

MACROECONOMICS OF THE ARREARS CRISIS IN RUSSIA

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Abstract

Debt crisis in Russia has essential impact on country's macroeconomic performance. There are different types of arrears, each of them caused by various factors which are analysed in the paper. Relationships between real sector, monetary, fiscal, social policies and arrears are also discussed. It is emphasized that currently the arrears have become one of the topical problems for Russia. Following changes in the structure of their stock and growth in real terms. Wage and tax arrears which have become the most urgent problem to be solved as they have a direct impact on main economic indicators. Arrears may also distort understanding of regular statistics, giving misleading picture for policy makers.

Introduction

It used to be that inflation and output decline were considered in the literature as the most topical problems of Russian transition. There have been also a number of studies on the arrears crisis in Russia [Ickes and Ryterman (1993), Rostowski (1993), Bigman and Leite (1993), Schaffer (1995)]. Various authors have emphasized different points on the impact of this phenomenon on Russia's transformation. At any rate there are no doubts that an unsettled economic environment, and unclear and complicated legislation caused that the arrears problem has also become rather topical for Russia's transition. This paper broaches these issues and attempts to analyse the inter-relations between arrears and various fields of macroeconomics.

There are various types of arrears (inter-enterprise debt, wage arrears, delayed payments to the budget and extra-budgetary funds, bank arrears) and the impact of each type on main macroeconomic indicators varied during the reforms. At early stages of reforms the stock of arrears increased rapidly due to the fact that a great number of inefficient enterprises were still in operation. Tight fiscal and monetary policies pursued at the beginning of 1992 reduced dramatically the demand for a great number of commodities, but, enterprises (still the bulk of enterprises has been state property) continued to produce and deliver them to their traditional customers through inertia. Prices were rising rapidly, as every producer tried to cover expenses

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(even in advance) and get profits as high as possible. They did not take care about payments in return expecting that sooner or later the government would clear inter-enterprise accounts as used to be the case in the planned economy. Thus a rapid increase of the inter-enterprise debt took place at the beginning of 1992 due to the continuous over-production not correlated with the drop in solvent demand. To some extent such a producer's behaviour could be treated as an institutional cause of arrears.

However, while structural adjustment took place in the country and behavioural patterns of Russian producers started to change, the real stock of inter-enterprise arrears and its structure have become more invariable showing that the main problem is not the existence of inter-enterprise debt, but its growth in real terms. Trade credit is a normal phenomenon in a market economy (the arrears did exist in the planned economy also, and they were cleared at the end of the fiscal year by authorities).

On the other hand, inter-enterprise arrears are closely tied to the adjustment of relative prices and the pace of their transformation. The administratively settled pre-reform price structure in Russia reflected the superfluity of natural resources and the relatively low technological level of manufacturing. It became clear soon after the liberalization of prices and deregulation of the foreign trade that energy-consuming production technologies inherited from the planned economy appeared to be inefficient in the open transitional economy. The need to decrease material expenditures meant that it was not possible to replace all capital stock in a short period. It was also possible to stop production in an entire country. Since 1992 more and more domestically produced commodities became non-competitive due to the permanent appreciation of national currency in real terms. At the beginning of reforms, as was said, many enterprises continued production while they could not sell their products. So in turn they could not pay for energy and raw materials, thus increasing the stock of arrears to the energy sector and some other sectors of the economy.

Another institutional cause of arrears in Russia is transformation of the banking sector, as it plays a key role in a market economy. It should provide a number of the first and foremost services, such as lending money and conducting fast payment transactions between economic agents. It should also attract and accumulate money, acting as an intermediary between savings and investments. A strong and reliable banking sector is a key resource for a national economy. Thus creation of a market-oriented banking system was one of the main targets of the institutional transformation in the country.

The reforms gave birth to a two-level banking system in Russia: commercial banks and the Central Bank. The two-level banking system resulted from an idea to change the payment system and separate finances of the enterprise sector from state finances that was aimed at hardening budget constraints for the enterprises and making them change their behavioural patterns.

Initially it was decided to change the payment system by channelling transactions among enterprises through commercial banks and collection centres of the Central Bank. In such a system, after receiving the payment order from the producer, money from a purchaser's account in some commercial bank was supposed to be transferred to the local collection centre of the Central Bank and then to another Central Bank's local collection centre, located in the producer's region. After all transactions money went to the producer's account in the other commercial bank. At any rate, however, money was supposed to pass via the Central Bank. This system was not computerised and was based on ordinary mailing, so due to enormous

paperwork it could take up to several months to transfer money from the seller to the purchaser.¹ That was one of the reasons for sharp arrears crisis of 1992. Now this system is computerized and the stock of inter-enterprise arrears since 1993 has been relatively stabilized. However, some variations could be seen.

The arrears crisis of mid-1992 forced the authorities to soften monetary policy and increase money supply, which caused high inflation at the end of the year. Though prices were rising, real money did not pass the banking system, so taxes could not be collected by the government. At the same time the government was forced to spend more money following price increases.

The latest increase in the stock of arrears could be seen in mid-1995. It used to be that at the early stage of transition the real stock of arrears was negatively correlated with the stock of rouble money, meaning that enterprises compensated for the lack of working capital through mutual debt. In late 1993 and in 1994 the lack of rouble broad money was compensated by inflows of hard currency following an increase in net exports. Moreover, as foreign trade operations were very profitable at that time due to the liberalization of trade and the remaining gap between relative and world market prices, the expanding foreign trade required an increase of the working capital in hard currency. Fiscal and monetary policies have been rather moderate. It is also notable that a great number of deals (especially among private enterprises) were cleared in hard currency despite it had been prohibited. At this point the stock of arrears was relatively invariable in real terms. However, in 1995 it started to grow again when inflation slowed down as a huge amount of money was absorbed by the budget from the economy. Commercial banks preferred lending money to the budget by purchasing government securities, so lending money to the real sector of the economy decreased in real terms. The stock of inter-enterprise debt increased slightly, while tax and wage arrears grew dramatically in the second half of 1995.

The most rapid growth of tax arrears could be seen in the third quarter and at the beginning of the fourth quarter of 1995. For example, they increased by 34 per cent during August-October (as of August 1995 they were 40.1 trillion roubles). An attempt to stop inflation one more time was followed by the increase of arrears: wage and tax arrears at this time. One more time Russia's practice showed that the country is too reluctant to accept radical changes. It also one more time showed that there is a feed-back in Russia's transformation: tight fiscal and monetary policy revealed itself in the lack of budget revenues.

The stock of non-payments to the budget as of November 1, 1995, reached nearly 54 trillion roubles, which was slightly less than one-third of rouble M2, or some one-fifth of tax revenues of the consolidated budget. One half of the stock of tax arrears was delayed payments of the value-added tax (26 trillion roubles, compared to 74.9 trillion roubles of actually collected VAT). The rate of growth of tax arrears slowed down by the end of the year, due to a more than 13 per cent growth in the money supply from November to December. However,

¹ On the other hand, as money could remain in the banking system for a long period out of control (and no interest was paid), this money could be used as credit resources, and that was one of the reasons for a rapid growth of the number of commercial banks, that could be seen in 1992-1994. Already by December 1992 there have been operating in Russia 1675 commercial banks, of which 688 were founded on the basis of the former specialized state banks and their branches, while other commercial banks were those of newly established. By the end of 1993 there have been operating 2019 commercial banks, by the end of 1994-2517, by August 1 of 1995-2571. The slow-down of the growth rate of the number of banks in 1995 was quite evident as the government proclaimed more strict fiscal and monetary policies.

the stock of tax arrears jumped again to 70 trillion roubles as of February 1, 1996.

An increase of tax arrears was respectively followed by a rapid growth of wage arrears in the budgetary organizations. Moreover, the stock of wage arrears increased across the whole economy. According to Goskomstat the stock of wage arrears in industry, agriculture, transport and construction reached 13.6 trillion roubles (or 7 per cent of M2) as of December 1995. At the end of January it exceeded 20 trillion roubles.

As seen from (1) there is a positive correlation between the stock of wage arrears and two-months lagged stock of tax arrears, while at the same time tax arrears are negatively correlated with money supply M2:

$$\text{ARRWAG} = 0.491 \cdot \text{ARRTAX}(-2) - 0.078 \cdot \text{M2} + 4.071 \quad (1)$$

(9.202) (-5.285) (7.818)

$$R^2 = 0.98 \quad \text{DW} = 1.67,$$

where ARRWAG and ARRTAX represent the stocks of wage and tax arrears respectively, t-statistics are given in parenthesis. Monthly data from the end of 1993 till the beginning of 1996 were taken as a sample range.

The same result can be derived from the empirical statistical analysis carried out in terms of percentage changes. The regression between growth rates of wage and tax arrears and money supply was obtained as follows:

$$d \text{ARRWAG} = 0.374 \cdot d \text{ARRTAX}(-2) - 1.493 \cdot d \text{M2} - 0.135 \cdot \text{DUM} + 2.312 \quad (2)$$

(1.346) (-3.491) (-1.902) (5.585)

$$R^2 = 0.52, \quad \text{DW} = 1.56.$$

Here a dummy variable (DUM) with 1 for January and 0 for all other months was employed in order to exclude end-year effects. Values for all the above variables were collected as of the 1st of each month. The above regressions clearly show that wage arrears have resulted from the government fiscal and monetary policies.

There is another confirmation that a too restrictive monetary policy causes an increase in arrears. As seen from (3) the rate of growth of the entire stock of payables, the bulk of which is represented by delayed payments to suppliers and to the budget and extra-budgetary funds, is also negatively correlated with M2:

$$d \text{PAYABL} = -0.010 \cdot \text{M2} + 1.219 \quad (3)$$

(-5.512) (66.407)

$$R^2 = 0.55 \quad \text{DW} = 1.31, \text{ where } d \text{PAYABL} \text{ denotes rate of growth of payables.}$$

Table 1 shows nominal stocks and rates of growth of wage arrears, payables (to the budget, extra-budgetary funds, to suppliers, by bills of exchange), inflation, and money supply in 1995 as of the end of the month. It is seen that since May growth rates of arrears exceeded inflation. An exception could be seen in December due to the increase of money supply growth

TABLE 1. ARREARS, MONEY SUPPLY AND INFLATION
IN RUSSIA IN 1995

	Payables:		Inflation (CPI)	Wage arrears		M2	
	Nominal Growth rate			trln. rb.	%	trln. rb.	%
	trln. rb	%	%				
January	99.0	110	118	5.5	132	92.2	96
February	109.1	110	111	5.6	102	100.0	108
March	115.9	106	109	5.7	101	105.1	105
April	132.1	114	108.5	5.5	97	121.1	115
May	142.6	108	107.9	6.0	110	136.3	113
June	155.2	109	106.7	6.4	107	154.3	113
July	173.1	111	105.4	7.2	111	163.7	106
August	187.4	108	104.6	8.4	117	172.6	105
September	201.4	108	104.5	10.3	122	178.8	104
October	216.2	107	104.7	11.6	112	183.5	103
November	232.8	108	104.5	13.6	117	194.8	106
December	238.9	103	103.2	13.4	99	220.8	113

Source: Goskomstat RF, Central Bank of Russia

at the end of the year, which allowed the government to improve the situation slightly. It is notable that the stock of arrears is higher than money supply. Equally important that the share of tax arrears (including non-payments to the extra-budgetary funds) in entire payables increased from some 25 per cent in January of 1995 up to nearly 30 per cent by the end of the year. Thus, contrary to the declared goal of stabilization, the country's macroeconomic condition seems to be rather unstable, as inter-enterprise debt has an indirect impact on main indicators, while wage and tax arrears affect the macroeconomy directly.

This shows that relative success in fighting inflation in 1995 was perhaps rather artificial (also taking into account that the government reregulated energy prices). Wage arrears and arrears to the budget are more harmful for the economy than inter-enterprise debt and debt to the banking system. Finally accumulation of the arrears can totally redistribute the power in the country, moving right (communist) forces to the top of the hierarchy, as happened in the December 1995 elections. This might be too high a price to be paid by the society.

Really, an explanation of the failure in the elections should be sought in the economic field first. Russia's macroeconomic performance in 1995 was greatly influenced by the fiscal policy pursued. In the case of Russia fiscal policy should be treated as a key instrument of economic policy in general. The main features of this policy in 1995 were:

- refusal to borrow from the Central Bank
- foreign borrowing and issue of the government securities to cover the fiscal deficit.

As was already mentioned (Gavrilenkov 1995), to peg inflation in the short term by cutting budgetary spendings and limiting of the money supply growth was the main target of the government.

Finally, although the government reduced inflation, the stabilization policy was not completely successful. Inflation in January-August of 1995 was practically the same as during the same period of 1994. Moreover, as was said, in order to move closer to the inflation target the government decided to use a quite rude but "reliable" method: they re-introduced

TABLE 2. KEY ECONOMIC INDICATORS OF THE RUSSIAN FEDERTION IN 1992-1995

		1992	1993	1994	1995
GDP, nominal	US\$ bn	98.7	184.0	276.2	363.4
GDP, per capita	US\$	663.9	1238.8	1862.0	2456.9
GDP, nominal	trln. RUR	19.0	171.6	611.0	1659.0
GDP, real ¹⁾	% change	-14.5	-8.7	-12.6	-4.0/-6.8
Industrial production	% change	-18.0	-14.0	-21.0	-3.0
Budget/GDP ²⁾	%	3.4	4.6	10.3	3.3
M2 (end of the year)	trln. RUR	5.9	29.2	95.9	221.1
Inflation					
(December to December)	%	2510	840	215	131
Unemployment	%	4.7	5.5	7.4	7.8
Average monthly wages	RUR, th/month	6.0	58.7	220.4	482.0
Average monthly wages	US\$/month	31.1	62.9	100.0	103.5
Exchange rate		192.5	932.2	2204.0	4656.6
Merchandise exports	US\$ bn	53.3	59.2	66.8	77.8
Merchandise imports ³⁾	US\$ bn	42.8	36.1	51.2	57.9
Trade balance	US\$ bn	10.5	23.1	25.6	19.9
Current account ⁴⁾	US\$ bn	4.2	6.4	5.8	5.3
Monetary reserves, excl, gold	US\$ bn	...	5.8	2.5	14.1
Gross foreign debt	US\$ bn	...	112.8	119.3	123.7

1) Official (Goskomstat) and alternative (author's) estimate

2) Official budget does not include implicit import subsidies, state extra-budgetary funds

3) Imports for 1992-1993 do not include unrecorded trade (i. e. from "shuttle" business, etc.)

4) Curent account for 1992-1993 does not include CIS countries

Source: National statistics

regulation of energy prices in the fourth quarter of 1995.

No doubts that the government also enjoyed success in reducing the fiscal deficit in 1995 to 3.3 per cent of GDP, the lower level of the reform period. It was also announced that GDP fell in 1995 only by 4 per cent compared to a nearly 13 per cent drop in 1994. But despite all the macroeconomics achivements such as reducing fiscal deficit, lowering inflation and slowing the fall in production economic reform became unpopular than ever before. This may prove that in particular Russian circumstances the IMF-driven targets might be counterproductive if they are taken separately from other economic policy objectives. On the other hand it may be that the official data is not completely correct.

A set of main economic indicators showing Russia's transformation in 1992-1995 is given in Table 2. Official data might be misleading to some extent. It refers mainly to GDP. An alternative estimate presented in this table shows a deeper fall in production. The methodology for a reapprising GDP for 1995 was the same as that employed in the paper by Gavrilencov and Koen (1994, 1995). Alternative estimates presented in that paper were targeted to reconcile inconsistencies in the official statistics. Later Goskomstat of the Russian Federation revised GDP accounts [Goskomstat (1995)] following the results of Gavrilencov and Koen. The situation for 1995 seems to be different from that of 1992-1994. In 1992-1994 Goskomstat undervalued the level of production for a number of quite obvious reasons, while in 1995 it has perhaps overvalued economic activity in the country.

In reality, retail sales (the bulk of households' consumption) according to Goskomst dropped in 1995 by 7 per cent. Household consumption of paid services dropped even more (by 17 per cent). Decline in investment (13 per cent) was also much greater than the fall in GDP according to official figures. It is also notable that government expenditures according to official budget figures dropped in real terms by nearly 30 per cent: the expenditures of the consolidated budget increased in nominal terms from 235 trillion roubles in 1994 to 487 trillion roubles, or 2.1 times, while average annual consumer prices increased by some 2.9 times (consumer prices in December 1995 prices were 2.3 times higher than those in December of 1994).

Such gaps between the GDP fall and its main components are yet to be explained by Goskomstat. All the above mentioned inconsistencies lead to the conclusion that the decline in GDP in 1995 should be nearly 7 percent (Table 2).

Taking into account data from Table 2, one could also see that velocity of money circulation continued to increase in 1995 despite significant slow-down of inflation. However, this is positively correlated with the fact that the stock of arrears in real terms was increasing in 1995. In other words it meant further demonetization of the national economy.

The same is going to be in 1996 also, as according to an agreement between the Russian government and the Central Bank on economic policy in 1996, approved by IMF, tight fiscal and monetary policies are to be continued. Fiscal deficit in January of 1996 remained at a rather low level - 2.2 per cent of GDP. Inflation didn't exceed 4.1 per cent, while the stock of arrears increased much more: the stock of paybles as of February 1, 1996 has grown by nearly 10 per cent or up to 262.4 trillion roubles compared to 238.9 trillion roubles as of January 1, 1996, while money supply has slightly decreased (from 220.8 trillion roubles as of January 1, 1996 to 217 trillion roubles as of February 1, 1996). It is clear that the gap between growth rates of arrears and inflation can't last forever. Current macroeconomic condition requires to increase money supply in the country.

The structure of Russia's money supply is shown in Table 3. It is seen from this table that the bulk of money is withhold by population (cash in circulation M0 and household deposits). The share of households' money (account to 72.3 per cent of the entire rouble money stock. The remaining money is money of the enterprises and public organizations. As seen from this table the share of money withhold by population increased dramatically from its value (nearly one-third) as of January 1, 1993 at the expense of a decrease of money withhold by enterprises. This of course goes in the wake of the increasing velocity of money circulation. But it also explains a rapid growth of the stock of arrears as an enterprise sector is a main tax-payer in the Russian Federation.

It should be also noted that by the end of 1995 enterprises in Russia owned some 12 billion dollars (in roubles) only, which is enormously low value for such a country as Russia. Expanding foreign trade and convergence between relative and world market prices caused that at this background a desirable increase of investment activities has become even more problematic. An increase of investment in fixed capital is getting to be more and more urgent problem to solve, as after dramatic overall drop in investment during the reforms capital stock in the country has become more obsolete.

Permanent rise in arrears is also harmful for investment. Macroeconomic environment with a permanently growing stock of arrears, that exceeded the money supply, can not provide stability for investors even if inflation is going down.

TABLE 3. ROUBLE MONEY SUPPLY² IN RUSSIA
AND ITS STRUCTURE
(in trln. roubles and in per cent)

	as of		as of		as of		as of	
	01. 01. 93		01. 01. 94		01. 01. 95		01. 12. 95	
	RUR	%	RUR	%	RUR	%	RUR	%
MO	1.5	24.9	10.8	37.0	34.5	36.0	71.1	36.8
Current accounts	2.5	42.7	8.9	30.5	25.0	26.1	42.7	25.2
Monetary instruments	0.3	5.2	0.5	1.5	1.0	1.1	4.1	0.6
M1	4.3	72.8	20.2	69.0	60.5	63.1	114.9	59.6
Deposits	1.0	16.2	7.0	23.9	31.1	32.5	74.5	38.0
-enterprises	0.4	6.4	2.9	9.7	5.2	5.4	9.7	3.5
-households	0.6	9.8	4.1	14.2	26.0	27.1	64.8	35.5
Investment accounts	0.6	10.9	5.1	7.0	4.2	4.4	5.4	2.4
M2	5.9	100	29.3	100	95.9	100	194.8	100

Source: Central Bank of Russia

Concluding it can be pointed out, that from macroeconomic point of view arrears has become one of the most topical problems for Russia despite that the inter-enterprise debt currently does not affect the economy directly.

On the contrary, growth in the stock of wage arrears is a good background for continuous growth of income inequality. In turn it means that mass domestic demand may only decrease. Tax arrears may only reduce government spending respectively reducing domestic demand. Perspectives for growth in the near future might still remain illusory.

Finally, an increasing stock of arrears is a distorting factor for statistical accounting which gives misleading information for the decision makers.

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² Money supply statistics presented here is based on the Central Bank of Russia methodology, employed by Russian monetary authorities since 1995.

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