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INSTITUTE OF THE ECONOMIC PROBLEMS OF THE TRANSITIONAL PERIOD

The Crisis of the Financial System in Russia

Principal Factors and Economic Policy

The nature and principal factors of the development of the financial crisis

The budget crisis

The principal cause of Russia's great vulnerability as the world financial crisis developed was the imbalance in state finances. The process of macroeconomic stabilization—the decline in the rate of inflation, the exchange rate of the ruble, and interest rates—that began in 1995 had been accomplished through the pursuit of a tight monetary policy against a background of high levels of budget deficits, which ranged from 11.8 percent in 1994 to 3.9 percent in the first half of 1998. The significant deficit in state finances led to a rapid rise in state debt and the cost of servicing it, simultaneously reducing the amount of national

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savings and reducing the current net balance of payments.

A substantial decrease in the income of the budgetary system has been observed in Russia since 1992. The high level of redistribution of financial resources through the state budget in the USSR provided for a corresponding degree of centralization in the management of the national economy. The democratization of the political regime and the transition to a market economy brought about the appearance of general laws, new to Russia, for the functioning of the system of state finances. These laws are expressed at a highly generalized level as the presence of a stable connection between the level of the country's economic development and the level of mandatory tax collections. That level currently does not exceed 30 percent of GDP, plus or minus a few percentage points.

The principal impediment to overcoming the crisis of state finances in Russia has thus been the inability of the authorities to reduce spending to the necessary extent and thereby to eliminate the budget deficit. Table 1 contains data on the spending of the consolidated budget of Russia (including off-budget allocations) for 1991 through the first half of 1998.

Two conclusions arise from an analysis of the data represented in the table. First, the reduction of state spending has taken place very slowly and has been completely inadequate to establish budget equilibrium. Second, an irrational spending pattern has taken shape in Russia. The greater portion of the spending, however, is not subject to further reduction in the short run. Cutbacks in spending for administration, defense, law enforcement, subsidies to the regional budgets, and the like, will require radical reforms in the corresponding areas.

The reduction of social spending is a separate issue. A burden of social spending equal to 16–19 percent of GDP is obviously beyond the strength of a country with a level of development such as Russia's. With regard to reducing this spending, there simultaneously exist serious limitations associated with public support of the economic transformations being pursued, which determines to no small extent the dynamic of the social spending of the state. State spending that provides for maintaining a high educational level of the population is moreover an important factor of economic growth. Reserves for such a reduction are nevertheless found in a reorientation of the entire system of social assistance of the population to

Table 1

Real Expenditures of the Consolidated Budget of Russia in 1991–98 (billions of rubles in 1991 prices)

	1991[a]	1992	1993	1994	1995	1996	1997	1998[c]
State expenditures and loans net redemptions	901	724	493	421	335	336	355	138
Expenditures for maintenance of state authorities and administration	8	7	9	10	6	6	9	4
For defense	82	53	45	39	24	23	25	7
For maintenance of law enforcement bodies	20	15	16	16	13	14	18	6
For science	8	7	6	4	2	3	3	1
Social and municipal services	208	153	183	159	131	130	147	62
including:								
Education	—	42	43	39	29	30	35	13
Culture, arts, and mass media	—	7	7	7	5	4	5	1
Health care and physical fitness	—	29	34	28	21	20	34	25
Social security	—	76	99	86	76	76	74	33
State services to the national economy[b]	238	232	129	97	79	70	79	25

Sources: Ministry of Finance; State Committee on Statistics of the Russian Federation; Institute of the Economic Problems of the Transitional Period.

[a]Expenditures of Russian budget and union budget on Russian territory.

[b]Estimated subsidies to importers at the prevailing ruble exchange rate totaled 10.5 percent of GDP in 1992, and 1.1 percent of GDP in 1993.

[c]First six months.

Table 2

[Foreign Debt of the USSR and the Russian Federation 1992–98]

	Debt of USSR, billions of dollars	Debt of Russian Federation, billions of dollars	Servicing, as percentage of GDP
1992	104.9	2.8	0.7
1993	103.7	9.0	0.3
1994	108.6	11.3	0.5
1995	103.0	17.4	0.9
1996	100.8	24.2	0.9
1997	97.8	33.0	0.7
1998[a]	95.0	55.0	1.2

Source: Russian Federation Ministry of Finance.
[a]Estimate.

targeted support, in which financial resources are accumulated for the support of socially unprotected groups of the population.

The problem of servicing and refinancing state debt

The inadequacy of measures to reduce state spending before 1995 was a condition of the necessity of financing the budget deficit through seigniorage. Starting in 1995, domestic state debt began to increase rapidly due to borrowing in the securities market. By mid-1998, domestic debt had increased to 25.6 percent of GDP. The increase in domestic debt required a rise in spending to service it, and by 1998 it had turned into one of the largest expenditure line items of the federal budget. The magnitude of that spending was 4.8 percent of GDP in 1996, and 3.9 percent of GDP in the first half of 1998.

The widespread use of borrowing in foreign financial markets began at the same time (see Table 2). The overall debt burden, equal to 49.8 percent of GDP (as of January 1, 1998), can nevertheless be regarded as relatively low.[1] The large amounts of foreign debt are moreover determined to a significant extent by the indebtedness of the former USSR. The amount of the intrinsic Russian debt was 7.6 percent of GDP as of January 1, 1998, that is, 25.2 percent of the total amount. The share of the debt obligations of the Russian Federation [RF] reached 36.7 percent of the overall amount of foreign debt over the first eight months of 1998.

The specific features of the foreign debt situation are determined by its short-term nature and the large proportion of the debt belonging to nonresidents. The low level of monetization (16.2 percent) causes low amounts of domestic financial savings, which imposes more serious limitations on the size of domestic debt than in the developed countries (short-term domestic debt exceeded the bank deposits of the public as early as the spring of 1996).

Domestic debt in Russia was represented by short-term (primarily less than one year) securities. Their durations increased from 60 days to 90 days over 1995, to 150 days over 1996, and to 250 days over 1997. This indicator was unfortunately only about 330 days by August 1998. As a result, the funds necessary every month just to pay off previously issued bonds (without counting the coupon payments on the two- and three-year coupon bonds and federal loan bonds [OFZs]) reached 10–15 percent of the monthly GDP in the first half of 1998.

A situation in which state borrowing required significantly more resources than the amount of liquid domestic savings predetermined the decision to permit nonresidents into the domestic state debt market. According to the Ministry of Finance of the Russian Federation, in April 1998, the share of nonresidents was about 28 percent of the market. The access of nonresidents to the domestic state debt market made it possible to accomplish the task of reducing interest rates in the Russian economy, thereby reducing the burden on the budget of servicing state debt. At the same time, the widespread participation of foreign investors in financing the state budget deficit drastically increased the dependence of the Russian economy on competitive conditions in world financial markets.

But the substantial lessening of control over foreign capital and the corresponding decline in the cost of servicing state debt created the illusion that there were no problems in financing the state budget deficit, at least in the medium term. From this standpoint, nonresident access to the domestic debt market increased the risks in choosing a soft budget policy that did not presume a drastic reduction in the budget deficit and the requirements for state borrowing accordingly.

Foreign borrowings are longer term than securities placed in the domestic market. However, starting in 1999, Russia must begin to repay the credit and loans previously granted by international financial organizations, and starting in 2001 it will have to assume the expense of repaying the Eurobonds placed in 1997–98 as well. Over the next ten years, annual spending just for the repayment of debts to international financial organizations and the interest payments to investors who purchased Russian Eurobonds will be U.S. $3.5 billion to $5 billion. Moreover, in 2002, the grace period on the servicing of debts to the London and Paris clubs will be expiring, which also signifies a considerable rise in the yearly amounts of foreign payments.

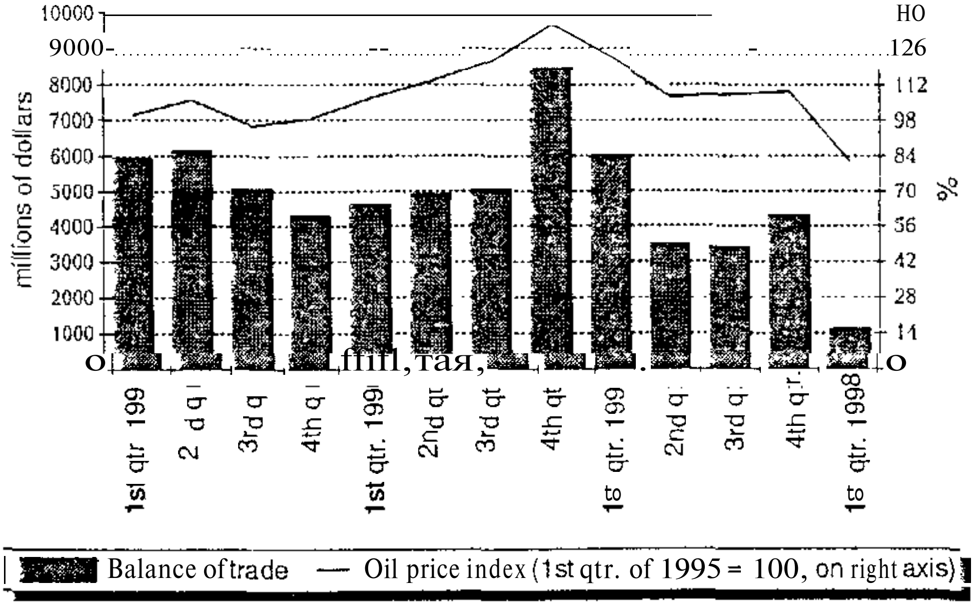
We can nevertheless say that the policy for the management of state debt being pursued in 1997-98 did not take into account to a sufficient extent the advantages of foreign as compared to domestic borrowing. The attempt to increase the amount of foreign loans by placing Eurobonds was not pursued very consistently during that period, in our opinion. The placements of Eurobonds were just U.S. $14.9 billion over 1997-98. Had the consolidation of debt (the replacement of short-term debt with long-term debt) through a change in the ratios of domestic and foreign borrowing been pursued more vigorously, the threat of financial crisis could clearly have been eased somewhat.[2]

The dynamic of balance of payments indicators

In analyzing the factors that determined the appearance of a negative net balance of payments for current operations and the change in the sources for financing the balance of payments deficit in 1997, it is important to bear in mind the internal contradictions of the economic situation in Russia. On the one hand, the drop in oil prices gave rise to the suspicion among economic agents that the exchange rate of the ruble was overstated, and expectations of devaluation surfaced accordingly. These expectations were also strengthened owing to the increased demand for currency in connection with the necessity to service and repay foreign debt. The change in competitive conditions in world markets for energy resources also made a correction in the exchange rate policy being pursued and a certain devaluation of the ruble really essential. This became obvious in the fourth quarter of 1997, when the tendency to use the official gold-currency reserves as one of the principal sources for financing the deficit became apparent.

However, on the other hand, given an economic situation that is characterized by the presence of short-term domestic state debt and

Figure 1. **Trade Balance of the Russian Federation** and World **Oil Prices in 1995–First Quarter of 1998**



Sources: Central Bank of the Russian Federation; *International Financial Statistics.*

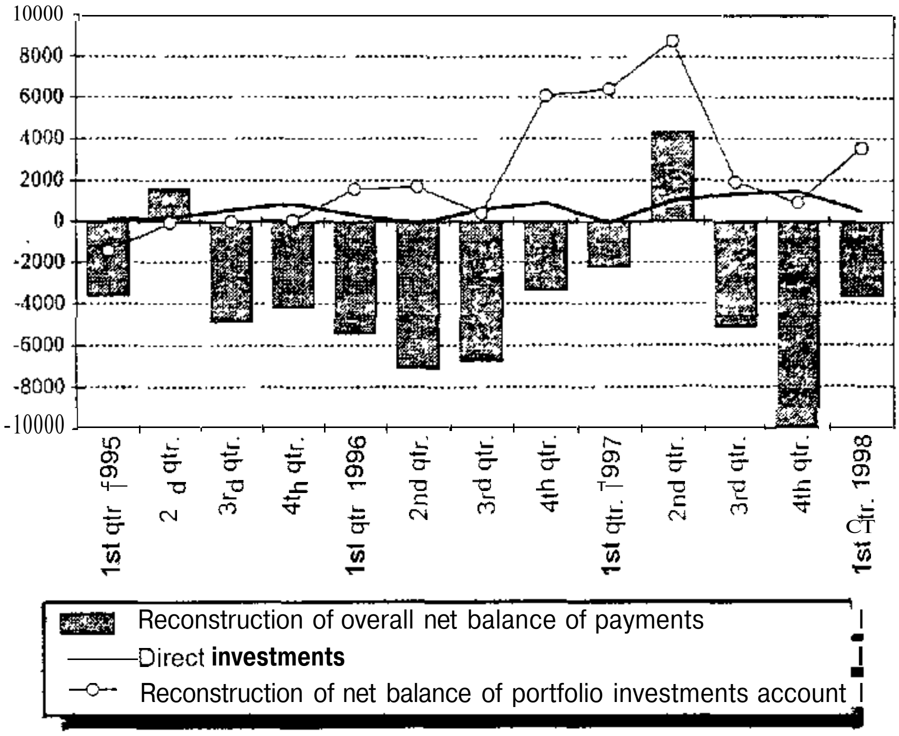
a high share of nonresidents in that market, any attempt to change exchange rate policy (and attempts to accelerate the devaluation of the ruble in particular) causes a mass exodus of foreign investors from financial markets, a rise in interest rates, increased demand for currency, a drop in currency reserves, increased risks of a default on state obligations, and a drastic devaluation. The policy of gradual devaluation of the ruble for the purpose of stabilizing the balance of payments becomes unfeasible in practice as a result.

Starting with the second quarter of 1997, the net balance in the current account has by and large been taking on negative values (with the exception of the fourth quarter of 1997, when a positive value was recorded at a level not exceeding $400 million). Among the most important factors causing a decline in the net balance of the current operations account may be singled out the unfavorable competitive conditions in the world market for the principal Russian export commodity groups (as shown in Figure 1, the fluctuations in the balance of trade of the Russian Federation almost entirely duplicate the changes in world oil prices), as well as the increase in the total amount of interest payments to nonresidents (based on the results for 1997, the net income paid to service capital was $–8 billion, or 1.75 percent of GDP).

Despite the unfavorable dynamic of the current operations account, the net balance of the account for transactions with capital and financial instruments remained positive in 1997; a level of $19.5 billion, or 4.2 percent of GDP, was recorded, which resulted in a positive overall balance of payments. But the surplus in the financial account in 1997 arose as a consequence of the demonstrated influx of foreign portfolio investments in the balance of payments, while the net balance for the remaining line items of the account for operations with capital and financial instruments had either negative or only slightly positive values. This was caused by the restructuring of Russia's indebtedness on the debts of the former USSR to the members of the London Club, which was accomplished through the issue of bonds in the amount of the debt principal ($22.1 billion) and the overdue interest ($6.1 billion). This transaction was reflected in the balance of payments as a decrease in the indebtedness of the state sector for borrowed credit (a reduction in overdue indebtedness) and a corresponding increase in obligations on the portfolio investments of nonresidents (as a result of the issue of securities). For the purpose of obtaining values of the net balance of the balance of payments accounts that reflect the actual state of affairs in the fourth quarter of 1997, we reconstructed the "portfolio investments" and "liabilities of the state administrative sector" accounts of the RF balance of payments, by reducing the liabilities of residents for portfolio investments by the amount of the restructured debt and simultaneously increasing the obligations of the state administrative sector (see Figure 2).

An analysis of the restructured balance of payments of Russia for 1997 shows a significant decline in the net balance on the portfolio investments account in the fourth quarter to U.S. S906 million (0.72 percent of GDP), and the total net balance of payments to U.S. $–9.9 billion (–7.9 percent of GDP). A sharp turnaround in the dynamic of foreign portfolio investments was thus characteristic of the fall of 1997. Along with the weakening of market prices for the principal Russian export goods, this factor led, at the end of 1997 and first half of 1998, to a catastrophic rise in the balance of payments deficit financed from the foreign reserves of the Central Bank of the Russian Federation. The gold currency reserves decreased by $5.9 billion in the fourth quarter of 1997. According to preliminary data on the balance of payments of the RF, a deficit was recorded in the balance of trade (more than $1 billion) in the second quarter of 1998 for the first time since the balance has been computed; the current

Figure 2. Reconstruction of the Russian Federation's Balance of Payments Based on Investment Accounts and Overall Balance of Payments in 1995–First Quarter 1993



Source: Central Bank ofthe Russian Federation.

account deficit continued to rise (the deficit exceeded $4 billion), with further increases in the amount of servicing of foreign indebtedness (the negative balance ofcapital services exceeded S4 billion).

Whereas the current balance ofpayments deficit in the spring and beginning of the summer of 1998 was financed both through obtaining portfolio investments and credit from the International Monetary Fund [IMF] and reducing the gold currency reserves of the Central Bank, the currency reserves had effectively been exhausted as a source offinancing for the deficit in August 1998 (the gold currency reserves of the Central Bank declined by $12 billion over July 1997–August 1998), and the further attraction of portfolio investments proved to be impossible due to the crisis, while the first installment of the IMF extended credit was expended to maintain the exchange rate of the ruble for record short periods. The sole method ofbalancing off the balance ofpayments under these conditions was a devaluation of the ruble, the decision for which was made on August 17.

The question of sources for financing the foreign debt principal and interest payments due in 1999, as well as the redemption of the third installment of the domestic currency loan bonds (in the amount of about $18 billion), also arose in analysis of the balance of payments status of Russia. The factors enumerated above (the growing current operations account deficit, the decline in the gold currency reserves of the Central Bank, and the unfavorable forecasts for obtaining credit from international financial organizations and attracting other investments) in the aggregate obviously make the payment of that amount impossible. First, a further devaluation of the ruble for the purpose of improving the balance of payments is undesirable for domestic political considerations, and second, it will not lead to the necessary growth in exports owing to their price inelasticity. Under these conditions, a further restructuring is becoming the sole policy option for the management of foreign debt in 1999.

Chronology of the crisis in the financial system of Russia in 1997–98

In summer 1997, the situation in the financial markets of Southeast Asia had started to worsen, but this was having virtually no impact on the Russian economy. An important factor that supported a favorable assessment of the prospects for the Russian economy in the eyes of foreign investors was the quite explicit and consistent reform program of the team of "young reformers" headed by A[natolii] Chubais and B[oris] Nemtsov. On a short-term plane, at the beginning of fall 1997, the Russian economy was characterized by a positive dynamic of competitive market conditions.[3] The relative political stability in the country, along with the increased business activity of Russian companies and banks, created a favorable impression among Western investors regarding the prospects for the Russian economy.

However, the financial stabilization and rapid development of Russian financial markets occurred against a backdrop of worsening fundamental economic problems—the fiscal crisis, a significant deterioration in the balance of payments, and a rise in the preconditions for greater instability in economic policy. The correlation of the short-term obligations of the state held by nonresidents and the foreign reserves of the Central Bank of Russia [CBR], which characterized the exchange rate risk in the repatriation of profits from investments in the Russian financial markets, was giving rise to serious apprehensions. Investor assessments of the stability of the political situation and the capabilities of the team of "young reformers" were seriously weakened after the political scandals surrounding the competitive bidding for a block of shares in the Sviazinvest joint-stock company in July 1997. The crisis phenomena in the economies and financial markets of Southeast Asia were simultaneously gaining force in mid-August 1997, and had already begun to have a palpable impact on the conditions in the financial markets of leading Western nations.

Beginning of the crisis (November–December 1997)

The Dow Jones Industrial Average had a record drop of 554 points on October 27, 1997. Despite the subsequent rapid recovery of the Dow Jones and other American stock market indexes, this may be considered the date of the beginning of the development of the financial crisis in Russia that destroyed all the macroeconomic results achieved in 1997 and entailed a change in the direction of economic transformations. The worsening of the world financial crisis, which naturally affected the developed markets and caused a collapse in prices in a number of developing markets, was the trigger for the start of the destructive processes in Russia. But we can consider the end of October 1997 as the date starting from which the confidence of foreign investors in the stability of the financial and macroeconomic situation in Russia, despite some fluctuations, diminished as a whole, and was accompanied by a drop in prices for Russian financial instruments and a rise in the demand for foreign currency.

The unfavorable changes in world market conditions caused an outflow of capital from Russian financial markets. This was reflected most quickly in the Russian stock market. The market index dropped by 18.5 percent over the week from October 27 to November 2, 1997. The RTS-1 index dropped to a value of 328.5 over November as a whole, that is, the drop in quoted prices was about 32 percent.

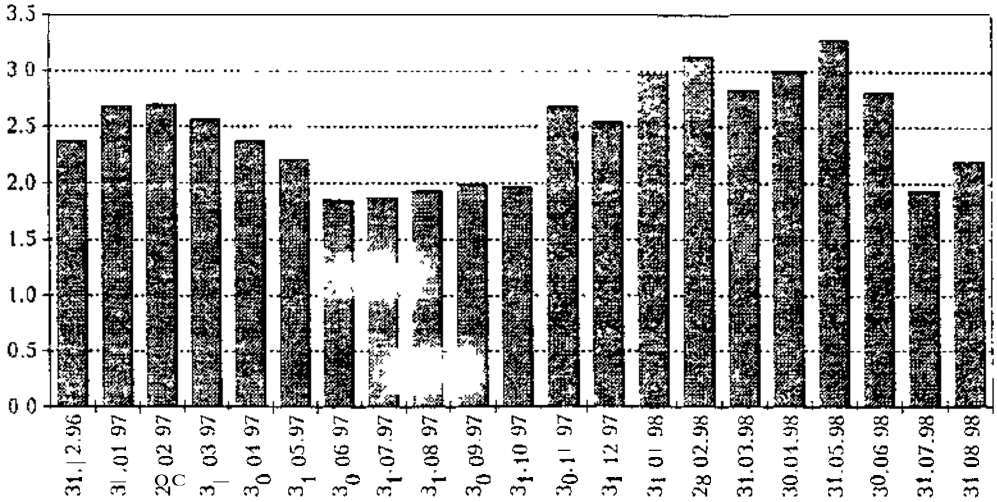
It should be noted that, in 1997-98, a quite close link was noted between the Russian RTS-1 stock market index and the dynamic of the Dow Jones average. Moreover, the dependence was asymmetrical: the closest dependence was manifested during periods of decline in the Dow Jones average.[4] The substantive explanation for this is that investments in foreign stocks can either increase or decrease under conditions of growth in the share prices on the American exchanges (as determined by the various factors characterizing yields, risks, etc.). But under conditions of a deterioration of conditions in world financial markets, investors sharply limit their presence in the developing countries, which leads to a corresponding drop inprices.

The mean weighted yield in the state debt obligations market increased from 22 percent to 28 percent annually in the very first week of the crisis. Trading volumes rose markedly, and the weekly trading in the secondary market more than doubled. A drastic drop in the quoted prices for Russian Eurobonds occurred simultaneously. The yield spreads between Russian foreign bond loans and state securities in the corresponding currency with early redemption dates had risen by 70–100 basis points by November 10 compared to the average level for October.

The CBR thus faced a choice of policies that corresponded to the conditions of financial crisis. Naturally, there were no good solutions in the situation that had taken shape. The CBR had to choose between bad and very bad solutions. The discussion centered on two possible policy options, or some combination of them. The first option was reduced to protecting the ruble against attacks by increasing the interest rates in the market for state obligations, which made it possible to avoid losses of international reserves. The second option consisted of holding interest rates at a relatively low level by conducting open market operations.

The CBR unfortunately adhered to the second option in November, trying to effect a policy of holding interest rates down by increasing the block of state short-term bonds [GKOs] it owned. Only on November 11—that is, two weeks too late—did the CBR raise the refinancing rate from 21 percent to 28 percent, which was clearly inadequate to establish equilibrium in the state debt market. Interventions in the GKO market gave the CBR the opportunity to avoid rates higher than 30 percent right up until the last week of November. The increased demand for currency on the part of nonresidents who had sold their state bond holdings, however, led to a rapid reduction in the gold-currency reserves of the CBR, and was a blow to the stability of the exchange rate policy. The foreign reserves of the CBR declined from $22.9 billion to $16.8 billion in November. The ratio of the magnitude of short-term debt to the gold-currency reserves was about 2.4 at the end of 1997; there was then a slight

Figure 3. Ratio of Short-Term State Debt to Gold Currency Reserves



Sources: Central Bank of the Russian Federation; "Finmarket" Information Agency.

rise in that value, associated by and large with the increased volume of borrowing (see Figure 3).

The pursuit of this policy by the Central Bank of Russia seems to us a serious mistake, which predetermined to a significant extent the further development of the crisis. The CBR should not have maintained low interest rates in the GKO-OFZ market; it had to let them rise until the establishment of market equilibrium at a higher level.[5] The attack on the Russian ruble could have been much less intensive had there been a timely, substantial increase in refinancing rates and a corresponding rise in the interest rates for state securities, and the ratio of short-term debt to foreign reserves would not have reached such dangerous values—from the standpoint of foreign investors—as a result. The policy of raising interest rates could have been supplemented with the assurance of higher rates of devaluation in the exchange rate of the ruble. Even though this would have signaled investors that there was an increased risk of devaluation, it could have facilitated the stabilization of the currency market, given sufficient foreign reserves and predictable exchange rate behavior. This policy could have been effected by narrowing the currency "corridor" while increasing its slope.

But on November 10, 1997, the Central Bank announced the target values for exchange rate policy in 1998-2000. An expansion of the currency "corridor" was proposed in 1998, while the average exchange rate of the U.S. dollar was to be 6.1 rubles/dollar, and 6.2 rubles/dollar for the next three years. Possible fluctuations were not to exceed 15 percent of that level therein (from 5.25 to 7.15 rubles/dollar). In practice, the CBR, having given the markets a negative signal regarding an increase in the exchange rate risk, continued to support low rates of decline in the ruble exchange rate through currency interventions. It cannot fail to be acknowledged that the cessation of these measures would have put the RF Ministry of Finance in a quite difficult position, when new obligations had to be placed at lower prices. In this case, the burden on the federal budget would have increased substantially approximately a year later.

Another important circumstance is the fact that the measures under consideration (a rise in interest rates in the face of an accelerated rate of decline in the ruble exchange rate) would have been contradictory in nature on the plane of the impact on the financial situation. A number of investors could have considered high interest rates sufficient compensation for the increased risk. More conservative investors would have continued to pull capital out of Russia. The most probable result would nevertheless have been the establishment of a new state of equilibrium in the Russian financial markets, with a not very drastic reduction in foreign reserves. In the last week of November the CBR, having lost more than one-fourth of its international reserves, abandoned its attempts to maintain low interest rates and left the GKO-OFZ market. The mean weighted yields on state obligations increased to 40 percent annually.

One of the factors demonstrating the ill-suited government reaction to the deepening crisis was the absence of a well-developed program of measures to reduce state spending and the state budget deficit. An additional cause of the deterioration of the situation in the financial markets was changes in the composition of the government that were made at the end of November, which instilled in investors a lack of confidence in the ability of the executive authorities to pursue an intelligent and consistent financial policy.

In December, a relative stabilization was noted in the financial markets. The yields on state securities and trading in the secondary markets gradually declined. There was a rise in quoted prices on the stock market: the RTS-1 index rose by 20.8 percent over the month, so that its overall decline was 18.2 percent compared to October 27.

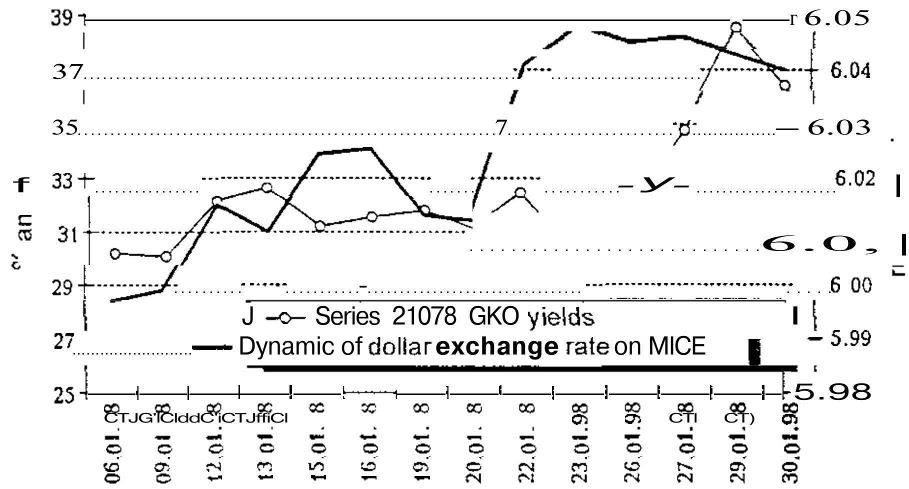
Worsening of the crisis (January 1998) and temporary stabilization (February–April 1998)

The crisis in Southeast Asia had started to grow at the end of 1997 and beginning of 1998. Once again this was a reason for a deterioration of the situation in the Russian financial markets. The assessments of the increased level of risk in Russia and the subsequent redistribution of quotas for investment in various countries among the major investment funds caused the next drop in prices in the stock market and a rise in yields in the GKO-OFZ market. At the beginning of January, the interest rates in the market for state securities went back up to 40 percent, remaining at that level until the end of the month. Domestic participants in the market also started dumping their paper because of the generally pessimistic sentiments relative to the prospects for the economic situation, as well as the worsened liquidity situation (as a consequence of the currency interventions in January, the M2 money supply had declined by 2.1 percent compared to October 1997).

The expected stabilization of the economic and financial situation in the Asian region and the review of Russian investment quotas in the ensuing year forced many investors to orient themselves toward price rises in the Russian stock market. This is evidently the explanation for a rise of 13 percent in the RTS-1 index at the end of December 1997 and beginning of January 1998. But a rise in price quotes did not occur in January 1998. The next round of the crisis in Asia, accompanied by a drop in the most major Asian and Western stock market indexes, destroyed the optimistic mood. There were two serious drops in the prices of Russian securities in January, and the overall drop in the RTS-1 index from October 6, 1997, to the end of January 1998 reached 50.9 percent. The decline in share prices for Russian companies became self-sustaining in nature.

The increased pressure on the ruble as a result of the exodus of portfolio investments from Russia at the beginning of the year caused a rapid increase in the official exchange rate of the U.S. dollar and a rise in forward quotes. As may be seen in Figure 4, the attempts of the CBR in January to accelerate the rate of devaluation of the ruble led to a sharp increase in interest rates on the GKO market. The market extrapolated the rate of the rise in the exchange rate and reacted to it with an increase in interest rates to compensate for the drop in yields figured in currency. This market reaction confirms

Figure 4. Dynamic of State Short-Term Bond and Currency Market **Yields** in January 1998



GKO =State short-term bond.
MICE = Moscow Interbank Currency Exchange
Sources: Central Bank of the Russian Federation; ''Finmarket'' Information Agency.

the considerations noted above that the pursuit of devaluation is a difficult decision to effect under conditions of a crisis of confidence, given short-term state debt, a high proportion of nonresidents in that market, and low levels of currency reserves.

It should also be noted that the lack of CBR stabilization measures in the currency market, given the conditions of a quite broad currency "corridor," led to a substantial increase in the amplitude of exchange-rate fluctuations. The heightened variability of the ruble exchange rate in turn increased the lack of investor confidence in the ability of the CBR to implement its announced exchange rate policy consistently.

Political tensions worsened again in the second half of January. A major redistribution of powers took place in the government: the economy was left under the management of Chubais, while the financial sphere was transferred to the oversight of V[iktor] Chernomyrdin. Nemtsov was released from his oversight of the fuel and energy complex. This was an additional factor that worsened investor expectations.

A period of relative stabilization ensued in the markets in February–April 1998. These positive trends were to a significant extent the consequence of several declarations by the president and the goveminent that budget policy, in particular, would be tightened up, and that a primary budget surplus would be achieved as early as 1998; the government elaborated "Twelve Major Steps of Socioeconomic Policy." A number of additional events occurred that served as positive signals for investors.[6] Thus, the IMF decided in February to extend the three-year program of extended financing for Russia to four years. The managing director of the fund, M. Camdessus, gave us to understand that Russia would be receiving the next installment of the credit in the amount of $700 million, and would receive credit until the year 2000 provided all agreements were fulfilled. Russia and Great Britain agreed entirely on the terms of a restructuring of Russian debt within the framework of the Paris Club on February 24.

But the president dismissed the Cabinet of Ministers on March 23, 1998. S[ergei] Kiriyenko was named acting prime minister. The short-term reaction of the financial markets to the change in government was quite positive. The improvement of the budget became the main direction of government economic policy. Analysis of the budget policy in the spring and beginning of the summer of 1998 shows that the cabinet of Kiriyenko was able to achieve some successes in this area.

As can be seen from Table 3, the situation with tax receipts to the federal budget shaped up somewhat better in the first quarter and beginning of the second quarter of 1998 than in 1997. At the same time, virtually all expenditure line items of both budgets were subjected to real reductions, with the exception of the servicing of state debt and spending on government administration. As a result, the federal budget deficit declined from 8.7 percent of GDP in 1997[7] to 4.8 percent of GDP.

Tracking the dynamic of arrears on tax payments to the federal budget during the period of 1997 and the first half of 1998, it may be noted that a reduction in tax payment shortfalls was observed throughout the whole first half of 1997 (approximately 11 percent from January through June), which was associated with the tough stance of the government aimed at tightening tax discipline and raising the collection of tax payments. However, this positive trend was replaced with its opposite—increased tax receipt shortfalls—as early as July 1997. Thus in December 1997, the rise in real shortfalls compared to the value in June was 37 percent. The rise in real shortfalls in tax payments over the first half of 1998 was 20 percent

Table 3

Federal Budget Funding in First Half of 1997 and First Half of 1998 (as % of GDP)

	01/97	02/97	03/97	04/97	05/97	06/97	01/98	02/98	03/98	04/98	05/98	06/98
Revenues:												
Tax revenues	6.7	7.5	8.4	9.4	9.9	9.2	8.5	8.5	8.8	8.9	9.0	8.9
Total revenues	8.5	9.7	10.3	11.1	11.5	10.9	10.2	10.3	10.7	10.8	10.9	10.8
Expenditures:												
Slate administralion	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3
National defense	1.9	2.4	3.2	3.4	3.5	2.9	2.0	2.0	1.9	1.9	1.8	1.9
Law enforcement activity and security	1.5	1.5	1.8	1.7	1.8	1.6	1.1	1.3	1.2	1.2	1.2	1.1
Science	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2
State services to national economy	1.0	1.0	1.6	1.7	1.7	1.6	0.4	0.7	0.6	0.7	0.7	0.8
Social services	0.6	2.0	2.4	2.5	2.5	2.5	1.6	1.8	2.0	2.0	1.9	1.9
Servicing of state debt	5.6	6.1	5.9	6.1	5.6	5.4	2.7	3.3	5.0	4.9	5.3	5.2
Total expenditures	15.0	16.4	18.1	19.1	18.5	18.5	14.9	12.1	14.3	14.4	14.5	14.7
Deficit	–6.2	–6.5	–8.0	-5.9	-7.4	-7.9	–4.7	-1.8	–3.5	–3.7	–3.6	–3.9

Sources: Ministry of Finance; State Committee on Statistics of the Russian Federation; Institute of the Economic Problems of the Transitional Period.

compared to December 1997. If the increased shortfalls had been able to be averted in 1998 (not counting fines and penalties), the tax payments to the federal budget over the January–June period would have been 9.5 percent of GDP.

Growth and culmination of the crisis (May–August 1998)

The macroeconomic situation in Russia began to worsen drastically in mid-May.[8] The quoted prices for state securities dropped rapidly; the mean weighted yields on GKOs rose to 33 percent in the middle of the month, to 46 percent by the twenties of the month, and reached 65 percent in the last week of May. The trading in the secondary market rose significantly at the same time. The drop in the RTS-1 stock market index was about 40 percent. The pressure on the ruble exchange rate increased. In May, currency reserves declined by $1.4 billion (almost 10 percent). The continued growth of political and economic instability in Asia (the situation in Indonesia and India, and the new round of crisis in South Korea and Thailand, among others), as well as the expectation of a hike in interest rates by the Federal Reserve System that would have increased the attractiveness of investments in American securities, had a definite influence on this development of events in Russia. But domestic Russian events evidently had a more material influence. The most important among the events that gave negative signals to the financial markets were the following.

The State Duma passed, and the president signed, the Law on Specific Features of the Disposition of the Shares of the United Energy System of Russia Joint-Stock Company [RAO EES Rossii] and the shares of other electric power companies under federal ownership. This law violated the rights of owners because it proposed that not more than 25 percent of the shares should be under the ownership of foreign investors. This reinforced doubts in the readiness of the Russian leadership to guarantee ownership rights. At a session of the government, S[ergei] Dubinin announced the threat of a crisis in the financial system and a disastrous rise in state indebtedness. This statement resonated even more strongly owing to the lack of "transparent" statistics characterizing monetary and currency policy. The statement by Accounting Office chairman Kh[achim] Karmokov regarding the necessity of a "proportional" sequestering of budget spending was received by the mass media as a proposal to freeze payments to service and repay state debt.

Alarming symptoms of a banking crisis appeared, as manifested in the introduction of outside management into the Tokobank, which had significant credit from Western banks. The structure of the balance sheet of the banking system[9] (along with its overall weakness in a financial regard, the result of the protectionist attitude of the state toward the major banks) made it extremely vulnerable to a devaluation of the national currency.

Despite the growing crisis in the Russian financial markets, the reaction of the government was extremely slow, which caused doubts in its ability to control the situation and accelerated the development of the crisis in and of itself. Only at the end of May did the government begin to develop anti-crisis measures in earnest. The government made statements on May 17–19 (regarding adherence to a policy of macroeconomic stability), as did the Central Bank of the RF (regarding the unchanged nature of currency policy and the impermissibility of financing the budget through the method of emissions), the Ministry of Finance (regarding a plan for a strict economy of budget spending), and the Federal Securities Commission (regarding ensuring the rights of investors).

On May 29, 1998, the government came out with a declaration of immediate measures to stabilize the financial market and budget and tax policy in 1998. A few days after his appointment, B[oris] Fedorov outlined the principal ways of raising the collectibility of taxes in Russia. The financial markets began to display a certain optimism after Chubais's visit to Washington on May 29-30, in the course of which the problem of offering a large financial aid package to Russia was discussed. The yields on state obligations declined to 51 percent in the first week of June, and to 46 percent in the second week.

Nevertheless, the absence of any systematic actions by the government to overcome the crisis provoked a new wave in the lack of confidence on the part of investors. A negative factor in the development of the situation in June was the slow pace of the negotiations between the Russian government and the IMF on the allocation of stabilization credit. The Russians had great difficulty agreeing to a program of measures to get out of the crisis that the IMF would have been prepared to support.

The international credit ratings of Russia and a number of Russian banks and companies dropped seriously in June.[10] It is important to note here that the downgrading of the ratings at the beginning of June, against the backdrop of the successful visit to Washington by Chubais, did not have a negative impact on the financial situation. However, when the corresponding decisions to reduce the rating were superimposed on the negative information on the progress of the negotiations for IMF credit after June 8, they caused a sharp deterioration in the situation in the market. The mass withdrawal of funds by investors from the financial markets after the reduction in Russian credit ratings led to a new rise in the interest rates on GKOs in the second half of June that exceeded 50 percent. The reduction in the stock market index was 20 percent over June. This markedly increased the pressure on the ruble exchange rate, and required sweeping interventions in the currency market on the part of the Central Bank of Russia.

Despite the unfavorable situation, on June 4, 1998, Russia placed five-year bonds in the amount of $1.25 billion at a rate of 11.75 percent. A new Russian loan for $2.5 billion was placed on June 18. The rate was 12.75 percent. These offerings were a negative signal to investors owing to the high price of the borrowings, and reduced the quotes for other circulating Eurobonds.

On June 17, 1998, B[oris] Yeltsin named Chubais the president's special representative for liaison with international financial organizations, with the rank of deputy prime minister. This decision, made on the eve of the negotiations with the IMF, was perceived in very positive fashion by the participants in Russian financial markets. An IMF team headed by the first deputy managing director of the fund, S[tanley] Fisher, arrived in Moscow on June 22 to conduct the negotiations regarding the allocation of stabilization credit to Russia in the amount of about $10 billion. The total amount of the stabilization credit was raised to $15 billion in the course of the discussions. A day later the Board of Directors of the IMF approved the allocation of the next credit installment to Russia in the amount of $670 million. Furthermore, the IMF issued a statement in which it supported the position of the Russian government, which was taking steps to support the national currency and not to permit a drastic devaluation.

The government was actively developing an anti-crisis program in June of 1998. Among the measures included in it, we can single out the planned reduction in gas prices and rates for electric power, changes in tax legislation (the conversion to charging the value-added tax [VAT] upon shipment; the institution of a uniform income tax rate; a reduction in the profits tax rate; an increase in excise rates; a limitation on the number of enterprise settlement accounts; and the institution of a sales tax, among others), and the sale of the blocks of shares in major Russian corporations belonging to the state (in particular, 5 percent of the shares of the Gazprom Russian joint-stock company and the state block of shares in the Sviazinvest joint-stock company). A package of draft anti-crisis legislation was submitted to the State Duma at the beginning of July 1998.

The deterioration of the situation in the market for state securities in the first half of July 1998 was characterized by a rise in the mean weighted yields in the market to 126 percent annually. On July 8, 1998, the RF Ministry of Finance canceled auctions to offer two issues of GKOs with maturities of January 6 and July 7, 1999, and an additional installment of the OFZ with a fixed income. On June 13, 1998, the government announced its intention to offer GKO holders the opportunity to convert them into medium- or long-term bonds denominated in dollars with redemptions in 2005 and 2018.

The situation improved somewhat after the announcement on June 13, 1998, that the IMF, the International Bank for Reconstruction and Development, and the government of Japan would grant Russia $22.6 billion in financial assistance. Of this sum, $5.6 billion was to be granted immediately following the conclusion of the session of the IMF Board of Directors. The mean weighted yields on GKOs declined to 53 percent from July 13 to July 19, while the RTS-1 index rose by 34 percent. However, the auction on July 15 to place GKOs was not carried out once again, and the state debt was serviced out of the state budget. A suspension of the issue of state securities for one year was announced on July 20.

Unfortunately, much of the draft legislation in the anti-crisis package was rejected by the State Duma. Because the passage of those laws was a constituent element of the obligations of the Russians to the IMF in obtaining financial assistance, a slight decline in the amount of it could be anticipated. Nevertheless, as a result of Chubais's negotiations with the IMF leadership, the size of the first installment was not reduced very much—from $5.6 billion to $4.8 billion. The

IMF decided to allocate a new aid package to Russia on July 21.[11] It was planned to offer Russia more than $11 billion in all in 1998. After that decision was made, Russia sent an inquiry to the IMF regarding the possibility of opening a credit program for 1999–2001. The total amount of the borrowing was expected to be $8 billion.

The Statement of the Government and the Central Bank of the RF on June 20, 1998, also defined highly important steps in the area of state finances, such as strengthening controls over the payment of current tax obligations; extending the deadlines for the repayment of domestic debt; ensuring a primary budget surplus of 3 percent of GDP in 1999; reducing noninterest budget spending to 10 percent of GDP; and reducing the budget deficit to 2.75 percent of GDP. The government proposed changes to the Tax Code of the Russian Federation with regard to the introduction of a uniform VAT rate of 20 percent, a transaction to the charging of the VAT according to the accrual method; the elimination of concessions for closed partnerships; changes in the structure of income tax rates on individuals; the introduction of a sales tax of 5 percent; and the cancellation of all deferments on tax payments.

Despite the reduced size of the first installment, the financial markets reacted positively to this event. The yields on state obligations declined to 45 percent. The further development of the situation largely depended on clear-cut signals to the market regarding the next steps of the Russian government to normalize the situation. But no measures testifying to the presence within that government of a well thought-out plan of action were effected. Moreover, a chain of evidence demonstrated to investors that the government lacked an understanding of the seriousness of the prevailing situation.

One important circumstance was the confrontation between the Ministry of Finance and the Central Bank of the Russian Federation. The essence of the conflict was that by summer 1998, the Ministry of Finance had begun systematically to delay repayment to the CBR of the indebtedness that had arisen for the repayment of the next series of GKOs by the bank. The indebtedness of the Ministry of Finance to the CBR was reaching 12-13 billion rubles in July. As a result the CBR froze Ministry of Finance accounts on July 21. The problem was settled only several days later, when the Ministry of Finance was required not to delay the repayment of the GKO debt by more than six days.[12]

Table 4

Weekly Dynamic of Gold Currency Reserves and Monetary Base at the End of July–October 1998

	Monetary base, billions of rubles	Growth rate of monetary base, %	Gold currency reserves, billions of dollars
July 20–26, 1998	—	—	19.5
July 27–August 2, 1998	160.8	—	18.4
August 3–9, 1998	—	—	16.3
August 10–16, 1998	160.7	—	15.1
August 17–23, 1998	161.8	0.68	13.4
August 24–30, 1998	158.7	-1.92	12.7
August 31–September 6, 1998	162.8	2.58	12.3
September 7–13, 1998	167.3	2.76	12.3
September 14–20, 1998	170.3	1.79	12.0
September 21–27, 1998	171.2	0.53	12.4
September 28–October 4, 1998	174.8	2.10	12.8
October 5–11, 1998	183.9	5.21	13.3

Source: Central Bank of the Russian Federation.

A meeting of the chairman of the government with the largest investors took place immediately following the receipt of the credit, in order to explain to them the action plan to repay and service state obligations in the near future (at least to the end of 1998). But the government felt that a temporary stabilization in the market in the latter days of My was a stable trend, and held this meeting only after a week, on July 27.

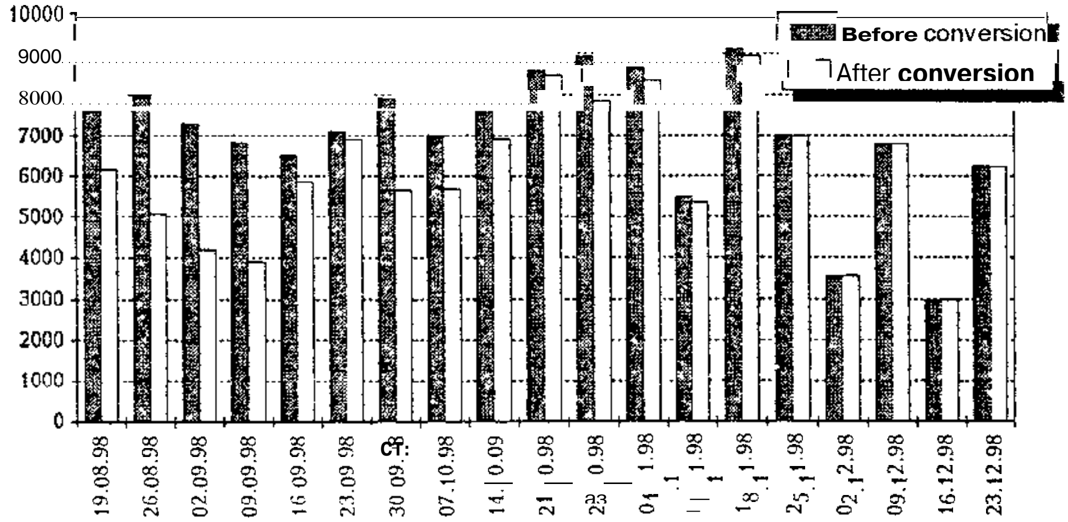
In the aggregate, the events that occurred led to the fact that, beginning approximately August 3, the process became uncontrollable. The yields on state obligations increased to 56 percent, and the stock market drop accelerated. The RTS-1 index had fallen by almost 30 percent over the time that passed from the allocation of the IMF stabilization credit to August 17. The amount of international reserves of the monetary authorities decreased at a rapid rate, comparable to the pace of the drop in November 1997 (see Table 4).

A banking crisis began along with the panic in the currency market. It was provoked by the deterioration of the situation in the financial markets, against the background of the tight monetary policy of the first half of 1998; by September 1, the monetary base had declined by 3.5 percent compared to the value at the beginning of the year. We would note that in August, despite the mass sales of currency by the CBR, the monetary base was hardly reduced at all. The drop in the quoted prices for Russian state securities that were serving as collateral for credit given to Russian banks by foreign banks played an important role in the worsening liquidity crisis in the banking system. As a result of the drop, additional deposit requirements arose for the Russian banks to increase their funds in margin accounts (margin calls). The banks began selling the GKO-OFZs in their portfolios, as well as corporate shares, with the subsequent conversion of the funds received into currency, in order to bring up the funds in the margin accounts. This bankpolicy caused additional nervousness in the financial markets, including the market for Russian securities denominated in currency. The first banks that were unable to meet their obligations to foreign lenders were the SBS-Agro and the Imperial.

In summing up the results of the last months before the culmination of the crisis, it should be noted that the chief factors that kept Russia from avoiding a devaluation of the ruble in August, in our opinion, were the lack of support for the government anti-crisis program on the part of the State Duma and the insufficient amounts of assistance on the part of the IMF. By the middle of the month, the situation could possibly have been rectified at the expense of emergency assistance in the amount of $10–15 billion, but obtaining that kind of funding was unrealistic in the prevailing political situation. The sole possible way out of the emerging situation was a devaluation of the ruble.

The government plan, made public on August 17, included three groups of measures: the introduction of a "floating" ruble exchange rate, with its devaluation to approximately 9 rubles to the dollar before the end of the year; the imposition of a three-month moratorium on the repayment of the foreign debts of Russian banks; and the compulsory restructuring of GKO-OFZ debt. Several alternative options for the realization of this decision were discussed during the period of its preparation. In particular, the introduction of a fixed exchange rate for the ruble at a level determined by an equality of the amount of foreign reserves to the monetary base was proposed.[13] The ratio of the monetary base to gold currency reserves was about 1.6 in August 1998 (thus, the devaluation of the ruble by about 60 percent would have made the monetary base and currency reserves equal). The option of a moratorium on the repayment of foreign

Figure 5. **Schedule of State Short-Term Bond–Federal Loan Bond Redemptions from August 19 Through December 31, 1998** (before and after conversion in July, millions of rubles)



Sources: "Finmarket" Information Agency; Institute of the Economic Problems of the Transitional Period.

debts that would extend only to those in need of such a solution, rather than to everybody, was also proposed. Several plans for restructuring state obligations were discussed. The tough decision to announce a *de facto* default on the GKO-OFZs was explained by the fact that the redemption of the GKO-OFZ issues in August–December 1998, given the impossibility of refinancing them out of new offerings, would be possible only through a sweeping emission. About 20–25 billion rubles a month were required to pay off the corresponding issues (see Figure 5).

The government plan received the concurrence of the IMF on August 15. But the IMF subsequently insisted on making these measures public without a plan for the restructuring of the GKO-OFZs, which required additional coordination in the opinion of the IMF. The announcement of the program on August 17 without a restructuring plan elicited a negative reaction in the financial markets. The stock market index dropped another 29 percent in just one week. The government announced a plan to restructure domestic state debt a week later.[14] The total amount of the frozen domestic debt was 265.3 billion rubles ($42.2 billion at the exchange rate of August 14, 1998). OFZs worth 75 billion rubles with maturities in 2000–2001 remained in circulation.

The exchange rate of the dollar, despite the attempts of the CBR to restrain it, rose by 11 percent. The attempts to protect the ruble with the aid of currency interventions were major mistakes by the bank, which served as an important factor in the collapse of the ruble at the end of August and beginning of September. On August 26, the CBR, having squandered significant reserves at low dollar prices, suspended trading on the Moscow Interbank Currency Exchange [MICE] indefinitely. Trading on regional currency exchanges was suspended as of August 28. The Central Bank was no longer able to hold the ruble, owing to the drop in the levels of currency reserves ($12.3 billion as of September 1).

The Moody's Investors Services agency lowered the rating on Russian obligations in foreign currency from B1 to B2 on August 17, 1998. This momentarily caused an additional drop in the prices for the currency obligations of the RF Ministry of Finance, quoted in foreign markets at rates of 170 percent annually. The credit ratings for the debts of constituent entities of the Federation and major Russian banks were lowered as well.

The program of Kiriyenko's government was not effected in its initial form. The dismissal of the government headed by Kiriyenko on August 23, and the appointment of Chernomyrdin as acting chairman of the government, engendered a rise in the uncertainty of economic prospects and a panic in the financial and commodities markets.

In August 1998 overall, the official exchange rate of the dollar rose from 6.238 to 7.905 rubles/dollar, that is, by 26.7 percent. The dollar exchange rate rose on the MICE on August 25 (the last day of trading) from 6.272 to 7.86 rubles/dollar, that is, by 25.3 percent. The RTS-1 index dropped steadily following the trend that had been set for it as early as mid-July, and the total drop over August was about 55 percent. There was a jump in the rates for one-day credit on the interbank lending market to 120–170 percent annually after August 17, 1998. The crisis of liquidity in the banking system and the outbreak of solvency problems at virtually all of the major commercial banks drastically lowered the confidence level of financial institutions in each other. The daily volumes of credit being issued dropped to record low levels in the second half of August 1998.

A further worsening of the economic and financial crisis associated with the devaluation of the ruble and the decline of confidence in the Russian national currency occurred in September 1998. The three-fold devaluation of the ruble and significant increase in the velocity of the money supply caused a rapid growth in consumer prices.

Prices rose 3.7 percent in August, and the consumer price index went up 35.7 percent over the first week of September. The jumps in the exchange rate of the dollar, sharp reductions in imports, and the closing of a number of stores caused a consumer panic that accelerated the price increases and led to the appearance of shortages for a number of goods. But the rate of inflation later slowed simultaneously with the declines in the exchange rate of the U.S. dollar. The consumer price index thus rose by 38.4 percent as a whole for the month. The further slowing of the rate of price increases was explained to a large extent by the tough monetary and credit policy of the CBR in August 1998.[15] The monetary base grew 9.5 percent in September, in the face of a substantial slowdown in the rate of decline in foreign reserves. The inflationary impact of the emission was simultaneously offset to a significant extent by the reduction in the money and credit multiplier, owing to the withdrawal of the deposits of the public from commercial banks.

The domestic currency loan bond market and Eurobonds became the sole indicators of interest rates for Russian obligations under conditions of the absence of a market for domestic state borrowings. The quotes for series 3 domestic currency loan bonds (maturity in 1998) dropped to 40 percent of the nominal value compared to 90 percent at the beginning of August, and domestic currency loan bonds of other installments went to 10 percent of nominal value. The Eurobonds were quoted at 20–30 percent of their nominal values (70–85 percent before the crisis).

In September, significant fluctuations were typical of the exchange rate of the dollar in the Electronic Lot Trading System. Whereas on August 31, the exchange rate of the dollar had been 7.905 rubles, it had risen to 20.825 rubles/dollar by September 9. The necessity of bringing down the nominal losses from forward contracts for delivery in the middle of September determined the subsequent drop in the dollar exchange rate to 8.67 rubles/dollar. The dollar quotes rose again to the level of 16 rubles after the establishment of this exchange rate on September 15, 1998. As a result, the exchange rate of the U.S. dollar rose by 102.4 percent in September.

After the August drop in quotes, the price declines of Russian shares slowed somewhat in September. Whereas in August the RTS-1 index declined by 56.2 percent, in September it went down by 33.2 percent. The RTS-1 index had declined by 92.3 percent since the beginning of October 1997, and by 89 percent since the beginning of 1998. The interest rates for one-day loans in the interbank ruble credit market in mid-September reached 450 percent annually, and for three-day credit, 130 percent. The repayment of the credit was provided for through the high yields on currency operations. The dealing volumes in September had dropped tenfold compared to August.

Summarizing the results, we would single out the most important economic consequences of the financial crisis in Russia:

—the decline in confidence among both domestic and foreign investors in the government, the Central Bank, and the Ministry of Finance of Russia signifies a loss of opportunities to borrow money in both foreign and domestic markets, as well as the outflow of foreign investments, and, as a consequence, a further postponement of the prospects for economic growth;

—the closing off of both foreign and domestic sources of financing for the state budget deficit signifies a transition in this situation to the inflationary nature of financing and a return to the practice of Central Bank lending to the government, which will in turn raise the growth rate of the money supply and inevitably be expressed in a rise in consumer prices and an overall weakening of monetary and credit policy;

—the crisis in the domestic banking sector, caused not only by the losses in the financial markets but also by the very fact of the elimination of the principal and interconnected sources of income itself—the GKO-OFZ market—will worsen the payments crisis;

—the collapse in the Russian stock market will lead to a further decline in opportunities for Russian enterprises to attract investments;

—the expected increase in business activity in the oil, gas, and other export-oriented sectors of the economy might not occur thanks to the devaluation, because, under conditions of a worsening budget crisis, the state will try to capture all additional profits as payments for overdue indebtedness to the budget;

—the ability of a number of domestic import-replacing sectors to increase product output quickly, taking advantage of the sharp drop in the real exchange rate of the ruble and the corresponding decline in the competitiveness of imported goods, will be determined by the level of future inflation.

The macroeconomic forecast

If we consider the hypothetical option of implementing the initial plan of action for overcoming the crisis developed by the Kiriyenko government, the following possible consequences could be delineated. Given the absence of an expansion of the monetary base after the approximately 50 percent devaluation, the rise in consumer prices could have been 30–50 percent in one month. Moreover, under conditions of tight monetary policy, the variation is possible in which prices drop even as far as their initial level as a consequence of the contraction of aggregate demand. The new equilibrium could be characterized by a smaller volume of aggregate supply in which domestic goods occupy a greater share, while the share of imports is less, than before devaluation. At the same time, the prices for imported goods are relatively higher, while the prices for domestic goods are relatively lower. Given these preconditions, the budget for 1998 could have been met through the rise in nominal incomes as a consequence of inflation and economies in the expenditures to sendee state debt. Moreover, the support of the IMF for this program would have made it possible to receive the next installments of the stabilization credit.

But this variation of the development of events seems politically very unlikely owing to the completely inevitable and severe social consequences (a sharp drop in the real income of the population, unprecedented growth in unemployment, the aggravation of the bank crisis, nonpayments, etc.). Even given a high level of political stability, such a program has little chance of successful realization, insofar as a tight money policy is an initial precondition for it. At the same time, the pursuit of tight money policies under conditions of a developing banking crisis, one of the reasons for which is the tight money policy itself, would be exceedingly difficult.[16] Overcoming the liquidity crisis under Russian conditions requires a significant weakening of monetary policy. The political pressure on the part of the influential banking lobby, which can scarcely be withstood by any Russian government, is also a factor weakening it. The precondition of the capability of tight control of the monetary base under conditions of devaluation and default in the market for state obligations is thus hard to consider realistic.

The options for economic policy under which a weakening of monetary policy occurs after devaluation can be divided into two fundamentally distinct groups. The first group includes the options, not very realistic under contemporary political conditions, under which some increase in the monetary base occurs over a quite limited time interval, and then there is a return to a tight money policy. They could occur in a case where the switch to a restrictive monetary policy is accomplished under conditions where economic agents have confidence in it, that is, when inflationary expectations are dampened simultaneously with the pursuit of restrictive measures, and the demand for real cash balances rises. In this case, a monetary emission consolidates the higher price levels, while the stabilization and subsequent rise in demand for cash balances absorb the additional supply of money. The level of inflation thus depends on the correlation of the size of the additional emission and the growth in demand for money in the course of a subsequent tightening of monetary policy. Depending on this correlation, the establishment of prices at a new equilibrium level that is both higher and lower than the level achieved as a result of the initial price jump after devaluation, but in any case higher than before devaluation, is possible. This signifies in particular that if the real money supply reaches the pre-devaluation level in a few months, inflation will have the same value as growth in the money supply.

The second group of options for economic policy is characterized by a significant growth in the monetary base after devaluation and a soft money policy aimed at financing the budget deficit and resolving the banking crisis through emissions. Monetary equilibrium is lacking under this turn of events. The economic agents do not believe in the possibility of a stabilization in the foreseeable future, and they continue to reduce their demand for real cash balances. The price increases outstrip the increase in the monetary base in that case, and lead to an actual reduction in the real supply of money.

In order to predict the dynamic of prices in the fourth quarter of 1998 and in 1999, we will consider four scenarios for monetary and credit policy with regard to the second of the enumerated groups. All of the scenarios are based on the assumption of the realization of the program of "controllable emission," talked about by many officials; they differ only in the amounts of obligations assumed by the state. The results of calculations and the dynamic of the principal macroeconomic parameters for all scenarios are given in Table 5.

The following preconditions are common to all of the scenarios:

—the income and expenditures of the federal budget and sources for financing the federal deficit in the fourth quarter of 1998 correspond to the statements of the Ministry of Finance at the session of the government on October 16, 1998, regarding the principal parameters of the federal budget for October-December 1998;

—the level of income of the federal budget in 1998 will not

Table 5

Dynamic of Macroeconomic Indicators in Realization of Various Options for Monetary and Credit Policy

	October 1998	November 1998	December 1998	1998	1999
Scenario 1					
Inflation (%)	3.0	3.5	5.6	68.0	259.0
GDP (billion rubles)	260.0	269.0	284.0	2,697.0	8,280.0
Growth rate of monetary base (%)	13.1	18.1	11.2	55.3	259.3
Growth rate of M2 (%)	13.1	12.5	5.6	29.7	259.4
Scenario 2					
Inflation (%)	3.0	3.5	5.6	68.0	330.0
GDP (billion rubles)	260,0	269.0	284.0	2,697.0	9,130.0
Growth rate of monetary base (%)	13.1	18.1	11.2	55.3	375.3
Growth rate of M2 (%)	13.1	12.5	5.6	29.7	375.5
Scenario 3					
Inflation (%)	3.0	3.5	5.6	68.0	370.0
GDP (billion rubles)	260.0	269.0	284.0	2,697.0	9,573.0
Growth rate of monetary base (%)	13.1	18.1	11.2	55.3	415.3
Growth rate of M2 (%)	13.1	12.5	5.6	29.7	415.4
Scenario 4					
Inflation (%)	3.0	3.5	5.8	69.0	420.0
GDP (billion rubles)	260.0	269.0	285.0	2,698.0	10,526.0
Growth rate of monetary base (%)	13.1	20.7	14.8	63.8	437.2
Growth rate of M2 (%)	13.1	14.9	9.0	36.8	437.3

exceed 9 percent of GDP (9.5-10.5 percent of GDP in the first half of 1998);

—the spending of the federal budget in 1999 will be 17.0–19.5 percent of GDP through increases (compared to the first half of 1998) in the budget line items for national defense, law enforcement activity, research and development, state support for sectors of the national economy (including the banking sector), financial assistance to other levels of authority, and other expenditures (including assistance to off-budget allocations);

—the federal budget deficit in 1999 will reach 8.0–10.5 percent of GDP, and will be covered through emissions;

—GDP and consumer price index in September correspond to the actual values, and inflation in October 1998 is estimated according to the results of the first three weeks of the month;

—the growth rate of GDP will lag behind the growth rate of the consumer price index in October–December 1998, and will grow in accordance with consumer prices in December;

—the monetary multiplier will decline from 2.1 to 1.9 by December 1998;

—the drop in real GDP in October-December 1998 will be 4–5 percent relative to the corresponding period of the prior year, and 5 percent in 1999 compared to 1998;

—a relative stability of inflationary expectations and the absence of significant fluctuations in the exchange rate of the U.S. dollar will be observed. In this case, a monetary emission (in the first month or two) will consolidate the price levels attained in September 1998;

—the volume of gold-currency reserves of the CBR will be preserved, provided their use to "support" the monetary emission is not permitted;

—the consumer price index is adjusted considering seasonal factors in December 1998–February 1999.

The *first scenario* corresponds to the option of a federal budget for 1999 with a deficit of 8 percent of GDP. This deficit level is roughly equal to the one implied by the Ministry of Finance for the fourth quarter of 1998 (about 8.3 percent of GDP). It is assumed that an emission will be made in October-December 1998, in accordance with the gap predicted by the RF Ministry of Finance between the budget income and expenditures month by month. The total emission will thus be about 83 billion rubles by the end of 1998.

According to the *second scenario*, the government will increase the amount of expenditures in 1999 to 19.5 percent of GDP. In this case, the federal budget deficit will reach 10.5 percent of GDP. This option seems the most likely to us; we will therefore use it henceforth as the baseline.

The draft federal budget for the fourth quarter does not plan the complete repayment of all of the arrears to employees in the budget-financed sphere. Therefore, we assume that the *third scenario* for the solution of these problems is additional expenditures and the corresponding emission of about 37 billion rubles. We understand that the repayment of the arrears will occur in the first quarter of 1999.

Finally, in the *fourth scenario* we take into account the possibility of supporting the banking system through emissions. According to estimates of the Central Bank of the Russian Federation, about 10 billion rubles is needed to clear up the nonpayments among banks. Concurrently, the temporary restoration of bank liquidity through lending or the buy-out of their state securities (except for the Savings Bank of the Russian Federation) would require approximately 40 billion rubles (this is the amount of the block of state securities held by the banks, which roughly corresponds to the amount of obligations to the public). We assume that these funds will be received by the banking system evenly for a period of fourteen months, starting in November 1998.

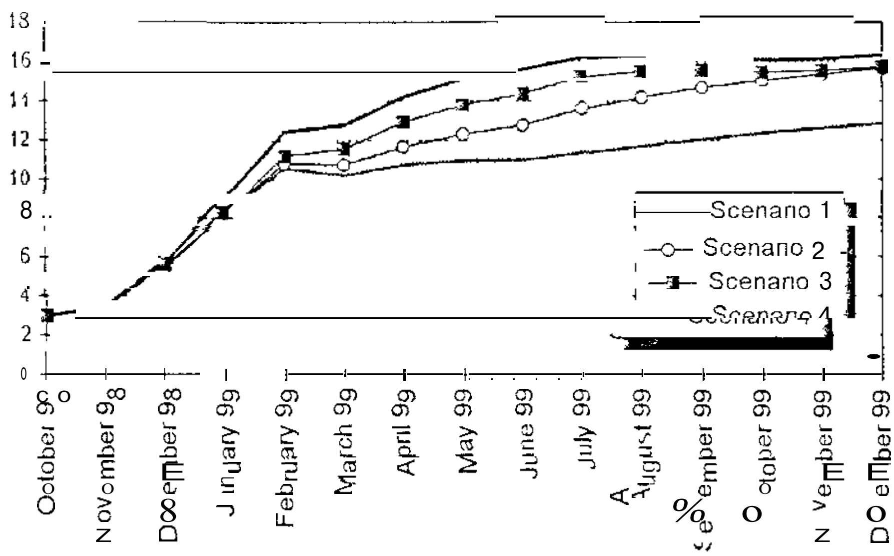
In order to model inflation, we used an autoregressive monetary model of price index dynamics estimated for the period of high inflation of 1992 to the beginning of 1995.[17] The narrow (ruble) money supply M2 was taken as the descriptor of monetary policy, because an estimate of various specifications of the equation reveals a better dependence of the consumer price index on this aggregate than on the dynamic of broadly defined prices (counting currency deposits) or the monetary base.[18]

Thus, given an additional emission of 83–97 billion rubles, the rise in the consumer price index would be 65–70 percent in 1998. In 1999 the difference in the levels of inflation between the scenarios under consideration as a consequence of the presence of lags that condition the link between growth in the money supply and the growth rate of prices will be much more substantial.

According to the calculations, and given a development of events according to the first scenario (a budget deficit at the level of 8 percent of GDP), inflation in 1999 will be about 260 percent, for the second scenario 330 percent, for the third scenario 370 percent, and finally, for the fourth scenario, 420 percent. The dynamic of inflation by months is shown in Figure 6.

As has been noted, these levels of inflation could be reached with relatively stable or slowly decreasing demand for real cash balances. This, in turn, assumes an absence of significant jumps in the exchange rate of the dollar, that is, the devaluation of the ruble relative to the dollar will occur at rates that roughly correspond to the rate of inflation. In this case, the dynamic of the exchange rate would not serve as a benchmark for increasing inflationary expectations. According to the scenarios that have been considered, the

Figure 6 Scenarios of the Dynamic of Inflation in October 1998–99 (as %)



exchange rate of the dollar at the end of 1998 will be about 17.5 rubles/dollar, given a "soft" administrative regulation of the exchange rate and devaluation of the ruble at the level of about 0.7 of the rate of inflation. This corresponds to the situation of high inflation of 1992–94, when currency policy was regulated by the present management of the CBR.

The dynamic of the ruble exchange rate and currency reserves will be influenced by both speculative (determined by the level of inflationary expectations) and fundamental factors, largely reflected by the balance of payments indicators. The demand for currency will be determined by the amount of imports (given a drop in imports of 10–15 percent compared to last year) and a demand for currency on the part of the population at the level of about 15 percent of monetary income (the latter is lower than the indicator for 1997 and the first half of 1998, and corresponds to the structure of spending by the population under conditions of high inflation). The commercial banks will be needing currency to settle with creditors (about $11 billion, according to data from the consolidated balance sheet of the banking system), and, moreover, a portion of the funds allocated for the reorganization of the banking system could end up in the currency market as well. The repayment and servicing of state foreign debt next year will require about $18 billion. At the same time, a decline in exports of 5-7 percent compared to the prior year can be presumed, with the possibility of the use by commercial banks of a portion of their currency assets to repay debts. The dynamic of the dollar exchange rate and currency reserves can thus be assessed only by prescribing the options for the development of events associated with the restructuring of foreign debt in 1999.

Notes

1. According to the Maastricht Treaty, regarding the creation of the European Monetary Union, candidates for entry into that union are to provide for a reduction in the ratio of state debt to GDP to 60 percent.

2. Obviously the question of whether any tactical measures could have prevented the development of events observed in Russia in 1998 has no unequivocal answer. The near future will nevertheless show whether Brazil—where the economic policy being pursued, given conditions comparable to those of the fall of 1997, in our opinion, corresponded to the requirements of the economic situation to a greater extent—will be able to avoid an acute financial crisis.

3. For the first ten months of 1997, the growth in real GDP was 0.7 percent relative to the corresponding period of the prior year. Industrial output rose by 2.4 percent in real terms, and agricultural production by 12.0 percent. Inflation was 0.2 percent in October, and the cumulative price index since the beginning of the year was 9.2 percent. The income of the federal budget for the first ten months was 10.9 percent of GDP.

4. See R. Entov, ed. *Razvitie rossiiskogo finansovogo rynka i novye instrumenty privlecheniia investitsii* [The Development of the Russian Financial Crisis and New Instruments for the Attraction of Investments]. Moscow: IEPPP, 1998, pp. 235–40.

5. As of January 1, 1998, there should not have been a complete liberalization of the domestic debt market for nonresidents, in particular the lifting of the guaranteed yield levels and regulation of the terms for the repatriation of profits.

6. On March 10, 1998, the Fitch IBCA rating agency, despite all of the fluctuations in market conditions in the domestic financial markets, confirmed the long-term credit rating of Russia for foreign currency borrowings at BB+, and left Russia's short-term rating unchanged at B. But the next day the Moody's rating agency announced a downgrading in the credit rating for foreign borrowings in foreign currency from Ba2 to Ba3, and on bank deposits in foreign currency to B1.

7. In the first half of 1997, the secondary federal budget deficit according to the international definition was approximately 1 percent more than that based on data from the RF Ministry of Finance.

8. We would note that an unsymmetrical reaction of the markets occurs objectively as a crisis deepens: any mistake in economic policy or bad news has serious negative consequences, while correct steps do not elicit a positive response from the markets.

9. Currency-denominated credit predominated in the structure of commercial bank assets under the conditions of the rapid rise in the exchange rate of the dollar in 1992-94. The rapid devaluation of ruble obligations made it possible to finance even projects that were inefficient in currency terms. The situation was altered

somewhat starting in 1995, with the relatively stable exchange rate of the ruble: the high real rates on ruble obligations demanded the more efficient placement of assets. A process of increases in the value of currency-denominated liabilities of the commercial banks thus occurred in 1995–96, and their value exceeded the currency assets of banks in the first quarter of 1997. By the end of the first quarter, the currency obligations of commercial banks had approximately doubled for the year, from $9.5 billion to $19.2 billion. Their value had reached $20.5 billion on July 1, 1998. This increase was a consequence of the rapid growth in borrowed funds and loans in the face of relatively stable values of current currency accounts and deposits. Currency assets rose to approximately $12.1 billion over this period. Moreover, the growth occurred principally through increases in credit issued.

10. Moody's rating agency on June 2, and the Fitch IBCA on June 2 and June 8.

11. This installment was received in the CBR accounts on July 23, 1998.

12. At the same time, the Ministry of Finance made a serious technical error on July 22, in the placement of the next GKO installment. Its task was to show the markets that after the IMF credit was received, a basis existed for a play on a rise in prices for Russian securities. For this purpose, not accelerating the amounts of borrowing of funds, they should have made a cautious application for the placement of 2–3 billion rubles. The Ministry of Finance instead tried to place 13 billion rubles, raising interest rates in the market to 49 percent, thereby sending a signal opposite to the one necessary to stabilize the situation.

13. Such a ratio more likely has psychological significance in the prevailing situation because about S5 billion of the $12 billion of reserves are gold, and another three billion are illiquid and cannot be mobilized quickly in the event of an attack on the ruble.

14. The plan proposed a week later by the government of the Russian Federation to restructure the domestic state debt of the RF envisions the following. GKO-OFZs with maturities before December 31, 1999, are to be redeemed at the times stipulated when they were offered, but the funds are not paid out to the holders of the bonds but rather are credited to special "transit" accounts, from which they can be reinvested either in new ruble coupon bonds with circulation terms of three to five years and coupon rates of 20–30 percent annually, or in certificates of deposit of the Savings Bank of the Russian Federation. This procedure does not extend to the securities belonging to the CBR and resident individuals of the RF. A plan of restructuring for the primary holder is to be considered separately in conjunction with the RF Ministry of Finance. The latter should obviously receive the nominal value of the obligations at the times stipulated when they were offered. An individual clause of the decree stipulates the possibility of the early redemption of the GKO-OFZs (before September 26, 1998). In this case, an investor who has declared his intention to submit bonds held by him for payment before maturity receives 5 percent of the nominal value of the securities and can exchange up to 20 percent of his holdings for currency obligations with a maturity in 2006. The payment of 5 percent of the nominal value of all GKOs redeemed during the period from August 17 through September 3, 1998, is also envisioned.

15. There was virtually no change in the monetary base in August, despite the fact that the CBR expended S5.95 billion that month from its own gold currency reserves. The currency interventions were obviously sterilized as a result of the

open market operations with state obligations and the issue of stabilization credit to commercial banks.

16. The bankruptcies of banks, which began as a result of the drop in quotes on currency-denominated Russian state securities, the default on the GKO-OFZs, the crisis in the Russian stock market, and the "runs" on banks by depositors, obviously require that steps be taken to enhance their liquidity, as well as to carry out the mass bankruptcies of banks with the opening of access to foreign banks. The banking crisis is paralyzing all economic activity and drastically worsening the crisis in the system of state finances. The resolution of the liquidity crisis across Russia by the traditional means—a slight increase in the monetary base—is extremely difficult. Credit to banks under the institutional conditions prevailing today would be used primarily to purchase currency and meet the requirements of some creditors (those connected with the bank), and not to untangle nonpayments. At the same time, given the inflationary expectations of economic agents, an increase in liquidity would cause a sharp acceleration in inflation.

17. This model links monthly inflation with inflation in the prior month and with growth in the money supply M2. The geometric mean of the monthly increases in the money supply over the prior six months is an indicator of that increase. Solution of the autoregression gives the following results:

$$p_t = \underset{(7.5)}{0.646p_{t-1}} + \underset{(4.0)}{0.408m_{t-1,\,t-7}},$$

where p_t is the consumer price index for month t, and $m_{t-1,\,t-7}$ is the geometric mean of the monthly rates of increase in the money supply M2 over the preceding six months.

The regression equation does not include an absolute term (evaluation showed it to be statistically insignificant). Checking for the presence of an autocorrelation using the Lagrange method demonstrated the absence of a first-order correlation at a 95 percent confidence level. Moreover, the Box-Pierce test shows that the hypothesis that the balance represents white noise cannot be refuted with a 95 percent probability. The multiplication factor of the determination for an equation with an absolute term R^2 is equal to 0.81.

18. It must be noted that, while the dynamics of the narrowly and broadly defined money supplies behaved in roughly identical fashion under the conditions of financial stabilization in 1995–97, growth in the currency component, and, accordingly, in the money supply broadly defined, was observed with the onset of crisis, while the narrowly defined (ruble) money supply contracted.