2001, are not the result of fiscal adjustments and therefore the pressure to increase expenditure would reemerge in 2002.

Federal budget has also recorded higher revenues than planned in 2001, benefiting from the tax reform. The main increase came from higher sale tax revenues, which Federal budget shares with that of Serbia, but also from larger than expected import tariffs revenues that go directly to Federal budget. Comparison with 2000 (Table 24) points to relatively lower total revenues in 2001 and increased share of retail tax revenues. The main item on expenditure side is that for Army. It was envisaged that its share in GDP should decrease from 6.3% in 2000 to 4.8% in 2001. It is estimated that this share would reach 5%. Thus, although not as planned, considerable adjustment has been achieved.

Table 24.

Federal Government Revenues
in percent of GDP

	2000	2001
Total revenues	8.0	7.3
1. Retail sales tax	2.5	4.0
2. Taxes on international trade	2.5	2.1
3. Excises	0.3	0.2
4. Other taxes and non tax revenues	0.8	1.0
5. Extra-budgetary revenues	1.9	0.0

Federal Government Expenditures
in percent of GDP

	2000	2001

Total expenditure	8.0	7.3
1. Defense	6.3	5.0
2. General government services	0.8	0.9
3. Social security	0.2	0.5
4. Frozen FX deposits	0.1	0.2
5. Other	0.5	0.8

Monthly dynamics of the Government of Serbia budget in 2001, depicted in Figure 7, indicate that surplus is recorded in the first five months, and then the deficit through the end of the year.

Figure 7,
Republic of Serbia 2001: Government Revenues, Expenditure and Surplus/Deficit

The budget surplus is due primarily to the restrictions of expenditures, where some social and reform related items were postponed, e.g. an one off support to mitigate effects of tax reform and electricity price increases. This, restrictive fiscal stance was a reaction to the uncertainty about conclusion of the Stand-by arrangement with IMF and about Donors Conference to be held in June 2001.

Budget deficit broke in summer and was triggered by the two large unplanned items: buyout of the wheat and expenditures to cover additional maintenance costs for Serbia's electricity utility (EPS). Although in both cases loans from the budget were extended, small chances are that they would be serviced. Later on deficit was driven by expenditures that could not be postponed anymore, in particular scheduled wage increase, but also higher than envisaged transfers to the social funds.

Due to the accumulated surpluses in the first five months, cumulative deficit emerged only by the end of August, as demonstrated in Figure 8.

Figure 8,
Republic of Serbia 2001: Cumulative Government Revenues, Expenditure and Surplus/Deficit

The rise of cumulative deficit initiated the borrowing from the central bank (NBY), thus ending almost eleven months long period in which money supply was exclusively governed by foreign exchange operations.

The dynamics of budget revenues and expenditures in 2001, explained above, have important consequences for the next year. Namely, the increasing budget deficit in the second half of the 2001 implies, other things constant, the higher deficit in 2002 than the average one in 2001, i.e. 1.2% of GDP. The order of the magnitude of 'carried-over deficit' can be assessed by looking at the share of the deficit in total budget expenditures, shown in Figure 9.

Figure 9
Republic of Serbia 2001: Budget Surplus/Deficit as Share of Expenditure

Thus in the last quarter of 2001, the average monthly share of the deficit is around 8%, compared to the first quarter surplus amounting nearly 15% of expenditures. Taking into account the share of expenditure in GDP, one can estimate the last quarter 2001 deficit is around 3.5% of GDP. The corresponding deficit for the second half of 2001 is approximately 2.5%. The latter may be taken as a rough estimate of 'carried over deficit'.

Financing of the budgeted fiscal deficit in 2001 (3.3% of GDP) was envisaged by foreign grants and loans, privatization receipts and borrowing from Central bank. The absence of privatization receipts was a main reason for downward adjustment of expenditures and the deficit. Also, foreign grants and loans were lower than expected. The reduced deficit, 1.2% of GDP is to be financed by somewhat larger borrowing from the NBY, i.e. 0.85% instead 0.6% and foreign grants (0.35%). Higher borrowing from NBY has been feasible since Net Domestic Assets of NBY have decreased in 2001 as shown in Table 8 above.

3. Fiscal Adjustments in 2002: Challenges Ahead

As explained above, there is a strong upward pressure on fiscal expenditure and hence deficit that will be carried over from the second half of 2001 to the next year. The structural problem of growing social funds deficits should be faced in 2002. These funds primarily account for the increasing deficit in second half of 2001.

Enterprise and bank restructuring is on agenda in 2002. This would call for additional expenditures for labor market programs to support considerable lay off, subsidies for enterprise sector and resources for bank rehabilitation.

Consequently, it seems that the economy of Serbia in 2002 can not avoid a sizeable increase in relative fiscal burden and deficit. As to deficit financing, privatization receipts foreign loans and grants that were expected in 2001 are coming early in 2002 and hence will add to the regular 2002 revenues.

An outlook for to 2002 indicates that the expenditures are planned to increase relative to GDP by 6 percentage points (cf. Table 25), and revenues by 3 points, leading to the deficit equal to 4.4% of GDP. The share of public expenditure in GDP of 50% puts the economy of Serbia in that respect at the very top among transition economies.

Table 25
Republic of Serbia: Fiscal Revenue, Expenditure and Deficit in 2001and 2002

	2001	2001	2002	2002
	Billions dinars	% of GDP	Billions dinars	% of GDP
Expenditure	298.0	43.6	443	49.9
Revenue	290.0	42.5	404.6	45.6
Deficit	8.0	1.2	38.8	4.4
GDP Serbia	683		888	

The fiscal deficit is again to be located in the Government of Serbia budget, and the deficits in social funds are to be covered by transfers from the budget.

Table 26

Republic of Serbia: Government Revenues, billions dinars

	2001	2001	2002	2002
	Execution	in percent of GDP	Plan	in percent of GDP
Tax revenues	121.4	17.8	180.7	20.4
1. Personal income tax	31.4	4.6	44.8	5.0

2. Corporate income tax	3.5	0.5	4.6	0.5
3. Retail sales tax	37.6	5.5	67.9	7.6
4. Excises	24.9	3.6	38.5	4.3
5. Other tax and revenues	24.1	3.5	24.9	2.8

The revenues of the Government of Serbia budget are envisaged to increase 2.6 percentage points of GDP (cf. Table 26). This increase is expected primarily to come out of higher revenues from excises and retail sales tax. Excises are announced to be increased effective beginning of 2002 which, together with higher collection, should lead to substantial increase in revenues. Decrease in expected 'other tax and revenues' (cf. Table 26) results from the lowering of the tax on financial transaction by one third. This is the main change in taxes envisaged for 2002, and is intended to decrease financial costs and consequently interest rates. Additionally, exemptions from retail sale tax are envisaged through 2003, for communal utilities, basic medicaments, and a few fresh and frozen food items.

Expenditures in the budget of Serbia are planned to increase considerably, i.e. 5.8 percentage points of GDP (cf. Table 27); this increase is just below the one in total fiscal expenditures (cf. Table 25).

Table 27
Republic of Serbia: Government Expenditure, billion dinars

	2001	in percent of GDP	2002 Plan	in percent of GDP
Total	129.3	18.9	219.5	24.7
1. Wages and severance payment	33.4	5.0	45.9	5.2
2. Purchases of goods and services	12.5	1.8	16.8	1.9
3. Subsidies	19.3	2.8	20.2	2.3

4. Transfers to household	17.1	2.5	24.8	2.8
5. Transfers to social funds	26.1	3.8	54.4	6.1
6. Interest payment	0.7	0.1	15.5	1.7
7. Capital expenditure	3.5	0.5	12	1.4
8. Structural adjustment	0.6	0.1	9.7	1.1
9. General reserves	-	-	4.7	0.5
10. Frozen FX deposits	4.2	0.6	6.2	0.7
11. Loans	9.8	1.4	-	-
12. Other	2.1	0.3	9.3	1.0

Transfers to the social funds, for covering their deficits, account for a main part of expenditure increase. This item will become the single largest one in the Government of Serbia budget, even higher than wage bill. Social fund deficits, the largest one being that of the pension fund, are structural problem. Thus the start of pension reform is envisaged for early 2002 that will encompass the increase of the statutory retirement age by 3 years, change in indexation of pensions from wage growth to the mean of wage and price increase, and the lowering of the minimum pension to 20% of average wage. The increasing deficit of the pension fund in second half of 2001 was largely due to indexation of pensions to wage growth.

Restructuring of enterprises and banks, envisaged for 2001, increased structural adjustment expenditures in the budget. Approximately 0.6% of GDP will be extended from the budget for enterprise restructuring, and 0.5% for rehabilitation of the banking sector. Additional 0.5% is allocated, from the transfers to households, to support those that will be laid off due to restructuring. Also subsidies to Serbian Electrical power company (EPS) of around 0.4% will mainly be used for its restructuring.

Capital expenditure is planned to increase substantially, one percentage point of GDP, and more than half is going for road reconstruction.

Despite the favorable terms obtained from the Paris club, and assuming approximately the same agreement with the London club, external debt servicing allocated to the budget of Serbia in 2002 is 1.7% of GDP.

Federal budget for 2002 is planned to increase a bit more than GDP, increasing its share from 7.3 to 7.4%. It is envisaged to be a balanced budget. Revenues from import tariffs (2.4% of GDP) are planned to increase relatively, while those from retail taxes and excises (4% of GDP) to fall as percentage of GDP. The main item on expenditure side is that for the Army, and they are planned at 4.9% of GDP hence decreasing its share by 0.1%. Transfer to the pension fund is now explicitly budgeted (0.6%), and the servicing of frozen currency deposits (0.3%) is also envisaged for 2002.

Fiscal deficit equal to 4.4% of GDP, and we estimate that it's financing could be as follows. Privatization receipts counted upon are in the range of US$200 to 400 millions; a major preparatory work was done in the second half of 2001. The lower bound of privatization revenues foreseen for deficit financing, thus equals to 1.7% of GDP. Foreign loans could be predicted at 1.1% of GDP, referring mainly to World Bank structural adjustment credit. Anticipated foreign grants, including EU macro-financial assistance, may be at most 1% of GDP, while the remaining deficit of 0.6% will be covered by the borrowing from the NBY. Official stand on deficit financing is, however, somewhat different, being more conservative with the privatization receipts and hence looking for higher share of grants.

4. Tax Reform

4.1 Elements of Tax Reform

A thorough tax reform in Serbia was advanced in March 2001 along with the budget for that year. The major changes were proposed in the area of retail sales tax, excises and in payroll contributions and taxes. These taxes account for 80% of total fiscal revenues in Serbia. Some other taxes, e.g. corporate income tax, property tax etc., have been changed as well. Federal Government pursued, in May 2001, reform of import tariffs.

Before tax reform, there were seven different retail sales tax rates, ranging from 1% to 28% outside Belgrade and from 1% to 31% in Belgrade, and they have been now unified at the rate of 20%, including a separate federal tax for the Army of 3%. Retail tax exemptions in 2001 were limited only to trade in bread and standard EU exceptions. Some limited additional exemptions, as explained in Section 3 above, are envisaged for 2002 and 2003.

The goals of the enacted changes in retail sales tax are to reduce the allocation bias of the previous system, avoid the strong lobbying, simplify the calculation and reduce the cost of calculation and control. Also, the unification of retail tax rate is a good starting point for the planned introduction of the value-added tax.

Radical simplification of the taxation of excise products is also enacted. A consolidated excise is introduced by combining the present excises and 4-8 charges calculated for excise products. Except simplifying calculation, selective increase in excises is proposed.

Change in the fiscal treatment of wages and salaries are the third, and probably the most important measure within the fiscal reform. The changes were accepted in April and have been effective from June 2001. They encompass: a) shift to the system of gross wage, which represent the uniform base for levying all fiscal charges on wages and salaries; b) tax exemption for minimum wage was abolished; c) luncheon bonus and vacation vouchers are included in gross wage; d) introduction of minimum base for each qualification and a maximum one for levying contributions. At the same time, contribution rates were lowered so that the reduction of fiscal burden on average wage decreased by about 10%.

The combined effect of widening tax base, i.e. gross wage that now includes the whole take home income, and the lowering of contribution rates have led to the reduction of fiscal burden on take home wage from 105% to 72%.

The introduction of gross wage as the taxable base have strong impact on depressed sectors (e.g. textile, metal processing etc.) in which the dominant part of take home income were previously nontaxable allowances. This puts the strong pressure on them to restructure or close down. However, in medium and long run, the introduction of gross wage as a tax base would lead to the corresponding, higher, pensions. This is not well understood by employees since they even before tax reform wrongly perceived take home income as the base for their pensions.

The first steps towards fiscal decentralization have been already taken during 2001in order to strengthen local self-government. Thus the revenues from property tax have been exclusively allocated to local communities. As a result, the share of local communities in fiscal revenues increased upon changes to 10.5% compared 8.4% at the beginning of 2001 and 7.8% in 2000.

4.2 Some Effects of Tax Reform

Tax reform directly affected the dynamics and structure of public revenues through broadening the tax base, changes in burden (tax rates) and reduction of tax exemptions. The indirect effect is achieved through improved collection due introduction of simpler and fairer tax system.

Figures 10 to 12 show quantitative effects of tax reform on overall fiscal revenues in Serbia and its main components. Monthly revenues, seasonally adjusted and deflated, for 2001 are shown in these Figures in order to cover both pre reform and post reform periods.

Figures 10 to 12

As can be seen from the Figures 10 to 12, overall fiscal revenues and retail tax revenues, exhibit S curve dynamics. Namely, from the lower pre reform level, they start increasing during introduction of tax reform and subsequently reach new higher levels. On the other hand, contributions to the social funds decreased in June due to reduction in their rates by 10%.

In order to summarize quantitative effects of tax reform on fiscal revenues, we have used deflated and seasonally adjusted data to calculate ratios of average monthly revenues after and before reform. The results are reported in Table 28 below.

Table 27

Effects of Fiscal Reform

	Index	Period After reform/Before reform
Total revenues	119	July-Nov./Jan.-March
Retail sales tax	159	May-Nov./Jan.-March
Excises	141	May-Nov./Jan.-March
Personal income tax	135	July-Nov./Jan.-May
Import tariffs	127	June-Nov./Jan-April
Contributions to social insurance funds	87	July-Oct./Jan.-May

Overall revenues in Serbia increased 19% in real terms upon tax reform. At the same time the structure of public revenues has been improved, i.e. the fiscal burden has been shifted from the factors of production to consumption. Namely, contribution rates levied on wages have been decreased, while the retail sale tax and excises have been increased. The lower contributions from wages have, by and large, spilled over into wage increase in the socially owned enterprises.

Retail sale tax revenues expanded 59% after tax reform. This increase in real terms is due to the following factors: a) the growth of average weighted tax rate; b) broadening of the tax base and reducing the scope of exemptions; c) suppressing of smuggling and d) the growth of the turnover volume.

While unifying sale tax rate at 20%, the average tax burden on goods and services increased by around 17%, which approximately led to the growth of revenues by the same percent. Broadening of the sale's tax base was mainly achieved by including all

previous charges on excise goods into excises, on which sales tax is now levied. The suppression of smuggling of all goods, especially the excise ones represents additional source of real increase of retail tax revenues. The volume of turnover increased, as shown by real wage growth of 9%, in May – October relative to January – March. This expansion in turnover also added to real increase in retail tax revenues.

The revenues from excises were raised by 41%. The growth of revenues from excises resulted, almost entirely, from reduction of smuggling in sales of excised goods. Namely, the real fiscal burden upon including previous charges into now uniform excise, has approximately remained the same for the most important excise goods. As a result of tax reform and tax and customs administration measures, the smuggling of cigarettes has been reduced from 50% to around 15-20% of the overall sale of cigarettes. In case of oil derivatives the percentage of collection of excises and sale tax has reached as much as 90-95% compared to the modest 50% in the previous year. This increase is basically due to the controversial Government of Serbia decree that restricts the raw oil import only through pipeline and its processing to state own company, while banning import of oil derivatives at the same time. This temporary measure was the reaction to the widespread smuggling controlled by organized crime.

Personal income tax revenues increased 35 % upon the introduction of tax reform. This is primarily due to the broadening of the tax base since, as explained above, all fringe benefits are now taxable. Furthermore, the wages immediately increased upon the reduction in contribution rates, thus adding to the personal income tax revenues.

Import tariff reform was introduced in May 2001, lowering statutory weighted protection rate from 15% to 9%. At the same time, the actual exchange rate has been used to determine import value as opposed to notional, lower rate before. The overall effect was an increase in import tariffs revenues by 27% in real terms, while the effective protection rate is estimated at 8%.

Contributions to social funds decreased by 13% as result of reducing the corresponding rates. The decline was partly offset since lowering the rates led to almost proportional increase in wages, thus broadening base for levying contributions.

The tax reform obviously had an impact on price increase and standard of living. Highly distorted, pre reform, tax system was fulfilling social support function, which was not, by definition, targeted to the poor. This is parallel to the role played by low utility prices, explained above.

Unifying retail tax rate and sharply reducing exemptions led to direct one off price increase by 3%, and additional 1% of indirect growth, as already mentioned while discussing core and non core inflation above. However, tax reform caused higher increase of the basic goods prices. We estimate that the direct effect on price increase for these goods was around 5% and indirect one 1.5%. This has obviously worked towards

lowering of population's purchasing power.

On the other hand, reduction in contribution rates by 10% resulted in almost proportional increase in wages. Therefore, the cumulative effect of both measures on standard of living is positive and estimated to be on average 5-6% increase. However, the effects of tax reform are unevenly distributed, hitting adversely social layers whose wages are by 5% or more below the average in Serbia, since they previously had the large share of non-taxable income (fringe benefits). Thus, in the case of these layers, the real wages grew (due to lowered contributions) less than 5%, which compared to 6% increase in the prices of basic goods, implies decrease in their real incomes.

V. Sustainability of Macroeconomic Stabilization: A Medium Term Outlook

Lasting macroeconomic stability is a precondition for economic growth, and hence it is important to explore its viability in the medium term. The main challenge for macroeconomic stability may come from the fiscal sector, i.e. whether fiscal deficit and the relative size of public expenditure could be kept under control. Somewhat related issue of servicing foreign debt and in general external sustainability, comes as a subsequent challenge. However, the former adjustments to be viable should not impede economic growth.

In this Section we want to explore a feasible medium term path of the economy that would imply, both macroeconomic stability and acceptable economic growth.

Medium term forecast of selected macroeconomic indicators is reported in Table 29.

Table 29. Forecast of Selected Macroeconomic Indicators

	2000	2001	2002	2003	2004	2005	2006	Cumulative rate in % 2001–2006	Average rate in %
GDP, bill. YUD, const. 2001 prices	689.9	727.4	756.5	801.9	850.0	892.5	937.2	28.8	5.2
GDP growth rate in %	5.0	5.5	4.0	6.0	6.0	5.0	5.0	-	
Inflation, end of period in %	112.0	42.0	20.0	12.0	8.0	5.0	5.0	-	
Inflation, average of the period in %	70.0	91.0	25.1	14.0	8.2	5.1	5.0	-	
GDP, bill. YUD, current prices	361.0	727.4	946.4	1144.1	1311.6	1446.9	1595.2	119.3	17.0
Real exchange rate appreciation, 2001.g = 100		100.0	84.0	80.3	78.2	76.7	75.2	-24.8	-5.5
GDP in bill. $US		11.2	13.9	15.4	16.7	17.9	19.2	71.2	11.4
Population, in thousands		9100	9130	9160	9190	9220	9250	1.6	0.3

GDP/pc, in $US	1230	1519	1677	1819	1942	2072	6849	11.0
Real wages, 2001 = 100	100.0	109.0	115.5	122.5	128.6	135.0	35.0	6.2
Monthly average net wage, in DM	205	266	295	321	344	368	79.4	12.4

We have already discussed GDP growth for 2001 and 2002. The subsequent medium term growth will be governed by new investments. The relatively high growth rates are feasible due to comparable low marginal capital coefficients. Namely, infrastructure and buildings, although partly ruined, are in place for the output twice as large. Marginal capital coefficients implied by the GDP growth rates in Table 29 above and the shares of new investments in GDP discussed below, are 1.5 and 1.6 in 2003 and 2004 respectively, and than the coefficient increases to 2 in the next two years. Thus the new investments should result in high increase in output.

Inflation in 2002 and 2003 will still be partly due to administrative price adjustments, and afterwards solely due to core inflation. The low core inflation implies that the necessary fiscal adjustments are pursued and hence fiscal deficit need not be monetized. Furthermore, no significant cost pressures are expected. Namely, wages are projected to grow at the rate that keeps by and large unit labor costs constant. Dinar is expected to appreciate in real terms, thus decreasing the impact of import costs on prices.

Real appreciation of dinar in 2002 will still be mainly governed by administrative price adjustments mostly of non-tradable goods and services, and a large carry over effect from 2001. Thereafter, real appreciation will be driven by productivity growth differentials. As explained below, productivity growth is expected roughly to equal GDP growth. Thus productivity growth differentials are estimated at 2.5 to 3% annually, and it is assumed that dinar will appreciate accordingly.

Average real wage rate is projected to grow as GDP, apart from 2002 which still includes upward effect due to the decrease in contributions (cf. Section IV,4). Currently, there is a large latent unemployment that drives down average wage rate. It is assumed that output growth in medium term would absorb this latent unemployment, of course not necessary the same people, and in that sense GDP growth is due to productivity growth of currently employed. Consequently, the same growth of productivity and wage rate would leave unit labor costs unchanged.

Table 30

Federal Republic of Yugoslavia (excludes Kosovo): Gross Domestic Product, Expenditure Composition

	2000	2001	2002	2003	2004	2005	2006
	(In percent of GDP)						
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100,0
Domestic Demand	118.0	120.1	118.3	117.1	115.8	114.6	113.4
Consumption	102.8	103.3	100.1	97.8	95.7	94.1	92.9
Private Consumption	84.3	84.1	80.6	79.3	77.9	76.6	75.8
Public Consumption	18.4	20.1	19.5	18.5	17.8	17.5	17.1
Investment	15.3	16.8	18.2	19.3	20.1	20.5	20.5
Gross Fixed Capital Formation	16.3	16.3	17.4	18.8	19.6	20.0	20.0
Non-government	13.1	14.7	13.4	14.3	15.1	16.0	15.2
Government	3.3	1.6	4.0	4.5	4.5	4.0	4.8
Changes in Inventories&valuables	-1.0	0.5	0.8	0.5	0.5	0.5	0.5
Net exports of goods & services	-18.0	-20.1	-18.3	-17.1	-15.8	-14.6	-13.4
Exports of Goods and Services	31.6	24.5	24.5	26.7	29.0	30.7	32.3
Imports of Goods and Services	49.6	44.6	42.8	43.8	44.8	45.3	45.7

The share of fixed investment in GDP is expected to increase from 16% in 2001 to almost 19% in 2004 and subsequently to 20%. Estimating replacement to be around 10% of GDP, the share of new investment is projected to grow from 6% to 10%, thus driving the growth after 2002.

Large negative external balance of goods and services at the beginning and than decreasing over the period indicates that investments will first heavily rely on foreign sources and only later on domestic savings. Consequently, the share of consumption in GDP is expected to decrease from 103% in 2001 to 93% in 2006, thus opening some space for domestic savings. This still implies growing consumption per capita, however at the lower rate than GDP one. Sizeable downward adjustment in the share of public expenditure on goods and services is also imperative if the room for domestic savings is to be made.

External balance viability is an issue of low domestic savings relative to the investment necessary to drive wanted economic growth and to service foreign debt.

Table 31 gives balance of payment: estimates for 2001 and a projection for 2002.

Table 31

Balance of payments

	2000	2001	2002

(in million U.S. dollars)			
Exports of good and services	2547	2650	3071
Imports of good and services	4004	4820	5368
Net exports of good and services	-1457	-2170	-2297
Net factor income: net interest		-63	-213
Private remittances, net	848	1210	1100
Current account balance, before grants	-609	-1023	-1410
(In percent of GDP)	-7.6	-9.5	-11.2
Financing *(in percent of GDP)*		9.5	11.2
Grants		4.7	4.5
Foreign loans, net		4.7	4.3
Foreign direct investment		0.0	2.4

Current account deficits in 2000, 2001 and 2002 are 7.6%, 9.5% and 11.3% of GDP respectively, while after grants they are 4.2%, 4.4% and 6.9%. These deficits are generated by the large trade deficits in these three years, while in 2002 servicing external debt interest payment also adds to the deficit (up to 2%). Trade deficit is partly offset by the surplus in services and private remittances. Current account deficit after grants in 2001 is financed by foreign loans from IFO, and in 2002 is expected to be covered again by foreign loans and also FDIs.

Yugoslavia will run relatively high current account deficit even in the medium term. It is due, first, to large external debt servicing despite favorable terms obtained from creditors. Then, as explained above, it should substantially increase the share of investment in order to achieve the appropriate growth that can alleviate unemployment and poverty. At the same time, the country should experience an acceptable consumption growth so that economic reforms remain politically feasible. Estimates of current account deficits that would meet conditions above, i.e. follow from projections given in Tables 29 and 30 are presented in Table 32.

Table 32

Current Account Deficit and its Financing

	2003	2004	2005	2006
(in percent in GDP)				
Current Account Deficit	-11.7	-11.4	-10.8	-10.3
Grants	3.1	2.1	1.7	1.4
Foreign Direct Investment	3.7	3.9	4.6	4.8
Foreign Loans	4.9	5.4	4.5	4.1
(in million U.S. dollars)				
Current Account Deficit	-1606	-1715	-1764	-1817
Grants	423	311	280	242
Foreign Direct Investment	509	589	750	850
Foreign Loans	674	815	735	725

We estimate that before grants current account deficit will vary from almost 12% to 10% of GDP, while after grants around 8% of GDP. Even the latter deficit is very high, questioning external sustainability. The largest current account deficits that transition economies recorded in the period 1996 – 98, varied from 6.5% to 7.4% of GDP in the case of Central Europe and Baltic States, and from 6.8% to 12.9% for Commonwealth of Independent States (cf. World Bank data base).

The grants and foreign loans are expected largely from the three Donors' conferences, with main inflows during 2002 – 2004. The third source of financing CA deficit is foreign direct investments (FDI), that we estimate to vary around 4% of GDP. This estimate of FDI is in line with those recorded in transition economies in the period 1997 – 2000. In the case of Central Europe and Baltic States, the share of FDI in GDP varied from 3.1% to 4.4%, while for Commonwealth of Independent States it was in the range of 2% to 4.5% (cf. World Bank data base).

Even after favorable write off (66%) and rescheduling of the external debt with the Paris club, and assuming that approximately same terms would be obtained from the London club, the debt burden is still high. Table 33 gives main external debt indicators.

Table 33

External Debt

	2002	2003	2004	2005	2006	2010
External Debt/GDP (%)	71.3	69.4	67.2	64.1	60.0	47.9
External Debt Service Ratio (% of Export)	10.3	11.9	14.2	17.9	20.6	13.7
External Debt Service (% of GDP)	2.5	3.2	4.1	5.5	6.7	5.5

The indicators show that although still high, the debt service is sustainable. The ratio of external debt to GDP is decreasing dropping to 60% in 2006 and 47.9% in 2010. External debt service ratio, i.e. the ratio of debt service to export, reaches maximum in 2006 and than declines. However, even at its maximum value the ratio is below the upper limit of 25%, indicating that the debt could be serviced. The share of debt servicing in GDP is moderate in 2002 and 2003 and than increases during 2004 to 2006 due to agreed rescheduling plan. In the latter period debt servicing becomes substantial burden primarily for the fiscal sector, but also for balance of payment.

As explained in Section IV, the fiscal burden in 2002 is going to be very large with half of GDP allocated for public consumption. Obviously this is not sustainable in the medium term, implying that the share of expenditures should decrease. Some very tentative evolution of fiscal expenditure and revenues over the medium term is presented in Table 34. Again, as in the Section IV, Montenegro is excluded from the Table 34 below.

Table 34

Fiscal Sustainability
(In percent of GDP)

	2002	2003	2004	2005	2006	2010

Revenue	45.6	44.5	44.3	44.1	44.0	42.0
Expenditure	49.9	49.1	48.5	48.2	48.0	45.0
Overall balance	-4.4	-4.5	-4.2	-4.1	-4.0	-3.0
Financing	4.4	4.2	4.2	4.1	4.0	3.0
Foreign grants	1.0	0.7	0.5	0.3	0.1	0
Foreign borrowing	1.1	0.9	1.0	1.2	1.3	1.8
Domestic borrowing	0.6	0.6	0.8	1.2	1.5	1.2
Privatization receipts	1.7	2.3	1.9	1.4	1.1	0

Some of the main expenditure items will still be present in the medium term, keeping the share of expenditure relatively high. Specifically, restructuring costs and subsidies are foreseen to be still significant in 2003 and partly 2004. At that time, external debt servicing takes over by increasing considerable, i.e. to 4.1% of GDP in 2004 and than to 6.7% in 2006 (cf. Table 33).

On the other side, reform of the pension system, that is about to start in 2002, should downsize relative expenditures on pensions and decrease the pension fund deficit in the medium term. This would relatively decrease overall expenditures, since covering the deficit in pension fund is the single largest item in Government of Serbia budget for 2002 (cf. Section IV, 3). The health insurance fund is also running a considerable deficit, although smaller than the pension one. This should be also addressed in the medium term. The share of expenditures on Army is currently at 5% of GDP, thus leaving ample of space for the relative decrease in the medium term.

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Figure 1

Dynamics of Money Supply, Price Level and Exchange Rate
(July 1994=100)

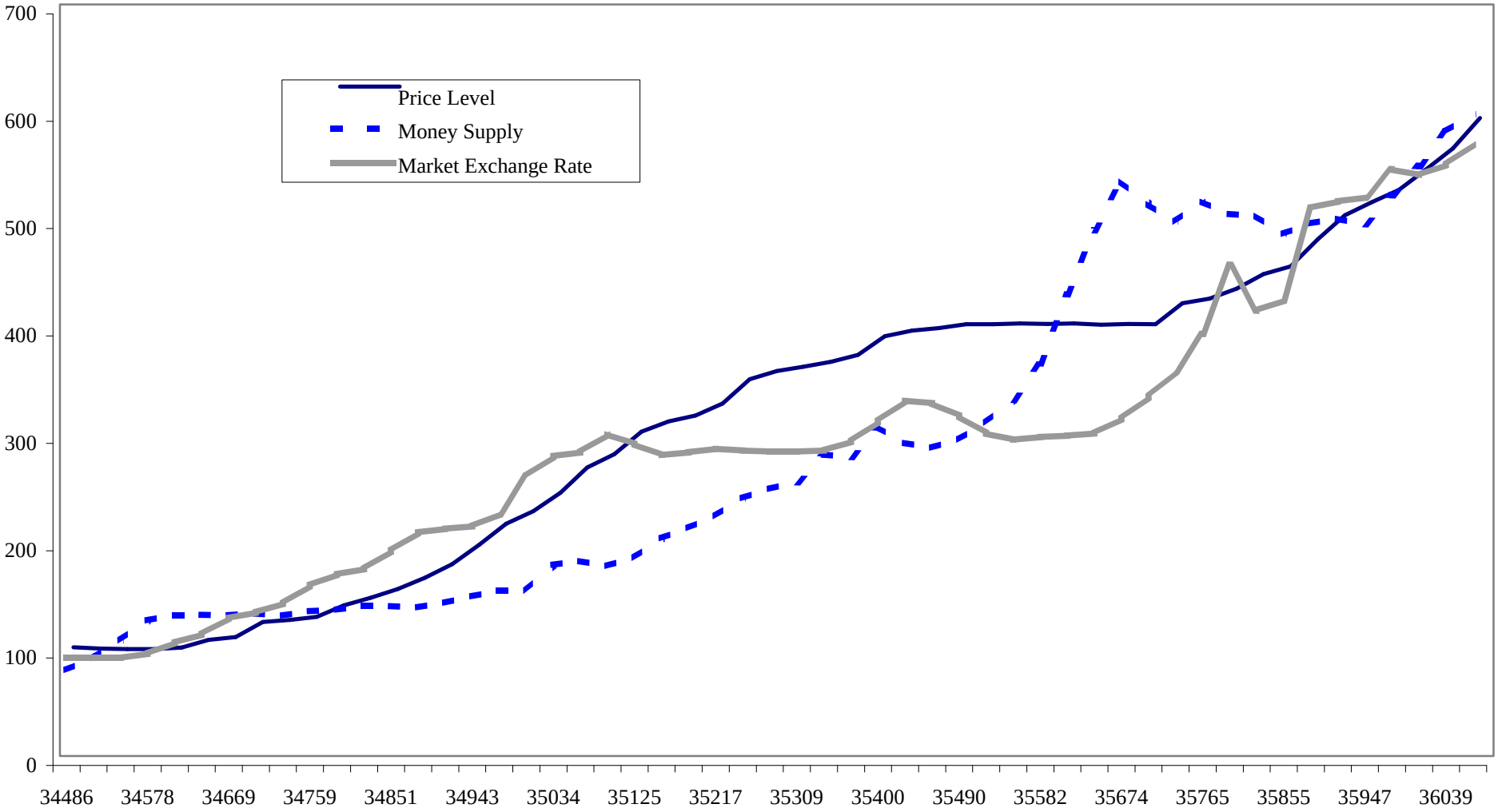

Figure 2

Real Exchange Rate (average 1994-98=100)

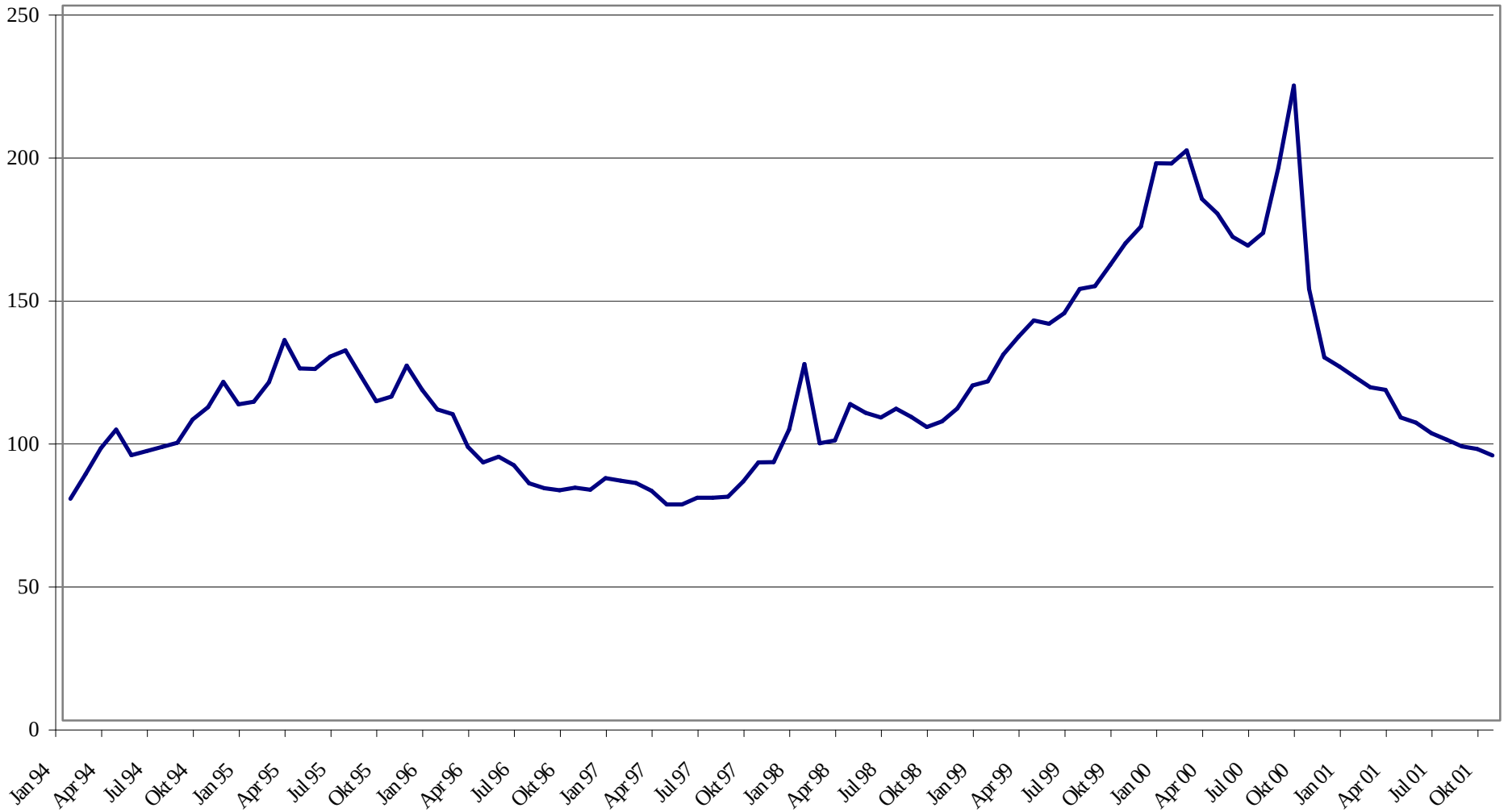

Figure 3

Real Wage Rate (in DEM)

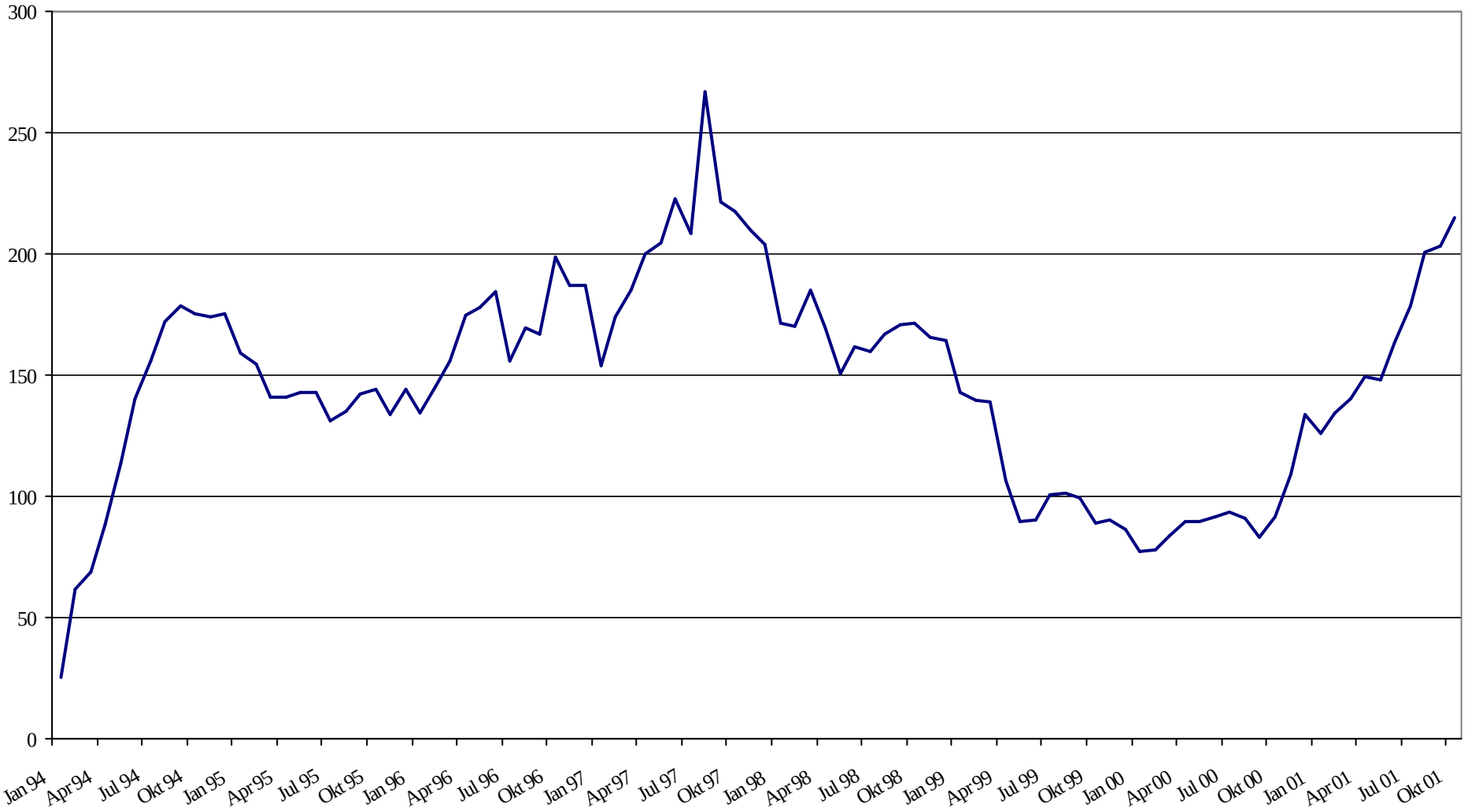

Figure 4

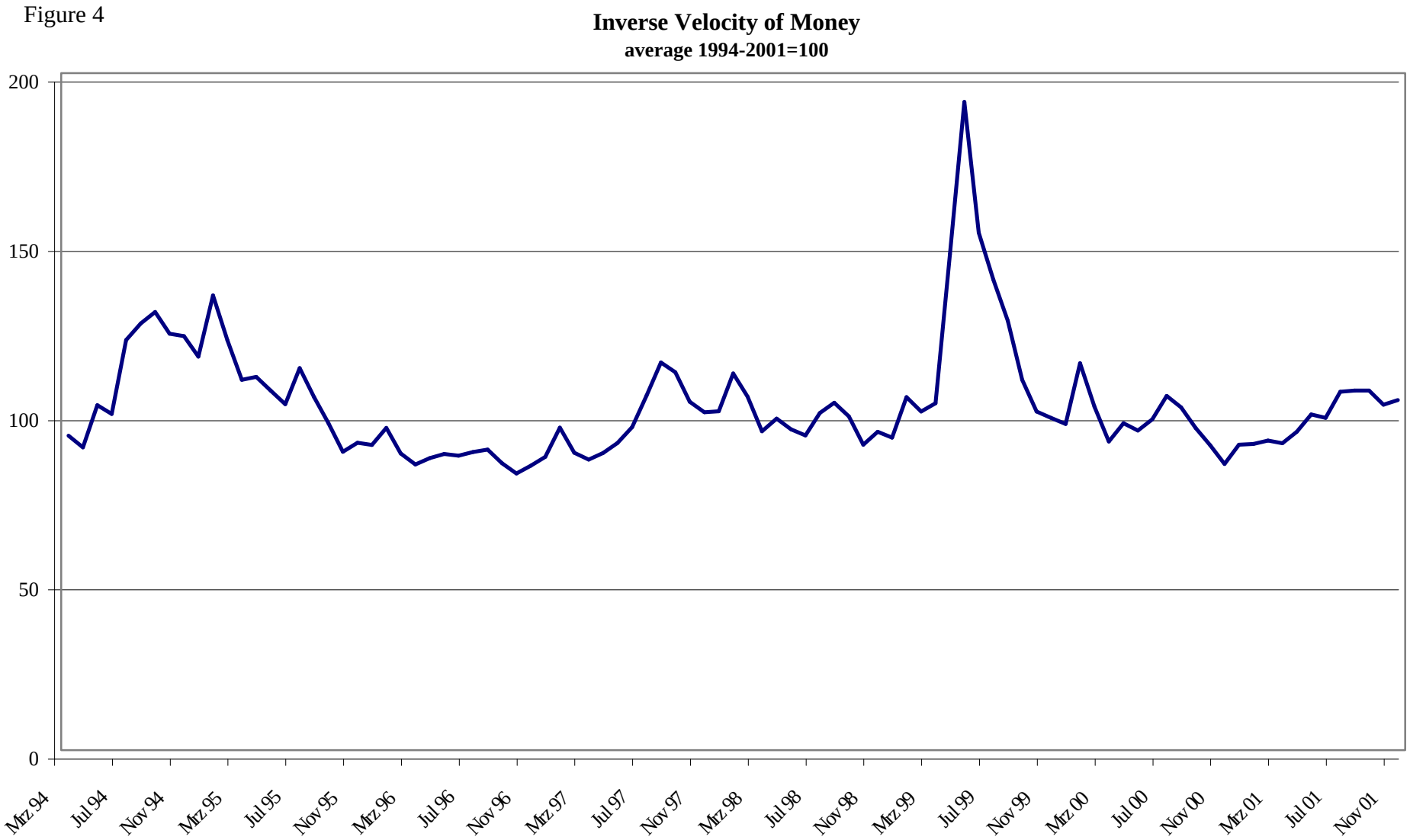
Inverse Velocity of Money
average 1994-2001=100
200
150
100
50
0
Mrz 94
Jul 94
Nov 94
Mrz 95
Jul 95
Nov 95
Mrz 96
Jul 96
Nov 96
Mrz 97
Jul 97
Nov 97
Mrz 98
Jul 98
Nov 98
Mrz 99
Jul 99
Nov 99
Mrz 00
Jul 00
Nov 00
Mrz 01
Jul 01
Nov 01

Figure 5 **Real Wage Rate (average 1994-98=100)**

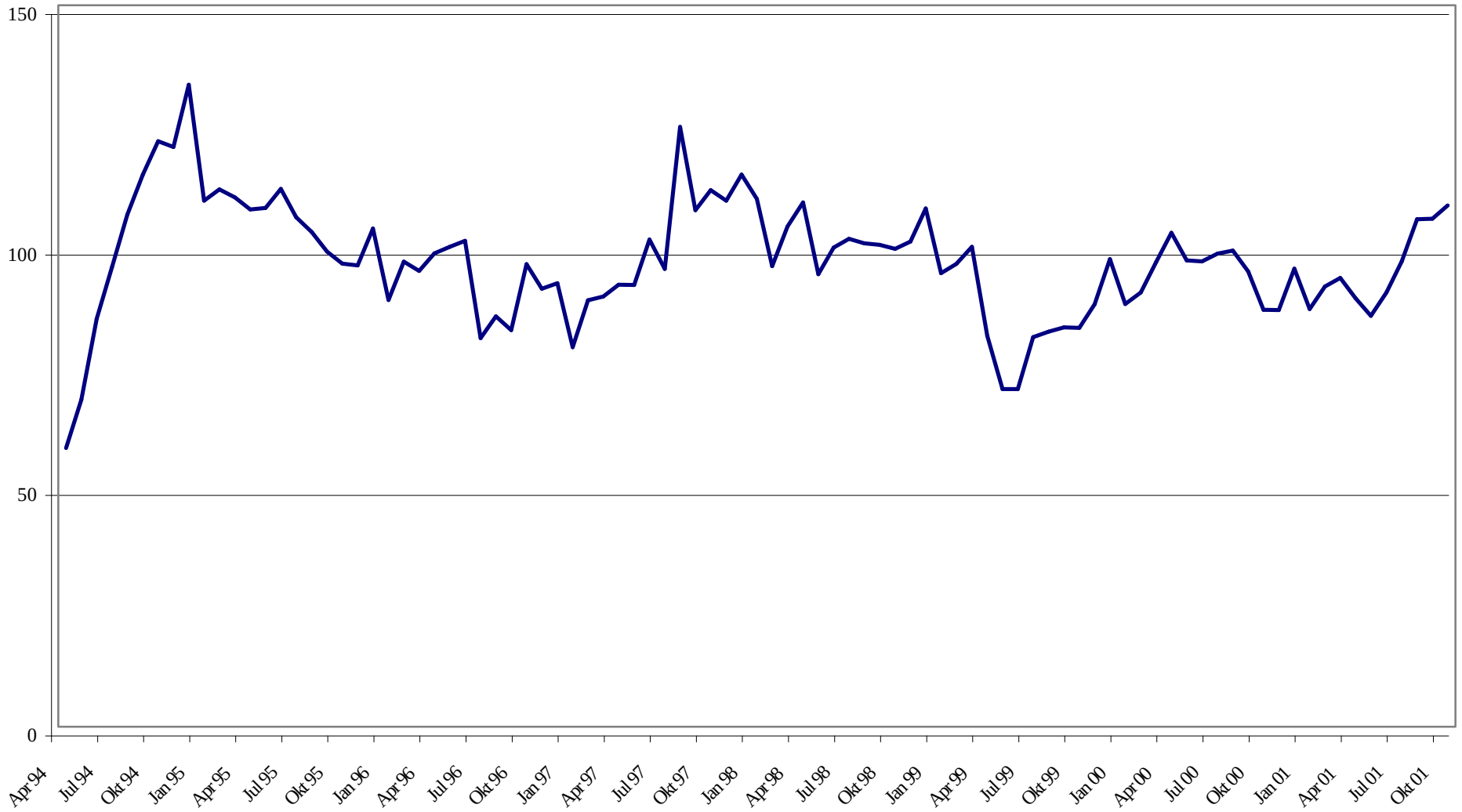

Figure 6

Industrial output
(average 2000=100)

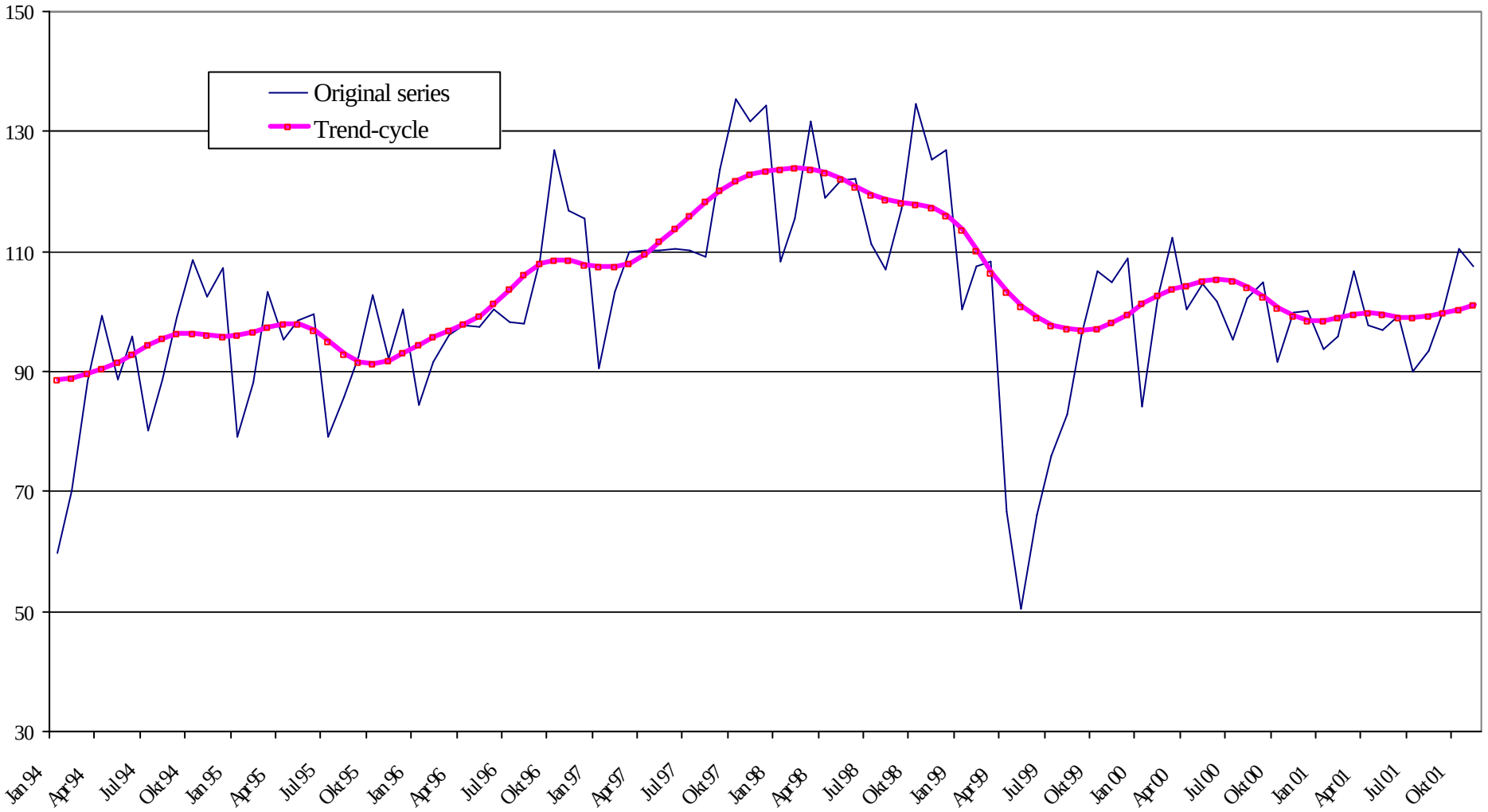

Figure 7

Republic of Serbia 2001: Government Revenues, Expenditures and Surplus/Deficit
(in billions dinars)

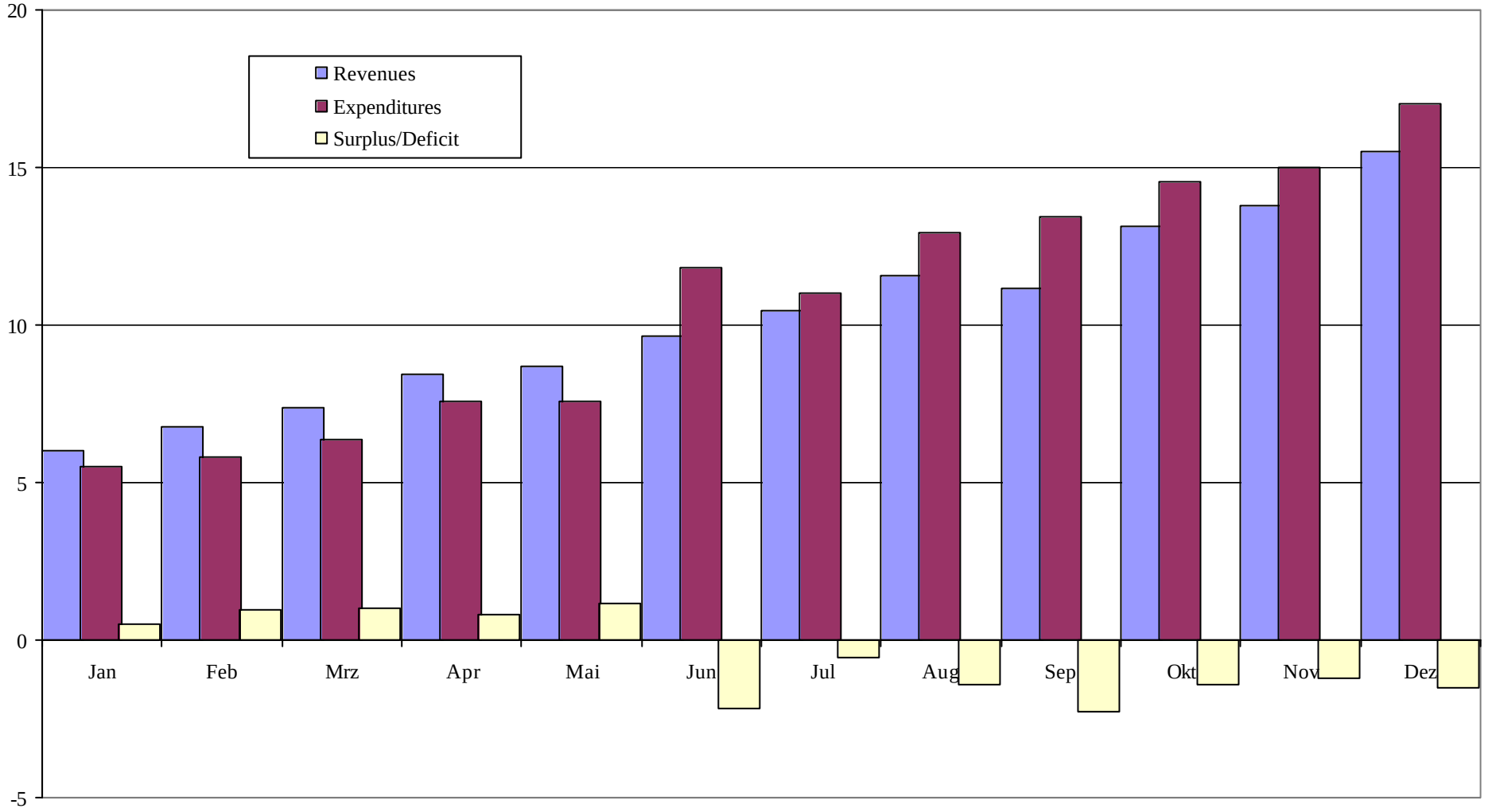

Figure 8

Republic of Serbia 2001: Cumulative Government Revenues, Expenditures and Surplus/Deficit
(in billions dinars)

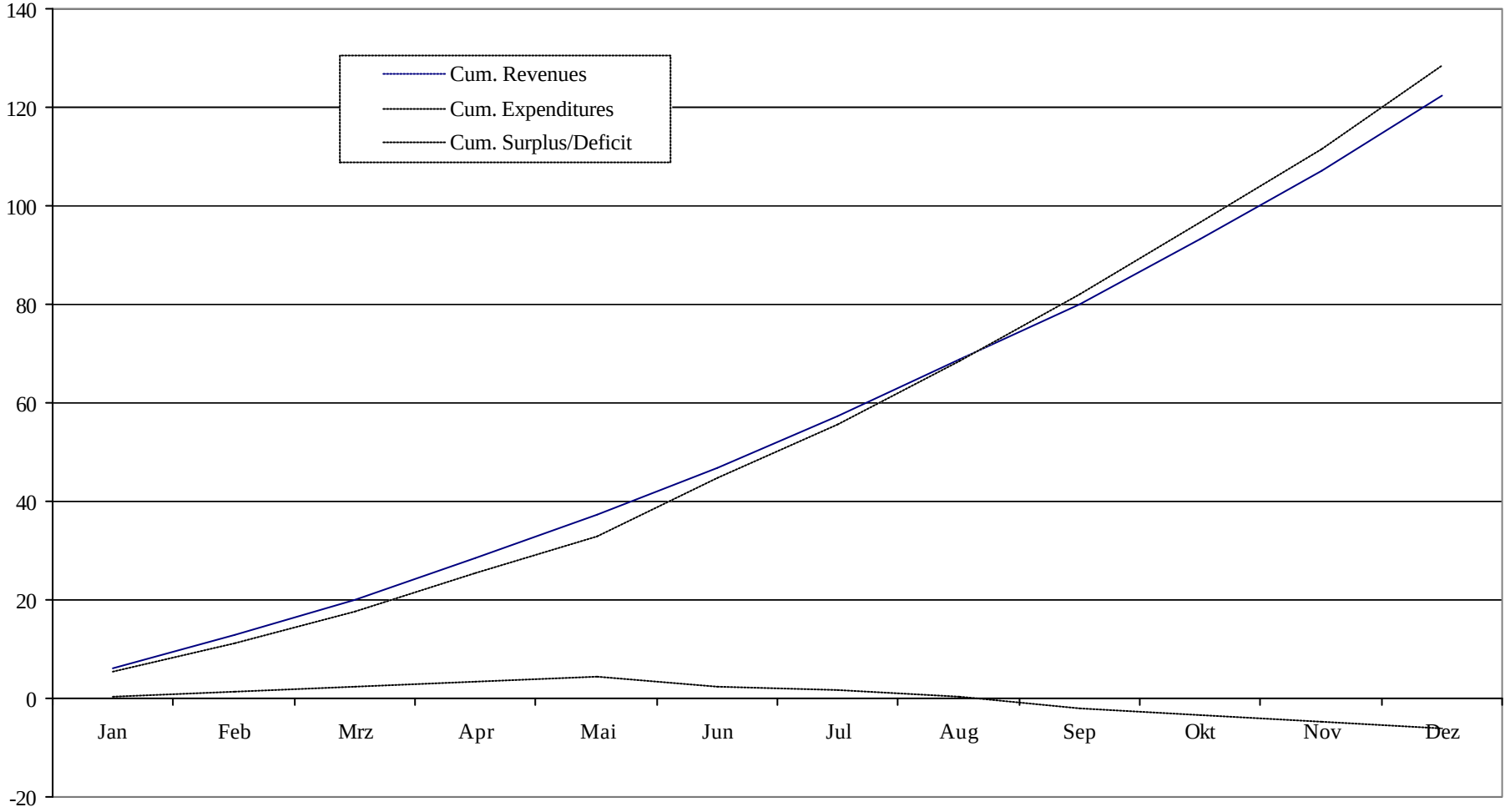

Figure 9

Republic of Serbia 2001: Budget Surplus/Deficit as Share of Expenditures
(in percent)

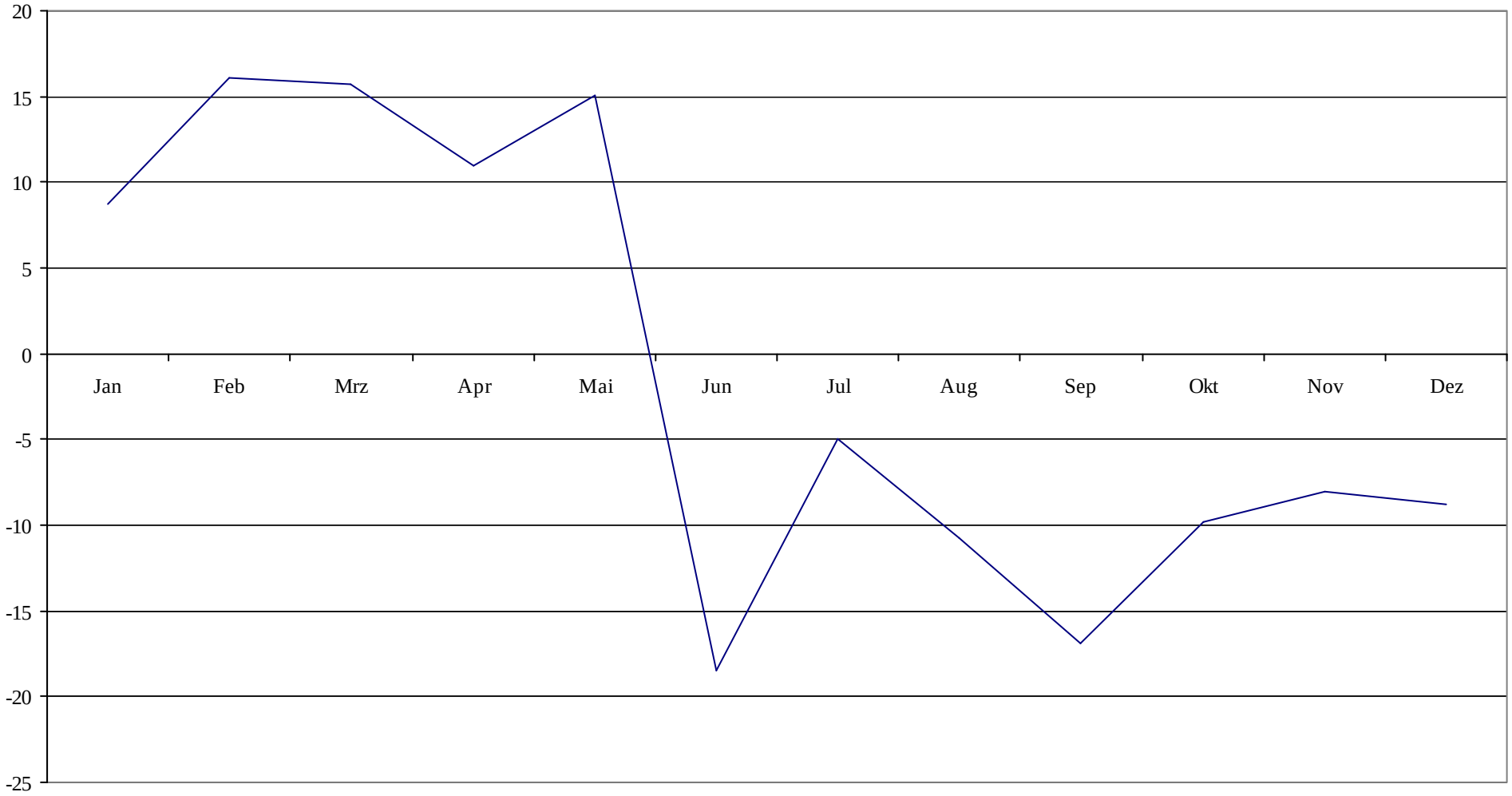

Figure 10

Total Fiscal Revenues
(constant prices and seasonally adjusted)

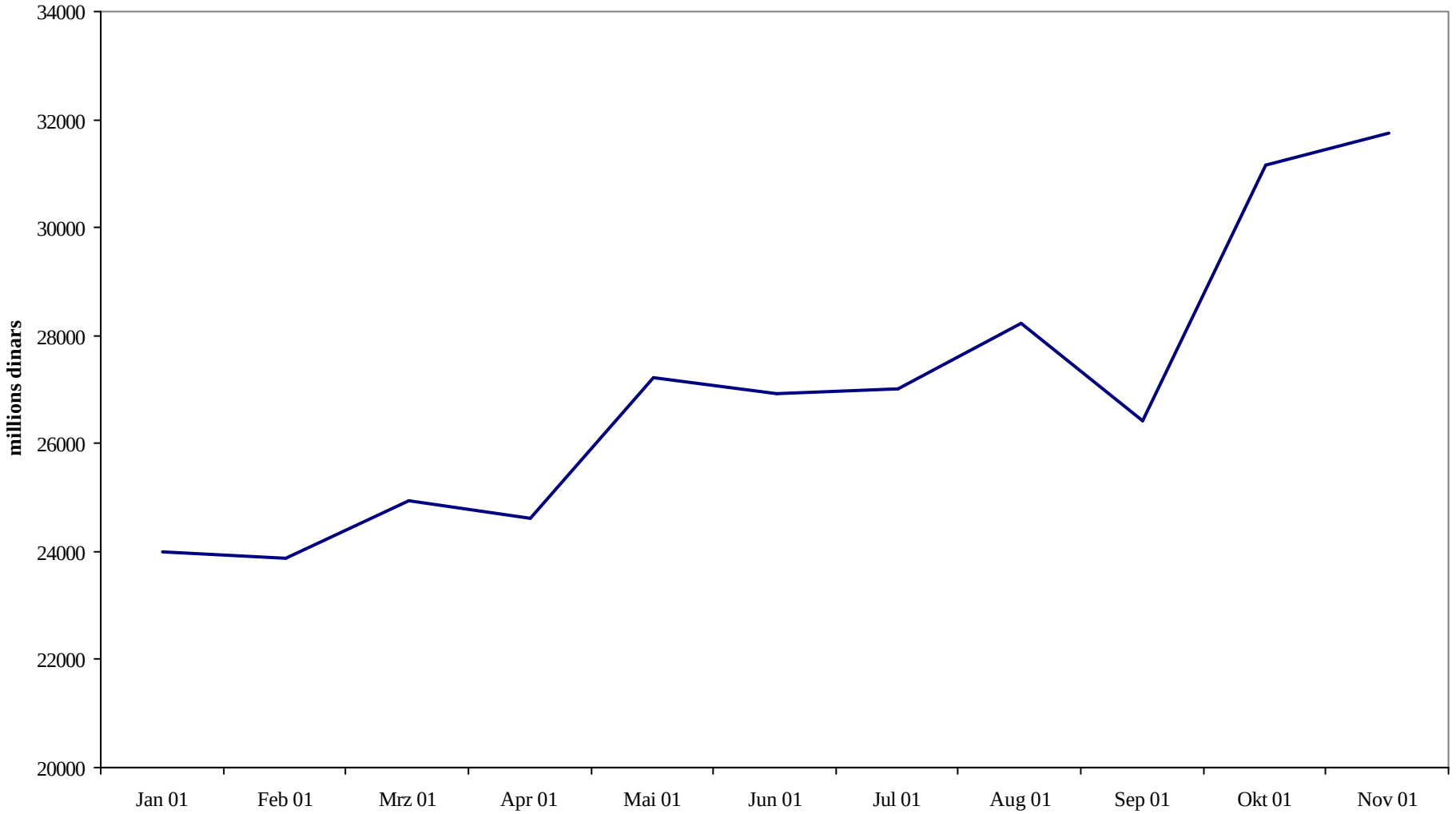

Figure 12

Sales Tax Revenues
(constant prices and seasonally adjusted)

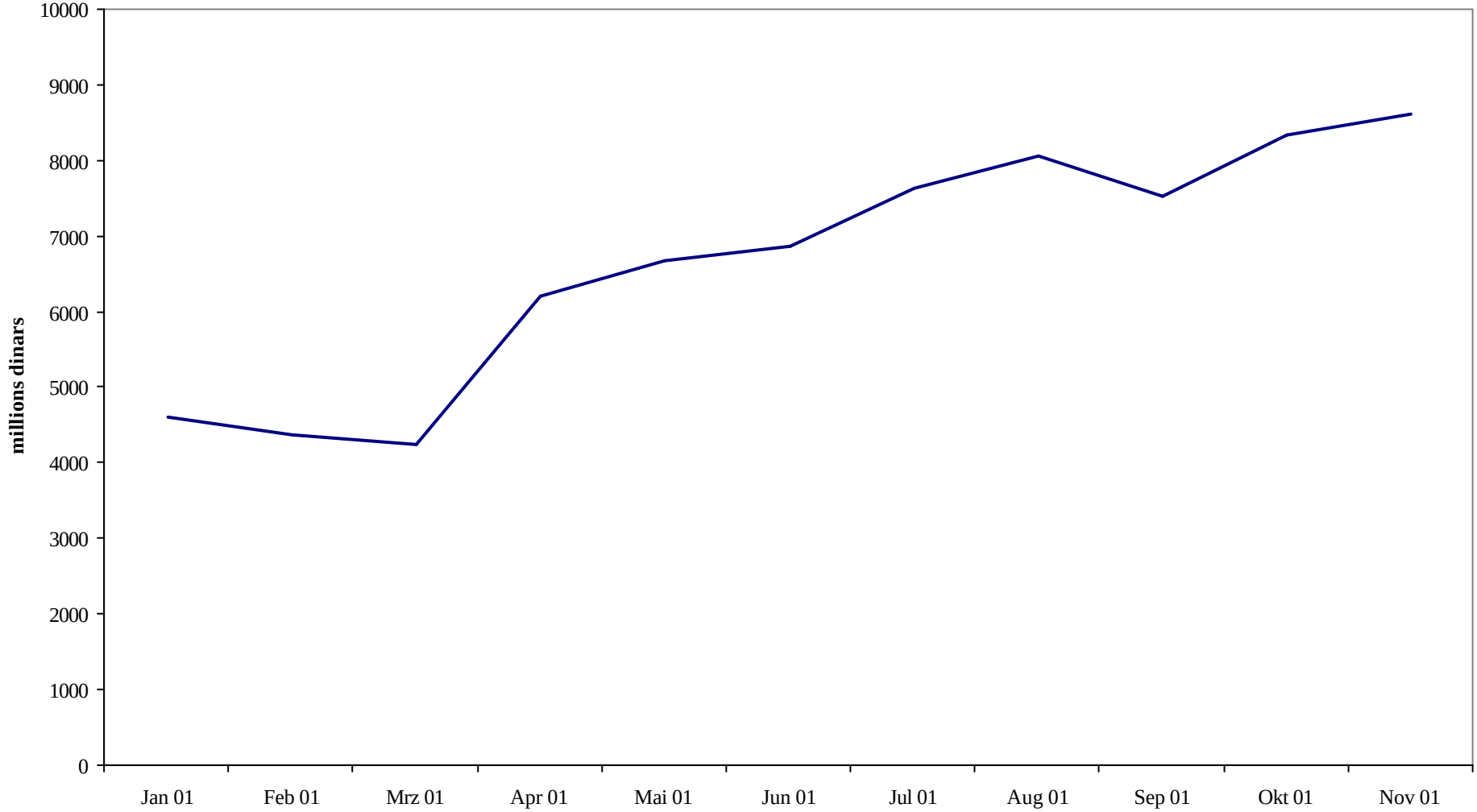

Figure 15

Contributions to Social Funds
(constant prices and seasonally adjusted)