Lessons from the Russian Meltdown

The Economics of Soft Legal Constraints

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Foreword

On 17 August 1998 Russia abandoned its exchange rate regime, defaulted on its domestic public debt and declared a moratorium on banks' foreign liabilities. This was equivalent to an outright default. The depth and speed of the Russian meltdown shocked the international markets and precipitated a period of serious financial instability. There are important lessons to be learned from this episode on issues of bank supervision and international stability. Enrico Perotti locates the underlying cause of the crisis in the structure of individual incentives in a context of capture of state decisions by special interests. The author concludes with a radical policy proposal for a stable banking system for Russia, based on a segmented, narrow banking sector, concentration on commercial banking and a cautious extension of deposit insurance.

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HILARY BEECH
31 August 2002

Executive Summary

On 17 August 1998 Russia abandoned its exchange rate regime, defaulted on its domestic public debt and declared a moratorium on all private foreign liabilities, which was equivalent to an outright default. The depth and speed of the Russian meltdown shocked the international markets and precipitated a period of serious financial instability. Important lessons on issues of bank supervision and international stability can be learned by understanding the roots of such a crisis.

The visible reason for the crisis was an unsustainable fiscal deficit coupled with massive capital flight. But what were the underlying causes? We argue that the structure of individual incentives in a context of capture of state decisions by special interests, compounded by a rouble overvaluation driven by exceptional international support, helps explain the build-up of non-payment, theft and capital flight leading to the crisis. We offer an explicit model of rational collective non-compliance, cash-stripping and rational collective non-payment, which led to the fiscal and banking crisis and ultimately to a complete meltdown. In our view, the banking sector was already insolvent before the crisis, and contributed directly and indirectly to it. We conclude with a radical policy proposal for a stable banking system for Russia, based on a segmented, narrow banking sector, concentration on commercial banking and a cautious extension of deposit insurance.

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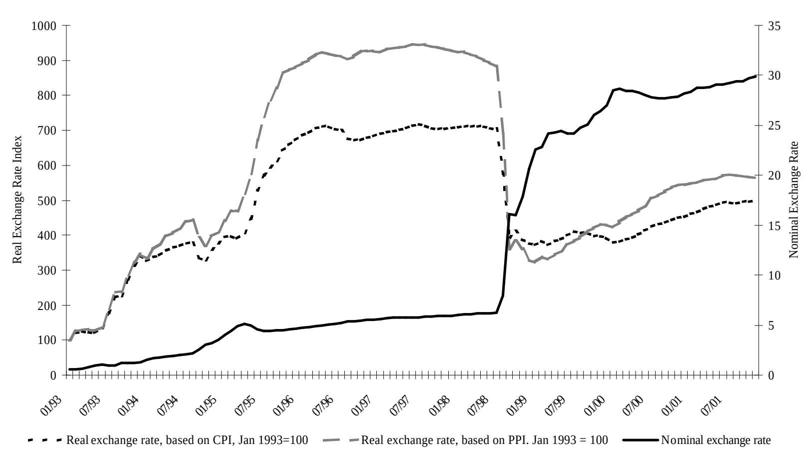
1. Introduction

On Monday 17 August 1998 the Russian authorities unilaterally declared a moratorium on all rouble-denominated public debt and suspended all private foreign obligations. This amounted to a de facto default by the government and the banking system. The rouble rapidly lost two-thirds of its value against the dollar (Figure 1). This was followed by a liquidity crisis and runs on many banks. The shock created by these measures developed into a full-scale international crisis of confidence, with credit spreads widening sharply in all markets and briefly raising doubts about global financial stability. The shock waves were so strong because no one, not even the most sceptical observers, had anticipated such a complete collapse.[1]

The Russian collapse had visible macroeconomic causes. It followed an unsustainable overvaluation of the rouble and a fiscal crisis (Popov, 2000; see also Figure 2). The rouble became overvalued under an externally supported fixed exchange rate while being undermined internally by capital flight. Yet the speed, scale and scope of the financial collapse has challenged observers to seek a specific model of the Russian financial crisis.

This Paper will argue that while fiscal imbalance and capital flight were the visible causes of the collapse, its ultimate causes may be understood only by analysing individual incentives in the political and institutional context of the Yeltsin years.

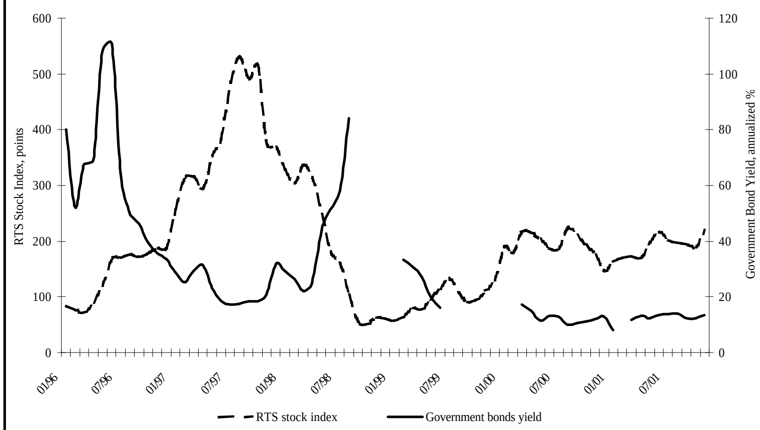
Figure 1: Rouble exchange rates



Source: Central Bank of Russia

[1] In the end, only a firm intervention by the US Fed restored confidence.

Figure 2: Russian Capital Market Prices



Source: Russian Statistical Agency

Specifically, it offers a model of rational individual incentives leading to widespread theft, illegality and tax arrears which supported massive capital flight.

A general consensus has emerged that the failure of microeconomic reforms, which were at first neglected in favour of macroeconomic policy, undermined stabilization policy and restructuring (Fischer and Sahay, 2000). Such reforms include 'establishing property rights, hardening budget constraints, building a healthy banking system, and ensuring true domestic competition' (Wyplosz, 1999).

Essentially, this Paper claims that while Russia ultimately managed to achieve monetary stabilization, the weak adjustment response coupled with collective non-compliance with contractual and tax obligations meant that financial imbalances accumulated throughout the system. The failure to enforce fiscal discipline and decentralized contracting (necessary in an economy abandoning central planning) led to strong incentives to strip cash out of old and new Russian institutions. Appropriated cash flows, in combination with an overvalued rouble, fed capital flight throughout the period. The failure to collect tax revenues ultimately caused a fiscal crisis too long delayed by external support.[2]

This argument shifts the main issue to the question of what explains such a lack of enforcement. We offer here a model of collective non-compliance arising from poor credibility of institutions, high adjustment costs relative to Central European economies and, critically, diffuse cynicism which produces a self-reinforcing expectation of massive non-compliance. In a systemic adjustment, enforcement depends critically on a sufficient adjustment response; as a result, expectations are critical in determining the aggregate outcome. Cynical expectations of the response by other agents and of the credibility of enforcement may thus produce a critical

[2] For evidence that weak institutions cause financial instability, see Acemoglu et al. (2002).

mass of non-compliance, which creates an insurmountable barrier to enforcement of legal and financial obligations.

Our second argument is that state capture seriously weakened the credibility of enforcement. Although corruption accompanied transition in all countries, its extent in the Former Soviet Union (FSU) led many authors to describe it as state capture, with the corrupting agents holding more bargaining power than the corrupted officials (Hellman, Jones and Kaufmann, 2000).[3] A weak political regime under Yeltsin needed the support of special interests to remain in power, and allowed them a free rein in plundering state assets and escaping obligations. Such a poor example from the top affected individual attitudes and expectations among the population regarding the reliability of legal enforcement and further weakened compliance.

A main conclusion of this Paper is that the foundations of the Russian financial system were deeply undermined by such perverse incentives, and its eventual insolvency fed the collapse rather than being a consequence of it. This is consistent with several cases of insolvency of large banks just before August 1998, as well as with the results of a large audit study in late 1998, which indicated that bank losses caused by the fiscal default were secondary (see Section 4).

Many observers recognized that the main aim of Russian banks was never to broker funds to the real sector, and the amount of intermediated savings is very modest.[4] Most Russian banks were kept as empty boxes in which liabilities accumulated; cash was promptly sent abroad, even moving abroad the main payment system among Russian companies and among individuals. Firm managers converted corporate assets into cash in order to appropriate it (asset-stripping), even if they made large losses. Yet asset-stripping and capital flight were rational, if perverse and corrupt, responses to the institutional failure of the post-Soviet reforms, and were the direct counterpart of the non-payment problem.

Consistent with this view, capital flight was not concentrated before the collapse, unlike more traditional crises, but continued at a steady, massive rate throughout the 1990s. It was particularly high during the 1995-7 stabilization period, a time of large trade surpluses and high domestic real rates (Loungani and Mauro, 2000; see also Figure 3).[5] This is prima facie evidence that the financial crisis and devaluation were the final consequence of steady structural outflows rather than mirroring a progressive fiscal deterioration.[6]

A challenge to our argument is that other transition and developing countries faced

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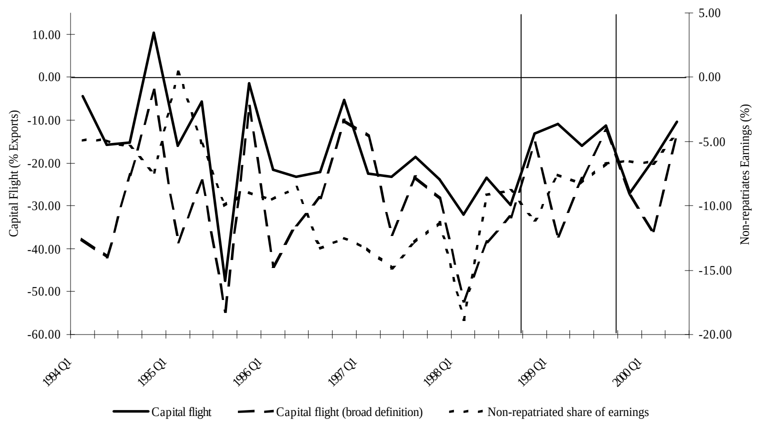
[3] There is evidence that while connected firms benefit relative to others, growth in other firms underperforms the standards in less captured economies, and the overall growth rate is lower (Hellman, Jones and Kaufmann, 2000).
[4] While in Central Europe deposits became accepted as a form of savings, in Russia (and the FSU) the amount of cash in circulation rose throughout the 1990s from a fraction to over four times total deposits, far above Central European values (Tang et al., 2000).
[5] In Loungani and Mauro's estimate, capital flight per capita was higher in 1996 and 1997 than 1998; the rate of rouble outflow in real terms is comparable in earlier years.
[6] Loungani and Mauro (2000) show that after controlling for fiscal and monetary conditions, a poor record of implementation of structural reform is associated in transition countries with higher capital flight.

Figure 3: Capital flight



Source: Organisation for Economic Cooperation and Development

the same institutional problems as Russia.[7] Similar arguments, based on opportunism and crony capitalism, were put forward for the Asian crisis as well. Why was the crisis in Russia so deep? In what way was Russia different from, say, Ukraine or Bulgaria, or even Indonesia?

Russia's fall was spectacular because it had been artificially delayed. Nominal reforms without real enforcement (what we term soft legal constraints)[8] were for too long tolerated by international institutions keen to see a pro-Western stance survive in Moscow. Western government loans and the 1996 and 1998 IMF loan programmes were clear examples of concessionary support and sent powerful signals to investors. Most countries are not allowed such a long run, and their failures are thus less spectacular. Furthermore, in few countries were the incentives to strip cash at all costs as strong and the risk of punishment as feeble as in Russia in the late Yeltsin period, with its high adjustment costs, gross currency overvaluation and weak political centre.

The next section offers a brief chronology of the main trends in the Russian economy during the period of post-communist reforms. Section 3 describes briefly our model of rational collective non-compliance (the formal model is in the appendix). Section 4 presents illustrative applications of the model to various segments of the Russian economy and briefly discusses the aftermath of the crisis. Section 5 puts forward a radical reform proposal for achieving a stable banking system in Russia in the light of our analysis.

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[7] There the macroeconomic picture looked quite different: a large trade deficit, a good fiscal position, large domestic savings, high investment and growth rates. Yet the degree of financial misallocation (Corsetti, Pesenti and Roubini, 1998), supported by moral hazard by foreign investors (Corsetti, Pesenti and Roubini, 1999), is similar.

[8] Gelfer, Pistor and Raiser (2000) show that it was not lack of legal text, but of capacity or willingness to enforce, which determined the unreliability of financial transactions in Russia.

2. Main trends of the Russian economy, 1992-2001[9]

After a period of partial and inconsistent reforms under Gorbachev, the demise of the Soviet Union in the autumn of 1991 opened the way for an ambitious 'shock-therapy' programme, launched along lines comparable to the 1990 Polish plan (Lipton and Sachs, 1992). The Gaidar government tightened credit in January 1992 to encourage microeconomic restructuring, following price liberalization. The critical phase of this policy required resisting pressures for reflation and compensatory bailouts, and ultimately forcing real adjustment. In Russia the adjustment response was insufficient, as most trade bills went unpaid. The policy had collapsed by the summer, when trade arrears rose to three times total bank credit, and there was a massive bailout funded by money printing by the Central Bank of Russia (CBR). The bailout validated collective inertia and led to new cycles of accumulation and bailing out of arrears (see Figure 4). High inflation in 1992-4, with a monthly inflation rate of 5-25%, wiped out domestic savings (see Figure 5).

At the same time, under an extremely laissez-faire policy of minimal bank capital requirements, the number of banks increased rapidly from fewer than ten to over 2,500. Many such 'banks' performed cash management, capital flight and whitewashing services for enterprises or shadowy organizations, and were at first mostly speculating against the rouble. Some well-connected banks thrived on managing the balances of federal or local authorities. Banks also held on to transfer payments for clients as a form of costless funding, indirectly collecting a large

Figure 4: Real payables overdue and tax arrears

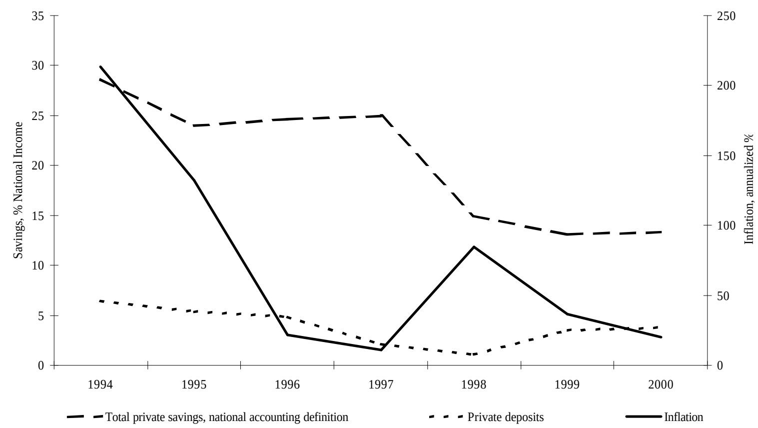
Source: RSA

[9] We have drawn from the chronology of events in Perotti-Sgard (2000).

inflation tax. Bank supervision performed perfunctorily, monitoring compliance with the formalities of regulations rather than with their content. Pure Ponzi schemes became common, such as the large MMM collapse in 1994.

When stabilization policy from 1995 onwards froze the printing presses, there was a last chance to tighten financial discipline. The number of banks fell briefly as the CBR adopted a more rigorous supervision policy. The banking lobby in the Duma opposed tight supervision, however. From 1996 onwards, the supervisory reform stopped, and the CBR returned to merely cosmetic controls. A weak government, prey to special interests, shifted to a different form of ex post laxity, substituting loose enforcement for loose money, condoning non-payment and asset-stripping, and stoking trouble for later.

Figure 5: Inflation and savings

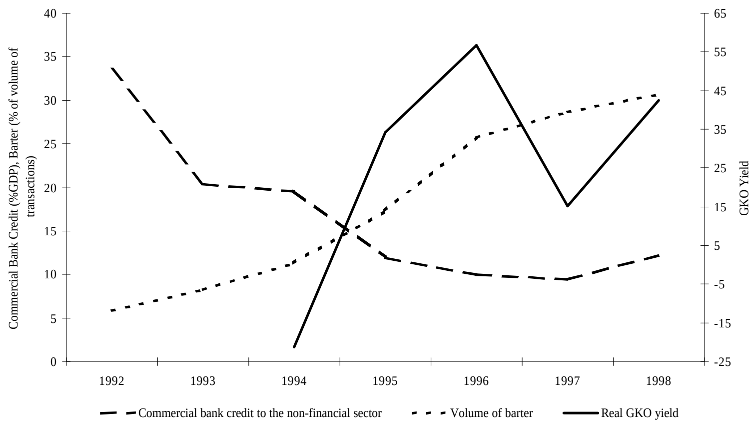


Source: CBR

Figure 6: Dynamics of payables, receivables and wage arrears

Source: RSA

Figure 7: The crowding out effect of government debt



Source: OECD, RSA

So banks were allowed to operate on the edge of insolvency, but they were by no means alone. While stabilization policy stopped the destruction of financial obligations via inflation, enterprises kept accumulating trade, tax and wage arrears (see Figures 4 and 6).

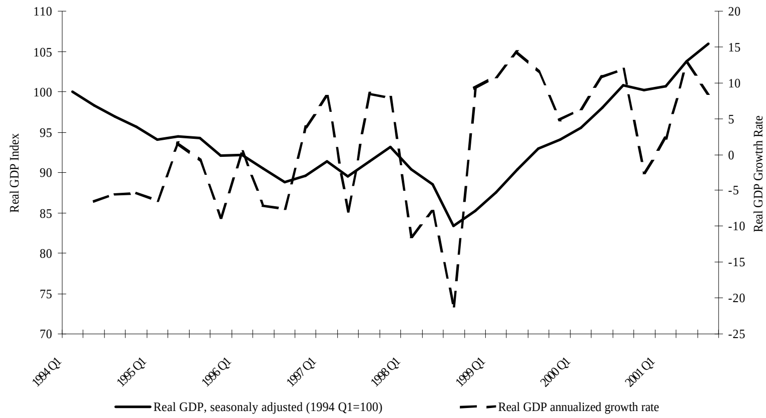
Nominal stabilization was maintained by shifting from inflationary financing to issuing rouble-denominated public bonds at high yields (see Figure 7). Intermediated rouble assets for the first time offered better returns than mattress dollars. As the risk of a communist victory at the 1996 presidential elections disappeared, a number of private banks competed for deposits with Sberbank, a former Soviet retail monopoly and the only retail bank enjoying deposit insurance. In 1997 there were signs of growth in intermediation to enterprises.[10] The stock market boomed, as foreign brokers interpreted the low price/earnings ratios of Russian stocks as a buying opportunity, rather than a reflection of non-existent minority rights. Thanks to falling interest rates and strong inflows, in 1997 the economic growth rate was marginally positive (Figure 8).

The window of opportunity was doomed to close rapidly. The pressure of increasing budget deficits caused by tax arrears and weak oil prices resulted in a rapid accumulation of government debt. The government bond market paid very high rates in real terms, which further encouraged cash-stripping and tax arrears. Banks took advantage of stabilization and the progressive overvaluation of the rouble by borrowing abroad to invest on the GKO (Russian government bonds) market and feeding capital flight.

The CBR's withdrawal from offering currency forward contracts in 1997 led commercial banks to insure, on a massive scale, foreign investors eager to hedge their rouble risk. While the exchange rate held, this offered huge profits with no real

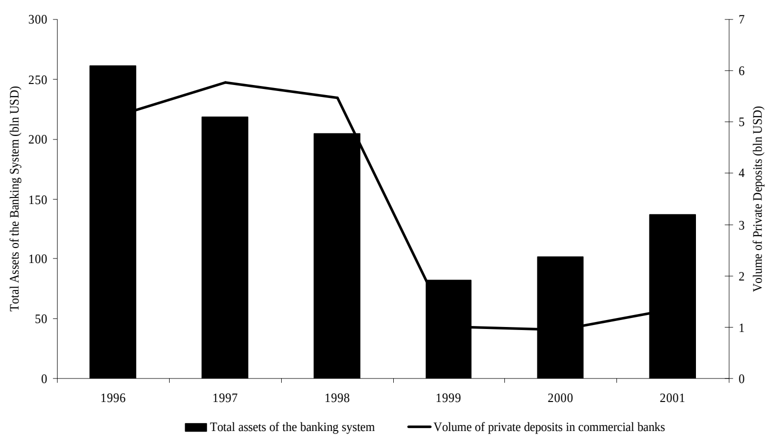
[10] Ex post, much lending appeared to have been granted either within bank-controlled groups or through personal relationships.

Figure 8: Real GDP



Source: RSA

Figure 9: Banking assets before and after the crisis



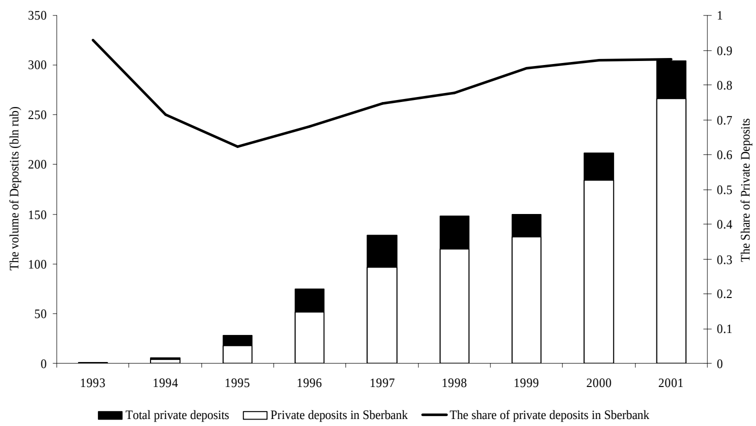
Source: CBR

downside, since the banks had no assets to back up these claims after devaluation. In essence, they were offering insurance they had no plans to honour.

The difficulty of refinancing the booming stock of short-term public debt was compounded by the Asian crisis and falling oil prices in late 1997. A new government was formed in March 1998 with a mandate to restore fiscal responsibility. Because of its political weakness, its few reforms went unimplemented, tax collection did not improve and capital kept flowing steadily abroad. Several large private banks, such as Tokobank and SBS-Agro, became visibly insolvent. Only the arrival of the first tranche of an IMF loan delayed the final meltdown.[11]

[11] Yet even the average Russian investor turned out to be a bit naïve; Perotti and Sgard (2000) argued that Russian bond markets had envisioned a devaluation, not a complete default. A few influential Russian bankers managed to capture the last rounds of dollar reserves from the Central Bank just before the collapse.

Figure 10: The structure of private deposits



Source: CBR; Sberbank of Russia

The dollar inflow from the first IMF loan tranche left the country at extraordinary speed, leaving the government with no choice but to announce a devaluation and a moratorium on the debt - a de facto default. Under heavy pressure from bankers, the government extended the moratorium to private bank debt. This was a final confirmation of the soft legal constraints under which the financial system had been operating.

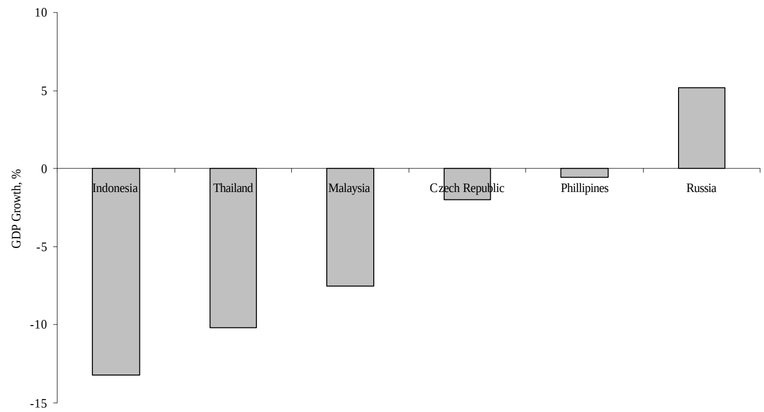
The fall of the rouble sparked a liquidity and payment crisis, and many private banks experienced runs on their funds (see Figure 9). Yet banks were able to refuse or delay withdrawals, while shifting the last assets abroad or to affiliates.[12] The Central Bank suspended bank withdrawals and shifted private deposits to Sberbank. As a result, Sberbank's share reached 90% of the rouble savings market (see Figure 10). The insolvent banks were not declared bankrupt, nor were their owners ever called to respond to the asset-stripping. After frustrating attempts to have their claims enforced, foreign investors accepted settlements of a few cents per dollar.

The crisis in Russia did not have the same impact on real activity as in Mexico in 1995 and in Asia in 1997 (see Figure 11). A steep fall in production occurred immediately after the August crisis, but a recovery had already started in December. In later years, the lower rouble and higher oil prices ensured positive growth.

Financial crises usually cause severe recessions because of financial distress from the resulting liquidity crunch. In Russia, the ability of firms and banks to renege on their obligations to depositors or workers, the limited development of intermediation, and the extent of cash payments and barter trade all help to explain why the crisis did not feed through into the real economy. Even the liquidity crisis in the interbank market affected payments only temporarily.

[12] For a description of the asset-stripping by banks, see Schoors, 1999.

Figure 11: GDP growth in a year following the financial crisis 1997-8 (selected countries)



Source: International Monetary Fund; Institute for Fiscal Studies

Three important elements have changed in Russia since the crisis. As the rouble overvaluation has disappeared and domestic demand has revived, the trade-off between cash-stripping and productive activity has shifted. As a result, stripping has probably diminished and capital flight has slowed see Figure 3), certainly as a proportion of export revenues. The devaluation caused a sharp drop in imports and a recovery in domestic output, and a strong oil price boosted liquidity. Firms started using cash payments instead of barter. As a result of political consolidation under President Putin, state capture ended and fiscal authority has been restored. Tight spending discipline has ensured a fiscal surplus, granting Russia a modest financial buffer. The government has taken to paying its bills.

The slowdown of capital flight presumably reflects a reduced incentive to dump the rouble since the devaluation; moreover, the new political leadership has been assertive in forcing greater fiscal and payment discipline. Yet capital flight persists at high levels, and the country's financial system has lost much credibility both abroad and internally. Since the crisis, precious little has occurred to restart the domestic intermediation circuit. Banking policy was not among the first policy initiatives under the new Putin administration, although the banking lobby has visibly lost influence. Some Russian financial institutions appear to be enjoying a return of enterprise liquidity. Outside Sberbank, however, there is limited lending to the real sector. Without further reform, the legal foundations of the banking system will remain extremely vulnerable to the next crisis.

3. Rational collective non-compliance in Russia

We sketch here a model of rational collective non-compliance, which is formally presented in the appendix (see page 24). Suppose that the ability of authorities to enforce any obligation (be it legal rules, fiscal or contractual obligations) depends on the number of economic agents which choose to comply with the obligation. The more agents ignore the obligation, the harder it is to enforce it, and thus the lower is the risk of punishment. Naturally, this leads to multiple equilibria.

The main conclusion of this simple model with a 'compliance externality' is that the degree of compliance depends on the beliefs held by the population about other agents' behaviour as well as on the credibility of enforcement authorities. If individuals hold pessimistic beliefs about either, they will all choose to ignore rules and financial obligations, however low is their individual cost of compliance. The result is a lack of contractual reliability and the inability of the authorities to enforce any legal and fiscal obligation.

If government credibility or the legal punishment are high, or the compliance cost is low, other things being equal compliance will be higher. But note that a deterioration in any of the parameters has a further effect, as it reduces compliance indirectly through a reduced probability of punishment.

State capture, of course, reduces the credibility of authorities, as they are expected to bend rules themselves to accommodate special interests. This may reinforce cynical expectations of the behaviour of other agents. Coupled with high average adjustment costs, this creates an expectation of a critical mass of non-compliance, which will overwhelm the enforcement ability of policy-makers and justify non-compliance.

The logic of the model can be applied to many aspects of transition policy. If tight credit policy results in massive non-payment, monetary authorities come under pressure for financial relief; in the face of massive tax evasion, fiscal authorities are forced to tolerate arrears, thus validating non-payment. Similarly, regulatory and legal reform cannot be enforced and diffuse criminality cannot be policed.[13]

We will describe next how the model may explain massive non-compliance in Russia with financial and fiscal obligations, as well as new laws or prudential rules in the banking sector.

[13] This effect, termed by Janet Mitchell (1998) the 'too-many-to-fail effect', has been modelled by Perotti (1998) in the context of monetary stabilization, by Roland and Verdier (1994) for privatization, and by Mitchell (1993) for bankruptcy reform.

In the conclusion, we discuss how this failure to enforce compliance may be a possible determinant for the great economic divide that has opened between the reforming Central European economies and the FSU states.

3.1 Stabilization policy

To start applying our model of non-compliance to Russia, we describe the collapse of the early attempts at stabilization policy in 1992. Consider the choice of an enterprise facing a tough restructuring decision in the face of tight credit. In deciding whether to adjust, each manager would compare the adjustment costs against the chance of a general bailout. As a critical mass of insolvent firms creates insurmountable political pressure for relief, the probability of a bailout depends critically on the expected aggregate response (Perotti, 1998).

The individual decision depends on the perceived decision of others, as well as on government credibility and adjustment costs; in Russia, these factors were considerably worse than in Central Europe. In 1992 the firm adjustment response to tight monetary policy was insufficient, and most firms did not pay their bills. Firms apparently decided that most other firms would find it impossible or unattractive to adjust, and as a result the risk of strict enforcement was minimal. In the end, the Central Bank was indeed forced to monetize the arrears, creating expectation of further bailouts and undermining the credibility of the stabilization programme for years.

In general, any systemic policy shift faces strategic complementarity in individual adjustment responses. Russian firms' expectations about the behaviour of other units (in part a function of historical experience[14]) reflected a perfectly rational lack of confidence in the capacity to maintain a tight credit policy in the face of massive defaults.

3.2 The cash-stripping economy

Before applying our model to Russian institutions, we need to describe the role of cash. Converting enterprise assets into cash allows enterprise managers to appropriate and easily transfer value. As a result, firms avoided cash payment and often failed to pay altogether. Massive non-payment minimized the risk of prosecution. Settlements of payment obligations became a matter of bargaining. In Russia, a de facto seniority of claims emerged with little connection to contractual priority.

Creditors with the highest priority were those who could impose concrete sanctions. Under Yeltsin's weak leadership, criminals had more power than authorities, as did local government relative to federal authorities. Next in seniority came those with the power derived from reciprocal dependence, such as suppliers or political partners.

[14] Passive resistance was already developed under central planning, when unrealistic diktats could be resisted by collective sluggishness.

Foreign investors belonged to this category only if they were critical for technology transfers or future funding. The lowest priority creditors were dispersed or socially disorganized agents, such as workers, depositors and minority shareholders. Unlike, say, Latin America, it was possible for both government and enterprises to ignore payments to workers, savers and pensioners at the time of tight money. In no other industrialized country have workers suffered such non-payment with such resignation (Earle, 1998).[15]

3.3 Enterprises

In a grand political bargain to buy out opposition to privatization, ownership of most enterprises became controlled by managers (Shleifer and Treisman, 1999). Perhaps there was no other way to entrench private property in Russia. Yet it appears that transferring control to managers seriously weakened the ability of the state to control the reform process.[16] Under poor legal enforcement, control rights are very valuable (Modigliani and Perotti, 1998; Bebchuk, 1999). Control generates access to cash-appropriating activities. Privatization thus granted insiders great discretion to capture resources from the state and investors, without exposing them to binding 'rules of conduct'[17] (Filatotchev, Bleaney and Wright, 1999).

The overwhelming empirical evidence suggests that privatization failed to improve performance (Earle and Estrin, 1998). The incentive for managers to restructure, retain cash flow and reinvest it internally did not emerge in Russia.

Why did partial ownership fail to motivate management? Restructuring offered low returns and high risk, because of rouble overvaluation, increasing competition and the difficulty of switching to Western markets. Corporate profits were exposed to taxation and external predation by bureaucrats, criminals and racketeers, and even political reversals by the communists in the Duma. In this environment, owner-managers protected their own interests by stripping assets and transforming them into cash (cash-stripping). Cash is anonymous, easy to transfer and difficult to track.[18] Stripping assets destroyed long-term value, but cash was more appropriable than the gains managers could expect as value-optimizing shareholders. The progressive overvaluation of the rouble also discouraged productive activities and encouraged capital flight.

Insider privatization produced poor results in other countries such as in the Czech Republic. The Russian case suggests an even greater loss of regulatory control to special interests.

[15] We argue later that the capacity to run up wage arrears is crucial to understanding how Russia could maintain such a tight monetary policy after the devaluation.[16] Many structural reforms, such as bank legislation, the sale of the most valuable resource companies, the public debt market and the provision of currency hedges, were implemented in a compromise with powerful interests.

[17] This outcome compares unfavourably with the Chinese experience of central control over major resources while allowing liberalization on new ventures (Roland, 2001).

[18] This problem was made more acute by a legal framework in which someone who acquires illegally obtained

A spectacular example of policy capture was the debt-for-shares deal, negotiated on the eve of the 1996 presidential elections. Via a dubious secured loan, control of the best natural resources companies was captured at a minimal price by a few influential banks, creating a number of financial industrial groups (FIGs). Cash-generating companies in these groups were actively milked by controlling shareholders, leading to major conflicts with investors and, more recently, with the Russian government.[19]

3.4 Taxation

Tax liabilities in Russia enjoyed a priority status contingent on the perceived political strength of the government.[20]

A simple elaboration of the basic model illustrates this point. Consider a Russian firm facing a tax obligation. The risk of punishment for non-payment diminishes as more firms fall into arrears and as tax authorities face a greater task of collection.[21] At the same time, the incentive to delay payment increases with the opportunity cost of cash, measured by the expected devaluation or the GKO yield. Fiscal weakness thus further reinforces the benefits of tax resistance: the lower the tax revenues, the stronger is the need to issue bonds and the higher is the GKO yield. Thus the costs of tax arrears fall and their rewards rise in the perceived number of firms in arrears.

Indeed, tax revenues remained weak throughout the reform period, and tended to respond to signs of weakness of the federal government. The last days of the Chernomyrdin administration in 1997 were marked by a massive expansion in tax surrogates, matched by rising GKO rates (see Figure 12). Even as the government of Kirilenko immediately thereafter tightened rules and closed the loopholes of tax offsets, tax payments did not improve significantly, reflecting the perceived impotence of the government (Ivanova and Wyplosz, 1999). In part as a result, the government persistently failed to comply with its own payment obligations.[22]

The incentives for tax evasion have changed markedly since the crisis. The disappearance of the rouble overvaluation and the GKO market reduced the return to tax arrears. Strong political leadership restored a measure of enforcement credibility under the Putin administration, affecting compliance directly and indirectly via a shift in the perceived degree of overall compliance. Even the government has given a positive example by significantly improving its payment record, a step that may shift the focal point of expectations on payment discipline.

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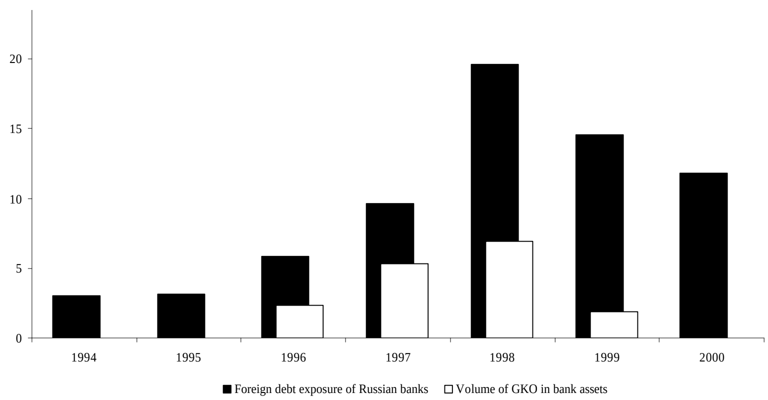
[19] Large industrial-financial groups, common in underdeveloped financial systems, certainly owe their influence to political support, yet may provide governance and an internal capital market to alleviate credit constraints. Empirical research on Russian FIGs (Perotti and Gelfer, 2001) has shown that while group firms may have been better managed, cash flow from cash-rich group firms was reallocated on a massive scale and may have been shifted outside the group.

[20] Tax obligations to local government may have been more binding, since local support allowed firms to resist federal taxes.

[21] Although there are penalties for late tax payment, settlement in Russia is always a matter of bargaining.

[22] Political changes weakening the centre can thus have a disproportionate effect on tax compliance if they are seen as leading to a weaker bargaining position by the federal government.

Figure 12: Foreign debt exposure and CKO holdings of Russian banks



Source: Centre for Development Research

3.5 Barter

Barter has a long tradition in Russia, and its causes are complex; we will not attempt a complete assessment here.[23] Historically, barter appears mainly during wars or hyperinflation. In Russia, the opportunity cost of cash payments was high because of the high appropriability of cash and its higher return for managers. Evidence that cash-stripping took precedence over productive activity is that barter rose with real interest rates and with rouble overvaluation (see Figure 7).[24]

The ability to ignore payments to suppliers depends on the counterparts' comparative importance. Russian firms needed to maintain good relations with suppliers to secure inputs; yet such was the value of cash that they switched en masse to barter, a very inefficient form of settlement, leading to an unprecedented degree of demonetization.

A related view is that barter is a form of collateralized trade credit, which emerges when there is no credible liquidation threat. Marin and Schnitzer (1999, 2000) argue that barter supported trade between firms with tightly integrated production. Thanks to mutual bargaining power, trading via barter provides a form of collateral that limits the buyer's ability to resist payment. Barter then offers the sole transacting solution when managers have incentives to strip cash.

The steady fall in barter since the crisis reflects the reduced opportunity cost of cash (owing to the devaluation and the disappearance of the GKO market) and the enhanced discipline under Putin. Furthermore, the devaluation restored incentives for productive activities, and thus induced firms to pay cash to ensure a timely delivery of inputs.

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[23] For a review, see Commander and Mumssen, 1998. A special issue on barter and arrears was published in Economic Systems (2000), with contributions from Schaffer, Gavrilenkov, Poser, Marin and Ickes.
[24] Ivanova and Wyplosz (1999) find that both higher monetary growth and higher interest rates are correlated with higher barter.

3.6 Banks and Banking Supervision

Many observers recognized that prior to the crisis, banking supervision at the CBR was largely perfunctory,[25] leaving much leeway to Russian banks to claim compliance with prudential regulations and capital requirements (Laeven, 2000). Connected lending (loans to insiders and friends) were often outright transfers; cash would be lent to an empty-box firm which would pass it on and vanish, leaving no trace. Cash also left the banks via purchases at face value of worthless securities from obscure companies, which were often located abroad.

State capture appears to be the main explanation for such lax controls. Bankers enjoyed tremendous political clout, either via lobbying or by virtue of their control over the media.

One example of their political power is reflected in the incredible story of Russian bankruptcy law, a classic example of soft legal constraints. The first general bankruptcy law in 1990 was extremely pro-debtor and thus toothless. Even after later amendments, removing insiders from control after default turned out to be impossible. Furthermore, as a result of intense lobbying, the new legislation explicitly stated that it would not be applicable to banks. Yet no law on bank bankruptcy was passed until the crisis. The most indebted and vulnerable sector in the Russian economy could thrive without any threat of exit. De jure, Russian banks could not go bankrupt.[26]

As the crisis approached, banks maximized their leverage and dollar exposure; cash was sent abroad while contingent liabilities piled up. The collapse of Tokobank and SBS-Agro, two generally well-regarded private banks, before the crisis occurred revealed the extreme precariousness of the system.

Direct evidence of the insolvent status of the banking system comes from a Western bank audit performed in the autumn of 1998 in 18 large Russian banks. Poor lending, often in favour of connected parties, accounted for over one-third of capital losses. The fall of the rouble caused another 25% of losses, largely through huge forward positions. In comparison, losses due to the GKO default accounted for just 13% of total losses.[27]

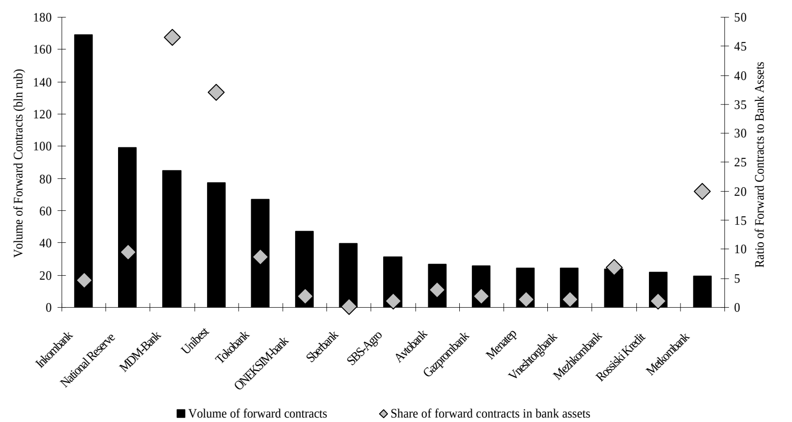
Yet balance sheet data of Russian banks in 1997 indicated much larger holdings of GKO debt and a much lower net dollar exposure (Figure 12). In early 1998, Russian banks were reporting capitalization rates above 10%, a modern equivalent of the

[25] The Central Bank mostly sought control by requiring very high obligatory reserves without remuneration. Schoors (2001) shows that Russian banks, notwithstanding this confiscatory policy, preferred to hold liquidity and gamble rather than to lend.

[26] Even the rights of the CBR to withdraw a bank's licence were unclear, and some attempts were thrown out in court. Tighter legislation was passed in 1999 under IMF pressure, yet few significant banks have been closed since.

[27] The GKOs were the only rouble assets yielding a cash return, so the default was directly responsible for the initial liquidity crisis in payments, in addition to the interbank confidence crisis. I am grateful to a referee for this observation.

Figure 13: Russian banks with the largest forward positions



Source: *Profile,* autumn 1997

façades in front of empty houses in a Potemkin village. The banks' exposure to the dollar was in reality higher and more leveraged than reported, owing to massive sales of forward dollar hedges to foreigners. Figure 13 illustrates the vast dollar exposure that the largest Russian banks had built by 1998, relative to their own (largely imaginary) capital. Such contingent liabilities allowed them to capture the large interest rate differential without committing any capital to back up the promised claims. The Central Bank provided no prudential oversight: when pressed, banks claimed to have 'cross-hedged' their exposure with (grossly undercapitalized) small regional banks. The difference between net and gross exposure was blurred.

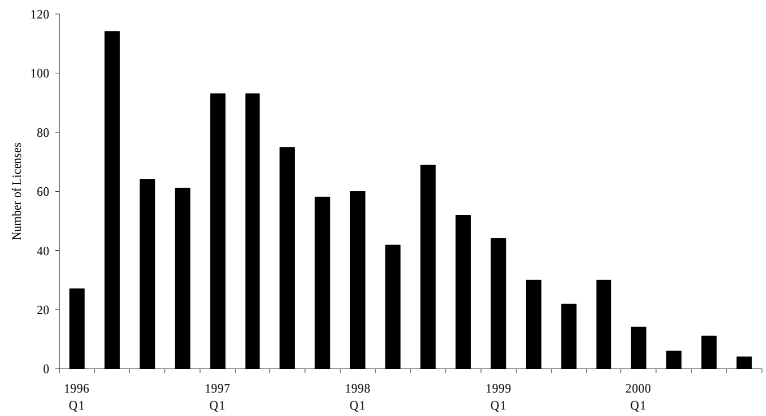
Paradoxically, the crisis did not produce improvements in prudential enforcement. Bank closures fell, just as bank insolvency became obvious (Figure 14). The CBR officers who tried to force bank closures were countermanded and had to resign. Failed bankers were allowed to escape repayment with no legal consequences, and had enough time to transfer the last assets elsewhere. Incredibly, some bankrupt banks whose licences had been withdrawn managed to have them returned on legal technicalities.

The sole steps taken after the crisis were to transfer deposits in failed private banks to frozen accounts in Sberbank, which have since been withdrawn at considerable loss.[28]

The Russian banking system has lost much credibility, so restarting domestic intermediation is essential, given the scarcity of external funds available to Russia in the foreseeable future. The Putin administration has managed to reverse state capture, restoring administrative controls and tightening enforcement of official rules - indispensable steps to remove the most perverse incentives. Yet only modest regulatory changes have taken place in the banking sector. Since the crisis,

[28] The government also created a bank restructuring agency, ARKO. Yet ARKO made no effort to counter asset-stripping; all its refinancing deals were made with the approval of existing management.

Figure 14: Number of bank licenses withdrawn under prudential supervision



Source: CBR

individual depositors moved away from private banks, shifting mostly to cash. Although Sberbank has always dominated the retail deposit market, after the crisis it gained a near monopoly position thanks to its deposit guarantee. It is now venturing into commercial lending, often supporting politically favoured projects. This may develop into a financial time bomb, especially since its dominant position grants it formidable bargaining power. Incentives to conduct proper banking business remain undermined by an excessive number of banks, many of which are insolvent, and poor creditor rights protection. There has been some recovery of lending, reflecting high corporate liquidity deposited in banks since the devaluation. Still, the vulnerability of the sector to external shocks remains extreme: prudential rules are easily circumvented, and capital flight is still massive. Only radical changes in the structure of bankers' incentives offer some chance of stability.

Our proposal seeks regulatory solutions that are simple enough to be easily implemented and monitored, and robust with respect to the nature of the opportunistic behaviour we have described.[29]

[29] Glaeser and Shleifer (2001) show that when regulatory enforcement is difficult, quantity restrictions, while less efficient, may be preferred to other restrictions that are easier to circumvent.

4. What is to be done? (Chto delat'?)

We offer a reform strategy based on our reading of the Russian context and the mistakes made in the past. It is crucial to choose measures that create incentives for prudent banking without relying too much on rules that can be easily circumvented or resisted. The idea is to shift from conventional supervision in a context of universal banking to a policy of managing the degree of competition and segmentation in a two-tier banking sector.

The choice Russia made early on (under heavy lobbying by bankers) for the 'universal bank' format granted maximum discretion in investment choices and contributed to the failure of prudential supervision. The large number of licensed banks overwhelmed the CBR's supervisory capacity, thus reducing compliance; it also spread financial skills thinly across banks and reduced lending margins. In such a situation, speculation was more attractive than proper bank lending. Both mistakes need to be redressed.

First, the universal bank charter should be abolished and bank activities should be segmented. A layer of safe banking institutions, dedicated to payment services and safekeeping for retail depositors, should be established to create a solid foundation for the financial system. Paradoxically, there are too few real retail banks in Russia, in part because of Sberbank's monopoly on deposit insurance. This privilege should be progressively diluted by the entry of new saving banks enjoying a (partial) deposit guarantee that matches Sberbank's. The retail network of Sberbank, accounting for 95% of all retail branches in the country, should be also partially sold out to other banks.

To prevent speculation or outright cash-stripping, savings banks will be obliged to invest an amount equal to their retail and bank deposits in safe assets, such as Central Bank and government bonds, domestic bonds with international ratings and perhaps some safe foreign assets. Riskier lending would be allowed only up to the level of paid-in and subordinated capital. Their assets could not be swapped or pledged as collateral in order to avoid asset-stripping (in the extreme case, assets may be deposited with the CBR).

Safe banks may be progressively authorized to lend a rising fraction of their funds, so as not to exceed a low fraction of their assets. Such 'quantity restrictions' would eliminate the risk of speculative or opportunistic transactions. The supervision task of the CBR would be greatly simplified: it is easier to monitor a bank's compliance with asset restrictions than with capitalization requirements.

The possible composition of safe asset portfolios is an issue. Although the Russian government is currently running a surplus, this may be highly cyclical as it reflects high oil prices. Public spending may also surge before the next elections. It is therefore important that a broad-based, less speculative basis be created for a medium-term government debt market. There is also evidence that the better Russian firms are trying to improve investor relations and may soon issue bonds.

Narrow banks can be quite profitable. A study in the US shows that payment, deposit and service fees account for over 40% of total bank profits (Radecki, 1999). A profitability study of East European banks (Fries et al., 1998) showed that the major determinant of profitability was a broad retail base, which allowed the banks to invest cheap deposit funds in higher-yielding government paper.

The second layer of banks, the commercial banks, should not have restrictions on their assets and should not enjoy deposit insurance. Commercial banks will need to obtain new licences from the CBR, conditional on a significant injection of new capital. Capital requirements should be fairly high so as to be initially very restrictive to entry.

The goal of a temporarily concentrated commercial banking sector is to restore profitability in proper banking operations. Research suggests that a more concentrated commercial banking sector may be safer precisely because a low degree of competition maintains margins in less risky lending.[30] This creates powerful incentives for banks to remain solvent in order to maintain valuable operating licences.[31]

In the medium term, when the supervisory capacity of the Central Bank and other institutional mechanisms will be stronger, asset restriction in the safe layer of banks can be gradually relaxed. The flow of funds from safe to commercial banks may be gradually expanded; monitoring such interbank flows could become a major channel of CBR supervision.

This market structure coincides with the early experience of credit market development in the West. Most countries started with an extremely restrictive bank licensing policy; even when entry was allowed, the banking system was kept highly segmented, especially among retail and investment banking and insurance. Deregulation took place progressively, at the speed at which indirect regulatory and market mechanisms became effective. These included the establishment of reliable secondary markets, credible professional services such as auditing and rating agencies, and effective enforcement mechanisms such as bankruptcy.

[30] Caminal-Vives (1996); Suarez (1994).

[31] A related policy, well established in Western Europe, assigns control of failed banks to solvent institutions on concessionary terms. This may reinforce the incentive to remain solvent and create support among other banks for tough enforcement of solvency requirements (Perotti-Suarez, 2002).

Russia's leap into universal banking was not the result of a careful policy, but of bending to strong special interests. The attempt to leapfrog the intermediate stages of financial development ultimately backfired.

In essence, our argument is that Russia must evolve gradually to stages of greater financial development, following a natural sequence. Restrictions on competition serve prudential purposes when the institutional capacity for enforcement is limited, since a valuable banking charter is the best incentive to promote a long-term strategy of proper banking over short-term opportunistic speculation and theft.

Segmentation imposes constraints that are crude but are very simple to verify, and can thus be more easily enforced.

Recent experience of policy implementation in Russia does call for caution. Reforms were designed to co-opt entrenched interests which may otherwise have blocked their implementation - an approach that has too often backfired. Clearly, creating a concentrated market can help overcome resistance to banking reform by those Russian bankers who will be licensed. Experience suggests that it would be unwise to create banks so powerful that they capture supervisory policy. Important safeguards include separating the retail market and maintaining a strong authority to enforce exit or changes in control for speculating banks.

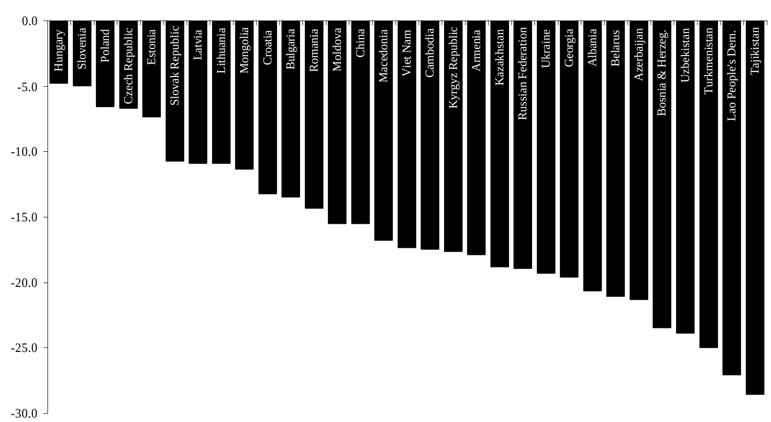
5. Conclusions

This Paper has described the dynamics of the Russian crisis as the outcome of the failure to move from central planning to a system of decentralized obligations. We argued that this failure was endogenous to high adjustment costs for many agents and negative expectations of compliance by other agents, made worse by state capture and sustained rouble overvaluation. Russian enterprises and banks effectively moved from a Soviet-period soft budget constraint to soft legal constraints. (Figure 15 confirms the relative standing of Russia and other FSU countries in terms of institutional capacity for legal enforcement.) Asset-stripping at the top was matched by systemic non-payment and illegality, and by passive resistance on a massive scale to comply with the necessary adjustment.

How can we explain the difference with other transition countries in Central Europe where stabilization succeeded? Clearly, state capture mattered. While success for Central European businessmen reflected their capacity to succeed in open competition, in Russia it resulted from the capture of state resources or protected rents (Black, Kraakman and Tarassova, 2000; Johnson, Macmillan and Woodruff, 1998).[32]

But why was the new Russian state so easily captured? Was Yeltsin's rule inept, or seen as not fully legitimate? Perhaps part of the answer is that the ability to enforce rules is endogenous; only when enough citizens choose to obey the law does it

Figure 15: Overall average institutional quality index



Source: Kaufmann, D.; Hellman, J.; G. Jones; and M. Schankerman, 2000

[32] In fact, passive resistance was a pattern already developed under central planning, when unrealistic diktats from the centre could be often resisted by collective sluggishness.

become possible to enforce it on the few who do not comply. In that sense a rapid reform process was not credible in Russia, because adjustment costs and diffuse expectations of the attitude of other agents were more unfavourable than in Central Europe. The greater distance from Western markets and the poorer infrastructure of the FSU countries implied higher costs to access new markets, but also made quick adjustment less credible and thus undermined the implementation of rapid reforms. At the same time, the extent of state capture in the Yeltsin years diminished the credibility of the authorities, since it signalled to everyone the inability of a corrupt political system to commit to the enforcement of the rule of law; this in turn increased the expectation of massive non-compliance.

Finally, Russia missed out on a major factor which reinforced support for reforms in Central Europe: namely the realization that they were necessary steps to join the European Union. Unfortunately, this option was not open to Russia for political and military reasons (Roland and Verdier, 2000).

While much can be learned from the Russian crisis, an important lesson is that no special approach is required to understand it; in other words, the Russian crisis is extraordinary because of its size, not because of its nature. Russia is indeed a special country because of its size, complexity and history; and yet Russia is not unique, nor do its citizens have a different system of economic aspirations. Quite simply, the Russian crisis is the systemic consequence of a structure of perverse individual incentives built on an extremely weak legal environment. Although lack of experience and external factors (the oil price drop, the Asian crisis) all played a role, the collapse was the result of poor incentives, arising from (and contributing to) the failure to establish financial discipline. Russia is different in one respect: because of its political and military importance, it enjoyed the support of international institutions even though its government was leading an unsustainable policy which encouraged capital flight and theft on an unique scale.

In such a context, the focus of Western assistance on monetary stabilization, funded by foreign aid and loans, was misplaced, as it just fed the capital outflow without correcting the roots of the problem. A more appropriate policy would have pressed for stricter governance in state and private institutions.[33]

To be fair, the IMF and the World Bank came under intense political pressure to support Russia at any cost and were forced to gamble, in the hope that the rouble rate could be defended until a stable economic foundation was built. Yet the massive support given to support the rouble actually reinforced the short-term incentives to expropriate and export capital.

This Paper offers a minimalist strategy based on a realistic reading of the Russian context and on learning from past mistakes. The idea is to shift from conventional

[33] A restrictive mandate for the IMF, which would reduce its relatively recent role in promoting microeconomic reforms and limit it to providing short-term liquidity to countries satisfying certain criteria, would severely limit the number of countries that could qualify for IMF support.

supervision in a context of universal banking to a policy of managing the degree of competition and segmentation in a two-tier banking sector.

Although bank segmentation is out of fashion in the West, we argue that it fits the stage of financial development in which Russia currently finds itself. The historical experience of the early stage of financial development in the West was also characterized by tight restrictions, limited entry and market segmentation (Perotti and Suarez, 2002). Such constraints are needed in any society with a weak institutional framework to control opportunistic behaviour, which may be harder to control in a more liberal, rule-based regulatory policy. Financial liberalization can progress only as fast as the ability of domestic institutions to control opportunistic behaviour in the financial sector, and the ability of authorities to ensure fiscal discipline.

Appendix: A formal model of rational collective non-compliance

Consider an agent who must decide whether to comply with a contractual, fiscal or legal obligation, which implies some cost c. Compliance costs differ among agents and are distributed uniformly on [0, 2C]. The average cost C reflects either the extent of the obligation (i.e. the financial liability) or the adjustment/opportunity cost of compliance. There is a legal penalty P for non-compliance, but enforcement is not certain.

There are two components to enforcement uncertainty. The first is a measure of the credibility of the legal system, which we denote as K. This reflects the political capacity or determination to enforce obligations, and is affected by vulnerability to corruption. The second reflects the systemic nature of adjustment in a transitional context. Specifically, we assume that the ability to enforce a penalty, and especially the probability of enforcement (denoted as q), increases with the number of agents choosing to comply. This may reflect a limited capacity and experience in enforcement of decentralized arrangements after years of central planning.

Denote the fraction of agents not complying as B. We assume that the expected enforcement probability q equals the credibility level K, divided by the expected percentage of agents not complying: $q = K/E(B)$. In equilibrium, any agent complies if its adjustment cost c is less than $c^* = qP$, the adjustment cost for the individual who is just indifferent.

The individual decision thus depends on credibility K, but also on the expected behaviour of other individuals; the fewer are expected to comply (i.e. the higher is B), the less likely is punishment. This externality leads to multiple equilibria.

In particular, full compliance is an equilibrium only if people expect all others to comply, and $2C < KP$ (i.e. the maximum adjustment cost is less than the expected punishment under complete compliance).

The more relevant case is $KP > 2C$;[34] in this case, at least some agents have a sufficiently high cost not to comply. Expected compliance B is given by solving $B = \text{prob}(c<c^*) = 1 - c^*/2C = [2C-KP/B]/C$.

The resulting quadratic equation[35] has two solutions, $0 < B_1 < 1$ and $B_2 > 1$, for the

[34] While there are equilibria in mixed strategies, their implications are similar.
[35] The quadratic form results from the assumed linear cumulative function for c.

equilibrium expectation on compliance. The first root describes an interior solution, with a positive fraction of the population complying. In this case, the degree of compliance depends on the institutional parameters and the average cost of adjustment.

If government credibility or the legal punishment are high, other things being equal, compliance will be higher. If the average adjustment cost C is high, average adjustment is lower. But note that a deterioration in any of the parameters also has a further effect, as it reduces compliance indirectly through a reduced probability of punishment.

The second solution B_2 is a self-fulfilling worse equilibrium, in which all individuals ignore their obligations because they expect everyone else to do the same.

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