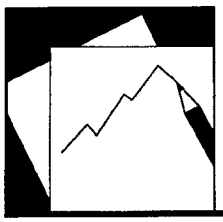
WP/01/157



IMF Working Paper

Cost and Effectiveness of Banking Sector Restructuring in Transition Economies

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INTERNATIONAL MONETARY FUND

 WP/01/157

IMF Working Paper

IMF Institute

Cost and Effectiveness of Banking Sector Restructuring in Transition Economies

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October 2001

Abstract

The paper analyses the cost and effectiveness of bank restructuring policies in 11 transition countries during 1991–98. It argues that country-specific banking sector features, the size of bad loans inherited from the centrally planned system, and weaknesses in the restructuring policies implemented were the main factors affecting the overall fiscal costs, with the latter two being more significant. The paper finds no significant relationship between the size of restructuring costs and overall improvement in banking sector performance for the sample countries as a whole.

JEL Classification Numbers: G21, G28, P20, H60

Keywords: bank restructuring; transition countries; fiscal costs of banking crises

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[1] I would like to thank Dimitri Demekas, Andrew Feltenstein, Peter Lohmus, Reza Vaez-Zadeh, Rachel Van Elkan, and the participants at the INS seminar where this paper was presented for helpful comments and suggestions.

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I. INTRODUCTION

The development of a sound and efficient banking sector has been a major challenge facing countries in transition from a centrally planned to a market economy. Virtually all countries of Central and Eastern Europe (*CEE*) and the former Soviet Union went through episodes of extensive banking sector problems, which necessitated substantial restructuring of the banking sector, that, in turn, generated sizable cost for the governments and central banks involved.[2]

Both the magnitude and composition of bank restructuring costs varied widely across these countries (Figure 1).[3] In 6 of the 11 countries considered, the estimated total cost of banking sector restructuring was more than 9 percent of GDP (in four cases, it exceeded 15 percent of GDP); in the remaining five countries it was under 5 percent of GDP. The cost for depositors' compensation was typically moderate in all sample countries, with the exception of the *former Yugoslav Republic of Macedonia*. Although the bulk of the restructuring costs was typically borne by governments, in *Bulgaria*, the *Czech Republic* and the *Kyrgyz Republic*, central banks incurred sizable expenditures as well. In *Estonia* and the *Kyrgyz Republic,* governments transferred funds to central banks to cover the losses generated by their support to troubled banks[4].

What factors contributed to the emergence of such costs? Did countries that incurred higher bank restructuring costs improve their banking sector more than did countries that spent less? These are the two key questions that this paper tries to answer in the context of the experiences of the 11 transition economies. With regard to the second issue, the paper finds no significant relationship between total banking sector restructuring costs and overall improvement in banking sector performance for the sample countries as a whole.

To address the first issue, the paper considers several factors that might account for the different outcomes, and analyzes, in particular, the role played by the specific features of the banking sector in the countries concerned; the size of the non-performing loans inherited from the former centrally planned regime; and the weaknesses in the design and implementation of the restructuring policies. To assess the latter, the paper develops indices of the effectiveness of bank restructuring, capturing the key features of the restructuring and reform policies expected to affect the total cost. The empirical analysis seems to support the proposition that restructuring programs entailing repeated recapitalizations, significant involvement of the central bank in the restructuring scheme, inadequate institutional

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[2] Banking sector problems have included bank insolvencies, bank runs, and sizable non-performing loans, leading in many instances to systemic banking crises.

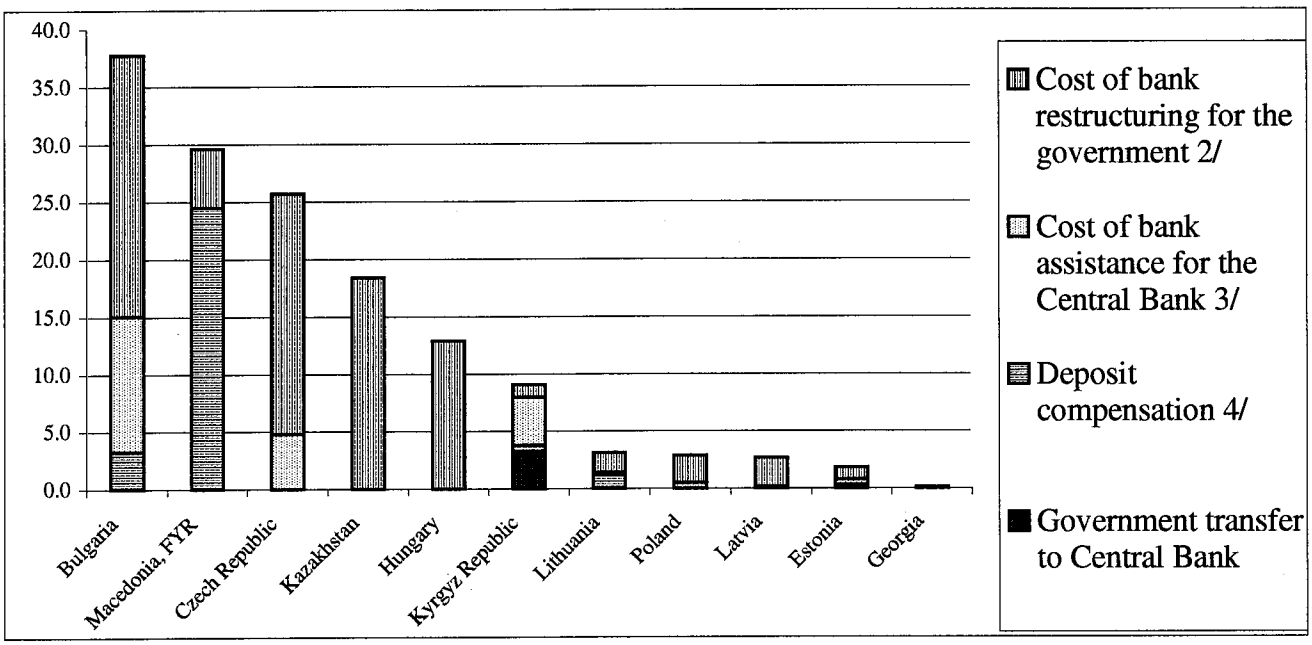
[3] The study covers the experience of banking sector problems during 1991–98 and excludes the effects of the Russian financial crisis. As in certain countries (e.g., the Czech Republic) bank restructuring is ongoing, and as most transition economies were hit by the Russian crisis, further costs for banking sector problems were incurred after 1998.

[4] For more details on government and central bank costs for bank restructuring and depositors protection, see Appendix I. See also Tang, Zoli, and Klytchnikova (2000).

restructuring, and the existence of more than one restructuring agency amplify the total cost of banking sector restructuring.

The paper is organized as follows. Section II provides a brief overview on banking sector problems in the countries under consideration. It also discusses the main causes of these problems and the actions taken by the authorities concerned to address them. Section III examines the factors affecting the total cost of banking sector restructuring. Section IV presents the econometric analysis. Section V discusses the relationship between bank restructuring costs and indicators of banking sector performance. Concluding remarks and policy implications are presented in Section VI.

Figure 1: Costs of Banking Sector Problems in Percent of GDP (1991–98) 1/



Source: Author's calculations.
1/ These total costs are the sum of the present value at end-1998 of annual costs during 1991–98, as a percentage of 1998 GDP. For details see Appendix I. The estimates do not take into account cost recoveries.
2/ Sum of the amount of bonds issued for bank recapitalization, cash transfers to banks, and expenses for called loan guarantee (when applicable), excluding government transfers to the central bank.
3/ Sum of losses and provisions on credit extended to banks, excluding losses covered by government transfers.
4/ Sum of the amount of bonds issued and of cash transfers for deposit compensation.
5/ For Macedonia, FYR the expense for deposit protection includes the obligations related to the compensation for foreign currency deposits. See text for explanation and discussion.

II. Background

A. Origins of Banking Sector Problems

The 11 countries studied repeatedly faced banking sector problems over the period 1991–98, adversely affecting the solvency and liquidity of both state-owned and private banks.[5] Previous studies on the experience of these countries have identified the following five factors as the main reasons for the emergence of such problems.[6]

(1) External shocks. All countries in Europe and Central Asia suffered from the collapse of the Council for Mutual Economic Assistance trade system, which had previously isolated the conditions of foreign trade within socialist countries from those prevailing in the rest of the world. Furthermore, some countries were hit by idiosyncratic external shocks. Specifically, a few banks located in countries of the former Soviet Union lost access to part of their assets held in Russia after the collapse of the Soviet empire. In the mid-1990s, bank profitability in *Latvia* and *Lithuania* was sharply reduced by the decline of trade financing opportunities resulting from price liberalization in Russia.[7]

(2) Macroeconomic conditions. The transition process and external shocks led to severe output contractions, which often precipitated banking sector problems. In addition, in certain countries, stabilization programs involving tight monetary policies forced nominal interest rates up and reduced inflation, thus raising real interest rates and adversely affecting borrowers' ability to service their debt.[8]

(3) The transition process. The transition process made the banking sector vulnerable in different ways. First, internal and external liberalization and the removal of enterprise subsidies curtailed the profitability of enterprises and reduced their ability to repay loans. Second, both enterprises and the newly commercialized banks lacked experience operating with a profit-oriented approach. Third, the commercial banks carved out from former state banks inherited poor quality loans created under the central planning system. Finally, in *Georgia*, *Kazakhstan*, *Kyrgyz Republic*, the continued use of directed credit and on-lending under government instruction contributed to the emergence of weak bank portfolios.

(4) Deficiencies in supervision and in the legal framework. In most transition countries of the early 1990s supervisory systems were inadequate and prudential regulations were missing, so credit institutions often engaged in risky lending, prompting a deterioration of the quality of their portfolios.

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[5] Appendix II provides a comprehensive synoptic analysis of individual country circumstances.

[6] See, for example, Fleming and Talley (1996), and IMF Staff Country Reports (various issues).

[7] In the early 1990s, when prices of metals and other commodities in Russia were largely below world prices, Latvian and Lithuanian banks were extensively involved in the profitable activity of trade financing between East and West.

[8] This occurred in *Latvia* after 1993; the *Czech Republic* in 1997–98; and *Macedonia, FYR* in 1992.

(5) Poor internal governance. In some countries, corruption, insider lending, fraud, and inadequate disclosure further weakened the banking system. In fact, management misconduct and insider lending were behind the formation of bad loan portfolios in two *Estonian* banks (liquidated respectively in 1992 and 1994), in the largest *Latvian* bank (liquidated in 1995), and in the second largest bank in *Hungary*, which in 1997 suffered from substantial liquidity problems.

B. Authorities' Responses: Bank Restructuring and Deposit Compensation

Different instruments have been employed for financial restructuring in the 11 countries studied.[9] In most cases the government boosted banks' net worth through the transfer of consolidation bonds (Table 1). Occasionally, governments resorted to the transfer of cash or property, the reduction of banks' liabilities, the provision of public guarantees on outstanding loans and repurchase agreements. Central banks' assistance to the banking sector entailed mainly liquidity support (Table 2).

In most of the countries depositor compensation was limited. Only in *Bulgaria*; *Macedonia, FYR*; and *Lithuania* was the cost higher than 1 percent of GDP.[10] In *Macedonia, FYR* the cost was estimated to be very high, because the government granted explicit guarantee for approximately DM 1.1 billion foreign exchange deposits (about 17.5 percent of GDP), lost after the dissolution of the of the former Socialist Republic of Yugoslavia.[11]

III. Factors Affecting Restructuring Costs

The 11 countries faced similar problems in their transition from a centrally planned system to a market economy. Why then was the result in government and central bank costs for banking sector restructuring so different? This section analyzes the contributions of three factors to this outcome, namely the country-specific banking sector features that affected the authorities decision on whether to liquidate or restructure ailing banks; the size of non-performing loans inherited from the socialist era; and the design weaknesses and implementation slippages of the restructuring programs.

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[9] Financial restructuring deals with the problem of banks' negative net worth. It generally entails the use of the following instruments: injection of new capital into troubled banks; reduction of bank liabilities; transfer of non-performing loans to a special agency; improvement in the management of non-performing loans.

[10] See Table A1 in Appendix I for details on the cost for depositor compensation.

[11] These deposits were held at the National Bank of the former Socialist Republic of Yugoslavia and were frozen after the breakdown of the country. The Macedonian authorities intend to settle obligations to small depositors in cash and swap larger deposits for government bonds (IMF, 2000).

Table 1. Instruments of Financial Restructuring and Government Assistance to the Banking Sector

Instruments	Country and Date
1. Capital injection	
Bond transfer	
Exchange for bad loans	Bulgaria (1991–94, 1995, 1996–97); Czech Rep. (1991–92); Hungary (1992–93); Macedonia, FYR (1994); Estonia (1992); Lithuania (1996); Kyrgyz Rep. (1996–97)
Unrequited	Czech Rep. (1991–92); Hungary (1993–94); Poland (1991, 1993–94); Latvia (1994); Estonia (1993); Kazakhstan (1996–97)
Cash transfer	Czech Rep. (1991–92, 1993–96); Lithuania (1996)
Transfer of property assets	Lithuania (1996)
2. Reduction of bank liabilities	
Write-off of bank liabilities to the government (in exchange for bank assets)	Georgia (1998)
Assumption of bank liabilities	Estonia (1995)
3. Repurchase agreement	Czech Rep. (1996–97)
4. Provision of guarantees on outstanding loans	Czech Rep. (1991, 1993, 1996); Hungary (1991); Lithuania (1997)
5. Placement of deposits	Lithuania (1995)
6. Actions on enterprises to allow servicing/repayment of bank debt	
Assumption of enterprise debt	Georgia (1998) 1/, Kazakhstan (1994–95) 1/ 2/
Equity conversion of government claims on enterprises.	Hungary (1992)
C. Rescheduling or writing-off of government claims on enterprises.	Hungary (1992)

Source: Tang, Zoli, and Klytchnikova (2000).
1/ For directed credits extended under government instruction.
2/ In exchange the government received an equity position in the enterprises.

Table 2. Instruments of Central Bank Assistance to the Banking Sector

Instruments	Country and Date
Liquidity support	Bulgaria (1991–1994, 1995,1996–97); Czech Republic (1996); Macedonia, FYR (1995); Poland (1993); Estonia (1992–1994); Latvia (1995); Lithuania (1995); Kazakhstan (1994–95, 1996); Kyrgyz Republic (1994).
Loan to asset management agencies	Czech Republic (early 1990s, 1997); Macedonia, FYR (1994)
Transfer of assets (in exchange for bad loans)	Estonia (1997)
Long-term loan to banks	Poland (1993)
Rescheduling of loans to banks	Kazakhstan (1997); Kyrgyz Republic (1994)
Writing off of central bank shares in banks to cover their losses	Estonia (1995)

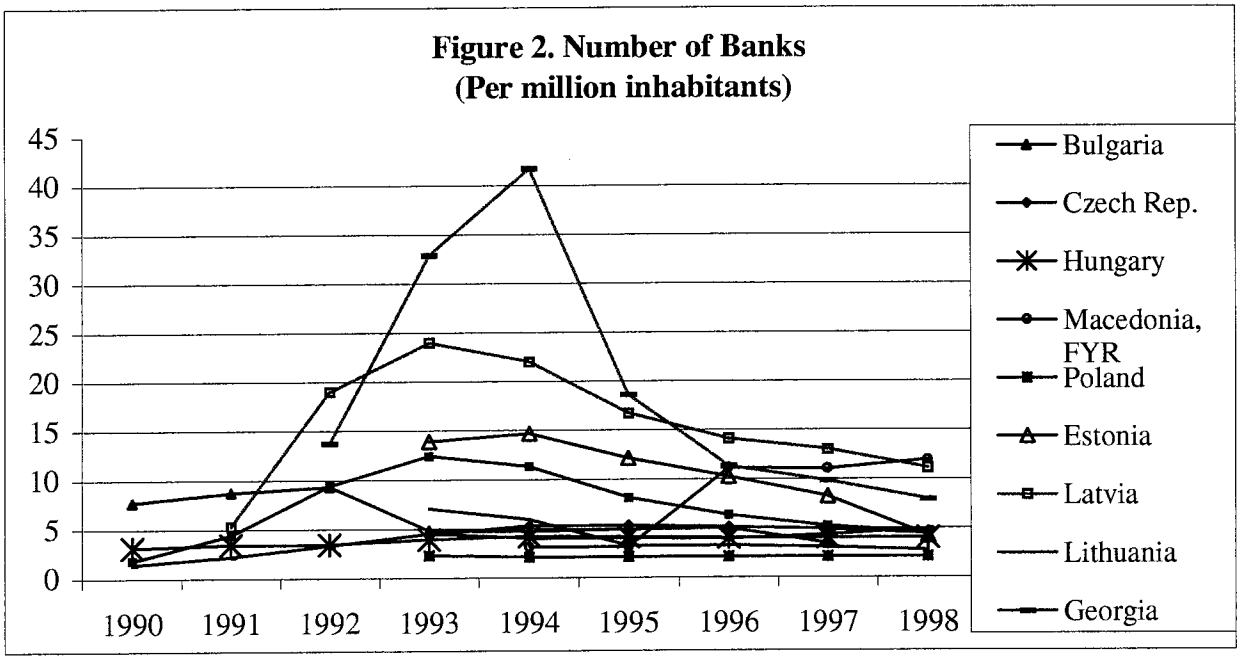
Source: Tang, Zoli, and Klytchnikova (2000).

A. Liquidation versus Restructuring

To address banking sector problems, authorities in the *CEEs* implemented extensive restructuring and recapitalizations, whereas in the *Baltics* and the *CIS* they pursued a combination of liquidations and restructuring. Since deposit compensation was limited, the fiscal costs associated with bank liquidations were very small. The different strategies adopted to deal with ailing banks, then, partly explain the variance in the total cost of resolving banking sector problems. The authorities decision on whether to liquidate or restructure banks, in turn, was affected by the country-specific features of the banking sector.

In the *CIS* and, to a lesser extent, the *Baltics*, the banking sector consisted primarily of many newly created small and often undercapitalized banks. Although in some countries the number of credit institutions was large, financial intermediation was very low, as indicated by the ratio of credit to the private sector to GDP and by the ratio of M2 to GDP (Table 3). Consequently, the authorities were able to respond to banking sector problems by closing the insolvent institutions, without disrupting the shallow financial system. In these economies the resolution of banking problems resulted in the consolidation of the banking sector. In fact, as shown in Figure 2, the sharp increase in the number of banks in most of the *CIS* and the *Baltics* in the early 1990s was followed by a sharp drop in the number of banks per capita from the mid 1990s.

Figure 2. Number of Banks
(Per million inhabitants)



Source: EBRD Transition Report (2000)

Table 3. Features of the Banking Sector in Sample Countries

	1990	1991	1992	1993	1994	1995	1996	1997	1998
					Central and Eastern Europe				
Bulgaria									
Number of banks	**67**	**75**	**79**	**41**	**40**	**41**	**42**	**28**	
O/w domestic					39	38	39	21	
Foreign					1	3	3	7	
Credit to the Private Sector 1/		**7.2**	**5.8**	**3.7**	**3.8**	**21.1**	**35.6**	**12.6**	**12.7**
Broad Money 1/		**71.9**	**74.7**	**77.6**	**78.0**	**64.9**	**71.2**	**33.6**	**29.3**
Czech Republic									
Number of banks				**45**	**55**	**55**	**53**	**50**	**45**
O/w domestic				33	43	43	40	36	32
Foreign				12	12	12	13	14	13
Credit to the Private Sector 1/				**50.8**	**59.5**	**59.4**	**57.4**	**66.4**	**58.7**
Broad Money 1/				**69.6**	**73.1**	**80.5**	**75.4**	**71.2**	**68.3**
Hungary									
Number of banks	**32**	**35**	**35**	**40**	**43**	**42**	**41**	**41**	**40**
O/w domestic	21	27	23	25	26	21	16	11	13
Foreign	11	8	12	15	17	21	25	30	27
Credit to the Private Sector 1/	**46.2**	**38.7**	**33.1**	**28.1**	**26.1**	**22.5**	**22.0**	**24.0**	**23.7**
Broad Money 1/	**43.8**	**47.4**	**51.2**	**49.6**	**45.5**	**42.3**	**41.4**	**41.3**	**45.5**
Macedonia, FYR									
Number of banks					**6**	**6**	**22**	**22**	**24**
O/w domestic					3	3	17	17	19
Foreign					3	3	5	5	5
Credit to the Private Sector 1/				**59.3**	**48.8**	**25.6**	**29.8**	**30.6**	**18.1**
Broad Money 1/				**72.9**	**13.6**	**13.5**	**13.0**	**15.2**	**14.9**
Poland									
Number of banks				**87**	**82**	**81**	**81**	**83**	**83**
O/w domestic				77	71	63	56	54	52
Foreign				10	11	18	25	29	31
Credit to the Private Sector 1/	**3.1**	**11.1**	**11.4**	**12.2**	**11.2**	**12.0**	**14.9**	**17.1**	**19.5**
Broad Money 1/	**34.0**	**32.3**	**35.8**	**35.9**	**34.5**	**34.1**	**35.4**	**37.6**	**39.9**
					Baltics				
Estonia									
Number of banks				**21**	**22**	**18**	**15**	**12**	**6**
O/w domestic				20	21	14	12	9	4
Foreign				1	1	4	3	3	2
Credit to the Private Sector 1/		**18.0**	**7.5**	**11.2**	**14.1**	**14.8**	**18.0**	**25.8**	**25.3**
Broad Money 1/		**126.9**	**30.2**	**28.4**	**26.9**	**25.5**	**27.0**	**30.3**	**28.4**
Latvia									
Number of banks		**14**	**50**	**62**	**56**	**42**	**35**	**32**	**27**
o/w domestic						31	21	17	12
Foreign						11	14	15	15
Credit to the Private Sector 1/				**17.3**	**16.4**	**7.8**	**7.2**	**10.5**	**14.1**
Broad Money 1/				**31.6**	**34.2**	**23.4**	**23.0**	**27.4**	**26.7**

Table 3. Features of the Banking Sector in Sample Countries

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Lithuania									
Number of banks				**26**	**22**	**12**	**12**	**11**	**10**
o/w domestic				26	22	12	9	7	5
Foreign				0	0	0	3	4	5
Credit to the Private Sector 1/				**13.8**	**17.6**	**15.2**	**11.1**	**10.9**	**11.3**
Broad Money 1/				**23.1**	**25.8**	**23.3**	**15.8**	**19.0**	**19.4**
					CIS				
Georgia									
Number of banks			**75**	**179**	**226**	**101**	**61**	**53**	**43**
o/w domestic					225	98	55	45	34
Foreign					1	3	6	8	9
Credit to the Private Sector 1/					**7.8**	**6.1**	**3.4**	**3.8**	**5.0**
Broad Money 1/			**44.6**	**20.1**	**5.6**	**5.0**	**4.5**	**5.5**	**5.1**
Kazakhstan									
Number of banks	**30**	**72**	**155**	**204**	**184**	**130**	**101**	**82**	**71**
o/w domestic		71	154	199	176	122	92	60	51
Foreign		1	1	5	8	8	9	22	20
Credit to the Private Sector 1/				**45.3**	**24.8**	**7.1**	**5.1**	**5.0**	**6.5**
Broad Money 1/			**45.0**	**20.9**	**13.4**	**11.6**	**9.5**	**10.2**	**9.0**
Kyrgyz Republic									
Number of banks	**6**	**10**	**15**	**20**	**18**	**18**	**18**	**20**	**23**
O/w domestic	6	10	14	19	15	15	15	17	17
Foreign	0	0	1	1	3	3	3	3	6
Credit to the Private Sector 1/						**12.5**	**9.0**	**3.4**	**5.3**
Broad Money 1/						**17.2**	**14.2**	**13.7**	**14.6**

Source: EBRD Transition Report (2000); IMF International Financial Statistics.

1/ Percent of GDP.

In the *CEEs*, instead, the number of new small banks was lower, and the quality of the new banks was better than that in the *CIS* and the *Baltics*. New entrants, in fact, also included foreign banks, which were generally sounder than the domestic private banks (Table 3). Furthermore, financial penetration was much deeper than in the *CEEs* in the other two groups of countries, as measured by the ratio of credit to the private sector to GDP and by the ratio of M2 to GDP (Table 3). In this context, liquidation of problem banks could mean wiping out most of the banking system, imposing huge economic and political costs. As a consequence, in the *CEEs*, with the exception of *Bulgaria,*[12] the resolution of banking problems did not result in any significant change in the number of banks in the system.

[12] In *Bulgaria* the authorities resorted to extensive bank liquidations only in 1996–97, when the country went through a full-fledged banking crisis.

B. Inherited Non-Performing Loans

The problem of the non-performing loans outstanding at the inception of the two-tier banking system was significant especially in *Bulgaria*, *Hungary*, and the *Czech Republic*, prompting those countries to implement special bank restructuring programs to resolve for selected inherited bad assets.[13] The way the authorities handled these non-performing loans added to the total cost of banking sector problems over the 1990s in two ways. First, governments issued large amounts of bonds to recapitalize banks. Second, the drawbacks of the consolidation programs carried out to deal with inherited bad debt played a role in exacerbating successive banking sector problems, raising the total cost of bank restructuring.

The origin of inherited non-performing loans can be traced to the credits extended during the socialist period to inefficient state-owned enterprises, without any preliminary credit risk assessment, and passed on to the commercial banks carved out of the monobank. Whereas the *CIS* countries; the *Baltics*; *Macedonia, FYR*; and *Poland* experienced hyperinflation in the early 1990s, which greatly reduced the real value of their bad debt, in *Bulgaria*, *Hungary*, and the *Czech Republic* inflation was not as high (Appendix III), so the real value of inherited bad debt was only partially eroded.

Table 4 reports the estimated fiscal costs of the initial banking sector restructuring operations, carried out in *Bulgaria*, the *Czech Republic* and *Hungary* at the beginning of the 1990s to clean bank portfolios from inherited bad credits.[14] These figures represent an appraisal of

Table 4. Estimated Fiscal Costs of the Consolidation Programs for Inherited Bad Loans

	Bulgaria (1991–94)	**Czech Republic** (1991–93) Consolidation Program I	**Hungary** (1992–93) Loan Consolidation Program
Percent of GDP 1/	21.9	17.2	5.2
Percent of total cost of banking sector problems over the period 1991–98	58.0	66.9	40.1

Source: Author's estimates.
1/ Calculated as the sum of the present value at end-1998 of annual costs, as a percentage of 1998 GDP. For details see Appendix I.

[13] In *Bulgaria* during 1991–94 the authorities carried out a program to replace loans extended before 1991, and in arrears for more than 180 days, with special government bond issues. In *Hungary* at the end of 1991 the government issued a guarantee to cover part of the doubtful credits extended by the National Bank of Hungary before the creation of a two-tier banking system in 1987 and inherited by commercial banks. In 1992–93 the authorities also implemented the Loan Consolidation Program to carve out bad loans and recapitalize state-owned commercial banks. Similarly, in the *Czech Republic* in 1991–93 the authorities carried out the Consolidation Program I, to clean the portfolios of former state-owned banks and organizations from doubtful assets.

[14] See Appendix I for details.

the fiscal costs for inherited bad loans, but they have to be interpreted with caution, as these costs might include some expenses related to the clean-up of non-performing loans created during the very first years of the transition. The estimates indicate that the restructuring packages implemented in the early 1990s contributed substantially to the total cost of banking sector problems during 1991–98.

Furthermore, the weaknesses of these consolidation programs contributed to successive banking sector problems, thus boosting the total cost of bank restructuring. There were three major drawbacks associated with the early consolidation programs, which are discussed below.

Inadequate financial restructuring at the beginning
The loan consolidation packages did not always sufficiently strengthen banks' net worth and liquidity position. Inadequate bank recapitalization resulted in recurrent bank problems as undercapitalized banks faced distorted incentives in extending new loans and were prone to excessive risk taking.[15] The transfer of government bonds to banks in some cases also failed to improve liquidity as the securities carried a minimum selling price or paid below-market interest rates.[16]

Insufficient institutional and operational restructuring[17]
The loan consolidation schemes to remove inherited bad loans from banks' portfolios did not affect the culture of banks or their operating procedures. Until the late 1990s in all the three countries the supervisory regime was lax and the regulatory and legal frameworks were inadequate;[18] as a result the misuse of credit was widespread. Moreover, without adequate

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[15] The example of *Hungary* illustrates this point. In 1991 the Hungarian authorities extended a guarantee to cover part of the inherited bad loans. However, the measure was insufficient, given the magnitude of existing non-performing credits; hence banks were left in a fragile position to stand future losses and to comply with the capital requirements introduced soon afterwards. Thus, in 1992–93 the government had to launch a new scheme (the Loan Consolidation Program), in which banks were allowed to swap bad loans for government bonds. This program also proved to be inadequate. So, in 1993 a second consolidation scheme was started (Bank-led Restructuring and Loan Consolidation Program) (Anderson and Kegels, 1998).

[16] In *Bulgaria*, in 1993–94 the government swapped banks' bad credits with special bonds issues. Although the consolidation bonds were negotiable, they carried a minimum selling price and so they were largely illiquid. Moreover, the interest rates on bonds denominated in local currency were below market and below banks' cost of funds. As a result, two banks (Mineral Bank and Economic Bank), holding large amounts of these bonds, faced serious liquidity problems. In 1995 the government had to intervene again to replace the local currency denominated consolidation bonds with other bonds, paying market interest rate.

[17] Institutional restructuring encompasses reforms of the legal framework, prudential regulations, accounting standards, and banking supervision. Operational restructuring deals with the flow problems caused by sizable non-performing loans and high operating costs and aims at improving corporate governance. It may involve changes in management, privatization or both.

[18] Significant improvements in banking supervision and regulation were introduced in 1996 in *Bulgaria*; in 1998 in the *Czech Republic* (when the amendments to the Banking Act were approved), and in 1997 in *Hungary* (with the adoption of a new Banking Law).

operational restructuring, many banks continued to rollover outstanding loans to state-owned enterprises.[19]

Lack of credibility and expectations of further bailouts.
Government actions created expectations of further bailouts and encouraged moral hazard in banks' lending decisions. For example, in *Hungary*, after announcing that inherited bad loans would be covered only by a partial government guarantee, the authorities launched two successive far-reaching consolidation programs. Furthermore, the government acted as a soft negotiator by extending the date for credits eligible for bailout[20], by reneging on the terms of the consolidation bonds in favor of banks[21] and by expanding the number of state-owned enterprises to be bailed out. Such government behavior encouraged excessive risk taking and creation of new bad loans.[22] Also, in the *Czech Republic*, while implementing the first consolidation program (1991–93), the government retained a controlling stake in major banks, creating the expectations of future bailout.

C. Implementation Procedures of Bank Restructuring

Design weaknesses and implementation slippages of bank restructuring policies (in short, "bad policies") may aggravate the associated overall costs. Table 5 provides a synopsis of the main features of the restructuring policies implemented in the 11 transition countries that may have ultimately affected the magnitude of total government and central bank costs. In order to quantify and assess the impact of bad policies on the total cost of banking crises, it may be helpful to develop appropriate *bank restructuring effectiveness indices* (REIs) to capture and evaluate the key cost-critical features of bank restructuring policies.

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[19] In *Hungary* the government provided support to the banking sector by implementing the first Loan Consolidation Program, but without requiring banks to improve their management and governance practices. Only the successive program (1993–94) required state-owned banks benefiting from the recapitalization scheme to implement restructuring programs. However, the effectiveness of these commitments was compromised by the lack of quantitative performance targets and sanctions for noncompliance (IMF, 1997).

[20] Although the government initially provided a guarantee only for credits extended before 1987, the 1992–1993 Consolidation Program also covered bad loans created in 1992, five years after the establishment of the two-tier banking system.

[21] The consolidation bonds issued in 1992 were of two types. Whereas one type paid market interest rate, the other carried a below market interest rate. Moreover, consolidation fees were deducted from the interests banks received. After the program was negotiated, however, banks complained that the terms were unfavorable, and the government agreed to remove the consolidation fee and to pay equal interest rates on both types of bonds (Anderson and Kegels, 1998).

[22] In fact the stock of problematic loans declined from Ft 276 billion (9.4 percent of GDP) to Ft 193 billion (6.6 percent of GDP) in 1992, as a result of the 1992 consolidation program, but then it rose again immediately after the program in 1993 to reach 352 bln forint (9.9 percent of GDP) (IMF, 1997, Table 13).

Table 5: Key Aspects of Bank Restructuring (1991-98)

	Bulgaria	Czech Rep.	Hungary	Macedonia FYR	Poland	Estonia	Latvia	Lithuania	Georgia	Kazakhstan	Kyrgyz Rep.
Financial restructuring											
Repeated recapitalization	Yes	Yes	Yes	No	No	No	No	No	No	Yes	No
Central bank liquidity support to insolvent institutions	Yes	No	No	No	No	Yes	Yes	No	No	No	No
Authorities bailed out or tried to rescue insolvent banks only because they were considered too big to fail	No	No	Yes	Yes	No	No	No	No	No	Yes	No
Shareholders equity always written down before providing government support				Yes		Yes	Yes	No		No	
Recapitalization from private resources		Yes							Yes		Yes
The initial restructuring program failed to effectively improve bank liquidity	Yes	No	Yes	No	No	No	No	No	No	No	No
Institutional restructuring											
Significant improvements in supervision, regulation, etc. introduced at the beginning of government intervention	No	No	No	No	Yes	Yes	No	No	Yes	No	Yes
Operational restructuring											
Privatization and foreign entry contributed to improvements in bank governance	No	No	Yes	No			Yes		No		
Always change of management in banks that received government support				Yes	Yes	No		No		Yes	
Government support tied to operational restructuring from the beginning			No								
Transparency											
More than one centralized bank restructuring agency	No	Yes	No	No	No	No	No	No	No	Yes	Yes
Large involvement of Central bank in restructuring	No	Yes	No	No	No	Yes	No	No	No	No	No
Use of guarantees to address banking sector problems	No	Yes	Yes	Yes	No	No	No	Yes	No	No	No
Depositor compensation											
Government introduced an ad-hoc depositor protection scheme providing full guarantee	Yes	Yes 1/	No	No	No	No	No	No	No	No	No

Souce: IMF Country Reports, OECD Economic Surveys, various issues.

1/ Only for banks involved in the Consolidation Program II.

As a first step, a 0-1 dummy is assigned to selected cost-critical features of the restructuring policies described in Table 5,[23] subsequently, all the dummies are summed up to create a REI. To check for the robustness of the results obtained when one or two sensitive components of the REI are dropped, four alternative version of the same index are constructed (EFFECTIVE1 to EFFECTIVE4).[24] Large values of REIs indicate high effectiveness of restructuring policies and are expected to be associated with lower restructuring costs. The REIs are meant to evaluate only the effectiveness of the restructuring programs in minimizing the fiscal costs and not to provide an overall assessment of the effectiveness of the bank restructuring programs.

The four REIs are based on the following assumptions, which will be tested in the empirical analysis below: (i) financial restructuring operations entailing repeated recapitalizations are expected to intensify moral hazard and amplify total fiscal costs; (ii) central bank liquidity support to insolvent institutions is expected to increase total costs, by generating losses, that will be borne either by the monetary authority directly or, eventually, by the government;[25] (iii) the bail-out of insolvent banks that are considered "too big to fail" is expected to create moral-hazard and magnify the fiscal costs of bank restructuring; (iv) consolidation programs that do not provide adequate recapitalization from the start and that fail to effectively improve bank liquidity will likely require further intervention, raising total fiscal costs;[26] (v) insufficient institutional restructuring is expected to contribute to higher fiscal expenditures; (vi) the existence of more than one restructuring agency may duplicate operating costs, jeopardize the transparency of the restructuring program, and ultimately generate unforeseen budget costs, thus it is expected to increase total costs;[27] and (vii) a large involvement of the central bank in consolidation schemes may create conflict of interest and moral hazard since

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[23] Not all of the aspects considered in Table 5 are included in the empirical analysis, because information on certain features of the restructuring programs was available only for a limited number of countries.

[24] For definitions and methodological aspects of the construction of the REIs, see Appendix IV.

[25] In the *Czech Republic* and in *Estonia*, for example, the losses incurred by the central bank were or will be ultimately paid by the government budget. In the former country the National Bank bore the cost of the "Consolidation Program II" launched at the end of 1995. The government, however, issued a guarantee to the monetary institution for potential losses. Since the central bank intends to call this guarantee (Czech Republic National Bank, 1998), part of the cost of the central bank support to the banking sector will fall on the government budget. In *Estonia*, largely as a consequence of the financial assistance granted to the banking sector, the central bank showed negative profits in 1994. The loss was eventually covered through a budget transfer, extended by the government in 1996.

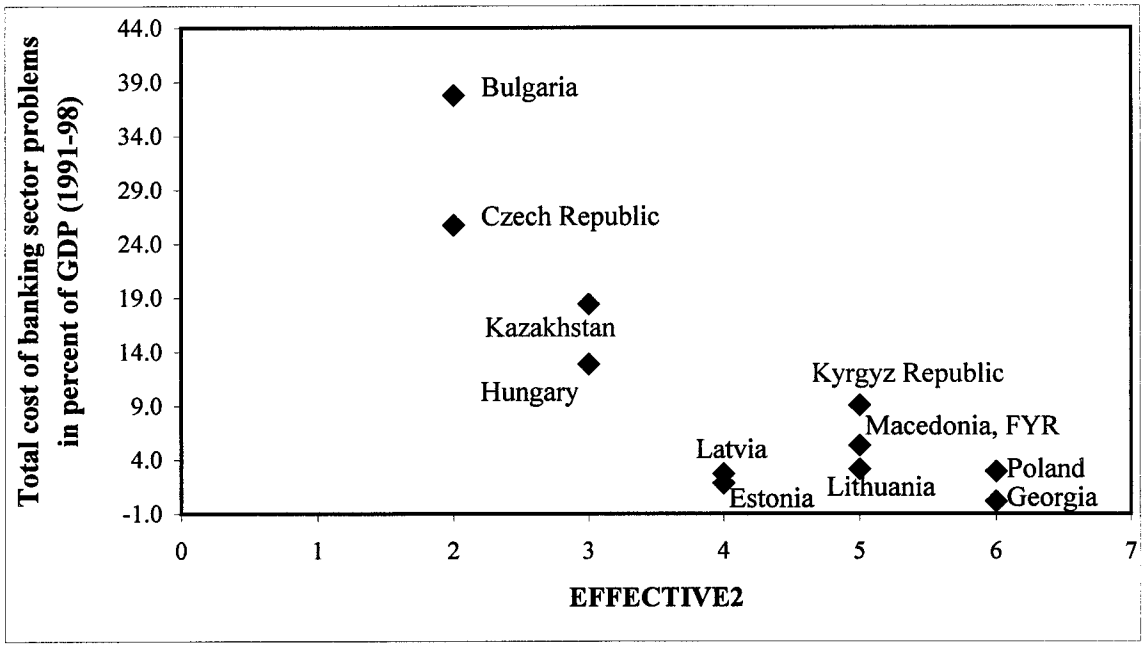
[26] The previous section illustrated the experience of some countries (*Bulgaria, Hungary*), where restructuring programs suffered in particular from these drawbacks.

[27] In the *Czech Republic*, for instance, three state-owned institutions were created to take over and manage banks' non-performing loans (*Konsolidacni banka, Ceska inkasni* and *Ceska financni*). These companies are linked through a complex web of financial obligations and guarantees to the Ministry of Finance, the National Property Fund (the privatization agency), and the central bank. The amount of gross potential government liabilities arising from these loan hospitals was estimated to be nearly 7.5 percent of GDP at the end of 1997 (OECD, 1998).

the monetary authority may end up having to supervise banks in which it has a direct economic interest.[28] This may lead to delay in the resolution of banking problems and is, therefore, expected to increase the associated costs.[29]

Figure 3 plots the total cost of banking sector problems against the REI EFFECTIVE2, for the 11 countries. As expected, there appears to be a negative relationship between the index and total costs. But how important was the role of bad policies in determining the total cost of bank restructuring? To try to evaluate the impact of the REIs on the cost of banking sector problems against other factors that might have exacerbated these costs, cross-country and panel data analyses are performed in the next section. It has to be stressed, however, that owing to the small number of observations and other data limitations,[30] the following econometric results should be seen as merely suggestive rather than conclusive.

Figure 3. Cost of Banking Problems and REI



Note: For details on costs see Appendix I. The costs related to the compensation for foreign currency deposits in *Macedonia, FYR* is deducted.

[28] It can be argued that the Stabilization Program launched in the Czech Republic in late 1995 and largely financed by the Czech National Bank gave rise to this kind of situation (World Bank, 1999).

[29] In general, also the policies regarding the treatment of depositors of failed banks are expected to have a significant impact on the costs of banking sector problems. In the countries under consideration, however, deposit compensation was limited and there was not much variation across countries in the policies adopted on this matter. Therefore this aspect is not considered to be a cost-critical feature for the restructuring programs reviewed here.

[30] Early 1990s data tend to be poor, especially for the CIS countries.

IV. Econometric Analysis

A. Cross-Section

The discussion above suggests that three main factors seem to have contributed to the total cost of banking problems: financial depth prior to the emergence of the problems, the size of inherited non-performing loans, and the weaknesses of bank restructuring programs. In the following statistical analysis three variables are used alternatively as indicators of financial depth: the ratio of credit to the private sector to GDP and the ratio of broad money to GDP before the eruption of bank problems[31] (INITCREDIT and INITM2, respectively), as well as the average of these two variables (INITCREDM2).[32] The share of inherited non-performing credits in total credits is adopted as a measure of the size of inherited bad loans (INHERITED).[33] Three different variables are used to assess the cost of banking sector problems: the total cost (TOTAL), the total cost less the cost for deposit compensation (RESTRUCT), and the total cost less the cost for inherited bad loans (NET COST).[34]

Tables 6 and 7 show the correlation coefficients and the Spearman rank correlation coefficients between the different variables measuring the costs of banking problems and the variables that might have affected these costs. As expected, the four REIs are negatively correlated with the cost variables. Also, the rank correlation coefficients have the expected sign and are statistically significant. The different indicators of initial financial depth and INHERITED are positively correlated with the cost measures in Table 6. However the rank correlation coefficients on these variables are not statistically significant and occasionally they even exhibit the wrong sign (Table 7).

Also the results obtained by regressing the cost measures on the REIs, on INHERITED, and on the indicators of initial financial depth suggest that the drawbacks of restructuring policies significantly contributed to the total cost of banking sector problems in the 11 countries (see Table 8). It appears that inherited bad credits also had a positive and significant impact on the cost of banking sector problems. On the other hand, the coefficients of the variables measuring the scale of intermediation prior to the emergence of banking problems have the unexpected sign and are insignificant.

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[31] One or two years before the emergence of bank problems, depending on data availability.

[32] Although the ratio of credit to the private sector to GDP and the ratio of broad money to GDP are traditional measures of financial depth, they are imperfect indicators, as they may well reflect other factors, such as bad lending practices or excessive money creation.

[33] Note, however, that a definitive evaluation of inherited loans is impossible, owing to the lack of accounting and loan classification procedures at the onset of the transition and the difficulty in distinguishing between old and new credits.

[34] These costs are calculated as the sum of the present value at end-1998 of annual costs during 1991–98, as a percentage of 1998 GDP. The expense related to the compensation for foreign currency deposits in *Macedonia, FYR* is deducted. For details, see Appendix I.

Table 6: Correlation Coefficients

	TOTAL	RESTRUCT	NET COST
EFFECTIVE1	-0.78	-0.80	-0.74
EFFECTIVE2	-0.84	-0.86	-0.69
EFFECTIVE3	-0.77	-0.79	-0.65
EFFECTIVE4	-0.71	-0.74	-0.71
INITCREDIT	0.18	0.23	0.33
INITM2	0.61	0.61	0.28
INITCREM2	0.47	0.5	0.33
INHERITED	0.86	0.86	0.44

Table 7: Spearman Rank Correlation Coefficient

	TOTAL	RESTRUCT	NET COST
EFFECTIVE1	-0.98***	-0.99***	-0.85***
	(13.83)	(17.98)	(4.84)
EFFECTIVE2	-0.71***	-0.70***	-0.59**
	(3.06)	(2.98)	(2.17)
EFFECTIVE3	-0.61**	-0.61**	-0.52*
	(2.30)	(2.30)	(1.82)
EFFECTIVE4	-0.70***	-0.71***	-0.61**
	(2.98)	(3.06)	(2.33)
INITCREDIT	-0.01	-0.02	-0.07
	(0.03)	(0.05)	(0.02)
INITM2	0.38	0.43	0.13
	(1.24)	(1.42)	(0.38)
INITCREM2	0.45	0.48	0.25
	1.49	(1.65)	(0.79)
INHERITED	0.28	0.28	-0.05
	(0.88)	(0.88)	(0.16)

Note: Absolute value of t statistics in parenthesis. *, **, and *** imply significance at 10%, 5% and 1% level, respectively.

Table 8: Cross-Country Regression Results

	Dependent variable						
	TOTAL	TOTAL	TOTAL	RESTRUCT	RESTRUCT	NET COST	NET COST
CONSTANT	26.16**	31.58***	23.45**	24.10**	24.97**	20.93**	16.64***
	(3.10)	(3.25)	(2.96)	(2.78)	(2.64)	(3.05)	(4.08)
EFFECTIVE1	-2.38**	-2.99**	-	-	-	-	-
	(2.66)	(2.89)					
EFFECTIVE2	-	-	-2.27*	-2.33**	-	-	-
			(2.24)	(2.35)			
EFFECTIVE3	-	-	-	-	-2.28**	-	-1.50**
					(2.38)		(2.55)
EFFECTIVE4	-	-	-	-	-	-1.93**	-
						(2.72)	
INITCREDIT	-	-0.12	-	-	-	-	-
		(1.19)					
INITM2	-0.07	-	-	-0.01	-	-0.03	-
	(0.65)			(0.14)		(0.42)	
INITCREM2	-	-	-	-	-0.09	-	-
					(0.74)		
INHERITED	0.37**	0.30**	0.28**	0.27*	0.34***	-	-
	(3.46)	(3.34)	(2.59)	(2.12)	(3.94)		
Adjusted R^2	0.82	0.84	0.80	0.79	0.80	0.40	0.40
Number of observations	11	11	11	11	11	11	11

Note: Estimates obtained using OLS. Absolute value of t statistics in parenthesis. *, **, and *** imply significance at 10%, 5% and 1% level, respectively. The REIs have been normalized, so that they assume values between 1 and 10.

B. Panel Data

Panel data analysis allows to expand the sample size, which is very limited in the above cross-sections. Although other studies have used econometric models to investigate the determinants of fiscal costs of banking crises using cross-country regressions, to the author's knowledge this is the first attempt to address the issues using panel data. [35] Since the length of banking sector problems varies across countries, an unbalanced panel is constructed (see Appendix IV for details).

[35] See, for example, Frydl (1999) and Honohan and Klingebiel (2000).

The dependent variables are the total cost of banking sector problems (TOTAL), the cost excluding deposit compensation (RESTR), and the total cost excluding the expense for inherited bad loans (NET COST) for each year, as a percentage of GDP.[36] Among the explanatory variables, in addition to those considered in the cross-section regressions, the model includes the European Bank for Reconstruction and Development index of enterprise reforms (ENTERPRISE). This index evaluates progress in privatization, governance, and enterprise restructuring in transition countries.[37] Extensive reforms in the enterprise sector (a higher ENTERPRISE index) are expected to increase firm profitability, and reduce the quantity of non-performing credits, thus diminishing banking sector problems and their costs. To account for the macroeconomic shocks that, as discussed in Section II, caused or exacerbated banking sector problems, several macroeconomic indicators are also included among the regressors. These indicators are GDP growth (GROWTH), real interest rates on loans (REALINT), the current account balance as a percentage of GDP (CAB), the fiscal account balance as a percentage of GDP (FAB), the change in the terms of trade (TOTCHANGE).[38] The assumption is that higher growth, lower real interest rates, a more favorable external and fiscal position and an increase in the terms of trade reduce banking sector problems and lower costs.[39] Finally, the regressors also include time dummies (for example, T1991, T1992) as well as a dummy for the first year in which banking sector problems erupted (START).

The results of the regressions (Table 9) support the previous finding that the indices assessing the effectiveness of the restructuring policies appear to have had a significant impact on the cost of banking sector problems. The coefficients of the variable accounting for inherited non-performing loans and of the index measuring the progress in enterprise reforms have the expected sign and are statistically significant. Surprisingly, the coefficients of INITCREDIT are significant, but with the wrong sign. The coefficients of the other indicators of initial financial depth are instead insignificant. Among the variables controlling for the impact of macroshocks, only the change in the terms of trade, the fiscal account balance as a percentage of GDP, and the real interest rates show significant coefficients with the expected sign. Finally, only the time dummy T1994 has a significant coefficient.

In sum, after controlling for several factors that might have exacerbated the cost of banking sector problems, both cross-country and panel regression results suggest that weaknesses in the design and implementation of the restructuring programs aggravated the associated costs. Specifically, these empirical findings seem to support the paper's assumption that restructuring programs entailing repeated recapitalizations, significant involvement of the central bank in the restructuring scheme, inadequate institutional restructuring, and the

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[36] These cost variables excludes the expense for interest payments.

[37] For details see EBRD (2000). The original index ranges from 1 to 4. In the following regressions it has been normalized, so that it takes values between 1 and 10.

[38] Similar indicators have been used in Honohan and Klingebiel (2000).

[39] To deal with the possible problem of reverse causality and to account for some sluggishness in the adjustment process, the variables ENTERPRISE, GROWTH, FAB and TOTCHANGE are lagged.

existence of more than one restructuring agency amplified the total cost of banking sector restructuring.

Table 9: Panel Data Regressions

	Dependent Variable						
	TOTAL	**TOTAL**	**TOTAL**	**RESTRUCT**	**RESTRUCT**	**NET COST**	**NET COST**
CONSTANT	9.77***	11.43***	11.43***	11.33***	11.38***	9.78**	8.53**
	(2.99)	(4.50)	(4.08)	(4.48)	(4.15)	(2.61)	(2.61)
EFFECTIVE1	-0.60**	-	-	-0.67**	-	-	-
	(2.07)			(2.69)			
EFFECTIVE2	-	-0.70***	-	-	-	-0.68***	-
		(2.75)				(2.88)	
EFFECTIVE3	-	-	-	-	-	-	-0.63***
							(2.98)
EFFECTIVE4	-	-	-0.70**	-	-0.69**	-	
			(2.43)		(2.44)		-
INITCREDIT	-0.06**	-0.04**	-0.07**	-0.05**	-0.06**	-0.06	-0.04*
	(2.44)	(2.17)	(2.60)	(2.18)	(2.29)	(1.57)	(1.75)
INHERITED	0.05**	0.03	0.04**	0.04*	0.04*	-	-
	(2.25)	(1.17)	(2.17)	(1.96)	(1.90)		
ENTERPRISE (-1)	-0.71***	-0.93***	-0.85***	-0.92***	-0.89***	-0.59*	-1.48
	(2.8)	(4.44)	(3.99)	(4.48)	(4.26)	(1.74)	(1.61)
GROWTH (-1)	-0.04	-	-	-	-	-	-
	(0.76)						
REALINT	0.003**	0.003***	0.004***	0.004***	0.004***	0.002**	0.002*
	(2.13)	(3.11)	(3.03)	(3.36)	(3.34)	(2.10)	(1.98)
TOTCHANGE (-1)	-	-0.07**	-0.07*	-0.07**	-0.07*	-0.06	-0.07*
		(2.08)	(1.93)	(2.13)	(2.01)	(1.63)	(1.79)
FAB (-1)	-0.36***	-0.34***	-0.35***	-0.26**	-0.31***	-0.18**	-0.27***
	(2.90)	(3.34)	(3.43)	(2.59)	(3.11)	(2.67)	(3.31)
T1994	-	2.42**	2.39**	2.65***	2.62**	-	-
		(2.48)	(2.40)	(2.76)	(2.70)		
Adjusted R^2	0.52	0.61	0.60	0.60	0.59	0.38	0.38
Number of obs.	48	46	46	46	46	40	40

1/ Estimates obtained using OLS. Absolute value of t statistics in parenthesis. *, **, and *** imply significance at 10%, 5% and 1% level, respectively.
2/The t statistics are obtained using the White heteroskedasticity-consistent standard errors.
3/ The REIs have been normalized, so that they assume values between 1 and 10.

V. Bank Restructuring Costs and Banking Sector Performance

Did countries that incurred high bank restructuring costs improve their banking sector more than countries that spent less? The paper considers different aspects of banking sector conditions to assess the success of the restructuring operations undertaken in the 11 countries.[40] The ratio of credit to the private sector to GDP and the ratio of M2 to GDP are used as indicators of the degree of financial depth. These variables are expected to enlarge when the banking sector is effectively restructured. An increase in credit to the private sector, however, may also reflect bad lending practices. Therefore, the share of non-performing loans is included as an additional indicator of banking sector performance. Interest rate spreads (lending minus deposit rates) and central bank credit to banks are taken as measures of the efficiency of intermediation. An increase in interest rate spreads may indicate that banks are facing riskier borrowers, and hence charging them with higher rates, or that banks need to cover larger expenses due to loan losses. So a decline in the spreads is interpreted as an improvement in efficiency. Also lower reliance of banks on central bank credit indicates progress in the performance of the system. The ratio of M1 to M2 and the currency-to-deposit ratio are used as measures of confidence in the banking sector. As these variables reflect the degree to which the banking sector is able to mobilize long-term liabilities, a decline in these indicators is interpreted as a sign of increased confidence in the system.

Table 10 shows the change in the indicators of banking sector performance after the resolution of banking sector problems, relative to the years before the eruption of the problems. All 11 countries show a significant decline in the share of non-performing loans and central bank credit to banking institutions. In certain countries, however, some variables, such as the ratio of M2 to GDP, and the ratio of M1 to M2 point to a weakening in the intermediation capacity of the banking sector and a decline in the public's confidence in the financial system.

To investigate whether there is any relation between the cost of bank restructuring and improvement in banking sector conditions, an overall measure of progress in banking sector performance is constructed. This measure is defined as the unweighted average of the increase in credit to the private sector, increase in the ratio of M2 to GDP, decline in central bank credit to banks, decline in the currency-to-deposit ratio, decline in the M1-to-M2 ratio, and decline in the share of non-performing loans.[41] A simple look at the data underscores no significant relationship between total banking sector restructuring costs and overall improvement in banking sector performance for the sample as a whole (Figure 4). This is probably because progress in banking sector conditions was largely affected by macroeconomic as well as idiosyncratic shocks. Furthermore, part of the costs was not

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[40] The approach adopted here to evaluate the effects of bank restructuring partly follows the methodology of Dziobek and Pazarbaşioğlu (1997).

[41] The decline in interest rate spreads is excluded from the average calculation, as data are missing for two countries.

discretionary, but was incurred in response to impending crises, so it could not be well targeted toward improving the performance of the banking sector.

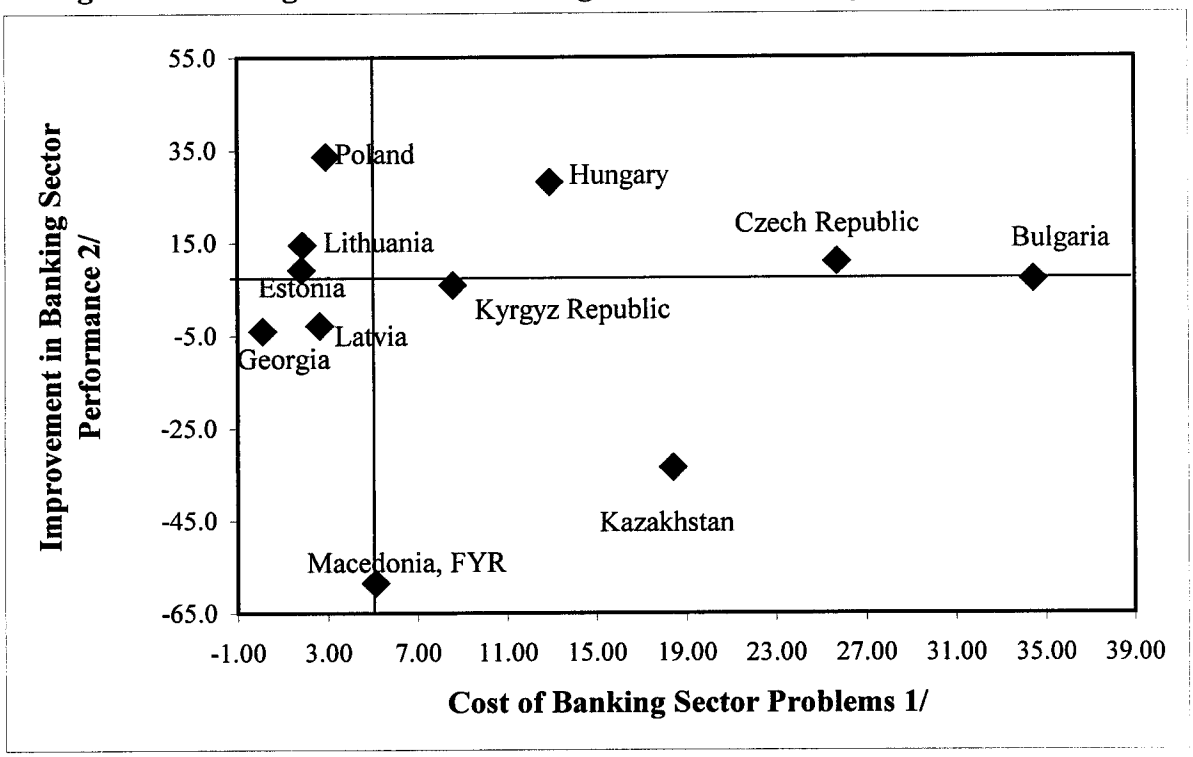
Table 10. Improvements in Banking Sector Performance 1/

	Financial Intermediation		Efficiency		Confidence in the Banking System		Soundness
	Credit to the private sector (Percent of GDP)	Broad money (Percent of GDP)	Interest rate spreads 2/	Central bank credit to banks (Percent of GDP)	Currency-to-deposit ratio	M1-to-M2 ratio	Share of non-performing loans
Central and Eastern Europe							
Bulgaria	75.9	-59.2	16.0	-93.7	75.4	75.5	-82.4
Czech Rep.	15.7	-2.1	-32.8	-47.4	63.3	-13.7	-53.5
Hungary	-44.2	-0.1	-29.4	-89.6	-16.4	-28.0	-78.9
Macedonia, FYR	-69.5	-79.5	-77.9	-35.2	-6.9	304.1	-60.0
Poland	41.2	8.0	427.7	-74.7	-21.2	-22.0	-34.6
Baltics							
Estonia	41.9	-2.9	-4.0	-98.3	31.9	105.8	-55.1
Latvia	-28.8	-14.6	-82.2	-11.3	2.4	9.0	-25.9
Lithuania	-28.1	-20.6	-28.5	-92.9	1.2	9.5	-53.7
CIS							
Georgia	-35.9	-60.3	-44.1	-15.1	35.6	-19.7	-72.8
Kazakhstan	-85.7	-56.9		-99.5	258.3	-34.3	-65.8
Kyrgyz Rep.	-65.2	-17.6		-91.1	90.1	-22.4	-94.5

1/ Percent change between performance before and after the resolution of banking sector problems.
2/ Lending minus deposit rate (percent per annum).

Figure 4 divides the sample countries into four subsets by drawing a vertical and a horizontal line to correspond with the two median countries, *Macedonia, FYR* and *Bulgaria*. Countries in the first group (*Bulgaria*, *Hungary*, the *Czech Republic* and the *Kyrgyz Republic*) undertook expensive restructuring programs that significantly improved banking sector conditions. Countries in the second group (*Kazakhstan* and *Macedonia, FYR*) made little progress in banking sector performance relative to the other countries in the sample, despite the relatively high cost of the restructuring policies. For countries in the third group (*Georgia* and *Latvia*), low banking sector restructuring costs are associated with relatively small improvements in banking sector performance. Finally, the countries in the fourth group (*Estonia*, *Poland* and *Lithuania*) appear to be those in which restructuring policies produced significant progress in banking sector conditions despite their relatively low cost.

Figure 4. Banking Sector Restructuring Costs and Banking Sector Performance



1/ Total costs less costs for deposit compensation. For details, see Appendix I.
2/ Average of the increase in credit to the private sector, increase in M2-to-GDP ratio, decline in central bank credit to banks, decline in the currency-to-deposit ratio, decline in M1-to-M2 ratio, decline in the share of non-performing loans following the resolution of banking sector problems.
3/ The vertical and horizontal lines mark the median.

VI. Concluding Remarks and Policy Implications

This paper analyzed the banking sector restructuring costs incurred by the government and the central bank in 11 transition economies. It pointed out that although all these economies confronted similar problems, the size and composition of the overall bank restructuring costs varied greatly among them. In this connection, the paper examined the contribution of three main factors in explaining the different outcomes, namely, the specific features of the banking sector in each country; the size of non-performing loans inherited from the previous centrally planned regimes; and the design weaknesses and implementation slippages in the restructuring policies put in place. The results of empirical analysis appear to support the hypothesis that inherited non-performing loans and weaknesses in the restructuring operations had a significant impact on the cost of banking sector problems. This finding also holds after controlling for other factors, such as macroeconomic shocks, that might have exacerbated those costs. The paper finds no relationship between total bank restructuring cost and the ex post overall improvement in banking sector performance for the sample countries as a whole.

The analysis of the experiences of the 11 transition economies supports the following policy implications.[42]

- To achieve a successful and sustained resolution of banking sector problems and to minimize the associated costs for the government and the central bank, financial, operational, and institutional restructuring involving improvements in banking supervision and regulation would need to be implemented simultaneously and comprehensively.

- Financial restructuring must provide adequate recapitalization, and effectively strengthen banks' liquidity position to curtail the risk of moral hazard inherent in expectations of repeated injections of public funds.

- Consistency and credibility of the authorities' actions and announcements are key to containing expectations of future bailouts.

- The policy of bailing out banks that are regarded as too big to fail may induce moral hazard and magnify the cost of bank restructuring.

- Significant involvement of the central bank in bank restructuring operations may generate conflict of interests reduce transparency, and ultimately result in unexpected costs for the government budget.

- The existence of more than one centralized restructuring agency may produce duplication of operating costs, reduce the transparency of restructuring policies, and create unanticipated expenses for the government budget.

[42] These policy implications are consistent with the conclusions of Enoch and others (2001) on the experience of Indonesia during 1997–99.

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Table A1. Cost of Bank Restructuring and Deposit Compensation for the Government (1991–98)

(Percent of GDP)

Bulgaria		1991	1992	1993	1994	1995	1996	1997	1998	Total 1/
1991-94: Clean up of banks' portfolios from inherited bad loans.	Bonds issued	0.0	2.0	10.9	19.0	0.0	0.0	0.0	0.0	**21.9**
	Interest Payments	0.0	1.3	1.3	2.9	1.6	2.5	0.5	0.4	
1995: Solvency and liquidity problems in two state-owned banks (Mineral Bank and Economic Bank).	Bonds issued 2/	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	**0.4**
	Interest Payments	0.0	0.0	0.0	0.0	1.3	7.8	0.3	0.0	
1996-97: Widespread solvency and liquidity problems.	**Bank restructuring**									
	Bonds issued	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	**0.4**
	Interest Payments	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.04	
	Deposit Compensation									
	Bonds issued	0	0	0	0	0	3.3	1.3	0.04	**3.3**
	Interest Payments	0.0	0.0	0.0	0.0	0.0	1.4	0.2	0.1	
TOTAL										**26.0**
Czech Republic 3/		1991	1992	1993	1994	1995	1996	1997	1998	Total 1/
1991-93: Consolidation Program I to clean the portfolios of former state-owned banks/organizations.	Bonds issued 4/	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
	Bad loans taken over	10.9	1.8	2.7	0.3	0.0	0.1	0.0	0.0	13.8
	o/w by KoB	10.9	1.8	0.0	0.0	0.0	0.0	0.0	0.0	10.9
	o/w by CI	0.0	0.0	2.7	0.3	0.0	0.1	0.0	0.0	3.0
	Total									**17.2**
1996-1997: Consolidation Program II to clean portfolios of small-medium banks created after start of transition.	Bad loans taken over by CF	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	**0.9**
Other	Bad loans taken over by KoB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	**1.0**
	Transfers to banks 5/	0.0	0.0	0.9	0.7	0.3	0.0	NA	NA	**1.8**
TOTAL										**20.9**
Hungary		1991	1992	1993	1994	1995	1996	1997	1998	Total 1/
1992-93: Loan Consolidation Program for inherited bad loans	Bonds transferred to banks	0.0	2.7	0.0	1.3	0.0	0.0	0.0	0.0	4.9
	Guarantees called less recovered	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2
	Total									**5.2**
1993-94: Bank-led Restructuring and Loan Consolidation Program.	Bonds transferred to banks	0.0	0.0	3.6	0.8	0.0	0.0	0.0	0.0	**5.2**
Support for Agrobank.	Bonds issued	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.3
Support for Postabank	Bonds issued	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.9
Total interest payments		0.0	0.0	0.0	1.2	1.7	1.5	1.0	0.5	
Guarantees called less recovered		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3
TOTAL										**12.9**
Macedonia, FYR		1991	1992	1993	1994	1995	1996	1997	1998	Total 1/
1994: Clean up of the portfolio of the largest bank from non-performing loans.	Bonds issued	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	5.1
	Interest payments	0.0	0.0	0.0	0.0	0.4	0.4	0.2	NA	
Foreign currency deposits 6/		0.0	0.0	0.0	0.0	22.5	0.0	0.0	0.0	24.3
Cash deposit compensation		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
TOTAL										**29.6**

Table A1. Cost of Bank Restructuring and Deposit Compensation for the Government (1991–98)

(Percent of GDP)

Poland		**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total 1/**
1993-1994: Enterprises and Banks Restructuring Program for inherited bad loans.	Bonds issued	0.0	0.0	1.3	0.8	0.0	0.0	0.0	0.0	2.4
	Interest payments	0.0	0.0	0.2	0.4	0.3	0.2	0.2	0.1	
TOTAL										**2.4**
Estonia		**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total 1/**
1992: Four banks faced solvency problems.	Bonds issued	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	1.0
	Interest payments	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	
1994: The country second largest bank (Social Bank) faced solvency and liquidity problems.	Purchase of bad loans	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.04
	Recapitalization of the Central Bank	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3
TOTAL										**1.4**
Latvia		**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total 1/**
1993-1994: Restructuring of two state-owned banks.	Bonds issued	0.0	0.0	1.6	1.9	0.0	0.0	0.0	0.0	2.5
	Interest payments	0.0	0.0	0.3	0.4	0.04	0.03	0.03	0.03	
1995: Systemic crisis	Bank restructuring	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Deposit compensation Cash	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.04
TOTAL										**2.5**
Lithuania		**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total 1/**
1995-96: Systemic crisis	**Bank restructuring**									**1.7**
	Bonds issued	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.5	1.6
	Interest payments	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
	Cash	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0
	Property transfer	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0
	Guarantee on interbank loan (called)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
	Deposit compensation									**1.3**
	Cash compensation and write-off of government deposits	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3
	Bonds issued	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9
	Interest payments (zero coupon bonds)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Deposit compensation from Deposit Insurance Fund paid by the government	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
TOTAL										**3.0**
Georgia		**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total 1/**
1994: Widespread insolvency and non compliance with regulations.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995-1997: Solvency and liquidity problems in Agrobank.	Bank liabilities to government written-off	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#DIV/0!	0.08
	Assumption of enterprise debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#DIV/0!	0.04
TOTAL										**0.1**

Table A1. Cost of Bank Restructuring and Deposit Compensation for the Government (1991–98)

(Percent of GDP)

Kazakhstan		**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total 1/**
1994-95: Restructuring program to clean-up banks' portfolios.	Assumption of enterprise debt	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	17.6
1996: Four large banks experienced solvency and liquidity problems.	Recapitalization of banks	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.8
TOTAL										**18.4**

Kyrgyz Republic		**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total 1/**
1994-96: Clean up of banks' portfolios from bad loans.	**Bank restructuring**									**4.4**
	Bonds issued	0.0	0.0	0.0	0.0	0.1	4.4	0.7	0.0	4.4
	o/w to Central bank	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	3.3
	Interest payments	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	
	o/w to Central bank	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	
	Deposit compensation									**0.5**
	Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5
TOTAL										**4.9**

1/Sum of present value at end-1998 of annual costs during 1991-98, as a percentage of 1998 GDP.
2/ The government swapped foreign currency bonds held by Mineral Bank and Economic Bank for local currency denominated securities. The figure shown is net of the bonds withdrawn.
3/ Assistance to the banking sector provided by the National Property Fund and various asset management companies: Konsolidacni Banka (KoB); Ceska Inkasni (CI); Ceska Financni (CF)
4/ Issued by the National Property Fund
5/ Extended by the National Property Fund
6/ The government assumed the obligation for the repayment of households foreign currency deposits that were lost after the dissolution of the former Socialist Republic of Yugoslavia.

Table A2. Cost of Bank Restructuring for the Central Bank (1991–98)

(Percent of GDP)

	1991	1992	1993	1994	1995	1996	1997	1998	Total 1/
Bulgaria									
Provisions for losses on credit extended to banks	NA	NA	NA	NA	2.8	6.6	2.3	0.0	
Recoveries (-)	NA	NA	NA	NA	NA	NA	0.05	0.1	
Total	NA	NA	NA	NA	2.8	6.6	2.2	-0.1	**11.8**
Czech Republic									
Cost of Consolidation Program (provisions and losses)	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.9	
Provision on credit to asset management agency	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	
Total									**4.8**
Hungary	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Macedonia, FYR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Poland									
Total cost of central bank intervention	NA	NA	NA	NA	NA	NA	NA	NA	**0.5 2/**
Estonia									
Loss on assets purchased from troubled banks	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	
Provisions on loans unrequited by the liquidated banks	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	
Writing off of CB shares in banks to cover their losses	0.0	0.0	0.0	0.0	0.02	0.04	0.0	0.0	
Transfer of assets	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
Recoveries (-)	0.0	0.0	0.0	0.0	0.0	0.002	0.005	0.02	
Total	0.0	0.0	0.0	0.7	0.3	0.0	0.2	0.0	**0.8**
Latvia									
Provisions for losses on credit extended to banks	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	**0.1**
Lithuania									
Losses on credit extended to banks	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	**0.2**
Georgia	NA	NA	NA	NA	NA	NA	NA	NA	**NA**
Kazakhstan	NA	NA	NA	NA	NA	NA	NA	NA	**NA**
Kyrgyz Republic									
Losses on credit extended to banks	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	**7.4**

1/ Sum of present value at end-1998 of annual costs during 1991–98, as a percentage of 1998 GDP.
2/ Kawalec (1999), p. 29.

Features of Banking Sector Problems in Selected Transition Countries

Country	Period	Episodes	Magnitude of the problem	Private vs. public banks affected	Liquidity vs. Solvency
Bulgaria	1990s	1991–94: Clean up of bank portfolios from bad loans inherited from the centralized system.	In 1990 non-performing loans were about 54 percent of total loans.	Former state owned banks.	Solvency.
		1995: Solvency and liquidity problems in two state-owned banks.		State-owned banks.	Solvency and liquidity.
		1996–97: Widespread liquidity problems. Also currency crisis.	About one third of the total number of banks was found insolvent and closed.	Both state and private banks.	Solvency and liquidity.
Czech Rep.	1990s	1991–93: Consolidation Program I to clean the portfolios of former state-owned banks/organizations.	A clear evaluation of bad loans size at the beginning of the transition is impossible. Estimates of the share of bad credits vary from 2.4-19 percent to 50-66 percent.	Former state-owned banks and former trade organization.	Solvency.
		1996: Run on a medium-sized bank (Agrobanka)			
		1996–97: Consolidation Program II to clean the portfolios of small-medium banks and Stabilization Program to provide cash-flow relief in distressed banks.	Eighteen banks involved in the Consolidation Program (of which three were liquidated). Six banks involved in the Stabilization Program.	Mainly private banks.	Mainly solvency problems. Also some liquidity problems in 1996.
Hungary	1990s	1992–93: Loan Consolidation Program to clean up bank portfolios from inherited bad loans.	According to some estimates, in 1992 non-performing loans were 20.7 percent of total loans.	State-owned banks.	Solvency.
		1993–94: Bank-led Restructuring and Loan Consolidation Program.	In 1993 non-performing loans constituted nearly 30 percent of total loans.	State-owned banks.	Solvency.
		1995: Solvency problems in a state-owned bank (Agrobank).		State-owned bank.	Solvency.
		1997: Run on the second largest retail bank (Postabank). Solvency crisis in a small private bank.		Private banks.	Solvency and liquidity.

Features of Banking Sector Problems in Selected Transition Countries

Country	Period	Episodes	Magnitude of the problem	Private vs. public banks affected	Liquidity vs. Solvency
Macedonia, FYR	1990s	1994: Clean up of the portfolio of the largest bank (Stopanska Bank) from non-performing loans.	In 1993 non-performing assets were about 80 percent of total assets.	State-owned bank.	Solvency and liquidity.
		1997: Eight saving houses were closed.			Solvency.
Poland	1990s	1993–94: Enterprises and Banks Restructuring Program to clean the portfolios of state-owned banks.	In 1992 about 30 percent of total loans were non-performing.	State-owned banks.	Solvency.
		1991–94: Solvency problems in two specialized banks (BGZ and PKO BP).		State-owned banks.	Solvency.
		1994–98: Solvency problems in agricultural cooperatives banks.	Two-hundred cooperatives qualified for bankrupcty and sixty were suspended.	Mostly state-owned cooperatives.	Solvency.
Estonia	1992, 1994	1992: Three banks faced solvency problems.	Total bad assets: 40 percent of banking system assets.	Private banks.	Solvency and liquidity.
		1994: The country second largest bank (Social Bank) faced liquidity problems and had weak loan portfolio. It was closed in 1995.	Withdrawal of over one-half of Social Bank bank deposits. This bank represented about 20 percent of total banks' assets at the end of 1993.	Private bank, with residual government ownership.	Solvency and liquidity.
Latvia	1993–94, 1995	1993–94: Restructuring operation in two banks.	In 1993 non-performing loans were about 5 percent of total banking system assets.	State-owned banks.	Solvency.
		1995: Closure of the largest private bank (Baltija); three small and medium sized banks declared insolvent. Fiteen bank licenses revoked.	Total compromised assets were 40 percent of banking system assets.	Private banks.	Solvency and liquidity.
Lithuania	1995–96	Widespread solvency problems in the whole banking system (including in the two largest banks).	In 1996 non-performing loans were 32 percent of banking assets.	Private and state-owned banks.	Solvency and liquidity.

Features of Banking Sector Problems in Selected Transition Countries

Country	Period	Episodes	Magnitude of the problem	Private vs. public banks affected	Liquidity vs. Solvency
Georgia	1994, 1995–97	1994: Insolvency of five state-owned banks. Many small private banks did not conform with regulations and were closed.	Bad loans in 1995 reached 40 percent of total loans.	State owned and private banks.	Solvency.
		1995–97: Solvency and liquidity problem in a bank (Agrobank).	Insolvent bank's assets were 7 percent of total banking system assets.	Private.	Solvency and liquidity.
Kazakhstan	1994, 1997	1994–95: Restructuring program to clean-up banks' portfolios.	In 1994 about 50-55 percent of commercial loans were either doubtful or loss.	State-owned and private banks.	Solvency.
		1996: Four large banks experienced solvency and liquidity problems.		State owned and private banks.	Solvency and liquidity.
Kyrgyz Rep.	1995–97	Liquidation of several banks. Clean up of bank portfolios from bad loans (FINSAC).	In 1995 approximately 92 percent of banking loans were non-performing. Also the four largest banks were insolvent.	State-owned and private banks.	Solvency.

Source: Tang, Zoli, and Klytchnikova (2000).

Inflation

(Consumer prices annual percent change)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Central and Eastern Europe									
Bulgaria	23.9	333.5	82.0	72.8	96.0	62.1	123.0	1082.2	22.3
Czech Rep	10.8	56.6	11.1	20.8	10.0	9.1	8.8	8.4	10.7
Hungary	28.6	34.8	22.8	22.4	18.8	28.3	23.5	18.3	14.2
Macedonia, FYR			1690.7	338.7	126.5	16.4	2.5	1.5	0.6
Poland	585.8	70.3	43.0	35.3	32.2	27.9	19.9	15.0	11.7
Baltics									
Estonia	23.1	210.6	1069.0	89.0	47.7	28.9	23.1	11.2	8.2
Latvia	10.5	124.4	951.3	109.1	35.8	25.1	17.6	8.4	4.7
Lithuania	8.4	224.7	1020.5	410.4	72.1	39.5	24.7	8.8	5.1
CIS									
Georgia	3	78.5	887.4	3125.4	15606.5	162.7	39.3	7.1	3.6
Kazakhstan		91.0	1515.7	1662.3	1879.9	176.3	39.1	17.4	7.3
Kyrgyz Rep.		85	854.6	772.4	228.7	52.5	30.4	25.5	12.0

Source: International Financial Statistics; EBRD Transition Report, various issues.

The Index of Effectiveness

Each index includes several components, summarizing different aspects of the bank restructuring programs. First, a 0-1 dummy is assigned to each component, reflecting the assumptions discussed in Section III.C; then all the dummies are summed up to obtain an index. [1/] The background information used to derive each dummy is reported in Table 5 in Section III.C. The table shows the dummies for each component of the indices and the four indices of effectiveness for the sample countries.

	Bulgaria	Czech Republic	Hungary	Macedonia, FYR	Poland	Estonia	Latvia	Lithuania	Georgia	Kazakhstan	Kyrgyz Republic
1. Did the restructuring scheme involve repeated recapitalization?	Yes	Yes	Yes	No	No	No	No	No	No	Yes	No
	0	0	0	1	1	1	1	1	1	0	1
2. Did the Central Bank extend support to insolvent institutions?	Yes	No	No	No	No	Yes	Yes	No	No	No	No
	0	1	1	1	1	0	0	1	1	1	1
3. Did authorities bail out or tried to rescue insolvent banks only because they were considered too big to fail?	No	No	Yes	Yes	No	No	No	No	No	Yes	No
	1	1	0	0	1	1	1	1	1	0	1
4. Did initial restructuring program fail to effectively improve bank liquidity?	Yes	No	Yes	No	No	No	No	No	No	No	No
	0	1	0	1	1	1	1	1	1	1	1
5. Were significant improvements in supervision and regulation introduced at the beginning of government intervention?	No	No	No	No	Yes	Yes	No	No	Yes	No	Yes
	0	0	0	0	1	1	0	0	1	0	1
6. Was more than one centralized bank restructuring agency created?	No	Yes	No	No	No	No	No	No	No	Yes	Yes
	1	0	1	1	1	1	1	1	1	0	0
7. Was the Central Bank largely involved in restructuring operations?	No	Yes	No	No	No	Yes	No	No	No	No	No
	1	0	1	1	1	0	1	1	1	1	1
EFFECTIVE1 (sum of component 1 through component 7)	**3**	**3**	**3**	**5**	**7**	**5**	**5**	**6**	**7**	**3**	**6**
EFFECTIVE2 (sum of components 1, 2, 4, 5, 6, 7)	**2**	**2**	**3**	**5**	**6**	**4**	**4**	**5**	**6**	**3**	**5**
EFFECTIVE3 (sum of components 1, 2, 5, 6, 7)	**2**	**1**	**3**	**4**	**5**	**3**	**3**	**4**	**5**	**2**	**4**
EFFECTIVE4 (sum of components 1, 2, 3, 5, 6, 7)	**3**	**2**	**3**	**4**	**6**	**4**	**4**	**5**	**6**	**2**	**5**

Source: IMF Staff Country Reports and OECD Economic Surveys, various issues.

1/ The correlation among the different components was checked. Each aggregate index includes only components that are not highly correlated with one another.

Panels Used for Regressions in Table 9

For regressions where the dependent variable is TOTAL or RESTUCT, the panel was constructed as follows:

Country	Time period
Bulgaria	1992–97
Czech Republic	1991–98
Hungary	1992–98
Macedonia, FYR	1994–97
Poland	1993–94
Estonia	1992–97
Latvia	1993–96
Lithuania	1995–98
Georgia	1994–98
Kazakhstan	1994–97
Kyrgyz Republic	1995–97

For the regressions where the dependent variable is NET COST, the panel was constructed as follows:

Country	Time period
Bulgaria	1995–97
Czech Republic	1994–98
Hungary	1994–98
Macedonia, FYR	1994–97
Poland	1993–94
Estonia	1992–97
Latvia	1993–96
Lithuania	1995–98
Georgia	1994–98
Kazakhstan	1994–97
Kyrgyz Republic	1995–97