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**Banking Crises in Transition Countries.  
Theory and Empirical Evidence: The Case of Russia**

by  
Ulrich Thießen

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Deutsches Institut für Wirtschaftsforschung, Berlin  
Königin-Luise-Str. 5, 14195 Berlin  
Phone: +49-30-89789- 0  
Fax: +49-30-89789- 200  
Internet: <http://www.diw.de>  
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Ulrich Thießen<sup>1</sup>

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## Contents

1. Introduction
2. Background of the banking crises, economic costs, and approach of the authorities
  - a) Background of the crisis
  - b) Economic costs of the banking crisis
  - c) Approach of the authorities
3. Modern theoretical findings of the workings of financial markets and their contribution to economic growth
  - a) The contribution of financial intermediation to economic growth
  - b) Theories on market failures of financial intermediation
4. Empirical findings on the workings of financial markets with special reference to transition countries
  - a) Growth promotion
  - b) Impediments for financial intermediation in transition countries
  - c) Economies of scale and scope and competition in banking
  - d) Restrictions on equity holdings of banks
5. Policy Options
  - a) Weaknesses of western prudential regulation
  - b) Could the banking crisis of August 1998 have been prevented had western prudential regulation for banks been enforced?
  - c) Adaptation of some western prudential rules
  - d) Adoption of a bank restructuring approach that is comprehensive
6. Concluding Remarks

References

Summary

Zusammenfassung

## 1. Introduction

There have been many and recent experiences with banking crises in industrial countries, occurring in some cases even without a prior or concomitant strong adverse shock such as a considerable recession, and despite extensive prudential oversight. They triggered substantial and in some cases also very costly (in terms of taxpayers money) government interventions. Hence, even in the most developed countries achieving sustained smooth and efficient financial intermediation is still difficult, suggesting how much more difficult it must be during transition.

This paper aims to discuss policy options for the Russian authorities against the background of recent theoretical and empirical analyses on the workings of financial systems in general and banking crises in particular. However, given the extent of the literature it is unavoidable to concentrate on subjectively selected issues. In the paper the expressions financial markets, financial system and banking system are used synonymously because financial intermediation outside banks in Russia appears to be small: As long as the large interenterprise credit and the many “money surrogates“ such as vekselns and other short-term debt instruments are issued by one party and held by another one without involving an intermediary, they cannot be considered to be elements of financial intermediation. The growth of such instruments may, however, very well reflect inefficient financial intermediation (in addition to other reasons such as tax avoidance, soft budget constraints for enterprises and government borrowing).

The paper starts in section 2 with highlighting major causes for the crisis, assessing its economic costs, and pointing to weaknesses of the current approach to find solutions. Section 3 reviews the major theoretical channels through which financial intermediation contributes to economic growth and the potential failures of markets in this process. Section 4 reviews empirical findings related to financial intermediation that appear most relevant in the context of transition countries. Section 5 discusses then selected policy options. Section 6 concludes.

## 2. Background of the banking crises, economic costs, and approach of the authorities

### a) Background of the crisis

At the end of 1997 an evaluation of the progress toward “a market-based financial system“ in the 15 successor states of the former Soviet-Union was published<sup>2</sup>. The high ranking that Russia received in this assessment apparently was

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<sup>2</sup> The study distinguished six functional areas of “central banking reforms“: Monetary operations and government securities markets, foreign exchange operations and market, banking supervision, bank restructuring, payments system, and central bank accounting and internal audit. Marks from 1 (indicating limited progress) to 3 (indicating substantial progress) for each of these reform areas were

somewhat optimistic, particularly with regard to banking supervision. Fundamental prudential rules for banking had not been enforced before the crisis, in particular regarding the foreign exchange rate risk and provisioning for bad debt. This together with a rapidly growing public debt to GDP ratio on account of issuance of short- and medium-term high interest yielding treasury bills (GKO/OFZ debt), sold mainly to the state-owned Sberbank<sup>3</sup>, caused three major weaknesses in the aggregate balance sheet of commercial banks and in their off-balance sheet transactions: Banks were overexposed to the foreign exchange rate risk, to the credit risk (amplified, for instance, by a Rubel depreciation) and to the risk of default of the government<sup>4</sup>. Thus, the large currency depreciation in August/September 1998 and the government's default on its domestic Rubel debt in August 1998 became instantaneously an open banking crisis. It caused the transitory collapse of the payments system and, to some extent, of new lending.

A very important contributory factor to the crisis has been (as in several other countries who experienced a currency crisis during 1997 and 1998) the fixed exchange rate corridor (adopted in the beginning of 1998). Given Russia's little diversified export structure, considering the slow structural reform progress and other adverse developments such as the fall of oil prices and withdrawal of foreign investors from emerging markets, it proved to be too ambitious<sup>5</sup>. This promise of relative nominal exchange rate stability with lax enforcement of prudential requirements for banks contributed to the overexposure of banks to the exchange rate risk: For banks it thus appeared profitable to borrow at relatively low foreign interest rates, lend at high domestic interest rates and to enter into unhedged off-balance sheet currency forward contracts. Not considering off-balance sheet items, Table 1 shows that just prior to the crisis the open foreign currency position amounted to about 18 percent of the balance sheet total.

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given and for an overall ranking. Russia received a mark of 3 with regard to the three first mentioned areas and a mark of 2 for the three last mentioned areas. See KNIGHT et al. (1997).

<sup>3</sup> The share of credit to the government in bank's total assets had steadily increased from about 5 percent at end of 1994 to about one third at end June 1998, mostly treasury bills (see Table 1). Subsequently this share declined slightly to about 30 percent (Table 2).

<sup>4</sup> This corresponds to the findings of a "due diligence survey" of 18 Russian banks (15 of which were among the 30 largest Russian banks), performed by the World Bank in the second half of 1998: 14 of these 18 banks had a negative own capital. The losses incurred by the 18 banks were identified as having been loan losses (45 percent of the aggregate loss), foreign exchange related losses (37 percent) and losses on government debt (18 percent). The Sberbank was not reviewed. See RUSSIAN EUROPEAN CENTRE FOR ECONOMIC POLICY (1999d), p. 84.

<sup>5</sup> Most analyses agree that the exchange rate policy has been crucially flawed. See, among others DIW et al. (1998), pp. 938-960, and WELFENS (1999), p.149. In this respect the Russian devaluation and banking crisis of August/September 1998 is very similar to the crises experienced in 1997 by several East-Asian countries casting doubt on the policy advice the countries received from western institutions.

**Table 1:**

Russia: Consolidated balance sheet of commercial banks (including Sberbank) at end June 1998

<b>Assets</b>	<b>bn Rubel</b>	<b>in percent</b>	<b>Liabilities</b>	<b>bn Rubel</b>	<b>in percent</b>
Bank reserves	58,7	9,4	Demand deposits	136,7	21,9
Foreign assets	73,1	11,7	Time and savings deposits	97,8	15,7
Claims on general government	207,8	33,3	Deposits with temporarily suspended access	18,2	2,9
Claims on non-financial government enterprises	30,1	4,8	Foreign currency deposits and other foreign liabilities	183,0	29,3
Claims on private sector	249,3	40,0	Money market instruments	38,9	6,2
Claims on financial institutions	5	0,8	General government deposits	15,1	2,4
			Credit from monetary authorities	10,5	1,7
			Other items	-32,3	-5,2
			Capital accounts	156,2	25,0
<b>Total</b>	<b>624,1</b>	<b>100,0</b>	<b>Total</b>	<b>624,1</b>	<b>100,0</b>

Source: RUSSIAN EUROPEAN CENTRE FOR ECONOMIC POLICY (1999c).

Table 2 shows the (official) aggregate balance sheet of commercial banks at end April 1999 in constant Rubels of June 1998 so as to assess the evolution of real credit, real deposit holdings and real own capital of banks by eliminating the distortionary effect of the surge of inflation after the devaluation crisis. It thus becomes clear that the central bank bore the major burden in stabilizing the banking system since it increased its lending to commercial banks in the 10 months after June 1998 by almost six times in real terms.

Inflation and deposit withdrawals caused real total Rubel denominated deposits to decline by almost 40 percent and real own capital of banks to decline by about 50 percent. Surprisingly, however, banks managed to drastically increase their foreign assets in real terms so as to decrease their open foreign currency position, which, nevertheless, remained substantial<sup>6</sup>.

Concerning the important question as to the lending behavior of banks the table indicates a considerable restraint, particularly with regard to lending to government enterprises, which has been very small even before the crisis. This restraint could have favorable interpretations: With regard to the supply of loans it

<sup>6</sup> The increase could become plausible if reports of Italian newspapers of October 1999 are considered which cited analyses performed by Russian judicial authorities. According to these analyses during the three months just prior to the currency crisis in 1998 a substantial fraction of IMF loans (about several billion US-Dollars) had been transferred to Russian commercial banks to improve their stability.

could indicate that the banking system as a whole did not simply capitalize interest on loans and increased lending to risky borrowers. On the demand side it could indicate that borrowers were somewhat interest sensitive. This is a purely empirical question.

**Table 2:**

Russia: Consolidated balance sheet of commercial banks (including Sberbank) at end April 1999 in constant Rubel of June 1998

<b>Assets</b>	<b>Bn constant Rubel</b>	<b>in per- cent</b>	<b>change 1)</b>	<b>Liabilities</b>	<b>bn constant Rubel</b>	<b>in percent</b>	<b>change 1)</b>
Bank reserves	51,6	9,2	-12,1	Demand deposits	80,0	14,3	-41,5
Foreign assets	138,5	24,7	89,4	Time and savings deposits	57,3	10,2	-41,4
Claims on general government	164,0	29,3	-21,1	Deposits with temporarily suspended access	21,9	3,9	20,2
Claims on non- financial government enterprises	14,8	2,6	-50,7	Foreign currency deposits and other foreign liabilities	213,6	38,2	16,7
Claims on private sector	185,2	33,1	-25,7	Money market instruments	29,0	5,2	-25,6
Claims on financial institutions	5,7	1,0	14,3	General government deposits	16,1	2,9	6,7
				Credit from monetary authorities	71,7	12,8	583,3
				Other items	-8,1	-1,5	-74,8
				Capital accounts	78,3	14,0	-49,9
<b>Total</b>	<b>559,8</b>	<b>100</b>	<b>-10,3</b>	<b>Total</b>	<b>559,8</b>	<b>100</b>	<b>-10,3</b>

Source: RUSSIAN EUROPEAN CENTRE FOR ECONOMIC POLICY (1999c); nominal figures were deflated using the increase in the CPI during July 1998 through April 1999.

1) Denotes the percentage change of the respective asset or liability in real terms during July 1998 and April 1999.

To shed some light on it, a simple equation representing the market for real lending was estimated on the basis of monthly data for the period from January 1997 through May 1999. Real lending to the private sector ( $crpri$ ) was regressed against a constant, seasonally adjusted real industrial production ( $ipr$ ) as a proxy for real GDP, which is not available on a monthly basis, the nominal lending interest rate ( $lendr$ ), inflation ( $cpi^7$ ), and the stock of real loans of the previous month ( $crpri_{(t-1)}$ , table 3).

Since both demand for and supply of loans tends to increase with increasing real economic activity, the expected sign for industrial production is positive. For the reasons discussed, the expected sign for the lending rate is ambiguous. The

<sup>7</sup> The producer price index (PPI) may be a better measure of inflation in a loan market model than the CPI. However, when the PPI was used in the estimations, the statistical significance declined dramatically. Therefore the CPI was used.

expected sign for inflation is also ambiguous: under normal conditions, inflation would tend to increase the demand for real loans because inflation reduces their cost. Similarly, inflation would tend to decrease the supply of real loans.

**Table 3:**

Russia: Regression results of the market for loans January 1997- May 1999;  
Dependent variable: Change of real lending to the private sector (dcrpri)<sup>1)</sup>  
(27 observations)

Independent Variables:	constant	dipr	dlendr	dcpi	dcrpri <sub>(t-1)</sub>	ma
Estimated						
Coefficients:	0.023	0.005	-0.005	-0.004	0.613	-0.98
t-statistics:	3.5	2.1	-2.7	-3.8	5.5	-1842.9
R <sup>2</sup> : 0.75; Adj. R <sup>2</sup> : 0.69; S.E.E.: 0.04; D.W.: 2.4; F-statistic: 12.7; Q-statistic (up to 12 lags): 15.5; Breusch-Godfrey LM test (2 lags): 2.2.						

Source: own calculations.

1) Variables transformed into first differences.

All data were taken from RUSSIAN EUROPEAN CENTRE FOR ECONOMIC POLICY (1999c). Prior tests of these variables revealed that they are unit root nonstationary. Since it appeared that the variables are integrated processes of first order they were differenced once. In addition, a moving average term of first order (ma) was added to improve the statistical fit.

Rather surprisingly, the obtained signs of the estimated coefficients suggest that lending to the private sector by Russia's commercial banks during this period of great instability and uncertainty behaved relatively "normal", i.e. cautiously, even similar to the behavior that could be expected in an advanced industrial country: Lending increased with a rise of economic activity, albeit very little. It decreased with a rise of the lending rate, suggesting that demand was somewhat interest sensitive and/or that supply was characterized by some credit rationing. However, this statistically significant adverse response of lending to a rise of the lending interest rate was also very small. Nevertheless, it casts some doubt on the hypothesis that the demand for and supply of private sector loans was completely insensitive to the interest rate and that interest on loans was simply fully capitalized and not paid. The regression also shows a statistically significant adverse response of banks' lending to inflation, although also very small. It may indicate that despite the large credits banks received from the central bank, they were somewhat apprehensive to lend under circumstances of increased macroeconomic instability and withdrawals of deposits. However, the relatively large coefficient of the lagged credit variable makes clear that the previous period's stock of loans largely determined the current period's stock of debt. Hence, despite banks' apprehension towards new lending in case of increasing interest rates and inflation, borrowers may have had some power to force banks into prolonging non-performing loans.



b) Economic costs of the banking crisis

The economic costs of the banking crisis (direct losses such as a loss of deposits, and indirect losses such as output losses, a contribution to devaluation expectations, higher inflation, and other externalities such as deterred foreign investment) could be very substantial, although they are difficult to quantify: The dramatic output decline began in January 1998 and ended about in September 1998, which is only one month after the banking crisis had its peak with the transitory breakdown of the payments system and of new lending. This fact could even be used in favor of the well known hypothesis that a banking crisis in Russia would probably not have a big impact on the real economy simply because the size of the banking system is relatively small and since the degree of monetization is so low (the relation of M2 to GDP stood at merely about 15 percent in mid 1998). However, there had already been important bank failures earlier during the year (e.g. Tokobank in May 1998) which preceded drastic production declines in several sectors and which contributed to a loss of confidence, raising devaluation expectations. Direct losses, incurred by domestic residents with Rubel deposits, appear to have been limited<sup>8</sup>, losses on the part of foreign currency depositors (private and institutions, residents and nonresidents) occurred and appear to have been substantial<sup>9</sup>. The weakness of the banking system prior to the open crisis in August/September 1998 contributed to expectations of devaluation and thus to the extent of the large real devaluation and the surge of inflation. Hence, the losses due to inflation, including their redistributive consequences, have to be considered. Perhaps most importantly, however, there may be substantial costs in form of a long lasting adverse effect on the confidence of domestic and foreign economic agents into financial intermediation in Russia with far reaching adverse effects on savings, investment and other macro- and microeconomic variables.

c) Approach of the authorities

Since at the outset of a banking crisis it is difficult to distinguish between insolvent banks and temporarily illiquid ones, the Central Bank of Russia (CBR) met its lender of last resort function by providing liquidity to most banks that faced

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<sup>8</sup> Until May 1999 about 60 to 70 percent of Rubel deposits at commercial banks were transferred to the Sberbank, which remains liquid due to the CBR's guarantee of her deposits. The Sberbank's share in total Rubel denominated deposits increased from close to 80 percent before the crisis to nearly 90 percent in Summer 1999.

<sup>9</sup> Foreign currency depositors have incurred losses, because either they were transferred to the Sberbank who had to convert them into Rubels using the exchange rate of September 1, 1998, or they were not transferred and partly or completely lost. Several banks evidently engaged in asset stripping which still continues. A popular method of this practice apparently has become the establishment of new banks that take over assets but not liabilities. This, however, is possible only under the condition of lacking property rights and weak law enforcement.

liquidity problems so as to mitigate further adverse effects. Thus, since the crisis the CBR:

- allowed banks to draw on their reserve requirements to make payments,
- supported off-sets of liabilities between banks,
- provided “stabilization credits“ to problem banks,
- guaranteed the deposits of the relatively large state owned Sberbank, and
- allowed depositors of other 32 banks to transfer their savings to Sberbank<sup>10</sup>.

These measures were, however, associated with serious flaws because this process was neither transparent nor orderly<sup>11</sup>. Perhaps more crucially, the CBR (who has the responsibility for banking supervision) and the government failed to implement promptly both a transparent bank restructuring program and improvement and enforcement of prudential regulations for banks. The government failed to implement promptly an indispensable program to deal with bank debtors, i.e. restructuring of non-financial enterprises, and enforcement of liability for any overdue debt with property of the debtor<sup>12</sup>. This lack of action reinforced incentives for bank managements and their owners to “gamble for resurrection“ of their banks. Even if table 2 and the above regression may cast some doubt on the hypothesis that banks increased lending to bad debtors, the delay in adopting a restructuring plan in connection with both leniency of the central bank regarding the violation of prudential rules and its generously granted “stabilization credits“, most of which have been uncollateralized, has caused adverse incentives for bank managements and/or their owners. These incentives refer to take high risks, distribute profits despite insolvency, prolong non-performing loans instead of restructuring them and/or writing them off, engage in asset stripping and lobbying for state support.

Only in mid-1999, about 10 months after the open banking crisis began, the authorities developed a bank restructuring strategy. It appears to consist of three main elements:

- a restructuring of relatively large problem banks with the help of a special “Agency for Restructuring Credit Organizations“ (ARCO), established in late 1998, and on the basis of a broadened legal basis. The latter improves substantially the rules governing supervision, restructuring and bankruptcy of banks and it defines the duties and powers of both the central bank and ARCO regarding identifying, supervising, restructuring or liquidating problem banks (Russian European Center for Economic Policy (1999d)). These rules imply that banks that fulfill certain criteria regarding their size and financial problems need to be referred to ARCO by the central bank. The central bank has to disfranchise the respective bank’s

<sup>10</sup> See, for instance, Russian European Centre for Economic Policy (1998) and (1999a).

<sup>11</sup> There was little control over the use of the funds provided, the criteria regarding the selection of banks that received support were not defined, and the transfer of deposits from commercial banks to the Sberbank has in many cases not been associated with a transfer of assets to Sberbank of equal market value. To some extent these problems may have been the result of political influences on the CBR.

<sup>12</sup> Although the improved bankruptcy law, which came into effect in March 1998, caused a substantial increase in the number of bankruptcies, many enterprises, particularly large ones, large debtors to energy producers, and also the latter, continue to enjoy leniency.

shareholders from the bank and may replace management by a temporary one. ARCO will then decide (within a 90-day period) whether to manage or liquidate the bank. If it decides to take over the bank (which is possible only within its very limited financial means<sup>13</sup> and for a maximum period of four years) it has to file a lawsuit against the owners of the bank so as to hold them financially liable. ARCO's goal is defined as restructuring the banking sector via financial rehabilitation and liquidation of banks. ARCO's rights are defined as those, which are in the competence of the bank's general shareholder's meeting. However, the law also determines that ARCO may remove the bank's management for a period of up to one month only. This is not consistent with the provision that ARCO is entitled to assume the rights of the general shareholder's meeting. ARCO can appeal in court those transactions of a bank, which took place up to three years prior to the transfer of the bank to ARCO. Thus, some of the asset stripping that occurred may possibly be reversed. Creditors are de facto treated such that they have a choice either to roll over their claim in the hope that ARCO will improve the bank's solvency or to receive the "bankruptcy value" of their claim. Since the latter is, of course, difficult to determine, creditors are likely to follow ARCO's proposals for a bank's restructuring because otherwise they risk losing their deposit. Government authorities are not allowed to intervene in the lawful activities of ARCO;

- The policy of a transfer of deposits from those problem banks that have not yet been restructured by ARCO to the state-owned Sberbank is continued. Since the outbreak of the open banking crisis these transfers were, however, often not associated with adequate transfers of assets even in those cases where assets were available. The dominating Sberbank is planned to be submitted to international auditing and a government's business strategy;

- Formal introduction of deposit insurance for all banks. A "Law on guarantee of bank deposits of citizens" provides for deposit insurance with broad coverage. It is financed by relatively low contributions from banks and by a government guarantee. Insurance premiums do not appear to depend on the riskiness of a bank's assets.

On paper these rules indicate a remarkable breach with the *laissez-faire* approach and forbearance exercised by the Russian authorities and central bank during the first 10 months or so after the outbreak of the open banking crisis. This *laissez faire* occurred despite the empirical evidence that suggests that it is important to react swiftly to a banking crisis with the implementation of a restructuring plan in order to avoid the mentioned adverse effects (Dziobek and Pazarbasioglu, 1997). Given, however, that a restructuring approach has finally been adopted the question is whether this approach is likely to provide for a systematic, transparent, and equitable restructuring process of problem banks and bank debtors?

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<sup>13</sup> ARCO was capitalized with 10 billion Rubel, about 0,25 percent of expected GDP in 1999. The amount needed to restore solvency of the largest 18 banks was estimated to amount to at least over 100 billion Rubel, about 2,5 percent of expected GDP. However, ARCO is entitled to extend guarantees in the name of the Russian Federation. Since the value of such guarantees is uncertain, it is also unclear to what extent this could increase its financial power.

The approach may be evaluated as being a centralized one, since only one agency, ARCO, has to decide on the viability and restructuring of all problem banks that have been identified by the central bank. There is, however, also an important decentralized aspect to the extent that ARCO decides to leave bad debt in banks' balance sheets. The bad debt would thus need to be handled by the new or old management of the respective problem bank and not be transferred to a special loan collection agency. Although these characteristics of the restructuring plan are not inconsistent with the "best practice bank restructuring policies" attempted to be identified in the literature (in particular Dziobek and Pazarbasioglu, 1997, pp. 140-143), there are apprehensions about several aspects:

- The very limited human and financial resources of the lead agency (ARCO) and the exclusion of most of Russia's banks from the restructuring program owing to their relative small size may be in conflict with a systematic, universally enforced, equitable and comprehensive restructuring process;
- The exclusion of small banks from the approach could even create loopholes of restructuring;
- Due to the lack of funds for recapitalization, bank closure could become widespread among the relatively small group of larger banks that are subject to the restructuring approach. Closure may become a function not of the potential value of a bank for Russia's economic development but of other determinants such as the order in which banks were referred to ARCO;
- The restructuring approach does not explicitly consider the potential contribution foreign banks and foreign investors could make. On the contrary, restrictions for foreign banks to participate in the Russian banking market continue to apply<sup>14</sup>. Given that foreign banks have some equity holdings in Russian banks and are important creditors, it could be expected that they would, in principal, have incentives to participate in a recapitalization so as to recover some of their former assets<sup>15</sup>.
- Another problem appears to be the unclarity of the "Law on Restructuring of Credit Institutions" concerning the removal of bank managements. This may be a crucial flaw in the restructuring approach since it can inhibit ARCOs effective powers to restructure problem banks;
- The restructuring approach does not explicitly consider reforming the internal operations of problem banks, such as risk-management systems;
- The proposed deposit insurance appears to be flawed mainly because premiums by banks are relatively small, they are not risk-related and even if the insurance has a guarantee extended by the government, it may lack credibility if the government is insolvent and banks' contributions small;

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<sup>14</sup> Foreign investments in the Russian banking sector may not exceed 12 percent of the total statutory capital of banks. In mid 1999 these investments are estimated to amount to about 7 percent.

<sup>15</sup> Several authors have stressed this contribution. See, for instance, Buch (1996), Steinherr (1997) and Buch and Heinrich (1999). The latter see the participation of foreigners as a major potential solution to the Russian banking crisis, particularly in light of the severe fiscal constraints, which limit the Russian government's ability to provide funds for recapitalization.

- The approach does not explicitly address the restructuring of large insolvent bank debtors and the signals to be sent to delinquent borrowers;
- Further, the approach does not consider the potential role of the government or of ARCO regarding the promotion of savings and lending in the many regions where banking is absent or severely underdeveloped, i.e. the issue of government supported “development banking“ is not addressed;
- Finally, decisions on the dangerously dominant government-owned Sberbank have been postponed.

In sum, even though the legislative approach adopted by the authorities in mid 1999 is an abandonment of the laissez faire policy response to the banking crisis, it appears to have several important drawbacks. Before discussing aspects of a comprehensive banking restructuring program in section 5, the following two sections briefly review modern theoretical and empirical findings as to the workings of a financial system. This clarifies the main impediments for financial intermediation in transition countries and that such a program is unlikely to spur financial development unless it is associated with much improved government regulation.

### 3. Modern theoretical findings of the workings of financial markets and their contribution to economic growth

#### a) The contribution of financial intermediation to economic growth

Two fundamental market frictions cause financial intermediation, information and transaction costs. Without these costs financial markets would not exist. Financial markets tend to reduce these costs, thereby creating true value added<sup>16</sup> so that they may in fact be considered a “real sector“. Levine (1997) breaks this primary function of the financial system down into five subfunctions. Extending and redefining his proposal somewhat, one may distinguish the following six functions of financial markets:

- mobilization of savings,
- allocation of resources,
- facilitation of exchange of goods and services,
- provision of liquidity,
- exercising of corporate control including monitoring of managers of non-financial enterprises,
- provision and facilitation of risk management (including the permanent search to provide for “financial market completeness“ in the sense that “every contingency in the world corresponds to a distinct marketable security“ (van Horne, 1985, p. 621)).

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<sup>16</sup> In economic terms the value added created by financial markets equals the difference between the reduction of these costs (across space and time) and the resources they consume.

In transition countries information and transaction costs are higher than in a developed market economy (if only due to intransparencies) and the mentioned functions of financial markets are all much less fulfilled. Therefore, one could expect financial market development in transition countries to lead the economic development, i.e. financial markets should grow faster than the rest of the economy and become relatively larger than in developed market economies, because the need for them is so much more pronounced. From this perspective it is paradoxical that the relative size of financial markets is so small in Russia.

Although the contribution of financial intermediaries to economic growth has been studied for a very long time, theoretical work on the channels through which financial intermediation (i.e. the fulfillment of the above mentioned functions) affects economic growth was lacking. This theoretical work was spurred with the rise of the “endogenous economic growth theory“ since the 1980s. This is because endogenous growth theory aims at explaining self-sustained growth without resorting to the assumption of exogenous technological progress. Hence, channels through which the existing factors of production (capital stock and hours of labor input) are used more efficiently, are improved with respect to their quality, and through which their growth rates are increased (particularly the growth rate of capital) are made explicit in these growth models. One group of such channels relate to the financial system: For instance, financial intermediaries can contribute to an increase of the proportion of saving channeled into investment, of the social marginal productivity of capital, and of the private saving rate (Pagano, 1993). These effects are, of course, the traditional ones, which have been stressed long ago. In more sophisticated models financial markets provide liquidity and thus allow a shift from relatively liquid but less productive assets to less liquid but more productive assets (Bencivenga et al., 1996). Financial markets may improve specialization of enterprises and thus increase the division of labor (Saint-Paul, 1992), and they can improve available information, thus promoting efficient resource and risk allocation (Greenwood and Jovanovic, 1990). These theoretical aspects are the basis for viewing financial market development and its promotion through financial market liberalization as crucial for economic growth, despite the potential market failures reviewed in the following section.

#### b) Theories on market failures of financial intermediation

Also since about the early 1980s, the literature on likely market failures of financial markets also improved its theoretical breadth and depth<sup>17</sup>. Therefore, both proponents of financial market liberalization and proponents of a strong role of the government in financial markets are on the theoretical level endowed with much improved arguments on either side. Particularly at an early stage of economic

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<sup>17</sup> For an overview of this literature see, in particular, Stiglitz (1993 and 1994).

development or at an early stage of transition from a centrally planned to a market economy, financial markets are subject to major imperfections that could prevent them from satisfactorily fulfilling the six above mentioned functions. Hence, the application of second best theory, which suggests that under multiple distortions government intervention may be welfare increasing, could provide additional support for proponents of a strong role of the government in financial intermediation.

However, it is important to consider that government behavior (actions or missing actions) may itself be the cause for imperfections and malfunctions of the financial system. There is thus a need to identify the origins of market imperfections. For instance, in Russia basic preconditions for the development of financial markets are still not met such as macroeconomic stability and fundamental institutional characteristics, such as a guaranteeing of property rights, a reliable court system, enforcement of liability for debt with property, a stable legal environment, transparent accounting of financial and non-financial enterprises, and enforcement of a legal and regulatory framework for banking supervision, including prudential regulation for financial intermediaries. To meet these preconditions has to be viewed as the responsibility of a government. Malfunctions of the financial system resulting from their nonfulfillment may not be interpreted as market imperfections that could require government intervention, which is not focused on their fulfillment. Therefore this section considers only those potential failures that do not appear to originate in basic shortcomings of government policy (Stiglitz, 1994; see also Caprio and Levine, 1994 and Levine, 1997):

- Monitoring of managements of financial institutions may be insufficient (the principal-agent problem). The principal (shareholder, depositor or other creditor) faces difficulties exercising sufficient control over his agent (bank management), because this would be too costly for him. Banks, unlike non-financial firms, have a large number of lenders who neither have the information nor the incentive to monitor the bank. As a result of this asymmetric information and incentive problem the agent may perform in his own interest (moral hazard) and/or without sufficient effort;
- There are externalities of monitoring, selection, and lending. Best known is the externality of contagion, for instance such that a bank failure causes depositors with imperfect information to believe other banks will also fail and therefore to withdraw their funds. In general, actions of agents that exercise significant control over other entities usually have effects on other agents;
- Externalities of an instability of the financial system. A failure of a financial institution may cause a credit crunch or disruptions of the payments system affecting others;
- Incomplete financial markets: Often financial products and instruments are missing for which there would be a demand. Long-term loans may not be available, risks cannot be hedged, even if macroeconomic stability prevails. This incompleteness largely results from moral hazard and adverse selection which cause the potential risks associated with such products to become relatively high from the

viewpoint of the financial intermediary. Hence, the quantity traded becomes very small or even zero;

- Imperfect competition particularly in the loan market: There may be too few lenders for a given customer, because even if competing banks offer their services, switching banks may be difficult because of the necessity to have a track record etc.;
- Deviation of market returns from social returns: Lending decisions are based only on the expected private returns and not on additional returns or additional costs accruing to society. Thus, savings may not be allocated efficiently by financial institutions;
- Nonclearing markets: Credit rationing may occur in the sense that despite excess demand for loans, lenders do not increase the interest rate (the interest rate is not market clearing). This occurs if lenders want to avoid borrowers with high risk and/or to avoid causing them to take higher risk (Stiglitz and Weiss, 1981). However, it needs to be considered that credit rationing is a market failure only to the extent that it crowds out investment that would be profitable. If such credit rationing would even increase during a recession, it could worsen macroeconomic fluctuations. But to the extent that such credit rationing is a precautionary means of financial intermediaries to prevent the built-up of bad loans, it may not be a market failure. In this sense it may contribute to the stability of the financial system by crowding out investment that is likely to be too risky and therefore unprofitable;
- Information disclosed by financial institutions may not be understood properly by customers causing flawed decisions on their part, for instance with regard to the chosen interest rate and other stipulations in a loan contract. While this is not a market failure in the strict sense it may call for government action.

Any financial system is subject to these potential failures. The fundamental cause for them is the same that explains the existence of financial markets in the first place, namely information costs. Since in many circumstances information may be considered a public good (characterized by nonrivalrous consumption and nonexcludibility), there may be a tendency for it to be undersupplied. Such undersupply of information and its uneven distribution among the actual or potential contract participants (asymmetric information) cause or contribute to the problems of moral hazard, adverse selection and externalities which characterize the failures.

These failures may be more pronounced in Russia for three reasons: First, economic agents are less experienced, and goods and labor markets and markets providing information about them are less developed. Second, the mentioned basic preconditions for the development of financial markets are not met (such as macroeconomic stability and formal institutions to deal with financial market failures). Third, as argued below in section 5, some standard western formal institutions (especially some prudential regulations such as the zero risk-weight for certain central government debt in calculating capital-adequacy) which Russia has already formally adopted appear grossly inapt in promoting financial system stability.



Given these difficulties and lags regarding the implementation of effective formal institutions, and given the great need for financial markets in Russia as clarified above, the question arises whether informal institutions could be conceived to supplement the underdeveloped formal ones and if so, why did they not evolve automatically?

Informal institutions received attention by some authors. For instance, there is evidence that local capital markets in Europe already hundreds of years ago were able to cope with some of the mentioned failures and were working very satisfactorily due to some extent to informal institutions (Hoffmann et al., 1998)<sup>18</sup>. However, the important point is that this research also argues that such informal institutions are imbedded in a legal structure and therefore they are complementary to formal institutions rather than substitutes. Hence, searching for informal institutions as a way to promote financial development in Russia may be misguided if it is not based on the premise that there is no alternative for Russia to improve the legal and regulatory framework.

#### 4 Empirical findings on the workings of financial markets with special reference to transition countries

##### a) Growth promotion

On the empirical side the studies on growth promoting effects of financial intermediation are still at an early stage. Important, although preliminary, findings are that financial system development precedes and can predict real GDP growth (King and Levine, 1993)<sup>19</sup>. The authors also find that economic growth tends to be larger when real interest rates on both deposits and loans are positive rather than negative. Using a similarly large sample of developed and developing countries, Rajan and Zingales (1996) confirm the growth promoting effect of development of financial intermediation by testing and confirming the hypothesis that financial development tends to reduce external financing costs for enterprises. For OECD countries Steinherr and Huveneers (1994) find that variables that represent financial development have a positive, albeit small, effect on economic growth. Atje and Jovanovic (1993) find for a large sample of developed and developing countries (for whom the required data are available) that stock market growth has a strong, positive and statistically significant effect on per capita economic growth<sup>20</sup>. Somewhat surprisingly, their study does not confirm such an effect for bank

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<sup>18</sup> The authors analyze the case of notaries in Paris in the 18th century. The notaries were important financial intermediaries, apparently also with regard to all social classes. The authors find that the informal institution of a notary allowing his clients to defect periodically to another notary played an important role in coping with the problem of asymmetric information and thus in maintaining quality service.

<sup>19</sup> This finding is based on a large set of data that includes developed and less developed countries.

<sup>20</sup> This result would probably have been most surprising for Keynes who argued against promoting stock exchanges, which, in his view, were more like casinos. See Keynes (1964), chapter 12.

lending. A study on the US-financial system finds that improvements in the quality of lending, i.e. avoiding bad loans, rather than increased volume of bank lending, appear to cause economic growth (Jayaratne and Strahan, 1996). Financial intermediation and economic growth may simultaneously be promoted by way of transforming a pay-as-you-go pension system to a capital-funds-based system. A precondition for this appears, however, to be that certain institutional requirements such as a well-defined regulation of pension funds is in place, which, in turn, is difficult to be satisfied by transition countries. These results were found by an empirical study of the well-known transformation in the early 1980s of the Chilean pension system (Holzmann, 1997).

b) Impediments for financial intermediation in transition countries

Given these results, a recent cross-section study on 18 transition countries takes the growth promoting effect of financial system development as given and tests for factors that may cause financial intermediation (Rother, 1999). For a single country, such as Russia, this approach cannot currently be repeated because several of the variables used are available only on an annual basis so that the number of available observations (i.e. 8 years of transition) is still too small to allow meaningful econometric analysis. In the study, financial intermediation is proxied either by the broad money multiplier (reflecting the function of banks to create deposit money) or by the ratio of credit to the private sector over the monetary base (reflecting the function of banks to generate funds for external finance in the private sector from the money base). The panel estimations consider a relatively large number of variables relevant in determining supply of and demand for banks' financial intermediation, including factors (or their proxies) that are particularly relevant in the context of Russia (such as inflation expectations, bad loans in banks' balance sheets, the legal environment, concentration ratio in the banking system, interest rate spread). Despite several weaknesses of the estimations caused by data limitations, the results confirm that high inflation and bad loans in banks' balance sheets are detrimental to financial intermediation. The interest rate spread is found not to have a significant direct influence on financial intermediation. Rather it appears to be largely determined by bad loans in banks' balance sheets, which tend to increase it, and by the concentration ratio, which tends to lower the spread. The latter finding may indicate that higher concentration does not lead to higher prices but rather to a limitation of credit at a relatively low spread, i.e. credit rationing, possibly confirming Stiglitz and Weiss (1981). This result appears to be consistent with both the above presented empirical evidence of relatively conservative lending behavior of Russian banks and relatively high concentration in Russia's banking system.

However, given Rother's careful compilation of the data, it is not self-evident that several other variables considered in the panel estimations, whose coefficients would have been expected to have definite signs, did not prove to be

statistically significant. An elaboration shows that this insignificance provides insights and can have important policy implications: Insignificant have been the (risk-weighted) capital adequacy ratio, minimum reserve requirements, and the legal environment (proxied by the property rights indicator of the Heritage Foundation).

With regard to the capital adequacy ratio the insignificance could point to weak enforcement of the regulation so that capital adequacy is not of primary importance to bank managers. In addition, it may indicate that depositors do not react to changes of a banks' "riskiness" as shown in its balance sheet, either because they do not trust the balance sheet and/or do not use it, or they expect a bail-out of banks in case of problems anyway.

The insignificance of minimum reserve requirements can also be a valuable insight: Since minimum reserves can relatively easy be enforced, their insignificance may not indicate enforcement problems but rather that they are not a relevant factor in explaining insufficient bank lending during transition. This would underline their usefulness as a crucial safety means without causing a too large burden on financial intermediation. This "prudential" role of reserve requirements during transition is corroborated by theoretical analysis showing that they influence a bank's choice of its capital-asset ratio (Fernandez and Guidotti, 1996). Higher reserve requirements increase the cost of funding loans with deposits relative to own capital. Thus, when enforcement of capital adequacy is difficult (because of weak supervision and difficulties in ascertaining the value of bank assets) an adequate minimum capital could be promoted indirectly through minimum reserve requirements.

Finally, the insignificance of the proxy for the reliability of the legal system and enforcement of property rights may neither reflect a poor legitimacy of this proxy (the property rights indicator of the Heritage Foundation)<sup>21</sup> nor a secondary importance of a reliable legal system for financial intermediation: Rather it appears that inflation and non-performing loans are related to the legal environment and thus its proxy (in fact, inflation and bad loans are in some estimations used as proxies for the overall quality of a government). Hence, multicollinearity would result contributing to insignificance.

In sum, the empirical analysis of financial intermediation during transition supports, on the one hand, self-evident policies that would promote financial intermediation such as achieving moderate inflation, tackling the problem of bad loans and policies that prevent high concentration in financial intermediation. On the other hand, it may also corroborate the view that minimum reserve requirements could be a relatively efficient safety means during transition while at the same time the improvement of the legal and regulatory framework is indispensable.

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<sup>21</sup> The index could also be interpreted as a measure of the overall extent of market distortions in the economy and should therefore be expected to be highly significant. It has been used in several other empirical studies, in particular economic growth equations, where it is usually significant. See, for instance, Sachs and Warner (1996).

Two additional issues, relevant in identifying policies promoting stability and development of the financial system and which have been analyzed empirically, are the following:

c) Economies of scale and scope and competition in banking

Firstly, to what extent is financial intermediation subject to economies of scale and scope? If such economies would be large, possibly increasing over time due to technological progress, then there should be tendencies of concentration in the financial system and an oligopolistic market structure might emerge. Provided there are formal and/or informal institutions, which enforce prudent behavior of banks and prevent their collusion this could be optimal so as to allow the potential gains from economies of scale and scope to materialize. The gains could accrue to all market participants in form of lower aggregate cost of financial intermediation and thus lower prices, better collection and distribution of information, higher liquidity of financial assets, lower aggregate risks due to better diversification of financial intermediaries etc.

The available studies with regard to developed countries are concentrating on banks and find that there are indeed economies of scale and scope but their extent appears to be limited<sup>22</sup>.

However, economies of scale and scope in the financial system are influenced by technological progress, especially in communications and data processing where progress is strong. This progress may allow banks to collect, process, and disseminate an increasing amount of information at given cost, possibly causing a downward shift of their marginal cost curve. Whether technical progress may even cause economies of scale and scope to increase such that banking becomes a natural monopoly (i.e. the marginal cost curves would become downward sloping) cannot be excluded, although there are costs which tend to increase with size such as (labor intensive) control costs. In addition, it could be that banking might always require some personal contact to customers so that local branches are needed, especially in a country of large land size, such as Russia. The extension of such networks and/or the control costs related to them may cause increasing marginal costs.

A downward shift of marginal costs due to technical progress would, however, also tend to lower the entrance costs for newcomers, thus facilitating competition, instead of causing concentration. In addition, technical progress makes it easier for bank customers to circumvent banks by looking for alternatives of bank

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<sup>22</sup> Clark (1988) reviewed the empirical studies on economies of scale and scope for the USA, Canada, and Israel. He argued that economies of scale appear to be present up to a balance sheet total of - at that time- roughly 100 million US-Dollars. Larger banks appear to be subject to diseconomies of scale. The presence of economies of scope was uncertain. Steinherr and Huveneers (1994) find for a large sample of banks in OECD countries only indirect evidence of economies of scale and scope. They do not estimate a critical threshold from which on diseconomies may start.

services, be it a loan, an investment, another transaction, or advice. This would also increase competition, namely between banks and non-banks. However, such circumvention appears limited because of regulation, which defines financial services and requires a license for offering them. In developed countries the regulation is usually defined sufficiently flexible or adjusted so that it covers most financial innovations being created. Financial intermediation is by law kept in institutions, which are subject to supervision so as to maintain stability of the financial system.

Summarizing these considerations it appears likely for economies of scale and scope in banking to exist and to increase with technical progress, so that tendencies of concentration in banking would be normal. Therefore it is difficult to justify entry restrictions in banking, such as minimum capital requirements, with economies of scale and scope, because these economies would automatically be realized. Minimum capital requirements and other necessary entry restrictions such as licenses, proof of qualification of bank managers etc. need to be justified on other grounds, namely improving the stability of the banking system. However, since concentration in the banking system and entry restrictions limit competition in financial services, there is a strong need to supervise banks not only for the purpose of enforcing prudential behavior but also in order to secure a satisfactory level of competition, in particular participation of foreign banks. The latter would also help to prevent the government from unwarranted interference in banks, since in the presence of foreign competition, domestic banks can argue that such interference puts them at a disadvantage to their foreign competitors. Ideally, supervision for the purpose of monitoring the intensity of competition would be carried out by the anti-trust agency and not by the banking supervisory agency so as to prevent conflict of interests. For example, in Russia such a supervisory division of labor would show that the situation of Sberbank dominating deposit taking and offering deposit rates below the inflation rate and very poor service is untenable.

#### d) Restrictions on equity holdings of banks

Secondly, if banks are allowed to act as “universal banks“, defined as a bank that may lend and at the same time hold equity shares large enough to monitor non-financial borrowers effectively, the financial sector and the economy may function and perform differently compared to a financial system where the activities of banks are more restricted. An analysis of these regulations is particularly relevant for transition countries because of their influence on bank lending, on dealing with the bad debt problem in banks’ balance sheets, for instance by way of debt-equity swaps, and on corporate control and enterprise restructuring in general.

Currently most Eastern European countries, including Russia, have limits for equity investments of banks as a percentage of a bank's own capital<sup>23</sup>. Alternatively or in addition to these limits some of the countries set limits for a bank's share in the equity of a non-financial enterprise<sup>24</sup>. While both types of restrictions for equity holdings contribute to portfolio diversification and thus to limiting the riskiness of a bank, the second type of restriction is directed to limiting the banks' influence on other entities. In a developed market economy these restrictions may not prevent banks to act as universal banks, because equity holdings within a range of 5 to 20 percent of the equity of an enterprise may suffice to be able to effectively monitor the enterprise or to even exercise control over its business strategy and borrowing decision. In slow reforming transition countries such as Russia with the mentioned imperfections of the legal, institutional, and regulatory framework and the experiences of difficulties even for dominant shareholders to exercise effective control over managers, these restrictions are likely to make it more difficult for a bank to effectively control managements of non-financial enterprises.

On the theoretical level either system has particular strengths and weaknesses<sup>25</sup>. Disadvantages of universal banking systems in comparison to other systems could be: A suspected lower overall intensity of competition and less transparency in the financial system, and thus a somewhat lower capability for innovation. There could also be a bias against adoption of risky and innovatory strategies on the part of borrowers and serious conflicts of interest. On the other hand, there may also be advantages of universal banking systems. These refer to the capacity of universal banks to collect information, exercise control over and monitor borrowers, thereby concentrating on long-term relationships with borrowers and facilitating the adoption of long-term investment strategies on their part, realize economies of scale and scope, and diversify risks.

Only the empirical evidence can shed light on the historical growth promoting effects of either system. The analysis by Steinherr and Huveneers (1994) addresses this question on the basis of a large data sample (it considers the balance sheet data of 88 banks in 18 developed and developing countries for the decade of the 1980s). For the 1980s they find that countries with universal banking have a

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<sup>23</sup> In Russia, ownership of industry on the part of banks (excluding the relatively large Sberbank) was since long promoted by the government through loans-for-shares transactions and privatization auctions particularly in 1997, and promotion of the so-called "financial industrial groups" (FIGs) since 1993. In 1997 FIGs accounted for about 20-35 percent of GDP (DIW et al., 1998, p. 947, see also Sutela, 1998, p. 119). In contrast to this development, restrictions on equity holdings of banks, on large exposures to a single borrower, and on exposures to insiders have been, on paper, successively tightened. Since about early 1998 they are even formally equivalent to Western European standards. The limit for equity investments of a bank amounts to 10 percent of the bank's own capital for a single shareholding and 25 percent for all equity holdings. However, as long as international accounting standards are not universally applied, this rule appears to be rather meaningless. In addition, banks could circumvent it by granting loans to enterprises that are associated with a bank, which then use the proceeds of the loan to acquire shares.

<sup>24</sup> In Russia, banks have to report those equity holdings that have been held longer than 6 months and that exceed 5 percent of the equity of an enterprise.

<sup>25</sup> These are extensively discussed in Steinherr and Huveneers (1994).

slightly higher economic growth rate, and universal banks exhibit somewhat less volatility of profits than other banks.

Although these results do not warrant any firm conclusions as to the superiority of one system vis-à-vis the other, they demonstrate that the loan business and equity holding of banks can complement each other. In fact, lending of banks may be facilitated through their equity holdings, particularly if these are large enough to enable a bank to exercise effective monitoring and to influence the business strategy of the firm. Regarding transition countries the following aspects need to be considered:

- Credit availability has been a major bottleneck in all of them<sup>26</sup>. It continues to be a serious constraint in most of them, particularly in Russia (where outstanding credit by commercial banks to the private sector in 1997 and 1998 was less than 13 percent of GDP) and Ukraine (where it amounted to even less than 8 percent of GDP in 1998)<sup>27</sup>. The dearth of lending to private enterprises has many reasons such as the small deposit base, crowding out of credit by governments (with the exception of the Czech Republic where the government borrowed little), possibly also changed behavior of banks in response to tighter bank regulations and non-performing loans (Dittus, 1994, and Steinherr, 1997), and, of course, the slow improvement of the demanding political, economic, and organizational prerequisites for the development of efficient capital markets<sup>28</sup>. Not only may banks pursue credit rationing but other potential financing sources can develop only slowly. There are very little chances for an average enterprise to receive financing from domestic or foreign sources other than from banks. Therefore “banking needs to precede markets“ (Steinherr, 1997).

- The bad debt problem in the economy and regarding banks' balance sheets is very large in Russia<sup>29</sup> and the means of the government to contribute to a cleaning of the balance sheets insufficient. Therefore, widespread use of the instrument of debt-equity swaps appears to be an indispensable means in any bank and enterprise restructuring program<sup>30</sup>. Such enforcement of liability for debt with equity may simultaneously tend to improve property rights and a hardening of budget constraints for enterprises.

<sup>26</sup> See, for instance, Steinherr (1997), p.118-121

<sup>27</sup> In most of the central eastern European countries this ratio increased to more than 20 percent of GDP in 1998 with the Czech Republic holding the lead with about 65 percent of GDP. In industrial countries it is usually more than 100 percent of GDP. See IMF (1999).

<sup>28</sup> Steinherr and Huveneers (1994) provide an overview.

<sup>29</sup> Russia and Ukraine have extremely high ratios: In the first quarter of 1999 total interenterprise debt (overdue receivables) was above 70 percent of GDP in Russia and above 100 percent of GDP in Ukraine; bad debt in total lending of banks to the private sector was estimated at above 20 percent in Russia (corresponding to around 7 percent of GDP) and above 30 percent in Ukraine (corresponding to about 3,2 percent of GDP).

<sup>30</sup> This is also unanimously emphasized in the still growing literature on the interenterprise debt problem in transition countries.

- It was argued that the preference of a universal bank (as both shareholder and lender) for a less risky strategy on the part of the borrower might be highly desirable in a transition country where relatively high risks prevail (Steinherr, 1994).

Hence, the view that banks in transition countries should hold equity and provide governance of non-financial enterprises may appear compelling. However, the view is associated with manifold risks:

- Banks may not exercise their control function properly. They may even use the equity holdings for rent seeking purposes, for instance to pressure governments for privileges, a behavior that occurred in Russia (Johnson, 1997).

- Imperfections of the legal, institutional, and regulatory framework make it more difficult for a bank to effectively control managements of non-financial enterprises.

- The budget constraints for enterprises partly or fully owned by banks may not become harder but weaker. This can be the result of certain anticipations of the managements of such enterprises. For instance, they know that in case of insolvency of their enterprise the bank as owner and lender is likely to prefer restructuring of the enterprise rather than liquidation because the latter usually entails considerable additional costs that need to be borne by the owner (Dewatripont and Tirole, 1994).

Available studies on lending of banks belonging to relatively large FIGs in Russia (evaluated in DIW et al., 1998) show a mixed result: Only three of these eight banks appear indeed to have lent more to non-financial enterprises than the average bank, measured in terms of the balance sheet total. Following the banking crisis of 1998 two of the three banks became insolvent and their licenses were withdrawn. The other one started to receive support by ARCO in mid 1999. In the Czech Republic the rules regarding equity investments of financial intermediaries have been liberal. There, however, poor management of such relatively large equity holdings was blamed to have been a major cause for too little restructuring occurring at the enterprise level and contributing to the recession in 1998.

These objections to equity holdings on the part of banks or other financial intermediaries reinforce the view that a search for second best solutions instead of systematic improvement of the mentioned imperfections of the legal, institutional, and regulatory framework, may appear futile. This improvement would include strict enforcement of Russia's adopted limits for equity investments as a share of a bank's own capital and of the standard prudential rules regarding qualification of bank managers, large loans, loans to owners, insiders, related entities, off balance sheet transactions and all other risk exposures with some necessary modifications discussed in the following. Moreover, governance of financial intermediaries is an issue that, unlike in a developed market economy, may have to be subject to regulation in transition countries (as discussed below). But under the condition of such systematic improvements, restrictions for equity investments defined in terms of a maximum share of the respective company's own capital could be sufficiently liberal, so as to enable banks to hold stakes of non-financial enterprises sufficiently large to monitor them effectively. This would be expected to facilitate lending of banks, debt-equity swaps and risk containment.



## 5. Policy Options

### a) Weaknesses of western prudential regulation

Even without the banking crisis in 1998, Russia's financial system has been unstable and not been able to fulfill its functions. Improvements of the regulation of the financial system prior to the crisis have been insufficient. The important point is, however, that even had there been a fully enforced prudential regulation of Russia's financial system according to western standards, the crisis may not have been averted as discussed in the following.

Western prudential regulation centers around the capital adequacy rule according to the BIS (1988 and 1996) definition (updated Cooke ratio). This rule determines that the ratio of own capital of a bank to its risk-weighted on and off-balance sheet assets needs to be no less than 8 percent, where own capital is defined as equity and retained earnings (core capital or tier I capital) plus certain financial instruments bearing characteristics that make them similar to equity (subordinated debt or tier II capital and also, since 1998, tier III capital). Although the capital adequacy rules are regularly revised in an attempt to consider the changing spectrum of risks and risk mitigating techniques in banking, there are currently still considerable drawbacks of the updated Cooke ratio. Some of them are addressed in a recent proposal for a new capital adequacy framework (BIS 1999). However, it may take considerable time until compromise on this proposal is reached and it also has significant drawbacks (some of them are described in Adamson et al., 1999).

The problems begin with the definition of own capital. The recognition of (even short-term) subordinated debt (up to certain limits) as own capital may not contribute to promote stability of the banking system: In case of, for instance, successive adverse shocks to a bank the latter's capital costs are likely to increase. In slow reforming transition countries this increase could be very substantial even to the point that it would not be possible to raise additional capital. There is thus an additional burden for the bank just at a time when it cannot bear it. It is also not clear from a theoretical point of view whether the chosen capital ratio of 8 percent can be considered optimal.

With regard to consideration of market risks in the required capital ratio, portfolio diversification of a bank and the interest rate risk are considered with regard to the trading book of a bank (financial assets intentionally held for short-term purposes) and not with regard to the banking book<sup>31</sup>. In addition, although there have been improvements regarding consideration of risk increasing and also risk mitigating effects of off-balance sheet transactions, the mitigating effects are considered only rudimentarily. Several approaches for improvement are suggested

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<sup>31</sup> The recent 1999 BIS proposal suggests to consider explicitly interest rate risks in the banking book for those banks where these risks are significantly above average.

in the BIS (1999) reform proposal which, owing to their complex nature, are likely to require considerable time until a compromise is implemented.

Regarding credit risk it is also widely acknowledged that the current risk weighting of assets is too crude to be a satisfactory measure. Currently the main determinants of risk weighting are the distinction between OECD and non-OECD countries on the one hand, and between governments, banks, and other entities, on the other. For instance, claims with maturity of up to one year on banks incorporated in non-OECD countries, such as Russia, carry a risk weight of only 20 percent, (i.e. a capital charge of only 1,6 percent of such loans is levied). Non-OECD central governments are assigned a risk weight of zero percent (if the claim is denominated and funded in the respective national currency) or 100 percent (all other cases). Claims on banks from non-OECD countries with a maturity of over one year are assigned a risk weight of 100 percent (equivalent to a capital charge of 8 percent).

Given the arbitrariness of these assignments it is proposed to replace the current risk weighting with credit ratings (BIS 1999). The fundamental merit of this could be to make capital charges more sensitive to actual credit risk. However, it leaves in place a system of arbitrary asset allocation and capital charges: The proposed jumps in risk weights from one rating level to a higher or lower level are considerable. In addition, crucial unanswered questions concern the effects of a sudden downgrading of ratings during a crisis, the quality of the assessments of rating agencies, the selection of eligible agencies, and to what extent the behavior of these agencies is affected (and potential new conflicts of interest are created) should such a system come into effect. Another problem of the proposal appears to be that unrated banks, corporates and sovereigns receive a much lower risk weight than entities with a poor rating. This could provide incentives not to receive a rating.

With regard to Russia the BIS proposal would tend to increase the risk weights for claims on Russian entities dependent, however, on the rating agency used. For instance, when using the rating of a leading rating agency of mid-1999, claims on Russia's central government would be assigned a risk weight of 150 percent (which corresponds to a capital charge of 12 percent) instead of the current 100 percent risk weight. Claims on Russian banks with maturity of less than 6 months would receive a risk weight from 20 to 150 percent instead of the current 20 percent.

As to risks other than credit and market risks, such as liquidity and operational risks, including reputational and legal risks, these are currently considered merely implicitly in the capital ratio. This is because the ratio is interpreted to have a buffer for unquantified risks. The 1999 BIS proposal acknowledges this to be unsatisfactory and suggests to introduce an explicit capital charge for these risks. For Russia, this could mean considerably higher capital requirements. In addition the BIS (1999) proposal suggests two additional pillars of banking supervision. Firstly, a supervisory review process of capital adequacy where banking supervisors ensure that a bank's capital is consistent with its overall risk profile by reviewing and evaluating internal capital adequacy assessments of banks and intervening early to ensure sufficient capital ratios. Secondly, enhanced

market discipline through common standards for improved disclosure of information on banks' risk and capital structure. In contrast to the proposals for reform of the first pillar (the capital requirements) the proposals for the second and third pillar may appear much less controversial, perhaps even not controversial at all.

- b) Could the banking crisis of August 1998 have been prevented had western prudential regulation for banks been enforced?

Given the apprehensions about some aspects of the proposed reform of the first pillar for a new capital adequacy framework and given the uncertainty regarding its implementation, it is not warranted currently to rely on it as the new western model of prudential regulation. Using then the current capital adequacy framework it appears that several of its weaknesses, in particular a weak definition of capital, unsatisfactory consideration of portfolio diversification, interest rate risk and credit risk in the banking book, and unsatisfactory consideration of liquidity and operational risks, are more pronounced during transition. This is because of the mentioned legal and institutional imperfections, the higher volatility of macroeconomic variables and the solvency problem of the government.

For instance, under this current framework and assuming that national supervisors do not impose further restrictions, banks would not need to back up credit to the Russian government denominated and funded in Rubel with own capital. Hence, under this regulation the default of the Russian government on a substantial part of its debt (as occurred in August/September 1998) consumes own capital of banks holding such debt that is needed as a buffer for other risks. This problem is particularly relevant for the Savings Bank (Sberbank) since the share of government debt in its assets is very large. In addition the government guarantee of the deposits of the Sberbank or of any other bank liability cannot have any value when there is a government default.

Secondly, although western prudential regulation would have limited banks' open foreign exchange positions, thus limiting banks' direct losses from the large currency depreciation shock, it may not have provided sufficient protection against the decline of the quality of the loan portfolio of the banking sector that is likely to be associated with a large currency devaluation, i.e. against the rise of the aggregate share of non-performing loans: Under a large currency devaluation this decline may be substantial if the institutional infrastructure does not facilitate structural change on the enterprise level. It takes time for the economy to adjust to a devaluation and to benefit from it, so that initially adverse effects on production dominate. In addition, even those sectors of the economy that may instantaneously benefit from the devaluation are unlikely in an unstable situation to increase their deposits at banks. Rather they may join other economic agents in attempting to shift deposits out of banks to assets considered to be safe. Thus, the adverse effect on banks' aggregate balance sheet and profitability caused by those sectors of the economy

that are initially hurt by the devaluation (and that face liquidity problems, become a higher risk and require more intense monitoring) is likely to dominate potential favorable effects on banks' balance sheets and profitability caused by sectors that benefit from the devaluation. As a result, initially after a large devaluation, increased losses on loans and deposit withdrawals are likely. If, under the assumption of enforced western prudential regulation, banks react to this with increased credit rationing, contraction of lending would intensify and production would even be more adversely affected. Thus, even under western prudential regulation, stability of the financial system in a situation of large currency depreciation can prove to be difficult to be maintained.

In the context of Russia, however, the problems of deteriorating quality of the aggregate loan portfolio and deposit withdrawals as a result of a given, large currency depreciation would be expected to be more severe even if banks would be strictly subject to western prudential regulation. This is because of Russia's less developed institutional environment (regarding guaranteeing of property rights, stability of the legal environment, reliability of the court system, transparent accounting and auditing, enforcement of liability for debt including bankruptcy etc.), not to mention the response of macroeconomic policy makers to the large currency depreciation that contributed to macroeconomic instability.

In sum, a financial system is so closely intertwined with the rest of the economy, that recapitalization and restructuring of banks and banks' submission to prudential regulation according to the current western standard, even if enforceable, may neither be likely to provide for sufficient stability of the banking system nor to significantly improve the fulfillment of the functions of banks unless some of the prudential rules are adapted and the institutional environment is simultaneously also improved. Hence, a comprehensive approach is needed.

c) Adaptation of some western prudential rules

Concerning capital adequacy, several authors argued that capital-asset ratios in transition countries should be higher than in industrial countries. For instance, GOLDSTEIN (1997) proposed that the capital-asset ratio in countries with loan defaults, restructuring of banks, or substantial government assistance to problem banks should be higher than BIS standards. Opposing this view, STEINHERR (1994, 1997) argued that since many transition countries did not succeed in enforcing the BIS capital requirement, it would be unrealistic to recommend an even more demanding standard. In addition, the additional costs of such higher capital requirement would put banks in transition countries at a disadvantage; it could dampen lending and restrict entry into banking. He proposed to modify the 8 percent rule in three ways:

- In the risk-weighting scheme for the three main groups of bank borrowers (governments, banks, and others), higher weights should be applied, and the maturity of lending to banks and to non-banks should be explicitly considered.

- The capital coefficient could depend on a bank's risk diversification. Better risk diversification of a bank could be reflected in the capital required.
- There should be an additional rule determining the ratio of core capital to the risk weighted assets.

TIROLE (1994) proposed to index the capital adequacy ratio to the state of the economy or to the state of the banking industry. This is well reasoned and de-facto acknowledged by many banking supervisory institutions that, in times of recession, tend to lower the capital requirements. However, since transition countries generally started with insolvent banking systems and several of them remained in recession or fell back into recession before bank solvency was achieved, the difficult question becomes what the required capital asset ratio should have been in this proposal in the starting period and how it should have evolved? Moreover, such indexing would be difficult to implement even in industrial countries and more so in transition countries.

There are reservations to the view that transition countries should not put themselves at a disadvantage to industrial countries by adopting stricter capital regulations. On the one hand and considering the short run, it may occur that higher capital requirements have a dampening effect on bank lending. With regard to industrial countries there is, however, little empirical evidence for this assumption (Jackson, 1999). On the other hand and adopting a medium and long-term view, capital requirements contribute to financial stability and thus their effect on economic growth may be positive. Given the often still very low money demand in transition countries, particularly in Russia, deposit growth and thus more lending, not less, due to improved stability of banks may occur. The quality of lending could also be improved if excessive risk taking would be dampened through capital requirements. Given, however, that in Russia particularly capital adequacy is likely to continue to be difficult to enforce<sup>32</sup>, if only due to the asset valuation problem, reserve requirements need to remain relatively high and unremunerated, so as to indirectly enforce capital adequacy through relatively high cost of deposits, as mentioned.

Unremuneration of reserve requirements appears also warranted as an insurance premium for implicit or explicit guarantees the central bank should extend (STEINHERR, 1994). These guarantees should include the lender of last resort function, provision of liquidity, and provision of deposit insurance (capped and partial, and perhaps existing only as long as it takes to establish a private insurance with regulatory oversight).

Regarding the risk weights in the capital asset ratio, the default of the Russian government on a part of its debt made clear that the weight for government debt (even if denominated and funded in domestic currency) cannot remain low. Arguments that this weight may be lower than 100 percent in Russia appear difficult

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<sup>32</sup> The current minimum capital requirement amounts to 8 to 9 percent, depending on the size of the bank.

to justify. Analogously, the risk weight for bank debt would have to be raised. A weight less than 100 percent appears warranted only for such bank debt that is short-term and incurred by a bank whose creditworthiness is proven, for instance, by quarterly publication of financial statements that meet western standards. A large increase in these weights would, of course, only increase pressure on banks to recapitalize, in particular with regard to the government-owned Sberbank.

Regarding the limitation of interest rate risk, the current BIS rules should be adapted so that capital requirements apply to all maturity weighted asset-liability imbalances. The BIS (1999) proposal to levy an interest rate risk capital charge only for banks where interest rate risk is significantly above average, appears not to be adequate for Russia, since interest rate volatility is large and management capacity scarce (Steinherr, 1994).

Also risk diversification rules need to be adjusted so that not only the risk increasing effects of on-balance and off-balance sheet transactions on the exposure of a bank to individual borrowers, group of borrowers, and sectors of the economy are considered and limited with regard to the own capital of the bank but also, to the extent possible, the risk diminishing effects of off-balance sheet transactions.

Explicit consideration of other risks in prudential regulation (such as operational, reputational, and legal risks) would, on the one hand, demonstrate how the legal, institutional and other imperfections burden financial intermediation while, on the other hand, it would provide a buffer for banks against these risks. Given their difficult quantification, supervisory authorities need to make a qualitative judgement in assessing them.

As to equity investments of banks in non-financial enterprises the above discussion argued for a liberal regulation enabling banks to hold substantial investments. For instance, such investments could be limited to 20 percent of the non-financial enterprise's own capital with an even larger share permitted if the holding is transitory. (If a bank claims the holding to be transitory, the latter would have to be sold within a certain period).

When allowing banks to hold substantial investments in non-financial enterprises, governance of bank managements becomes an even more crucial issue than it already is. STEINHERR (1994) proposed to reserve seats on a bank's supervisory board to the government, the central bank, a foreign auditing firm having no relationship with the bank, and to provide incentives to pension and investment funds to invest in banks and to acquire a board seat. In addition, he proposed that the government could retain a minority share in banks. The main disadvantages of this proposal are potential conflicts of interest on the part of the government and central bank. Solvency problems of the government may increase such conflicts so that particularly regarding Russia it may be preferable not to involve the government. Whether the proposal could make it more difficult to attract foreigners to invest in Russian banks -which appears to be a sine qua non for improving Russia's banking system- is not obvious, since foreign investors may not necessarily consider the presence of the government and central bank as a hindrance. Assuming that the participation of the government is dropped from the

proposal its main advantage appears to be an almost certain increase in quality of the supervision of bank managements. This could also dampen conflicts between former bank managements and ARCO that are likely to arise due to the mentioned unclarity of the bank restructuring law.

In sum, Russia should adapt the current western capital adequacy framework so as to narrow the definition of own capital of banks and improve the consideration of credit risk, interest rate risk, portfolio diversification, and liquidity and operational risks. On the other hand, relatively liberal rules regarding equity investments of banks could apply while at the same time improving banks' governance for instance through rules concerning the supervisory board of a bank.

d) Adoption of a bank restructuring approach that is comprehensive

Bank restructuring has two elements, systemic and operational restructuring. Successful systemic restructuring of banks implies that both the stock of non-performing loans and the flow of new bad loans are reduced to very small proportions. Operational restructuring means improvement of the internal operations of banks, including their risk-management systems, and possibly replacement of managements and owners.

However, there are several special characteristics of transition countries in addition to the already mentioned institutional weaknesses, which tend to make such restructuring more difficult than in an industrial country. Firstly, financial resources of the government to provide for support to banks are limited, particularly in Russia. Secondly, trained personnel that could replace managements in banks are scarce. Thirdly, bank restructuring is more likely to interfere in monetary policy: The central bank in most transition countries is also the banking supervisory authority (for practical reasons) so that conflicts of interest arise. In addition, fulfillment of the supervisory function of the central bank contributes to distract it, for instance, from evaluating the effects of changes in money demand and money supply on money growth and inflation just at a time when these changes are relatively large. Also the monetary policy instruments are underdeveloped. This makes it difficult to absorb excess increases in base money that may result from liquidity provided by the central bank to problem banks.

However, without restructuring of banks and hoping for automatic improvements of their balance sheets and earnings on account of, for instance, relatively high interest spreads, the flow problem is likely to continue or even to intensify. This is because a relatively large stock of bad debt in a bank's balance sheet is a large incentive for bank owners and bank management to "gamble for resurrection" in the sense of excessive risk taking since the potential loss is limited or even not existent in case the bank is already insolvent while the gain is not limited.

The slow response of Russian authorities to the banking crisis of 1998 may be explainable by the above mentioned additional problems transition countries face with regard to bank restructuring but it contradicted the lessons learned from international experiences with banking crises. Prompt action (within about 10 months after the crisis starts) with regard to the diagnosis of the nature and extent of systemic banking problems, identification of problem banks and the beginning of both their restructuring and the improvement of the accounting, regulatory and legal framework appears to be an important factor determining success in restoring the conditions for a sound banking system and a sound macroeconomic performance (DZIOBEK and PAZARBASIOGLU, 1997).

Several stylized restructuring approaches may be distinguished<sup>33</sup>. In practice, however, some overlapping of these approaches occurs, since elements of one approach may also be employed in another approach. Given this qualification, the attachment of countries to the following restructuring approaches is indicative only:

- a) establishing a lead agency, which takes over bad loans and possibly, provides new capital for banks (e.g. Spain 1979-85, USA 1989-95, Czech and Slovak Republics in 1992-93, Hungary in 1991-1994, Kyrgyz Republic since 1997, Russia since 1999),
- b) capital injections directly from the central bank which assumes bad loans from commercial banks (e.g. Chile 1981-84),
- c) replacement of bad loans in banks' balance sheets through long-term government bonds (e.g. Germany following WWII, Kazakstan since 1995<sup>34</sup>),
- d) establishing an institutional framework without a lead agency to recover nonperforming loans, involving, for instance, loan committees that decide on reorganizations of insolvent non-financial enterprises and involving also capital injections from the government (e.g. Poland in 1993-94, Hungary in 1995-96),
- e) the government takes over problem banks and tries to sell them after several years (e.g. Sweden in 1992-96) and
- f) case by case decisions where government support is granted dependent on the case (e.g. Latvia 1995-96).

In the context of eastern Europe the approach taken by the Polish authorities, whose main ideas were also incorporated in the second major Hungarian bank restructuring process during 1995-96, is widely considered to have been comparatively successful<sup>35</sup>. The Polish authorities named their banking reform approach "Enterprise and Bank Restructuring Program", underlining the search for a comprehensive solution. The program aimed at privatizing the major public banks within specified time limits. It was based on a "Restructuring law" that forced banks

<sup>33</sup> See SUNDARARAJAN and BALINO (1991), BORISH et al. (1995), BUCH (1996), DZIOBEK and PAZARBASIOGLU (1997).

<sup>34</sup> In Kazakstan much of banks bad debt is converted into long term government debt vis-à-vis the central bank.

<sup>35</sup> See, for instance, DZIOBEK and PAZARBASIOGLU (1997), GRAY and HOLLE (1996, 1997), and BORISH, LONG and NOEL (1995).



and problem debtors to tackle their bad debt problems on their own through numerous permitted avenues (banks had to set up work-out units that agreed on loan restructuring, loan sales, loan write-offs, exercise of collateral, debt-equity swaps, improved governance and management of debtor enterprises, and court-led bankruptcy/liquidation procedures). The law prohibited banks from extending new credit to bad debtors unless there had been a restructuring agreement or liquidation or regained creditworthiness of the debtor. Otherwise the bank had to sell the loan in the open market. In addition, independent supervisory boards for banks were established, banks were audited by international auditing firms and long-term technical assistance contracts with reputable foreign banks were signed. Recapitalization occurred and was based on an initial audit of the banks and not linked to the collection of bad debt. This important feature caused strong incentives for banks to collect bad debt. Recapitalization was implemented mainly through a transfer of government bonds to the recipient bank (bonds with a 15 year maturity that were non-negotiable for 3 years and with delayed amortization so as to prevent a misuse of public funds). The solvency of public banks was restored within a period of about two years and the flow of bad loans was stopped. The estimated share of non-performing loans in total loans of commercial banks declined rapidly (from more than one third at end of 1992 to about 13 percent at end of 1996 and continuously further afterwards).

However, the program appears to have promoted the restructuring of non-profitable non-financial bank borrowers less than was expected. Also debt-equity swaps were not used as widely as was hoped for (GRAY and HOLLE, 1996). A simple mistake made was to allow firms to book loan write-offs as income. This improved their reported profitability and contributed probably to wage pressure and more debt forgiveness later. Without this, financial discipline for firms could have been even better.

The salient features of this program may be summarized as follows (GRAY and HOLLE, 1996 and 1997, and DZIOBEK and PAZARBASIOGLU, 1997):

- it forced banks to confront their problems;
- it helped them build institutional capacity at least in their bad loan “workout units“ (not necessarily in their credit units); and
- it contributed to increased pressure on non-financial enterprises to restructure without creating an atmosphere of debt forgiveness and forbearance. Nevertheless, even in Poland actual restructuring of problem debtors has been assessed as limited;
- it provided for a rapidly increasing participation of foreign banks.

The second and similar Hungarian bank restructuring process was evaluated as similarly successful<sup>36</sup>.

Comparing the restructuring process undertaken in Russia (section 2c) with the Polish approach, comprehensiveness and clarity of the Russian approach appears less emphasized:

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<sup>36</sup> See, for instance, EBRD (1998).

- Although the Polish approach was initially, like the Russian one, limited to a certain number of banks, its requirements for new bank supervisory boards, explicitly listed avenues for a reduction of bad debt and enforcement of bad debt work out units in the banks through strong incentives both to collect bad debt and to improve the quality of bank managements are not or much less visible in the Russian approach;
- The role of foreign banks and international auditing firms is not addressed in the Russian program;
- The probability for survival of a bank in the Polish program was not dependent on the funds provided by the government for recapitalization or the order in which banks were reviewed by supervisory authorities but this appears likely in the Russian program;
- The stock and flow of bad debt were effectively reduced in Poland despite institutional weaknesses, because of clarity and enforcement of the “bank restructuring law“ with relatively rapid court conciliations, whereas ambiguities in the Russian program entail the risk that prolonged court suits prevent fast bank restructuring.

However, there are additional drawbacks of the Russian Bank approach. The relatively low and not risk-related contributions of banks to the newly established deposit insurance can promote undue risk-taking on the part of banks, particularly regarding those many small ones which do not fall under the bank restructuring program. The postponement of a reform with regard to the monopoly-like Sberbank appears to be an important hindrance to improving the healthiness of the banking system. Given that Sberbank administers about 90 percent of household rubel deposits, the bank appears to have nearly monopoly power vis-à-vis depositors and uses it by paying interest on deposits lower than the inflation rate. Although in absence of government funds to recapitalize the bank this may be needed to restore its solvency (given that it assumed deposits during and following the banking crisis from other banks without receiving equivalent assets and given that most of its assets are government debt), it has adverse distributional consequences. It also means that Russia still does not have a domestic relatively safe and liquid financial asset that yields at least a real interest rate not much below zero. Without such an asset the financial system has little long-run credibility (DIAZ-ALEJANDRO, 1985) and the necessary promotion of domestic savings is impaired<sup>37</sup>. Given Sberbank's size and regional importance, liquidation of it appears unreasonable in case of a lack of funds on the part of the government or of ARCO to pay in the required cash to restore its solvency. An alternative could be to try to use it as an institution promoting savings and, in particular, rural financial market development with initial subsidies and guidance from international organizations (World Bank, EBRD). For

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<sup>37</sup> GREGORY et al. (1999) argue that the household saving rate is less than half the official figure. Given the large public sector deficit and slightly negative or zero net savings of the enterprise sector, the aggregate savings ratio in Russia appears to be very small, perhaps around 1 percent of GDP (see also SUTELA, 1998, p. 105).

instance, an empirical study by the World Bank analyzed a policy change in a government program of providing rural financial services in Indonesia in the mid 1990s. It was found that with an initial subsidy and a major policy change in this program from disbursing credit to innovative incentives for loan recovery, and to mobilizing savings, broadening the clientele, maintaining a sufficient interest-rate spread to cover the high costs of servicing small loans and deposits, the program increased lending and deposit taking and became profitable (YARON et al., 1998). This could mean that an initial investment by international institutions into Sberbank and following such lines of reforming the bank could not only improve Sberbank's function but also possibly counteract Russia's substantial regional financial development problem: in Russia's regions banks from Moscow often became dominating, crowding out local banks, or financial intermediation has simply not developed (see, for instance, OECD, 1997). In addition, there are relatively large differences in interest rates in the regions.

## 6. Concluding remarks

Russia's banking crisis showed that assessments of the progress made in banking supervision, in improving the legal and regulatory framework and in its enforcement had been overly optimistic. Given these deficiencies, the evidence found in this paper for rather conservative behavior of lending of Russia's banks during the past two years was unexpected. However, both on theoretical and empirical grounds it was argued that searching for ways to promote financial development in Russia under no systematic improvement of the legal and regulatory framework and its enforcement appears to be futile. Even informal institutions that could perhaps be conceived to provide some remedy appear to be imbedded in a legal structure and thus would be complementary to formal institutions rather than substitutes.

However, several standard western prudential rules need to be adjusted for slow reforming transition countries with governments that have a solvency problem such as Russia. This refers particularly to the definition of own capital of banks, the risk weights in the capital-asset ratio and consideration of several other risks (such as interest rate risk, liquidity risk, and operational risk). Further it was argued that restrictions of equity investments of banks in non-financial enterprises could be sufficiently liberal so as to enable banks to assume an important role in corporate governance, which, however, makes improvements of the governance of banks even more important. The latter may be likely to be improved through an additional regulation concerning the supervisory board of banks.

Russia's adopted banking restructuring program is an abandonment of the laissez faire policy response to the banking crisis but it appears to have several important drawbacks. Comparing it with relatively successful bank restructuring programs in transition countries it appears to be less comprehensive. This refers to its contribution to forcing otherwise passive creditors to take action against bad

debtors, owners and managements of banks (to collect bad debt), to improve the chances for recapitalization without setting wrong incentives, to improve internal operations of banks, and to improve regional financial development.

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## Summary

This paper assesses the causes and costs of the Russian banking crisis, the lending behavior of Russian banks, and it evaluates the authorities' response to the crisis. There appears to be evidence for conservative lending behavior on the part of Russian banks. The paper also searches for ways to promote financial development in Russia. It is argued that there may not be an alternative to systematic improvement of the legal and regulatory framework and its enforcement. It is also argued that several standard western prudential rules need to be adjusted for slow reforming transition countries with governments that have a solvency problem such as Russia. Russia's recently adopted banking restructuring program is an abandonment of the laissez faire policy response to the banking crisis but the weaknesses of this program become evident when comparing it to relatively successful bank restructuring programs pursued in other transition countries such as Poland.

[Transition countries, Russia, Banking crises, Banking regulation, Behaviour of banks]

## Zusammenfassung

Das Papier gibt zunächst einen Überblick über die Ursachen und ökonomischen Kosten der Bankenkrise in Rußland, die im Jahr 1998 ausbrach. Eine Analyse des Verhaltens russischer Banken im Zeitraum 1998 bis 1999 zeigt, daß diese sich relativ konservativ bezüglich ihrer Kreditvergabe verhielten. Dies kann ein überraschendes Ergebnis sein aus folgenden Gründen: Die Bankenaufsicht hatte bisher eine relativ schwache Kontrolle über das Verhalten der Bankleitungen. Dafür hatten die Bankeigentümer, die gleichzeitig in mehreren bedeutenden Banken auch bedeutende Kreditnehmer sind, einen relativ hohen Einfluß auf die Bankleitungen, so daß erwartet hätte werden können, daß Kreditnehmer in signifikantem Umfang Banken zwingen, Kredite zu verlängern und/oder auszuweiten. Auch das relativ hohe Realzinsniveau hätte ein Anreiz für Bankleitungen sein können durch Ausweitung ihrer Kreditvergabe, Gewinne zu realisieren. Eine relativ starke Zurückhaltung russischer Banken vor und nach dem Höhepunkt der Bankenkrise hinsichtlich ihrer Kreditvergabe war jedoch nicht begleitet von konservativem Verhalten dieser Banken hinsichtlich der von ihnen eingegangenen Währungsrisiken. Die Übernahme dieser Risiken vor dem Höhepunkt der Krise wurde neben der mangelhaften Überwachung risikobegrenzender Vorschriften offenbar auch durch die Wechselkurspolitik der russischen Zentralbank begünstigt. Das Papier gibt außerdem einen Überblick über die in der Literatur sowohl theoretisch als auch empirisch identifizierten Kanäle des Beitrags der Finanzintermediation für das wirtschaftliche Wachstum, um so Ansatzpunkte zu

finden, wie die Finanzintermediation in Rußland eventuell gefördert werden kann. Diese Betrachtung ergibt jedoch kein neues Ergebnis, sondern lediglich, daß die Förderung der Finanzintermediation Rußlands zwingend die Verbesserung der aufsichtsrechtlichen Regulierung und ihrer Durchsetzung erfordert. Die Suche nach einem möglichen Ersatz für systematische Verbesserungen des Rechtsrahmens, beispielsweise in Form einer "informellen" Regulierung, scheint nicht erfolgversprechend zu sein. Allerdings wird in dem Papier erläutert, daß Rußland die westliche Bankenregulierung modifizieren sollte. Bei dieser Diskussion werden die jüngsten Entwicklungen der Bankenregulierung in westlichen Ländern berücksichtigt. Schließlich wird das Sanierungsprogramm für russische Banken verglichen mit den relativ erfolgreichen Umstrukturierungs- und Sanierungsprogrammen für Banken in Polen und Ungarn. Dieser Vergleich mündet in einer Bewertung des russischen Sanierungsprogramms und zeigt deutliche Schwächen dieses Programms auf.

[Transformationsländer, Rußland, Banken Krisen, Bankenregulierung, Bankenverhalten]