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ROADBLOCK TO ECONOMIC REFORM: INTER-ENTERPRISE DEBT AND THE TRANSITION TO MARKETS

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Roadblock to Economic Reform: Inter-Enterprise Debt and the Transition to Markets

Barry W. Ickes and Randi Ryterman[1]

Abstract: Two American specialists on Soviet and East European economies examine the relationship between inter-enterprise payments for goods and services and economic reform in Russia. Based on extensive interviews with Russian governmental officials and enterprise directors, as well as unpublished documents, the authors trace and discuss the unsuccessful policies of the government and Central Bank of Russia to eliminate arrears during 1992–93. They also explain why financial underdevelopment poses a serious obstacle to economic reform, and why an effort to sharply tighten credit in 1993–94 could lead to cascading enterprise failures. The analysis includes references to the change after October 1993. *Journal of Economic Literature* Classification Numbers: P21, O17, G20.

During 1992, a new economic crisis arose in Russia, one symptomatic of the deepest conflicts in the transition to markets. The economic reform program initiated by the government of Yegor Gaydar—shock therapy—was predicated on the assumption that the behavior of enterprise directors could be changed rapidly in favor of the market. The underlying assumption of shock therapy was that, if threatened with bankruptcy or liquidation, both state and privately-owned enterprises would choose to adjust to the marketplace. This assumption, it turned out, was not well-founded. Many enterprises, of both ownership forms, pursued an alternative strategy. Confronted with a dramatic fall in demand and a policy of tight credit, they chose not to adjust but, rather, to conduct business as usual. To finance production, enterprises provided their

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trading partners with credit, regardless of the creditworthiness of these partners. Much of this credit remained unpaid for two months or more, sparking one of the most serious and persistent crises of the transition.[2]

The inter-enterprise debt accumulation in Russia represents more than just a financial crisis. The phenomenal growth in the level of inter-enterprise debt in arrears has had profound political and economic consequences.[3] It precipitated a political crisis that severely weakened the Gaydar team, and eventually led to Gaydar's dismissal. The economic consequences have, if anything, been even more severe. An outcome of the debt accumulation has been a breakdown in economic stabilization. And, most ominously, arrears have proven to be a safety valve that enables enterprises to postpone adjustment.

Two independent forces converged in the early summer of 1992 to push successfully for a solution to the arrears crisis. Frustrated with the mounting volume of arrears, and with the monetary policy of the Central Bank of Russia, Parliament, spurred by the industrialists' faction, pushed for the replacement of Georgiy Matyukhin by Viktor Gerashchenko as Governor of the Central Bank of Russia. At the same time, the Russian government was faced with the very difficult problem of privatizing enterprises possessing large inter-enterprise credits and debits. These credits and debits were of uncertain value because the enterprises and their trading partners were of unknown viability. Therefore, neither the government nor enterprises could evaluate the likelihood that these loans would be repaid. Moreover, arrears delayed the realization of enterprise profits, causing the government's tax receipts to fall, especially the VAT. As a consequence, the Russian government also sought a solution to the arrears crisis.

One purpose of this article is to examine how the Russian government and the Central Bank of Russia responded to the stock of inter-enterprise debt that had been accumulated by July 1, 1992. We argue that the policy mix they selected has failed to address the fundamental incentive and information problems that underlie the creation of inter-enterprise debt. Consequently, while these policies have provided temporary relief from the problem of arrears, a new crisis is already developing. This time, however, the crisis may take an entirely new form.

[2]A detailed analysis of the causes of the arrears crisis is presented in Ickes and Ryterman (1992).

[3]In January 1992, inter-enterprise arrears were relatively insignificant, approximately R37 billion, less than 4 percent of Russia's GDP. By July 1992, arrears had risen to over R3.2 trillion, or approximately 25-40 percent of Russia's annual GDP (measured using prices at that date), or up to 80 percent of the GDP produced in the first half of the year.

This wide range in the ratio stems from differences in the estimates of inflation for the first six months of 1992. It is immensely difficult to be precise about any macroeconomic magnitudes, given the high inflation in Russia. But if we assume that Russia's GDP fell by 20 percent in 1992, and that the price level increased about 15 times by July (*Commersant* [in English], June 23, 1992), then arrears in the beginning of July would be about 25 percent of GDP. If, on the other hand, we take the official retail price index which shows prices rising 9.8 times, then we get the 40 percent figure. If we take the latter inflation estimate, then the July level of arrears would be equal to 80 percent of the GDP for the first six months of the year! In any event, the rise in arrears represented an 86-fold increase in nominal terms, and a six-fold increase in real terms, when measured using the *Commersant* inflation estimate.

A second purpose of our paper is to explain why inter-enterprise arrears pose a serious obstacle on the road to economic reform. Arrears arise because enterprises find the adjustment to markets costly. When enterprises provide credit to trading partners of unknown viability, they discover that they can obscure their own viability. This loss of information undermines the commitment of the government to policies, such as bankruptcy and liquidation, that, by necessity, must distinguish between good and bad enterprises. As the level of arrears grows, the information necessary to make this distinction erodes, and the commitment of the government to permitting enterprises to fail wanes. If even a few of the "wrong" enterprises fail, then a chain reaction could be created in which these failures lead to the failure of other, potentially successful, enterprises. Consequently, in an environment of poor information, policies of liquidation and bankruptcy carry with them the seeds of coordination failure on a massive scale. Other policies that require good enterprise-level information and the willingness of enterprises to adjust, such as privatization, are also jeopardized. Therefore, the solutions pursued by the Russian government and its Central Bank became only half-hearted, resulting in crippling inflation without providing any relief to the incentive and information problems that are at the heart of inter-enterprise arrears.[4]

In the wake of the October 1993 events, which have freed Boris Yel'tsin and the reappointed Yegor Gaydar to accelerate economic stabilization and reform, it will be especially important that they draw the correct lessons from the arrears crisis of 1992-93. A precipitous effort to tighten credit, given the current state of the financial system, could trigger widespread enterprise failures.

ELEMENTS OF THE SOLUTION

A solution to the arrears crisis must be composed of two critical elements. First, the large stock of arrears must be reduced. Unless this takes place, financial and other institutions will be completely unable to assess the viability of enterprises. To some extent, this reduction will occur automatically; inflation will erode the real value of arrears. However, relying exclusively on inflation to reduce the stock of arrears is not good policy. As we explained in Ickes and Ryterman (1992), inflation, in combination with the tax system, provides an incentive for the deferral of profits and, consequently, deferral of the collection of payments on debts as well. Moreover, using inflation to erode the real value of arrears is equivalent to debt cancellation. Consequently, it encourages enterprises to treat arrears as financially unimportant, thus undermining the incentive of enterprises to adjust. Finally, the residual stock of arrears may be

[4]Measuring inflation under current economic conditions in Russia is notoriously difficult. During 1992 consumer prices increased 23 times, while wholesale prices rose 32 times (December 1992 over December 1991). It is important to note, however, that monthly inflation rates fell throughout the first half of 1992, reaching *single* digits by July. Monthly inflation then reached 31.1 percent by October, remaining above 25 percent per month until March, declining to 20 percent for June (IMF, 1993, table 6; and *Russian Economic Trends: Monthly Update* [weekly newsletter], August 26, 1993, table 1).

sufficiently high to still require mutual clearing. But mutual clearing will not be adequate if net debt exists.

Second, a system of incentives must be created to stem the flow of arrears; otherwise a new chain of arrears will arise out of the ashes of the old. To prevent the creation of new arrears, their primary underlying cause—the absence of financial discipline due to the underdevelopment of the financial system—must be addressed. What complicates this solution is that financial discipline must be imposed in an environment where financial information is exceedingly scant, which is, as we have emphasized, a primary consequence of the accumulation of arrears.

The rapid growth in arrears in May and June of 1992 presented the Yel'tsin-Gaydar government with a dilemma. The privatization process would be made much more complex if the enterprises to be privatized were saddled with highly uncertain net worth, owing to the inherent incalculability problems associated with arrears. Parliament (including the opposition) pressured for an extension of credits to enterprises to meet their working capital needs.[5] The government's response began to emerge with a series of decrees issued by Yel'tsin in early July 1992.[6]

The Government's strategy consisted of three essential elements. First, all arrears incurred prior to July 1 would be frozen. These arrears would be eliminated through a cancellation of mutual debt. Second, a new Agency for Managing the Debts of State Enterprises (hereafter, DMA), subordinated to the State Committee for the Administration of State Property (*Goskomimushchestvo*; hereafter, GKI), was to be set up to deal with net debtor enterprises that remain after mutual cancellation is completed. The DMA would sell off the assets of enterprises to cover remaining debt.[7] Third, tough new measures were announced to prevent the recurrence of debt. Bankruptcy or liquidation could result from nonpayment after July 1, and a 0.5 percent per-day penalty would be attached to incurring new arrears.[8]

This package of measures amounted to a very strict means of attacking the arrears crisis. The stock of arrears would be reduced through mutual cancellation combined with liquidation, and the flow would be diminished through new penalties on arrears. Notice, however, that the measures did not attack the problem of financial underdevelopment. Penalties on the creation of arrears are effective only if the threat of bankruptcy and liquidation is credible. In the absence of financial discipline, managers will not be concerned with costs that do not jeopardize the survival of their enterprise. Moreover, debt cancellation would, necessarily, leave the

[5]In June of 1992, we were told by officials in the government that consideration was given to providing enterprises with three times their 1991 working capital needs as a means of dealing with the crisis. Indeed, working capital was eventually "indexed" toward the end of 1992. The magnitude of this indexation, which came directly from the government budget, was approximately 5.6 percent of Russia's GDP for 1992.

[6]The three primary decrees can be found in *Ekonomika i zhizn'* (June 1992, p. 5); *Rossiyskaya gazeta* (July 4, 1992, p. 4); and *Ekonomika i zhizn'* (July, 1992, p. 20); see also Whitlock (1992: 37).

[7]Although mutual cancellation took place, creation of the DMA never occurred.

[8]It is hard to believe that this penalty (approximately 16 percent per month, compounded daily) is really sufficient given an inflation rate that is currently over 25 percent per month.

government with an uncertain liability. The relationship between gross and net arrears is arbitrary.[9] Until the mutual cancellation was completed, there would be no way to know the extent of net debt. Consequently, the number of enterprises that would have to be liquidated, or the amount of credit that would need to be extended in the absence of liquidation, to cover the remaining debt would remain uncertain.

The government was not, however, the only source of action on arrears. Gerashchenko signalled very early in his tenure that the policy of the Central Bank concerning the extension of credit would change.[10] On July 28, he issued the notorious telegram that authorized the emission of R1.2 trillion in credits to enable enterprises to reduce their stock of inter-enterprise debts.[11] This action immediately provoked a reaction from the government, precisely because credit extension on such a large scale threatened the reform program.[12] After considerable wrangling between Gaydar and Gerashchenko, a compromise was arranged. The telegram was rescinded, although the exact nature of the compromise remains unknown. The amount of new credits that were issued was scaled back, at least at first, and the process of unwinding the debt was begun.[13]

There are several justifications for credit extension. First, a credit emission might enable enterprises to pay off past debts. It is possible, for example, to place credit in special accounts that can be used only to pay off debts incurred before a certain date (e.g., July 1).[14] Second, once mutual claims have been netted, a credit emission may be needed to offset any remaining net debt.[15] Third, credits can be extended to provide working capital for enterprises to prevent a new chain of arrears from arising. Notice that the first two types of credit emission attempt to address the stock problem. The third type of credit emission is independent of any policy toward the stock, and is, instead, directed against the flow problem. The critical point to note is that none of these policies deal with the fundamental source of arrears, financial underdevelopment.

Although Gerashchenko's telegram drew most of the attention, two other Central Bank policies have had important effects. First, for reasons

[9]For a discussion of this relationship, see Ickes and Ryterman, 1992.

[10]Gerashchenko took office (actually returned, since he had been the last director of *Gosbank* before the demise of the Soviet Union) with strong views on how to deal with the problem of arrears. His views about the role of credit policy were, perhaps, foretold by the title of his early publication (see Gerashchenko, 1966).

[11]The contents of Gerashchenko's telegram were never made public. According to a report in *Commersant*, 32:1, 1992 cited in Whitlock (1992), "the commercial banks were to open lines of credit to the debtor enterprises equivalent to a third of the total sum of the inter-enterprise debt as it stood on 1 July, thus enabling them to make payments to creditor enterprises."

[12]For a sense of the controversy see Savvateyeva (1992, p. 1). Pyotr Filippov, chairman of the parliamentary Sub-Committee for Privatization, said that Gerashchenko's telegram was "pushing the country into the abyss of horrendous economic crisis" (*Moscow Interfax in English*, 1335 GMT, August 3, 1992).

[13]For example, according to a report in the *Financial Times* (August 7, 1992, p. 2), the Russian Central Bank would issue R500 billion in credits. The process of issuing credits for working capital needs has become a recurrent one, however, because of the system of *prepayment*.

[14]This arrangement does not necessarily prevent such credits from being used for other purposes.

[15]It will be needed unless the assets of enterprises that are net debtors can be liquidated to offset the remaining debts.

associated with changes in the payments system, the system of registration of late payments, *kartotyeka dva*, was eliminated.[16] A central record of arrears therefore no longer exists. Second, and more important, the Central Bank imposed a regime of prepayment on enterprises. Enterprises were required to pay for purchases prior to their delivery. This change in the system of inter-enterprise transactions is a fundamental one, designed to stem the flow of arrears.

Thus, in the end, the combined Russian response to the arrears crisis consisted of a dual strategy: creating a system of mutual clearing supported by easy credit and a system of payment prior to the delivery of inputs; we discuss these two elements more thoroughly below.

Mutual Clearing

The process through which the stock of arrears has been cleared can be described briefly.[17] The Central Bank informed commercial banks to create special off-balance sheet accounts for arrears, one for arrears to Russian enterprises (numbered 725) and another to enterprises in other parts of the former Soviet Union (numbered 721). The banks were instructed to register all payments in arrears in these accounts. Once all the arrears had been identified and registered, the process of clearing mutual claims could begin.[18]

To begin the process of clearing mutual claims, the commercial banks were instructed to send "payment notices" on behalf of their clients to the banks of all their creditors. Thus, if a sewing enterprise in Nizhnyy Novgorod had receivables from a textile enterprise in Voronezh, the sewing enterprise's commercial bank would send the payments notice, through corresponding clearing centers, to the bank of the enterprise in Voronezh. The 725 account of the sewing enterprise would be credited, and the 725 account of the textile enterprise would be debited, by an equal amount. In this manner, all the accumulated arrears prior to the cut-off date of July 1 were netted.

It is of note that, as a result of the netting process, some enterprises were discovered to be net creditors, while others were discovered to be net debtors. However, the net position of the enterprise, *ex post*, did not affect

[16]This system was eliminated for two reasons. First, the government implemented a system of *prepayment*. If all transactions were prepaid, then arrears should not arise. In this case, a system for tracking arrears is unnecessary. Second, the requirement that an enterprise use a single branch of a single bank for all its payments transactions was eliminated. Thus, the *kartotyeka dva* file at any one bank no longer would provide a record, let alone a comprehensive record, of an enterprise's arrears. We note, however, that there may have been value in continuing to keep these records for measurement purposes. Eliminating *kartotyeka dva* as a means of combatting arrears is much like ceasing to collect price statistics in an effort to combat inflation.

[17]Our understanding of the netting process in Russia was greatly aided by access to World Bank memoranda.

[18]Notice that the use of the term "mutual" is a bit misleading because it is never the case that enterprise A owes enterprise B and enterprise B owes enterprise A. Rather, what is meant by this term is that the claims of enterprise B on enterprise A can be settled by also settling a debt owed by enterprise C to enterprise A. The trick is to uncover such circuits where, for every debit, there is an offsetting credit; in other words, to avoid the chains that avoid net debt.

its ability to settle past arrears during the settlement operation. This feature was critical to the process of mutual clearing. Prior to mutual clearing, gross arrears blocked the payments system precisely because an enterprise could pay for its purchases only if it had sufficient funds in its bank account. But during this settlement operation, all payments notices cleared because enterprises with net arrears were permitted to possess deficits in their 725 accounts. In effect, the Central Bank of Russia was assuming the role of the guarantor of the net debt in the system. Without this guarantee, net debtors could not have paid debts owed to other enterprises.

As the process of debiting and crediting continued, the gross arrears of R3.2 trillion were reduced dramatically. One must recall here that most enterprises had both payables and receivables, and that gross debt was much greater than net debt (though by how much was uncertain when the process began). When the offsetting of claims was completed, the sum of the remaining credit (or debit) balances was approximately R402 billion rubles, or about one seventh of the gross arrears.[19]

A similar process was initiated to clear arrears to the rest of the former Soviet Union. The basic procedure was the same, this time using the 721 accounts. However, the netting process was complicated by the need to send the payment notices across national borders. Disputes between national authorities arose concerning the actual amounts owed.

This clearing process, as in the case of the domestic clearing process, used the postal system, so a considerable amount of time was needed for it to be completed.[20] By the end of November, the first stage of the process, the clearing of payables and receivables in the 725 accounts, was completed.[21] By the end of December, the clearing of interstate accounts was completed.

The next stage of the process focussed on the problem of residual net balances. One should note that the credit balances could not be allowed to revert to the enterprises themselves, for this would then lead to a large net infusion of credit into the system. The Central Bank issued instructions to all commercial banks in the Russian Federation concerning the treatment of remaining net credits and debts. Enterprises were permitted to use net

[19]Actually, the debit balances exceeded credit balances by R30 billion, reflecting errors and omissions. These statistics were provided during discussions in Moscow with officials of the government and the Central Bank.

[20]A question arises why the government engaged in such a time-consuming and costly netting process. Presumably, banks maintained records of each enterprise's receivables as a natural consequence of their role in delivering payments-demand orders to their clients' customers. They also maintained records of each enterprise's payables, in part because they require this information in the disbursement of cash and, in part, because of their need to record payables in arrears in *kartotyeka dva*. Thus, in theory, they should be able to calculate the net position of each enterprise, even in the absence of mutual clearing. One possible explanation for why the government chose to use a more time-consuming and costly strategy is that it did not trust this information and suspected that banks (or enterprises) might have inflated the value of enterprise receivables. Indeed, in interviews with enterprise managers in Russia, we discovered it is commonplace for buyers and sellers to attach different values to official transactions.

[21]The clearing of domestic arrears was supposed to be completed by October 15, but delays in the process led to an extension of the deadline to the end of November.

balances in their 725 accounts to settle debits in their 721 accounts and to settle overdue payments to the state budget. The remaining balances were to be frozen pending further instructions from the Central Bank. By the end of November, these funds were so insignificant that the Central Bank permitted them to be transferred to the bank accounts of enterprises.

The Central Bank of Russia also issued instructions concerning accounts in deficit. Commercial banks were permitted to use funds in the bank accounts of debtor enterprises to settle their debts. If these funds were insufficient, the commercial bank or, if it was unwilling, the Central Bank would provide the enterprise with a loan, scheduled for repayment in March 1993.[22] Any enterprise that would not or could not borrow from a bank was given to GKI for potential liquidation.

Prepayment

Perhaps the most important policy change that resulted from the events of the summer was the system of *prepayment*. Until July 1, the enterprise that sold goods delivered the payment demand order to its bank. In this case, the payment process was initiated by the seller, with the implications we have already discussed. Under the new system, the recipient enterprise delivered the payment order to its bank. And what made this change all the more significant is that the selling enterprise was instructed to postpone delivery until it received payment. Thus, an extreme *payment-in-advance* constraint was imposed on enterprises.

Simply stated, *prepayment* is a policy that attempts to restrict the flow of arrears by outlawing them. Clearly, this policy does not deal with the underlying financial problems of enterprises. Imposing such a regulation merely changes the way in which these underlying problems are manifested. In this case, the problem of financing production has been transferred from enterprises to the Central Bank. As a consequence, Central Bank credit in the second half of 1992 increased dramatically, with devastating implications for the government's stabilization program.

The system of prepayment has greatly increased the problems of enterprises. The sudden change in the system of credit has made it very difficult for enterprises to obtain inputs. Prepayment requires enterprises to pay for inputs prior to selling the goods produced from them. When external sources of credit are limited or inflation is high (rapidly eroding the real value of internal financial reserves), this constraint is severe.

This difficulty in obtaining inputs has two effects. First, enterprises draw down their inventories of inputs. During the first half of 1992, enterprises had accumulated inputs, often involuntarily. When *prepayment* became the rule, they drew them down. In a sense, the growth of arrears allowed enterprises to develop a cushion, which they used during summer 1992. The stock of inventories is not unlimited, however. The second effect of prepayment, then, is a decline in production. This decline, in itself,

[22]It appears that the bulk of the deficit, about R335 billion, was financed by the Central Bank.

reduces the flow of new arrears; with lower production, less inter-enterprise credit is needed to finance production.

It should be noted that the system of prepayment is not universal. Enterprise directors still give credit to customers with whom they have "historical relationships."[23] Nonetheless, one might have expected that *prepayment* would have had an even more disruptive effect than it seems to have had. The reason that it has not is that the Central Bank increased its credit emissions dramatically in summer/fall 1992. Between June and October, Central Bank credit to commercial banks trebled, from R580 billion to R1.5 trillion, an increase in real terms of 100 percent (*The Economist*, December 26, 1992, p. 107).[24] These credits were then lent to enterprises, often at interest rates that were highly subsidized.[25]

The importance of subsidized, targeted credit cannot be overemphasized. In 1992, directed credits to enterprises from the CBR and the Ministry of Finance were approximately 23 percent of GDP.[26] These credits were typically targeted by the government for important enterprises. The Central Bank of Russia extended credits to commercial banks, for the expressed purpose of lending to those targeted enterprises at annual interest rates, at that time, of 80 percent.[27] Given a monthly inflation rate of approximately 25 percent through the fall of 1992, this rate clearly involved a large subsidy.[28] The loans from the commercial banks to enterprises typically carried much lower interest rates, often as low as 20 percent.[29]

One puzzle that has faced economists studying the financial behavior of enterprises is why they appear reluctant to borrow, given the highly negative real value of interest rates. One possible response to this question is that, despite the apparent availability of credit, it is, in fact, rationed. Alternatively, reluctance to borrow might be rooted in the necessity for prepayment. Typically, payments from the purchaser are mailed to the seller, often with some delay due to technical problems in the postal system. Therefore, prepaid goods are frequently shipped only after some delay. Because most loans are very short-term in nature, enterprises may

[23]This response was common among enterprise directors interviewed in Russia in October and November of 1992.

[24]Central Bank credit to commercial banks is especially important in Russia because deposits from the public (with the exception of those in *Sberbank*) are almost non-existent. These credits were part of a program of directed credits targeted to industry. The credits came from the Central Bank, with an interest subsidy paid by the government. It seems to be the case, however, that the Finance Ministry borrows from the Central Bank to finance the interest subsidies.

[25]Central Bank of Russia credits to industry that were "not subsidized" carried interest rates 3 percent above the Central Bank's refinance rate. This rate was 80 percent annually in the fall of 1992. With inflation at 25 percent per month, 80 percent would still seem like quite a good value.

[26]IMF (1993, Annex 1). Directed credits amounted to about one-half of all credits from the Central Bank of Russia to the enterprise sector.

[27]The current (September 1993) CBR discount rate is approximately 175 percent, which given current inflation is still highly negative (*Commersant*, September 22, 1993, p. 4).

[28]Notice that there are really two parts of the subsidy. First, there is the difference between the CBR finance rate and what the enterprise was charged (the explicit subsidy) and the difference between the CBR rate and the nominal interest rate that would make the real interest rate equal to zero.

[29]"During the summer, companies were paying an average interest rate (weighted by size of loan) of just 30 percent" (*The Economist*, December 26, 1992, p. 107).

not have sufficient time to transform the goods into output and obtain the funds necessary to repay the loan.

The credit allocation process has also led to a proliferation in the number of banks owned by groups of enterprises. It is difficult to obtain exact figures on the extent of this phenomenon, but interviews with enterprise directors suggest that the practice is widespread. Enterprise directors believe that by investing in banks they obtain two important services. First, they think that the bank will credit their accounts more rapidly when payments are received. Many directors believe that banks use the float against the depositor's interest, and a founding relationship is seen as a way of circumventing this behavior. Second, a founding relationship is seen as a way to gain preferential access to credit. Moreover, under current Central Bank regulations, a founding member of a bank can borrow up to three times the founding stake.[30]

A number of other new financial institutions have arisen in response to the problems presented by prepayment. Many of these are technical in character, and are designed to improve the speed of payments between enterprises. For example, banks have created correspondent accounts with one another to facilitate transfers of funds from one enterprise to another, although the number of these accounts is limited. In some areas, enterprises are beginning to use checks. Also, the Central Bank is looking into the feasibility of creating a system of wire transfer; however, to date, this technology has not been introduced.

WAS THE REMEDY EFFECTIVE?

Soon after the clearing process was completed estimates of the level of inter-enterprise arrears appeared which suggested that, by January 1993, the R5 trillion level had been reached, approximately 20 percent of GNP.[31] This explosion in the level of inter-enterprise arrears clearly indicates that the combination of mutual clearing and prepayment failed to stem the flow of new arrears. In particular, it failed precisely because the Russian government and the Central Bank failed to signal their commitment to impose financial discipline on enterprises. In the absence of adequate sources of bank credit, prepayment is a severe constraint even for profitable firms; thus, the incentive for enterprises to continue to extend credit to trade partners remains high. Moreover, this incentive is reinforced by the willingness of the Central Bank to provide working capital to enterprises without sufficient regard for their viability.

[30]This regulation clearly benefits the founding member, but it calls into question the meaning of the capital-asset ratios in the banking sector.

[31]These estimates came from the chairman of the State Committee on Industrial Policy, Igor Olegovich Shurchkov, in an interview with the newspaper *Trud*, as reported in *RFE/RL Daily Report*, January 26, 1993. Since *kartotyeka dva* had been eliminated, no central record of arrears was collected, so it is difficult to discern where Shurchkov's estimate came from. There may be good reason to doubt that arrears reached this level. What is clear, however, is that after the clearing process was completed there was a resurgence in the level of arrears. On June 1, 1993, industrial and construction enterprises had debt accumulations of 6.5 trillion rubles (Goskomstat, 1993, p. 118).

The compromise policies that were implemented to deal with the arrears problem resulted in a large emission of credit. On the macroeconomic level, this emission fueled the resurgence of inflation that has so plagued Russia since the fall of 1992. On the microeconomic level, soft credit relieved the pressure on enterprises to adjust to the marketplace. Thus, arrears continue to present a serious obstacle on the road to economic reform.

A Roadblock to Reform

The underlying rationale for market reform is the redirection of economic incentives away from those consistent with central planning toward those consistent with market organization. Changing economic incentives is a very complex endeavor, requiring both extensive changes in economic institutions as well as governmental commitment to the new incentive system. Some changes in the incentive structure of Russian enterprises have already been implemented.[32] However, the complete transformation of the Russian economy requires a more explicit commitment by the government to market-based incentives.

The central dilemma facing reformers in Russia today concerns the potential cost of signaling a commitment to market incentives in an environment ripe with the potential for market failure. Indeed, the policy mix that is necessary to signal a credible commitment to market incentives—low fiscal deficit, tight money, and hard-budget constraints—carries with it the seeds of coordination failure on a massive scale. Without financial markets that can provide sufficient liquidity to creditworthy enterprises, a chain reaction can occur in which the failure of a few important enterprises can cause economy-wide collapse. After all, it is precisely the combination of tight money and financial collapse that led to the Great Depression in the United States

The importance of using extreme caution before initiating liquidation of even one enterprise in an environment of financial underdevelopment is illustrated by studies of the financial payments system in market economies. A particularly relevant study was that by Humphrey (1986), who examined the sensitivity of the Clearinghouse Interbank Payments System (CHIPS) to the hypothetical collapse of a member bank.[33] Humphrey simulated the effects of withdrawing the activities of a single net creditor from a day's transactions of the CHIPS system. He found that the attempt to unravel the payments of a single bank would cause the whole chain of

[32]We discuss this issue at length in Ickes and Ryterman (1993).

[33]The CHIPS system is a clearinghouse, privately owned by very large US banks, that handles interbank payments. During a market day, trillions of dollars flow through the system, and the accounts of member banks are credited or debited. Settlement of account balances does not take place until the end of the day. The question Humphrey addressed was: what would happen to the system if at the end of the day one of the banks could not meet its deficit? Notice that in the case of Russia, enterprises would also have credited and debited payments, but these would be settled not after daily but, rather, weekly or monthly activities. Hence, if CHIPS is subject to these problems, the risk to the Russian system is all the greater.

payments in the system to unravel. The lesson for the Russian case, where the age of the arrears to be unraveled is so much larger and where information about the positions of agents so much poorer, is self-evident.

The sensitivity of an industrial structure to the imposition of hard-budget constraints is best illustrated with an example. Consider the chain of production in a given sector of the economy. Assume that, for each enterprise i (i = 2, . . ., n), there are purchases from enterprise i–1 equal to 100 rubles and sales, with credit extended, of 100 rubles to enterprise i+1. For enterprise i=1, a credit of 100 rubles is obtained from a bank. The nth enterprise, machine tools, sells on credit to a defense enterprise that produces output, but cannot sell it. Now, for every enterprise 1 through n, there is a credit and a liability equal to 100 rubles outstanding. For enterprise n+1, there is only the debt to enterprise n. Because n+1 cannot pay n, n cannot pay n–1, and so on. Each enterprise possesses R100 of gross debt.

Now, assume the government wishes to signal the end of soft-budget constraints, but is not aware that enterprise n+1 is the source of losses in the sector. Further, suppose that each enterprise owns assets equal to R100. Clearly, if the government wishes to minimize the number of closures, the optimal enterprise to liquidate is enterprise n+1. In this case, its assets can be used to repay the debt it owes to enterprise n. Enterprise n can then repay its debt to enterprise n–1, and so on.

However, suppose that the government does not correctly identify enterprise n+1 as the source of net debt but, rather, begins the sequence of liquidation with enterprise j, $0 < j < n+1$. In this case, the assets of enterprise j can be used to repay the loan granted by enterprise j–1, which can then repay the loan granted by enterprise j–2, and so on. Enterprise j+1 effectively has its debt obligation to enterprise j repudiated. However, other debt in the sector remains. Enterprises j+2 through n+1 continue to hold gross debt. Clearly, continued imposition of bankruptcy requires more than one enterprise to be liquidated. Thus, the sequence in which enterprises are liquidated affects the evolution of the industrial structure after the transition to a market economy has begun.[34]

This example emphasizes the importance of good enterprise-level information when imposing hard-budget constraints. However, it also understates the difficulty of imposing hard-budget constraints in Russia, in two respects. First, the chain of arrears is not a single, uni-directional path that can be unwound. Rather, the pattern of lending tends to be multi-directional; downstream enterprises may lend to upstream enterprises. And, in much of industry, the whole notion of upstream and downstream is ambiguous. Machine tools are used in the construction of electric generators, just as electric generators are used in the construction of

[34]In many cases, the liabilities of an enterprise will be more than its liquidation value. Suppose, for example, that, instead of R100 in assets, each enterprise owns only R50 in assets. In this case, liquidation of enterprise n+1 is not sufficient to eliminate the chain of arrears; after enterprise n+1's assets are sold, enterprise n still possesses R50 of worthless receivables. Unless it receives a grant in this amount, the chain of gross arrears will persist.

machine tools. There are many chains of transactions in a modern economy, and they cross over many times. This pattern makes the reduction and elimination of inter-enterprise debt difficult and the risk of economy-wide coordination failure greater.

Second, the ability of the government to minimize the economic dislocation that occurs when hard-budget constraints are imposed depends on the extent to which the government's commitment to this policy is deemed credible by enterprises. The more credible the commitment, the greater the number of enterprises that will adjust. Consequently, a credible commitment leads to fewer enterprise failures.

However, in Russia during 1992, the credibility of the government's commitment to hard-budget constraints was undermined in four important ways. First, the credibility of the government's policy announcements was weakened by inter-governmental conflict. The Central Bank of Russia was not urder the authority of the government of Yel'tsin, but rather answered to Parliament.[35] But it was the Central Bank that was the key provider of credit to enterprises. Hence, even if the government stuck to its policy, the Central Bank could let enterprises off the hook. The government's commitment to a low fiscal deficit was not a sufficient condition to ensure tight money. Thus, during 1992, the government was relatively successful in reining in the fiscal deficit, but credit growth was still excessive.[36]

Second, the relationship between net debt and gross debt is arbitrary.[37] Consequently, the government could not know, *ex ante*, how many enterprises would fail if the policy was, in fact, implemented. Hence, the government could not identify the full economic costs of this policy prior to its implementation. This uncertainty provided opponents of the policy with fertile ground for dissent. It is in this respect that the transition problem in Russia differs most markedly from that of stabilizations in other countries. The problem in Russia is not just that the loose fiscal policies of the government relieve the pressure to adjust, but that the legacy of central planning is an industrial structure that is ill-suited to markets. The problem is that the government does not know how ill-suited it is; only through marketization will this information be revealed.

Third, in the example above, the decision about the viability of enterprises focused solely on the liquid position of the enterprise. In a real economy, the decision about viability should be based on the net worth of the firm. To calculate net worth, information about the value of an enterprise's assets is needed. However, in the absence of developed

[35]Despite Yeltsin's decree (in the late fall of 1992) that placed Gerashchenko in the cabinet, the Central Bank still answered to the Russian Parliament. This line of accountability changed only in October 1993.
[36]The government's plan, in January of 1992 was for a budget deficit of 1.5 percent (3.3 percent using the IMF's methodology) of GDP. See, for example, Bush (1992, p. 31). The actual deficit was far greater than this target, about 8 percent of GDP. This figure excludes, however, off-budgetary items such as the indexation of working capital, which was estimated to be roughly 6 percent of GDP in 1992, as well as import subsidies, which amounted to another 13.8 percent of GDP. See IMF (1993, p. 8).
[37]For an explanation of this relationship, see Ickes and Ryterman (1992).

financial markets, this information cannot be obtained. In Russia, assets are valued at historical values which, given the developments in Russia during 1992–93, renders them useless.[38] This lack of information makes it nearly impossible for enterprises to borrow against future income. The measure of viability of enterprises in such a regime is not the net worth of the enterprise, but rather its current cash-flow. Under such circumstances, imposition of a hard-budget constraint may result not only in the wrong enterprises being shut down, but also in directors making decisions that lead to declines in the present value of the assets. Without information regarding the financial viability of enterprises, no arbiter can evaluate the proper disposition of an illiquid enterprise.

Fourth, and finally, enterprises themselves can affect the level of information about enterprises that is available in the economy by manipulating the level of payments in arrears. As we explained above, the absence of financial markets heightens the importance of information about the liquidity of enterprises when assessing their viability.[39] When many receivables remain uncollected and many debts remain unpaid, even the liquid position of most enterprises is difficult to assess. Consequently, arrears provide enterprises with a weapon to sabotage the government's commitment to hard-budget constraints.

The purpose of this discussion is to emphasize that, without dramatic change in the quality of enterprise-level information, radical changes in economic incentives can be accomplished only at the risk of serious economic and social dislocation. The quality of information in the economy can be improved, in part, by a reduction in the stock and flow of inter-enterprise debt. Precisely how much debt is appropriate for an economy in transition is impossible to determine; however, we do know that current levels of inter-enterprise debt impede the progress of reform.

For example, in the fall of 1992, officials of GKI considered a policy of forcing some highly indebted enterprises into liquidation as a means of gaining credibility.[40] The plan would have allowed these enterprises the option of privatization as an alternative to liquidation, a policy that would foster the government's main objectives. The problem that GKI faced was *which* enterprises to choose. Which enterprises were most responsible for the creation of net inter-enterprise debt? Unfortunately, without adequate enterprise-level information, GKI could not identify the most serious offenders, without appearing arbitrary. Consequently, this policy alternative was abandoned.

[38]A revaluation of assets occurred in October 1992, but given the monthly inflation rates in the last quarter of that year, book values again lost any serious meaning.

[39]This information problem also makes problematic an oft-heard suggestion for dealing with this problem: securitization. The idea of allowing secondary markets in arrears seems appealing. The problem, however, is that under the conditions that prevail in Russia it is precisely the trading partners of an enterprise that are most informed about (or at least interested in) its viability. The lack of information explains the absence of other lenders. One wonders, then, who would buy the "securitized" arrears? If there were agents willing to lend to these enterprises, why do they not simply lend directly to them? Such markets have not yet formed precisely because of these information problems.

[40]We learned about this through conversations in Moscow with officials in GKI.

A Strategy for Survival

A central debate in the discussion of arrears is the degree to which their presence is an active policy on the part of enterprises. Clearly, many enterprises are unwittingly drawn into the chain of arrears. However, our interviews with enterprise directors suggest that many of them consider delays in the payment of debts and collection of receivables to be an important strategy for survival.

This strategy seems paradoxical. How can an enterprise enhance its prospects for survival by undertaking actions that seem to make it more vulnerable to failure, particularly if the government carries out its threat of imposing hard-budget constraints? The willingness of enterprises to accumulate debt from other enterprises is critically driven by enterprise incentives during the transition. Privately-held enterprises would be loath to hold the debt of enterprises of uncertain viability.[41] Enterprises in the transition, however, face a peculiar set of incentives that stem from their overriding concern with survival.

The transition from central planning in Russia has initiated a process of systemic change. Two important features of this change are crucial. First, inter-enterprise coordination is threatened by the absence of central planning institutions. New relationships between enterprises must form to replace the commands that previously directed production and distribution. These new relationships must be developed, however, in an environment of tremendous uncertainty. In particular, the viability of the enterprise and of its potential customers and suppliers are uncertain. Under such conditions, enterprises are reluctant to enter into long-term commitments with new trading partners.

The second critical feature of the transition is that control rights within the enterprise are ambiguous. Nominally, many enterprises remain state-owned,[42] although the government's ability to exercise its authority over their behavior is unclear. Other enterprises were privatized without the benefit of appropriate legal guidelines, so that the legality of the change in ownership may be questioned. Thus, directors of state-owned enterprises are uncertain of their long-term status in the enterprise. Nonetheless, the director is still responsible for adjustment within the enterprise until this uncertainty is resolved.

These two features combine to produce the characteristic form of behavior displayed by the *survival-oriented enterprise* (SOE). Such an enterprise displays a heightened concentration on the very short run, since it is

[41]Of course, for a privately-held firm, there would be a risk-return payoff. So such a firm might lend to a risky client if the rate of interest were high enough. In the case of Russia, however, inter-enterprise debt appears to be interest-free.

[42]According to the 1989 Soviet Census of Industry, there were approximately 18,000 industrial enterprises (all state-owned) in the territory of the Russian Federation. During 1992, approximately 500 large state-owned enterprises were privatized. According to a January 2, 1993 report by *Itar-Tass* (January 2, 1993), the State Committee for the Administration of State Property expected to privatize 4,500 enterprises in 1993.

current performance that is vital to survival. Actions that may not appear to make sense in a more normal environment are the natural response of the SOE.

The importance of survival-oriented behavior is most apparent in the response of enterprises to the decline in demand for their products. In many cases, production does not decline in proportion to the decline in demand. Most enterprises must demonstrate positive balances[43] to obtain cash rubles from banks; hence, they are willing to produce goods simply to acquire receivables. Enterprises would rather be owed rubles by another enterprise than cut back on production, for then they would not be able to pay their workers.

For enterprises focused exclusively on survival, this response is natural. Hence, enterprises accumulate both unpaid receivables and, in some cases, inventories of unused or unneeded materials. Of course, in many cases, this behavior jeopardizes their viability should market incentives be imposed. Nevertheless, enterprises continue to produce in exchange for receivables with the expectation that somehow they will be paid.

How do these expectations arise? This question is particularly important, given that, when budget constraints are hard, the incentive for an individual enterprise to provide credit to trading partners of uncertain viability is likely to be very low. In large part, these expectations are a legacy of the system of central planning. In the past, the state exercised its ownership rights over enterprises by guaranteeing their survival. This shared experience on the part of enterprises created an economic culture in which a large share of the economic and political legitimacy of the old system was based on such paternalistic behavior.[44] A break from this paternalism would represent a sharp departure from the past. While such a break could be effected, its anticipation by enterprise directors would require a strong and credible signal. In a policy environment as chaotic and divisive as the one that obtained in Russia during 1993, sending a credible signal was nearly impossible. Indeed, the enterprise directors' expectation of a government rescue was typically and repeatedly ratified later by the extension of credits from the Central Bank of Russia. As long as bankruptcy is postponed via subsidies, it is hard to envision how expectations of continued bail-outs will be altered.

Other legacies of central planning also contribute to the willingness of enterprises to extend credit to their trading partners. Relationships between most enterprises have existed for many decades. If a long-time customer or supplier is in trouble, many directors consider its rescue to be a natural response. Of course, to a certain extent, the extension of credit in such circumstances is usually self-serving. Most enterprise directors perceive themselves to be very dependent on their present suppliers and

[43]The balance is equal to receivables plus liquid assets minus payables.

[44]For a general discussion of the role of culture in policy making in countries in transition, see Murrell, Dunn, and Korsin (1992).

customers.[45] Consequently, the failure of an important customer or supplier could jeopardize the survival of the enterprise.

The dual system of money (cash [*nalichnyye*] versus non-cash [*beznalichnyye*]),[46] combined with the survival motive, also acts to reduce the incentive for enterprises to resist providing credit. As long as an enterprise is a net creditor and can obtain sufficient cash to pay workers, there is little need to collect payments on receivables. Because debts are repaid in *beznalichnyye*, they can only be used to repay debt; hence, the commentary from many enterprise directors: *we are not playing with real money*. The opportunity cost of supplying credit is lowered further by the presence of negative real interest rates on bank deposits.

The incentive of an enterprise to use arrears as a strategy for survival depends, in part, on its position in the chain of production. The more downstream the enterprise, the closer it is to the final consumer, who pays for goods with cash, rather than with a promise of *beznalichnyye* (non-cash rubles).[47] Cash helps the enterprise survive in two ways. First, it can be used to pay workers. Second, and more subtlely, cash is an important source of information about the survival prospects of the enterprise. Enterprises with a large share of cash transactions have better information about the demand for their products than enterprises that receive promissory notes of uncertain value. The transactions of most of these enterprises are carefully monitored by their banks, which in turn are able to evaluate their creditworthiness. Consequently, suppliers of many of these enterprises may be in a better position to determine the risks associated with extending credit to them. Under these circumstances, the more downstream the enterprise, the more information the enterprise possesses concerning its own financial viability.

An overriding concern with survival also weakens the incentives for enterprises to resist accepting credit. In some cases, accepting credit is nearly involuntary. As we noted above, until July 1, 1992, Soviet law, and then Russian law, required the seller of a good to notify the buyer's bank that a shipment of goods had been delivered. In many cases, the goods might never have been explicitly ordered or wanted by the buyer. The

[45]Brown, Ickes, and Ryterman (1993) suggest that the high level of vertical dependency among enterprises is not a consequence of high levels of industrial concentration in the Russian economy, which they find are absent at the national level. Rather, they argue that vertical dependency is a consequence of ministerial barriers erected between enterprises under central planning. These barriers prevented enterprises from learning about alternative suppliers and other potential customers.

[46]The two types of money, and the implications of this peculiar institution for arrears, is discussed in Ickes and Ryterman (1992).

[47]For example, consider a department store that sells its goods directly to individuals for cash. It does not face a problem in evaluating receivables, because it does not lend to its customers, but rather sells for cash. However, a shoe manufacturer which provides this and other department stores with shoes in exchange for a promise of non-cash rubles, faces some uncertainty in the evaluation of its receivables, particularly if the profits of department stores cannot be observed with ease. This problem of evaluation is even more strongly evident further upstream as the creditworthiness of customers becomes more obfuscated. A machine tool producer, who sells equipment to the shoe and other manufacturers, will have no sense of the quality of its receivables; it cannot determine if its customers are extending credit on fiscally sound bases.

recipient could attempt to return the goods, but this procedure took time and was no guarantee of success.[48] In the meantime, the buyer's bank would be presented with the payment order from the seller. In such circumstances, the recipient enterprise might lack the funds to make the payment. Many enterprises believed that it was better to keep the goods and simply delay payment.[49]

IMPLICATIONS FOR PRIVATIZATION

The mass-privatization program in Russia is an ambitious program in which state-owned enterprises are privatized in two stages.[50] First, they are corporatized, that is, legally transformed into joint-stock companies in which shares are owned by managers, workers, and the state according to well-defined formulas. During this stage, the state remains the majority (sole) shareholder. The enterprise then must choose a privatization plan from a list of options provided by the GKI. In the second stage, the share of the state is reduced to minority status and the enterprise is formally classified as privately owned.

The implementation of this program was delayed by many political as well as technical difficulties, including the inability of any institution to measure the economic value of the enterprise. To date, most attention has been accorded to the difficulty in valuing an enterprise's physical assets, given the absence of a developed capital market in Russia. However, with the rapid growth in inter-enterprise arrears, the complexity of valuing an enterprise's physical assets has been eclipsed by the difficulty of evaluating an enterprise's liquid position.[51] Unless an enterprise's receivables can be appropriately discounted, the net financial position of an enterprise remains unclear.[52]

Valuation of the enterprise is an issue of great importance in the privatization process. Under the most popular of GKI's plan, for example, the employees of an enterprise receive up to 51 percent of the equity at a 70 percent premium over book value, which for most enterprises represents a substantial discount. Most of the remaining shares of the enterprise are then auctioned off for vouchers. To implement the plan an assessment of the value of the enterprise is clearly critical. But uncertainty over the book value of assets has been compounded by the inter-enterprise debts that

[48]The process could easily take six months. It should also be noted that the recipient had to arrange for transportation of the goods back to the seller, seldom a simple task in the Russian economy.

[49]Better, that is, than the alternative, which was to return the goods. But in this case the payable was still counted against the receiving enterprise's balance until the case was settled, a process that could easily take six months.

[50]Djelic (1992) provides a good description of the mass-privatization program.

[51]"The interdependence among the balance sheets of enterprises is one of the key obstacles impeding the operation of the market system. It makes it very difficult to distinguish between enterprises that are efficient and viable and those that are inefficient and nonviable, thereby adding to the complexity of assessing the creditworthiness of individual enterprises" (Calvo and Frenkel, 1991, p. 447).

[52]In part, the relative contribution of inter-enterprise debt to the obscurity of an enterprise's value may be magnified by the government's decision to use the book value of the enterprise as a measure of the value of its physical assets. The book value of the typical enterprise tends to be small relative to the size of its inter-enterprise debt.

began to rise at an explosive rate during spring of 1992. Without any means of assessing the quality of these debts and the corresponding receivables, it was extremely difficult to figure out how to value the enterprise.

Notice that the problem of valuation is not just a technical one. Officials at GKI were extremely concerned that the sudden accumulation of liabilities might result in an enterprise's being sold to the workers when it was actually insolvent. The government was concerned, however, that many managers and workers might unwittingly purchase an enterprise without value, thus undermining the constituency for reform over time. To avoid this problem, GKI could hold off selling enterprises with large inter-enterprise liabilities. But by early summer 1992, such a policy, if implemented, would have taken most of industry off the market. Alternatively, enterprises could have their liability removed for all or a portion of their debts at the time of corporatization. While such a policy might appear to facilitate privatization, its positive effect would be only short-term. For such a policy would undermine the government's ultimate intention to signal an end to soft and semi-soft budget constraints.

Clearly, uncertainty about an enterprise's value can reduce the incentive for managers and workers to participate in government-mandated privatization programs. Managers and workers in enterprises that are uncertain about the value of their receivables may be reluctant to change ownership status. However, as we note above, this information problem does not affect all enterprises equally. Enterprises that sell to the public, or are one step removed from doing so, have better information about the quality of their receivables. Hence, they appear much more willing to opt for joint-stock status than enterprises that produce commodities that are more upstream. Consider the situation of machine tool builders that supply very specific heavy industry uses. If one of their major customers is forced into bankruptcy, they will likely follow. For these enterprises, reduction of the stock of inter-enterprise debt may be necessary to induce them to pursue joint stock status.

Inter-enterprise debt also lessens the external demand for shares in the enterprise. Given that the employees of the enterprise may not possess sufficient information to determine its viability, it is no wonder that individuals and institutions without private knowledge of the enterprise may find investment in the enterprise to be excessively risky.[53]

Some enterprises may respond to the process of privatization in ways that clearly undermine the goals of reform. For example, consider an enterprise that is not certain whether it would be viable in a market system. This uncertainty may be based on a lack of information about the demand for its product, information that may be obscured, in part, by the presence of high levels of inter-enterprise debt. In this case, the cost of extending credit to other enterprises might be low (or even negative). Given that an enterprise must have positive net worth prior to corporatization, extension of inter-enterprise credit might enable the enterprise to

[53]Except to the extent that individuals believe that all enterprises will be bailed out.

avoid corporatization, securing the position of the manager until the state ends its policy of soft budgets. Alternatively, a manager may be aware that other managers are extending credit. Therefore, he or she may anticipate that the government will lose sight of which enterprises are financially viable, making the entire program of privatization untenable.

This explanation of the growth in arrears is of the *end-game* variety. In the present context, an end-game is played because the manager believes he or she is at risk of losing his or her position. As a consequence, the manager is willing to accumulate debt, precisely because he or she believes that such a strategy will induce the government to take an action that enhances the likelihood of job security.[54] Thus, the manager can extend credit at little or no personal cost.

The impetus for rapid mass-privatization in Russia is the belief that such a policy is both a necessary and a sufficient condition for the transformation of enterprise-level incentives. Here we emphasize that the incentive effects of privatization can, in fact, be eroded by the mechanism that is used to reduce the stock of inter-enterprise debt. Specifically, many government officials support policies that effectively reduce the liabilities of enterprises, such as debt cancellation or the extension of credit based on non-commercial criteria, precisely because they appear to facilitate the process of privatization. Such policies signal enterprises that the government is not unambiguously committed to hard-budget constraints, thereby supporting their belief that, in the extreme, the government will rescue failing enterprises. In this case, *the growth of inter-enterprise debt is likely to continue even after an enterprise is corporatized or privatized.*[55] An enterprise will continue to extend extraordinary levels of credit to other enterprises, regardless of its ownership status.

CONCLUSION

The attempt to impose a tight credit policy in a financially underdeveloped economy is the fundamental cause of the explosion in inter-enterprise arrears. When monetary policy tightened in the first half of 1992, enterprises responded by lending to each other. Inter-enterprise lending was the only maneuver available to circumvent the credit crunch the enterprises faced.

Since July of 1992, Russia has altered the nature of inter-enterprise payments. This change has led some observers and some officials of the Russian government, most notably Finance Minister Boris Fyodorov, to argue that arrears are no longer a problem (Fyodorov, 1993). Such views ignore the fact that arrears are primarily a consequence of tight credit policy. Loose credit postpones arrears; it does not eliminate them. The fact that arrears have stabilized at less than ten percent of GNP does not mean that the problem is solved, for this stabilization has occurred during a

[54]The end-game strategy does entail the risk of liquidation.
[55]In fact, arrears are growing among privatized enterprises in Mongolia.

period of rapid credit growth. The crucial question is what will happen if monetary policy tightens.

Whether or not arrears will reappear draws the issue too narrowly, however. It is certainly the case that the next credit crunch will not resemble the last. Enterprises have undertaken some adjustment in the direction of financially prudent behavior. Some enterprises do cut off customers that do not pay, though these are usually new customers, not historical relations. Banks have created correspondent accounts to improve some payments. Enterprises have created their own banks to aid them in efforts to obtain centrally distributed credits. The key point, however, is that the financial system remains underdeveloped. Consequently, when the next attempt to tighten occurs, the result may take another form.

We already observe the development of financial-industrial groups in Russia. These groups solve two problems for their members. They secure deliveries for enterprises by strengthening vertical relationships. In this way, they enable enterprises to circumvent the difficulties posed by an inefficient distribution system. And they enhance enterprise viability by being a source of finance to the members. The proliferation of these groups results in a "balkanization" of financial markets.

The likelihood that the next financial crisis will appear in a different form is enhanced by the efforts of these financial-industrial groups to insulate themselves from the next credit crunch by establishing banks. For these groups, banks serve as a means of securing for themselves a source of finance. They are also a means of circumventing an ineffective payments system. The problem, however, is that a banking system that is created on the basis of such motives is not likely to be stable.

The danger inherent in this proliferation of banks is that when the next credit crunch occurs, the crisis will be centered in the banking system. In this case, financial underdevelopment will continue to make tight monetary policy problematic, but the manifestation will not be inter-enterprise arrears; it will be *arrears from enterprises to banks*. If this proves to be the case, then a future credit crunch may pose grave danger to the banking system as a whole.

The arguments we present in this study suggest that, in an economy in transition with an underdeveloped financial system, monetary policy must be sufficiently restrictive to encourage enterprises to adjust, but not so restrictive that enterprises choose to react in a way that undermines the process of economic reform. If the government chooses to tighten credit too quickly or too severely, then the credibility of the policy, once again, will be brought into question. Moreover, as long as financial markets are underdeveloped, tight credit policies have deleterious unintended consequences, such as gridlock in the payments system and arrears in the payment of taxes. This suggests that efforts to impose financial discipline on enterprises must be associated with progress in the development of the financial system in Russia.

Now that Boris Yel'tsin has restored Yegor Gaydar's stewardship of economic policy (September 1993), dissolved parliament and placed the

Central Bank of Russia under presidential authority (October 1993), and announced his intention to accelerate stabilization, marketization and privatization, the Russian government may be tempted once again to tighten credit. If it does so, it must be sensitive to the possible reverberating effects of a credit crunch: cascading enterprise failure, with little significant progress toward the goal of privatizing the economy.

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