



Work in progress
for public discussion

WORLD BANK TECHNICAL PAPER NO. 471

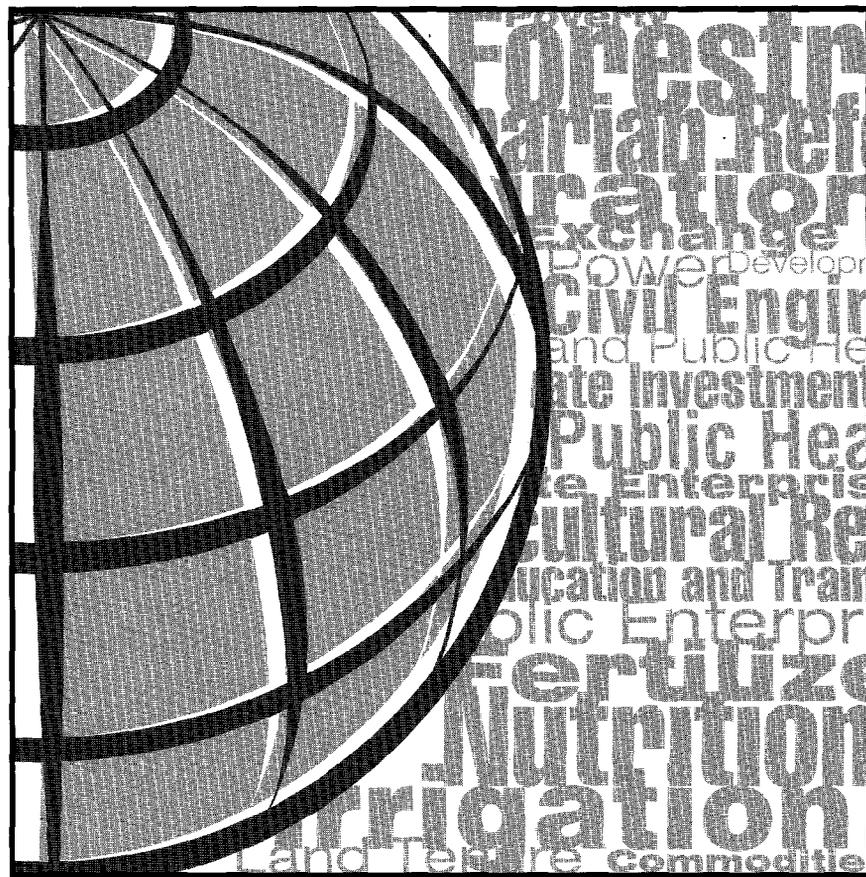
*Europe and Central Asia Poverty Reduction and Economic
Management Series*

WTP471

June 2000

Dismantling Russia's Nonpayments System

Creating Conditions for Growth



*Brian Pinto
Vladimir Drebensov
Alexander Morozov*

Recent World Bank Technical Papers

- No. 398 Ayres, Anderson, and Hanrahan, *Setting Priorities for Environmental Management: An Application to the Mining Sector in Bolivia*
- No. 399 Kerf, Gray, Irwin, Lévesque, Taylor, and Klein, *Concessions for Infrastructure: A Guide to Their Design and Award*
- No. 401 Benson and Clay, *The Impact of Drought on Sub-Saharan African Economies: A Preliminary Examination*
- No. 402 Dinar, Mendelsohn, Evenson, Parikh, Sanghi, Kumar, McKinsey, and Lonergan, *Measuring the Impact of Climate Change on Indian Agriculture*
- No. 403 Welch and Frémond, *The Case-by-Case Approach to Privatization: Techniques and Examples*
- No. 404 Stephenson, Donnay, Frolova, Melnick, and Worzala, *Improving Women's Health Services in the Russian Federation: Results of a Pilot Project*
- No. 405 Onorato, Fox, and Strongman, *World Bank Group Assistance for Minerals Sector Development and Reform in Member Countries*
- No. 406 Milazzo, *Subsidies in World Fisheries: A Reexamination*
- No. 407 Wiens and Guadagni, *Designing Rules for Demand-Driven Rural Investment Funds: The Latin American Experience*
- No. 408 Donovan and Frank, *Soil Fertility Management in Sub-Saharan Africa*
- No. 409 Heggie and Vickers, *Commercial Management and Financing of Roads*
- No. 410 Sayeg, *Successful Conversion to Unleaded Gasoline in Thailand*
- No. 411 Calvo, *Options for Managing and Financing Rural Transport Infrastructure*
- No. 413 Langford, Forster, and Malcolm, *Toward a Financially Sustainable Irrigation System: Lessons from the State of Victoria, Australia, 1984–1994*
- No. 414 Salman and Boisson de Chazournes, *International Watercourses: Enhancing Cooperation and Managing Conflict, Proceedings of a World Bank Seminar*
- No. 415 Feitelson and Haddad, *Identification of Joint Management Structures for Shared Aquifers: A Cooperative Palestinian-Israeli Effort*
- No. 416 Miller and Reidinger, eds., *Comprehensive River Basin Development: The Tennessee Valley Authority*
- No. 417 Rutkowski, *Welfare and the Labor Market in Poland: Social Policy during Economic Transition*
- No. 418 Okidegbe and Associates, *Agriculture Sector Programs: Sourcebook*
- No. 420 Francis and others, *Hard Lessons: Primary Schools, Community, and Social Capital in Nigeria*
- No. 421 Gert Jan Bom, Robert Foster, Ebel Dijkstra, and Marja Tummers, *Evaporative Air-Conditioning: Applications for Environmentally Friendly Cooling*
- No. 422 Peter Quaak, Harrie Knoef, and Huber Stassen, *Energy from Biomass: A Review of Combustion and Gasification Technologies*
- No. 423 Energy Sector Unit, Europe and Central Asia Region, World Bank, *Non-Payment in the Electricity Sector in Eastern Europe and the Former Soviet Union*
- No. 424 Jaffee, ed., *Southern African Agribusiness: Gaining through Regional Collaboration*
- No. 425 Mohan, ed., *Bibliography of Publications: Africa Region, 1993–98*
- No. 426 Rushbrook and Pugh, *Solid Waste Landfills in Middle- and Lower-Income Countries: A Technical Guide to Planning, Design, and Operation*
- No. 427 Mariño and Kemper, *Institutional Frameworks in Successful Water Markets: Brazil, Spain, and Colorado, USA*
- No. 428 C. Mark Blackden and Chitra Bhanu, *Gender, Growth, and Poverty Reduction: Special Program of Assistance for Africa, 1998 Status Report on Poverty in Sub-Saharan Africa*
- No. 429 Gary McMahon, José Luis Evia, Alberto Pascó-Font, and José Miguel Sánchez, *An Environmental Study of Artisanal, Small, and Medium Mining in Bolivia, Chile, and Peru*
- No. 430 Maria Dakolias, *Court Performance around the World: A Comparative Perspective*
- No. 431 Severin Kodderitzsch, *Reforms in Albanian Agriculture: Assessing a Sector in Transition*
- No. 432 Luiz Gabriel Azevedo, Musa Asad, and Larry D. Simpson, *Management of Water Resources: Bulk Water Pricing in Brazil*
- No. 433 Malcolm Rowat and José Astigarraga, *Latin American Insolvency Systems: A Comparative Assessment*
- No. 434 Csaba Csaki and John Nash, eds., *Regional and International Trade Policy: Lessons for the EU Accession in the Rural Sector—World Bank/FAO Workshop, June 20–23, 1998*

(List continues on the inside back cover)

WORLD BANK TECHNICAL PAPER NO. 471

*Europe and Central Asia Poverty Reduction and Economic
Management Series*

Dismantling Russia's Nonpayments System

Creating Conditions for Growth

*Brian Pinto
Vladimir Drebensov
Alexander Morozov*

*The World Bank
Washington, D.C.*

Copyright © 2000
The International Bank for Reconstruction
and Development/THE WORLD BANK
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

All rights reserved
Manufactured in the United States of America
First printing June 2000

Technical Papers are published to communicate the results of the Bank's work to the development community with the least possible delay. The typescript of this paper therefore has not been prepared in accordance with the procedures appropriate to formal printed texts, and the World Bank accepts no responsibility for errors. Some sources cited in this paper may be informal documents that are not readily available.

The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. The World Bank does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use. The boundaries, colors, denominations, and other information shown on any map in this volume do not imply on the part of the World Bank Group any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

The material in this publication is copyrighted. The World Bank encourages dissemination of its work and will normally grant permission promptly.

Permission to photocopy items for internal or personal use, for the internal or personal use of specific clients, or for educational classroom use, is granted by the World Bank, provided that the appropriate fee is paid directly to Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, U.S.A., telephone 978-750-8400, fax 978-750-4470. Please contact the Copyright Clearance Center before photocopying items.

For permission to reprint individual articles or chapters, please fax your request with complete information to the Republication Department, Copyright Clearance Center, fax 978-750-4470.

All other queries on rights and licenses should be addressed to the World Bank at the address above or faxed to 202-522-2422.

ISBN: 0-8213-4774-8
ISSN: 0253-7494

Brian Pinto is lead economist in the Poverty Reduction and Economic Management Department of the World Bank's Europe and Central Asia Region. Vladimir Drebentsov is an economist in the Poverty Reduction and Economic Management Department of the World Bank's Europe and Central Asia Region. Alexander Morozov is an economist in the Poverty Reduction and Economic Management Department of the World Bank's Europe and Central Asia Region.

Library of Congress Cataloging-in-Publication Data has been applied for.

Contents

FOREWORD.....	vi
ACKNOWLEDGEMENTS	vii
EXECUTIVE SUMMARY.....	viii
CHAPTER 1: NONPAYMENTS AT THE TOP OF THE POLICY AGENDA.....	1
Definitions	1
Why is Nonpayments a Problem?	2
The Story Line	3
CHAPTER 2: ROLE OF THE GOVERNMENT IN NONPAYMENTS	5
Nonpayments and Macroeconomic Policy	6
Budgetary Arrears and Resulting Offsets	9
Government as the Net Creditor in the Economy	10
Government as a Source of Subsidies to Enterprise Sector	11
More on Subnational Government	13
Rent-seeking Opportunities	16
CHAPTER 3: ENERGY SECTOR—NUCLEUS OF NONPAYMENTS.....	16
At The Center of the Web	16
Gazprom	18
Power Utilities—RAO UES (UES)	20
Conclusions	24
CHAPTER 4: NONPAYMENTS AND THE NEW INDUSTRIAL ORGANIZATION.....	24
NCS Motives	25
Nonpayments: Subsidy, Not Credit	29
Impact on Industrial Organization	31
CHAPTER 5: A MINIMUM SET OF REFORMS FOR DISMANTLING NONPAYMENTS	32
Guiding Principles	33
Government	35
Energy Monopolies	36
Exit Policy—Social Safety Net Issues	37
Other Factors—Banks and the Tax Code	37
REFERENCES AND READING LIST	38

Tables, Figures And Boxes

TABLE 1: Nonpayments—1994 to 1998	2
TABLE 2: Macroeconomic Performance between 1995 and 1998	6
TABLE 3: Offsets in the Federal Budget on Cash Basis	9
TABLE 4: Offsets and State Securities as Financing Mechanisms of Federal Budget	10
TABLE 5: Budget Payables and Tax Arrears	11
TABLE 6: Budget Subsidies to Enterprise Sector	12
TABLE 7: Adjusted Budget Deficit and State Debt.....	12
TABLE 8: Structure of Tax Arrears End -1997	14
TABLE 9: Payables of Federal and Subnational Budgets	15
TABLE 10: Gas and Electricity Generation in Industry Arrears	17
TABLE 11: Gazprom Sales and Cash Collection Ratio, 1997.....	18
TABLE 12: Domestic Implicit Subsidy Provided by Gazprom	19

TABLE 13: Composition of Power Utilities Sales by Means of Payments	20
TABLE 14: Domestic Implicit Subsidy by the Electricity Generation Sector.....	21
TABLE 15: Power Utilities Overdue Accounts	21
TABLE 16: Are Nonmonetary Methods of Payments Important in Minimizing Tax Bill?.....	26
TABLE 17: Share of NCS in Sales, by Industry	28
TABLE 18: Number of Loss-making Companies	30
FIGURE 1: Inconsistent Macro-Micro Policies, Nonpayments and Meltdown.....	vii
FIGURE 2: Real Interest Rate	3
FIGURE 3: Percentage of Companies Using Intermediaries in NCS	29
FIGURE 4: Dynamics of Industrial Output and Credit Ratio	30
BOX 1: Measures to Dismantle Nonpayments.....	xii
BOX 2: How Do Hard Budget Constraints Work?.....	4
BOX 3: A Universe of Federal Offsets	10
BOX 4: Leningrad and Nizhny Novgorod Oblasts.....	13
BOX 5: Nonpayments—The View From an AO Energo.....	22
BOX 6: Being Tough Helps—A Conversation With a Barter Intermediary	23
BOX 7: Has the Freezing of Bank Accounts Spurred NCS?	27
BOX 8: Summary of SAL3 Measures to Address Nonpayments	34

Annexes

ANNEX 1: BUDGET SUBSIDIES: MEASUREMENT AND INSTRUMENTS	40
Evaluation of Budget Subsidies to National Economy	40
Federal Nonmonetary Instruments: 1994-1998	41
Subnational Budget Offsets: Types and Institutional Basis	47
ANNEX 2: ENERGY SECTOR MONOPOLIES—VEHICLE FOR IMPLICIT SUBSIDY AND A CORNERSTONE FOR NONPAYMENTS	
Industrial Organization	53
Gazprom	53
Proliferation of Monopolistic Behavior—an Unexpected Consequence of Nonpayments for Gas ..	56
Electricity Generation Utilities (RAO UES and Energos)	58
ANNEX 3: ENTERPRISE BEHAVIOR – RATIONAL RESPONSE TO EXISTING INCENTIVES	62
The Russian Economic Barometer: Survey Results	62
Mr.Karpov’s 1997 Database	63
EBRD-VTsIOM November 1998 Survey	64
Case Studies	65

Tables & Figures

ANNEX 1	
Table 1: Budget Subsidies to Enterprise Sector, 1994-1998.....	40
Table 2: Losses Suffered by KO “Beneficiaries”	43
Figure 1: Dynamics of Budget Subsidies to Enterprise Sector, 1996-1998	41
Figure 2: KOs Circulation.....	42
Figure 3: Tax Payment via KO for KNO Swap	44
Figure 4: Direct Monetary Offsets.....	46

Figure 5: Reversed Monetary Offset	47
--	----

ANNEX 2

Table 1: Gazprom's Sales	53
Table 2: Domestic Supplies: Total Overdue Accounts Payable and Receivable.....	54
Table 3: Gazprom's Subsidy Extended through Barter and Overdue Accounts Receivable.....	54
Table 4: Gazprom's Tax Savings	56
Table 5: Domestic Gas Consumption, 1992-1997.....	58
Table 6: Energos Sales.....	58
Table 7: Electricity Consumption by Sector	59
Table 8: Composition of Energos Sales by Means of Payment.....	59
Table 9: Energos Overdue Accounts Payable and Receivable.....	60
Table 10: Energos Subsidy Extended via Barter and Overdue Accounts Receivable	60
Table 11: GDP and Electricity Generation Dynamics, 1992-1997	61
Figure 1: Composition of Gazprom Overdue Accounts Payable	55
Figure 2: Power Utilities, Overdue Payables Composition.....	59

ANNEX 3

Table 1: Sample Size	63
Table 2: Dynamics of Fiscal Burden Relative to Total and Cash Revenues	63
Table 3: Share of Cash in Total Revenue.....	64
Table 4: Share of Tax and Pension Fund Liabilities in Cash Revenue.....	64
Table 5: Distribution of Enterprises According to Financial Performance.....	64
Table 6: Number of Enterprises by Industries.....	64
Figure 1: Share of Barter in Total Sales.....	62
Figure 2: Average Annual Share of Barter in Sales.....	62

FOREWORD

The Poverty Reduction and Economic Management Unit in the World Bank's Europe and Central Asia Region has been undertaking a series of analytical works on issues pertinent to the economies in the region. These issues include transition issues; issues of economic integration pertinent for the Central and Eastern Europe countries which are candidates for accession to the European Union; poverty issues; and other economic management issues. The analytical work has been conducted by staff of the unit and other Bank staff, as well as specialists outside the Bank.

This technical paper series was launched to promote wider dissemination of this analytical work, with the objective of generating further discussion of the issues. The studies published in the series should therefore be viewed as work in progress.

The findings, interpretations, and conclusions are the author's own and should not be attributed to the World Bank, its Executive Board of Directors, or any of its member countries.

Pradeep Mitra
Director
Poverty Reduction and Economic Management Unit
Europe and Central Asia Region

ACKNOWLEDGMENTS

This paper was originally circulated under the title *The Russian Federation. Dismantling Russia's Nonpayments System: Creating Conditions for Growth. A Report by the World Bank, September 1999*. It was discussed at a seminar in Moscow organized on January 28, 2000, by the Working Center for Economic Reforms, Government of Russia.

The paper was written by Brian Pinto, Vladimir Drebentsov, and Alexander Morozov of the World Bank's Moscow Office, with substantial contributions from Stepan Titov and Sergei Ulatov. It draws upon background pieces written by Galina Kourlianskaya, Pavel Kuznetsov, and George Pavlov. Excellent research assistance was provided by Oksana Chernukha, Ksenia Krivenko, and George Pavlov.

The team acknowledges the contribution of Simon Commander, who provided answers to several questions from the enterprise-level database created by the November 1998 EBRD-VTsIOM survey. Petr Karpov was kind enough to provide access to his 1997 database of large tax debtors. Andrei Volgin generously shared his insights, and helped organize valuable, informal meetings with numerous enterprise managers and officials in one of the regions.

This study would not have been possible without the support, encouragement and guidance of Michael Carter, Country Director, Russia; Pradeep Mitra, Director, ECA PREM; and Robert J. Anderson, Sector Leader, Russia. The comments of peer reviewers David Dollar and Clifford Gaddy, and of Homi Kharas, Gerhard Pohl, Marcelo Selowsky, Andrei Shleifer and Mark Sundberg helped refocus and substantially reshape the paper. Numerous other colleagues provided helpful comments for revision.

EXECUTIVE SUMMARY

Nonpayments in Russia evolved into a complex, inter-linked system over the latter half of the 1990s, becoming one of the most critical issues facing policymakers. This paper analyzes this system, including its origins, its evolution, the factors that now perpetuate it, and its costs, and identifies a minimum set of economic reforms needed to dismantle it. The paper also proposes answers to key questions about nonpayments, including those listed below:

- How has its course been influenced by government policy at the federal and subnational levels?
- What are the links with macroeconomic policy?
- What is the role of the energy sector, and how has the system affected the way businesses operate?
- What are the implications for economic growth?
- How indeed, as part of Russia's transition to a monetized, market economy, did the nonpayments system come to exert a stranglehold on virtually every aspect of the economy?

Factors Driving Nonpayments

Nonpayments intensified and spread as a result of inconsistency between macroeconomic and microeconomic policies, as illustrated in figure 1. The macroeconomic policy goal was to stabilize rapidly as a prelude to the resumption of growth. The government attempted to achieve this goal by fixing the exchange rate and tightening credit even though fiscal reforms and the consolidation of the enlarged government deficit (total federal, regional, and Extra-budgetary Funds (EBFs)) lagged behind. As figure 1 shows, this led to spending arrears and a sharp increase in public debt.

While the microeconomic policy goal was not as clearly articulated as the macroeconomic disinflation strategy, it can be inferred from government actions, especially at the subnational level, that the goal was to maintain a social safety net by continuing to subsidize enterprises and thereby encourage them to remain in operation. Even though explicit budgetary subsidies for enterprises were drastically curtailed during the initial years of reform, enterprises have continued to be supported by implicit subsidies channeled largely through the energy sector and lax tax enforcement.¹ These implicit subsidies have taken the form of arrears and noncash settlements (NCS) for energy and tax payments, lumped together in this paper under the title "nonpayments."² The energy monopolies in turn passed the related costs on to the fiscal accounts, becoming the largest tax delinquents as well as the biggest participants in tax offsets, which were designed to cancel mutual budgetary and tax arrears. This led to the chronic shortfall in cash revenues witnessed during the 1995 to mid-1998 stabilization period.

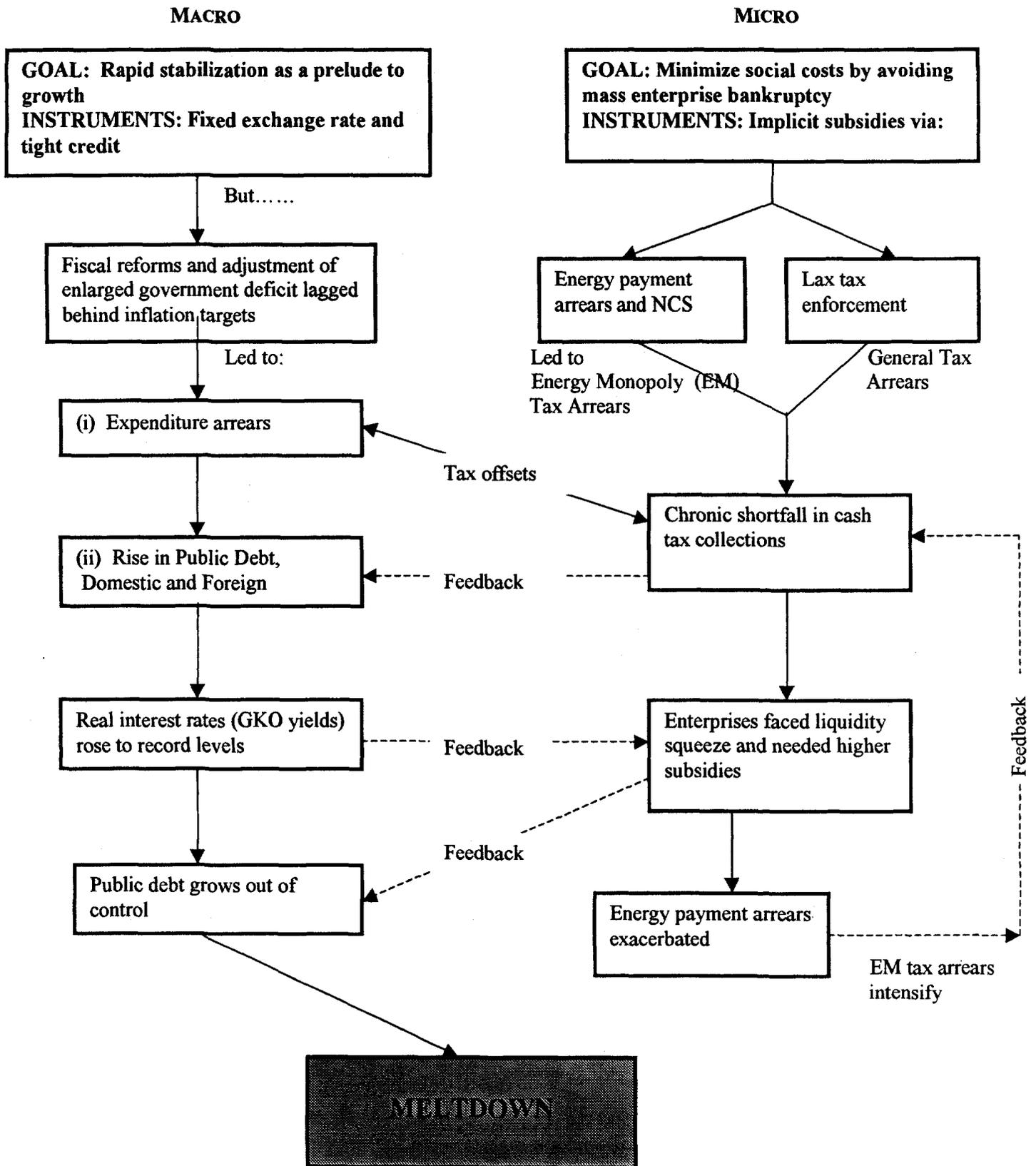
As figure 1 shows, feedback between macroeconomic and microeconomic policies has been strong. As real interest rates rose, enterprises experienced liquidity problems and moved further toward NCS; at the same time, the need for implicit subsidies increased. In turn, energy companies increased their tax arrears and delayed payments to the EBFs, exacerbating the cash revenue shortfall and forcing the government to borrow more as nonpayments eroded the tax base. This eventually led to the meltdown when public debt service reached insupportable levels.

Nonpayments were thus propelled by an inconsistent economic policy mix of soft budgets for enterprises, coupled with rapid disinflation in the face of inadequate fiscal adjustment.

¹ This argument applies more broadly, for example, when oil companies are threatened with a cutoff from the oil export pipeline unless they continue supplying nonpaying domestic refineries.

² Nonpayments comprises both arrears and NCS. The latter include operations related to barter, vekselns and offsets, which are typically settled at off-market prices, enabling a discount. See Chapter 1.

Figure 1: Inconsistent Macro-Micro Policies, Nonpayments and Meltdown



Economic Costs of Nonpayments

Nonpayments has been fiscally costly, has become a critical constraint to economic growth in Russia, and has had ambiguous welfare effects. It has also diluted the credibility of the key strategic reforms undertaken as part of Russia's transition to a market economy.

As is clear from figure 1, nonpayments has been fiscally costly, raising public debt to levels that forced the macroeconomic crisis of August 1998. In retrospect, given the scale of subsidies implicit in nonpayments—estimated in Chapter 3 at 4 percent of gross domestic product (GDP) per year from the energy monopolies alone—it is not surprising that the stabilization collapsed. All that was achieved was a temporary reduction in inflation. The reason is that nonpayments impeded fiscal consolidation so that, in reality, the government had only two choices: either higher debt today with higher inflation tomorrow; or higher inflation today. The former path was chosen. Thus, with nonpayments, stabilization can at best be temporarily achieved and will finally not be credible because of its adverse impact on the fiscal deficit through the erosion of the tax base.

Nonpayments has also prevented attainment of another key strategic goal: the resumption of growth.³ The reason is that by softening budget constraints, nonpayments has destroyed the incentives for enterprises to restructure and use inputs and existing assets more efficiently. As will be discussed in Chapter 4, a new industrial organization has resulted, based on an alliance of interests between managers of viable and nonviable companies, who have had strong incentives to collude and partly siphon off the implicit subsidies. This has fueled corruption, asset stripping, and capital flight. At the same time, by distorting prices, nonpayments has prevented the new relative prices, which resulted from liberalization, from serving as clean signals for resource allocation.⁴ Growth gets stifled, as there is little incentive for efficient companies or new entrants to invest more and increase output in this climate.

A key finding of this report is that the process of institutionalizing nonpayments has been incentive-driven. In other words, Russia's economic problems have resulted from distorted incentives in addition to weak institutions. While a strong institution such as a Federal Treasury is obviously important, distorted incentives might have unnecessarily delayed institution building: consider the vested interests of "authorized banks" that benefited from Russia's weak Federal Treasury. Further, in this atmosphere, tax rules have meant little, as taxes are effectively tailored to individual companies, corrupting the formal tax system and the credibility of tax enforcement and further weakening the development of public institutions. For the system of nonpayments to have grown and flourished would have been almost impossible without the active support of the government. As Chapter 2 will show, this has indeed been the case.

Lastly, the positive welfare impact of nonpayments, in its potential role as an informal social safety net, is at best ambiguous, as discussed later in this Executive Summary and in Chapter 5. Thus, nonpayments has impeded growth while making a questionable contribution to equity.

Key Questions Looking Forward

In many ways, Russia once again faces the same problems that it faced when it began its stabilization and structural adjustment efforts in 1995: it must meet the challenges of fiscal management, provide lasting stabilization, and create a foundation for sustainable growth. A crucial difference is that these must be achieved in an environment where access to commercial public borrowing will be severely limited. The key questions are:

³ The rebound in output following the big devaluation in 1998 is a special case discussed below.

⁴ Pricing in the context of NCS is to a large extent arbitrary, and determined more by personal enrichment goals rather than maximization of enterprise profits.

- Do nonpayments hurt growth?
- What are the inflationary implications of dismantling nonpayments?
- What are the welfare consequences of dismantling nonpayments?
- How to dismantle nonpayments?

These questions are discussed below.

Sustained Growth with Nonpayments: Unlikely

In early 1996, expectations ran high that growth would resume in Russia and achieve sustainable rates of 5-7 percent per year by 1997. However, the expectation proved excessively optimistic. Although there was a sharp reduction in inflation, real interest rates remained high in 1996 because of inadequate fiscal adjustment and heightened political uncertainty stemming from the presidential elections. In 1997, following greater political stability and the perception that reforms would accelerate, the international markets turned toward Russia, which benefited from vast portfolio capital inflows. Foreign exchange reserves rose by mid-year to unprecedented and unanticipated levels; real interest rates fell and output registered its first increase since the start of transition. However, with public debt in the form of short-term ruble treasury bills (GKO) rising sharply, Russia's vulnerability to market sentiment increased. Moreover, with nonpayments growing, cash revenues persistently fell short of targets, prompting the International Financial Institutions (IFIs) to tighten their stance toward the end of the year, coinciding with the first contagion attack from the financial crisis in Southeast Asia. Thereafter, real interest rates rose, and concerns about lack of fiscal adjustment and the slow progress in structural reforms dominated investor concerns about Russia. In August 1998, these concerns were realized with the macroeconomic meltdown, which called attention to the large agenda of remaining fiscal and structural reforms, while putting economic growth on hold.

After the sharp third-quarter drop in output in 1998, initial prognostications were that the recession would deepen and intensify in 1999, with GDP forecast to fall by 7-10 percent. In contrast, GDP is estimated to have grown by 3.2 percent in 1999. There are two main reasons for this: (a) the sizable real devaluation has encouraged domestic production, largely by cutting imports; and (b) with limited links between banks and the real sector, the collapse of the large Russian banks has not magnified the impact of the meltdown on enterprises, as in Southeast Asia. Furthermore, survey evidence shows a decline in the use of noncash settlements by firms following the meltdown and monetary loosening.

The common thread linking these two episodes—one preceding the meltdown, when sustainable growth never materialized, and another following the meltdown, when the downside was minimized—is that enterprise-level hard budget constraints have been absent in both cases because of nonpayments, which has impeded efficient enterprise restructuring.

Hard Budget Constraints and Growth. One of the most robust empirical results documented since the start of transition is the crucial link between the resumption of growth and enterprise-level hard budget constraints. These are essential for the efficient use of existing assets and resource reallocation through exit and entry, as will be discussed in Chapter 1. Poland's experience is instructive. Growth resumed long before mass privatization began. The main factors simulating this growth were competition and hard budget constraints. Further, in the initial years, much of the growth came simply from using existing assets better. Thus, while economic growth resumed in 1992, the big boom in domestic investment came only in 1995, and foreign direct investment did not take off until 1996, when Poland was in its fifth year of growth. Although many observers point to the role played by so-called *de novo* private companies in this process, empirical evidence establishes strong links between these new start-ups and old state enterprises, which in many cases

sold equipment and machinery to the new start-ups. This linkage is often referred to as “creative destruction” during transition.

Russia’s growth dynamics will similarly demand a hardening of budget constraints, that is, a dismantling of nonpayments. The continuing inefficiency in using existing assets is brought home by one statistic: energy intensity has actually gone up during the transition even though the relative price of energy has risen. This is because firms cannot be disconnected for nonpayment of energy bills, making the price irrelevant.

Nonpayments and the Question of Inflation

The experience between 1995 and 1998 shows that if low inflation is achieved while nonpayments persist, the economic costs in terms of the following are staggering:

- misallocation of resources and postponed enterprise restructuring,
- facilitation of corruption,
- a bad investment climate, and
- stifled growth prospects.

To make matters worse, even the inflation reduction is not likely to last.⁵ To put it plainly, if low inflation is attained in the presence of nonpayments, none of the benefits associated with low inflation will be forthcoming, while the economic costs will be considerable. In these circumstances, low inflation is neither an index of success nor credibility. The fundamental objective should be to complete the transition by dismantling nonpayments, with the government signaling that the rules of the game have changed, that it has changed course and will impose hard budget constraints on enterprises and itself.

Dismantling nonpayments calls for the following: (a) fiscal reforms focusing on both expenditures and taxes, with the stoppage by the government of expenditure arrears, to set an example for enterprises; (b) complete elimination of tax offsets; (c) stoppage of subsidies through the energy companies, while at the same time regularizing their taxation in a transparent and efficient manner.

Thus, inflation targets adopted must be consistent with a switch to cash expenditure payments with a simultaneous insistence on cash tax payments. It is obviously important that this coincide with the Federal Treasury exercising control over expenditure commitments. It is difficult to predict the short-term inflationary consequences of such a shift, owing to leads and lags in the adjustment process, and the need for the government to set an example by moving first. However, the medium-term consequences for inflation are likely to be beneficial because the elimination of implicit subsidies will facilitate credible enforcement of prompt cash tax collection, thereby easing the fiscal burden. This might delay the return to single-digit inflation levels, but the long-term strategic benefits of dismantling nonpayments and completing the transition will more than outweigh any short-term costs associated with moderate inflation. For example, in Poland, the government was able to establish enterprise-level, hard budget constraints and embark upon a program of fiscal reform without immediately bringing inflation down to single-digit levels. This did not in any way hurt the credibility of macroeconomic policies because it was evident to the private sector that the necessary political will to implement the needed fiscal reforms existed.

⁵ In 1998, twelve-month inflation dipped below 10 percent in February, and remained at single-digit levels up to August, after which it rose. It now remains at moderate levels.

In other words, fiscal reforms; enterprise-level, hard budgets; and structural reforms to promote growth, all of which require that nonpayments be dismantled, should be viewed in a strategic, medium-term context of completing Russia's transition and creating strong microeconomic foundations for both growth and lasting stabilization. The dismantling of nonpayments and the formulation of inflation targets need to be coordinated.

Welfare Concerns

The standard view is that the government and policy makers tolerate nonpayments because the social consequences of hard budgets would be difficult to accept. Enterprises are not shut down because of fears of rising unemployment and disruption in the flow of social services they provide.

However, data reported in chapter 2 show that transfers to the population and wages account for a significant part of government arrears at the subnational level. This is difficult to reconcile with the notion that social concerns are driving the no-exit policy for enterprises, i.e. supporting employment by preventing enterprises from dropping out of the market. Indeed, one of the major casualties of the chronic tax shortfalls witnessed during 1995-98—which can be partly attributed to the fact that the biggest tax delinquents are also the biggest implicit subsidy providers in the nonpayments system—has been social spending.⁶

At the same time, the output of large enterprises has been declining over time, and wage payment arrears are significant. Therefore, the additional social impact of hardening budgets at this point is not clear. It may be that apart from one-company towns, which have to be treated as special cases, the social impact on other enterprises may be much less severe than believed. This is clearly a topic requiring more work, but it is also worth noting that if sustainable growth does not resume—and this is not likely under the present system of nonpayments—then the welfare of the younger generation of Russians, who will not have much to look forward to, is also a factor that must be weighed. The key issue here is that the absence of exit of nonviable companies is the biggest barrier to the entry of new, more efficient, firms.

Dismantling Nonpayments: A Minimum Set of Reforms

The economic case for dismantling nonpayments and the technical solution are straightforward. The impediments are political. First, a political decision has to be made by government at all levels to stop subsidies to enterprises, explicit and implicit, thereby ensuring hard budget constraints. (One-company towns might have to be treated as exceptions.)

Based on the diagnosis of the nonpayments problem in this paper, corrective policies will need to address (a) continued reform to bring the enlarged fiscal deficit under control; (b) tax reform to enable the smooth switch to transparent cash-based taxation; (c) coordination of inflation targets with a switch to budget execution solely in cash form, and strictly avoiding further budgetary arrears, while imposing hard budget constraints on enterprises; (d) efficient pricing, taxation and regulation of the energy monopolies supplemented with a clear policy enabling disconnection of nonpayers; and (e) an assessment of the probable social impact of hard budgets.

Reform should follow two guiding principles:

1. Get the government and the energy monopolies out of the nonpayments web. This would eliminate the subsidies and provide incentive for an automatic dismantling of nonpayments among manufacturing firms in general. This process would work by effectively hardening budget constraints. As soon as the

⁶ This happens directly, because tax shortfalls means a general compression of cash expenditures, and social spending is cash spending; and indirectly because the implicit subsidies get siphoned off and ironically co-exist with wage payment arrears by firms.

net creditors in the system realize that offsetting compensation from the government in the form of tax breaks and other concessions is not forthcoming, the system will spontaneously begin to break up through a cascading effect. This will also restore integrity to the tax system: the provision of implicit subsidies will no longer provide an excuse for not paying taxes.

2. Coordinate inflation targets with the dismantling of nonpayments as discussed above.

In sum, the strategy for dismantling nonpayments requires a political shock to change the system radically with the government taking the lead. Details are contained in Chapter 5, and summarized in box 1.

Box 1: Measures to Dismantle Nonpayments

Government:

- Create political consensus at all levels of government (federal, regional, municipal) about need for dismantling nonpayments, that is, hardening budget constraints.
- Rapidly implement tax reform to eliminate all exemptions and treat all taxpayers uniformly.
- Implement strict expenditure commitment control using Federal Treasury.
- Make all appropriately controlled expenditures on time and in cash.
- Insist on prompt tax cash payments.
- Coordinate inflation targets with fiscal reforms and dismantling of nonpayments.
- Proceed rapidly with social reforms in the context of a well-targeted social safety net.

Energy Monopolies:

- Implement efficient and transparent pricing, taxation, and regulation of Energy Monopolies (EMs).
- Change civil code to unambiguously permit disconnection of nonpayers after reasonable notice period.
- Ban, or severely restrict and monitor, use of intermediaries by regional energy companies (AO Energos).
- Insist on prompt and full tax payments by EMs.

Enterprises:

- Separate all remaining social assets and provision of social services from enterprises, and introduce transparent taxation.
- Estimate social consequences in one-company towns of hardening budget constraints.
- Signal and advertise improvement in investment climate resulting from hard budget constraints and transparent taxation.

The Time is Now!

The present time for dismantling nonpayments is exceptionally good: (a) the real devaluation has given domestic industry a tremendous boost by discouraging imports, improving its liquidity, and reducing the need for subsidies; (b) the government can no longer postpone difficult decisions because access to commercial borrowing has dried up for the time being; and (c) the lessons learned from the meltdown are still fresh. The most important of these is that attainment of low inflation will lead to sustainable growth only if it is accompanied by genuine enterprise restructuring and fiscal adjustment. By softening budgets, nonpayments destroys incentives for enterprise restructuring and becomes synonymous with the lack of fiscal adjustment, delaying the completion of transition.

It is probable that the real devaluation, which has given breathing space to Russian enterprises and permitted an import-substitution-based expansion of domestic industry, will persist for the next 12-18 months, if not longer. The reason is the massive overseas transfers Russia must make during the next few years. With large foreign debt service payments due, limited access to foreign borrowing and reserves close to critical minimum levels, the only way for Russia to meet its obligations is to generate large trade surpluses, which in turn requires a depreciated real exchange rate. This is an ideal circumstance in which to harden budgets by eliminating nonpayments, which would also help ensure that the one-time windfall gain from devaluation that is now cushioning enterprises gets converted into genuine enterprise restructuring, providing a foundation for sustainable growth.

Another important benefit of dismantling nonpayments would be a strong improvement in the investment climate. For years, portfolio investors have been drawn to Russia on the promise of its huge potential, with abundant natural resources and every element in the periodic table. In fact, the valuation of Russian companies has largely been based on comparing the assets of these companies with those in the same field listed on stock markets in the West. So far, however, the necessary foreign direct investment to extract the income streams from these assets has lagged behind from both domestic and foreign sources. Nonpayments represents a major barrier to such investment because of the resulting opaqueness and the difficulty posed for new entrants. Furthermore, outside strategic investors may be deterred from investing in Russian companies because they cannot easily value these companies or determine how loans are going to be repaid in cash. By hardening budgets and increasing transparency, the elimination of nonpayments will also push managers to seek "normal" financing sources, thereby providing incentives for the fair treatment of all shareholders and creditors. Thus, when nonpayments are dismantled, Russia can expect a dramatic improvement in its investment climate, even though the improvement might take time because of the need for establishing a successful record of consistent reforms.

A last point relates to the pace at which nonpayments should be dismantled. While faster would clearly be better, temporary disruptions are bound to arise, including those related to the supply of social services now channeled through enterprises. A plan will be needed to address such disruptions. SAL3 incorporates a time-phased approach to removing government and the infrastructure monopolies from the nonpayments web.⁷ It is vital that the government adhere to the agreed schedules and institute sharp penalties in case of noncompliance.

NB: All rubles used in this report refer to the "new rubles" introduced on January 1, 1998, created by dividing the "old rubles" by 1000 (knocking off three zeroes).

⁷ SAL3 is the Third Structural Adjustment Loan negotiated between the Russian Government and the World Bank in August 1998, and restructured in 1999.

CHAPTER 1: NONPAYMENTS AT THE TOP OF THE POLICY AGENDA

Russia's transition suffered a setback in 1998, with a massive meltdown in August. Real gross domestic product (GDP) shrank 4.9 percent, compared with the slight growth the previous year, and 12-month December inflation increased to 84 percent from 11 percent in 1997. The meltdown stemmed from weak macroeconomic fundamentals, in particular, unsustainable public debt dynamics as a result of inadequate fiscal adjustment. This was complicated by spillovers from international financial crises, a fragile banking system, and weakening oil prices, which combined to precipitate a comprehensive fiscal, balance of payments, debt and banking crisis. But the meltdown also showed that the inflation reduction achieved in earlier years did not have a sufficiently strong microeconomic foundation based on enterprise reform, and could not therefore form the basis for sustained growth.

The results reported here establish close links between the 1998 meltdown and nonpayments. The dramatic rise in nonpayments over 1995-98 was driven by a fundamental inconsistency between macroeconomic and microeconomic policy. While macroeconomic policy strove to attain single-digit inflation as soon as possible, soft budgets in the form of a rapidly evolving system of nonpayments bailed out enterprises. The costs of this bail out eventually necessitated large volumes of government borrowing, and prevented fiscal consolidation, leading to the meltdown. In addition, the nonpayments system has distorted prices and incentives, and has become a barrier to efficient, market-based economic activity.

This paper contains an analysis of Russia's nonpayments system, including its origins, its evolution, the factors that now perpetuate it, and its staggering costs. The object is to identify a minimum set of economic reforms needed to dismantle nonpayments and thereby help complete the transition to a market economy. This chapter presents the theme of this paper and explains why reform aimed at eliminating nonpayments should be the top policy priority. The next three chapters analyze three aspects of nonpayments: (a) as influenced by government policy; (b) in the gas and electric power sectors, which play a central role in the system; and (c) among enterprises. Measures required for dismantling nonpayments are presented in the last chapter.

Definitions

The term "nonpayments" is defined to include (a) arrears and (b) all forms of noncash settlements (NCS), including barter, veksel or promissory notes, and tax offsets whereby government spending arrears and overdue tax payments are mutually canceled. While arrears, or the failure to pay, constitutes nonpayment in the strict sense, the use of NCS is not strictly nonpayment; it is only the use of a payment instrument other than rubles (cash) or bank transfers. However, as will be seen below, NCS has subsidies built into it for energy and tax payments. Thus, while arrears mark a complete failure to pay, NCS is a partial failure to pay (or an underpayment). The two are therefore lumped together to capture the notion of a subsidy under the compact, if awkward, title "nonpayments."

The nonpayments system has two parts: (a) a large volume of rapidly growing overdue payments, estimated at close to 40 percent of GDP at the end of 1998 compared to 15 percent at the end of 1994; and (b) growing use of non-monetary exchange, with economic transactions increasingly settled by using NCS. Cash collections by the gas and electricity monopolies (respectively, Gazprom and RAO UES) were as low as 12-13 percent on domestic sales, and about 30 percent for the railways during the summer preceding the meltdown. By 1998, the share of NCS in enterprise sales had increased to 50-70 percent. From early 1995 to mid-1998 (the period of curbed inflation), almost 50 percent of the spending by subnational governments was in noncash form, with the federal government's share averaging 20 percent of non-interest spending. Table 1 presents summary data on the time evolution of nonpayments during 1994-98.

Table 1: Nonpayments—1994 to 1998, as Percent of GDP

	1994	1995	1996	1997	1998
Arrears ^{a/}	14.8	15.1	23.4	29.2	39.3
Of which:					
To suppliers	9.2	7.7	11.2	13.3	17.7
To the budget and EBFs ^{b/}	3.2	4.7	9.2	12.2	16.4
To employees	0.8	0.9	1.6	1.5	2.9
NCS, percent of sales ^{c/}	17	22	35	42	51

^{a/} end of period overdue payables for 4 sectors: industry, agriculture, transport and construction. Goskomstat data.

^{b/} Extra-budgetary funds

^{c/} Source: Russian Economic Barometer and Aukutsionek (1998).

Why is nonpayments a problem?

Nonpayments masks a system of soft budgets constituting a large-scale bail out of companies, which impedes not only growth but also the attainment of sustainable fiscal adjustment and stabilization. In addition, solving nonpayments issues is problematic because of the differing policy agendas and objectives of the federal and regional governments. It is a political dilemma.

Nonpayments first became a priority on the policy agenda a few weeks before the August 1998 meltdown as part of the Russian government's emergency program to combat the growing financial crisis.⁸ Earlier, concern about nonpayments focused mainly on falling cash tax collections at the federal government level. The insufficient attention paid to the systemic nature of the problem during the preceding 3 years was due to two main factors: a belief that nonpayments would spontaneously disappear as market reforms and stabilization led to economic growth; and a widespread perception that the primary cause of these economic difficulties was tax evasion. According to this latter diagnosis, the prescription was simple: crack down on tax evasion, and you solve the problem. As the experience with the Emergency Tax Commission (VChK), created in October 1996 showed, this solution did not work. Why it was not successful will become apparent below, but the political trade-offs and conflicting goals at various levels of government—federal, regional, and local—played key roles. The discussion will also reveal a close link between the increase in public debt and nonpayments, which eventually led to the meltdown.

Today, it is accepted that the nonpayments system is not going to disappear spontaneously, even though some improvement has taken place since the devaluation and monetary loosening associated with the meltdown. For example, stimulated in part by sharply reduced access to public borrowing, compliance rates and cash tax collections at the federal level rose during the first half of 1999; developments at the subnational level, however, remain unclear. While such improvement is consistent with the analysis here, it will by no means lead to the dismantling of nonpayments. Dismantling the system will require a visible political decision to break completely with the past by hardening enterprise-level budget constraints. This will involve eliminating the implicit subsidies from tax offsets and through the energy sector. As long as energy providers and other prosperous companies are required to bail out the rest of the economy, they will continue to be the biggest tax delinquents. They will perpetuate nonpayments and impede the completion of fiscal reform, and thereby, the attainment of low inflation and growth.

⁸ Recognizing that a macroeconomic crisis was brewing, the Russian government issued two documents on June 19, 1998: "Stabilization of the Economy and Finance Program" and "Stabilization Measures Plan," which contained its analysis (focussing on unsustainable public debt dynamics) and recommendations. At the top of the list was the need to generate adequate primary fiscal surpluses and resolve the nonpayments and barter crisis. These measures would create conditions for output recovery and income growth, thereby expanding the tax base.

The Story Line

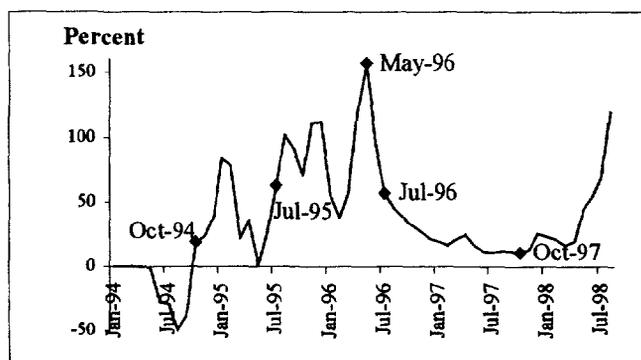
How, as part of Russia's transition, did nonpayments expand into such phenomenal proportions? This can be explained by the interaction of two basic factors:

- A macroeconomic shock, whereby real interest rates changed abruptly from negative to highly positive levels toward the end of 1994 and remained at high positive levels up to early 1997—the accompanying tightening of liquidity pushed enterprises toward arrears and NCS as a natural response; and
- The persistence of soft-budget constraints, whereby enterprises could run up arrears with impunity and pay tax and energy bills with overpriced, uncompetitive goods.

The macroeconomic shock, which came out of a desire to halt inflation as rapidly as possible by fixing the exchange rate and tightening credit, had three components.

- Real interest rates abruptly turned positive and large, and remained at extraordinarily high levels for the better part of three years, as can be seen from figure 2.⁹ No successful transition country, for example, Poland, Hungary, or the Czech Republic has had to weather a similar prolonged spell of such high real interest rates as Russia did from late 1994 to early 1997.¹⁰
- To support the exchange rate anchor, tight credit ceilings were imposed both on the government and enterprises, with the Central Bank of Russia (CBR) financing of the fiscal deficit curtailed and directed credits to enterprises eliminated
- CBR “netting out” exercises designed to cancel mutual debts among enterprises after the first nonpayments “crisis” of summer 1992 were eliminated.

Figure 2: Real Interest Rate, Jan94-Jul98



Source: Authors' calculations.

⁹ The monthly real interest rate is measured by the annualized average GKO yield for that month less inflation for the next 12 months. Although any construction of an ex post real interest rate is problematic, the one graphed in figure 1.1 accords well with objective macroeconomic events such as Black Tuesday in October 1994, the introduction of the ruble corridor and inter bank market crisis in mid-1995, and events preceding the 1996 presidential elections as well as the 1998 meltdown.

¹⁰ In 1992, the year that growth resumed in Poland, the real ex post yield on one-year treasury bills was close to zero. In Russia, the lowest this reached was in early October 1997, about 5 percent, but during 1995-96, real rates even exceeded triple-digit levels.

The soft budgets for nonviable enterprises had and continue to have the following components:

- Energy subsidies in the form of overdue unpaid bills and substantial parts of the energy bill paid for in kind at prices that exceed market values (so-called "non-equivalent barter")
- Arrears on taxes and dues to extra-budgetary funds, which ultimately are partly forgiven as part of a bargaining process and/or effectively settled in kind through the mechanism of tax offsets, once again at artificially high prices
- Government procurement, not with cash, but either with (a) explicitly tradable tax offset certificates, which can be sold to profitable and liquid companies at a discount, or (b) through complex tax offset schemes, which essentially lead to the same result. This helps to save on taxes, with the savings split suitably among enterprises and their managers.

Thus, the soft budgets flow from arrears and NCS, that is, nonpayments.

The system grew and persisted because profitable companies realized they could take advantage of it provided they linked up with the nonviable companies that were the original targets of the soft budgets. This in turn created natural alliances between the managers of viable and nonviable companies, who could personally enrich themselves by siphoning off part of the subsidy. The spread of nonpayments was rapid as increasingly complicated networks developed, eventually creating a new form of industrial organization linking suppliers and final goods producers.

The circle is completed by feedback from the soft budgets to the fiscal accounts. Essentially, fiscal adjustment was inadequate given inflation targets, culminating in a rapid accumulation of public debt that eventually led to the meltdown.

How to dismantle the system? An implication of the "shock-combined-with-diffusion" spread of nonpayments is that the process once started becomes institutionalized as new alliances form. This means that it will not automatically reverse itself if, for example, real interest rates come down and more credit is available, although the situation may improve. Dismantling the system will require an exogenous political shock to attack the key nodes and vested interests in the network, as discussed later.

To sum up, nonpayments proliferated as a result of a fundamental inconsistency between the macroeconomic goal of disinflating rapidly and the microeconomic economic goal of maintaining soft budget constraints. It spread as new networks of viable and nonviable companies developed to take advantage of the soft budgets. The related subsidies were financed in part by the energy sector, and in part by public borrowing from the domestic and international capital markets, eventually resulting in the meltdown. Dismantling nonpayments essentially requires the imposition of enterprise level hard budget constraints. How these get established is the subject of box 2.

Box 2: How Do Hard Budget Constraints Work?

The term "hard budget constraint" (HBC) was coined by Professor Janos Kornai, and has become a standard part of the lexicon of transition. Essentially, an HBC means financial discipline: a firm should pay its bills and taxes on time; if it does not, its suppliers are free to stop doing business with it. At the same time, the government should prosecute for nonpayment of taxes. In transition, it acquires a special and sweeping connotation. First, along with price liberalization, it becomes part of the mechanism for resource reallocation, by identifying viable and nonviable firms. Second, it is a fundamental statement of political will, announcing that the rules of the game have changed and, in particular, that the government will not bail out a company that is nonviable in the new system of market-determined prices and demand patterns. How the HBC works can be illustrated with reference to Poland's experience in the early 1990s.

The “big bang” on January 1, 1990, signaled the start of Poland’s transition as a sharp break with the past. This included steep cuts in subsidies to enterprises. In the months preceding, it was understood that following the price and trade liberalization scheduled for January 1, 1990, enterprises would have to cope with the consequences themselves. Although there has been no systematic documentation of exactly how the budget constraint hardened, surveys of state enterprise managers later revealed that it may have taken as long as 18-24 months after the big bang for the HBC to become credible. Thus, an announcement alone does not suffice, and credibility is not achieved instantaneously.

How is credibility established? Quite simply, by making no exceptions to the rules. Thus, even icons of the powerful Solidarity movement such as the Ursus tractor factory and the Gdansk shipyard were not spared market and payments discipline.

As in other transition countries, enterprise managers did not initially have the know-how or willingness to restructure. A reimposition of trade barriers and a restoration of subsidies and directed credits would have been the easy way out. But the government steadfastly refused to do this. Once managers realized that there was no option but to restructure, they proved remarkably adept at it. However, this did not happen overnight. Only in mid-1992 did it become evident that managers had the resourcefulness and confidence to cope with the rigors of a market economy. It took two-and-one-half years for this adaptation to crystallize. Thus, even a decisive change of policies takes time to become credible and to elicit a clear response.

As best as one can reconstruct the events in Poland, the HBC became established in the following sequence involving the progressive elimination of (a) government subsidies, (b) soft bank loans, (c) inter-enterprise arrears, and (d) tax arrears. Each of these funding sources became a new safety valve as the previous one was shut off. A somewhat ironic feature of the above sequence is that as subsidies are eliminated as part of the HBC, a bulge in inter-enterprise arrears (that is, nonpayments) develops, but which disappears spontaneously as it quickly becomes clear that the government is not going to intervene through netting out exercises or bailouts. Creditor enterprises no longer have an incentive to run up receivables from firms whose payment capacity is suspect, as the government is not going to offer offsetting compensation.

Therefore, in transition countries, an HBC is most importantly a political statement, not only that the rules of the game have changed, but that the new rules will be uniformly applied. There will be no bailouts.

CHAPTER 2: ROLE OF THE GOVERNMENT IN NONPAYMENTS

This chapter shows how the pursuit of various government objectives, in particular the desire to lower inflation while maintaining soft budgets for enterprises, has propagated nonpayments. It also amply demonstrates that government is far from being a monolithic structure; indeed, a key problem is reconciling federal and subnational reform agendas.¹¹

The links between macroeconomic policy and nonpayments are explored, shedding light on why Russia’s macroeconomic stabilization was short-lived and costly. Essentially, lagging fiscal consolidation made stabilization unsustainable, and nonpayments were the prime underlying factor impeding such consolidation. While direct subsidization of the economy has been on a downward trend, hidden subsidies through nonpayments have flourished, eventually leading to an insupportable public-debt burden.

Based on aggregate numbers of budget and tax arrears, the government turns out to be a net creditor to the rest of the economy. However, this only reflects the fact that the cost of the government-sponsored subsidies implicit in nonpayments eventually ends up burdening the fiscal accounts—it does not mean that

¹¹ The term “enlarged government” is used to denote collectively the federal government (or center), the regional (or oblast) governments, the local (or raion or municipal) governments and the four primary social EBFs: the Pension Fund, the Social Insurance Fund, the Employment Fund and the Medical Insurance Fund. “Consolidated government” refers to the federal plus subnational (regional plus local) governments. Budgets are correspondingly defined.

the fundamental problem lies with the enterprise sector. This chapter describes how this happens and also illustrates how the signals transmitted by government actions, as well as the incentives created by the pursuit of the government's own objectives, set the example for enterprises to follow.

The most important implication of the analysis here is that the nonpayments system is going to be dismantled only when the government takes ownership. The nature of the system makes it extremely unlikely that it (a) will spontaneously break up, or (b) be dismantled as a result of outside conditionality. This is illustrated vividly by the process whereby ever new forms of tax offsets have replaced old ones to superficially conform to the conditionality that particular offset instruments be banned. Ultimately, the Russian government must take the responsibility for dismantling the system because of its efficiency and welfare costs.

Another important implication is the need for coordinating inflation reduction with the dismantling of nonpayments, as discussed in the Executive Summary.

Nonpayments and Macroeconomic Policy

Russia's macroeconomic stabilization failed because inflation targets were too ambitious in relation to the fiscal adjustment achieved. This section argues that the subsidies implicit in nonpayments prevented the requisite fiscal adjustment, thus putting public debt on an explosive path that led to the meltdown.¹²

Disinflation, Implicit Subsidies, and Public Debt. The single most striking feature of Russia's temporary stabilization from 1995 to mid-1998 was that even though fiscal deficits strayed far from their targets, the inflation path stipulated in the original three-year Extended Fund Facility program (EFF) negotiated with the International Monetary Fund (IMF) was largely adhered to. This is shown in table 2 below.¹³

Table 2: Macroeconomic Performance Between 1995 and 1998

Year	12-Month inflation (%)		Fiscal deficit-GDP (%) ^{a/}		Increase in Public Debt \$ billion ^{e/}
	Original Program Target	Actual	Original Program Target	Actual	
1995 (SBA)	63	131	6.5	5.6	25
1996 (EFF96)	25	25	4.2 ^{b/}	7.9 ^{c/}	31
1997 (EFF96)	9	11	3.2 ^{b/}	7.3 ^{c/}	25
1998 (EFF96)	6	84	2.2 ^{b/}	5.9 ^{c/d/}	29

^{a/}Deficit of the enlarged government on a commitments' basis.

^{b/}Based on higher nominal GDP projections.

^{c/}Inclusive net change in government arrears.

^{d/}Excluding overdue interest on ruble denominated federal government securities (GKO-OFZ).

^{e/}Sum of domestic and foreign borrowing.

Source: Authors' calculations.

In retrospect, the year 1995 was remarkable. Substantial fiscal retrenchment occurred, with the cash deficit at the federal level virtually halved as a percentage of GDP compared to 1994, and the deficit target was more than met. Even though inflation was double its target, it was a big drop from more than 200 percent in 1994. In fact, macroeconomic policies significantly tightened in 1995, with strict credit ceilings, a new law that prohibited direct lending from CBR to the budget, and drastic expenditure compression.¹⁴

¹² A detailed analysis of public-debt dynamics preceding the meltdown is contained in World Bank (1998).

¹³ NB: The comparison is with the original program path negotiated in early 1996 as part of the 3-year EFF. Subsequently, both inflation and deficit targets were revised.

¹⁴ CBR was allowed to increase its claims on the government only via purchases of government paper on the secondary market.

Nevertheless, borrowing remained high to counteract the sharp fall in revenues. Real interest rates rose sharply, and foreign money poured in. In July, an exchange rate corridor with a relatively narrow band of 14 percent was established to stabilize expectations, giving impetus both to portfolio investment and the real exchange rate, which appreciated massively during following months, facilitating further borrowing because of the capital gains transferred to the fiscal accounts from the foreign currency denominated portion of debt. Russia looked as if it were on the verge of a lasting stabilization.

However, fiscal adjustment fell apart in 1996 and 1997, and in retrospect, even the 1995 retrenchment appeared based on unsustainable levels of cash expenditure reduction. In the next two years, flagging revenues required much more reduction in noninterest expenditures than stipulated originally. In addition, high GKO yields led to much higher interest expenditures than assumed in the program.

But, surprisingly, the momentum of inflation reduction carried through to 1996 and 1997, with actual inflation only marginally exceeding the original targets negotiated in early 1996. This appears to have happened for a very simple reason: the net domestic assets of CBR—essentially, domestic credit—remained the focus of attention as the drive to conquer inflation intensified. The huge public debt build-up, which enabled this control of net domestic assets (NDA) and was the counterpart of the lack of fiscal adjustment, seemed to receive little attention until the spring of 1998.

The ultimate impediment to fiscal adjustment has been the persistence and proliferation of enterprise-level soft-budget constraints in the guise of implicit subsidies. Implicit subsidies translated into chronic tax shortfalls because the biggest providers of these subsidies, the energy companies, turned into the biggest tax delinquents. Thus, the tax collection problem, rather than being a matter of political will, could be interpreted as the outcome of a tacit contract, whereby energy companies bailed out nonviable companies in return for government leniency on tax arrears. In this sense, the tax arrears incurred by these companies to compensate for the implicit subsidies became a form of “tax expenditures,” with the subsidies themselves becoming an expenditure precommitment financed directly by the energy companies.¹⁵ The problem was exacerbated by a generally permissive attitude toward tax enforcement, which resulted in a more general tax compliance problem.

Subsequently, the federal government tried to achieve fiscal deficit targets by a compression of cash expenditures. However, this did not compensate for the revenue shortfall, and the balance came from an increase in arrears and additional borrowing. When combined with other results in this study, the above information supports the following explanation of connections among implicit subsidies, disinflation, fiscal adjustment, and the unsustainable build-up in public debt:

- The difference between ex ante and ex post deficits can be explained in large part by tax shortfalls, lower than projected GDP growth (also ascribable to soft budgets), and higher than expected interest rates;
- The government cannot credibly enforce tax rules because the biggest delinquents are also the biggest implicit subsidy providers;
- The build-up in public debt made fiscal adjustment even more difficult, as noninterest expenditures had to be considerably cut in the unsuccessful attempt to maintain a sustainable profile of the budget deficit;
- The expenditure compression used to partially meet fiscal deficit targets significantly affected welfare programs, as it included a reduction in social spending; and
- Lasting intertemporal problems have been created, as the implicit subsidies stifle growth and lower future taxes.

Real Interest Rates. Inflation reduction in Russia was pursued largely by controlling credit aggregates, in particular, the net domestic assets of CBR, not through fiscal adjustment. Along with the exchange rate

¹⁵ In budgetary parlance, tax expenditures refer to the budgetary cost of tax exemptions.

anchor, there was a concerted attempt to break the link between fiscal deficits and money creation, with CBR credits replaced by money surrogates (treasury promissory notes (KOs), treasury tax offsets (KNOs) arrears and eventually, massive borrowing through GKO-OFZs, eurobonds and IFI loans. While budgetary arrears became a primary reason for NCS as discussed below, large-scale public borrowing with tight credit ceilings pushed up real interest rates to record levels.

In principle, after Russia fixed its exchange rate in July 1995, yields on government paper should have converged to international levels. Yet, real interest rates remained exceptionally high during 1995 and 1996, the two years in which nonpayments began to be institutionalized. Why did this happen? The standard explanations include capital controls and high devaluation and default risks. That is, repatriation restrictions on the ruble proceeds of investments by nonresidents in GKOs during 1995 and 1996 effectively served as capital controls, driving a large wedge between ruble and dollar interest rates. And with no credible macroeconomic track record, devaluation risk remained high, together with high political and bank risk (commercial banks offered currency forwards to hedge devaluation risk) and, possibly, settlement risk. However, there were other important reasons as well. The government's priority was to lower inflation, and it appeared to pay little attention to what might have been perceived as short-term costs. Further, there were widespread perceptions at the time that GKO yields were being kept high to prop up the banks. For example, Sberbank's books in 1995 were in the red. Yet its profits from increased GKO investment enabled it to remain solvent. Other commercial banks also benefited from the GKO bonanza.¹⁶

The high GKO yields skewed financial intermediation in favor of financing the fiscal deficit. Big banks either invested in GKOs or were part of financial industrial groups (FIGs) and fragmenting the financial market. The net result was a shortage of working capital for the vast majority of firms, pushing them toward NCS.¹⁷ Anecdotal evidence suggests that enterprise managers also diverted liquid funds to GKOs, worsening the problem.

A natural response by firms in a high real interest rate environment is to delay making payments and run up arrears to suppliers, workers and the government. It is also natural for persistent net creditors to build the opportunity cost of payment delays into their prices and, in extreme cases, to cease supplying chronic nonpayers. In Russia, the main net creditors within the enterprise sector are the gas and electric power companies. But raising domestic prices—especially for the infrastructure monopolies Gazprom, RAO UES and the railways, as well as the oil companies—is politically difficult, as illustrated by the June 1999 “price pact”.¹⁸ These companies are seen as part of the survival support system for other domestic companies. Even exporting as a way of raising revenues is subordinated to domestic sales, as witnessed by threats to cut off oil pipeline access to oil companies that favor exports (at rising world prices) to sales of domestic refineries (at a fraction of the world price). Disconnecting clients who do not pay gas and electricity bills is no easier and might even be illegal under the civil code. In addition, the proliferation of “strategic lists” of companies that may not be cut off under any circumstances, and interference from regional governors, serve to protect nonpayers. As the director of a regional power company (Energo) put it during an interview, “That’s where barter comes in.” Rather than get nothing, the gas and electric companies accept payment in kind, while also accumulating substantial accounts receivable, which must ultimately be written off or converted into equity, a strategy recently adopted by Gazprom. Thus, NCS became a way of settling arrears, with the two feeding on each other in an upward spiral.

¹⁶ In a provocative paper, Treisman (1998) argues that high GKO yields were the political price paid to convert the banking oligarchs from a pro-inflation to an anti-inflation lobby.

¹⁷ In all likelihood, from the banks' point of view, it did not really matter what the real yield was once it exceeded a certain threshold, for example, 20 percent. Except for the blue chips around which FIGs coalesced, lending to real sector companies made no sense.

¹⁸ A highly publicized “price pact” was signed between the government and the industrial giants (including Gazprom and RAO UES) on June 16, 1999, whereby the infrastructure monopolies agreed to curtail price rises to help domestic industry.

Budgetary Arrears and Resulting Offsets

The government's own arrears stemming from unrealistic budgeting and general fiscal mismanagement contributed to nonpayments, provoking tax arrears to the budgets and institutionalizing nonpayments. A key cause of budget arrears is inadequate budget resources because of both poor budget planning and political bargains that lead to excessive revenue projections and subsequent expenditure sequestration. Inadequate expenditure provisions in the budgets (for instance, for the energy bill) and over-commitment in other sectors have led to continued use of arrears as a 'normal' financing mechanism, carried across into every budget year. In 1996-1998 the amount of new arrears of federal government was stable, varying from 22 to 26 billion rubles per year after offsets.

With CBR direct financing prohibited, the government started offset procedures to improve its fiscal performance and provide implicit subsidies to inefficient enterprises. The subsidies took either the form of a discount at which offsets can be exchanged for cash or a premium of the barter price above the market price, enabling 100 rubles of tax obligations to be paid for with, for example, 60-70 rubles. The amount of discount depends on the type of offset (the lower the liquidity, the higher the discount); informal relationships between government executives and participating enterprises (the better the relationship, the higher the discount); and the budgetary level (relatively better control is exercised at the federal level).

The practice of offsetting budget expenditures and tax arrears quickly became an intrinsic element of budgeting despite pressure from IFIs. As soon as one type of offset was abandoned, thus formally meeting IFI requirements, a new type was developed (for more details see box 3). Table 3 below, which gives the time profile of different offset instruments, illustrates how persistent this pattern of mutation has been: the off-diagonal elements are mostly zero.

Table 3: Offsets in the Federal Budget on Cash Basis
(billion of rubles)

<i>Year</i>	<i>KNO</i> ^{a/}	<i>DMO</i> ^{b/}	<i>RMO</i> ^{c/}	<i>TF</i> ^{d/}	<i>Unidentified</i>	<i>Total offsets</i>	<i>Total revenues</i> ^{e/}	<i>Percent share of offsets in revenues</i>
1994	9					9.0	81.7	11.0
1995	21.8					21.8	210.6	10.4
1996	30.9	23.9			2.7	57.5	287.6	20.0
1997		62.0	24.5		2.1	88.6	371.2	23.9
1998			19.0	21.8		40.8	320.8	12.7

^{a/} KNO – Treasury tax offsets

^{b/} DMO – Direct monetary offsets

^{c/} RMO – Reverse monetary offsets

^{d/} TF – Targeted financing

^{e/} MoF definition, adjusted for proper offset bookkeeping

Source: Ministry of Finance (MoF), State Tax Service (STS), authors' estimates

The importance of offsets has significantly changed from year to year. In 1994 offsets accounted for 11 percent of federal budget revenues. In 1996 their share increased to 20 percent, and in 1997 to 24 percent. Only in 1998 did the share of offsets substantially diminish to 13 percent of total revenues. At the federal level, the share of offsets has also varied greatly during the year. Usually most of offsets are carried out in the fourth quarter and in the first quarter of the following year to clear the end-of-year budget accounts.

Box 3: A Universe of Federal Offsets

KNOs were issued by the MoF in 1994-1996 to providers of goods and services to budgetary entities and gave a right to offset current or overdue tax liabilities to the federal budget. In 1996-1997 the MoF used direct monetary offsets (DMO) to reduce both stock of budget and tax arrears to the federal budget. Transactions with DMO were financed by short-term loans from large commercial banks and were processed through special accounts in those banks.

In 1997 DMO were replaced by reverse monetary offsets (RMO), the principal difference being that now the federal budget first injected cash to commercial banks to make offset procedures work. Targeted financing (TF), the latest reincarnation of offsets, appeared in 1998 with the Federal Treasury replacing commercial banks as the principal agent in offset schemes.

In 1999, better than expected revenue performance of the budget and strong financial performance of major taxpayers boosted by a rise in export prices helped the government to mitigate accumulation of new expenditure arrears and to demand full payment of taxes in cash. However, the government still forced oil companies into de facto free delivery of fuels to agriculture, thus opening a window either for new offsets in future or for ad hoc negotiations on the tax bill.

Offsets and other forms of NCS play an important role in financing budget expenditures. Their share in noninterest expenditures of federal budget grew from about 14 to 25 percent between 1994 and 1996 before declining to about 14 percent in 1998 (see table 4). NCS as a share of subnational budgets accounted for an estimated 50 percent of subnational noninterest budget expenditures in 1998, up from 34 percent in 1996 and 45 percent in 1997.

Offsets thus resulted from poor budget management and a tolerant attitude to tax arrears (soft budget constraints). Government promises to ban offsets, will not be credible without improved budget management and tough tax enforcement.

Table 4: Offsets and State Securities as Financing Mechanisms of Federal Budget
(billions of rubles)

	<i>KOs, veksels, guarantees and offsets</i>	<i>Noninterest expenditures</i>	<i>Share of KOs and offsets in non-interest expenditures, percent</i>	<i>New budgetary arrears</i>
1994	17.6	128.5	13.7	n.a
1995	43.7	239.8	18.2	n.a
1996	80.4	328.2	24.5	21.6
1997	88.6	406.7	21.8	26.4
1998	40.8	301.0	13.5	24.6

n.a. not applicable

Source: MoF, authors' estimates

Government as the Net Creditor in the Economy

Table 5 shows that the consolidated budget is a net creditor to the rest of economy, since tax arrears to the budget significantly exceed budget payables. Adding tax fines and penalties, and arrears on payroll payments to social EBFs, would further increase this gap in favor of the government.

Table 5: Budget Payables and Tax Arrears, End 1997
(billions of rubles)

	<i>Budget payables</i>	<i>Overdue taxes</i>	<i>Tax fines and penalties</i>
Federal	47.3	93.9	N/A
Subnational	68.0	66.8	N/A
Total	115.3	160.7	329.4

Source: MoF, STS, authors' estimates.

Table 5 also shows that more tax arrears are owed to the federal budget, while payables are concentrated at the subnational level. This reflects greater clearance of subnational tax arrears through offsets, individual tax exemptions, and deferrals for inefficient enterprises, as well as less access to borrowing than by the federal government. Offsets tend to muddy the picture on arrears. For example, even though the increase in the stock of consolidated budget payables was a relatively modest 1.5 percent of GDP in 1997, the total amount of noncash spending, including offsets, was a huge 38 percent of total expenditures of the consolidated budget or 13 percent of GDP.¹⁹

Offsets reduce budgetary and tax arrears, but only temporarily. Given past practice, every new offset instrument bears expectations of further offsets later on, negatively affecting the flow of current tax payments, creating a fiscal gap in the budget and inviting new offset clearance as a self-fulfilling prophecy. Just after one offset campaign is completed, taxpayers start accumulating new tax arrears rapidly to prepare for future offsets. According to the head of the Regional Clearing Center in the Leningrad Oblast (administrative region in Russia) expectations about future offsets are reflected in market prices for which government arrears are traded. The higher the expectation of offsets, the higher the price, that is, the lower the discount. Because the prolonged absence of offsets diminishes expectations about new offsets, prices for government arrears fall. And powerful and liquid enterprises may find it profitable to buy cheap government arrears and start pressuring the government to initiate a new round of offsets, thereby making a capital gain or savings on taxes.

Government as a Source of Subsidies to Enterprise Sector

When economic reform was launched in 1992, the government opted to extend significant amounts of explicit subsidies to enterprises to assist them in adapting to the market. Subsequently, budget and off-budget federal subsidies and investment grants dropped sharply from 9 percent of GDP in 1992 to just 0.7 percent in 1998. However, this dramatic reduction at the federal level has not meant a hardening of budget constraints. Subnational budgets have been increasingly picking up the role of subsidy provider with respect to housing, agriculture, and industry. In the past few years, the share of subnational budgets in overall amount of explicit (or officially reported) budgetary subsidies has grown from 71 percent in 1994 to 88 percent in 1998. Furthermore, subnational subsidies as a percentage of GDP did not diminish from 1993 to 1997, and were only modestly reduced after the 1998 fiscal crisis. Implicit subsidies in the form of tax exemptions and ad hoc bargaining with large enterprises about tax bills have also proliferated at the subnational level.

The effective level of budgetary subsidies to the national economy is much higher than official reports on budget execution suggest. Table 6 presents an adjusted picture, incorporating implicit subsidies from the net increase of tax arrears and the inflated prices of goods procured by the government and paid for by

¹⁹ This captures the important fact that offsets artificially reduce the amount of budget payables by year's end.

offsetting tax arrears. The sum of the explicit and implicit subsidies remained roughly constant during 1996-98 despite a downward trend in explicit subsidies.²⁰

Table 6: Budget Subsidies to Enterprise Sector, 1994-1998

	1994	1995	1996	1997	1998
Explicit budget subsidies to enterprise sector-GDP (percent)	10.2	8.6	7.9	8.6	5.9
Implicit budget subsidies to enterprise sector-GDP (percent) ^{a/}	0.7 ^{b/}	3.1 ^{b/}	7.6	7.4	10.4
Total budget subsidies to enterprise sector-GDP (percent)	10.9 ^{b/}	11.7 ^{b/}	15.5	16.0	16.3

^{a/} Does not include subsidies in form of ad hoc tax exemptions as well as net increase in overdue fines and penalties

^{b/} Does not include subsidies imbedded in regional offsets

Source: Authors' estimates.

Implicit subsidies provided to enterprises in general and energy monopolies in particular in the form of tax arrears, ad hoc tax exemptions, offsets, and barter have a substantial fiscal cost. Had implicit subsidies disappeared, this would have reduced the budget deficit to an estimated 0.3 percent of GDP in 1996, and turned deficit into a surplus of 0.1 percent of GDP in 1997 and 4.5 percent of GDP in 1998 (table 7). In other words, with the same expenditure pattern, additional resources could help prevent public debt from rising and avoid default on state debt even without recourse to new foreign borrowing in 1998. Thus, hardening budget constraints by eliminating implicit subsidies to enterprises can be viewed as a complement to explicit expenditure reform while balancing the state budget.²¹

Table 7: Adjusted Budget Deficit and State Debt, 1996-1998

	1996	1997	1998
Adjusted enlarged budget deficit(+)/GDP (percent) ^{a/}	0.3	-0.1	-4.5
Net new public borrowing/GDP (percent) ^{b/}	7.6	5.7	9.2

^{a/} Implicit subsidies deducted.

^{b/} Federal government borrowing only.

Source: Authors' calculations

In addition, both federal and subnational governments have tolerated tax arrears. In many instances, federal and subnational authorities protect "socially important" enterprises from bankruptcy procedures initiated by other creditors, encouraging mismanagement and inefficiency, and preventing redistribution to efficient owners. Also, subnational governments build up artificial entry barriers for efficient entrants from outside, thus preserving inefficient quasi-market structures. This is a serious impediment to competition and illustrates that absence of exit is an integral part of soft budget constraints.

²⁰ Annex 1 explains the computations used for Table 6. The table should also include individual tax exemptions granted by the federal, and increasingly, subnational governments. However, data are not available.

²¹ Expenditure control first received serious attention during the 1990s only with the Kudrin-Fischer Fiscal Action Plan of November 1997.

More on Subnational Government

Box 4 summarizes results of interviews and some quantitative analysis for Leningrad and Nizhny Novgorod oblasts on NCS in subnational government operations. A more general discussion follows.

Incentives for Subnational NCS. Less access of subnational authorities to borrowing, as well as the absence of significant outside pressure in the shape of IFI conditionality against the use of noncash instruments have made arrears and tax offsets much more widespread at the subnational level of government. An important feature of arrears and NCS is that they allow subnational governments to control enterprises and their surpluses. In exchange for cooperation, budget constraints for enterprises are softened, they are protected from bankruptcies and competition from outsiders is blocked. Interbudgetary relations also provoke offsets.

Box 4: Leningrad and Nizhny Novgorod Oblasts

Results of interviews conducted in Leningrad and Nizhny Novgorod oblasts during March 1999 and supported by regional budget data are provided below:

- Mutual offsets with subnational budgets became a common practice in 1994, accelerated toward the end of 1996, and peaked in 1997. In 1998, however, the share of cash revenues in nonconsolidated budget¹ increased relative to 1997, most likely due to the additional constraints imposed by the federal government (*the elimination of noncash components in federal taxes was required for extending the maturity of 1997 federal budget loans to the regions*), and "soft money" policy during the fall of 1998 following the meltdown (table B.1). For local budgets, however, the share of cash revenues was the same in both 1997 and 1998. Further, the share of cash revenues in Leningrad oblast nonconsolidated budget was lower than local budgets' average throughout the whole period of 1996-1998 (that was also true for Nizhny Novgorod oblast in 1997-1998). The different scales and diversification levels of the local and regional economies can explain this.

Table B.1: Share of Cash Revenues in the Budgets (percent)

	1996	1997	1998
Leningrad oblast (nonconsolidated)	57	31	48
Leningrad oblast (local)	71	57	57

- A much lower share of cash revenues than oblast or local averages tend to be in raions (municipal government sector) where the enterprises of natural monopolies, military, and machine-building industries are located (see table B.2). On the other hand, export oriented localities usually have a high share of cash revenues.

Table B.2: Variation in the Share of Cash Revenues by Raions.

	Share of cash revenues, percent
Sosnoviy Bor (Leningrad nuclear power plant)	22-26
Volkov (hydroelectric station)	31-39
Kirovski raion (military industry)	39-59
Tikhvin (transmash tractor producer)	36-43
Kirishi (powerful oil refinery)	72-85
Pikalevo (aluminum production)	71-97
Vyborg (export-oriented industries)	84-97

- Seasonality was found in the practice of offsets, which increase substantially toward the end of the fiscal year, especially in October-December, according to the monthly data on budget execution in Nizhny Novgorod oblast for 1996-1997. When the local government officials realize their budgeted expenditures are not covered by real revenue they try to find ways to bypass this problem, hence the increase in offsets. Moreover, equalization transfers from the center are partly based on the previous level of expenditures, which provides an incentive for inflating budget expenditures toward the end of the year.
- Companies receive an implicit subsidy through mutual offsets in the form of the margin paid above the market (cash) price. Prices for mutual offsets with the budget are usually inflated by 40 to 70 percent relative to the cash market price, according to interviews conducted in Leningrad and Nizhny Novgorod oblasts. The majority of the firms even have quotations of "prices for mutual offsets" included in their price lists.

- Quantitative evidence indicates that raions are adept at collecting their “own taxes” (that is, taxes that are legally not required to be shared with the higher levels of government) principally in cash. A significant negative correlation was found between the share of these taxes in tax revenues and the share of noncash taxes in total revenues of Leningrad oblast raions for 1996-1997 (correlation coefficient – 0.46). Because raions rely more on their own fiscal base, they have more incentive to collect their own taxes in cash form, since there is little need to effectively reallocate shared taxes through NCS. In other words, NCS is an important tool for additional tax retention at the subnational level.
- Also, the noncash tax share is positively correlated with the share of expenditures on housing and utilities (correlation coefficient + 0.63). It reflects the fact that utility bills typically go unpaid, making the local EMs the biggest creditors of the *raion* budget. This provokes EMs to run tax arrears and eventually becomes a fund for tax offsets and NCS—other firms join in as well to buy budgetary accounts payable to EMs, using this as a basis for their own offsets. In addition, at the local level, firms may supply goods and services to divested housing stock against accumulated tax arrears to local budgets as a part of housing divestiture agreement between firms and municipalities. As a result, a high share of housing expenditures is financed by NCS.

¹ Regional, or oblast, budgets can be viewed at four different levels: (a) individual raions, or municipalities; (b) local budget, comprising all the raions, but excluding the oblast level budget; (c) oblast level (nonconsolidated) budget; and (d) oblast consolidated budget, comprising (b) and (c).

Since transfers from upper to lower budgetary levels in most cases are based on actual spending of the previous year, officials are interested in increasing expenditures to be eligible for higher transfers or higher tax sharing rates next year. Use of offsets is an easy way to achieve this objective. Only in the 1999 federal budget was this practice discontinued, although there is strong suspicion that inflated expenditures are still informally used as a bargaining tool to receive ad hoc transfers from the center. At the subnational level, the old practice still prevails.

In addition, nonpayments have become a useful mechanism for increasing tax retention at the expense of the federal government, while also serving as a basis for local tax-subsidy transfers. Thus, part clearance of tax arrears through offsets when these were prohibited at the federal level in early 1998, gave regions an opportunity to retain more taxes. As table 8 shows, the share of the federal budget in tax arrears is higher than its statutory tax-sharing rate.²²

Table 8: Structure of Tax Arrears, End-1997
(billions of rubles)

	<i>VAT</i>	<i>Profit tax</i>	<i>EBFs</i>
Federal	66.4	13.0	n.a.
Subnational	17.6	11.6	n.a.
Total	84.0	24.6	134.0
<i>Reference:</i>			
Statutory sharing rate of federal budget, percent	75.0	37.1	n.a.
Arrears share of federal budget, percent	79.0	52.8	n.a.

n.a. not applicable.

VAT. Value added tax.

EBFs. Extra-budgetary funds.

Source: MoF, STS, authors' estimates.

²² In 1999, the federal authorities have reportedly found a way to discourage NCS at the subnational level. The Federal Treasury, responsible for splitting shared taxes between federal and subnational budgets, started adjusting the flow of tax revenues for each of the shared taxes to comply with the statutory shares established by law. As a result, more cash revenues were transferred to the federal budget, putting pressure on regions to lower NCS.

Structure of Payables. Table 9 below shows that total subnational (regional plus municipal) budgetary payables as of end-1997 amounted to 68 billion rubles, or 26 percent of the 1997 expenditures of the consolidated regional budgets. These payables increased to 86 billion rubles by February 1, 1999. The structure of payables is different at the subnational level. While federal payables are concentrated on defense procurement (up to 40 percent of the total); new fixed investment and capital repairs (37 percent); and communal services, predominantly to infrastructure monopolies (16 percent); at the regional level, there are significant payables on wages, payrolls and transfers to population. These account for more than 40 percent of the total, followed by payables to infrastructure monopolies, providing communal services (27 percent). Thus, households ultimately carry a large part of the burden from implicit subsidies to enterprises, raising doubts about the idea that subsidization and enterprise bailouts are driven by social considerations.

Arrears to the energy EMs are also an important part of the problem. Although the share of payables to infrastructure monopolies embedded in "communal services" appears modest, these payables are in fact outstanding payables after the clearance of offsets, in which energy EMs are heavily involved. Arrears to the energy EMs form a fund for offsets, tax breaks, and implicit subsidies in general.

Table 9: Payables of Federal and Subnational Budgets
(millions of rubles)

	<i>Federal budget</i>		<i>Subnational budgets</i>	
	<i>Payables, Jan.1, 1998</i>	<i>Percent of the total</i>	<i>Payables, Jan.1, 1998</i>	<i>Percent of the total</i>
Total expenditures	47,336.6	100.0	67,988.0	100.0
-of which:				
Wages and payrolls	0.0	0.0	15,321.2	22.5
Communal services	7,729.0	16.3	18,898.9	27.8
Other current expenditures on goods and services	19,043.0	40.2	9,733.5	14.3
Transfers to population	427.3	0.9	12,062.0	17.7
New fixed investment	11,497.4	24.3	1,479.7	2.2
Capital repairs&other capital Expenditures	5,516.2	11.7	2,380.2	3.5

Source: MoF

Economic Costs. The welfare costs implicit in the structure of subnational payables have already been noted above. The quick accumulation of budget payables during the past few years had a negative behavioral impact, giving companies a solid excuse to stop paying taxes, as data on subnational budget execution suggest. The significant gap of 17.6 billion rubles between budget accounts payable and tax arrears at the subnational level in 1996 virtually disappeared by 1997.

Besides impeding competition and new entry through selective provision of implicit subsidies, subnational authorities distort markets through their procurement practices. Chronic tax debtors are first to receive orders from the budgets in view of their tax liabilities, which helps them to solve marketing problem and inflate prices (and thereby lower taxes) as interviews in *Nizhny Novgorod* revealed. Even when procurement is done on a formally competitive basis, in fact, the winning company is often decided on in advance. Regional capital expenditures are typically financed by offset schemes. In 1997, for instance, capital expenditures of consolidated regional budgets increased from 10.8 percent of total expenditures to 12.4 percent after accounting for "closing operations" (that is, offsets), compared with 11.4 percent in the original budget plan.

In addition to the above welfare and resource allocation costs, fiscal costs abound. Arrears, offsets, and barter distort the true level of expenditures, undermine the effectiveness of policy making, and bias

spending in directions more readily financed through noncash means. It follows that reported budget expenditure, for example on education, may include a producer subsidy in the form of either an inflated price (in case of barter deal and-or mispriced procurement) or a discount through offsets. In many cases, government authorities have limited choice in expenditure allocation when allowing offsets.

Rent-seeking Opportunities

Offsets have become a lucrative, extra source of income for intermediaries, including banks, individuals and government officials. This has led to widespread rent seeking, bargaining, and corruption. Access to huge balances on accounts during offset settlements, commissions, bribes and “fees” for officials have linked all vested interests and now sustain offsets. Thus any attempt to discontinue offsets faces strong opposition from all who benefit from them.

Given the huge volumes of offsets (tens of billions of rubles), fees of intermediaries are rather significant and represent a deadweight loss for the economy, varying from 3 to 30 percent of the amount of offsets. This percentage was especially high in early years of offsets and is higher at the subnational level. Attempts to get rid of offsets, increase tax compliance, and reduce tax arrears very often conflict with the interest of criminal groups, formally or informally controlling companies. In March 1999 a vice-governor of Omsk oblast was wounded just a few days after he ordered liens on assets of some local enterprises, including a brewery and a vodka plant (*Kommersant-Daily*, March 23, 1999).

Government officials are also involved in rent seeking while orchestrating offset procedures. Besides receiving commissions for their assistance to particular enterprises for whom they secured inclusion in an offset chain, they may also personally benefit from discounts at which government arrears are exchanged for tax arrears or cash. This happens when they (or their relatives) have a stake in intermediary companies.

Political rent seeking by top regional and local officials is another reason to protect enterprises against federal authorities, hostile creditors, and competing companies in exchange for control of financial flows. These financial flows are usually mobilized to support incumbents running for the position of governor or mayor during public election campaigns.

CHAPTER 3: ENERGY SECTOR—NUCLEUS OF NONPAYMENTS

At the Center of the Web

This chapter documents the centrality of the role played by the energy sector in nonpayments. It estimates implicit energy subsidies to manufacturing firms at more than \$60 billion during the period 1993-97, averaging 4 percent of GDP per year.²³

Depicting the energy sector’s central role in the nonpayments system, table 10 shows that it consistently accounted, on the average, for about one-half of industry overdue receivables, and more than one-third of overdue payables, in recent years. These numbers are much higher than the share of gas and electricity in industrial production. These two industries account for a significant fraction of budget-related payables (second-last column). The last column indicates that sector’s overdue inter-industry receivables considerably outstrip overdue payables, capturing the arrears portion of the subsidy element in gas and electricity operations.²⁴

²³ “Energy sector” is defined for the purposes of this study as gas and electricity.

²⁴ Table 10 is based on figures for gross arrears which include intra-industry debt (for power utilities, for instance, this amounts to roughly 25 percent of the total), as well as power utilities’ debt to Gazprom (roughly 30 percent of power utilities’ payables). However, the last column nets out this intra-industry component.

Table 10: Gas and Electricity Generation in Industry Arrears, End of Period

Year	Percent share in inter-industry		Percent share in industrial production	Percent of budget-related Payables	Percent of receivables/payables (inter-industry)
	Receivables	Payables			
1994	28.4	25.4	13.9	15.0	123
1995	38.0	30.9	12.9	17.0	143
1996	49.0	39.8	15.2	15.4	130
1997	53.6	40.2	20.3	20.0	137
1998	54.0	41.3	18.1	20.1	136

Source: Goskomstat, authors' calculations

The other portion of the subsidy comes from sales in NCS at inflated prices, which account for a majority of domestic sales (see Annex 2).²⁵

Why Subsidize Manufacturing? The idea that the energy sector cross-subsidizes manufacturing is an integral part of the virtual economy story of Clifford Gaddy and Barry Ickes (Gaddy and Ickes, 1998—GI). In the GI framework, there are four sectors: (a) households, which get paid wages; (b) the government, which transfers taxes to households as pensions; (c) a natural resources sector (for example, Gazprom) which receives payments in kind from (d) a value-subtracting manufacturing sector.

Essentially, GI argue that NCS payments by the manufacturing sector for both taxes and energy conceal subsidies while also masking negative value added in manufacturing. This occurs because NCS prices of manufactured goods are inflated above their true market price cash equivalents. While this pretense prevents, or minimizes, inter-enterprise and tax arrears, it leads to wage and budget (pension) arrears as wages and pensions must be paid in cash, and cash equivalents are low because manufacturing companies subtract value. This imposes a cash constraint on them: they can pay either wages or taxes in cash, but not both. A drive to increase cash taxes would worsen the wage arrears and vice versa. GI argue that everyone accepts the pretense of positive value added in manufacturing “because they can use the overpriced output in barter with one another or to pay their own taxes.”

However, this assertion begs two questions. First, while the above pretense may work in a one-shot game, there is no convincing reason why it should be successful repeatedly. Can the manufacturing sector really trick Gazprom, its workers, and the government year-after-year? This concern is reinforced by noting a second problem: in the GI virtual economy, only the manufacturing sector gains. Every one else loses—workers, pensioners, government, and Gazprom. So do future generations, because of the waste of economic resources and the postponement of growth and a higher debt burden, as the meltdown amply demonstrated.

This chapter extends the GI argument to show that there is a concerted effort by the energy monopolies to also gain from the nonpayments system. It demonstrates that through tax arrears and unpaid dues to extra-budgetary funds, the energy sector substantially passes on the costs of the implicit transfers to the general fiscal accounts. This means that the burden of the subsidies is eventually passed through to the public exchequer and shows up in the accumulation of public debt.²⁶ Sometimes, this transfer of costs is explicit, for example, the export tax breaks received by Gazprom until early 1996, or the constant growth in real terms of Gazprom's arrears to the enlarged budget. Yet the most common means are ever reemerging tax offsets, of which Gazprom is one of the major beneficiaries. As Chapter 2 demonstrated, the reason the

²⁵ Prices used in noncash transactions (barter, offsets, and so forth) tend to be inflated by 20 to 40 percent. The portion of gas and electricity shipments whose value is not recovered is an implicit barter subsidy from energy monopolies to manufacturing firms.

²⁶ The exact extent of this transfer of costs cannot be ascertained based on the information available; but it is probably substantial.

government continues to tolerate nonpayments is simple: this is part and parcel of its strategy to keep nonviable enterprises afloat.

Finally, this chapter shows that nonpayments have been used by energy monopolies to pursue their corporate strategy, as has been recently demonstrated by Gazprom and UES's expansion into nonenergy sectors.²⁷ Both companies have been implementing a program of acquisitions by converting overdue receivables into equity in selected companies—a policy, which has significant economic costs to the country (see detailed discussion in Annex 2).²⁸

Gazprom

Cash Collection. The typical composition of Gazprom's cash sales is illustrated in the table below by its results for 1997.

Table 11: Gazprom Sales and Cash Collection Ratio, 1997

<i>Market</i>	<i>Deliveries (billion cm)</i>	<i>Price (\$/1000 cm)</i>	<i>Sales (\$ million)</i>	<i>Cash receipts (\$ million)</i>	<i>Cash rec./sales %</i>
Europe	121	88.5	10,707	10,707	100
CIS	64	76.8	4,937	2,855	58
Domestic	301	47	11,536	1,730	15
Total	486		27,180	15,292	56

Source: Company data, Customs Committee, Brunswick Warburg, Morgan-Stanley Dean Witter Research, authors' calculations

From table 11 one can calculate that even though domestic shipments exceed 60 percent of total gas deliveries, they account for only 42 percent of sales, and a mere 11 percent of total cash receipts. Arrears to the budget and EBFs plus tax privileges on exports, which jointly constituted more than 50 percent of sales (details in Annex 2), allowed the company to tolerate lack of cash payments for domestic deliveries without damaging Gazprom's financial standing.

Opaque Domestic Taxation. The efficient and adequate taxation of Russia's natural resource sector, and Gazprom in particular, is a key fiscal issue. Gray (1998, Appendix 3) notes that Gazprom domestic tax compliance is only 40 percent. Applying this compliance rate to the gas excise, value added tax (VAT), Road Fund, and Social Fund mandatory contributions, the average tax rate would equal 17 percent of total sales.²⁹ But Gazprom's domestic taxation situation changes dramatically once the costs of the implicit subsidies are factored in. For unrecoverable arrears on gas deliveries, the implicit tax rate is 100 percent. When Gazprom accepts noncash settlements, the implicit tax depends upon the mark-up above the true cash prices. For example, if the mark-up is 30 percent, then the tax rate is 23 percent on the NCS part of sales.³⁰

Once implicit taxes are added to the average rate of 17 percent noted above, the picture changes markedly. Based on recent years, we understand arrears at Gazprom to be 30 percent of sales, NCS' share to

²⁷ For Gazprom, ferrous metallurgy and petrochemicals have become main targets, while UES concentrates on penetrating nonferrous metallurgy.

²⁸ Debt-for-equity swaps also create perceptions of conflicts of interest. In 1995, Gazprom failed to pay in time for procurement from its former subsidiary Stroytransgaz, and in accordance with the terms of the contract, transferred to that company 1.14 billion Gazprom shares at a nominal price of 10 old rubles each (0.01 in new rubles) in settlement of arrears. Over 20 percent of Stroytransgaz shares are owned by three individuals: one is a daughter of Gazprom's Chairman of the Board; another is a close relative of the First Deputy Chairman of Gazprom's Board; and the third is the Director of Gazprom's Procurement and Transportation Department (*Novye Izvestia*, September 2, 1999).

²⁹ The statutory gas excise rate is 30 percent of producer price, which translates into 23.1 percent of sales. The same applies to other turnover taxes, translating VAT of 20 percent into 16.6 percent of sales, and 3 percent of Road and Social Fund contributions into 2.9 percent, giving a total statutory rate of 42.6 percent. Assuming 40 percent compliance, we end up with a 17 percent explicit rate (total tax actually paid/total sales including arrears).

³⁰ A mark-up of 30 percent means Gazprom sells 130 rubles of gas for 100 rubles, giving a tax rate of $(30/130) = 23$ percent.

be 55 percent of sales at a mark-up of 30 percent, and cash sales to be 15 percent. Noting that the marginal implicit tax rate on arrears is 100 percent and on NCS sales 23 percent, the effective tax rate works out to be:

$$0.3(1 + 0.17) + 0.55(0.23 + 0.17) + 0.15 \times 0.17 = 0.597, \text{ or } 60 \text{ percent,}$$

much higher than assumed by Gray. The effective rate of 60 percent can be broken down into an explicit rate of 17 percent and an implicit rate of 43 percent, the latter flowing from arrears and the NCS subsidy.³¹ This rate is much higher than the 42.6 percent statutory rate (see footnote 29). Of course, the question of whether the statutory rate is high enough arises, but the implicit taxes confuse the issue, allowing Gazprom to claim that it, in fact, faces a much higher tax burden than the tax rules would suggest. This then becomes a source of bargaining power, as noted later in this chapter.

Estimating the Implicit Subsidy on Domestic Deliveries. Table 12 shows that the average annual implicit subsidy passed on by Gazprom to domestic customers as a result of unrecoverable arrears and inflated NCS prices was about 1.5 percent of GDP per year between 1993 and 1997, a cumulative total of \$26.2 billion.³² Power utilities account for approximately 50 percent of Gazprom's overdue receivables, followed by chemical industry -7 percent, and ferrous metallurgy -5 percent.

Table 12: Domestic Implicit Subsidy Provided by Gazprom

	<i>Via arrears</i> (\$ billion)	<i>Via barter</i> (\$ billion)	<i>Total as % of GDP</i>
1993	1.4	1.4	1.4
1994	1.6	1.7	1.3
1995	3.4	3.7	1.8
1996	3.6	3.7	1.8
1997	3.3	3.5	1.6
Total	12.7	13.5	

Source: authors' calculations

Tax Arrears, Offsets and Export Tax Breaks. However, the burden of the subsidy has not been fully borne by Gazprom. Although Gazprom is owed substantial net overdue receivables by other industries, its total net overdue receivables have always been negative, as the company has managed to offset the growing arrears component of implicit subsidy to customers by arrears to the budget, and, increasingly, extra-budgetary funds. Federal and regional tax offsets, which typically involve some tax forgiveness, have also absorbed part of Gazprom's burden. Further, between 1993 and 1995, Gazprom was able to recover an additional 0.5 percent of GDP per year as a result of tax privileges granted by the government on gas export sales (see details in Annex 2), thus compensating for a portion of implicit subsidy incurred in deliveries for NCS.

Moreover, Gazprom has acquired significant influence over the government because of its role in subsidizing companies. Effective taxes amounted to 60-70 percent of Gazprom's domestic revenue during 1992-1997. Gazprom has always exploited this argument in negotiating customized tax payment schemes. Until implicit taxation is dismantled, the government will always experience problems in regularizing the taxation of Gazprom.

Hardening Gazprom's Budget Constraint. Tax privileges on exports were abolished at the beginning of 1996 under pressure from the IMF, prompting a range of responses from Gazprom:

³¹ The assumed mark-up of 30 percent on NCS is probably a minimum, as Gazprom's offer of 30 percent cash discounts has not met with much response.

³² This figure is calculated using valuation of Gazprom's free annual deliveries (flow method), and hence is significantly higher than the annual increase in gas industry net receivables from customers, as reported by Goskomstat (stock method), because of large-scale tax offset schemes regularly run by the government.

- The company ran large tax arrears in 1996 to compensate for the drastic reduction in its export tax privileges;
- It borrowed \$3.6 billion from the international capital markets in 1997 to meet its tax payment obligations;
- It established Mezhtregiongaz in spring 1997 to increase its control of domestic deliveries and cash collection;
- It launched an aggressive acquisition campaign, primarily through debt-for-equity swaps, to acquire several major clients in the key industries (thus, proliferating its own vertically-integrated monopoly structure to other sectors of the economy—see Annex 2 for details); and
- In late 1998, it reached an accommodation for more prompt payments by RAO UES in return for suspending bankruptcy procedures against 26 AO Energos facilitated by the amendment of the Bankruptcy Law in April 1998, a deal that could have ripple effects throughout the economy.

Power Utilities—RAO UES (UES)

Like Gazprom, the electricity sector is heavily involved in the nonpayments' web, and serves as a major channel for large implicit subsidies to domestic industries. However, unlike Gazprom, its hard currency exports are negligible.³³ As a result, the only way it can offset these subsidies is by running arrears to the government and to its fuel suppliers, including importantly, Gazprom, which alone accounts for 30 percent of power utilities' payables.

Cash collection. Table 13 shows that the electricity generation sector is also plagued by low collection rates and low cash collections, that is, by both arrears and NCS. These phenomena are unique to FSU countries, as a detailed, multicountry, 1999 World Bank study of the energy sector shows. The problem is virtually absent in the transition countries of central Europe and has been largely solved in the Baltic Republics.

Table 13: Composition of Power Utilities Sales by Means of Payment

	1996	1997
Sales	100	100
Cash & liquid equivalent	20	20
Bank bills	11	6
Offsets and barter	49	62
Nonpayments	20	12

Note. This table includes intra-industry transactions
Source: UES, Renaissance, Brunswick Warburg

Implicit Subsidy on Domestic Deliveries, and Tax Offsets and Arrears. As was mentioned above, the share of NCS and arrears in receivables is much higher for power utilities than for general manufacturing. Further, survey evidence shows that both profitable and unprofitable firms prefer to use NCS while paying their energy bills, attesting to the implicit subsidy in NCS as a result of inflated prices. As the Bank energy study reports, there were no takers when UES offered a 30 percent cash discount on energy and heat bills in 1997, indicating the extent of such inflation.³⁴ Lastly, a decomposition of arrears payable to the electricity sector shows that industrial companies account for about a third, federal, regional and local budget entities another third and resellers, controlled by the regional authorities, a fifth, showing the pervasiveness of the implicit subsidy.

³³ Interestingly, beginning in 1998, UES has embarked on an active export promotion campaign, so far resulting in agreements to boost electricity sales to Germany, Japan, and China.

³⁴ This lack of interest in a cash discount also weakens the argument that high electricity prices are the main reason for not paying energy bills.

Table 14 presents our estimate of the implicit subsidy flow from the electricity generation sector. According to it, the average annual net subsidy extended by power utilities to other sectors amounted to 2.3 percent of GDP per year during 1993-1997, a cumulative total of \$36.8 billion.³⁵ Consequently, the energy sector as a whole has been providing economy with an annual implicit subsidy equal to 4 percent of GDP—a hefty \$63 billion during five reviewed years.

Table 14: Domestic Implicit Subsidy by the Electricity Generation Sector

	<i>Via arrears (\$ billion)</i>	<i>Via barter (\$ billion)</i>	<i>Total as % of GDP</i>
1993	3.0	2.0	2.5
1994	3.9	2.8	2.6
1995	3.7	4.8	2.2
1996	3.5	5.9	2.4
1997	0.5	6.7	1.6
Total	14.6	22.2	

Source: authors' calculations

Unlike Gazprom, power utilities had been unable to pass on the burden of the implicit subsidy from arrears onto the government before 1997. The electricity generation sector has never enjoyed tax privileges similar to those granted to Gazprom. Moreover, even given large tax offsets from the government for the electricity generation sector on an annual basis, power utilities had positive net receivables prior to 1997.³⁶ This means that the electricity generation sector had to finance some portion of the implicit subsidy at its own expense (see Table 15). Box 5 describes the evolution of nonpayments as seen by the manager of a regional energy company.

Table 15: Power Utilities Overdue Accounts (Millions of Rubles, End of Period, 1993)^{a/}

	<i>Net Interindustry Receivables</i>	<i>Net Budget and Extrabudget Payables^{b/}</i>	<i>Net Receivables</i>
1994	802.1	68.5	733.5
1995	1,039.6	823.0	216.6
1996	1,552.2	1,312.0	240.2
1997	2,107.2	2,130.2	-23.0
1998	2,178.1	2,567.9	-389.8

^{a/} Excluding intra-sector arrears.

^{b/} Including negligible amount of payables and receivables on commercial loans.

Source: Goskomstat, authors' calculations.

³⁵ Net power utilities' subsidy excludes share of gross subsidy received from Gazprom.

³⁶ Most recently, these offsets have been conducted under the guise of directed financing.

Box 5: Nonpayments—The View From an AO Energo (Regional Energy Company)

The AO Energo is owned 49 percent by RAO UES. The Deputy General Director described the nonpayments system as follows (April 1999):

Cash collection, receivables, and payables. As a percentage of the Energo's billings, the collection rate has been stable at 85-90 percent, with a slight improvement in 1999, as the devaluation has helped. Of this, cash collections have fallen from about 40 percent in 1994 to about 20 percent in 1999. About 50 percent of receivables stem from the budgetary sphere and households. The price of heat for households is 25-30 percent of cost, with the local budget filling the gap; but they do not do so, leading to arrears. The electricity price, similarly, is 35 percent, and firms are expected to cross-subsidize this; but they do not have funds, also leading to arrears. Of the Energo's payables, 60 percent are owed to Gazprom, 20 percent relates to electricity purchases from the wholesale electricity market, 12 percent to taxes, and the balance to others. Payables are about 75 percent of annual sales and have an average life of 2 years.

Does disconnecting nonpayers help? We know the finances of our clients and disconnect those who can pay cash; but others cannot, and if we disconnect, workers will lose their jobs, and we will lose a client. **But what's the point of a client who cannot pay?** That's why you have barter! Better to get something than nothing. Barter prices are fixed by taking costs and adding a 10 percent margin.³⁷

What pressure did Gazprom's decision to start bankruptcy proceedings against 26 Energos put on you? This is really bankruptcy against the state, because the government owes us much more than we owe them. Our debt to the federal budget is about one-third of what federal government entities owe us, while we owe local budget one-fourth of what they owe us. So the state is the ultimate debtor. That's why the Duma stopped Gazprom's bankruptcy proceedings.

What should the state do? Should they print money? Printing money will amount to a reversal of policies, but will help companies. It will reduce barter, as the monetary base is too low. At the same time, the fixed exchange rate policy was a mistake. The market should determine the rate.

The government wants to have 100 percent cash taxes by September 1, 1999, for Energos and by July 1, 2000, for Gazprom. It also wants to shift VAT to an accruals basis. This will not work. The government, which built the barter system, does not want tax offsets, but cash payments, which is impossible. As for VAT on accruals, this is not fair because we supply our electricity to help socially.

Why Do Energos Tolerate Nonpayments? In addition to the inability in many instances to disconnect customers because of legal ambiguities in the civil code and political pressure (see details in Annex 2), power utilities' central role in many NCS schemes makes them vulnerable to influence by numerous interest groups, who profiteer on NCS intermediation. According to the Ministry of Interior, NCS with power utilities serves as a focal point for Mafia money laundering and provides a huge potential for corruption in the form of side payments to managers and bribes to public servants. Owing to the widespread occurrence of these practices, a slang word, "otkat", meaning "push" or "bribe," has even become acceptable in mainstream Russian. Finally, NCS creates strong incentives for power utilities managers to get involved in profiteering and bribes.³⁸ Therefore, NCS and arrears represent a soft budget constraint that also enables various interest groups, including power utility managers, to enrich themselves in an atmosphere of tight liquidity constraints. This observation is important because personal enrichment creates a strong incentive for the system to perpetuate itself. Thus, the Bank energy study reports instances where energo managers refused cash payments because the resulting transparency ruled out "otkat."

³⁷ There is the issue, of course, of independently verifying the costs of the firms using barter. Thus, there was no response when a 30 percent cash discount was offered in 1997, indicating that barter prices were at least 30 percent higher than cash equivalents.

³⁸ The Bank energy sector study points out that barter intermediaries are often controlled by the managers of Energos, enabling them to skim off profits by inflating prices on the inputs side.

All this means that the system of implicit subsidies ultimately does not reach its intended destination. The bulk of the subsidy targeted at ailing manufacturing sector ends up in the pockets of managers, corrupt public officials and the Mafia. The funds are mostly taken offshore, either draining the resource base of this economy, or coming back under the guise of offshore investment to legalize ownership.

Hardening budget constraints. The hardening of budget constraints on UES through an insistence on payment of taxes in cash is not likely to work unless accompanied by a clear disconnection policy. In its absence, cash collections from UES clients are unlikely to increase, making it impossible for UES to succeed. The importance of a credible disconnection policy is shown by two remarkable statistics. First, the railways have a much higher share of cash sales than either gas or electricity because they are not legally obliged to serve nonpaying clients. Second, casual observation shows that nuclear power stations have even lower cash collection ratios than conventional power stations. This is because unlike conventional power stations, nuclear power stations cannot reduce the voltage without risking a crisis with the reactor. Thus, their disconnection threat is even less credible. However, as box 6 illustrates, improvement can be expected by being tough on the use of intermediaries by Energos.

Box 6: Being Tough Helps—A Conversation With a Barter Intermediary

By profession, Mr. X is an engineer. He is a barter intermediary specializing in the energy sector. Mr. X supplies AO Energos with equipment, which they routinely need for maintenance and refurbishment. They cannot pay cash because their clients do not pay them. In return for the equipment, Mr. X takes over the accounts receivable of the Energos at a discount. He then goes to the companies which owe this money and takes goods from them which are sold for cash or converted into other goods that can be sold for cash.

Mr. X indicated that during the past few months, doing barter deals in Russia had become unprofitable because of a crackdown by RAO UES on regional Energos. This crackdown has put their managers increasingly under pressure to raise the cash component of sales and avoid using intermediaries. Mr. X candidly admitted that while this was good for the economy, it was killing his business. Therefore, he has branched out into a neighboring country, where soft budgets are still pervasive, supplying Energos there with equipment in return for their accounts receivable. This is then converted into goods that can be supplied as inputs to Russian companies. The goods are from companies indebted to the Energos, which are absolutely forbidden from disconnecting nonpayers.

Mr. X would not answer questions about whether managers of regional energy companies personally benefited from the use of intermediaries.

This example illustrates how soft budget constraints give birth to NCS and corruption. Although the crackdown alluded to by Mr. X will have an impact, changes in the civil code and in the nature of contracting between Energos and their main clients to permit disconnection after a reasonable notice period is vital for a full solution.

Conclusions

- Gas and electricity generation has become the main conduit of implicit subsidies transferred to enterprises, amounting to an estimated 4 percent of GDP per year. Given the vast sums of money involved, the energy sector has become a focal point for corruption, personal enrichment and economic crime.
- Given their central position in the nonpayments' web, Gazprom and RAO UES are obvious instruments for the government to use while dismantling nonpayments. This will require two things: a conscious decision to stop implicit subsidies; and amendment of the civil code to unambiguously permit disconnection of chronic nonpayers after a suitable grace period (discussed further in Chapter 5 on dismantling measures).
- Eliminating implicit subsidies and enforcing timely cash tax payments would simultaneously uproot the potential for profiteering by managers, government officials, and the Mafia. By the same token, as long as the implicit subsidy and the whole system of incentives associated with it remain the cornerstone of the economy, vested interests grown on this fertile field will always propagate the nonpayments culture.
- On an encouraging note, the Gazprom experience shows that even managers with the most lobbying power will respond to harder budget constraints (the elimination of export tax breaks). This change has forced Gazprom to pay more attention to domestic sales, including agreements with AO Energos that could have ripple effects throughout the economy. However, a piecemeal approach (implicit subsidies continue, while disconnection is almost impossible) to hardening budget constraints may lead to undesirable results.³⁹ In Gazprom's case, new vertically integrated monopolies in petrochemicals and ferrous metallurgy have emerged as arrears are swapped into equity. If unchecked, this trend would lead to Gazprom's expansion into other sectors and proliferation of monopolistic structures. The solution is to complement the elimination of export tax breaks by radically reducing the implicit domestic subsidy (and hence establishing a clear disconnection policy), better regulating Gazprom's acquisitions, and addressing competition issues at large.

CHAPTER 4: NONPAYMENTS AND THE NEW INDUSTRIAL ORGANIZATION

This chapter attempts a systemic explanation for nonpayments by enterprises. The first section examines the relative importance of (a) tax evasion, (b) the freezing of bank accounts and (c) survival in a market system with tight liquidity as factors driving the high share of NCS in sales. It ascribes the primary role to (c). Continuing in this vein, the second section concludes that burgeoning arrears are not a replacement for vanishing bank credit, but a subsidy to support uncompetitive firms. The third, and most important, section describes the new industrial organization that has emerged in Russia in response to government policies. Drawing upon the results of this study, the chapter presents linkages between nonpayments and such characteristic features of the Russian transition as proliferation of FIGs, corruption and capital flight based on concrete examples taken from case studies.

Background. In 1994, concern about mounting inter-enterprise arrears led to a paper by Bank staff at the request of then First Deputy Prime Minister Soskoviets (Fan, 1994). It concluded that while enterprise arrears had indeed risen, their percentage of sales was not unreasonable. Further, such a rise was a normal part of transition as enterprises sorted out which of their client enterprises could pay and which could not. The paper pinpointed as critical the establishment of a credible no bailout policy by the government. The

³⁹ The highly publicized "price pact" signed between the government and the industrial giants (including Gazprom and RAO UES) on June 16, 1999 is likely to open new avenues for tax negotiation in return for implicit subsidies.

overall message was simple: enforce hard budget constraints at the enterprise level and make sure the government—federal and local—pays its own bills on time

Instead of spontaneously declining, by late 1996, nonpayments in Russia had become a serious problem and enterprise managers were increasingly exploring noncash settlements as a way of generating sales and doing business (Pinto, 1996).

Visits to enterprises in St. Petersburg, Ivanovo and Naberezhnye Chelny (October 1996) suggest that enterprises are at a very early stage of adjustment to a market-based economy.

Two problems pre-dominate: (i) a severe payments problem dating from September 1995, after the crisis in the inter-bank market. Enterprises without exception complain of late payments or payments in kind. A giant truck maker indicated that 50-60 percent of its sales are through barter or offsets, often involving 10-12 intermediaries in a complex circle of barter-based exchange. They estimated this costs them 10-12 percent of sales, including 5 percent commission for intermediaries. This company pays its 200 suppliers in the form of trucks. The oil industry pays for its trucks with oil, which the truck company then sells. The Government is particularly late in making payments, as are other domestic buyers. A margarine-mayonnaise producer in another region had a similar story, with wage payments up to two months late and workers partly paid in kind; (ii) the collapse of traditional distribution networks.

Enterprises also complained about the real appreciation of the ruble, which they claim hurts exports, which are virtually the only source of ready-cash (apart from retail sales).

By 1997, nonpayments had become a way of life, a development no one had anticipated as a “normal” part of transition. Survey evidence put the noncash component of enterprise sales at an average of close to 50 percent, while a December 1997 study of the largest 175 tax debtors, which form the core of Russian industry, found that they received 73 percent of their income in NCS (Karpov, 1997). How did this happen?

NCS Motives

Tax Evasion. Tax evasion has been a longstanding explanation for the use of NCS by firms. While there is no doubt about the need for adopting modern, transparent, rules-based tax and accounting systems as part of completing Russia’s transition to a market economy, pinning the systemic evolution of NCS on tax evasion is questionable, as discussed below.

According to a study by Hendley, Ickes, and Ryterman (HIR, 1998), firms deem the tax system as unfair, and have developed NCS as a way to escape taxes. However, evidence from 350 companies collected in November 1998 (EBRD-VTsIOM – Russian Center for Public Opinion Polls – survey) does not support tax evasion as a core or primary motive for NCS, as reported in table 16.⁴⁰ The first column shows the various instruments used in NCS: barter, offsets, veksel, and debt sales and swaps, while the other columns contain answers about the degree to which the instrument facilitates lower tax payments. As can be seen, barter and offsets are the most widely used NCS instruments—used by more than 90 percent of the firms in the survey (last column) —but only about one-sixth of the firms regarded tax reduction as an important objective (second-last column).

⁴⁰ These and other results reported here are based on a data set resulting from a survey commissioned by Simon Commander (World Bank and EBRD) and Christian Mumssen (EBRD), and conducted by VTsIOM (*Vserossiiski Tsentri Izucheniya Obshchestvennogo Mneniya*) in November 1998. On tax evasion not being a primary motive for NCS, see Commander and Mumssen (CM, 1998), table 17. Aukutsionek (1998) also presents similar evidence.

Table 16: Are Nonmonetary Methods of Payments Important in Minimizing Tax Bill?
(reply of respondents in percent)

	<i>Not important</i>	<i>Used, but not very important</i>	<i>Very important</i>	<i>Instrument is not used</i>
Barter	68	13	12	6
Offsets	63	15	16	5
Veksels	47	8	9	36
Debt sales, swaps	25	5	6	63

Source: EBRD-VTsIOM Survey, November 1998.

While enterprise managers could hardly be expected to admit evading taxes, their responses are consistent with those of government officials, as well as with the provisions of the tax code. The Russian tax code is neutral with respect to cash and noncash sales, that is, it does not distinguish between these forms of sales when taxes are computed. To the contrary, as transactions costs of noncash sales are high, any net tax savings would be minimal (see CM, 1998).⁴¹ The very structure and transactions costs of NCS deals suggests that the primary goal is to somehow generate sales in an unsympathetic market, not to evade taxes.

Another argument against noncash sales being a form of tax evasion is that NCS prices are typically inflated above their cash equivalents. The EBRD and Vserosiiski Tsentri Izucheniya Obshestvennogo Mneniya (EBRD-VTsIOM) survey showed that for barter and offset deals, 38 percent and 48 percent, respectively, of the respondents reported that prices they charge on such nonmonetary deals are slightly or significantly overvalued relative to the cash market prices. This would raise, not lower, the value of tax claims.

Last, and most compellingly, the biggest tax delinquents (Gazprom, RAO UES, regional Energos, and oil companies) are also the biggest sources of hidden subsidies to general manufacturing companies at the behest of the government, as was seen in Chapter 3. In other words, arrears and NCS are a pervasive set of soft budgets aided and abetted by government; tax evasion then partly becomes a by-product as the companies that provide the implicit subsidies attempt to compensate themselves, leading to a more general chain reaction. Furthermore, as was demonstrated in Chapter 2, the politics of tax sharing between the subnational and federal governments is such that the former may well encourage noncash tax payments (part of NCS) to retain more taxes at the local level. So ironically at the regional level, NCS is promoted by the authorities in an effort to increase tax compliance.

Inadequate Banking System. In order for banks in any transition country to play a role in efficient intermediation, the following conditions need to be fulfilled: There must be (a) a modern legislative framework and strong central bank supervision; (b) a stable macroeconomic environment; (c) transparent IAS-compatible accounts for enterprises that would permit creditworthiness assessment; (d) adequate protection of creditor rights; (e) reasonable transactions costs and a good payments infrastructure; and most crucially, (f) confidence in banks, both by households and firms.

All the above have been lacking in Russia, some of them seriously, resulting in a segmented banking system that focused on insider lending or else invested heavily in government paper. Intuitively, an untrustworthy and inefficient banking system should push enterprises away from banks and toward NCS. Likewise, banks would not be interested in lending to enterprises when government paper offered such high real yields, and money could be easily made playing the role of authorized banks for government finance pending the full implementation of the Federal Treasury.

In addition to the above weaknesses, HIR argue that the freezing of bank accounts and the creation of the *kartoteka 1* system has served as a deterrent to the use of banks to settle business transactions, thus

⁴¹ CM, 1998 and Hendley, Ickes and Ryterman (HIR, 1998) cite survey evidence estimating the transactions costs at 20-25 percent of the value of a transaction.

spurring barter and other NCS. Under this system, when an enterprise is in tax arrears, tax officials can block its accounts, forcing all its revenues into a special account, *kartoteka 1*, with any proceeds automatically going to pay off tax debts. As a result, the marginal tax rate on cash inflows is 100 percent. But even this role of banks in tax enforcement does not seem to have been a fundamental driving force behind the rise and spread of nonpayments, as box 7 affirms.

Box 7: Has the Freezing of Bank Accounts Spurred NCS?

Banking practitioners and tax specialists indicate that there are many ways around blocked accounts.⁴² Firms can open an account in another bank or in another district where the tax authorities do not impose the *kartoteka 1*, or they can simply open a new account in the name of a subsidiary. Thus, while the freezing of bank accounts may be a nuisance, it is by no means a binding constraint to the use of the banking system as a means of payment. This general view was also borne out by interviews during a visit to an oblast in April 1999, as the following excerpts show.

Regional Background: The region is heavily industrialized and has a big coal-mining sector. Output today is 30 percent of 1991 levels. Enterprises are constrained by a shortage of working capital "as the monetary base is low." The cash share of sales is less than 5 percent in coal and 20-25 percent, at best, in the region. It is becoming almost impossible to work without cash.

Oblast Government: Enterprises are not interested in evading taxes, just in working. The freezing of bank accounts had a big impact at first, but companies soon found out that they could open 10-20 accounts to evade the tax authorities. **Did all this have a positive impact on tax collections?** The finance director for the regional government said that there were many views on this, but he believed it had had a negative impact.

Heavy Engineering Corporation (HEC): HEC makes machinery for coal mines (50 percent) and all kinds of lifting equipment and conveyors for various other branches of industry (50 percent). Pretransition, it also exported its products to 23 countries, including Western Europe, through various government agencies. Employment has shrunk from 10,000 at its height to a little more than 4,000 now, and output had steadily declined to 30 percent of old levels by 1998.

HEC has about 1,500 suppliers and has clients in all FSU markets, but has lost its western exports. Barter has been a major problem for the last 6 years; 70 percent of sales is in noncash form and all input procurement and sales are through barter intermediaries, who charge 5-8 percent commission. In spite of working through intermediaries, HEC knows its ultimate clients, but cannot deal with them directly because they have no working capital.

The company does not deal with banks because interest rates are too high and, according to it, banks are more interested in short-term loans to small and medium-size companies. The freezing of bank accounts for tax dues is not a factor because there are "1000 ways to work with a bank even with a frozen account. This is only 5 percent of the problem."

Mineral Fertilizer Company (MFC): All domestic sales (70 percent of output) of the MFC, one of the biggest enterprises of its kind in the country, are through barter. The balance of 30 percent is exported for cash, and pays for wages and gas, because Gazprom, "being a monopolist," demands 70 percent cash payment.

Barter began with the 1992 price liberalization. The agricultural sector never had money, and the government promised to pay on its behalf, but did not. MFC's payables exceed its receivables, and 60 percent of arrears are owed to Gazprom.

"The freezing of bank accounts is the 101st problem. Cannot imagine for whom it is a problem." With 150,000 companies and 2000 banks in the country, it involves modest creativity and 'just a little extra work'."

⁴² Based on conversations with the head of a Russian bank, two western analysts of Russian banks, and a tax specialist with a big six firm.

NCS as a Survival Response. The share of NCS in sales has typically been higher for heavy engineering firms than for firms in food processing or retailing, as can be seen from the table 17 below:

Table 17: Share of NCS in Sales, by Industry

<i>Sector</i>	<i>NCS-Sales (%)</i>
Retail	0
Food processing	10
Alcohol drinks	37
Cars, trucks	59
Oil, refineries	69
Machinery	77
Steel	79
Coal mining	80
Chemicals	84
Utilities	87
Gas-domestic	91

Source: Karpov (1997) and Volgin (1999)

This is not surprising. Given tight liquidity constraints, heavy engineering firms making obsolete products will find it more difficult to sell for cash than those in consumer goods or services. What about the high share of NCS for utilities and gas? As the Chapter 3 showed, this is the counterpart of substantial implicit subsidies to manufacturing firms.

While noting the above sectoral differences in NCS, survey evidence collected between 1997 and 1998 suggests that the gap between NCS for firms with a marketable product and those without may have substantially narrowed over time. Thus, HIR report that profitable firms in their 1997 survey had a share of NCS in sales equal to 40 percent, while unprofitable firms reported a share of 47 percent. Commander and Mumssen (CM, 1998) similarly do not find any significant difference between firms classified as profitable and unprofitable based on their October 1998 survey.⁴³

This suggests the following evolution in NCS. After the real interest rate shock, firms with uncompetitive products resorted to barter and other NCS as a survival response. As regional and local governments realized nonviable firms could be forced to exit with possibly undesirable social consequences, soft budgets developed that bailed out such firms through tax offsets, a favored status in public procurement and protection from disconnection by the infrastructure monopolies. This latter would explain the high share of NCS in gas and electricity, as discussed in the Chapter 3. Subsequently, as networks developed and viable firms realized they could benefit from the implicit subsidies, the gap in NCS between viable and nonviable firms narrowed. Unfortunately, there are no panel data that would allow this hypothesis to be tested; but the description of the new industrial organization later in this chapter supports this interpretation of the evolution of NCS. It started out as a survival response of nonviable firms with the active support of government. Viable companies then joined the bandwagon to also benefit from the soft budgets.⁴⁴

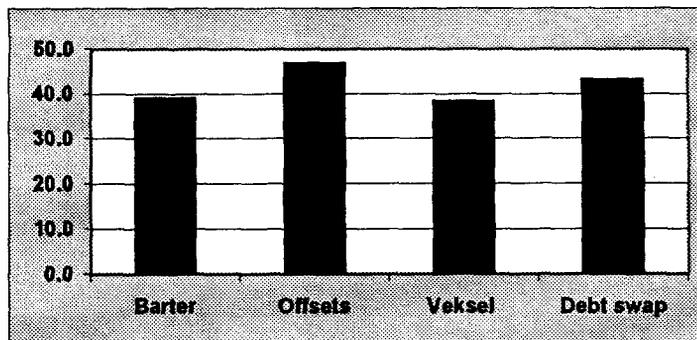
Entrenchment of NCS. The HIR survey finding, as well as evidence from the EBRD-VTsIOM survey, indicates the extent to which NCS is becoming institutionalized. According to the EBRD-VTsIOM survey, 93 percent of the sampled enterprises were using NCS such as barter and offsets, and 3 percent were not

⁴³ Profitable companies reported their NCS share as 63 percent, with the corresponding numbers for unprofitable and break-even companies at 65 percent and 62 percent respectively.

⁴⁴ Buckberg and Pinto (1997) report that based on visits to several enterprises in the summer of 1997, there appeared to be a definite pattern in NCS, indicating that it was a survival response by firms simply unable to sell their products for cash.

using cash at all. Also, a significant number of companies reported that they used intermediaries or dealers in their most important nonmonetary deals (see figure 3), indicating the extent of institutionalization.

Figure 3: Percentage of Companies Using Intermediaries in NCS



Source: EBRD-VTSIOM Survey, November 1998.

Nonpayments: Subsidy, Not Credit

As noted before, the size and duration of the real interest rate and credit shock, as a rational reaction would have pushed firms to incur arrears to suppliers, workers, and government. In fact, arrears grew dramatically between 1994 and 98. The question is: to what extent can this rise be explained as a replacement for vanishing bank credit versus a subsidy to uncompetitive companies?

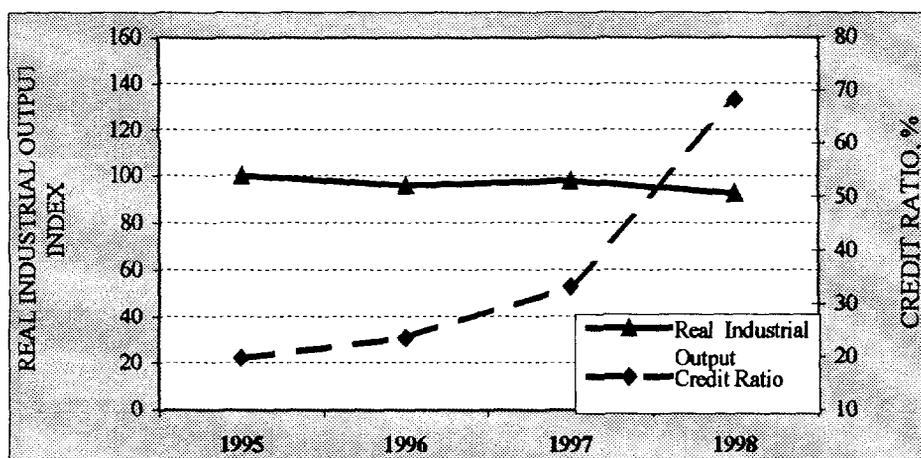
The credit interpretation of arrears is based on the observation that bank credit to nonbank enterprises fell from 30 percent of GDP in 1992-93 to about 10 percent by 1997-98 as high real interest rates prompted banks to reallocate their funds in favor of GKO and away from the enterprise sector (CM, 1998). According to this view, nonpayments have reallocated liquidity among industrial enterprises, with NCS and arrears substituting private, nonbank credit for bank credit. CM take this argument a step further by noting that (a) payables have been rising much faster than receivables; and (b) a decomposition of overdue payables indicates that arrears to the budget and extra-budgetary funds, as well as to the utilities, are the fastest growing item. This pattern of growth in arrears indicates net credit infusion into the enterprise sector from the general budget and utilities.

However, there are three strong arguments in favor of interpreting nonpayments as a subsidy, not credit. First, the sharp decline in bank credit to the nonfinancial sector can be partly explained by normal transition dynamics. Thus, the 1997 OECD survey of Russia attributes it to the discontinuation of sizable directed credits from the central bank, which largely vanished after 1994. Second, industrial output has been on a secular decline throughout the period that arrears have risen, except for 1997, when there was a slight increase. If arrears were serving as a substitute for bank credit, then one would expect the credit ratio defined as

$$\text{Credit Ratio (CR)} = (\text{bank credit} + \text{net overdue payables}) / \text{industrial output}$$

to be roughly constant. Figure 4 plots industrial output (left scale) and CR (right scale) for 1995-1998. The rapid growth of this ratio at a time when industrial output has been declining (with the exception of a small blip in 1997) is much easier to reconcile with the notion of a subsidy and bailout than with an infusion of credit. This is especially true for 1998, when CR went up despite a setback to industrial output.

Figure 4: Dynamics of Industrial Output and Credit Ratio



Source: Authors' calculations based on Goskomstat data.

The rise in CR also coincided with an alarming increase in the number of loss-making firms as shown in table 18.

Table 18: Number of Loss-making Companies,
(percent of total)

	1994	1995	1996	1997	1998
Total	33	34	51	53	56
including:					
Industry, total	23	26	44	47	49
Electric power	7	14	21	25	31
Oil upstream	16	24	19	28	40
Oil downstream	3	2	14	24	31
Gas	31	11	13	35	45
Coal	49	45	54	65	64
Ferrous metallurgy	10	13	31	42	45
Nonferrous metallurgy	23	35	65	66	57
Chemicals and petrochemicals	13	16	38	44	49
Machine building and metalworking	20	24	40	43	52
Construction materials	24	27	47	54	57
Textiles	28	36	63	63	62
Food	17	18	37	42	44
Agriculture	59	55	77	80	83
Transport	29	31	54	55	56
Construction	15	18	33	40	40

Source: Goskomstat

Third, the pattern of the arrears whereby the energy sector is a persistent net creditor also supports the subsidy interpretation. It is difficult to believe that it is in the commercial interest of the energy monopolies to extend these "loans", as discussed in Chapter 3. In fact, the pressure by the government on the energy monopolies to increase their share of taxes paid in cash and reduce their tax arrears has not been credible precisely because of these involuntary "loans" extended by the energy sector.

Impact on Industrial Organization

Nonpayments have spawned a new industrial organization to take advantage of the hidden subsidies. These subsidies aim to keep nonviable companies afloat, and have two channels: arrears to suppliers and government that never get paid back, and “in-kind” payments at prices above market clearing levels for taxes and energy.⁴⁵ These subsidies have created a symbiotic relationship between managers of enterprises that would not be able to survive without nonpayments and managers of efficient enterprises, with both having learned to extract personal gain from the system. This alliance of interests has been responsible for the spread and perpetuation of the system following the macroeconomic shock. Ultimately, the source of sustenance is the ability to redistribute the subsidies implicit in the system through arbitrary pricing of in-kind payments for taxes and energy, as well as other supplies, and extensive profit shifting through the use of related intermediaries.

Features of the new system. The subsidy embedded in NCS not only keeps chronically loss-making enterprises afloat—which in itself creates a peculiar industrial organization, where almost half of industry is insolvent, yet exits are few—but also facilitates establishment of nontransparent redistribution chains, through which a significant portion of the subsidy is channeled into the pockets of enterprise managers. It encourages collusion between managers of efficient and inefficient enterprises, and ensures strong interest on the part of both the successful and unsuccessful enterprises in the continued existence of insolvent companies. Profitable enterprises need unprofitable ones for extracting the subsidy from the government, while managers of loss-making enterprises can cash a part of the subsidy as their own gain (in a form of an *otkat*) only with the assistance of managers of profitable enterprises that can realize the value of the subsidy through tax savings. As the case studies in Annex 3 demonstrate, this necessity for “twinning” gives impetus to the establishment of numerous formal and informal financial-industrial groups (FIGs), comprising both profitable and loss-making enterprises. No other transition economy has experienced such an increase of FIGs.

This extensive proliferation of FIGs, with their highly non-transparent internal transactions, has led to yet another distinctive feature of Russia’s new industrial organization: personal enrichment of managers even at the most insolvent enterprises. Veksel schemes, in particular, are helpful in this respect, as the case of OAO “Urals Automobile Plant” (UralAZ) (Annex 3) demonstrates.⁴⁶

To complicate the situation, the government’s tolerance toward tax offsets—one of the major channels for transmitting implicit subsidy from public accounts to the manager’s pocket—stimulates enterprises to accumulate arrears in anticipation of subsequent offset operations. Moreover, some evidence suggests that, showing accumulation of inter-enterprise arrears on their books, enterprises settle their transactions offshore (see Bureau of Economic Analysis Annual Review of Russian Economy in 1997). This further fuels the spread of financial intermediaries, with an increasing number established offshore. Offshore intermediaries, belonging to Russian FIGs, have become real accounting units-treasuries of enterprises, providing the latter with the necessary cash component of working capital and rescuing them in case of hostile actions by the tax authorities (see respectively, Mechel and Moscow oil refinery cases in Annex 3). This has contributed to capital flight, which has reached substantial levels. Moreover, being built on the relative scarcity of cash and simultaneously providing occasion for huge personal gains, NCS has attracted the Mafia as a natural beneficiary for laundering cash earned in the shadow. As a result, according to high-ranking Ministry of

⁴⁵ For example, if a company paid for energy with products that on paper are valued at 30 percent above cash prices, it saves 23 percent on its energy bill.

⁴⁶ Veksel transactions allow both to redistribute implicit subsidy to managers’ pockets, as well as disguise asset stripping. For instance, former managers of UralAZ were selling enterprise veksel at such discounts—not without some *otkat* involved—that allowed customers to purchase trucks produced by the company at only a fraction of nominal retail price.

Interior officers who specialize in combating organized economic crime, the mob is getting increasingly involved in the every day business of Russian enterprises.⁴⁷

Another side effect of widespread NCS is the proliferation of vertically integrated conglomerates impeding competition and new entrants. Barter schemes, including multistage ones mediated by veksel, tend to embrace all stages of the production cycle, facilitating informal vertical integration within FIGs. Customers get firmly attached to existing suppliers (partly through managerial collusion in subsidy redistribution) and new entrants are not welcome. Moreover, the pricing policy of subsidized enterprises undercuts any potential entrant not belonging to an established NCS chain.⁴⁸ In fact, given that markets heavily involved in NCS are by origin noncompetitive, pricing (not just in nominal terms, but in relative terms, too) becomes highly discretionary. In many instances, prices do not show any definite pattern, and hence the system of market signals corrodes.⁴⁹ Perhaps even more importantly, because of corruption fueled by the huge gains earned on NCS schemes and implicit subsidy redistribution, public servants become involved in the same web of collusion, further promoting insider deals and an anti-competitive environment. Thus, corruption and crony capitalism become another typical feature of the new industrial organization flourishing on NCS, obstructing efficient allocation of resources and prohibiting sustainable growth.

The last peculiarity of the industrial organization developed from the redistribution of implicit subsidies from the government and cemented by personal gains of managers and public servants is its resistance to change. NCS chains depend on the integrity of all links. Attempts to break away literally constitute a capital offence (several managers, for example the Director of Ural regional power utility Chelyabenergo, were murdered soon after initiating anti-NCS campaigns). Such a system can hardly be expected to be dismantled from the inside.

To conclude, the nonpayments system masks hidden subsidies designed to bail out inefficient enterprises. Furthermore, it has become institutionalized, with both “good” and “bad” firms involved, and a large share of NCS transactions done through intermediaries. This has spawned a new industrial organization based on the allied interests of the managers of viable and nonviable firms. The new industrial organization has considerable costs associated with it, explaining why efficient investment and growth are unlikely until the nonpayments system is dismantled.

CHAPTER 5: A MINIMUM SET OF REFORMS FOR DISMANTLING NONPAYMENTS⁵⁰

What started out as a survival response by uncompetitive firms in an atmosphere of tight liquidity grew quickly into a pervasive system of nonpayments, propelled by the conflicting policy goals of achieving low inflation while retaining subsidies in implicit form for enterprises. These subsidies have been financed by a combination of transfers from the energy companies and by the accumulation of public debt. The energy companies sought to pass through their costs to the fiscal accounts by running arrears of their own, contributing to the chronic revenue shortfalls observed throughout the stabilization period from 1995 to mid-1998. Unable to adequately control public expenditure, the government ran arrears, did not make all its

⁴⁷ Similar concerns over the mob’s deep involvement in NCS by electricity generation companies—one of main channels for implicit subsidy distribution— have been expressed by the Chairman of the Federal Energy Commission. More exploration is needed of this phenomenon.

⁴⁸ Note, that while they sell to the government and energy monopolies—vehicles for implicit subsidization—at inflated prices, Russian enterprises sell at much lower cash, or even lower effective veksel, price on the market.

⁴⁹ This gives rise to different interpretations of NCS prices, with some authors claiming that bartered goods are overpriced, while others point to reasons for under pricing NCS, relative to the cash market. We believe both arguments are correct depending upon circumstances and the purpose of a given transaction. In general, while paying for energy or making tax payments via NCS, inflated prices are the norm.

⁵⁰ See also the discussion in Pinto, Drebensov and Morozov (2000).

payments on time and in cash, and orchestrated offsets to cancel mutual public expenditure and enterprise tax arrears. Enterprises have been quick to follow this example. Moreover, the opacity of the system and the scope for personal enrichment set up a natural alliance between managers of profitable and unprofitable firms, who colluded to siphon off part of the implicit subsidies. The ultimate results have been the meltdown as public debt reached unmanageable proportions, and a new, deeply entrenched, industrial organization that hampers exit, entry, and competition. A striking feature of this process of evolution has been its incentive-driven nature, indicating that Russian managers will be quick to respond to incentives, good and bad.

The bailout implicit in nonpayments has been fiscally costly, has impeded growth, and at best has had ambiguous welfare effects, as the subsidies have not always reached their intended targets. Hence, there is little reason for delaying its dismantling.

The present time is also exceptionally good from an economic point of view: the devaluation has brought relief to domestic companies; the government can no longer freely borrow and faces pressure to put the fiscal accounts and BOP on a sustainable footing; and the lessons from the costly meltdown are still fresh. However, the politics is a different matter.

Guiding Principles

The leadership provided by government in enabling private sector development and ensuring credible reforms is recognized as crucial in all transition economies. In Russia, this challenge is much greater than in three central European countries, the Czech Republic, Hungary, and Poland, which are not as large and do not face the same degree of “fiscal federalism” and differing reform agendas at different levels of government. Indeed, the evidence in chapter 2 has shown that government in Russia, especially at the subnational level, is part of the nexus that is slowing reform by its refusal to let insolvent companies exit, as well as its desire to capture economic surplus and taxes at the local level. The nonpayments system has become an important mechanism for both goals.

Another big difference between Russia and Central Europe is that Russia is much more richly endowed with natural resources. Whether this is a boon or bane has long been debated in the economics literature, with resource-rich countries often lagging behind in growth and leading in corruption (see for example, Sachs and Warner, 1995). Whatever the merits or demerits of being resource rich, the energy sector does indeed play a big role in Russia’s nonpayments story, as seen in Chapter 3.

As noted repeatedly above, the key issue is political. Can the various levels of government—federal, oblast and raion—work together to dismantle the system? The starting point must be a coordinated decision to stop implicit subsidies because their social costs far outweigh their social benefits - in fact, most of the benefits appear to be private; and to bring much needed transparency to inter-governmental fiscal relations, both federal-oblast, and oblast-raion. Once this formidable political hurdle is crossed, the technical solution for going forward is relatively simple. Noting that ultimately the Russian government must take ownership and dismantle the nonpayments system, this section only articulates the broad thrust of the needed reforms.

Based on the diagnosis of the nonpayments problem in this paper, corrective policies will need to center around (a) continued reform to bring the enlarged fiscal deficit under control; (b) coordination of post-meltdown inflation reduction with fiscal reform and the imposition of hard budget constraints on enterprises; (c) pricing, taxation and regulation of the energy monopolies supplemented with a clear policy enabling disconnection of nonpayers; and (d) assessment of the likely social impact of hard budgets.

Reforms need to follow two principles:

1. Withdraw the government and the energy monopolies from the nonpayments web. This will eliminate the implicit subsidies, and put in place incentives for the automatic dismantling of nonpayments among manufacturing firms in general. This process would work by effectively hardening budget constraints. As soon as the net creditors in the system realize that offsetting compensation from the government in the form of tax breaks and other concessions is not forthcoming, the system will spontaneously begin to break up through a cascading effect. This will also restore integrity to the tax system because the provision of implicit subsidies will no longer provide an excuse for not paying taxes.
2. Coordinate inflation targets with the dismantling of nonpayments, as discussed in the Executive Summary. This will require that the government make all its payments arising out of appropriately controlled expenditures on time and in cash, with a simultaneous insistence on cash tax payments. Enterprises will no longer be able to claim they are merely emulating the government by not paying taxes.

The paragraphs below spell out a few details, while box 8 shows that much of what follows is captured by the measures in SAL3 aimed at eliminating nonpayments.

Box 8: Summary of SAL3 Measures to Address Nonpayments

The nonpayments system is attacked from three angles in the SAL3 program: (a) facilitation of bankruptcy procedures and change in ownership; (b) infrastructure monopolies; (c) arrears of the general government and tax arrears to the government.

Bankruptcies:

- Eliminate court discretion to replace the creditors' decision to liquidate a debtor enterprise with reorganization.
- Increase personal financial liability of enterprise managers and management disqualification for violations resulting in the insolvency of enterprises.
- Legalize "out of court" simplified bankruptcy procedures.
- Formulate a detailed action plan for a Program for Reform of One-Company Towns.

Infrastructure monopolies:

- A quarterly timetable to increase shares of cash collections in sales has been established for 1999-2000.
- Make improvements in disconnection policy for nonpaying individual and institutional consumers.
- To reduce barter and increase transparency, terminate use of intermediaries for procurement of inputs and sale of outputs and adopt procurement rules based on open competitive bidding.
- To enhance cash collections and ensure fair and timely distribution of collections along the supply chain, eliminate existing transit accounts. Establish a comprehensive legal basis for mechanisms such as advance payment, letters of credit, joint accounts and escrow type of accounts.

Tax and budget arrears:

- Individual schedules for each oil company and for Gazprom to move progressively to full payment of taxes in cash have been introduced.
- Restrict access to oil export pipeline to oil companies without scheduled federal tax obligations.

- Require main infrastructure monopolies to prepare monthly statements indicating accumulated accounts receivable with respect to each federal agency and federally-funded agencies, regional governments and regionally-funded agencies, and municipal governments and municipally-funded agencies, along with a list of the top ten bad debtors from the private sector.
- Take measures to maintain accounts payable by the federal government and related agencies to no more than 30 days sales equivalent for sales starting June 30, 1999.
- Condition federal financial assistance to regions on (a) compliance with schedules to eliminate the outstanding stock of payroll tax and wage arrears; (b) maintenance of wage arrears relating to wages due at 30 days or less of the current wage bill; and (c) maintenance of payroll tax arrears at 30 days or less of average monthly liabilities.
- Implement mechanism to eliminate arrears to infrastructure monopolies and control accounts payable as a condition for federal financial assistance.
- Empower the Federal Treasury to control the volume of commitments incurred by budget recipients to pay for goods and services relating to allocations eligible for disbursement and to be financed from the federal budget. Commitments in excess of permitted allocations will not be liabilities of the federal government.

Government

Increasingly, attention must be paid to the deficit of the consolidated budget, not just the fiscal deficit at the federal level. Equally important will be attempts to harmonize the reform agendas at the federal and subnational levels with a view to hardening budget constraints. In addition, now that within-year inflation has reverted to moderate levels, it is important that its further reduction be based on credible fiscal reforms at the consolidated budget level.⁵¹

There has been considerable discussion about whether printing money will help reduce NCS. Rightly, there is much skepticism about this. In an environment of acute currency substitution, printed rubles are likely to find their way into the foreign exchange market, leading eventually to a collapse of the exchange rate and possible high or hyperinflation. However, there is a big range of inflation outcomes between the 37 percent rate achieved in 1999 (December-to-December) and the single-digit inflation goal that was pursued as a costly obsession from 1995 to 1998. The results of this study support the idea that inflation targets should be coordinated with (a) the imposition of hard budget constraints on enterprises; (b) a genuine reduction of the enlarged government deficit; and (c) continued institutional development and strengthening of the Federal Treasury and tax administration. Above all, a further build-up of arrears should be absolutely avoided. This might result in a temporary increase in inflation as noted in the Executive Summary; but this would be preferable to a quick but unsustainable return to single-digit inflation, provided that at the same time the much-strengthened Federal Treasury is used to control expenditure commitments and the government at all levels insists on cash tax payments.⁵²

Budgetary arrears need to be eliminated by improving general fiscal management; a comprehensive approach is needed to achieve success. First, realistic budgeting has to be introduced, including the provision of a strong and primary role for the Ministry of Finance, while also restricting the role of the Parliament and subnational legislatures to inflate expenditure commitments. Second, institutional changes are necessary: budget procedures need to be streamlined, and the Federal Treasury should be empowered to register and control expenditure commitments. Third, public expenditure analysis at all budgetary levels is needed to improve efficiency of public expenditure. Fourth, inter-budgetary transfers should be used as a policy instrument to encourage subnational budgetary levels to reform along the above lines.

⁵¹ Poland followed a gradual inflation reduction path letting the pace be dictated by fiscal reforms.

⁵² If the government made its (reformed) expenditures all in cash while simultaneously insisting on cash tax payments, the inflationary implications would be much milder than if cash handouts were made to jump start the economy, as was suggested by some soon after the meltdown.

Another vital component is genuine tax reform to eliminate implicit subsidies transmitted through the tax system, thereby complementing the earlier curtailment of explicit subsidies. Specifically, ad hoc tax exemptions and individualized bargaining about tax bills must be removed to provide uniform tax treatment of all companies and sectors. This would create a basis for the gradual decrease of the statutory tax burden in tandem with increased tax compliance. Elimination or rate reduction of the most distortionary taxes, such as the road users tax, accompanied by a switch to internationally comparable tax accounting (for example, corporate profits) would also help in making the tax regime business friendly. Other measures should include strengthening both administrative and professional capacities of the Tax Ministry, stabilizing key tax regulations for a prolonged period to facilitate making long-term investment decisions, and clarifying rights and responsibilities of tax authorities and tax payers. Some of these ideas are incorporated in the first part of the Tax Code.

Energy Monopolies

Two conditions need to be fulfilled in order to move the pricing, taxation and regulation of the energy monopolies to a transparent and efficient basis: the government must pay its bills on time and in cash, and the energy monopolies must be empowered to disconnect nonpayers. Only then will the government's insistence on cash tax payments by the energy monopolies themselves, and higher cash collections in their sales, be credible and enforceable.⁵³

A clear disconnection policy is of vital importance. This might require changes in the civil code, as noted by the World Bank Expert Panel in its February 1999 report:

It is widely believed that the Russian Civil Code contains provisions which seriously erode the right of the supplier to disconnect supplies for non-payment....Though Section 523 of the Civil Code appears to enable disconnection of supply when the purchaser repeatedly fails to pay his bills, the provisions of Section 546 (1) and Section 546 (2) read together are ambiguous enough to allow possible interpretation or inference that supplies cannot be denied to physical persons (individuals or households, as opposed to legal persons or entities) even when they repeatedly fail to pay the bills. Further, Section 546(3) appears to imply that even in respect of legal entities, curtailment or termination of supply cannot be done without the agreement of the consumer. We believe that it is necessary to remove such legal infirmities and place the right of the supplier to curtail or terminate supply to non-paying customers (whether they be physical or legal persons) on an unassailable legal footing, by undertaking a thorough review of all related provisions of the Civil Code and amending them appropriately.

In the absence of such a policy, there is ultimately no incentive for the prompt payment of energy bills. A key part of the problem here is nonpayment by budgetary entities at all levels, ultimately leading to arrears, tax offsets and NCS. As noted in Chapter 3, the scope for corruption is huge. Implicit subsidies amounted to an estimated \$60 billion during 1993-97. The possibility of diverting even a minute fraction of such staggering sums of money to private coffers would tempt even the most upright of managers and officials. A focal point has to be the dismantling of intermediary barter companies owned or controlled by Energo managers, plus an insistence on higher cash collection rates (see boxes 5 and 6 in Chapter 3). The time to do this is now, as the devaluation has opened up much breathing room for enterprises.

A disconnection policy is a prerequisite for moving VAT and other taxes to an accrual basis; otherwise the energy monopolies will rightly claim they are being unfairly penalized. As noted in Chapter 3, after Gazprom's export tax breaks were abolished, and as the insistence on cash payment of taxes increased, it began paying much more attention to domestic sales and even reached an agreement with RAO UES in return for suspending bankruptcy proceedings against 26 regional Energos. This would be a first step in

⁵³ These arguments apply to all the infrastructure monopolies.

hardening enterprise-level budget constraints. Disconnecting for nonpayment would be also much simpler than instituting mass bankruptcy, which would be neither feasible nor credible.

Pricing issues are also important. Anecdotal evidence suggests that regional Energos do not have uniform pricing even in the same locality, and discriminate among their clients based on ability to pay.⁵⁴ Thus, they operate a system of cross-subsidies, which also needs to be dismantled. The most sweeping example of this is that because cash discounts are not available to those already paying cash, efficiency and compliance are penalized. Moving to uniform cash prices is ultimately the only solution.

Exit Policy—Social Safety Net Issues

These are obviously crucial, and have to be examined in the light of the following facts (a) many de facto, insolvent companies are either heavily indebted to their workers, or do not pay at all; (b) the provision of social services by firms has complicated exit policy; (c) informal safety nets exist; and (d) the continuation of bailouts and soft budgets postpones growth.

These are topics on which more work is required. But the cooperation of government is essential to obtain the necessary information about and access to, for example, one-company towns or the capacity of raions to take over social assets. A particular issue here is to divest social assets from companies, with these assets being taken over by raions and the oblast. This will also clarify the taxation situation of companies, which will no longer be able to make tax deals on the grounds of providing social services, as well as make clear the true economic costs of these social services.

Other Factors—Banks and the Tax Code

This study has focused on topics considered to constitute the core of the nonpayments' problem. However, other structural reforms are also important to support the resumption of growth and to complete the transition to a market economy. High on this list are a working banking system that performs genuine intermediation and a modern, rules-based tax code.

⁵⁴ The Krasnoyarsk REC was forced to annul a decision setting dollar-based tariffs for six exporters operating in the region after Krasnoyarsk Aluminum filed a lawsuit claiming an unjustifiably high tariff. Kuzbass REC authorized increases of 30-60 percent of the industrial base rate in tariffs for local exporters. Reported in Brunswick Warburg *Daily News Review*, March 23, 1999.

References and Reading List

- Aukutsionek, Sergei. 1998. "Industrial Barter In Russia." *Communist Economies & Economic Transformation*. Vol. 10, No. 2.
- Buckberg, Elaine, and Brian Pinto. 1997. "How Russia is Becoming a Market Economy. A Policy Maker's Checklist." Manuscript, International Finance Corporation, The World Bank Group. Washington, D.C.
- Commander, Simon, and Christian Mumssen. 1999. "Understanding Barter in Russia." Working Paper 37, European Bank for Reconstruction and Development. Washington, D.C.
- Fan, Qimiao. 1994. "Arrears in Russia: Basic Facts and Policy Implications" The World Bank, August. Washington, D.C.
- Gaddy, Clifford G., and Barry W. Ickes. 1998. "Russia's Virtual Economy." *Foreign Affairs*. Volume 77, No. 5, pp. 53-67.
- Gray, Dale. 1998. "Evaluation of Taxes and Revenues from the Energy Sector in the Baltics, Russia, and Other Former Soviet Countries." Fiscal Affairs Department, Working Paper 98, International Monetary Fund. Washington, D.C.
- Hendley, Kathryn, Barry Ickes, and Randi Ryterman. 1998. "Remonetizing the Russian Economy." Paper presented at Enterprise Reform symposium organized by the World Bank. June. Washington, D.C.
- Karpov, Petr. 1997. "On Reasons for Low Tax Collections (nonpayments in fiscal system). General factors of Nonpayment Crises and Possibility of Restoring Solvency of Russian Enterprises.", Reprint of the Insolvency Commission
- Kourliandskaya, Galina. 1999. "Analysis of Regional and Local Authorities' Role in Emergence and Maintaining of Non-Monetary Forms of Settlements with the Budget." Background paper, Review of Nonpayments project, The World Bank. Washington, D.C.
- Krugman, Paul. 1999. "Balance Sheets, the Transfer Problem, and Financial Crises." Conference in Celebration of the Contributions of Robert Flood, International Monetary Fund. Washington, D.C.
- Ledeneva, Alena, and Paul Seabright. 1998. "Barter in Post-Soviet Societies: What Does it Look Like and Why Does it Matter?" University of Cambridge. Cambridge.
- Organization for Economic Cooperation and Development - 1997. Economic Surveys - Russian Federation. OECD, Paris.
- Pinto, Brian. 1996. "Russia after Yeltsin's Re-election: An Economic Report." Manuscript, International Finance Corporation, The World Bank Group. Washington, D.C.
- Pinto, Brian, Vladimir Drebensov and Alexander Morozov. 2000. "Give Growth and Macroeconomic Stability in Russia a Chance: Harden Budgets by Eliminating Nonpayments." *Economics of Transition*. Forthcoming.

Sachs, Jeffrey, and Andrew Warner. 1995. "Natural Resource Abundance and Economic Growth". National Bureau of Economic Research Working Paper No. 5398.

Sargent, Thomas J., and Neil Wallace. 1981. "Some Unpleasant Monetaristic Arithmetic."

Tompson, William. 1997. "Old Habits Die Hard: Fiscal Imperatives, State Regulation and the Role of Russia's Banks." *Europe-Asia Studies*. Vol 49, No.7.

Tompson, William. 1999. "The Price of Everything and the Value of Nothing? Unraveling the Workings of Russia's 'Virtual Economy'." *Economy and Society*. Vol 28, Number 2, pp.256-280.

Treisman, Daniel S. 1998. "Fighting Inflation in a Transitional Regime: Russia's Anomalous Stabilization." *World Politics*. Vol. 50, No. 2, pp. 235-265.

Volgin, Andrei. Undated. "The End of the Virtual Economy." Manuscript.

Woodruff, David M. 1998. "It's Value that's Virtual: Bartles, Rubles, and the place of Gazprom in the Russian Economy." Program on New Approaches to Russian Security, Working Paper Series No. 11, MIT. New Haven

Woodruff, David M. 1999. "Money Unmade. Barter and the Fate of Russian Capitalism." Cornell University Press. Ithaca and London.

The World Bank. 1998. "The Russian Federation. Analysis of Public Debt Sustainability. A Report by the World Bank." April. Washington, D.C.

The World Bank. 1999. "Nonpayment in the Electricity Sector in Eastern Europe and the Former Soviet Union." World Bank Technical Paper No. 423. Energy Sector Unit. Europe and Central Asia Region. The World Bank. Washington, D.C.

BUDGET SUBSIDIES: MEASUREMENT AND INSTRUMENTS

This Annex presents methodology for evaluating explicit and implicit budget subsidies. It also provides an overview of federal and subnational nonmonetary instruments embedding implicit subsidies to enterprise sector.

Evaluation of Budget Subsidies to National Economy

Explicit subsidies. Explicit budget subsidies to enterprise sector are taken directly from official Ministry of Finance (MoF) reports on federal and subnational budget execution. Since most of the category under budget expenditure, entitled "national economy," represents input subsidies and investment grants, this category was taken as a proxy for explicit subsidies.

It should be noted that gross budget lending to enterprise sector also includes a subsidy component to the extent of (a) the difference between market interest rate and discounted interest rate on budget lending and (b) the amount of overdue loans. Measurement of this component is problematic, especially at the subnational level, because of lack of data. Hence, this has been excluded from our calculations.

Table 1 shows that most explicit subsidies have been provided by subnational budgets.

Table 1: Budget Subsidies to Enterprise Sector, 1994-1998

	1994	1995	1996	1997	1998
Explicit budget subsidies to enterprise sector- gross domestic product (GDP) (percent)	10.2	8.6	7.9	8.6	5.9
of which: a. at federal level	3.0	2.5	1.7	1.8	0.7
b. at subnational level	7.2	6.1	6.2	6.8	5.2
Implicit budget subsidies to enterprise sector-GDP (percent) ^a	0.7 ^b	3.1 ^b	7.6	7.4	10.4
of which: 1. embedded in offsets	0.7	0.6	2.1	2.7	2.2
a. at federal level	0.7	0.6	0.8	0.8	0.4
b. at subnational level	n.a.	n.a.	1.3	1.9	1.8
2. net increase in tax arrears stock	n.a.	2.5	5.5	4.7	8.2
a. to federal budget	n.a.	1.3	1.2	1.4	2.7
b. to subnational budgets	n.a.	1.2	0.6	1.1	1.3
c. to extrabudgetary funds	n.a.	n.a.	3.6	2.2	4.2
Total budget subsidies to enterprise sector-GDP (percent)	10.9	11.7	15.5	16.0	16.3

^a Does not include subsidies in form of ad hoc tax exemptions as well as net increase in overdue fines and penalties

^b Does not include subsidies imbedded in regional offsets and in (a part of) tax arrears

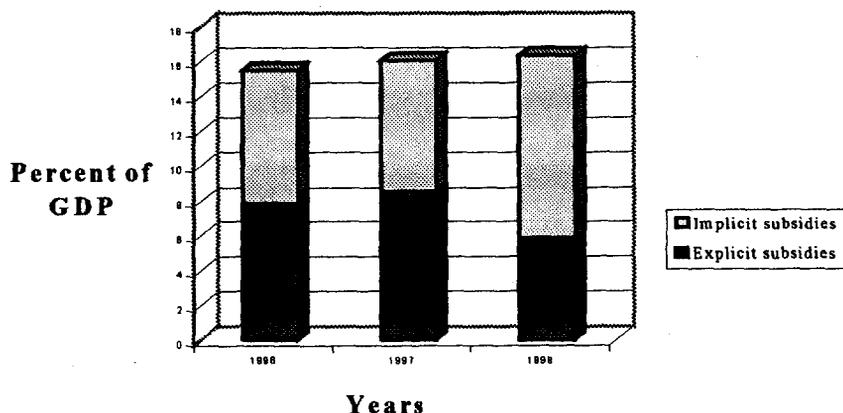
n.a. - not available

Source: Goskomstat, MoF, Ministry of Taxes and Fees, authors' estimates.

Implicit subsidies. Official reports on subsidies to national economy from all levels of the enlarged government severely understate the actual level of subsidizing. Table 1 presents an adjusted evaluation, which includes implicit subsidies in the form of tax arrears, offset discounts, and inflated prices used in government procurement. This adjustment proves that total amount of explicit and implicit subsidies, allocated from the consolidated budget to the economy, has remained practically unchanged during 1996-1998 (figure 1). This shows that implicit subsidies serve as a compensatory mechanism for reduction in explicit subsidies.

In contrast, implicit subsidies as a percentage of GDP increase when explicit subsidies decrease (1996, 1998) and decrease when explicit subsidies increase (1997). Since the discount-price- subsidy component of offsets was stable during 1996-1998, behavior of overall implicit subsidies has been driven by the dynamics of net increase of tax arrears stock.

Figure 1. Dynamics of budget subsidies to enterprise sector, 1996-1998



Source: Goskomstat, MoF, Ministry of Taxes and Fees, Authors' estimates.

Amount of implicit subsidies embedded in offsets was assumed at 30 percent of the total amount of offsets for the overpricing of goods. Therefore, when certain budget expenditures are financed with offsets, the budget actually pays above the market price, and the supplier of goods and services receives a subsidy. Due to the dominance of offsets at the subnational level, this level of government contributes most to total enterprise subsidies.

Subsidy associated with tax arrears was assumed in the amount of annual increase in the stock of tax and quasi-tax arrears. Table 1 shows that tax arrears to Extra-budgetary Funds (EBFs) are the biggest source of subsidies, followed by tax arrears to the federal budget and tax arrears to subnational budgets. This hierarchy reflects political economy governing the behavior of taxpayers. Tax payments to EBFs have the lowest priority, while tax payments to subnational budgets have the highest priority, since potential damage for taxpayers' business is the highest in cases of tax arrears to subnational budgets and lowest for EBF cases.⁵⁵

Table 1 should also include individual tax exemptions granted by the federal and, increasingly, sub-national governments, as well as subsidy component of offsets performed by EBFs. However, data for this adjustment were not available at the time of report preparation.

Federal Nonmonetary Instruments: 1994-1998

Beginning in 1994, persistent pressure from the International Monetary Fund (IMF) caused the government to abandon direct Central Bank financing of the budget deficit. Treasury veksel (promissory

⁵⁵ This damage consists not only of being caught and sued for tax arrears. In the case of subnational authorities it includes such obstacles for business as refusal of license reissuance and restriction of access to local markets.

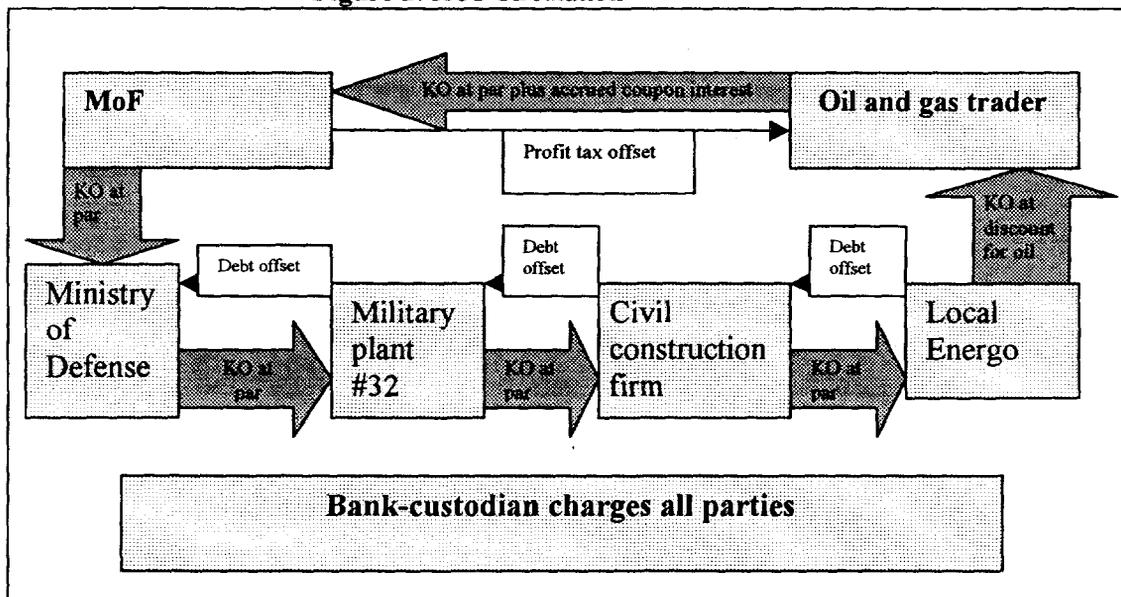
notes), Treasury obligations (KO) and, to a lesser extent, Treasury tax exemptions (KNO) were issued to cover a part of budget deficits in 1994-1996. They were replaced by direct and reversed monetary offsets later on. By March 1998, the federal government officially had abolished the practice of offsets, but reintroduced them again in October 1998 under the guise of “direct financing.”

KOs—Treasury obligations. KOs were first issued by the government in September 1994 “to optimize the implementation of the federal budget and to reduce the rate of inflation.”⁵⁶ KOs were defined as a government security, carrying a fixed interest of 40 percent per year. The MoF distributed KOs to budget-financed entities or federal ministries (“beneficiaries”) within ceilings of expenditure allocations provided in the budget law. Beneficiaries used KOs to pay their creditors and suppliers. Volumes, circulation rules, and beneficiaries were specified in the terms of issue provided for each batch of KOs. KOs existed in the form of electronic records in one of the thirty commercial banks authorized to provide custody services to KOs holders. Choice of custodians was made by the MoF on the basis of undisclosed criteria. First, three to five holders of KOs, depending on the terms of issue, were prohibited from selling them on the open market: they were required to use KOs to offset their payables, deferred taxes included. By the second half of 1995, the MoF was explicitly specifying, in the terms of issue, the chain of first transfers with KO for intercompany debt offsets up the production line. After the required number of transfers were made to clear intercompany debts, the holders of KOs were given several options: sell KOs on the open market, wait until the maturity date and obtain the cash from the MoF, or pay overdue or current tax liabilities with KOs.

The MoF was issuing two types of KOs. KOs of the first type had maturity of more than one month, could be redeemed with money, and were treated as marketable government debt. KOs of the second type had maturity of less than one month; there are no data available on these securities. Pressure from the IMF forced the government to discontinue issuance of KOs—the last KOs were issued in December 1995.

Figure 2 depicts the possible chain of transactions in which KOs might be involved. It is a pure illustrative example, though the Ministry of Defense was one of the major beneficiaries.” The Pension Fund and the Ministry of Interior are mentioned in the press as “other KO financed entities.”

Figure 2: KOs Circulation



⁵⁶ Government Act #807: “О выпуске казначейских обязательств” August 9, 1994.

According to the press, market yields on KOs were 10 to 30 percent higher than treasury bills (GKO) yields.⁵⁷ The existence of large discounts on KOs on the secondary market suggests its fragmented nature and high transaction costs, including custodians' fees, intermediaries' commissions, and "remuneration" to bureaucrats. Therefore, liquid companies that received KOs from the budget preferred to wait till maturity to save on transaction costs.

Demand for KOs was coming from tax debtors and firms that had strong incentives to avoid cash payments. If a company had its bank account arrested [is this the correct use of "arrested" or could you say "confiscated" perhaps?] by the tax authorities, its management could insist on payment in KOs, since its effective tax rate on cash flows to the bank account was 100 percent. Another possible reason to acquire KOs was related to the low speed of intercity bank transfers. Because of the small number of custodians, all of which were large Moscow banks, payment in KOs could be processed much faster than money transfers. Also the absence of publicly announced prices on KOs and rules dealing with accounting treatment of KOs making it easier for managers to embezzle companies' funds.

The demand for KOs from institutional investors was mostly limited to the narrow group of banks that provided custody services. Entities receiving KOs from the MoF had no discretion in the choice of custodian. Authorized banks were protected from competition by considerable barriers to entry, that is, licensing requirements and close relationships with government officials dealing with issuance and redemption of KOs. Ordinary investors preferred to acquire GKO because of the more developed infrastructure and ease of yield computations.⁵⁸

The contractors of the budget and their own suppliers were not legally obliged to accept KOs as a means of payment. According to the terms of issue, first holders had to take KOs at face value. Therefore, they suffered losses. In most cases they agreed to take KOs rather than risk not being paid at all. Presumably, suppliers to the budget had to overprice their goods to compensate for these losses. Other costs imposed on budget-financed entities and their contractors, which were forced to accept KOs at face value, include custodians' fees and commissions of intermediaries. Table 2 provides estimates of reduction in real government spending under the assumption of no overpricing by the budget contractors.

Table 2: Losses Suffered by KO "Beneficiaries"

Quarter	IV-94	I-95	II-95	III-95	IV-95
Issue of KOs as percent of tax revenue	18.55	16.18	8.18	7.41	9.10
Losses to "beneficiaries" as percent of government quarterly spending.	6.23	6.67	2.41	1.09	0

Source: MoF, Ministry of Taxes and Fees, authors' estimates

*Treasury veksel*s—*T-veksels*. In May 1994, the MoF started issuing T-veksels.⁵⁹ These were defined as a part of the government debt, and their 1994 issue was limited to 1.1 billion rubles (US\$540 million). T-veksels had maturity of 1 year and a yield of 40 percent per year. Paper veksel were kept in the Central Bank, which performed custody services for the holders.

T-veksels were paid to the budget creditors: 1.0 billion rubles of the budget debt overdue was swapped for 1.4 billion rubles of T-veksels. Initial holders had the choice of either keeping veksel for a year and getting an annual return of 40 percent or selling them on the market. In 1994 average GKO rates were 172.2 percent per year, which means that the government was forcing its contractors to accept T-

⁵⁷ "Зачетная экономика рождает чудовищ", Expert magazine 12-23-98.

⁵⁸ Yields from possession of KOs would be different for different companies. Absence of market determined prices of KO led to widespread corruption and financial crimes.

⁵⁹ Government Act #321 "О выпуске казначейских векселей 1994 года Министерством финансов РФ"

veksels at below market rates. There was some secondary trading in these instruments, although the market volumes were insignificant.⁶⁰

T-veksels could be used in transactions between companies. Because of the limited volumes of issue, it cannot not be stated that T-veksels were competing with the Central Bank of Russia (CBR) money, although they possessed many monetary attributes.

Another type of veksel used in clearing budget arrears was the veksel issued by commercial banks and guaranteed by the MoF. By the end of 1995, when the MoF was forced to abandon KOs as a means to finance the fiscal deficit, commercial banks were called in to facilitate implementation of the budget.⁶¹ Budget-financed entities were receiving bank loans to finance their activities. The loans were carrying interest equal to one-third of the CBR refinancing rate. Principal and interest were paid by the MoF when the loan was due. Bank commissions were paid by beneficiaries.

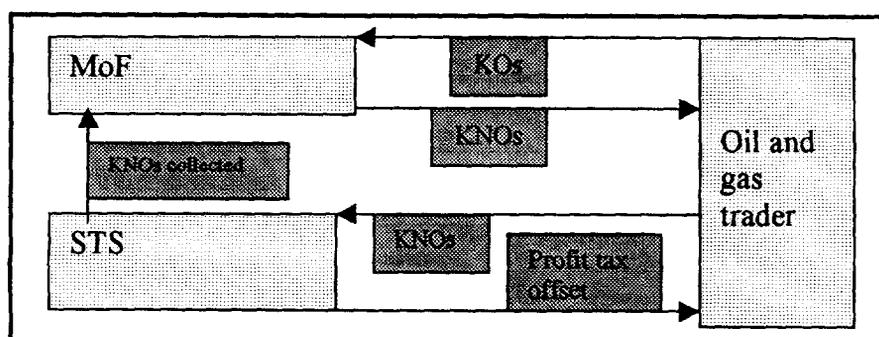
Low interest rates resulted from commercial banks' lending not money, but their own veksels. In essence, private money backed by the state was injected into circulation. At maturity, when the veksel was presented to the bank issuer, the latter redeemed its veksel with funds provided by the MoF. Usually, these funds were transferred to the bank several days before the redemption date, which gave the bank an opportunity to deposit received funds on the money markets.

Criteria applied to the choice of banks participating in the scheme were not disclosed. Government officials in charge of the process were heavily lobbied by the banks wishing to take part. According to the press, MoF veksel guarantees amounted to 22.9 billion rubles (US\$4.55 billion) in the first 9 months of 1996, of which 13.5 billion rubles were paid the same year.

KNO—Treasury Tax Bonds. The MoF first introduced KNOs in 1994.⁶² KNOs were defined as inscribed, nontransferable rights to offset current or overdue tax liabilities with debts incurred by the budget financed entities. It was argued that nontransferability of KNOs would prevent companies from using these as a general means of payment, thereby minimizing inflation.

In 1994 and 1995 KNOs were issued directly to the budget contractors or exchanged for KOs. When a holder of KOs wanted to pay taxes using KOs he or she had to ask the MoF for a corresponding amount of KNOs and then present those KNOs to the local tax service department. Figure 3 demonstrates the mechanics of KOs' redemption through tax liability offset.

Figure 3: Tax Payment via KO for KNO Swap



⁶⁰ Treasury veksel quotes receive no mention in the CBR statistics on the Russian stock markets for 1994.

⁶¹ As an example of a legal document dealing with the topic see: Government Act #970 "О финансировании закупок зерна и другой сельскохозяйственной продукции в Федеральный фонд в 1995", September 29, 1995.

⁶² MoF Directive, "Временный порядок проведения зачета по казначейским налоговым освобождениям" February 23, 1994.

In the beginning of 1996, the government authorized the MoF to reduce tax arrears and intercompany nonpayments by specifying the terms for offsets of tax liabilities of companies owed by the federal budget.⁶³ According to the document, the MoF and the Ministry of Taxes and Fees (MTF) were granted the authority to conduct offsets of tax liabilities incurred in 1995-96.

Under pressure from IMF, the government limited issue of KNOs in 1996 to 9 billion rubles.⁶⁴ Issue of KNOs was officially discontinued in August 1996, when the new mechanism of “direct monetary offsets” was introduced. In reality, KNOs were being issued at least till October 1996.⁶⁵ The MoF significantly exceeded the limit of KNO issue for 1996 and continued issuance of KNOs in order to offset mutual liabilities with budget contractors, incurred in 1995. KNOs issued in 1996 to cover budget debts of 1995 became known as KNO-95.

The MoF formed a list of creditors of budget-financed entities. According to the amounts of budget arrears specified in the list, it supplied other federal ministries with KNOs. The latter offered KNOs to their creditors. To be eligible to get KNOs in payment for goods delivered to the budget, a company had to have overdue tax payables. When the company agreed to accept KNOs, it had to submit an application to the MoF. Application had to include a letter from the local tax inspectorate where the tax arrears of the company were certified. MoF verified the amounts by using its original list and issued KNOs. The firm presented KNOs to the local tax inspectorate which wrote off overdue tax liability incurred by the company.

According to the press, most beneficiaries were reluctant to accept KNOs.⁶⁶ The position of the MoF was stronger here than in the case with KOs, because of the presence of tax arrears incurred by beneficiaries. Since KNOs were not classified as a security, the MoF prohibited secondary market circulation of KNOs, but companies managed to exchange KNOs for goods or money using a variety of schemes.

Formal and informal intermediation was developed for transactions involving KNOs. Intermediaries were constructing chains of participants as to overcome restrictions on secondary market operations. KNOs were usually issued with a large face value, the smallest being 1 million rubles (US\$200,000). The ban on transfers of KNOs to other parties by beneficiaries made KNOs indivisible. Thus, the second important function of intermediaries was to solve the problem of indivisibility. One solution was to use “cessions,” that is, transfer ownership right on KNOs; this operation was in full compliance with the Civil Code. Prices for KNOs were also quoted by some investment houses. These quotes bore indicative character and real prices were heavily influenced by a particular company’s characteristics.⁶⁷

Monetary offsets. Monetary offsets were legally introduced by a MoF directive in September 1996 and were used until December 1996.⁶⁸ After January 1997, they were replaced by a “special financing order” or reversed monetary offsets (RMO).

The idea of monetary offsets was to reduce mutual indebtedness of taxpayers and the federal budget. The MoF compiled a list of budget-financed entities that were going to benefit from the monetary offset.

Then it asked these beneficiaries to find out if their creditors had tax arrears. If mutual indebtedness existed, then an offset took place, the amount of offset corresponding to the smaller of the tax or

⁶³ Government Act #79 “О проведении зачета задолженности...” February 2, 1996

⁶⁴ Government Act #481 “Об упорядочивании расчетов по осуществлению налоговых платежей...” April 1, 1996.

⁶⁵ MoF Directive Э469 “О погашении задолженности в федеральный бюджет” October 22, 1996 whereby the oil product suppliers to the agricultural sector were issued KNOs amounting to RUR 3.2 bn.

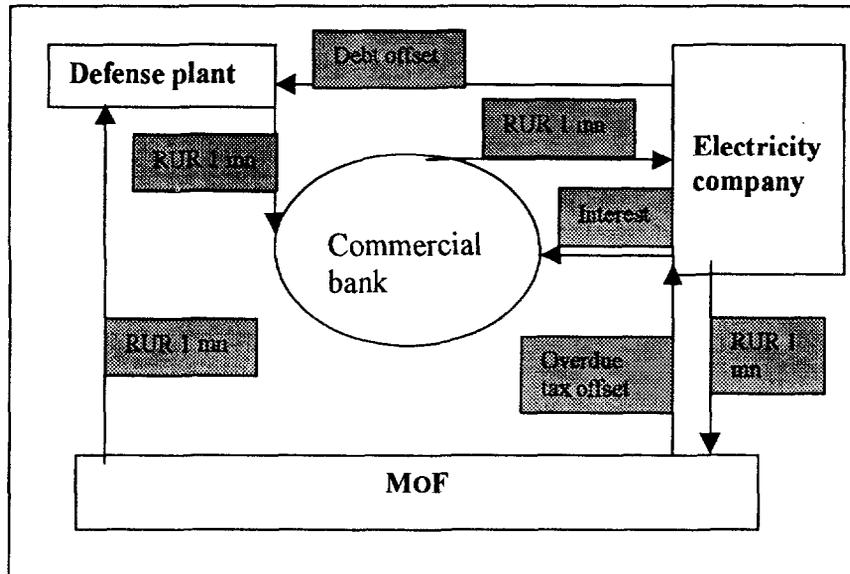
⁶⁶ An extensive review of KNOs circulation could be found in “КНО – практика работы на региональном рынке”, Delovoy Express, July 01, 1996.

⁶⁷ On 24th of October 1996 KNOs were bought at 64% and sold at 75% of their par value.

⁶⁸ MoF Directive “Временный порядок проведения денежных зачетов по доходам и расходам федерального бюджета на 1996”.

budgetary arrears. According to the Civil Code, the agreement of the company with tax arrears was not required for making an offset. Figure 4 illustrates the mechanics of monetary offsets. A commercial bank lends money to an electricity company, with tax arrears to the federal budget, to clear a part of the arrears equal to the amount of credit. The MoF then transfers the received repayment of tax arrears to a defense plant against budgetary arrears to this plant. The plant pays the equivalent amount to the electricity company to clear its own debt for electricity consumed. Finally, the electricity company repays the initial loan to the commercial bank. The circle is closed. In fact, all transactions are made using accounts opened in the commercial bank initiating the offset, so that cash never leaves the bank.

Figure 4: Direct Monetary Offsets



Of course, monetary offsets were not supposed to be traded between companies; however, some secondary market existed. Monetary offset in legal terms could be interpreted as a right to offset tax liability with a debt of a budget financed-entity. Transactions with monetary offsets were made in the form of cession. The buyer of the monetary offset would have its tax arrears reduced at a cost lower than equivalent cash payment. Transactions with monetary offsets involved a large number of intermediaries, which led to high, secondary-market discounts reaching 50 percent of the par value.

Initially (1996-first half of 1997) principles governing the choice of authorized banks were not disclosed. Implementation of each batch of offsets was assigned to a specific bank. Authorized banks were earning money from the three following sources:

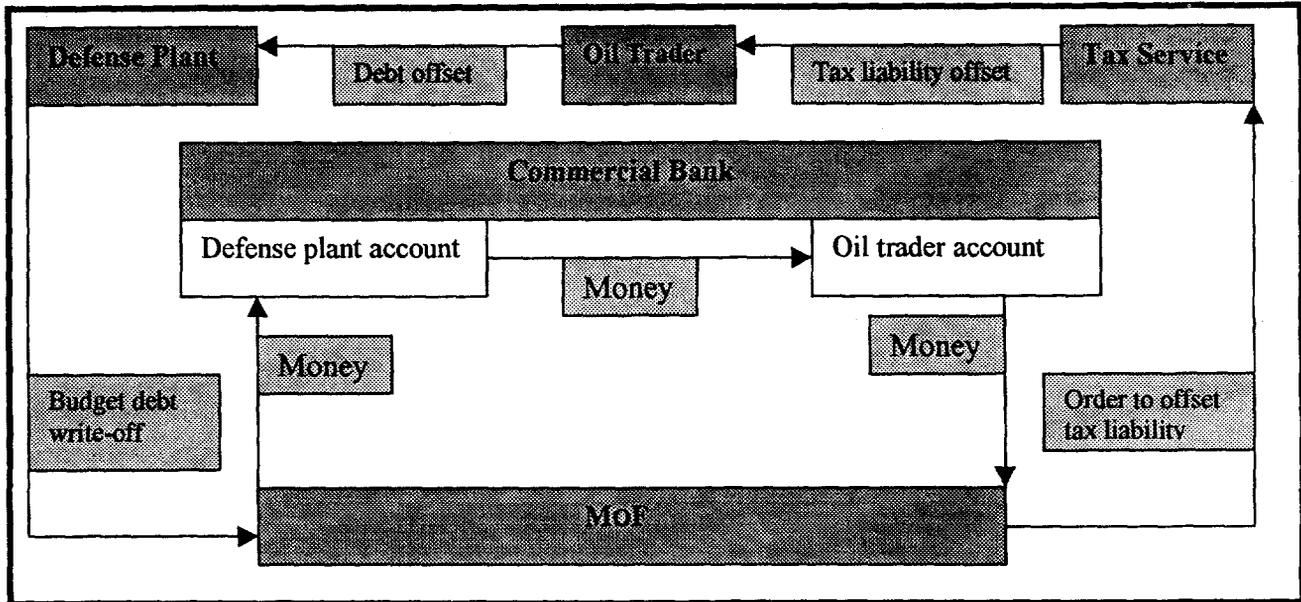
- *Interest on loan.* On average, offsets required three to four weeks for completion and the government implicitly guaranteed the loan. In the last quarter of 1996 the average inflation rate fell to 21 per cent per year. Banks charged 30-40 percent per year on funds loaned for monetary offset procedures.⁶⁹ High interest rates made participation in the offset schemes very attractive.
- *Commissions.* To take part in a monetary offset a company had to open an account in one of the authorized banks. The bank charged the company a fee for transactions going through this account. Authorized banks were uniquely placed to mediate in the secondary markets of offsets. Probably a considerable part of the discount mentioned above was appropriated by the authorized banks.

⁶⁹ Interbank rates in the first three quarters of 1996 were fluctuating around 60%.

- *Float.* After the loan was extended and before the money was transferred to the tax authorities, the banks could invest funds into GKO or interbank markets. Thus in addition to charging interest, they could earn some profits from the money markets.

Monetary offsets existed in the form described above until December 1997. In September 1997 the MoF introduced new type of offsets which were named “special order payments” or reversed monetary offsets (RMOs).⁷⁰ RMOs were almost identical to monetary offsets, the difference being the source of financing. The MoF provided the funds for offsets. The role of the banks was to supervise and technically implement the offset, through opening transit accounts for participants. In order to take part in the offset, banks had to win one of the tenders organized by the MoF. More transparency in the choice of the banks led to lower commission charges and less corruption. RMOs were employed by the MoF until the first quarter of 1998. Figure 5 presents an example of the mechanics of the reversed monetary offset.

Figure 5: Reversed Monetary Offset



Subnational Budget Offsets: Types and Institutional Basis

At the subnational level, budget offsets are carried out not only directly between enterprises and all levels of government (for example, between nuclear power plant’s tax arrears and budget arrears for heating in municipal housing), but also indirectly, involving budgets of different levels and other participants. For example, the oblast budget may have budget arrears to municipal budgets for subventions, municipal budgets may have arrears to an energy company for electricity, and the energy company may at the same time be in tax arrears to the oblast budget. So usually by the end of the year, so called “electricity offsets” are conducted in the way that either electricity company tax arrears are reduced or tax exemptions to the energy company are issued. In practice, such offsets may be even more complicated: for example, the energy company could be registered tax payer in other oblast, while some companies registered at home oblast operating in a neighboring oblast. Hence, budgets of different oblasts and raions may be involved in a complex offset chain. One anecdote refers to an offset chain with 18 participants in a construction deal with the raion budget in Leningrad oblast. Moreover, liquid veksels of some natural monopolies (such as railroads) and banks may be used as a part of an offset chain.

⁷⁰ MoF directive “Об особом порядке проведения расчетов при исполнении отдельных статей расходов федерального бюджета”. September 18, 1997.

In general, offset schemes at the subnational level can be divided into two main types in accordance with the following sets of criteria: (a) Criterion 1—length of the offsetting chain: determines the difference between direct offsets and complex (multilateral or chain) offsets; and (b) Criterion 2—use of money substitutes as the means of offset: determines the difference between offsets without using money substitutes and offsets using money substitutes. According to the interviews, the most widespread types of offsets are direct offsets not using money substitutes, and complex (multilateral) offsets using money substitutes

Factors making a mutual offset attractive for executive authorities are as follows:

- Formal improvement of figures contained in budget reporting
- Overstating of revenues and expenditures in order to submit application to higher-level budget for greater amounts of financial aid
- Speeding up of delivery of requisite goods and services to entities receiving funds from the budget
- Opportunity to conduct expenditure policies independently from the legislative authorities, including granting additional privileges to certain categories of taxpayers and actually fixing individual tax rates for enterprises
- Opportunity to toughen the control over lower-level authorities by targeting transfers at specific expenditures
- Opportunity to partially substitute the federal tax authorities' and the Federal Treasury's functions with regard to administering of tax collection and redistribution of tax flows in favor of lower-level authorities
- Opportunity to gain personal benefits for the officers who make a decision on carrying out a mutual offset.

Factors making a mutual offset attractive for a taxpayer are as follows:

- Obtaining a sales market for enterprise's noncompetitive or, unmarketable products
- Reduction of tax burden because of exclusion of the stage involving the sale of products to a third-party consumer and payment of relevant taxes associated with such sale
- Reduction of tax burden by means of overcharging price for the products being offset
- Actual obtaining of individualized tax rates reflecting enterprise's maximum capability to function without restructuring its production facilities
- Managers' receiving non-recorded income.

Three types of offsets are presented further in the section using specific regional cases:

Direct offsets without using money substitutes. The simplest type of offset is the mutual offset between budget and natural monopolies or public utilities, that is, the services for which fixed rates are set by the authorities. Existence of such offsets is often explained by the underdevelopment and unreliability of the banking system. However, these are not the only reasons, and not the major ones. By using offsets, the transmission of debtor enterprise's funds through a banking account is avoided. Otherwise, the funds would be used to extinguish tax arrears at the federal level. Through offsets, tax arrears are primarily repaid to regional and local budgets.

At Sosnoviy Bor raion (Leningrad oblast), which is the site of a nuclear power plant, in a typical offset scheme, a nuclear power plant provides heat to the municipality in exchange for its tax liabilities to municipal budget.

The next type of a simple offset involves other enterprises that supply goods or services to budget-financed entities and have tax debts to a subnational budget. Such offsets are performed on the basis of a direct agreement between a taxpayer and the budget-financed entity.

Regional or local authorities accept through offsets only those products which they need. Under such offsets, the price of goods or services is usually much higher than the price charged if consumers pay cash. According to estimates, the price for products is inflated, on average by 50 percent, depending on relations between a taxpayer and the authorities. No money substitutes are used in such offsets. Instead, tax offset certificates are drawn up. Two examples are given below.

- (a) In October 1998, upon the Order of the Leningrad Oblast Governor, the oblast budget's debt to *VESTI* newspaper (1.7 million rubles) was repaid by drawing up an oblast tax offset for forestry industry enterprises delivering paper to *VESTI* newspaper.
- (b) In Nizhny Novgorod oblast, mutual offsets involving social payments were often performed in the past through the local administration, for example, repaying debts on wages, child allowances, so-called ration allowances. These mutual offsets involved mostly the local budgets and were carried out by distributing foodstuffs, liqueur, and vodka products, as well as other local public resources, in return for offsetting tax dues of the supplying companies.

If it is prohibited to inflate the price of goods used in offsets above the market price, the following scheme is used: in lieu of tax arrears the budget accepts both goods at the market value and the debtor's receivables drawn up in the form of securities to cover the difference between the desired (nonmarket) and actual offset (market) price. Since those receivables are not recoverable and their liquidity is equal to zero, the tax debtor also receives an implicit subsidy in this scheme.

Enterprises may perform complex mutual offsets with the budget—without money surrogates—using both products manufactured by the enterprise itself and products received in the course of barter transactions. The price for such products is overstated as a result of products passing through the barter chain, and it would be very difficult for an enterprise to sell such products profitably. Actually, by drawing up such an offset, financial authorities of an administration voluntarily assume the responsibility to resolve an enterprise's problems relating to sales of its products. Such offsets are normally performed either with enterprises of special importance to the administration for social reasons, or with debtor enterprises having good personal relations with the administration, as illustrated below.

(a) One of the major debtors of the Nizhny Novgorod oblast budget, Champagne Wines Plant, supplied its products to Vorkuta City in exchange for coal (a barter transaction). The supplier of coal won the tender by offering the lowest price. Upon arrival of the coal in a certain district and its acceptance by the administration representative, the cost of delivered coal was registered as Plant's tax payment to the region's budget.

(b) In Kstovo Raion of the Nizhny Novgorod oblast, the following proposed offset scheme was initiated. Agricultural enterprises with tax debts supply milk to the local dairy as part payment of taxes. From that moment, the municipality becomes—directly or through the state owned enterprise—the owner of the raw material supplied for processing. The cost of dairy's processing of raw materials belonging to the budget, is drawn up in the form of a mutual offset of tax payments between the processing enterprise and the budget. Dairy products, first of all, come to the institutions financed from the budget (hospitals, kindergartens, and so forth) in order to satisfy budget needs; most of the products are delivered to municipal shops where they are sold to the public. The receipts are credited to the budget in the form of tax revenues.

An example of a complex offset is illustrated by the following transaction between GAZ (Gorky Automobile Plant) and Nizhnovenergo: Nizhnovenergo is both initiator and beneficiary of the offset. Nizhnovenergo obtains in advance the Oblast Administration's permission for employing an offset at the offset price. In this offsetting scheme, the initial commodity is VOLGA cars manufactured by GAZ; the final commodity is fuel oil needed for heat and power plant (HPP) operation. The sequence of the offset stages is as follows:

- Nizhnovenergo sets up an intermediary to buy cars from GAZ against its tax liabilities to the budget at the full manufacturer's price.
- The intermediary sells cars for cash at the market price.
- The intermediary spends the receipts on purchasing fuel oil at a price that remains unknown.
- The fuel oil is supplied by the intermediary to HPPs at the offset price, which is always higher than the monetary one. At this offset price, the administration offsets GAZ's tax debts to the budget, and the budget's debts to Nizhnovenergo. The difference between the offset price and the actual price at which the fuel oil was purchased goes to the intermediary set up by Nizhnovenergo.

Multilateral offsets using money substitutes. The offset participants themselves very rarely arrange a multilateral offset, since its arrangement is a complex procedure requiring much time and resources. Financial authorities, clearing centers for the local government, and private firms usually act as offset organizers.

The major factor for the success of such activities is availability of information (as detailed as possible) on accounts receivable and payable on (a) the amount of enterprise tax arrears, (b) the nature of products manufactured, and (c) the extent of effective demand for the products. Before their first contact, private firms offering their services to enterprises possess substantial information about its financial standing (because of access both to insider information and to statistical department and tax inspectorate's databases). As a result, after some time, the role of the local financial institution in offsets is reduced to considering and approving an already suggested chain. In addition, its functions continue to include arranging direct mutual offsets with natural monopolies.

Complex offsets normally involve use of securities. These can be either securities issued by the authorities, or those issued by a debtor enterprise, banks or other third party (such as a clearing center). Subnational government vekselns and other securities may be passed in the course of regular budgetary financing to enterprises, organizations, institutions, and-or local budgets performing settlements with subnational budgets. Entities that receive budget funds can use vekselns in the course of settlements with their own suppliers. The latter, in turn, can present vekselns for payment, which would be the simplest form of their use. These vekselns can also be used as means of payment for the portion of taxes owed to regional and local budgets.

After federal authorities imposed a ban on the issue of regional and municipal vekselns, highly liquid vekselns and the bills of third parties appeared in mutual offsets. The offset chain began with financial authorities' supplying budget entities with liquid bills or vekselns and ended with granting tax exemption to the last enterprise in the offsetting chain upon receiving the same bills or vekselns from it. The financial office of a local administration has admitted that using money substitutes keeps funds out of enterprises' bank accounts, thereby channeling the repayment of enterprises' tax arrears primarily to regional and local government budgets. See the following examples:

(a) In April 1998, the Leningrad oblast government issued an order entitled "On Approving the Program for Repaying Debt and Effecting Current Tax Payments to the Budget of the Leningrad Oblast and to the Extra-Budgetary Funds, by Forestry Industry Enterprises." The program stipulates the following system for repaying debts and making current payments by the forestry industry enterprises:

- Lenoblsprom (Leningrad oblast Department for Forestry Industry) receives goods from forestry industry enterprises as part of tax and other mandatory payments, sells the goods and receives in exchange money or other goods, and passes this on either to the Finance Committee of the Leningrad oblast, or to the Regional Clearing Center (RCC).
- The Finance Committee ensures the financing of budgetary entities from the funds obtained from Lenoblsprom.
- RCC, using the resources received from Lenoblsprom, ensures supplies of goods to the budgetary entities.

(b) A promissory note of the “L” series issued by the RCC and having restricted circulation is used as an instrument for repaying debt and effecting current payments, in accordance with the following scheme:

- RCC issues the note and transfers it to Lenoblesprom for management.
- Lenoblesprom passes the note to a forestry industry enterprise as part-payment for the products supplied by the latter.
- The forestry industry enterprise transfers the note to the Finance Committee, which issues a tax offset certificate for the amount of the note to the forestry industry enterprise and transfers the note to the budgetary entity, such a transfer constituting financing for the entity as stipulated by the oblast budget.
- The budgetary entity transfers the note to the RCC as part of payment for the deliveries of products.

(c) By means of the scheme described below, VODOKANAL Municipal Enterprise (Nizhny Novgorod City) managed to purchase the inputs for its production process from CAPROLACTAM enterprise:

- The Department of Finance of the Nizhny Novgorod City Administration transfers Sberbank (SB) veksel for the amount of two million rubles to TEPLOENERGO enterprise; the action is financed from the budget as part of financing of current costs.
- TEPLOENERGO transfers the accepted veksel for the same amount to VODOKANAL, one of its suppliers, as a partial repayment of a debt.
- VODOKANAL passes the accepted veksel for the same amount to CAPROLACTAM and receives its goods in exchange for the veksel.
- CAPROLACTAM hands over the accepted veksel for the same amount to MEZHREGIONGAZ as a partial repayment of its debt for gas supplies.
- MEZHREGIONGAZ transfers the received veksel for the same amount to VOLGOTRANSNGAZ as a partial repayment of its own debt for gas.
- VOLGOTRANSNGAZ transfers the accepted veksel for the same amount to the Department of Finance as a partial repayment of its tax debt.
- The Department of Finance writes off VOLGOTRANSNGAZ tax debts for the same amount without charging penalties and fines.

In this scheme, the SB veksel were used as means of payment and have strictly a purpose-oriented nature and closed circulation scheme, with the circulation period not exceeding one month.

In addition to the bills and presently prohibited veksel of regions and municipalities, so-called warrants, or simple warehouse certificates, are used as money substitutes. Here is the example of the scheme of settlements with Nizhny Novgorod Liqueur and Vodka Plant, which was in financial trouble, and which the local administration provides with assistance in order to overcome the situation:

The enterprise submits a “simple warehouse certificate” to the administration and receives an extension of time for tax payment without charging penalties. The certificate contains the following inscription: “I commit to supply goods for the amount of X rubles at sale price to the bearer hereof.” The administration transfers the certificate to VODOKANAL as a partial repayment of its debt, and VODOKANAL, in its turn, passes it on to its creditors. The chain’s last participant comes to the warehouse, receives the goods, and gives the receipt of goods delivery to the Liqueur and Vodka Plant. The Plant gives the receipt to the administration in return for a tax exemption. However, in reality, it would be unprofitable for the Liqueur and Vodka Plant to issue its vodka against the certificate, and it prefers to purchase the certificate for money, with a 6 percent discount. As a result of the above scheme, the Plant obtains a free extension of the tax payment period, as well as pays its taxes at a discount.

Federal-Regional offsets. In April 1996, the following scheme was implemented: the MoF, instead of collecting federal taxes owed to it and transferring funds to compensate for subnational budget

expenditures on maintaining housing and social and cultural facilities (divested to the municipalities by various organizations during 1994-1995), granted Leningrad oblast the right to be in control of KNOs of the oblast enterprises. Having received KNOs for 41.84 million rubles, Leningrad oblast arranged to offset district, town, and city administrations' debts to the following enterprises: Lenenergo (through the Leningrad Nuclear Power Plant bills for 15 million rubles), Lenoblgaz for 6.577 million rubles, Gazprom for 15.5 million rubles, Kirishinefteorgsintez for 1.842 million rubles, Oblzhilkomkhoz for 0.98 million rubles, and Volkhov Aluminium Plant for 1.941 million rubles.

In December 1996, the RF MoF, once again, instead of ensuring collection of taxes owed to the federal budget and transferring the funds needed by municipalities for maintaining their housing services, public utilities, and social and cultural facilities, arranged an offset. As a result, Surgutneftegaz, through its Kirishinefteorgsintez subsidiary, delivered (as part of its tax payments to the federal budget) to the administrations of the Leningrad Region districts, towns and cities 55 thousand tons of furnace oil for the amount of 28.6 million rubles. Concurrently, the federal budget's debt to administrations of the Leningrad districts, towns and cities was extinguished. In that case, the volume of furnace oil delivery was reduced by the amount of interest paid by Surgutneftegaz JSC to Baltoneximbank commercial bank for the credit granted for the purpose of performing the monetary offset.

In March 1998, the RF MoF granted Mezhrefiongaz in the Leningrad oblast a federal tax offset of 214.5 million rubles. Leningrad oblast allocated these funds for repaying debts for gas supplied by Mezhrefiongaz to the municipal enterprises of housing services and public utilities, which were to have been financed by federal transfers.

**ENERGY SECTOR MONOPOLIES—VEHICLE FOR IMPLICIT SUBSIDY AND A CORNERSTONE FOR
NONPAYMENTS INDUSTRIAL ORGANIZATION**

This Annex presents detailed evidence of the following conclusions drawn in the main Report:

- Gas and electricity generation (GEG) sectors channel enormous amounts of implicit subsidy to other sectors of the economy via unrecoverable accounts receivable and inflated prices accepted in NCS.⁷¹ Both Gazprom and UES (United Energy System) successfully manage to transfer the bulk of the subsidy burden onto the government. Moreover, for the most of transition period, Gazprom was receiving a 'participation bonus' for nonpayments in the form of tax privileges on exports.
- As the government tries to pressure for higher cash taxes from GEG monopolies, the latter seek compensation in some other form. Thus, nonpayments trigger Gazprom's and UES's expansion into other major industries. Vertically integrated companies that emerge as a result of capital concentration contribute to growing entry and exit barriers. Competition becomes even weaker, and the current, often obsolete, production structure of the Russian industry remains preserved
- Finally, by its nature the implicit energy subsidy impedes energy efficiency.

The Annex separately reviews the role of GEG monopolies in the nonpayments system. It begins by analyzing the role of Gazprom and concludes with showing the role of UES and affiliated Energos.

Gazprom

Table 1 contains data on Gazprom's sales and revenues by geographic destination. It shows that although the volume of domestic deliveries amounts to 61-63 percent of total shipments, domestic customers contribute only 35 to 42 percent to company's gross revenue. This gap is due to two factors: lower prices of and lower collection on, domestic deliveries. The lower, domestic cash collection rate is even more evident.⁷² As data for 1997 illustrate, only 11 percent of cash received by the company originates domestically. Comparison of cash and total domestic revenues shows that less than 15 percent of domestic sales is paid for in cash.

Table 1: Gazprom's Sales

Market	1995	1996	1997			1998	
	Volume bcm	Volume bcm	Volume bcm	Revenue \$ m	Incl. in Cash \$ m	Volume bcm	Revenue \$ m
Total sales	526.8	506.0	490.2	27,180	15,292	466.6	14,476
<i>Including:</i>							
Exports to Europe	121.4	128.0	116.8	10,707	10,707	120.5	7,439
Exports to CIS	69.1	73.0	72.1	4,937	2,855	52.4	1,921
Domestic deliveries	340.3	309.5	301.3	11,536	1,730	293.7	5,116

bcm - billion cubic meters

\$m - millions of US\$

CIS - Commonwealth of Independent States

Source: *Gazprom's Annual Reports, Customs Committee of the Russian Federation, Morgan Stanley Dean Witter Research, Brunswick Warburg*

⁷¹ Natural gas monopoly, Gazprom and electricity monopoly, UES, with its affiliated regional generating companies (Energos), represent GEG for the purposes of this report.

⁷² Although lower figures for 1998 are also partially due to the devaluation.

Subsidy Extended to Other Sectors: Nature and Genuine Sources. Table 2 illustrates one of most commonly used approaches to measuring the subsidy extended by Gazprom. The accumulated subsidy in this case is represented by a change in stock of the company's net inter-industry receivables. This approach is problematic because it does not take account of massive tax offsets carried out during the year. As a result of these netting operations, end-of-period data for Gazprom's overdue receivables do not capture part of the increase in customer's debt which gets offset by writing off corresponding part of Gazprom's arrears to the budget. Hence the gross subsidy extended by Gazprom to its customers is underestimated by the change-in-stock approach. These tax offsets were in the order of 6-8 percent of GDP during 1996-1998 (see Annex 1 for details), with the bulk of mutual clearing concentrated in the energy monopolies.

Table 2: Domestic Supplies: Total Overdue Accounts Payable and Receivable, End of Period
(millions of dollars)

	1995	1996	1997	1998
Receivables	1,634	3,478	3,901	2,752
Payables	1,915	3,967	5,296	3,438
Net receivables	-279	-489	-1,395	-686
Change in net receivables	-123	-210	-906	709
<i>Including:</i>				
Inter-industry receivables	1,531	2,754	3,596	2,368
Inter-industry payables	1,063	2,171	2,045	1,120
Net inter-industry receivables	469	583	1,551	1,248
Change in net inter-industry receivables	181	114	968	-303

Source: Goskomstat, authors' calculations.

In an attempt to measure the whole flow of annual subsidy, which other sectors extract from Gazprom by not paying for gas deliveries, or by bartering with Gazprom at a unilaterally inflated price, we employed a different approach. Using a conservative assessment of Gazprom's collection rates (80 percent) and a 30 percent mark-up in the price of goods received in barter transactions (Gazprom cannot compensate for the higher price charged by its partners by a similar inflation in gas prices because of state price regulation), we have estimated the annual unrecovered value of gas delivered to the domestic market.⁷³ Table 3 presents our estimate of both an annual amount of Gazprom's unpaid supplies to the domestic market and the value lost in barter exchanges. As the table shows, the total average value of "free" gas deliveries to the domestic market was, on average, around 1.6 percent of GDP over 1992-1997.

Table 3: Gazprom's Subsidy Extended through Barter and Overdue Accounts Receivable

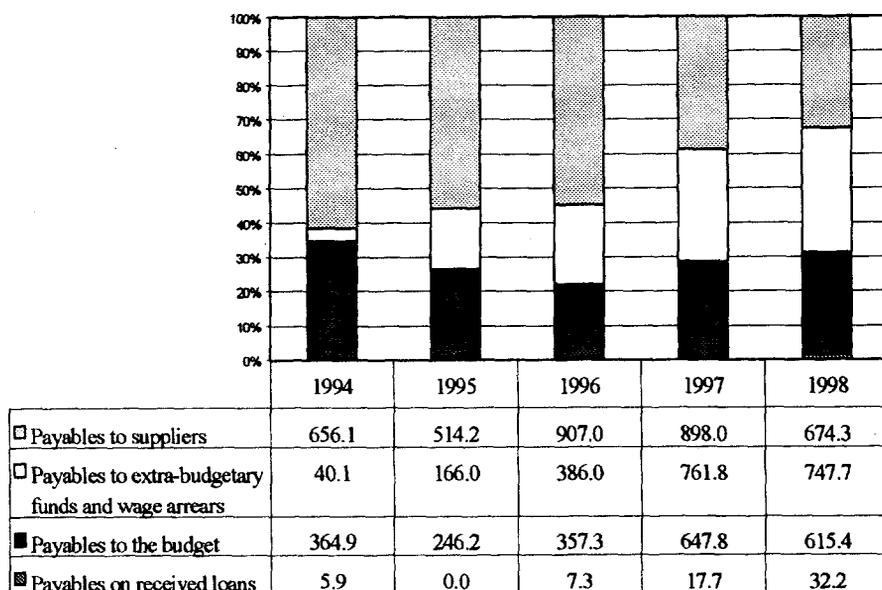
	1992	1993	1994	1995	1996	1997
<i>\$ million</i>						
Value of unpaid deliveries	466	1,352	1,609	3,379	3,556	3,303
Losses incurred through inequality of barter prices	490	1,420	1,690	3,675	3,734	3,468
Total annual subsidy	956	2,772	3,299	7,054	7,290	6,771
<i>% of GDP</i>						
Value of unpaid deliveries	0.5	0.7	0.6	0.9	0.9	0.8
Losses incurred through inequality of barter prices	0.5	0.7	0.7	0.9	0.9	0.8
Total annual subsidy	1.0	1.4	1.3	1.8	1.8	1.6

Source: Company data, authors' calculations

⁷³ Many analysts consider Gazprom's collection rate to be much lower (around 62 percent—see for example MSDW [Morgan Stanley Dean Witter] Research), and some evidence suggests that barter prices are inflated even more than 30 percent.

Figure 1 presents composition of Gazprom's overdue payables, demonstrating that Gazprom has been increasingly passing on the burden of the subsidy extended to other industries to the extrabudgetary funds (EBFs).

Figure 1: Composition of Gazprom Overdue Accounts Payable
(millions of 1993 constant rubles)



Source: Goskomstat, authors' calculations

Privileges in taxation of gas exports. The tax privileges granted by the government to Gazprom's export deliveries have been one of the main reasons for the company's tolerance toward domestic arrears prior to 1996. Presidential Decree No. 1333 of November 3, 1992, established Gazprom's Stabilization Fund, to be formed by savings generated by the company as a result of valuing export deliveries for tax purposes on the basis of domestic industrial, rather than actual-export prices.⁷⁴ Originally, this procedure also covered the profit tax and VAT [value added tax] on barter supplies to the Commonwealth of Independent States (CIS). When an export excise was established in 1993, the procedure was extended to this excise tax.

Table 4 shows that before the Stabilization Fund was abolished because of extensive International Monetary Fund (IMF) pressure as of the beginning of 1996, Gazprom had been generating extra export profits exceeding \$1 billion per year.

Legal and Institutional Issues of Disconnecting Insolvent Customers. Two legal and one institutional features of the domestic gas delivery framework impede Gazprom's ability to deny gas supply to actual or potential nonpayers. On the legal side, these are (a) the Law On Gas Supply, which denies Gazprom the right to refuse requests for gas supplies by potential customers, (b) the list of so-called 'strategic' customers - entities that cannot be cut off irrespective of accumulated arrears. The law effectively bans Gazprom from an ex ante verification of a potential customer's ability to pay, while the list facilitates nonpayments by selected consumers.

⁷⁴ This was the Decree on Gazprom privatization.

Table 4: Gazprom's Tax Savings
(millions of US dollars)

	1993	1994	1995	1996
Profit tax and excise Exemption on exports outside CIS	1,262	1,199	483	0
VAT exemption on exports to CIS	109	159	384	219
Preferential excise rate	0	0	141	381
Total	1,370	1,357	1,007	599

CIS - Commonwealth of Independent States

Source: authors' calculations

Legal barriers aside, the company does not possess direct access to a valve that could turn off supply to an individual customer. Owning the whole high-pressure pipeline system in the country (the Unified Gas Supply System of Russia), Gazprom does not control the bulk of the low-pressure distribution system. The latter is owned and run by the local gas distribution companies (GDCs), historically owned and-or controlled by the regional (oblast) authorities. In fact, prior to 1997, 100 percent of Gazprom's domestic supplies had been shipped by GDCs' facilities. As a result, even if Gazprom wanted to disconnect some habitually late- or nonpaying customer (or at least reduce gas pressure as a warning), it would have to apply the penalty to the whole region, which would be unacceptable.⁷⁵

To alleviate this, Gazprom established Mezhrefiongaz in the spring of 1997. By now, the company has direct sales contracts with 15,000 consumers, basically limiting GDCs realm to households, public institutions, and small industrial consumers. However, Mezhrefiongaz still does not control the majority of low-pressure pipelines, and thus needs a GDC's consent on disconnecting a specific customer. That is why the disconnection practice is only applied occasionally.

Proliferation of Monopolistic Behavior—an Unexpected Consequence of Nonpayments for Gas

Export earnings allow Gazprom to pursue an expansionary corporate strategy. Gazprom possesses significant blocks of shares—usually not less than 50 percent—in 18 joint ventures in 15 countries of Central and Eastern Europe (excluding joint ventures in the CIS), and is engaged in major domestic expansion. Apart from interest in the financial sector, where Gazprom owns and-or controls several major banks (National Reserve Bank, Imperial, Gazprombank, etc.), the company's sphere of influence has recently embraced petrochemicals and several ore processing plants.

The story of how Gazprom established dominance in the petrochemical branch is worth documenting. Prior to 1998, Gazprom's contribution had been one-fourth of the total domestic supply of hydrocarbons wide fraction (HWF)—the most important resource for production of a whole range of petrochemical products, from polyethylene plastics to synthetic rubber. Since HWF is produced by the gas monopoly, its prices are regulated by the state.

To increase profit from HWF production, Gazprom launched a campaign for expansion into downstream business. Gazprom started by acquiring control over the Sibur company—owner of nine gas

⁷⁵ Of course a reasonable question seems to be, why Gazprom could not come to an agreement with a specific Gas Distributing Company (GDC) if a customer needed to be disconnected or warned. However, this would in effect require coming to an agreement on that with regional authorities, which strive to protect local consumers by every means. Apparently Gazprom's single strong card in such negotiations would have again been disconnecting or lowering gas pressure to the whole region, which was virtually impossible.

processing plants in Western Siberia, and the major Russian supplier of HWF. According to the law, Gazprom was not allowed to participate in privatization auctions, either directly or through affiliated companies. In full compliance with the law, 72 percent of Sibur's shares were purchased by two companies: Bonus-invest, a Russian investment fund, and "Gazoneftekhemicheskaya kompaniya" (GNK), a foreign-owned, closed joint-stock company.

Interestingly, although the above two companies had no formal links to Gazprom, all five members nominated by them to Sibur's Board of Directors were on Gazprom's staff. This included three Gazprom Deputy Chairmen of the Board, one of whom became the Chairman of Sibur's Board of Directors. The Director General of a Gazprom affiliated company, Gabsibkontrakt, became Sibur's President. Upon completion of the deal, Gazprom acquired monopolistic control over Russia's HWF supply. The outcome of that operation has prompted the Russian press to suspect control by Gazprom of an off-shore company, GNK and of using it for its own purposes.⁷⁶

Gazprom subsequently created a holding of petrochemical plants, main consumers of HWF, which included Tobolsk petrochemical plant, whose shares Gazprom received in lieu of arrears.⁷⁷ Given that the current volume of HWF production suffices to utilize just half of Russian petrochemical plants capacity, Russian petrochemical plants using HWF as resource face a choice of either joining the Gazprom-run holding, or running into shortages in input deliveries. Gazprom uses the same system of 'incentives' in negotiations with tire producers. Since Gazprom is willing to add a couple of those to the holding, tire plants that would be eager to join would get privileged access to inputs (synthetic rubber).⁷⁸

Petrochemicals is not the only industry included in Gazprom's expansion plans. Ferrous metallurgy has become another target sector. Gazprom has simultaneously gone after the three biggest iron ore processing factories (IOPFs)—their combined share in Russia's supply of iron ore is 80 percent—and some leading ferrous metallurgy plants. By 1998, Gazprominvestholding, Gazprom's 100 percent owned subsidiary, had already purchased, jointly with Nakosta, 40 percent of the shares of the biggest IOPF—the Lebedinsky ore processing plant—and reached an agreement with the bank Rossiisky Kredit about buying another 46.5 percent of Lebedinsky's shares. Gazprominvestholding has also started negotiations with the Rossiisky Kredit on purchasing major blocks of shares in other two IOPFs built on the rich Kurskaya Duga iron ore deposit.

If these plans materialize, Gazprom will become a monopolistic supplier of the main input to the whole ferrous metallurgy sector. As the HWF example suggests, ferrous metallurgy itself can become the next target. In fact, Gazprominvestholding has already made first steps in this direction. The investment fund Interfin, whose president is the First Deputy Director General of Gazprominvestholding, has acquired 66 percent of the shares of the Oskol electrometallurgical plant—the industry's leader in production of the highest quality steel brands. According to media reports, Gazprom is currently considering acquisition of another steel industry giant—the Novolipetsky metallurgical plant, producer of the most widely used steel brands.⁷⁹

Nonpayments Inhibit Energy Efficiency. Subsidies imbedded in the domestic gas supplies explain the growing intensity of gas usage by major industries (metallurgy, chemicals, etc.) at a time of rising

⁷⁶ Expert No. 11, March 22, 1999.

⁷⁷ To avoid paying this plant's arrears to other creditors, Gazprom has initiated a bankruptcy procedure. Given that the enterprise is located in a one-company town and, according to the law, is subject to a ten-year-long restructuring procedure, by appointing an external manager, Gazprom acquired long-term control over the enterprise, while avoiding immediate debt burden.

⁷⁸ Most recently, GNK has expressed interest in acquiring controlling stake in the Yaroslavl Tire Plant – the second biggest tire producer in the country, whose shares became available for sale due to insolvency of the enterprise (Expert, No. 18, May 17, 1999).

⁷⁹ These acquisitions explain high level of Gazprom's investment, which puzzles investment analysts in the absence of construction of major new pipelines or development of major new deposits. Gazprom's investment totaled \$9.4 billion in 1996, \$6.6 billion in 1997, and an estimated \$2.6 billion in 1998.

relative prices of gas. Table 5 presents data on change in Gazprom sales in 1992-1997. During the transition, Gazprom production decreased by 18 percent, with domestic supplies falling by 24 percent percent. At the same time industrial production has fallen by approximately 45 percent. Given that the industrial sector had been consuming more than 70 percent of domestically supplied gas, the figures suggest an increase in intensity of gas use per unit of industrial output.

Table 5: Domestic Gas Consumption, 1992-1997

	1997		1992-1997	
	Consumption (bcm)	Share in total (%)	Change in sector output (%)	Change in gas consumption (%)
Electricity generation	137	45.5	-16	-21
Residential	48.16	16.0	n.a.	30
Metals	22	7.3	n.a.	n.a.
Chemical	22	7.3	-40	-21
Machinery	20	6.6	-50	-32
Construction materials	11	3.7	-53	-43
Non-industrial	40.84	13.6	n.a.	n.a.
Total	301	100.0		

n.a. - not available

Source: MSDW

Electricity Generation Utilities (RAO UES and Energos)

Sales and Arrears. Electricity Generation represents another major part of the nonpayments' web. Tables 6 and 7 respectively present data on AO Energos (regional energy companies) sales and composition of sales by customer. By depicting the low proportion of cash in Energos' sales, table 8 illustrates the sector's involvement in the nonpayments' web. Table 9 presents the power sector's overdue receivables and payables. As table 9 shows, overdue accounts receivable from enterprise sector customers have almost constantly been growing in dollar terms. Accumulated overdue receivables from customers reached the equivalent of \$11.4 billion by end-1998. This amount would have been significantly higher, if not for regular large-scale tax-offset operations run by the MoF towards the end of each year (see Annex 1 for details). Notably, overdue receivables from enterprise sector customers have always exceeded payables to enterprise sector suppliers, indicating that Energos have been unable to pass the whole burden of the implicit subsidy onto the suppliers. However, the latter definitely carried the most of the "electricity" subsidy burden (accounting for close to 70 percent of Energos' overdue payables in recent years—Figure 2).

Table 6: Energos Sales

	1993	1994	1995	1996	1997	1998
Producer price (Rbl per Thousand Kwh)	-	58.4	163	215	254	284
Deliveries:						
Volume (Kw bn)	814.5	781.7	767.1	756.2	744.4	751.7
Value (US\$ bn)	-	20.7	27.4	31.7	32.7	21.9*

Rbl - rubles

Kwh - kilowatt-hour

bn - billion

* 1998 data in dollar terms are low because of the devaluation.

Source: Company data, Goskomstat, authors' calculations.

**Table 7: Electricity Consumption by Sector
(percent)**

	Industry	Agriculture	Households	Transportation	Public Sector	Other Sectors	Losses
1995	55	8	11	7	11	n/a	8
1998	46	6	11	9	7	21	n/a

Source: UES Annual Reports

With a 30 percent portion of Energos' payables, Gazprom is playing the key role in generating subsidy channeled to consumers through "free" deliveries of electricity. However, as noted in the previous section, Gazprom has been compensated by the government for this subsidy. Consequently, the

**Table 8: Composition of Energos Sales by Means of Payment
(percent)**

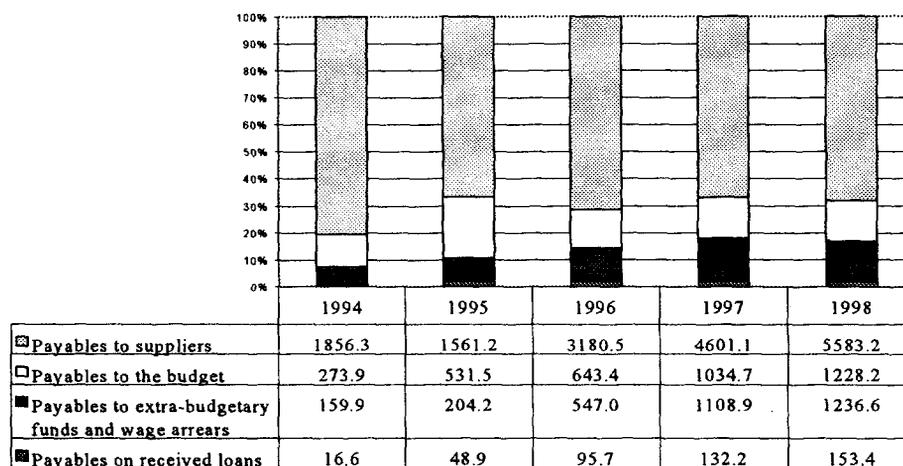
	1996	1997
Sales	100	100
Cash & liquid equivalent	20	20
Bank bills	11	6
Offsets and barter	49	62
Nonpayments	20	12

Note: This table includes intra-industry transactions within the electricity sector.

Source: UES, MFK Renaissance, Brunswick Warburg

ultimate burden for a portion of Energos' subsidy equal to their payables to Gazprom resides with the government. In addition, figure 2 illustrates the burden directly passed on to the government, by showing a constant portion of the budget and particularly extra-budgetary funds in Energos overdue payables.⁸⁰ Moreover, in recent years, the government has become an explicit source of the subsidy extended by the Energos, which is depicted by a negative sign of Energos' total net receivables (table 9).

**Figure 2: Power Utilities, Overdue Payables Composition,
millions of 1993 constant rubles**



Source: Goskomstat, authors' calculations

⁸⁰ Technically speaking, Goskomstat data do not allow wage arrears to be distinguished from arrears to extra-budgetary funds. Hence, Gazprom and Energos' staff might be considered providers of the subsidy, too. However, incidence of wage arrears is not widespread in natural monopolies, and thus we attribute the bulk of the subsidy to the state.

**Table 9: Energos Overdue Accounts Payable and Receivable, End of Period
(million of US dollars)**

	1995	1996	1997	1998
Receivables	5,295	11,266	15,609	12,976
Payables	4,848	10,691	15,661	13,624
Net receivables	448	575	-52	-648
Change in net receivables	-673	127	-627	-596
<i>Including:</i>				
Inter-industry receivables	4,834	6,100	13,550	11,443
Inter-industry payables	2,686	6,587	8,751	7,825
Net Inter-industry receivables	2,148	-487	4,799	3,618
Change in net inter-industry receivables	923	-2,635	5,286	-1,181

Note: This table excludes intra-industry debt.

Source: Goskomstat, authors' calculations.

Table 10 presents our estimate of the net annual flow of subsidy from Energos, calculated employing the same methodology as in the case of Gazprom.

Table 10: Energos Subsidy Extended via Barter and Overdue Accounts Receivable

	1992	1993	1994	1995	1996	1997
<i>\$ million</i>						
Value of unpaid deliveries	463	3,037	3,896	3,713	3,482	515
Losses incurred through inequality of barter prices	368	2,048	2,836	4,838	5,909	6,678
Total annual subsidy	831	5,085	6,732	8,551	9,391	7,193
<i>% of GDP</i>						
Value of unpaid deliveries	0.5	1.5	1.5	1.0	0.9	0.1
Losses incurred through inequality of barter prices	0.4	1.0	1.1	1.2	1.5	1.5
Total annual subsidy	0.9	2.9	2.8	2.2	2.4	1.6

Note. This table excludes portion of subsidy attributable to Gazprom.

Source: Company data, authors' calculations

Government intervention in deliveries. By the beginning of 1999, the federal and local governments had already borne direct responsibility for about 45 percent of Energos receivables. Moreover, further increase in the federal government's arrears to Energos has been explicitly built into the 1999 budget law. Out of 24-26 billion rubles in expenditures on electricity by the federally funded agencies, the budget law allocated just 9.5 billion rubles for that purpose, with the remaining three-fifth going directly into arrears.

A similar approach prevails at the level of regional authorities, whose paternalistic policies are responsible for the major part of Energos' overdue receivables. First, even though official lists of strategic customers have been compressed by the federal government, many regional governors keep their own, much more extensive, informal lists.⁸¹ Second, Energos have to rely on local distribution companies (resellers) – which are heavily influenced by the local authorities – for the delivery of electricity to the majority of final consumers. Without these resellers' consent, disconnection of end-users is technically

⁸¹ It should be noted that even these compressed lists are still responsible for proliferation of nonpayments for electricity. Quite a few commercial companies have managed to get connected to strategic customers, thus disguising themselves as strategic enterprises and shielding themselves from a potential disconnection. The federal government also contributes to nonpayments to Energos by requiring extensive "mobilization orders" (mandatory maintenance of contingency capacities for defense-related production). As a result of such orders, enterprise equipment has to be kept in the stand-by mode, including in many instances heating whole workshops, or even factories, containing a lot of currently idle capacities.

impossible. Besides, the resellers are among the worst Energos clients, accounting for 21 out of the 45 percent government share in utilities' receivables.⁸²

Trying to preserve the Energos' role as subsidy provider, the federal authorities want to shield the sector from possible restructuring. In the spring of 1999, in an apparent move against any changes in ownership and hence governance of Energos, the Duma started to debate amendments to the bankruptcy law, which would exempt Energos from regular bankruptcy procedures.

Similar to the case of Gazprom, subsidy to the economy facilitates inefficient use of electricity. Electricity consumption has been steadily contracting at a lesser speed than industrial output (table 11), increasing electricity consumption per unit.

Table 11: GDP and Electricity Generation Dynamics, 1992-1997

	1992	1993	1994	1995	1996	1997
Deliveries, Kwh bn	858.13	814.45	781.69	767.13	756.21	744.38
Deliveries, 1992=100	100	94.9	91.1	89.4	88.1	86.7
GDP, 1992=100	100	91.3	79.7	76.4	73.8	74.4
Industry electricity tariffs, 1992 Rbl.-Kwh	0.42	1.05	1.19	1.24	1.63	1.84

Kwh bn. - Billion kilowatt

Rbl-kwh - Ruble per kilowatt

Source: Goskomstat, authors' calculations.

Finally, the nonpayments system is pushing UES and Energos towards the same expansion in other industries, as in the case of Gazprom. The precedent was set by acquisitions of controlling blocks of shares in the coal companies. The most recent example is an agreed takeover by RAO UES of Krasnoyarskugol, coal company in Krasnoyarsk region.⁸³

⁸² A clear example of the negative impact of the local resellers policy's on the Energos' finances has been recently revealed in one of Russia's regions - Bashkortostan. Bashkir-Energo, a UES affiliate, increased its cash collection rate from 0.3 (!) percent to 25 percent immediately upon acquisition of the local reseller-distributor Bakaly-Energetik.

⁸³ Notably, one of the local utility managers explicitly admitted that the main motivation behind the takeover was a concern that an independent owner would increase the coal price.

ENTERPRISE BEHAVIOR – RATIONAL RESPONSE TO EXISTING INCENTIVES

The Annex presents a brief review of three main enterprise databases used for the purposes of this Report (particularly, in Chapter 2):

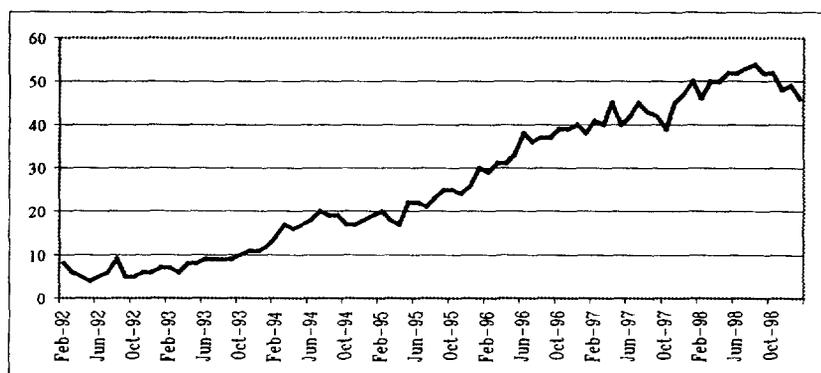
- Russian Economic Barometer mail survey,
- Interministerial Balance Sheet Commission (IBC)⁸⁴ database on the largest tax delinquents (Karpov's database), and
- EBRD 1998 enterprise survey (Simon Commander's survey).

It also contains a summary of three case studies from a background note prepared by Pavel Kuznetsov, each illustrating peculiar features of Russia's current industrial organization depicted in the Report.

The Russian Economic Barometer Survey Results.

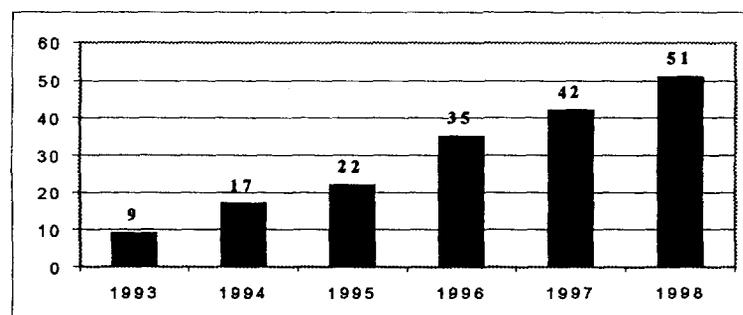
The results of the monthly survey of industrial enterprises conducted by the Russian Economic Barometer shows that since 1992, the share of barter in total sales had been rapidly growing, reaching over 50 percent by mid-1998. A slight decline, however, was observed towards the end of 1998. Figure 1 shows the monthly dynamics of the barter share in total sales, while figure 2 shows the annual average share of barter in total sales.

**Figure 1: Share of Barter in Total Sales
(percent)**



Source: Russian Economic Barometer (REB)

**Figure 2: Average Annual Share of Barter in Sale
(percent)**



Source: REB

⁸⁴ Federal entity charged with responsibility to review financial health of the major tax debtors.

Sample Characteristics. The database includes information on the 175 enterprises that are the biggest debtors to the Federal Budget and Pension Fund. The total number of observation, however, is 210, because some of the enterprises reported for two or three periods. These 210 observations are divided in table 1 into the following three samples according to the reporting period:

Table 1: Sample Size

December 1995-December 1996	94
June 1996-June 1997	75
September 1996-September 1997	41
Total	210

Source: IBC, Authors' calculations

Data. The database contains the quantitative information obtained mostly from the balance sheets of the enterprises that reported to the Interministerial Balance Sheet Commission. As for accounts payable, the information includes only data on tax and Pension Fund liabilities. Payables to other EBF (extra-budgetary funds) are not included; therefore, total fiscal dues might be underestimated.

Limitations and Restrictions. The data set encompasses some problems that should be taken into account: (a) the absolute figures are in current prices, so one should adjust for inflation when comparing absolute average indicators overtime; (b) the samples vary significantly in size and are not representative across industries, therefore, any comparison between periods is affected by peculiar features of enterprises in each sample.

Main Findings and Conclusions. The results of dynamic analysis support the hypothesis that enterprises use NCSs and tax arrears as implicit tax credits-subsidies in the environment of noticeably persistent, soft-budget constraints. As can be seen from table 2 below, most of the companies tend to pay a fixed amount of taxes (not more than 8-9 percent of the revenues, including only 2.0-2.6 percent in cash) regardless of the size of their fiscal liabilities, which, on the contrary, vary significantly between the analyzed periods (from 11 percent in December 1996 to 18 percent in June 1997). Moreover, the share of cash in total revenues remains relatively stable over time: 27 percent in the first period (Dec 95-Dec 96); 30 percent in the second period (Jun 97-Jun 98); and 26 percent in the third period (Sep 96-Sep 97).

Table 2: Dynamics of Fiscal Burden Relative to Total and Cash Revenues

	<i>Due</i>	<i>Paid</i>	<i>% Cash</i>
<i>Fiscal burden-revenue, %</i>			
Period 1	10.8	7.8	2.0
Period 2	18.0	9.3	2.4
Period 3	13.6	7.6	2.6
<i>Fiscal burden-cash revenue, %</i>			
Period 1	38.6	29.1	7.6
Period 2	59.3	30.6	7.8
Period 3	52.9	29.6	10.1

Source: IBC, authors' estimates

Although the claims of fiscal system on the enterprises' total revenue do not seem to be particularly high (11 percent to 18 percent), the claims on cash revenue of 39 percent to 59 percent are quite significant and combined with wage fund (it goes up to 81 percent - 104 percent) may represent a serious problem for enterprise finances, especially if the company is required to pay more taxes in cash.

⁸⁵ Mr. Petr Karpov is the head of the Interministerial Balance Sheet Commission. He kindly shared his 1997 database on large tax debtors with us.

Table 3 below shows the share of cash in total revenue for natural monopolies in dynamics. While for the gas and electricity companies this share was very low relative to sample averages, railroads managed to achieve much better results. Consequently, for the enterprises of gas and electricity sectors the ratio of fiscal burden to cash revenue is extremely high (see table 4).

**Table 3: Share of Cash in Total Revenue
(percent)**

	<i>Gas</i>	<i>Electricity</i>	<i>Railroads</i>	<i>Average</i>
Period 1	20	12	46	27
Period 2	13	12	77	30
Period 3	12	8	39	26

Source: Authors' estimates

**Table 4: Share of Tax and Pension Fund Liabilities in Cash Revenue
(percent)**

	<i>Gas</i>	<i>Electricity</i>	<i>Average</i>
Period 1	251	75	39
Period 2	586	99	59
Period 3	188	161	53

Source: Authors' estimates

EBRD-VTsIOM November 1998 Survey

Sample Characteristics. The total number of surveyed enterprises is 350. Although, the general sample has approximately equal shares of profitable and loss-making companies (see table 5), it is not representative across industries (table 6).

Table 5: Distribution of Enterprises According to Financial Performance

	<i>Profitable</i>	<i>Break Even</i>	<i>Loss-making</i>
1997	150	59	140
1998 H1	137	56	157

Source: Authors' estimates

Table 6: Number of Enterprises by Industries

1. Electric energy	28	8. Electric technology	5
2. Oil extraction	12	9. Chemical and petrochemical	41
3. Gas	4	10. Timber and paper	20
4. Coal	18	11. Construction materials	41
5. Ferrous metallurgy	16	12. Light industry	44
6. Nonferrous metallurgy	10	13. Transport	37
7. Machinery	72	14. Construction	2

Source: Authors' estimates

Data. The information was collected through formal interviews conducted in November 1998 by VTsIOM (*Vserossiiski Tsentr Izuchenia Obshestvennogo Mnenia*). The questionnaire is divided into two parts. The first part includes questions mostly related to the general enterprise characteristics as well as production and financial performance in 1997 and 1998. The second part deals with problems that enterprises face because of NCSs and arrears.

CASE 1: The Ural Automobile Plant— a Chronicle Loss-Making Company, Which Does Not Belong to an FIG (Financial Industrial Group)

General Characteristics of the Enterprise

“Urals Automobile Plant” is the largest machine-building enterprise in Cheliabinsk Oblast, located in a one-company town of Miass. Its core business is to manufacture heavy utility trucks. The main consumers are the Ministry of Defense, and oil, gas, and forestry sectors. The designed capacity of the enterprise is 34,000 vehicles a year (before reform, the plant’s annual turnover was about 30,000 trucks). Regardless of the sharp decrease in production, as shown in table 1, “UralAZ” retained the workforce at the pre-transition level of 24,000 workers. This constitutes 46 percent of the working population in Miass.

Table 1: Number of Trucks Produce (thousands)

1993	1994	1996	1997	1998
19	12	6.5	6	3

The company has access to the foreign market. In 1997, it exported approximately 10 percent of produced trucks (mostly four-wheel-drive vehicles) to Egypt, Ethiopia, Yemen, and Brasil.

Some Numbers on Performance in 1996-97

- Share of barter in costs and sales accounted for 99 percent (*note: calculated by the author*).
- Share of accounts receivable in total sales reduced from 16.3 percent to 11 percent.
- Accounts payable rose from 30.2 percent to 59 percent.
- The value of fixed assets rose 5 percent per year.
- Equity capital decreased by 10 percent in 1996 and 25 percent in 1997.

Nonpayments

In mid-1997, when enterprise arrears to the federal budget and Pension Fund exceeded 1 billion new rubles, UralAZ was put on the list of the largest debtors and was asked to report to the VChK (Interim Extraordinary Commission). Even during the second half of 1997, when the company was put under close supervision by the Federal Balance Commission, it continued generate huge losses and accumulate arrears, which by the end of 1997 reached 3.5 billion rubles (about US\$600 million). With average monthly sales of only 200 million rubles, the company would not be able to repay these arrears in coming years.

The major creditors of the company are the local and federal governments, and infrastructure monopolies: Financial Department of the Cheliabinsk Oblast Administration (25 percent of overdue payables), Federal Treasury (16 percent), Federal Department of the State Reserves Committee (16 percent), UES affiliate OAO “CheliabEnergO” (16 percent), and gas distributor OAO “MiassMezhRajGas” (16 percent).

Noncore Activities by the Firm and Wage Arrears

In 1996, UralAZ built 30,000 square miles of housing, which was more than 15 percent of the total volume of housing construction in Cheliabinsk Oblast. When it declared bankruptcy, it was employing 7 construction companies.

By the end of 1997, the noncash component in wages and salaries reached 90 percent, with an average monthly wage of 750 rubles (US\$125). Prices of products distributed in lieu of wages (with simultaneous delays in cash payments for many months), had a tendency to be substantially overvalued.

Barter and Money Surrogates

Available cash resources at the enterprise have been increasingly concealed. Cash was transferred to numerous small firms controlled by the parent company. According to Goskomstat data, the share of UralAZ cash transactions in 1996 was only 4.4 percent and even this cash was channeled through the accounts of a third party. This demonstrates how a new form of business conduct has been created, with the production of goods and associated financial flows being deliberately separated

A veksel policy, which was not pursued in a prudent manner, damaged the enterprise finances as well. By the time the external administration was introduced, it was hard to determine the amount of veksel issued. The approximate amount of issued veksel was 0.5 billion new rubles. According to the external administrator, in 1997, the company veksel were traded on the market at only 17 percent of their par value. And when they were exchanged for trucks, a vehicle could be purchased at a price, which was 5-6 times lower than the nominal, enterprise selling price. One of the reasons for low prices on the secondary market was, according to the external administrator, opportunistic behavior of the middle management of the company, who were placing company veksel on the market with significant discount. They were also purchasing necessary inputs at inflated prices and later paid for them with the enterprise products through barter deals.

Role of Natural Monopolies—Creating of an Informal FIG

Gazprom is a consumer of UralAZ final products. Having a local electricity generation company among its debtors, Gazprom offsets its procurement from UralAZ by electricity supply to the enterprise. Gazprom is also creating a barter trading house in Cheliabinsk Oblast, for the purpose of conducting offsets with numerous companies related to UralAZ, which should ensure a flow of necessary inputs to UralAZ. Finally, Gazprom is a co-founder of a JV "IVEKO-UralAZ", which acquired a substantial, and most valuable part of UralAZ premises and technological equipment.

With debtors in all industrial branches, Gazprom, the recognized "backbone" of the Russian economy, spontaneously undertakes functions of the former State Planning Committee, distributing flows of physical resources and using these flows in its own corporate interests. Moreover, Gazprom is actively involved in debt-for-equity swaps, appointing its managers to debtor companies.

Concluding Remark

The case shows how a Russian large manufacturer, in spite of a tenfold reduction in demand for the company's products relative to pre-transition years, manages to survive without layoffs and contraction in provision of social services (housing construction). Accumulation of arrears to the government and energy monopolies, as well as extensive resort to NCS is the main survivalist response. Hence, the loss-making enterprise remains afloat only because of implicit subsidy extended to it by the government and its conduits in the energy sector. Given the one-company-town status of UralAZ, the local authorities were probably the most active proponents of soft budget constraints. Its worth noting that NCS provided splendid opportunities for personal enrichment of company managers (veksel scam and transfer of cast to affiliated companies), while further damaging the company's financial position and adding employees to creditors of the company (inflated prices on goods distributed as in-kind wage). Finally, Gazprom took the company over, including it in its monopolistic realm.

CASE 2: Moscow Oil Refinery—Protected by FIG

The Moscow Oil Refinery is an enterprise that is involved in highly profitable business. In theory, such enterprise should experience no difficulties with tax payments. However, this is not the case for the Moscow Oil Refinery.

Performance in 1996-1997

In 1997, the profitability of producing petroleum products was reflected in an almost twofold increase relative to 1996 (29.2 percent compared to 16.2 percent). Profits reached 546 million rubles in 1996 and 495 million in 1997. High wages and salaries (in 1996-1997 about \$700 a month) were paid on time and in full. Mandatory payments to extra-budgetary funds were made regularly, with practically no arrears.

Dynamics of Tax Arrears

In 1996-1997, the enterprise's overdue tax liabilities to the federal government were not only chronic, but on the rise. At the beginning of 1996, their full amount (principal plus penalties and fines) was 352 million rubles; by the middle of 1997, they had increased to 565 million rubles. During the same period cash payments to the budget accounted for only 8 percent of total actual payment.

Interestingly, the dynamics of federal and regional tax payments and arrears were quite different. Federal tax liabilities increased 2.2 times over the first six months of 1997. At the same time, municipal tax arrears dropped 1.2 times to 126 million rubles and have been maintained at this level since then (that is, the enterprise has been paying all its current taxes to the Moscow budget in full).

Use of Implicit Subsidies

Tax arrears to the federal budget increased not because the business could not generate sufficient liquid resources to repay them. The data suggests that the enterprise would be able to pay its tax arrears but had no desire to do so.

This resulted in a situation where the surplus liquidity available to the enterprise was partially used for capital investment. The Moscow Refinery was carrying out expensive construction of facilities at the expense of tax payments to the federal budget. During 1995-1997, the amount of capital investment approached 1,023 million rubles, including 328 million rubles during 1997. Seventy percent of the constructed facilities had nothing to do with the core production, being in large part an investment in real estate. Thus, specific "short-term loans" from the state were channeled into huge, long-term investment. Despite its debt to the federal budget, the enterprise also continued to purchase long-term securities (8.6 million rubles in 1996).

Suppliers and Customers

Five companies are the Refinery's main customers and simultaneously its largest crude oil suppliers. According to the State Tax Service, refining of oil on "give and take" terms accounted for a large portion of production: 79 percent in the first half of 1997, against 57 percent in 1996, and 58 percent in 1995 (that is, the enterprise received "untied" payments only for 20 percent of its products). Consequently, cash payments accounted for only 15-18 percent of total sales revenue, even though the enterprise manufactured highly liquid products. The tax inspection has drawn up a list, which includes seven firms involved in offsets and barter deals using the products of the Moscow Refinery.

The above describes an enterprise which is independent only on paper; in practice, it performs only limited (pure production-processing) functions inside the FIG of the Central Fuel Company (CFC), controlled by the individuals close to the Moscow Government. (Note that 38 percent of the Refinery's stock belong to the CFC, 26 percent to other legal entities, and 36 percent to individuals).

Managing Financial Flows Inside FIG

The Moscow Refinery is, in fact, an integral part of the FIG, where it basically plays the role of the manufacturer. Main financial flows are severed from the enterprise. It actually manages a small portion of its funds and deals only with the cash flow required to pay wages and some taxes as well as other mandatory social contributions. Making payments inside the group does not require cash at all, hence offset arrangements suffice.

Prior to mid-1997, nonpayments to the federal budget, regarded as the "weakest" creditor, continued to be a usual practice at the Moscow Refinery: Minimal taxes were paid to the federal budget, if at all. But as soon as an issue of tax payment became a political one (in 1997, at its summer and fall sessions VChK threatened the enterprise with bankruptcy), the enterprise immediately received assistance in the form of financial injections from the FIG. The CFC transferred 293 million rubles required to cover shortfall in the refinery's tax debt repayment. The owners stood up for "their" enterprise, providing it with political and financial support.

Subsequently, by the end of 1997, not only did the enterprise follow the schedule of current payments but it also fully repaid its accumulated 565 million rubles debt (302 million rubles in tax arrears and 263 million rubles in penalties), which then was about US\$100 million.

However, as soon as the attention of the federal authorities to the Moscow Refinery relaxed, the FIG owners controlling the refinery's financial flows immediately resorted to the implicit credit from the federal government by accumulating new tax arrears. At the beginning of 1998, the refinery's arrears on federal taxes reached 210 million rubles.

Concluding Remarks

The case illustrates, how NCS is used for concealing profit of a perfectly viable enterprise, by splitting production and cash flow, and redistributing generated cash according to FIG's priorities (most likely, cash revenues reemerge in sectors subject to lower, than oil processing, taxation). Even more importantly, the case shows how relaxed the federal government's tax policy tended to be, allowing even the most explicitly profitable enterprises to run substantial arrears. Soft budgets were enjoyed by loss-making and profitable enterprises alike. The case also demonstrates how FIGs rescue enterprises that catch the attention of the federal tax authorities and how FIGs discriminate between various levels of the government, preferring federal to local government. Finally, it is clear from the case that even a temporary success by federal tax authorities in extracting cash from FIGs does not create a threat sufficient to prevent FIGs from resorting to tax arrears as soon as pressure is relaxed.

CASE 3: OAO MECHEL ("Cheliabinsk Iron and Steel Works"—Export Oriented Company, Which Does Not Have Cash to Pay to Suppliers, Yet Easily Attracts Foreign Financing for Its Investment Programs)

General Characteristics

The company is located in the city of Cheliabinsk; 98.1 percent of the facilities are used for production of ferrous metals. The enterprise employs about 30,000 workers. The government has sold its block of shares in MECHEL to a Cyprus-based investment fund at an investment tender. Official reports of the enterprise show that exports totaled US\$375 million in 1996 and US\$306 million in 1997, which was 34 percent and 37 percent of the annual sales, respectively. According to VChK, exports were even higher, accounting for 48 percent of the output.

In spite of being an export-oriented business, AO MECHEL is a chronic loss-making facility. The enterprise is continuously in arrears to the budgets and extra-budgetary funds.

Relations with Budgets and Extra-Budgetary Funds

In 1997, the federal tax arrears had the following dynamics: January 1—64 million rubles; April 1—152 million rubles; and July 1—105 million rubles. In September 1997, the enterprise declared its full repayment of tax arrears. At the end of 1997, however, federal tax arrears reemerged.

At the beginning of 1997, total arrears to the federal and local budgets, and extra-budgetary funds were 642 million rubles, which by end of 1997 slightly decreased to 558 million rubles. Changes in the structure of arrears are quite indicative: since there was no way to obtain implicit credit through accumulating arrears to the federal budget, AO MECHEL started to accumulate arrears to the extra-budgetary funds.

Payments from Clients (the Role of Intermediaries, Barter, Non-Payments)

The share of noncash payments by the customers accounted for 96.5 percent and 99.8 percent in 1996 and 1997, respectively. In 1996, cash sales were 198 million rubles, while in 1997 they were only 8 million rubles. Even for the fraction of sales, which were paid for in cash, the enterprise used third-party accounts. For example, in 1996, the cash revenue of 226 million rubles were wired to AO MECHEL trade unions account to avoid using the enterprise's bank account.

Payments to Suppliers: How to Obtain Commodity Credits

The level of AO MECHEL's debt to its suppliers is extremely high. As of December 1996, it equaled the value of enterprise's material costs for 5.4 months; at the end of 1997, for 4.9 months. In absolute terms, the debt to suppliers was about twice as high as that from the customers. In 1997, cash payment to suppliers totaled only 6 million rubles, resulting in an almost 100 percent of NCS share in payments to suppliers.

A major creditor of AO MECHEL, "CheliabEnergO," in order to recover some debts in June 1998 cut off the power supply to the plant ("switched to the conditions of emergency reserve supply"). This happened because AO MECHEL was not paying the agreed 30 percent cash portion of its debt for the electricity bill. Apparently, the offset portion of the payment (70 percent of the total electricity bill) was paid by MECHEL regularly. Therefore, for settling the "cash debt" the iron and steel works repaid its debt to CheliabEnergO by resorting to barter deals, yet offering for a change some very liquid consumer good. It repaid the debt with Lada passenger cars, received as payment from VAZ, that were then transferred to CheliabinskUgol (the debt of CheliabEnergO to CheliabinskUgol was more than 200 million rubles at that time) to repay the latter's wage arrears.

Financing Investment and Wages

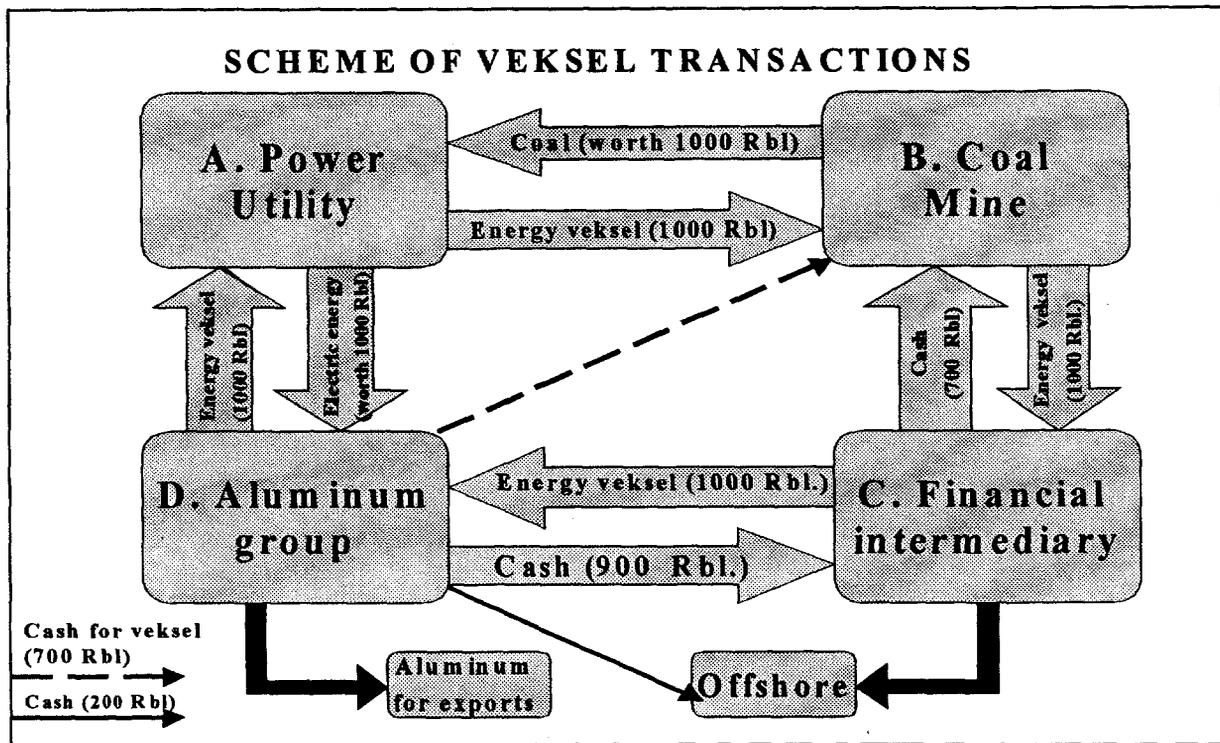
“Lack of cash” to finance those operations that couldn't be financed through NCS—investment in modern technological equipment, as well as wage bill—was compensated for by foreign credits. In 1997, the Swiss company Glencor extended to Mechel a loan of US\$100 million, and secured another loan worth US\$12 million from Chase Manhattan. Another portion of financing came from two Russian commercial banks, Chelyabinvestbank and Mechel-bank. Thirty-five percent shares of the latter is owned by a Cyprus-based offshore company, Fimco Overseas Ltd.

Concluding Remark

The case shows that an export oriented company can simultaneously experience huge domestic arrears because of lack of cash, yet experience no problem obtaining cash financing from domestic and offshore financial institutions. In other words, although showing no cash on domestic books, the company apparently is able to show sufficient evidence it can generate cash flow to convince foreign lenders of its creditworthiness. NCS is apparently a handy tool in this “no cash” game. It is also worth noting that formal foreign ownership (in case of MECHEL by an offshore fund) does not necessarily imply an efficient ownership and clean accounting practice. There are good reasons to suspect that in many instances, foreign owners are controlled by managers of Russian enterprises.

CASE 4: Notional Transaction in Money Surrogates (Veksels, Tax Offsets, etc.) and the Potential for Profiteering and Corruption.

The principal scheme involving payment in surrogate money (shown below) is simple and invariable both for the actual number of participating entities and the actual types of surrogate money used. There are just two necessary preconditions for translating such a scheme into practice. First, one entity (call it A) should not have—or should be universally believed not to have—cash to pay to a supplier B, and should offer payment in money surrogates (say, in veksel). Second, some entity C should have cash to buy this veksel from B at a discount, and turn the veksel either directly back to A at the face value in exchange for A's products (alternatively in lieu of debt to A), or resell it to some entity D, which owes A.



A notional example presented above illustrates such a transaction between a regional AO Energo (power utility A), coal mining company B, financial intermediary C, and aluminum smelter D. The power utility does not have cash to pay for coal and issues a veksel worth 1000 rubles to the coal mine. The coal mine needs cash and sells the veksel to a financial intermediary at a 30 percent discount (discounts on various veksels vary on the Russian market from 20 to 60 percent). The financial intermediary resells the veksel to the smelter at a 10 percent discount (aluminum is exported, so the smelter has easy access to cash) and, to complete the cycle, the smelter turns the veksel back to the power utility in lieu of a 1,000 ruble payment for the electricity.

Superficially, it seems that the coal mine bears the loss (30 percent of coal shipment's value, 300 rubles in our case). The financial impact of the scheme on the power utility is neutral, while the financial intermediary and the smelter split the profit in proportion 2 to 1. Two hundred rubles is intermediary's net revenue from the operation (29 percent return on investment—200-700 rubles—recovered in a matter of days beats even the highest GKO yield), and the smelter saves one hundred rubles on its electricity bills. However, the actual result of such scheme depends on who owns the intermediary. Staying within limits of the widely reported Russian practice, one might infer that the intermediary might be not an independent entity, but a company affiliated, usually in a nontransparent way (commonly through an offshore fund), either with the power utility or the smelter.

If this were the case, the actual profit sharing would look different. Suppose the intermediary is owned by the smelter. Then the smelter saves 30 percent. Note that the smelter would still purchase the veksel through the intermediary, rather than directly from the coal mine. Otherwise, it would have been taxed on a 300, instead of 100, ruble capital gain; however, in our example, 200 rubles is the profit of an offshore fund, so it can be taken out of the country without any legal impediments. The ownership of the Intermediary by the utility looks odd at the first glance. However, if we recall that the utility allegedly had no cash, the impossibility of a direct repurchase of its own debt would become clear. For the same reason, the utility-owned intermediary would still need to sell the veksel to the smelter to recover cash expenses. Even by selling the veksel to the smelter at the same 10 percent discount, the utility would still be able to earn 200 rubles, which would again safely land offshore.

The discount at which supplier B agrees to sell the veksel for cash represents the price of cash money, which anybody possessing cash can charge. Likely candidates for having excess cash are exporters, commercial banks, and, according to interviews with the officers of the Ministry of Interior, the mob controlling illegal production (primarily of liquor). Interestingly, the term "mob" apparently has a broad meaning in such interpretation, including not only assassins and bootleggers but also the whole, shadow-cash economy associated in Russia with regular enterprises. In fact, industrialists and organized crime happen to be tightly bound in that country and serve each other's interests in earnest.

It is noteworthy that the same schemes apply to tax offsets run by the federal and even more frequently by regional governments. In this case, A would stand for the government, B for a supplier to a budget entity, and D for some profitable company having large tax liabilities. As was mentioned above, exact choice of the tax-offset instrument does not matter. It can be anything from a treasury bill to a warehouse warrant. The profit allocation would certainly be different, though. The supplier would probably lose nothing, compensating itself for the necessity to sell the tax-offset instrument at a discount by inflating the offset price on government procurement (reported inflation in offset prices reaches 70 percent). The intermediary and the profitable company would split the profit, while the government would bear the loss by accepting the tax offset at face value. Thus, the implicit subsidy extended by the government to some supplier the government feels necessary to support eventually leads to profiteering by profitable companies, and facilitates capital flight.

Finally, one cannot but notice that scope of discounts-subsidies involved creates huge potential for widespread collusion between enterprise managers and facilitates extensive corruption of government officials involved in offset authorization. Extensive money-laundering opportunities also ensure that the mob will be involved in the daily business of Russian enterprises.

Distributors of World Bank Group Publications

Prices and credit terms vary from country to country. Consult your local distributor before placing an order.

ARGENTINA
World Publications SA
Av. Cordoba 1877
1120 Ciudad de Buenos Aires
Tel: (54 11) 4815-8156
Fax: (54 11) 4815-8156
E-mail: wpbooks@infovia.com.ar

AUSTRALIA, FIJI, PAPUA NEW GUINEA, SOLOMON ISLANDS, VANUATU, AND SAMOA
D.A. Information Services
648 Whitehorse Road
Mitcham 3132, Victoria
Tel: (61 3) 9210 7777
Fax: (61 3) 9210 7788
E-mail: service@dadirect.com.au
URL: <http://www.dadirect.com.au>

AUSTRIA
Gerold and Co.
Weinburggasse 26
A-1011 Wien
Tel: (43 1) 512-47-31-0
Fax: (43 1) 512-47-31-29
URL: <http://www.gerold.co.at/online>

BANGLADESH
Micro Industries Development Assistance Society (MIDAS)
House 5, Road 16
Dhanmondi R/Area
Dhaka 1209
Tel: (880 2) 326427
Fax: (880 2) 811188

BELGIUM
Jean De Lannoy
Av. du Roi 202
1060 Brussels
Tel: (32 2) 538-5169
Fax: (32 2) 538-0841

BRAZIL
Publicações Técnicas Internacionais Ltda.
Rua Peixoto Gomide, 209
01409 Sao Paulo, SP
Tel: (55 11) 259-6644
Fax: (55 11) 258-6990
E-mail: postmaster@pti.uol.br
URL: <http://www.uol.br>

CANADA
Renouf Publishing Co. Ltd.
5369 Canotek Road
Ottawa, Ontario K1J 9J3
Tel: (613) 745-2655
Fax: (613) 745-7660
E-mail: order.dep@renoufbooks.com
URL: <http://www.renoufbooks.com>

CHINA
China Financial & Economic Publishing House
8, Da Fo Si Dong Jie
Beijing
Tel: (86 10) 6401-7365
Fax: (86 10) 6401-7365

China Book Import Centre
P.O. Box 2825
Beijing

Chinese Corporation for Promotion of Humanities
52, You Fang Hu Tong,
Xuan Nei Da Jie
Beijing
Tel: (86 10) 660 72 494
Fax: (86 10) 660 72 494

COLOMBIA
Infoenlace Ltda.
Carrera 6 No. 51-21
Apartado Aereo 34270
Santafé de Bogotá, D.C.
Tel: (57 1) 285-2798
Fax: (57 1) 285-2798

COTE D'IVOIRE
Center d'Édition et de Diffusion Africaines (CEDA)
04 B.P. 541
Abidjan 04
Tel: (225 24 6510; 24 6511
Fax: (225) 25 0567

CYPRUS
Center for Applied Research
Cyprus College
6, Diogenes Street, Engomi
P.O. Box 2006
Nicosia
Tel: (357 2) 59-0730
Fax: (357 2) 66-2051

CZECH REPUBLIC
USIS, NIS Prodejna
Haveikova 22
130 00 Prague 3
Tel: (420 2) 2423 1486
Fax: (420 2) 2423 1114
URL: <http://www.nis.cz/>

DENMARK
Samfundslitteratur
Rosenørns Allé 11
DK-1970 Frederiksberg C
Tel: (45 35) 351942
Fax: (45 35) 357822
URL: <http://www.sl.cbs.dk>

ECUADOR
Libri Mundi
Liberia Internacional
P.O. Box 17-01-3029
Juan Leon Mera 851
Quito
Tel: (593 2) 521-6066; (593 2) 544-185
Fax: (593 2) 504-209
E-mail: libri@librimundi.com.ec
E-mail: libri2@librimundi.com.ec

COLOMBIA
Ruiz de Castilla 763, Edif. Expocolor
Primer piso, Of. #2
Quito
Tel: (593 2) 507-383; 253-091
E-mail: codeau@impsat.net.ec

EGYPT, ARAB REPUBLIC OF
Al Ahram Distribution Agency
Al Galaa Street
Cairo
Tel: (20 2) 578-6083
Fax: (20 2) 578-6833

The Middle East Observer
41, Sherif Street
Cairo
Tel: (20 2) 393-9732
Fax: (20 2) 393-9732

FINLAND
Akateeminen Kirjakauppa
P.O. Box 128
FIN-00101 Helsinki
Tel: (358 0) 121 4418
Fax: (358 0) 121-4435
E-mail: akatilaus@stockmann.fi
URL: <http://www.akateeminen.com>

FRANCE
Editions Eska; DBJ
48, rue Gay Lussac
75005 Paris
Tel: (33-1) 55-42-73-08
Fax: (33-1) 43-29-91-67

GERMANY
UNO-Verlag
Poppelsdorfer Allee 55
53115 Bonn
Tel: (49 228) 949020
Fax: (49 228) 217492
URL: <http://www.uno-verlag.de>
E-mail: unoverlag@aol.com

GHANA
Epp Books Services
P.O. Box 44
TUC
Accra
Tel: 223 21 778843
Fax: 223 21 779099

GREECE
Papasoloniou S.A.
35, Stourara Str.
106 82 Athens
Tel: (30 1) 364-1826
Fax: (30 1) 364-8254

HAITI
Culture Diffusion
5, Rue Capois
C.P. 257
Port-au-Prince
Tel: (509) 23 9260
Fax: (509) 23 4858

HONG KONG, CHINA; MACAO
Asia 2000 Ltd.
Sales & Circulation Department
302 Seabird House
22-28 Wyndham Street, Central
Hong Kong, China
Tel: (852) 2530-1409
Fax: (852) 2526-1107
E-mail: sales@asia2000.com.hk
URL: <http://www.asia2000.com.hk>

HUNGARY
Euro Info Service
Margitszgeti Europa Haz
H-1138 Budapest
Tel: (36 1) 350 80 24, 350 80 25
Fax: (36 1) 350 90 32
E-mail: euroinfo@mail.mata.vu

INDIA
Allied Publishers Ltd.
751 Mount Road
Madras - 600 002
Tel: (91 44) 852-3938
Fax: (91 44) 852-0649

INDONESIA
PT. Indira Limited
Jalan Borobudur 20
P.O. Box 181
Jakarta 10320
Tel: (62 21) 390-4290
Fax: (62 21) 390-4289

IRAN
Ketal Sara Co. Publishers
Khalaf Eslamboi Ave., 6th Street
Delafruz Alley No. 8
P.O. Box 15745-733
Tehran 15117
Tel: (98 21) 8717819; 8716104
Fax: (98 21) 8712479
E-mail: ketal-sara@mada.net.ir

Kowkab Publishers
P.O. Box 19575-511
Tehran
Tel: (98 21) 258-3723
Fax: (98 21) 258-3723

IRELAND
Government Supplies Agency
Offic an Isoldhair
4-5 Harcourt Road
Dublin 2
Tel: (353 1) 661-3111
Fax: (353 1) 475-2670

ISRAEL
Yozmot Literature Ltd.
P.O. Box 56055
3 Yohanan Hasandlar Street
Tel Aviv 61560
Tel: (972 3) 5285-397
Fax: (972 3) 5285-397

R.O.Y. International
PO Box 13056
Tel Aviv 61130
Tel: (972 3) 649 9469
Fax: (972 3) 648 6039
E-mail: roy@netvision.net.il
URL: <http://www.royint.co.il>

Palestinian Authority/Middle East
Index Information Services
P.O. B. 19502 Jerusalem
Tel: (972 2) 6271219
Fax: (972 2) 6271634

ITALY, LIBERIA
Licosa Commissionaria Sansoni SPA
Via Duca Di Calabria, 1/1
Casella Postale 552
50125 Firenze
Tel: (39 55) 645-415
Fax: (39 55) 641-257
E-mail: licosa@fibcc.it
URL: <http://www.fibcc.it/licosa>

JAMAICA
Ian Randle Publishers Ltd.
206 Old Hope Road, Kingston 6
Tel: 876-927-2085
Fax: 876-977-0243
E-mail: irpl@colis.com

JAPAN
Eastern Book Service
3-13 Hongo 3-chome, Bunkyo-ku
Tokyo 113
Tel: (81 3) 3818-0861
Fax: (81 3) 3818-0864
E-mail: orders@svt-eps.co.jp
URL: <http://www.bekkoame.or.jp/~svt-eps>

KENYA
Africa Book Service (E.A.) Ltd.
Quaran House, Mfangano Street
P.O. Box 45245
Nairobi
Tel: (254 2) 223 641
Fax: (254 2) 330 272

Legacy Books
Loita House
Mezzanine 1
P.O. Box 68077
Nairobi
Tel: (254) 2-330853, 221426
Fax: (254) 2-330854, 561654
E-mail: Legacy@form-net.com

KOREA, REPUBLIC OF
Dayang Books Trading Co.
International Division
783-20, Pangba Bon-Dong,
Socho-ku
Seoul
Tel: (82 2) 536-9555
Fax: (82 2) 536-0025
E-mail: seamap@chollian.net

Eulyoo Publishing Co., Ltd.
46-1, Susong-Dong
Jongro-Gu
Seoul
Tel: (82 2) 734-3515
Fax: (82 2) 732-9154

LEBANON
Librairie du Liban
P.O. Box 11-9232
Beirut
Tel: (961 9) 217 944
Fax: (961 9) 217 434
E-mail: hsayegh@librairie-du-liban.com.lb
URL: <http://www.librairie-du-liban.com.lb>

MALAYSIA
University of Malaya Cooperative
Bookshop, Limited
P.O. Box 1127
Jalan Pantai Baru
59700 Kuala Lumpur
Tel: (60 3) 756-5000
Fax: (60 3) 755-4424
E-mail: unkoop@tm.net.my

MEXICO
INFOTEC
Av. San Fernando No. 37
Col. Toriella Guerra
14050 Mexico, D.F.
Tel: (52 5) 624-2800
Fax: (52 5) 624-2822
E-mail: infotec@rn.net.mx
URL: <http://rn.net.mx>

Mundi-Prensa Mexico S.A. de C.V.
c/Rio Panuco, 141-Colonia
Guanajuato
06500 Mexico, D.F.
Tel: (52 5) 533-5658
Fax: (52 5) 514-6799

NEPAL
Everest Media International Services
(P) Ltd.
GPO Box 5443
Kathmandu
Tel: (977 1) 416 026
Fax: (977 1) 224 431

NETHERLANDS
De Lindeboom/Internationale
Publicaties b.v.
P.O. Box 202, 7480 AE Haaksbergen
Tel: (31 53) 574-0004
Fax: (31 53) 572-9296
E-mail: lindeboo@worldonline.nl
URL: <http://www.worldonline.nl/~lindeboo>

NEW ZEALAND
EBSCO NZ Ltd.
Private Mail Bag 99914
New Market
Auckland
Tel: (64 9) 524-8119
Fax: (64 9) 524-8067

Oasis Official
P.O. Box 3627
Wellington
Tel: (64 4) 499 1551
Fax: (64 4) 499 1972
E-mail: oasis@actrix.gen.nz
URL: <http://www.oasisbooks.co.nz/>

NIGERIA
University Press Limited
Three Crowns Building Jericho
Private Mail Bag 5095
Ibadan
Tel: (234 22) 41-1356
Fax: (234 22) 41-2056

PAKISTAN
Mirza Book Agency
65, Shahrah-e-Quaid-e-Azam
Lahore 54000
Tel: (92 42) 735 3601
Fax: (92 42) 576 3714

Legacy Books
Oxford University Press
5 Bangalor Town
Sharaf Faisal
PO Box 13033
Karachi-75350
Tel: (92 21) 446307
Fax: (92 21) 4547640
E-mail: ouppak@TheOffice.net

Pak Book Corporation
Aziz Chambers 21, Queen's Road
Lahore
Tel: (92 42) 636 3222; 636 0885
Fax: (92 42) 636 2328
E-mail: pbc@brain.net.pk

PERU
Editorial Desarrollo SA
Apartado 3824, Ica 242 OF. 106
Lima 1
Tel: (51 14) 285380
Fax: (51 14) 286628

PHILIPPINES
International Booksource Center Inc.
1127-A Antipolo St, Barangay,
Venezuela
Makati City
Tel: (63 2) 896 6501; 6505; 6507
Fax: (63 2) 896 1741

POLAND
International Publishing Service
Ul. Piekna 31/37
00-677 Warszawa
Tel: (48 2) 628-6089
Fax: (48 2) 621-7255
E-mail: books@ips@ktp.atm.com.pl
URL: <http://www.ipsoc.waw.pl/ps/export>

PORTUGAL
Livraria Portugal
Apartado 2681, Rua Do Carmo
o 70-74
1200 Lisbon
Tel: (1) 347-4982
Fax: (1) 347-0264

ROMANIA
Compani De Librari Bucuresti S.A.
Str. Lipsicani no. 26, sector 3
Bucharest
Tel: (40 1) 313 9645
Fax: (40 1) 312 4000

RUSSIAN FEDERATION
Isdatelstvo <Ves Mir>
Sa, Kolpachnyi Pereulok
Moscow 101631
Tel: (7 095) 917 87 49
Fax: (7 095) 917 92 99
ozimirin@glasnet.ru

SINGAPORE; TAIWAN, CHINA
MYANMAR; BRUNEI
Hemisphere Publication Services
41 Kallang Pudding Road #04-03
Golden Wheel Building
Singapore 348316
Tel: (65) 741-5166
Fax: (65) 742-9356
E-mail: ashgate@asianconnect.com

SLOVENIA
Gospodarski vestnik Publishing
Group
Dunajska cesta 5
1000 Ljubljana
Tel: (386 61) 133 83 47; 132 12 30
Fax: (386 61) 133 80 30
E-mail: repanski@vestnik.si

SOUTH AFRICA, BOTSWANA
For single titles:
Oxford University Press Southern
Africa
Vasco Boulevard, Goodwood
P.O. Box 12119, N1 City 7463
Cape Town
Tel: (27 21) 595 4400
Fax: (27 21) 595 4430
E-mail: oxford@oup.co.za

For subscription orders:
International Subscription Service
P.O. Box 41095
Craighall
Johannesburg 2024
Tel: (27 11) 880-1448
Fax: (27 11) 880-8248
E-mail: iss@is.co.za

SPAIN
Mundi-Prensa Libros, S.A.
Castello 37
28001 Madrid
Tel: (34 91) 4 363700
Fax: (34 91) 5 753998
E-mail: libreria@mundiprensa.es
URL: <http://www.mundiprensa.com/>

Mundi-Prensa Barcelona
Consell de Cent, 391
08009 Barcelona
Tel: (34 3) 488-3492
Fax: (34 3) 487-7659
E-mail: barcelona@mundiprensa.es

SRI LANKA, THE MALDIVES
Lake House Bookshop
100, Sir Chittampalam Gardiner
Mawatha
Colombo 2
Tel: (94 1) 321105
Fax: (94 1) 432104
E-mail: LHL@sri.lanka.net

SWEDEN
Wennergren-Williams AB
P. O. Box 1305
S-171 25 Solna
Tel: (46 8) 705-97-50
Fax: (46 8) 27-00-71
E-mail: mail@wv.se

SWITZERLAND
Librairie Payot Service Institutionnel
C(Im)tes-de-Montbenon 30
1002 Lausanne
Tel: (41 21) 943-3229
Fax: (41 21) 943-3235

ADECO Van Diemen
Editions Techniques
Ch. de Lacuz 41
CH1807 Blonay
Tel: (41 21) 943 2673
Fax: (41 21) 943 3605

THAILAND
Central Books Distribution
306 Silom Road
Bangkok 10500
Tel: (66 2) 2336930-9
Fax: (66 2) 237-8321

TRINIDAD & TOBAGO
AND THE CARIBBEAN
Systematics Studies Ltd.
St. Augustine Shopping Center
Eastern Main Road, St. Augustine
Trinidad & Tobago, West Indies
Tel: (868) 645-8466
Fax: (868) 645-8467
E-mail: tobe@trinidad.net

UGANDA
Gustro Ltd.
PO Box 9997, Madhvani Building
Plot 16/4 Jinja Rd.
Kampala
Tel: (256 41) 251 467
Fax: (256 41) 251 468
E-mail: gus@swiftuganda.com

UNITED KINGDOM
Microinfo Ltd.
P.O. Box 3, Omega Park, Alton,
Hampshire GU34 2PG
England
Tel: (44 1420) 86848
Fax: (44 1420) 89889
E-mail: wbank@microinfo.co.uk
URL: <http://www.microinfo.co.uk>

The Stationery Office
51 Nine Elms Lane
London SW8 5DR
Tel: (44 171) 873-8242
URL: <http://www.the-stationery-office.co.uk/>

VENEZUELA
Tecnol-Ciencia Libros, S.A.
Centro Ciudad Comercial Tamanco
Nivel C2, Caracas
Tel: (58 2) 959 5547; 5035; 0016
Fax: (58 2) 959 5636

ZAMBIA
University Bookshop, University of
Zambia
Great East Road Campus
P.O. Box 32379
Lusaka
Tel: (260 1) 252 576
Fax: (260 1) 253 952

ZIMBABWE
Academic and Baobab Books (Pvt.)
Ltd.
4 Conald Road, Graniteside
P.O. Box 567
Harare
Tel: 263 4 755035
Fax: 263 4 781913

Recent World Bank Technical Papers (continued)

- No. 435 Iain Begg, *EU Investment Grants Review*
- No. 436 Roy Prosterman and Tim Hanstad, ed., *Legal Impediments to Effective Rural Land Relations in Eastern Europe and Central Asia: A Comparative Perspective*
- No. 437 Csaba Csaki, Michel Dabatisse, and Oskar Honisch, *Food and Agriculture in the Czech Republic: From a "Velvet" Transition to the Challenges of EU Accession*
- No. 438 George J. Borjas, *Economic Research on the Determinants of Immigration: Lessons for the European Union*
- No. 439 Mustapha Nabli, *Financial Integration, Vulnerabilities to Crisis, and EU Accession in Five Central European Countries*
- No. 440 Robert Bruce, Ioannis Kessides, and Lothar Kneifel, *Overcoming Obstacles to Liberalization of the Telecom Sector in Estonia, Poland, the Czech Republic, Slovenia, and Hungary: An Overview of Key Policy Concerns and Potential Initiatives to Facilitate the Transition Process*
- No. 441 Bartłomiej Kaminski, *Hungary: Foreign Trade Issues in the Context of Accession to the EU*
- No. 442 Bartłomiej Kaminski, *The Role of Foreign Direct Investment and Trade Policy in Poland's Accession to the European Union*
- No. 443 Luc Lecuit, John Elder, Christian Hurtado, François Rantrua, Kamal Sibli, and Maurizia Tovo, *DeMISTifying MIS: Guidelines for Management Information Systems in Social Funds*
- No. 444 Robert F. Townsend, *Agricultural Incentives in Sub-Saharan Africa: Policy Challenges*
- No. 445 Ian Hill, *Forest Management in Nepal: Economics of Ecology*
- No. 446 Gordon Hughes and Magda Lovei, *Economic Reform and Environmental Performance in Transition Economies*
- No. 447 R. Maria Saleth and Ariel Dinar, *Evaluating Water Institutions and Water Sector Performance*
- No. 449 Keith Oblitas and J. Raymond Peter in association with Gautam Pingle, Halla M. Qaddumi, and Jayantha Perera, *Transferring Irrigation Management to Farmers in Andhra Pradesh, India*
- No. 450 Andrés Rigo Sureda and Waleed Haider Malik, eds., *Judicial Challenges in the New Millennium: Proceedings of the Second Summit of the Ibero-American Supreme Courts*
- No. 451 World Bank, *Privatization of the Power and Natural Gas Industries in Hungary and Kazakhstan*
- No. 452 Lev Freinkman, Daniel Treisman, and Stephen Titov, *Subnational Budgeting in Russia: Preempting a Potential Crisis*
- No. 453 Bartłomiej Kaminski and Michelle Riboud, *Foreign Investment and Restructuring: The Evidence from Hungary*
- No. 454 Gordon Hughes and Julia Bucknall, *Poland: Complying with EU Environmental Legislation*
- No. 455 Dale F. Gray, *Assessment of Corporate Sector Value and Vulnerability: Links to Exchange Rate and Financial Crises*
- No. 456 Salman M.A. Salman, ed., *Groundwater: Legal and Policy Perspectives: Proceedings of a World Bank Seminar*
- No. 457 Mary Canning, Peter Mook, and Timothy Heleniak, *Reforming Education in the Regions of Russia*
- No. 458 John Gray, *Kazakhstan: A Review of Farm Restructuring*
- No. 459 Zvi Lerman and Csaba Csaki, *Ukraine: Review of Farm Restructuring Experiences*
- No. 460 Gloria La Cava and Rafaella Y. Nanetti, *Albania: Filling the Vulnerability Gap*
- No. 461 Ayse Kudat, Stan Peabody, and Caglar Keyder, eds., *Social Assessment and Agricultural Reform in Central Asia and Turkey*
- No. 463 Stephen Foster, John Chilton, Marcus Moench, Franklin Cardy, and Manuel Schiffler, *Groundwater in Rural Development: Facing the Challenges of Supply and Resource Sustainability*
- No. 465 Csaba Csaki and Zvi Lerman, eds., *Structural Change in the Farming Sectors in Central and Eastern Europe: Lessons for EU Accession—Second World Bank/FAO Workshop, June 27–29, 1999*
- No. 466 Barbara Nunberg, *Ready for Europe: Public Administration Reform and European Union Accession in Central and Eastern Europe*
- No. 467 Quentin T. Wodon with contributions from Robert Ayres, Matias Barenstein, Norman Hicks, Kihoon Lee, William Maloney, Pia Peeters, Corinne Siaens, and Shlomo Yitzhaki, *Poverty and Policy in Latin America and the Caribbean*
- No. 469 Laurian Unnevehr and Nancy Hirschhorn, *Food Safety Issues in the Developing World*
- No. 470 Alberto Valdés, ed., *Agricultural Support Policies in Transition Economies*
- No. 473 Esen Ulgenerk and Leila Zlaoui, *From Transition to Accession: Developing Stable and Competitive Financial Markets in Bulgaria*



THE WORLD BANK

1818 H Street, N.W.

Washington, D.C. 20433 U.S.A.

Telephone: 202-477-1234

Facsimile: 202-477-6391

Telex: MCI 64145 WORLDBANK

MCI 248423 WORLDBANK

Internet: www.worldbank.org

E-mail: books@worldbank.org

Internal Documents Unit
MC C3-129

3 copies



ISBN 0-8213-4774-8