

INTERNATIONAL MONETARY FUND

**Sovereign Debt Restructurings and the Domestic Economy
Experience in Four Recent Cases**

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I. INTRODUCTION

1. **This paper provides evidence on the impact of sovereign debt restructurings on the domestic economy.** It provides background to the staff note “Sovereign Debt Restructuring Mechanism—Further Reflections and Future Work” (FO/DIS/02/18), although the work is also relevant outside the SDRM framework. As noted by some Directors at recent Board meetings, policy makers in a country facing severe debt servicing problems have to weigh the costs of a forced debt restructuring against those of the domestic adjustment otherwise necessary to mobilize the resources to continue debt servicing. A large part of the repercussions of a restructuring are on the domestic economy, although they also include legal and reputational costs. Revealed preferences seem to indicate that the negative implications of a forced debt restructuring for the domestic economy are perceived to be so traumatic that policy makers will delay this option until all other possibilities are exhausted. Such considerations might have driven, for example, the Argentine authorities’ decision in 2001 to try to avoid debt default at the expense of a further tightening of fiscal policies.

2. **Four recent cases are examined where governments decided to default on parts or all of their debt (*Ecuador, Russia*) or to reach a restructuring with creditors under the shadow of default (*Pakistan, Ukraine*).**¹ The first two of these are particularly relevant, as the debt restructurings were comprehensive and the economic consequences far-reaching. According to the above presumption, these forced sovereign debt restructurings should have inflicted heavy costs on the domestic economies. How much have they suffered? And through what channels? What were the factors that determined the size of the inevitable economic dislocations of restructurings? Answering these questions would help in understanding such crises, gauge their impact in advance, and develop appropriate policies on their management. It may also help countries facing the decision to restructure their debt, possibly in the context of the proposed sovereign debt restructuring mechanism (SDRM). Given its focus, the analysis in this paper abstracts from the *external* consequences—such as a country’s access to international capital markets or the risk of litigation, except to the extent that they impact the domestic economy.²

3. **The paper provides a unified, comparative account of the four recent cases and focuses particularly on the interaction of debt restructurings, currency crises, and financial sector distresses.** As with previous emerging market crises in the 1990s, the crises in the four countries came to the fore in the context of general and severe economic distress. In all cases, this involved elements of currency, banking, and sovereign debt crises. Against a

¹Argentina’s default in December 2001, clearly the most significant in recent years, is not considered here because the situation is still evolving.

² Such issues are discussed in detail in the recent Board seminar paper “Involving the Private Sector in the Resolution of Financial Crises—The Restructuring of International Sovereign Bonds—Further Considerations”(EBS/02/15) as well as several earlier Board papers.

complex background of differential initial conditions and policy responses, the paper explores the channels through which the fallout of sovereign debt restructurings was transmitted to the balance sheets of the banking system, corporations, and households. This approach helps to distill the *overall* economic impact of restructurings, but it cannot isolate the *incremental* effect of the restructuring decision (i.e., disentangle the impact of currency crises from that of debt crises or illustrate the ramifications of bond restructurings in isolation). Moreover, the sample is admittedly too limited to draw firm conclusions, which is why the paper puts a particular emphasis on highlighting the four countries' specific circumstances at the time of restructuring.

4. **The paper is organized as follows:** Following a brief description of the salient features of the four countries' debt restructurings and their broad macroeconomic impact in section II, section III explains the main transmission mechanisms through which they affected the domestic economies. These consequences are closely related to countries' policy responses, such as the imposition of capital controls and the abandoning of exchange rate pegs. Naturally, particular attention is paid to the countries' financial systems as these were most directly affected by debt restructurings. Notwithstanding the difficulty of fully disentangling the effects of the restructuring from those caused by the general economic and financial turmoil typical for a country in a debt crisis, the analysis suggests a set of four factors—the structure of debt, the degree of financial development, the openness of the capital account, and the exchange rate regime in place before the restructuring—which appear to be the most relevant in explaining the debt restructuring's impact on the domestic economy. These are analyzed in further detail in section IV. Section V provides concluding remarks.

II. SOVEREIGN RESTRUCTURINGS—SOME SALIENT FEATURES

A. Debt Stock, Before and After Restructuring

5. **The four country cases considered here have several commonalities.** All of the restructurings took place in 1998-2000, in the aftermath of the Asian crisis. Unlike in the sovereign defaults in the 1980s, the restructured debt was bonded and held by a relatively diverse group of creditors, including—in some cases to a considerable extent—domestic agents. In *Russia* and *Ecuador*, the sovereign imposed a restructuring of all or part of its debt with the private sector after a default and in *Ukraine* and *Pakistan*, the restructurings took place in the shadow of a default.³

6. **The debt burden and the composition of total public debt before the sovereign debt restructuring varied substantially in the four cases.** *Ukraine* and *Russia* had moderate total public debt to GDP ratios (45 percent and 53 percent, respectively), *Pakistan* high (around 90 percent), and *Ecuador* extremely high (100 percent). Of these, *Ecuador* and

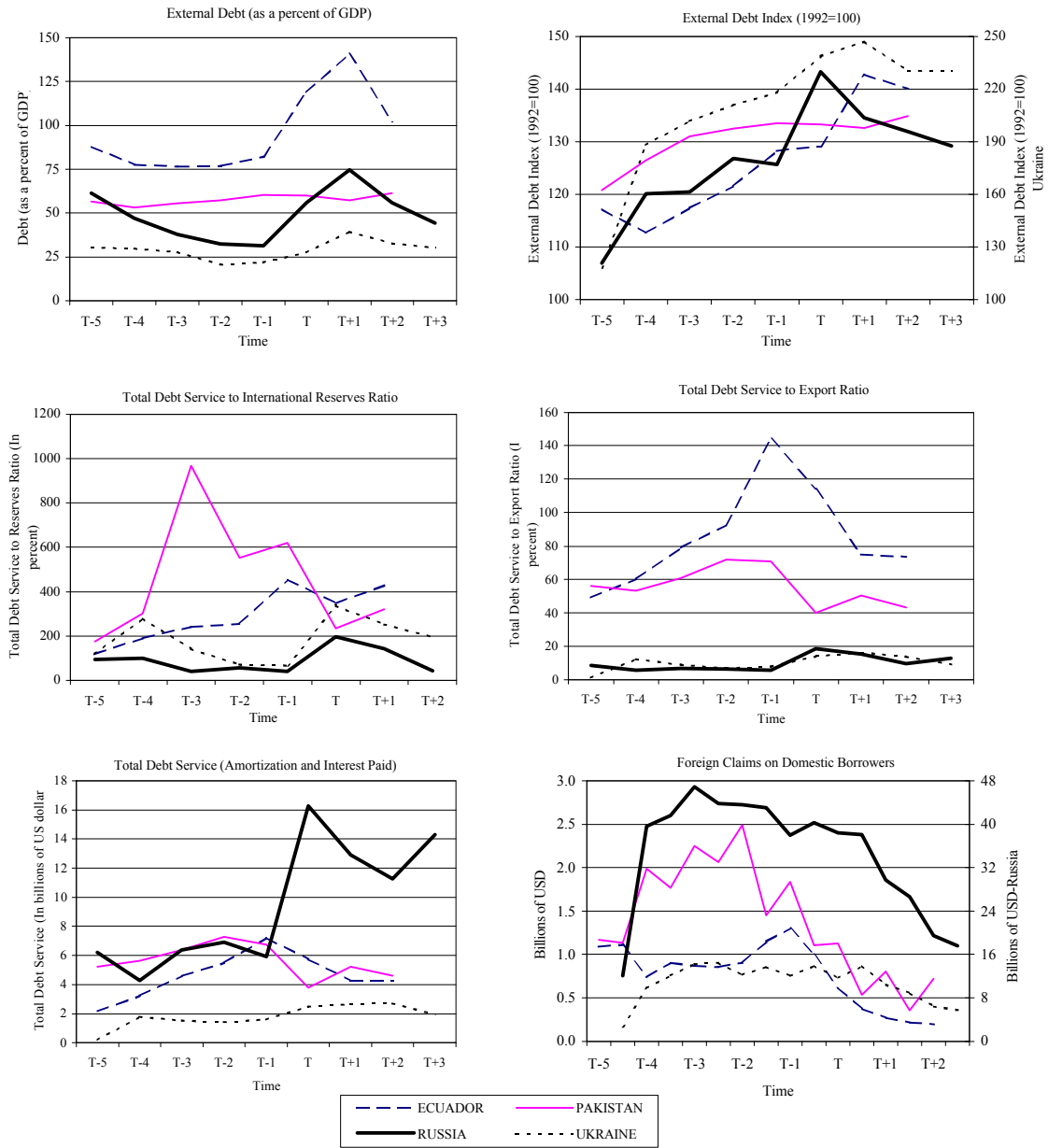
³ *Ecuador*, *Russia*, and *Pakistan* also accumulated arrears on their debt with the Paris Club.

Ukraine had a large share of external debt,⁴ about 80 percent of total, whereas in *Russia* and *Pakistan* it was slightly lower at about 60 percent. Total debt grew rapidly before the restructurings in *Ecuador* (because of costly bank restructurings) and *Russia* (reflecting a combination of persistent primary deficits and negative growth), and to a lesser extent in *Ukraine* (Figure 1).

7. **Despite the differences in the overall debt burden and the composition of debt, debt servicing problems intensified over time in all cases for a number of reasons.** In *Pakistan*, external debt service payments in the 1990s increased at a faster pace than export receipts (debt service as a share of export receipts rose from 26 percent in 1992 to 34 percent in 1998). In *Ukraine*, the external debt position did not appear unsustainable as regards to the overall debt burden, but the country faced mounting pressures from the bunching of debt service payments due to high nominal coupons (payable in foreign currency) and the short tenor of external debt. Moreover, the country's diminished access to new financing and its low level of reserves made the servicing of external debt challenging. In *Ecuador*, the public sector debt service increased sharply from 8.3 percent of GDP in 1998 to 18.1 percent of GDP in the first quarter of 2000, reflecting the real depreciation of sucre and the interest costs of government bonds in connection with the ongoing banking crisis. Finally, in *Russia* the weakening fiscal position at the end of 1997 and the first half of 1998 caused market sentiment to deteriorate, and resulted in a rising interest bill. All four countries were negatively affected by exogenous shocks such as the Asian crisis and its effect on oil prices and market sentiment.

⁴ In this paper “domestic debt” refers to debt primarily issued on domestic markets and “external debt” means debt primarily issued on foreign markets.

Figure 1. Debt Indicators 1/



Source: IFS and WEO

1/ T=1999 for Ecuador and Pakistan and 1998 for Russia and Ukraine.

8. **The debt servicing problems eventually led to debt restructuring in each case.** Unlike the Asian crises which reflected widespread difficulties in servicing and rolling over non-sovereign debt, the countries in this sample were characterized by difficulties in servicing sovereign debt. The type and the amount of restructured sovereign debt varied greatly in the four countries, ranging from restructuring of a specific type of instrument to broad based restructuring of external and domestic debt (Box 1).

9. **Countries regained external viability with the support of external debt restructurings, favorable exogenous factors and strong adjustment.** *Ecuador's* and *Russia's* debt after restructuring declined by 30 and 20 percentage points of GDP, respectively.⁵ The size of this reduction, a strong balance of payments adjustment and the subsequent increase of world oil prices helped improve the external position of these two energy exporters. In *Ukraine*, the initial restructurings provided budgetary cash relief, with subsequent restructurings including all private sector claims falling due in 2000-2002. In *Pakistan*, the total debt stock remained roughly constant, but external debt service fell by one half as a result of the Eurobond and Paris Club restructurings.

B. Macroeconomic Developments and Policy Responses

10. **This section summarizes the main macroeconomic trends before, during, and in the aftermath of the restructurings and describes the main policy responses.** It does not seek to provide a conclusive analysis of the precise combination of factors that led to the unsustainable debt positions and a full account of the implications of the debt restructurings. Rather, it focuses on the sequence of events (Box 2) and a number of distinctive features that were common to all four country cases.

Characteristics in the pre-crisis period

11. **Following a relatively short history of access to international capital markets, the macroeconomic situation was destabilized by domestic policy shortcomings and exogenous shocks:** Weak oil prices for *Russia* and *Ecuador*, international sanctions following nuclear testing for *Pakistan*, the El-Niño effect for *Ecuador*, *Russia's* turmoil for *Ukraine*, in addition to an unfavorable external environment after the Asian crisis. These

⁵ The agreed debt restructuring in *Russia* involved a 37.5 percent reduction in principal of PRINS and 33 percent reduction in principal of IANS. All papers, including GKO, experienced substantial reductions in net present value terms. In the case of *Ecuador*, the reduction on domestic debt in net present value terms was 9 percent, whereas stock of debt reduction on external debt was 41 percent, though the benefits of the reduction in face value are partly offset by the higher coupon on the new debt. There was no principal reduction in *Pakistan* or *Ukraine*.

Box 1. The Scope of the Four Sovereign Debt Restructurings

Ecuador launched the most comprehensive debt restructuring in 2000 as it defaulted (in September 1999) on all Brady and Eurobond debt with face value of US\$6.5 billion, all domestic public debt (both in domestic and foreign currencies) maturing between September 1999 and end-2000 of US\$346 million, and external credit lines in closed banks of about US\$80 million. The total debt restructured was equivalent to about 50 percent of GDP, of which roughly one tenth was held by residents. Ecuador had arrears to the Paris Club since 1996. A Paris Club agreement was reached in September 2000.

Russia restructured all ruble denominated debt falling due between August 19, 1998 and December 31, 1999 (except paper held by households and the central bank) amounting to 10.8 percent of GDP, of which 7.8 percent of GDP was held by domestic banks and the remainder by non-residents. In addition, Russia was not able to meet all of its obligations on Soviet-era debt to sovereign and private creditors, and accumulated substantial arrears to Paris and London Club creditors. A Paris Club rescheduling agreement was concluded one year later, succeeded by a London Club agreement.

Ukraine's debt restructuring took place in four stages over the 1998-2000 period, covering US\$2.5 billion of external (Eurobond) debt and US\$0.3 billion of domestic debt, representing overall about 9 percent of GDP. Of this amount, about 1.3 percent of GDP was held by domestic banks.

Pakistan restructured a relatively small amount of external debt to private creditors—uncollateralized Eurobonds falling due between December 1999 and February 2002 with a face value of US\$608 million, representing only about 1 percent of GDP of which one third is estimated to have been resident holdings and 11 percent was held by domestic banks. This restructuring took place as a requirement under the comparability of treatment clause for a Paris Club rescheduling, which included reduction of debt service on public debt contracted prior to September 1997, falling due between January 1999 and December 2000 (US\$3.3 billion equivalent to about 5 percent of GDP). Domestic debt remained unaffected. Pakistan was also able to reschedule US\$512 million of short-term trade credits and US\$415 million of medium-term commercial credits.

Sovereign Debt Restructuring

	Ecuador (end-1999)		Pakistan (June 1999)		Russia (end-1998)		Ukraine (1998-2000)	
	Millions of USD	Percent of GDP	Millions of USD	Percent of GDP	Millions of USD	Percent of GDP	Millions of USD	Percent of 1999 GDP
Total debt restructured 1/	6,887	50.0	608	1.0	48,660	10.8	2,780	8.8
Held by domestic banks 2/	660	4.8	200	0.3	35,230	7.8	395	1.3
Restructured credit lines in closed banks	80	0.6	...	...	...	...	...	...
Held by non-residents	6,227	45.2	0	0.0	13,430	3.0	2,385	7.6
Total sovereign debt restructured	6,807	49.4	608	1.0	48,660	10.8	2,780	8.8
External	6,461	46.9	608	1.0	...	...	2,480	7.9
Held by domestic banks 2/	452	3.3	200	0.3	...	...	95	0.3
Domestic	346	2.5	...	...	48,660	10.8	300	1.0
Held by domestic banks	208	1.5	...	...	35,230	7.8	300	1.0

Source: IMF staff reports and staff estimates.

1/ Excluding Paris Club rescheduling and frozen foreign currency deposits.

2/ Figure may include non-bank resident holdings.

Box 2. Timeline of Events in Recent Debt Restructuring

Ecuador

The sequence of events in Ecuador runs almost opposite to that in the other cases: In early 1998, the ongoing *banking crisis* deepened and ultimately evolved into a *bank run* in March 1999. In response, the government declared a bank holiday and the *freeze of deposits*. Some deposits were unfrozen from August 1999-January 2000 (US\$460 million about 1/6 of total frozen). A general unfreezing scheme began in March 2000 and lasted through the year. In tandem with the events in March 1999, the *exchange rate was floated* as pressures on the sucre mounted. (No *capital controls* were imposed). In September 1999, the government finally decided to *default* on its Brady- and Eurobonds and to restructure its domestic debt. Full *dollarization* became part of the government's new economic plan and was officially announced in January 2000, amid political turbulences that resulted in a new government. After being in default for almost one year, an external debt exchange offer was made in July/August 2000.

Russia

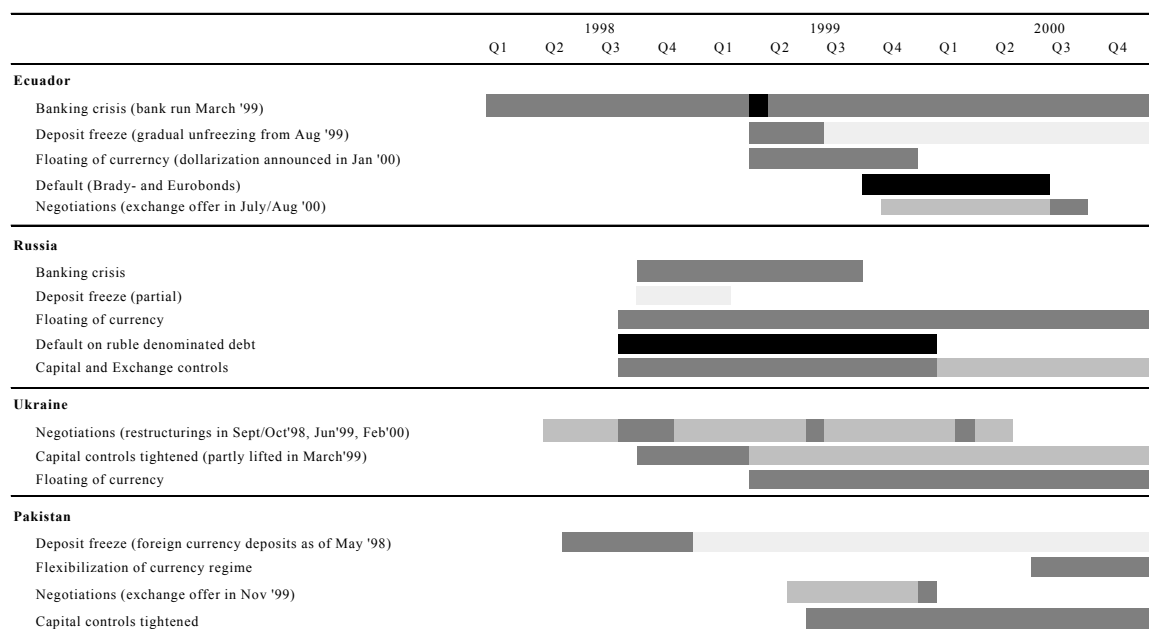
As indicated, events in Russia took a different order than in Ecuador. In August 1998, the authorities announced a series of emergency measures: a large devaluation of the ruble (followed by the official decision to *float the currency* in September 1998), the *unilateral restructuring (default)* on ruble-denominated debt, and a 90 day *moratorium on private sector payments on external liabilities* enforced through extensive *capital and exchange controls*. The announcement of the default, followed by the dissolution of the existing government only a few days later, increased pressures on an already weak banking system and triggered a severe *banking crisis*. In consequence, household deposits were transferred to the state-owned Sberbank, where they were guaranteed. In the interim a freeze was imposed on deposits remaining with some of the larger heavily insolvent banks.

Ukraine

The selective *restructuring* of domestic debt held by banks in August 1998 was followed by the restructuring of two bond-like instruments held by non-residents in September and October 1998. Continuing *negotiations* with creditors resulted in two further restructurings of external bonds in June 1999 and February 2000. To limit the outflow of capital, *exchange controls* were imposed in September 1998. While the restrictions on current transactions were lifted in March 1999, some capital controls were maintained. (No deposit freeze was imposed in *Ukraine* during the prolonged period of restructurings.) After having adjusted the exchange rate band several times since the beginning of 1998, the authorities decided to *float the currency* in March 1999.

Pakistan

In response to the external debt crisis that resulted from the events surrounding Pakistan's nuclear test in May 1998, the authorities imposed a *deposit freeze* on all foreign currency deposits. In order to fulfill the comparability of treatment clause included in the Paris Club agreement, the authorities began in May 1999 *negotiations* on a voluntary *restructuring* of their Eurobonds, which led to an official exchange offer in November 1999—shortly after a new government had assumed office in October 1999. During that period, provisions to further tighten *capital controls* were introduced in June and October 1999. In view of a continuing fragile external position, the authorities decided to switch to a more *flexible exchange rate regime* in mid-2000.



Source: IMF staff reports.

1/ Same shadings present similar events across countries. Darker areas within shading refer to dates of particular significance (as described in brackets).

brought to the fore domestic weaknesses and longstanding structural rigidities in the economies. The debt servicing ability was affected in two ways: First, public finances became more vulnerable to shifts in the appetite for government debt. The years immediately preceding the crisis had been characterized by large or widening budget deficits, and easy access to market financing which had loosened the resolve for fiscal reforms. When investors became more cautious and demand for government debt shrank, the escalating borrowing costs and the shortening of maturities set off debt dynamics that soon proved to be inconsistent with the countries' servicing ability.⁶ Second, economic activity started to weaken in *Ecuador*, stagnated in *Russia*, after a brief glimpse of positive growth, and remained weak in *Ukraine*, negatively affecting the debt servicing ability (Figure 2). The combination of weak economies and public finances gave rise to a circular policy dilemma as higher interest rates were necessary to finance budget deficits but dampened further economic activity which fed back to weaker budgetary performance.

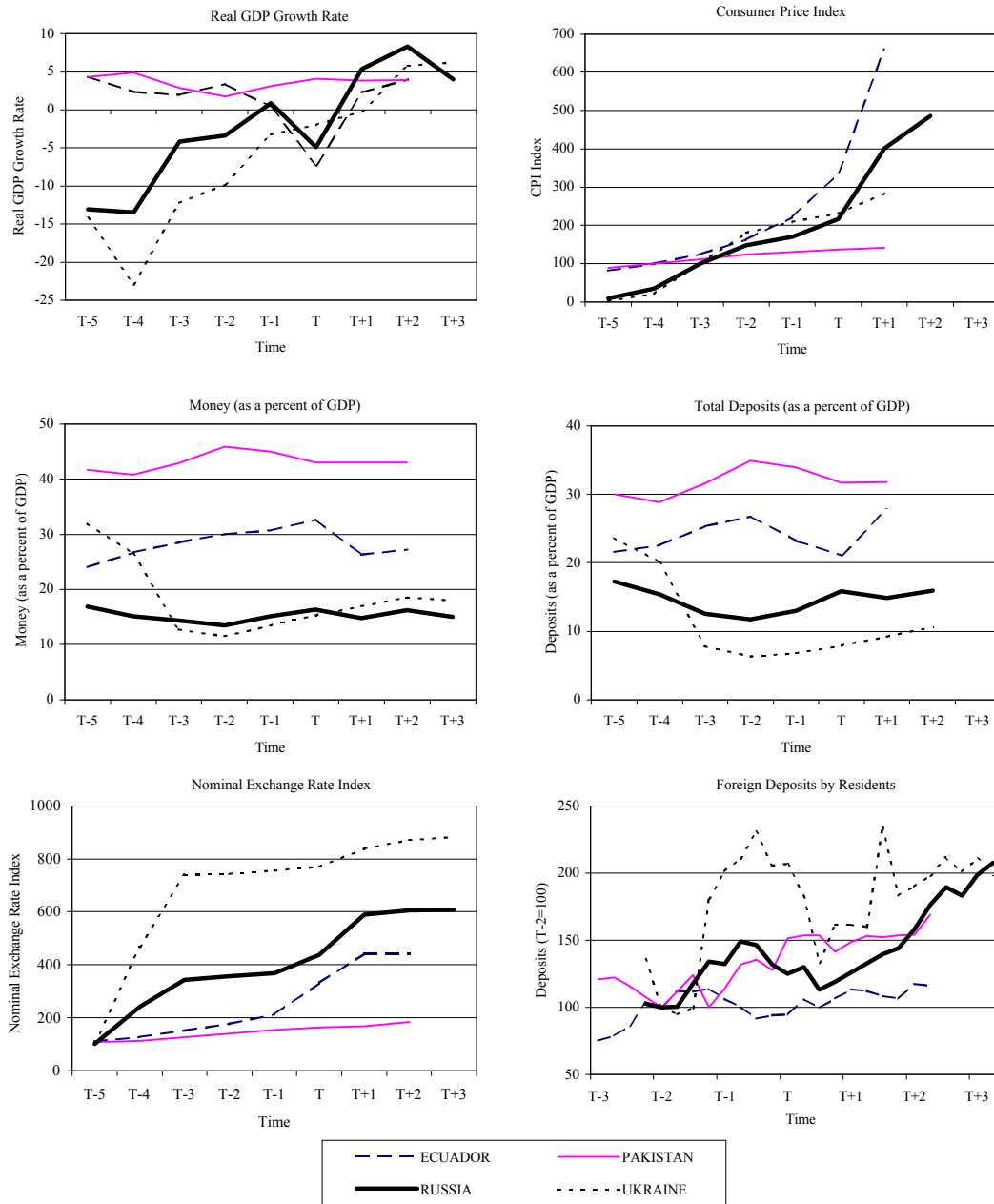
12. **In the face of mounting pressures, countries sought to restore stability through a combination of ad-hoc measures.** These were largely unsuccessful, as they were taken in the absence of comprehensive economic programs. In *Russia*, efforts over the summer-1998 to tighten the fiscal position, in line with agreements under a Fund-supported program, were not successful as the Parliament did not approve the submitted fiscal measures. In *Ecuador*, while the primary fiscal balance shifted from a deficit to surplus in 1999, monetary policy was slow to react and was undermined by the banking crisis. In all countries, uncertainty about the sustainability of domestic policies built up and market sentiment shifted against them. Pressures in the financial markets surfaced quickly in secondary markets and in reserve losses. As investors pulled out of domestic markets, securities and equity prices collapsed. Capital outflows put pressure on reserves as central banks intervened to support domestic currencies.

Announcement of the restructurings

13. **In the face of a mounting crisis, countries eventually sought a restructuring of public debt (Box 3) and put into place overdue corrective macro policies.** None of the countries responded to the crisis by loosening financial policies. In contrast, measures were taken to consolidate public finances and tighten monetary policies. Despite initial

⁶ *Ecuador* was unable to place significant amounts of domestic paper in the last two years before the default to finance the deficit. Instead, there was a buildup of payment arrears to external creditors and domestic suppliers, public sector wages, and the social security system in 1998, and an increase in oil revenue and default on interest payments to external creditors in 1999.

Figure 2. Selected Macroeconomic Indicators 1/



Source: IFS and WEO

1/ T=1999 for Ecuador and Pakistan and 1998 for Russia and Ukraine.

Box 3. Why Governments Decided to Restructure at that Particular Point in Time

Sovereign debt defaults are complex and multifaceted decisions. They have economic, legal, and political roots and a full account of events is beyond the scope of this paper. As discussed below, while the timing of the suspension of payments and the initiation of negotiations for debt restructuring reflected each country's specific circumstances, all decisions were taken against the background of insufficient international reserves, failed attempts at more voluntary and less comprehensive restructuring agreements with creditors, and the eventual unwillingness of the official community to provide new external financing.

Russia: In view of debt service payments that exceeded US\$1 billion a week and the continuous deterioration in government access to domestic GKO market, in mid-July 1998 the authorities embarked on a new adjustment program, that received substantial financial support from the Fund. At the same time they undertook a voluntary debt exchange program to convert short-term ruble denominated debt to longer-term foreign currency denominated bonds. The exchange program was, however, ineffective. The amount of debt converted was about a tenth of the amount eligible and failed to attenuate budgetary pressures. In addition, the Fund-supported program quickly went off track as the proposed tax legislation stalled in the Duma. With mounting capital outflows, reserves at precarious levels, and without prospects for more disbursements under the July program, the authorities declared a unilateral moratorium on debt service payments on August 17, 1998.

Ecuador: Over the first half of 1999, the authorities in protracted consultations with their legal advisors considered a number of different strategies to alleviate pressures associated with the debt service payments on their external bonds. The policy options narrowed significantly over the summer of 1999, in view of the difficult external and fiscal positions and after repeated delays in formulating and implementing an adjustment program. Payments to creditors became increasingly difficult and had to be financed by running domestic arrears. Negotiations for a Fund-supported program stumbled over adjustment measures and the financing of the program. Against this background, the authorities decided in late August 1999 to default selectively, activate the grace period on two Brady payments due in September, make the coupon payment on the uncollateralized Brady but miss the coupon payment on the collateralized one. The authorities hoped that the holders of the collateralized bond would vote to release the interest collateral to make the payment and cure the default. This selective approach was not favorably received by bondholders who voted to accelerate their bonds. Ecuador subsequently defaulted on both the Bradies and the Eurobonds.

Ukraine: Following payments to creditors holding a fiduciary note in August 1998, and given the country's very low level of reserves, the September EFF program included tight NIR floors. These made no allowance for net payments of principal to private creditors and thus guided partial restructurings in 1998-99. Creditors were invited to negotiations usually a few weeks before the bond's maturity day. By 2000, experience with the previous restructurings was that they produced high-yielding, short-term debts that placed an undue strain on the balance of payments and failed to ensure a return to medium-term viability. This led to the decision that a more comprehensive restructuring was needed, which was supported by the Fund. The announcement was made in early 2000, in the face of substantial maturities on bonds in the period through February 2001 and in the context of a request for a restructuring of private sector claims by Paris Club creditors.

Pakistan: In January 1999, the agreed minutes of the Paris Club meeting included a clause requiring Pakistan to seek from its Eurobond holders comparable treatment to the terms offered by the Club. After two further technical meetings in March and April to clarify the Paris Club's standpoint on the comparability clause, Pakistan proposed a time schedule for the restructuring in May 1999. This schedule allowed for a relatively small payment on a put option exercisable in June 1999, and focused on preparing a comprehensive exchange offer before the next large payment of principal on December 22, 1999.

announcements, it took several months before fully elaborated and credible adjustment programs were put in place, partly due to changes in government.⁷ Negotiations with creditors were relatively protracted, especially in *Ecuador* and *Russia*, lengthening the period of uncertainty (see Box 2) and the manner in which they were conducted created ill will among the investor community. During the interim period and beyond, the restructuring process affected domestic economies through various channels (discussed in detail in Section III), notably a substitution from domestic to foreign currency and capital flight, as well as deep financial crises.

14. **In an attempt to stem the flight into foreign currency and cash, most of the countries resorted to some form of deposit freeze.** This followed the precedence in Brazil and Argentina (Box 4). In terms of scale and duration, the most prominent case was *Ecuador*, although the authorities' action actually preceded the default itself. Faced with widespread bank runs and capital flight, already a few months before the debt rescheduling, all demand and savings deposits for six months and all time deposits for one year were frozen.⁸ About 20 percent were freed before dollarization was officially adopted 7 months after the default announcement, with about one third estimated to have gone into capital flight. Following the adoption of dollarization (3 months after the default), frozen deposits were gradually released, returning to depositors a combination of cash and dollar-denominated negotiable bonds. In the case of *Russia*, the operation had a narrower scope, its duration was shorter, and its motivation probably different. With extensive (although not tight) capital controls already in place, the deposit freeze was mainly a response to deal with a few of the larger, clearly insolvent banks in the context of limited bank restructuring legislation. Within three months after the debt rescheduling, the bulk of household deposits in these institutions had been transferred to the public-owned Sberbank, where household depositors enjoyed a government guarantee. In *Pakistan*, the deposit freeze was confined to foreign currency deposits (by residents and non-residents), and preceded the debt restructuring. The main motivation behind the deposit freeze appears to have been the prevention of capital flight. These frozen deposits could subsequently be converted into domestic currency deposits or, alternatively, so-called special US dollar bonds. *Ukraine* did not impose a deposit freeze.

15. **Moreover, the authorities tried to restrict capital outflows or, more extremely, control capital and current account transactions.** Indeed, with the exception of *Ecuador* where the most comprehensive controls on bank deposits were put in place, in all other three cases controls on capital outflows were tightened following the debt reschedulings. In the most extreme case of *Russia*, all legal entities (banks and non-banks) were explicitly forbidden to service their external debt, which meant that the controls not only covered

⁷ The Fund assisted all four countries with advice and additional financing, including under its lending into arrears policy. Only *Pakistan* did not experience a program interruption.

⁸ Due to a weak fiscal position, a blanket deposit guarantee announced in December 1998 was not credible and did not succeed in stemming deposit outflows.

Box 4. Argentina's BONEX and Brazil's Collor plan in 1990

While an analysis of the sovereign defaults of the 1980s and the subsequent Brady plan are beyond the scope of this paper, the experience of a partial default on domestic debt and/or the forced restructuring of deposits in Argentina and Brazil in 1990, foreshadows the issues raised in the more recent sovereign debt restructuring described.

Argentina's BONEX Plan: After attempts to place fixed-income instruments in the market had only resulted in a run on banks and the declaration of a bank holiday, the Argentine government announced on January 1, 1990 the compulsory rescheduling of all domestic currency denominated bank certificates of deposits (CDs)—excluding only savings accounts and sight deposits and domestic public debt. Public debt instruments (mainly held by banks) and term deposits were replaced by 10-year dollar denominated bonds (BONEX) which would make semi-annual interest payments and had a 2-year grace period. At the same time, banks were not permitted to accept new CDs, and their lending activities were severely restricted. In addition, the government issued a new BONEX 89 bond series, with monthly coupon payments to be used to pay the taxes owed by companies. A few days after the BONEX had been announced, the emergency bank holiday was lifted, and financial markets reopened (January 8).

Brazil's Collor Plan: One day after taking office on March 15, 1990, Brazil's new President Collor de Mello announced a package of economic policies that included the introduction of a new currency (cruzeiro) and the freezing of demand, savings and overnight deposits (together amounting to about 30 percent of GDP). Individuals and companies were only allowed to withdraw from their savings or demand deposits up to a limit of US\$1,000. For the following 18 months any deposit would be kept in interest bearing (and inflation indexed) accounts. Companies could pay wages from blocked accounts by bidding in Central Bank auctions for the right to convert their old currency deposits into the new currency. Beginning in September 1991, the frozen deposits were officially released in 12 monthly installments.

Both crises were rooted in fiscal problems and had a similar build-up. The countries had primary fiscal imbalances, important quasi-fiscal deficits in public banks, and growing public debts. In an environment of high inflation rates, the real interest rates had been high and volatile for years before the crises. A credit boom preceded the crises—with a high portion of credits directed to the public sector. Consequently, when the solvency of the public sector was questioned, banks' large exposure to the public sector triggered an erosion of confidence in these banks, and a deposit run.

Neither of the plans was able to protect the countries from paying a high economic price. Following the plans' introduction, both countries fell into recession for at least a year. Importantly, the reputation of the monetary authorities and the financial sector was damaged severely; in Argentina inflation accelerated at first and deposits did not return to historical levels until four years after the deposit restructuring. Although under the Collor Plan's comprehensive deposit freeze inflation came down quickly, it accelerated again in 1993.

Yet, the two plans had important differences. Argentina's BONEX Plan was a once-and-for-all conversion of deposits into bonds, which froze deposits for only the very brief period needed to implement the announced measures. In contrast, Brazil's Collor Plan was a gradual program of deposit freezing and unfreezing over a period of almost two years—allowing for frequently changing exceptions to the deposit freeze. Comparing the two approaches with the benefit of hindsight, Argentina's BONEX Plan seems to have had several advantages:

- **The losses to depositors were generally more transparent under the BONEX Plan.** The exchange of existing debt for the BONEX was an irreversible and clear cut deal, allowing the secondary markets for the BONEX to decide about the size of the loss. In contrast, the Collor Plan left room for attempts to seek special treatment through litigation, therefore clouding the losses different depositors finally had to take.
- Notwithstanding the above-described costs, **the BONEX plan's partial expropriation of deposits and default on domestic debt succeeded in eliminating public sector's solvency problem.** This, in turn, solved the banking sector crises caused by the public sector's solvency problem, and—although not yet an explicit element of the BONEX plan—prepared the ground for the introduction of convertibility law which eventually put an end to inflation.

capital (principal) but also current transactions (interest). This contributed to many Russian banks' and corporates' defaults on their foreign obligations. *Ukraine's* already controlled system was also tightened in August 1998, yet the controls never covered the servicing of external debt, and there are no indications that Ukrainian banks ran into external arrears with their creditors. Similarly, *Pakistan's* step-up in exchange restrictions did not include external debt servicing.⁹

16. **Although it is difficult to isolate the effects of the restructuring in the midst of severe economic crises, a broadly similar pattern emerges regarding the main macroeconomic aggregates** (Figure 2)¹⁰. The decline of real income and financing was transmitted to domestic demand. Confidence plummeted and private investment was curtailed sharply. Private consumption followed, albeit with a lag, as for a while households drew down their available savings. Public consumption was also scaled down reflecting efforts to consolidate public finances. Despite exchange controls, exchange rates depreciated sharply reflecting the shortage of foreign funds resulting from capital flight (Figure 3). The domestic demand contraction and import substitution helped improve current accounts. The exchange rate depreciation passed quickly to prices and inflation surged. Wages lagged, inflation wiped out the value of deposits, unemployment rose, and households suffered significant real income losses. GDP growth declined in *Ecuador* and *Russia*, which restructured large portions of their debt. In the balance of payments, current account surpluses helped finance the deterioration of capital accounts that continued for several quarters despite the capital controls and the moratorium on payments.

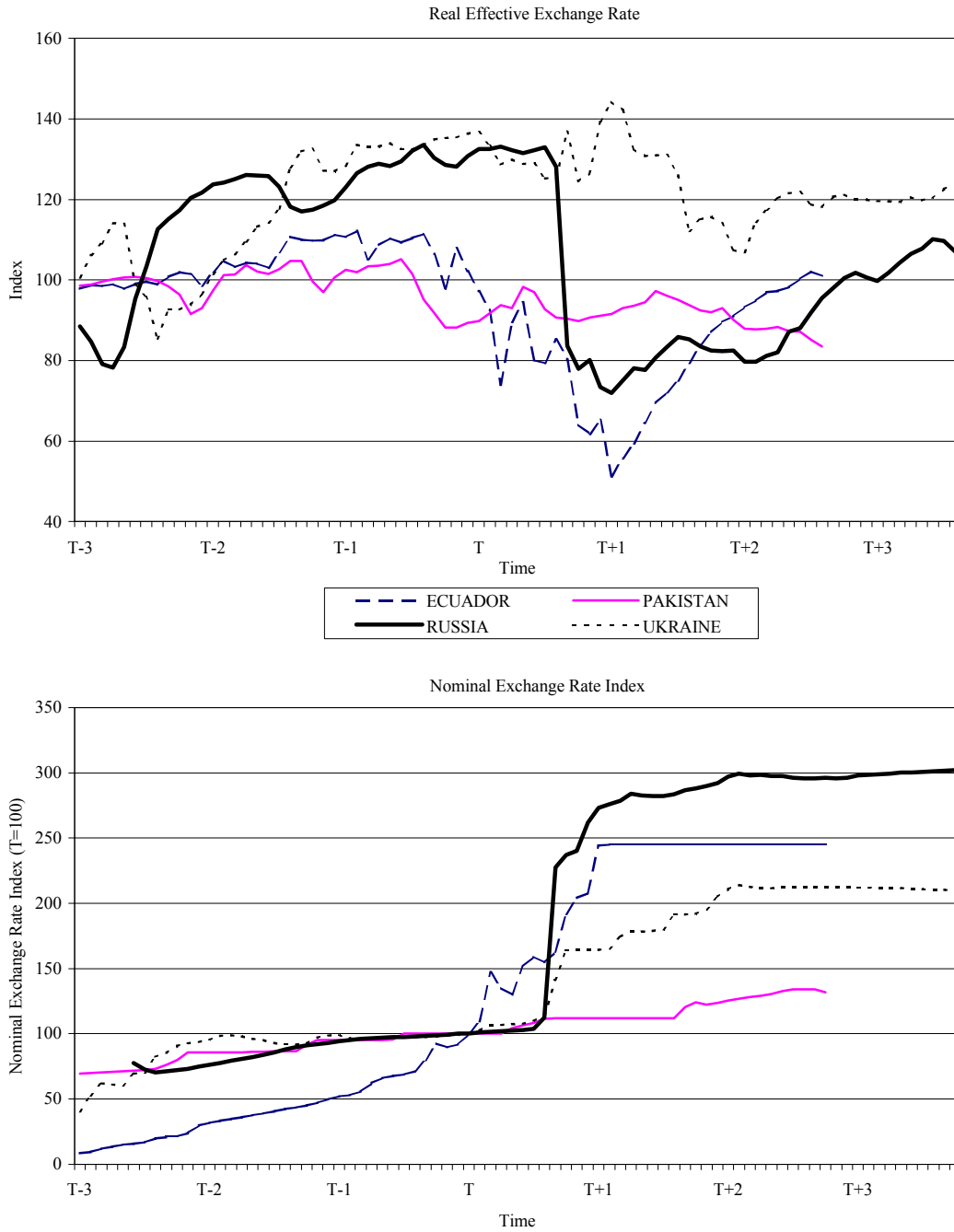
After the restructurings

17. **The immediate cash-flow relief from the suspension of debt payments and the eventual conclusion of debt restructuring agreements with creditors provided a breathing space to implement corrective policies and supported the recoveries.** On the fiscal front, sizeable adjustment resulted in substantial reductions in the fiscal deficits consistent with further improvements in the primary balances. Monetary policies were tightened, which contributed to a sharp deceleration of inflation. After the initial massive depreciation, rates were allowed to float (except in *Ecuador*, where the macroeconomic

⁹ In *Ukraine*, these covered the interbank currency market, export surrender requirements, strict screening of importers' application for foreign exchange, advance payments for import contracts, restrictions of foreign exchange loans to importers. *Russia* maintained similar restrictions. In *Pakistan*, residents were not permitted to purchase bonds (or other debt securities), money market instruments, or real estate abroad and make loans to non-residents; direct investment abroad required prior approval.

¹⁰ *Pakistan* presents a different case because there was no banking crisis and the disruptions to the economy were much less than in the other countries. Growth continued and inflation remained subdued.

Figure 3. Exchange Rates 1/



Source: IFS

1/ T=1999 for Ecuador and Pakistan and 1998 for Russia and Ukraine.

program eventually included full dollarization). The decision to float was partly due to a loss in countries' ability to maintain their previous policies but also to delays in dealing with remaining macroeconomic and structural weaknesses. The restructurings were slow to restore market confidence, and the sovereigns' ability to raise funds abroad has remained limited after the restructurings.¹¹

18. **The crises left their scars particularly on the banking systems as a number of banks failed in *Russia* and *Ecuador*.**¹² In *Russia*, excluding Sberbank, which accounted for almost a quarter of all assets, most of the remaining top 50 banks (in terms of assets) became insolvent after the default, but with existing legislation not providing for intervention in the event of insolvency, very few banks had their licenses revoked. Without a bailout, the direct fiscal cost of the banking crisis was marginal.¹³ In *Ecuador*, the crisis had affected the balance sheets of a large part of the financial sector, including those of the largest banks. During 1998-99, 14 financial institutions accounting for about 65 percent of the system's assets were intervened or closed by the deposit insurance agency. The estimated cost to the budget from the banking crisis, including bonds to recapitalize banks and to cover guaranteed deposits was significant, in excess of \$2.7 billion or about 24 percent of 2000 GDP.¹⁴ This offset the fiscal benefit from debt service reduction, which was estimated at about \$2.3 billion. Overall, the crises wounded public trust in the financial system as the activation of deposit guarantee schemes did not protect depositors from the reduction in the real value of their frozen savings.¹⁵ Currency substitution was accompanied by flight to quality either within the banking system, particularly to foreign-owned banks, or, wherever possible, to banks abroad. In all countries, foreign currency deposits in BIS reporting banks increased sharply during this period (Figure 2).

19. **The household and corporate sectors were considerably affected by the general crisis as real wages declined and corporates scaled down their activities or went out of**

¹¹ None of the countries have yet returned to the market for sovereign debt, but *Russia* plans to issue a Eurobond within 2002. A detailed analysis of the factors that determine the prospects and the pace of market access by countries emerging from crises is presented in EBS/01/157.

¹² The sequence of events in *Ecuador* was slightly reversed, with the crisis originating in the banking system and then affecting the budget. Nevertheless, most of the analysis holds.

¹³ Substantial support was provided by the Central Bank to a number of the larger banks, which may have entailed considerable quasi-fiscal cost.

¹⁴ By comparison, the estimated fiscal costs of other banking crises were 21 percent in Korea, 19 percent in Mexico, 14 percent in Malaysia, and 56 percent in Indonesia.

¹⁵ For example, in *Ecuador* the estimated haircut for sucre-depositors was about 80 percent, for dollar-depositors about 12 percent.

business. In *Russia*, real wages declined by about 30 percent during 1998-99 and pensions lost half of the real value over the same period. Unemployment increased from 11 percent at end-1997 to over 14 percent in February 1999. The percentage of the population below subsistence increased from 20.8 percent at end-1997 to 23.8 percent at end-1998. In *Ecuador*, the share of the population living in poverty increased from about 33 percent in 1995 to 43 percent in 1999 and the unemployment rate almost doubled to about 17 percent in January 2000 from end-1997. More moderate trends were observed in *Ukraine*: employment actually declined by about 3 percent in 1998-99, while real average wages fell by 18 percent during the same period.

20. **Notwithstanding the above, it is remarkable how quickly GDP growth turned positive in all four cases.** The turnaround was led primarily by import substitution and an eventual rebound of exports helped by the depreciations, and as economies benefited from a robust growth in global trade and the domestic policy adjustments. In the case of *Russia*, the economy was also helped by the increase of energy prices, whereas in *Ecuador* the recovery was led primarily by a return of domestic confidence and a sharp increase in domestic demand. The quick recovery is contrary to the earlier experience of debt restructurings in Latin American countries which went through a “lost decade of growth” in the 1980s.

21. **The economic impact may have been somewhat mitigated if decisions to default on or restructure sovereign debt had taken place earlier—assuming that an eventual default had become inevitable.** In particular, countries could have benefited sooner from cash-flow relief after suspension of debt service payments; foreign exchange intervention in support of overvalued exchange rates could have been minimized; and earlier imposition of deposit freezes and tightening of capital controls could have moderated deposit runs and capital outflows, and may have averted liquidity problems in the banking system. For example, in one month prior to the default *Russia* lost almost 40 percent of its official reserves, and *Ukraine* about 13 percent. In contrast, the deposit freeze in *Ecuador* prevented a reserve decline at that time. Most importantly, while the economic costs could not have been avoided, they might have been mitigated in the short term and confidence restored sooner if corrective measures had been implemented earlier. In particular, the relatively quick upturn of some of the countries after the restructurings point to the key role of adopting adequate macroeconomic and structural policies in the recovery process.

III. ECONOMIC CONSEQUENCES OF DEBT RESTRUCTURING— THE TRANSMISSION CHANNELS

22. **Debt restructurings affected the economies in a variety of direct and indirect ways.** In practice, it is hard to separate the primary effects from those caused by policy responses, such as the imposition of capital controls or a change in the exchange rate regime. This section identifies the most important transmission channels and their significance in the four cases. It turns out that the banking system plays a central role in spreading the effects of a debt restructuring through the economy. For this reason, these aspects are highlighted in Box 5.

A. Wealth of Domestic Holders of Restructured Debt

23. **Domestic agents holding restructured debt experienced a *direct* reduction of their wealth to the extent that the net present value of their assets declined.** In principle, holders of government papers could include (i) banks, (ii) other financial institutions, such as insurances and pension funds, (iii) corporates, and (iv) households. Naturally, the magnitude of the direct impact depended on the amount of restructured debt held by each group at the time of the restructuring. As discussed below, in the four cases the banking system and in some cases eventually depositors sustained the largest losses. Mark-to-market investors as well as banks in need of liquidity suffered losses already before the default as the increasing risk premia led to a fall in bond prices. For investors in short-term securities, the direct impact was mitigated to the extent that they had the opportunity to adjust their portfolios in anticipation of the restructuring or in the run-up enjoyed a period of large spreads corresponding to the default risk. For those who had purchased bonds at distressed prices, there were mark-to-market gains after the restructuring.

24. **The solvency effect on the domestic commercial banks was large, particularly in *Russia*.** Banks had invested a large share of their asset portfolios in government securities that were affected by the rescheduling (Table 1). As a result, a substantial part of their balance sheets had to be written down (short-term government paper in the form of treasury bills (GKOs) constituted just under one third of banks' total assets, or some 7 ½ percent of GDP). The holdings of rescheduled government paper by banks in *Ecuador* was less pronounced as a share of banks' total assets (6.8 percent) but only marginally lower as a share of GDP (4 ¾ percent). However, banks in *Ecuador* may have been in a somewhat better position than those in *Russia* to the extent that they were able to benefit from the extended period in which large spreads on short-term government securities could be earned in anticipation of the default. Nevertheless, in both cases the functioning of the banking system itself and the financial intermediation were seriously impeded (although in *Russia* from an already very low level).

Box 5. The Impact on the Banking System

Debt restructurings had an adverse impact on domestic economies to a large extent through disruptions to the domestic financial systems. Depending on the scope and type of operation, banks were negatively affected in a variety of ways:

- The **asset side of banks' balance sheets** suffered directly to the extent that it contained restructured assets.
- **Non-performing loans** increased as a result of debt servicing difficulties in the household and corporate sectors. The increase in overall risk of lending led to a **credit crunch**.
- **Unhedged on- and off balance sheet exposure to exchange rate risk** proved to be an important reason for the collapse of banks.
- On the **liability side**, banks experienced deposit withdrawals and the interruption of interbank credit lines. This impeded their ability to mobilize resources at the time of stress.
- Deposit freezes put additional strains on the **payment system**, especially in *Ecuador* where they lasted for an extended period of time. This paralyzed a key day-to-day activity of banks.
- The **lack of liquid assets** affected the interbank market and exacerbated the credit crunch.
- **Interest rate hikes** increased the cost of banks' funding and undermined their income position.
- **Flight to quality** further worsened liquidity problems of some of the banks, as deposits shifted towards healthier, often foreign owned, banks.

All of these factors contributed to the virtual collapse of the banking systems in *Russia* and *Ecuador*. In *Russia*, the large Moscow-based commercial banks were affected most, as they had significant exposures to domestic treasury bills, exchange rate risk (related both to unhedged liabilities to foreign counterparts and foreign currency loans to domestic corporates) as well as off-balance sheet option contracts. The result was widespread insolvency, resulting in many of these banks defaulting on their external obligations. In *Ecuador*, the banking system had been in a severe crisis even before the sovereign default. The default on sovereign debt served as a second blow to the financial system, implying a further significant dent into banks' capital. Banks in *Ukraine* and *Pakistan* experienced difficulties due to some of the factors mentioned above, but nowhere in the scale of the two large restructuring cases.

Table 1
Government Paper Held by Domestic Banks
(percent of assets)

	Total	Restructured
Russia (June 1998)	31.5	30.8
Ecuador (Dec. 1998)	...	6.8
Ukraine (June 1998)	14.3	4.6
Pakistan (March 1999) 1/	30.0	0.4
Memorandum item		
Argentina (Dec 2001)	21.0	...

Source: IFS and Staff estimates

1/ State owned banks only

25. **The direct wealth effect of the debt restructurings on non-bank financial institutions, corporates and households was limited.** This was due to the fact that in none of the four countries the restructured assets were held widely outside the banking sector—and those assets that were held outside the banking sector were often treated on favorable terms. In *Russia*, for example, certain groups of non-bank GKO holders were excluded from the restructuring. Pension systems operated largely on a pay-as-you-go basis and were therefore not directly exposed to the write-down of government papers.

B. Dollarization and Demonetization

26. **In at least three out of the four countries, there is evidence of falling money demand and a substitution from domestic currency to foreign currency denominated deposits in the period leading up to the debt crisis and its immediate aftermath.** In *Russia*, the shifts at the time of the crisis were the most dramatic, as could be expected given the scope and the largely unanticipated nature of the debt rescheduling. Ruble-denominated deposits, which had been increasing steadily in real terms for three years in line with improving expectations, reached their peak a few months before the debt rescheduling; they subsequently collapsed by almost 50 percent in real terms, and remained at that depressed level for the next three quarters. Real demand for domestic currency also dropped, fuelling inflation (see Figure 2). Foreign currency deposits were also drawn down reflecting the loss of trust in the banking system. Similar pressures on bank deposits and currency substitution

were observed in *Ecuador*, albeit evolving much more gradually: with a deep banking crisis and sovereign default risk emerging long before the actual default, the loss of confidence was a protracted process rather than a sudden event. Yet, with the official dollarization that followed, *Ecuador's* default experience ultimately resulted in an abandoning of its domestic currency altogether. Dollarization and demonetization can also be observed in *Ukraine*, albeit to a lesser degree than in the cases where deposit freezes were instituted, although velocity declined throughout the period.

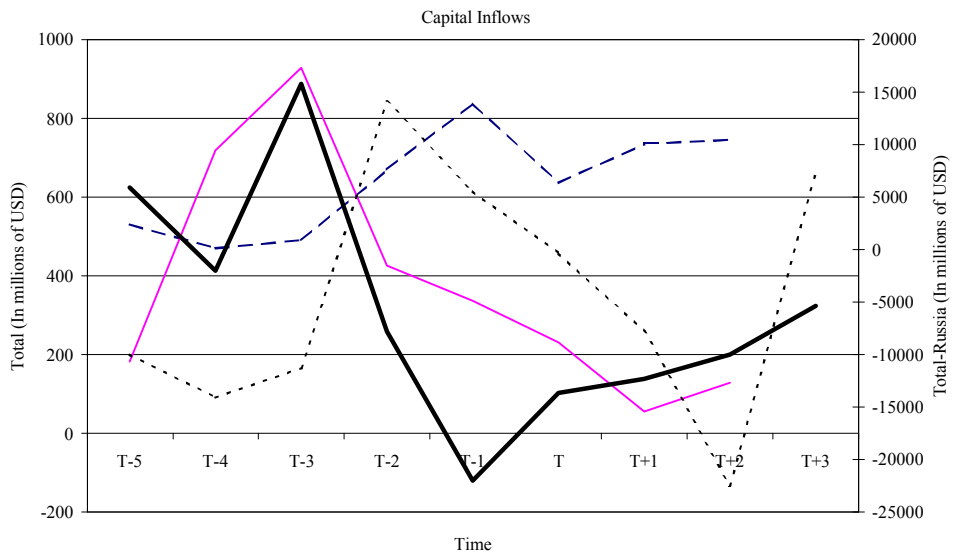
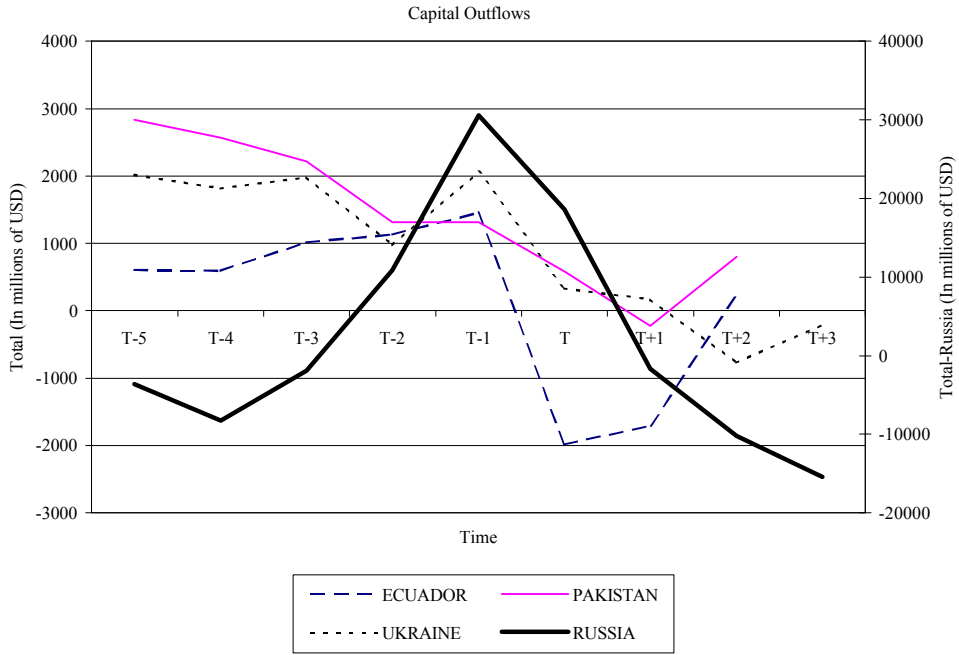
27. **These shifts in monetary aggregates were rooted in a loss of confidence in the sovereign's "promise to pay."** In this context, domestic currencies were regarded as just another form of a claim on governments, and their value came to be perceived as uncertain as the sovereign decided to no longer deliver on other types of IOUs, i.e., bonds. Significant devaluation and inflation enforced the flight into foreign currency denominated assets and the continuation of barter trade.

28. **Deposit freezes provided some immediate relief to banks, but did not come without costs for economic recovery.** This was particularly true in *Ecuador*, where such measures were used most extensively (see Section II). While larger-scale withdrawals of deposits and/or shifts from domestic to foreign currency deposits may have been avoided, thus mitigating the adverse impact on the banking system, this came at the expense of depositors being stuck with value-losing assets. By contributing to the negative wealth effect on households and firms, deposit freezes further depressed private consumption and investment—two potentially crucial elements in re-igniting economic activity. How these economic costs weigh against those that would have occurred had the banking system not been partly shielded by a deposit freeze, however, remains open. Given the key role of the banking system for economic activity, this counterfactual scenario would probably have been worse. In the event, for both *Russia* and *Ecuador* the negative effects on aggregate demand associated with the loss in corporate and household wealth were compensated by a favorable shift in the external environment.

C. Net Capital Flows

29. **In all four countries, gross capital inflows to both bank- and non-bank sectors declined sharply** (Figure 4). This contributed to the compression of domestic demand, particularly through its private investment component. In *Russia* the swings in capital inflows were particularly striking, in line with the largely unanticipated nature of its default. Three categories of capital inflows particularly stand out, portfolio investment (a decline of US\$21 billion), foreign loans to banks (US\$18 billion), and foreign loans to corporates (US\$6 billion). In *Ukraine*, the pattern was similar yet more moderate and more spread out in time, consistent with the discrete step-by-step debt rescheduling. Therefore, the decline in gross capital inflows was also much less persistent. *Ecuador* had effectively lost access to capital markets well before it actually restructured its debt, with the corresponding

Figure 4. Capital Account Flows 1/



Source: WEO

1/ T=1999 for Ecuador and Pakistan and 1998 for Russia and Ukraine.

deterioration of its capital account concentrated at that time.¹⁶ This deterioration continued well beyond the year of the restructuring. *Pakistan* is a special case: capital inflows declined as well, but this was mainly due to a sharp decline in official financing (from multilateral organizations) following the sanctions imposed after the nuclear tests in May 1998.

30. **Trade financing also suffered, especially in *Russia* and *Ecuador* where the domestic payments system was damaged.** While difficult to measure, the drying up of short-term credit lines added to the depression of foreign trade and economic activity in general. In *Ecuador*, for example, short-term revolving trade credits in 1999 fell to half of their 1998 volume. In all countries, this proved particularly difficult for credit-dependent exporters, who should have otherwise quickly benefited from the devaluations.

31. **Private capital outflows increased, as investors lost confidence in domestic institutions, including banks.** Foreign holders of domestic assets, irrespective of whether they were subject to restructuring or not, rushed to the exit, wherever they could. In addition, residents sought to protect their real wealth by not only switching to foreign currency denominated assets, but by also moving capital out of the country, especially in *Russia*. Real interest rate hikes did little to stem the outflow. Again, the effect seems most pronounced in *Russia* where the default startled the markets and the cushion of confidence was low to begin with. A similar pattern was, however, also observed in *Pakistan* and in *Ukraine*. In *Ecuador*, administrative caps limited the extent to which interest rates could rise in response to capital outflows. Instead, the deposit freeze was intended to halt further outflows.

32. **Notwithstanding the potential economic cost of exchange controls, their effect on capital inflows is not conclusive.** Capital controls, and especially exchange controls impairing the private sector's ability to service its external debt, would have been expected to undermine foreign investor confidence even further. However, it is striking that the decline of gross capital inflows in *Russia*, which imposed the most extensive exchange controls, was broadly similar in terms of GDP and persistence to that in *Ecuador*, which did not resort at all to capital controls but relied mainly on freezing deposits as a way to stem outflows. In *Ukraine*, where capital controls did not threaten external debt service and no deposit freeze was imposed, the decline in capital inflows appears to have been the least severe, at least in terms of persistence.

D. Exchange Rate Adjustment

33. **In almost all cases, the announcement of the sovereign's inability to service its external debt was accompanied by large depreciation of the exchange rate** (Figure 3). In *Russia*, the ruble lost about half of its value in August 1998 after the moratorium on

¹⁶ The non-availability of quarterly balance of payment statistics for *Pakistan* and *Ecuador* renders the analysis more difficult.

payments was announced, and three quarters of its value by year end. In *Ecuador*, the depreciation was almost as strong as in *Russia*, but extended over a longer period starting with the banking crisis which preceded the default. In *Ukraine*, the depreciation was significant although less abrupt, as the exchange rate band was adjusted in several small steps in 1998, before the hryvnia was floated in March 1999. *Pakistan*'s rupee depreciated much less because it was less overvalued to begin with.¹⁷ These currency movements reflected both net capital outflows and domestic currency substitution (discussed above). With limited reserves to intervene, interest rate defenses—as attempted by *Russia* and *Ukraine*—proved inadequate to support exchange rates at the height of the crises.

34. **The depreciation eroded the balance sheets of the banks, particularly those with significant open foreign exchange positions.** In the pre-crisis period, fixed exchange rates had distorted the incentives in the direction of increasing foreign currency exposure in countries where open positions were allowed. Banks in *Russia* and *Ecuador* had significant exchange rate exposures, while the banking systems in *Ukraine* and *Pakistan* were shielded by tight exposure limits and capital controls. In *Russia*, the quasi-fixed exchange rate regime in the pre-crisis period and lax supervision had contributed to banks maintaining a net open foreign position of some 10 percent of total deposits.¹⁸ In the case of *Ecuador*, foreign currency mismatches were also substantial and the negative net foreign asset position of commercial banks amounted to some US\$700 million in late 1998 (or 16 percent of deposits).

35. **Additional losses were incurred in countries that maintained insufficiently regulated derivative markets.** In *Russia*, commercial banks had assumed an extensive off-balance sheet exposure to currency risk, engaging in heavy trading of foreign currency derivatives following a liberalization of the rules governing nonresidents' access to the GKO market and in conjunction with the inflow of foreign capital into the stock market. Given the seeming stability of the ruble and weak prudential supervision, banks' own exposures were inadequately hedged. Two months before the crisis, commercial banks' off-balance sheet forward foreign currency claims on residents and nonresidents amounted to a staggering US\$93 billion, leaving a net open position of US\$10 billion.¹⁹ A large part of banks' derivative exposures were with unhedged counterparts or with dubious quality hedges. Consequently, when investors (mainly nonresidents) rushed to exercise their forward foreign exchange options following the exchange rate depreciation, banks ended up with a chain of defaults in off-balance sheet contracts.

¹⁷ Moreover, a complex system of trade restrictions, including many nontariff trade barriers, restrained imports and thus curbed the demand for foreign currency.

¹⁸ Foreign exchange liabilities to nonresidents of under one year had reached US\$12 billion, while short term foreign assets were about US\$5 billion.

¹⁹ See SM/99/178.

36. **The depreciation also exposed the banking systems of *Russia* and *Ecuador* to unrecognized credit risk.** In the period leading up to their respective reschedulings, banks had increasingly adopted the practice of borrowing in foreign exchange from the interbank market and on-lending to domestic companies in foreign exchange. These lending practices led to a substantial credit risk which had gone largely unnoticed by the supervisory authorities. In the case of *Russia*, during the four quarters preceding the default, such credit had surged by 125 percent. In the case of *Ecuador*, during the two years preceding the debt rescheduling, dollar-denominated credit to the private sector rose from 27 to 65 percent of the total. With the vast majority of the debtor firms in both countries not generating revenues in foreign exchange, large currency devaluations made it impossible for firms to service their debts, triggered widespread insolvency, and transmitted the problem to the banking sector.²⁰

37. **The effect on the corporate sector was mixed.** Part of the corporate sector was caught by large foreign currency exposures and found itself unable to service its foreign exchange denominated liabilities (in addition to the credit crunch, the slump of domestic demand and the disruption of financial relations with other firms and banks). But others, particularly low leveraged firms, reaped benefits from the depreciation. Initially import substituting industries and later export oriented industries faced a rebound in sales. With low inventories, production was soon increased to meet the higher demand, which provided a positive contribution to overall economic activity and output growth.

38. **The impact of the depreciation on households was more dramatic.** With deposits frozen, the depreciation and the subsequent inflation wiped out the real value of financial savings held in local currencies. In the aftermath of the depreciations, household consumption collapsed and wealth inequality increased, distinguishing those with and those without assets in foreign currency.

E. Cost of Capital

39. **Reflecting the loss of confidence and sovereigns' distress, bond spreads moved to exorbitant levels even before the announcement of the defaults.** Sovereign bond spreads in *Ecuador* climbed from about 2,000 basis points before the deposit freeze (March 1999) to over 3,000 basis points before the default and peaked to over 4,500 basis points after the announcement. In *Russia*, spreads climbed from about 1,200 basis points in July 1998 to over 5,000 basis points after the default. New financing, even if it was available, was at prohibitive terms for both sovereign and non-sovereign borrowers. As discussed above, external capital inflows declined sharply.

40. **In the domestic markets, sharply higher interest rates reflected efforts to support exchange rates but also expectations of depreciation and risk of default.** As with

²⁰ In Ecuador, nonperforming loans increased from about 7 percent of banks' credit portfolio at end-1998 to over 33 percent at end-1999.

external spreads, domestic rates shot up after the announcement, particularly in *Russia* where domestic rates increased from 50 percent to over 300 percent. Reflecting the higher borrowing costs and the deterioration in banks' asset quality, ruble credit declined by 12 percent in real terms and foreign currency lending to domestic firms fell by US\$19 billion during the first two quarters after the sovereign default. In *Ecuador*, while administered caps kept interest rates at moderate levels, bank credit to the private sector dropped by a quarter in 1999 due to the rapid increase in non-performing loans and the weak liquidity position of most banks.

41. **Banks were affected directly through their exposure to interest rate risk and indirectly through difficulties among their corporate clients.** Interest rates on bank liabilities (interbank credits and deposits) increased sharply reflecting the higher risk premia, the tight liquidity situation, and efforts to prevent deposit flight. With a maturity mismatch, the higher cost of funds was not matched by higher returns on the asset side. A part of banks' performing assets was long term at fixed rates while the restructured government paper carried less than market rates. Meanwhile, the higher financing costs led to corporate bankruptcies and thus augmented the nonperforming portion of banks' balance sheets.

F. Other Effects

42. **In *Russia*, a selected series of the restructured bonds was initially intended to be used in settlement of domestic agents' tax obligations.** After the creation of a secondary market for the restructured debt, corporates were able to purchase these bonds at a discount with the option of using them to settle some specific tax obligations at face value. In the event this scheme was not used, and the bonds were paid out in cash on maturity in December 2001. Tax offsets with restructured bonds were not used in other countries. In general, use of tax offsets could have an adverse tax collection and thus could partly offset the positive consequences of the debt restructuring on fiscal cash flow. In addition, it could have negative implications for transparency and governance.

43. **The interbank credit market suffered.** First, the risk of insolvency was widespread and naturally everyone wanted to avoid lending to a failing bank. Second, the dried-up supply of government papers meant a lack of marketable collateral for interbank lending. As a result, banks were deprived of an important source of refinancing. This effect was particularly pronounced in *Ecuador*, while in *Russia* the central bank injected liquidity by lowering reserve requirements and extending special stabilization credits to some of the larger banks.

44. **The default on sovereigns' obligations undermined the confidence in the value of other contracts in the economy.** For example, in *Ecuador* the population's faith in the government's ability to honor any of its contracts, including cash domestic currency bank notes, was shaken for some time. There are also indications that payment discipline in the private sector deteriorated (further eroding banks' assets). In *Russia* the default led to a continuation of barter trade (which had actually peaked a few months before the default).

IV. COMPARING THE RESTRUCTURINGS—THE CRUCIAL FACTORS

45. **The experience of the four countries examined in this paper suggests that four main factors appear crucial for the impact of a debt restructuring on the domestic economy:** (i) the extent to which restructured debt was held domestically, (ii) the degree of financial development, (iii) the openness of the capital account, including the size of foreign exchange liabilities of banks (iv) the exchange rate regime before the debt restructuring.²¹ This section summarizes how these factors came to play in the four restructurings under consideration. It should be emphasized that the aim of this chapter is not to draw inferences regarding the overall desirability of having in place the factors in question; rather, it seeks to shed some light on the question of the circumstances under which a debt restructuring can be expected to have a major impact on the domestic economy. This may help countries considering such an operation to gauge the potential cost in advance and thus make a more informed decision regarding their course of action.

A. Resident Holdings of Restructured Debt

46. **In the four cases considered, the size of the economic dislocations depended crucially on how much restructured debt was held by domestic agents.** This is one key reason why in *Russia* and *Ecuador*, where banks had invested relatively heavily in bonds subject to the restructuring, the effects on the financial system and the economy as a whole were so much bigger than in *Ukraine* and *Pakistan*, where the exposure was much smaller. The negative effect on economic activity would have been even worse if restructured papers had been held in any significant amount by pension funds, corporates or households. But there are limits to this argument; one could conceive of situations where a large-scale default were confined to debt held by private foreign investors, but could nevertheless entail a major impact on the domestic economy because of the implied disruptions in foreign trade financing.

47. **The extent to which residents had invested in government securities may have had a bearing on the government's decision as to the type of debt to restructure.** In the cases reviewed in this paper, the restructurings centered around debt held mainly by non-residents, except in the case of *Russia*. At least in *Ecuador*, this discrimination was apparently intended to minimize the direct wealth effect on the domestic economy.²² But the cases of *Ecuador* and *Russia* also show that bonded debt is increasingly held by residents and non-residents alike, making it difficult for governments to target certain classes of investors.

²¹ Additional important factors, which are implicitly covered here, include the initial debt stock and the size of the ensuing haircut, the policy response, the surprise element, and the relative treatment of diverse creditors.

²² In Ecuador, the terms of domestic debt restructuring were far more favorable than those offered for the external debt (see footnote 6).

B. Level of Financial Market Development

48. **The experience of the four recent reschedulings suggests that the degree of bank intermediation can be an important factor in determining a restructuring's ripple effect on the real economy.** As discussed above, many transmission channels can be traced through the domestic financial system. Whenever assets need to be written off or rescheduled, banks are usually the first in line to take a hit. Therefore, the larger the degree of financial intermediation, the larger the impact on the real economy. In *Russia*, the severe banking crisis had a much weaker effect on overall wealth and activity than what could have been expected in more typical cases because financial intermediation was so small to begin with: bank assets were just 30 percent of GDP, and private sector bank deposits 12 percent of GDP—low shares even by standards of other transition economies. The disruptions caused by *Ecuador's* bigger and more developed banking system were comparatively larger. In contrast, one could expect a smaller effect in the case of a more developed financial system, where firms have a variety of non-bank sources of financing; and a large-scale presence of foreign banks may increase the capacity of the system as a whole to absorb more easily the shock of a debt restructuring, as subsidiaries of foreign banks can be expected to retain substantial external financing.²³

49. **Ensuring that the banking system's underlying position is strong prior to the sovereign debt restructuring can go a long way towards limiting its vulnerability to a restructuring.** Much responsibility rests with the national supervisory authorities. In the case of *Russia*, for example, banking supervision had arguably not kept pace with the increasing sophistication of banks' activities, including derivatives trade and off-balance sheet transactions. In all countries, risks associated with an over-exposure to government paper²⁴ or unhedged foreign exchange positions of banks and their corporate clients went largely unnoticed. As shown earlier, currency mismatches were an important reason for problems in the banking system. Another problem was the practice of banks to borrow abroad and on-lend to domestic firms in foreign currency, irrespective of the firms' ability to generate foreign exchange earnings or hedge against devaluations. Had the supervisory agencies recognized these risks, capital requirements should have been increased.

50. **Prudential capital adequacy guidelines may not have been appropriate to deal with the risk associated with sovereign debt defaults.** In line with BIS-sanctioned

²³ This is also borne out by the experience of the Asian crisis, where foreign banks' lines of credit to their domestic subsidiaries actually increased during the crisis.

²⁴ Supervisory authorities could have, in principle, induced the banks to lengthen the maturity structure of their holdings of government paper. While this would certainly have limited the banking system's exposure to a Russian-type restructuring, it would have deprived banks of a powerful instrument to insulate against the maturity mismatches and to manage liquidity needs.

supervisory principles, a risk coefficient of zero was attached on banks' holdings of government paper in assessing capital adequacy, implying that banks did not need to hold any capital against the credit risk of such assets. This (non-) requirement could conceivably have been revised to encourage domestic banks to diversify away from sovereign securities in an environment where sovereign default expectations were mounting, and where the fiscal authority itself was contemplating a debt rescheduling. A change in the prudential regulations could have reduced a sovereign's ability to rely on a captive investors' base to continue to finance an unsustainable policy mix. At the same time, it could be argued that an effective downgrading of the creditworthiness of sovereign paper by the authorities themselves could have undermined confidence, even generating a self-fulfilling crisis; and tightening capital requirements in an environment of rising credit risk spreads may have been unduly procyclical. Naturally, supervisory agencies, which were not independent, were reluctant to explicitly concede the possibility of sovereign default.

C. Capital Account Openness

51. **An open capital account and large dependence on capital inflows tended to increase vulnerability to the fallout from the debt restructuring.** This was particularly the case in countries where the banking system and supervisory agencies had been unable to properly assess the risks associated with short-term capital inflows (see below). The reason is that in the absence of capital controls, investors—especially those holding liquid assets like bonds—found it easier to move their funds out of the country in response to a restructuring (or the threat thereof). As shown above, large swings in capital flows and, consequently, a painful balance of payments adjustment followed.²⁵ Capital account restrictions, which were in place in all countries even prior to the restructuring and intensified during the crisis—with the exception of *Ecuador*—did little to stem net capital outflows.

52. **In some countries exchange restrictions may have prevented a larger dependence on volatile portfolio investment.** *Ecuador* and *Pakistan* had not encouraged inward investment in their domestic equity and bond markets. Neither did their patchy policy record make them an attractive destination for international portfolio investors. In *Ukraine*, nonresident participation in the T-bill market had already passed its peak before the crisis and these inflows had gradually diminished by the end of 1998. *Russia*, however, offers a counter-example: Here, the exchange controls on repatriation of investment proceeds from T-bill operations had been deliberately lifted in an attempt to encourage portfolio inflows and nonresident participation in the T-bill market. Just prior to the default, these investors were among the first to rush for the exit, considerably contributing to the large capital account reversal in that country.

²⁵ It could also be argued, however, that freedom of capital flows in some cases could constitute an effective disciplinary mechanism, providing warning signals that would induce the authorities to adjust policies in time to avoid the need to resort to default.

53. **In general, the level of integration into international capital markets played a role in the overall negative impact on the domestic economy in the sample countries.** All of them were more deeply integrated with international capital markets than implied by the formal restrictiveness of their capital accounts, and thus suffered large net capital outflows as a result of debt restructurings. This is not to say, however, that openness was on the whole bad for these countries. Two different exposures can be distinguished: by residency of both debtors and creditors, and by currency.

- With regard to **exposure by residency**, the adverse direct impact on the economy was significant to the extent that the restructured sovereign debt was predominantly held by residents, as was the case in *Russia*. In *Pakistan*, as much as one-third is estimated to have been held by residents, but the overall amount of restructured debt was still small. However, the sharp decline of external credit perpetuated economic dislocation where domestic agents (and banks in particular) relied heavily on it. This indirect impact partly preceded restructurings in *Ecuador* and *Pakistan* and followed the restructuring in *Russia*.
- With regard to **exposure by currency risk**, the capacity to service debt eroded in all four countries as they had large shares of the foreign currency debt. In particular, the sovereigns experienced an increasing fiscal burden of debt servicing through steep exchange rate depreciations accompanying the restructurings and benefited to a lesser extent from inflating away the debt in domestic currencies. In addition, the position of banks worsened where significant currency mismatch existed in their balance sheets, as was the case in *Russia* and *Ecuador*. Also, households and corporates which had heavily borrowed in foreign currency faced debt servicing problems after the depreciations, as their income streams were mainly denominated in domestic currencies. In *Pakistan* and *Ukraine* the exposure of these sectors was contained by limited capital account openness.

D. Exchange Rate Regime

54. **In the countries considered, soft pegs contributed to the severity of the debt crisis.** Quasi-fixed exchange rate regimes had been in place in all four countries in the run-up to the debt restructurings, without adequately supportive macroeconomic policies. As described above, this contributed greatly to vulnerabilities that built up in the corporate and banking sectors. Moreover, exchange rates adjusted abruptly when capital outflows forced governments to abandon the peg, typically overshooting and causing widespread economic disruptions.

55. **Misalignments built up under the managed exchange rate regimes explain the magnitude of the depreciation and thus influenced the size of economic adjustment.** The degree of overvaluation of the soft pegs mattered for the economic outcome of restructurings. The sharp fall in *Russia*'s ruble and the relatively minor change in *Pakistan*'s rupee may serve as the two contrasting examples: The Russian ruble was broadly viewed as being significantly overvalued at the time of the default, having appreciated in real terms since the

start of the transition—far in excess of the currencies of the more successful transition economies.²⁶ By contrast, the case for an overvaluation of the *Pakistani* rupee is much more difficult to make.²⁷ While some misalignment of the rupee might be based on equilibrium exchange rate considerations, the resulting disequilibrium would have been much smaller than in *Russia*, helping to explain the large difference in the magnitude of depreciation the two currencies experienced in context of the debt restructuring.²⁸

V. CONCLUSIONS

56. **The preceding analysis identified the channels through which a forced debt restructuring and associated changes can affect the domestic economy.** A typical pattern is as follows: at the time of the sovereign default, the fiscal crisis—which often has been building up for years—spills over first into the balance sheets of the banking system and then those of corporations and households. Partly because a restructuring takes place in the context of general economic distress, the dislocations go far beyond the initial effect of reducing the net present value of restructured debt held by residents. The exchange rate plays a particularly important role, since it is invariably connected to the loss of confidence and the international capital movements associated with a restructuring. The analysis highlighted the key role played by the banking system in propagating the crisis throughout the economy.

57. **The paper offers some criteria for gauging *ex ante* the economic fallout from a debt restructuring.** The ripple effects for the domestic economy will be particularly large if (i) a large share of the restructured debt is held by residents, especially banks, (ii) the financial system is big (as a share of GDP) and is closely connected to the corporate and fiscal sectors, (iii) the country is integrated into global capital markets (e.g. certain sectors depend on external finance), is particularly exposed to short-term portfolio investments and has a history of capital flight, (iv) the country maintains an inflexible and overvalued exchange rate regime which has allowed vulnerabilities to build up. But the paper also identifies some factors that can lessen the negative economic effect: (i) if the default and the accompanying devaluation was anticipated for a long time and priced into government papers, domestic agents can adjust their behavior in advance (e.g., by hedging) if they are allowed to do so. Moreover, holders of restructured debt reap some of the risk returns; (ii) strong banking supervision can help even a large and sophisticated banking system to provision for a write-down of assets, a surge in interest rates and a devaluation.

²⁶ See SM/99/178, Figure 4.

²⁷ Neither an analysis of the CPI-based real effective exchange rate index, nor a comparison of *Pakistan's* real exchange rate with that of its main competitors seems to imply an overvaluation. (See the staff's analysis in EBS/00/230, Box 2).

²⁸ Again, Pakistan's less open current account (see footnote 19) may have played a role by suppressing demand for foreign exchange.

58. **What policy response could soften the negative economic effects of a debt restructuring?** Several lessons emerge: (i) an early tightening of financial policies and structural reforms (especially in the fiscal and banking sectors) can go a long way in supporting a recovery from the inevitable loss of confidence and economic activity; (ii) capital controls and/or deposit freezes, which were imposed by all of the countries surveyed here, may stabilize the situation in the short run, but their overall efficacy is ambiguous--especially when they are left in place for a prolonged period of time (as in *Ecuador*); (iii) an alternative of dealing with the problems posed by the default may be a strengthening of banks' balance sheets by a swift recapitalization, as this could prevent the crisis from propagating into other sectors. But none of the countries reviewed here was in a position to consider such an option in a situation where it was squeezed both by the lack of domestic resources (recession) and external financing (capital outflows). Official financing, possibly in the form of targeted balance sheet support, could fill this void.

59. **The international community's scope for softening the domestic impact of debt restructurings is limited.** Countries undertaking a restructuring of their official debt will continue to depend on international financial and technical support, but this should not induce them to postpone the inevitable restructuring. The Board has been considering a variety of options, including recently a sovereign debt restructuring mechanism (SDRM). Such an institutional arrangement would mainly address the speed at which a country reaches an agreement with its creditors, as well as the litigation risk. Resolving these issues may, on the margin, lower the economic cost of a restructuring, for example by shortening the restructuring period, shoring up confidence and reducing the cost of capital. Nevertheless, the economic dislocations as described in this paper would remain substantial.