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The Use of Blanket Guarantees in Banking Crises

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Abstract

In episodes of significant banking distress or perceived systemic risk to the financial system, policymakers have often opted for issuing blanket guarantees on bank liabilities to stop or avoid widespread bank runs. In theory, blanket guarantees can prevent bank runs if they are credible. However, guarantee could add substantial fiscal costs to bank restructuring programs and may increase moral hazard going forward. Using a sample of 42 episodes of banking crises, this paper finds that blanket guarantees are successful in reducing liquidity pressures on banks arising from deposit withdrawals. However, banks' foreign liabilities appear virtually irresponsive to blanket guarantees. Furthermore, guarantees tend to be fiscally costly, though this positive association arises in large part because guarantees tend to be employed in conjunction with extensive liquidity support and when crises are severe.

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I. INTRODUCTION

The ongoing global liquidity crisis which started with the subprime mortgage meltdown in the United States has brought to the fore once again a discussion on appropriate policy responses to handle financial crises, including the use of guarantees on bank deposits. Throughout the world, financial firms have been particularly hit following a significant decline in public confidence, which manifested itself in stress mainly at the wholesale funding level, and also in pressures at the retail deposit level. In the United Kingdom, for example, after more than one hundred years without a bank run, retail depositors lined up last summer outside Northern Rock, a bank heavily exposed to the mortgage sector. Bank runs are destabilizing phenomena that could spiral out of control and can cause significant harm to the economy if banks are forced into a fire sale of assets. In a seminal contribution, Diamond and Dybvig (1983) show that bank runs can occur in equilibrium, given the illiquid nature of banks' balance sheets. In their framework, runs are caused by self-fulfilling beliefs of individuals who rush to withdraw deposits because withdrawals by other depositors threaten the solvency of the banking system.[2]

When choosing an appropriate policy response to deal with bank runs, policymakers often face uncertainty about the underlying causes of bank runs, but most importantly, they face uncertainty about the potential outcome if runs spiral out of control. In such circumstances, policymakers sometimes choose to extend a blanket guarantee to creditors, aimed at restoring confidence in the system. The cost of such a guarantee, however, is a sizable fiscal contingency and potential moral hazard problems going forward. Blanket guarantees are therefore often seen as last-resort tools to contain crises. Over the last two decades, more than a dozen countries have used blanket guarantees during episodes of banking distress. More recently, in response to the ongoing financial turmoil, several countries in Europe have announced such guarantees, including Denmark,[3] Germany[4], Iceland, and Ireland.[5] As Diamond and Dybvig (1983) showed, the extension of depositors' guarantees by the government can prevent the occurrence of bank runs. However, in their framework, these guarantees are credible. In practice, this strong assumption may not be met, particularly in countries where fiscal policy is unsustainable or the government lacks credibility. In fact, Honohan and Klingebiel (2003) and Kane and Klingebiel (2004) argue that blanket

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[2] However, runs may also be triggered by insider knowledge of underlying problems in the banking sector, which in turn may have been caused by shocks to the economy (see, for example, Gorton (1985) and Saunders and Wilson (1996)). According to the Diamond and Dybvig (1983) view, runs are a contributing factor to the crisis whereas in the second view runs are merely a symptom of problems in the system.

[3] Denmark announced an agreement between the Government and the banks, which includes the creation of an entity to take over insolvent banks. Private banks would cover the losses of this company up to 2 percent of GDP, but a state guarantee accompanies the agreement committing to cover losses above 2 percent of GDP.

[4] Covering only private savings accounts.

[5] The US recently raised deposit insurance coverage from US$100,000 to US$250,000 per bank per depositor, and similar actions were taken among European Union countries where coverage was raised from €50,000 to €100,000. The United Kingdom has also issued a bank-specific guarantee for deposits in Northern Rock.

guarantees have often been unsuccessful in improving public confidence. They also argue that blanket guarantees have on average substantially increased the fiscal costs of banking crises.

This paper examines the experience of 42 episodes of banking crises, of which in 14 cases explicit blanket guarantees were extended, with specific attention to measuring their impact on restoring public confidence by depositors. As a proxy for the latter, we use liquidity support extended to the banking sector by the monetary authority around the periods of banking distress. If such support is successful, one would expect that liquidity pressures on banks arising from deposit withdrawals would ease and hence demand for liquidity support from the central bank would subside. As policy measure, we focus on explicit blanket guarantees, considered as such those cases where the authorities explicitly announced the protection of banks' liabilities.

The evidence in this paper shows that on average, the announcement of blanket guarantees are followed by a statistically significant and quantitatively important slowdown in the provision of liquidity support. However, we also find that foreign liabilities of banks are virtually insensitive to the announcement of blanket guarantees. Non-residents continue withdrawing resources even after a guarantee is put in place. A possible explanation for this result is that given the broader availability of assets to such non-resident investors, the cost of exiting the country is lower. Therefore, such investors have far more to lose if they trust the announcement and the guarantee is not fulfilled than if they move their funds out of the country and the guarantee is fully honored. However, an additional contributing factor may be the desire from banks to lower foreign exchange risk exposure by lowering their external liabilities. Furthermore, we find that the provision of liquidity support responds more strongly to the implementation of comprehensive bank restructuring policies than to the announcement of blanket guarantees.

The paper then argues that while blanket guarantees increase fiscal costs, previous quantitative estimates may have overstated its impact. Guarantees tend to be used in severe crises, when both liquidity support and fiscal costs are high. It is only when guarantees are used in combination with extensive liquidity support that they add substantially to fiscal costs. A way to rationalize this result is that the excessive provision of liquidity fuels pressures on the currency, increasing inflation, and affecting the balance sheets of borrowers, banks, and the government alike, with destabilizing ramifications for the overall economy. The ensuing deterioration in public confidence compounded with worsening balance sheets becomes self-reinforcing, increasing the ultimate costs of cleaning up the banking system.

From a policy perspective, this paper confirms the conventional wisdom that blanket guarantees need to be credible in order to restore depositor confidence. It also suggests that the fiscal impact of blanket guarantees may be reduced by using it as a breathing device before market conditions deteriorate substantially. When guarantees are used in combination

with extensive liquidity support or extended by governments that lack credibility, they tend to be ineffective in restoring confidence and add substantially to fiscal cost. Furthermore, public confidence appears to respond strongly to clear and comprehensive bank restructuring policies. Hence, the sooner credible bank restructuring and macroeconomic policies can be implemented, the lesser the need for a blanket guarantee.

The paper is related to a large literature on the linkages between the real economy and financial factors, and in particular to the real consequences of banking crises. The use of a blanket guarantee is usually justified on the grounds that if not put in place, the payments system could collapse. In fact, financial sector problems were key factors behind two major economic disasters of the twentieth century: the US Great Depression during the 1930's and the Japanese stagnation during the 1990's. For the US Great Depression, Bernanke (1983) argues that the weakness of financial institutions at the time of the Great Depression influenced the length and depth of the recession. In Japan, evidence on the real effects of the Japanese banking crisis has been presented by Klein, Peek, and Rosengren (2002), Peek and Rosengren (1997, 1999, and 2000) who identify supply shocks emanating from Japanese banks affecting U.S. economic activity. There is also evidence of the real effects of banking crises for a larger set of banking crisis episodes. Dell'Ariccia, Detragiache, and Rajan (2005) find evidence suggesting that sectors more dependent on external finance perform relatively worse during banking crises. Kroszner, Laeven, and Klingebiel (2005) find that this effect is particularly pronounced in deeper financial systems.

This paper is structured as follows. Section II describes the key features of selected blanket guarantee episodes. Section III analyzes the benefits of blanket guarantee announcements by examining its effectiveness in improving market confidence. Section IV discusses the fiscal impact of blanket guarantees. Section V discusses some policy implications. Section VI concludes.

II. COUNTRY EXPERIENCES

This section reviews briefly the characteristics of blanket guarantees implemented during modern crisis episodes. The focus for now is on 14 crisis episodes, including all systemic crises episodes during which blanket guarantees were issued as covered in the crisis resolution database of Laeven and Valencia (2008), and two non-systemic crisis episodes (Turkey in 1994 and Honduras in 1999) during which blanket guarantees were used to avoid problems of systemic nature. To these 14 cases, we add recent announcements of blanket guarantees in response to the ongoing crisis, starting with Ireland and followed by other European countries, including Denmark, Germany, and Iceland. Table 1 summarizes the experience of the selected countries. In most cases, guarantees were used when a systemic banking crisis was already unfolding, while in others it was used as soon as pressures were felt. Most cases fall in the former category, while Honduras in 1999, Turkey in 1994, and Mexico in 1993 are examples of the latter.

In terms of coverage, it is usually comprehensive—including foreign and domestic currency liabilities—but it commonly excludes subordinated debt (except the recent case of Ireland which includes dated subordinated debt) and liabilities to related parties. In some cases it is in place for as little as 11 months, while in others for over 8 years. Mexico and Turkey are examples where the guarantee was in place for a substantial amount of time. In the case of Mexico, a first step towards an unlimited guarantee was taken in December 1993. The guarantee was lifted only gradually starting in January 1999. In the case of Turkey, a first announcement covering all savings deposits was made on May 5, 1994, aimed at stopping bank runs triggered by the closure of three small banks. The guarantee was never lifted and instead was reinforced during the second episode, in December 2000. In some cases the blanket guarantee was preceded by an announcement of partial coverage of liabilities, such as Thailand, Korea, and Nicaragua.

Among the three Nordic countries that experienced a banking crisis in the early 1990's, only Finland and Sweden used explicit guarantees. Norway did not explicitly announced a blanket guarantee, hence its exclusion from Table 1. However, following the crisis at Christiania and other banks, the Ministry of Finance announced on October 14, 1991 "*that the government would implement the necessary measures to secure confidence in the Norwegian banking system.*" Later on during that same month, the government announced that "*...it would implement the necessary measures to secure depositors and other creditors of Christiania Bank against losses and to ensure confidence in the Norwegian banking system in general*" (Thorvald et al. (2004, p. 89). While it is not a blanket guarantee in the conventional sense, the assurance from the authorities that they would stand behind the banking system may have been interpreted by the public as such.

In other instances, the guarantee has been extended only for a specific institution or set of institutions, whenever bank runs have been contained within a segment of the system. Table 2 shows some examples, including the most recent case of Northern Rock in the United Kingdom. While in these cases guarantees are explicitly limited to specific institutions, the public may have interpreted them as if similar actions would be taken should problems at other banks arise.

Cases similar to those listed in Table 2 are in fact numerous. There are instances where bank resolutions implied a "*de facto*" protection of all depositors without an explicit announcement to this effect. In many of those cases, the problems did not end in a full-blown crisis. Some examples include Norway during the late 1980's, Ecuador in 1996, Peru in 1999, Guatemala in 2006, and the resolution of Bear Stearns in the United States in 2008.[6] Such "*de facto*" full protection may have been interpreted by the public as an implicit full

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[6] More details about the handling of bank failures in Norway prior to the systemic crisis can be found in Thorvald et al. (2004). For details on bank resolutions in Peru, Ecuador, and Guatemala, see Jácome (2008).

guarantee and in some cases might have been a contributing factor to the non-occurrence of a full-blown crisis induced by widespread bank runs.

III.   Effectiveness of Blanket Guarantees

The benefits of a blanket guarantee lie in its impact on public confidence by eliminating incentives to withdraw deposits. As a proxy for public confidence we use the provision of liquidity support from the monetary authorities to the banking system.[7] It is to be expected that if a blanket guarantee is successful, deposit withdrawals should subside and liquidity pressures at banks decrease, which would result in a decline or at least slowdown in banks' demand for liquidity support from the central bank. We also examine the evolution of deposits and foreign liabilities to complement our liquidity support analysis. We focus first on 14 cases of explicit blanket guarantees and also on 6 other cases where guarantees where non-explicit—Norway—or limited to only a segment of the banking system.[8] These cases include the 12 crisis episodes analyzed in Kane and Klingebiel (2004).[9] Because runs on the currency may become runs on the banks, we also attempt to quantify pressures on the currency, which in many circumstances unfolded in a twin—banking and currency—crisis. Currency pressures are measured by computing a weighted average of the percentage change in foreign reserves, interest rates, and the nominal exchange rate, with the inverse of the standard deviation of each series as weights. The economic rationale for this measure of currency pressures is that attacks on the currency can be dealt with by declines in foreign reserves, depreciation of the exchange rate, and increases in interest rates. An increase in this index captures any of these policy responses.[10]

Figure 1 depicts the evolution of deposits, foreign liabilities, and liquidity support for the 20 episodes that we examine in this section. The first 15 cases correspond to episodes where the announcement of guarantees covered *all* institutions in the system, as those described in Table 1, plus Norway. The last 5 cases in Figure 1 depict situations where the scope of the guarantee was limited to a subset of the system. Again, such policy action may have been interpreted as an intention to eventually offer unlimited protection to creditors should problems spread.

A visual inspection of the figures suggests that the evolution of liquidity support does decrease or slows down following the announcement of a blanket guarantee, with some exceptions. Cases where the pattern is exactly what one would expect include Malaysia,

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[7] Liquidity support is measured as claims of the monetary authorities on the banking sector, expressed as a percentage of the total deposits and foreign liabilities of the banking system.
[8] The timing of events is detailed in Table A1 in the appendix.
[9] We exclude the most recent cases of deposit guarantees (Denmark, Germany, Iceland, and Ireland) because of the lack of post-announcement data.
[10] The series are weighted with the inverse of the standard deviation of each series because each has a different volatility. The constructed index is then normalized to start at 100 at the beginning of the sample.

Honduras,[11] Mexico, Finland, Sweden, and Turkey.[12] In these cases, liquidity support reverses substantially following the announcement. In some episodes, liquidity support does not decline but decelerates significantly and/or levels off immediately after the announcement, which may be interpreted as signs of success of the blanket guarantee. Thailand, Nicaragua, and Jamaica are in that group.[13] Finally, we are left with episodes where markets seem to not have reacted much or at all to the announcement of guarantees. In Indonesia, Japan, and Ecuador, liquidity support rises rapidly after the announcement of guarantees. However, it is possible to identify factors that may have undermined the credibility of the guarantee in those cases. For instance, Japan experienced a continued decline in foreign credit to banks, even after the guarantee was announced, exerting additional liquidity pressures on banks. Notice, however (see Figure 1) that the fall in deposits stopped after the announcement of the guarantee by the Japanese authorities, suggesting some success for the blanket guarantee, but not to the extent that it stopped foreign liabilities from falling. In Ecuador, the ineffectiveness of the blanket guarantee may in part be attributed to a tax introduced with the guarantee affecting all financial transactions. This tax affected all deposit inflows and outflows from the banking system. Efforts by the public to circumvent the tax led to a significant deposit run immediately after the introduction of the blanket guarantee.[14] In Indonesia, prior to the

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[11] In Honduras, the blanket guarantee was used immediately after the announcement of a small bank closure. Liquidity support, however, never reached significant proportions.

[12] In Mexico, the reversal takes place after the announcement was made in December 1994, although an implicit guarantee had been in place for a year (IMF, 1995). In Finland, the legal reform that encompassed the blanket guarantee was passed in Parliament in February 1993. However, it is worth noticing that in August 1992, the Finnish authorities took the first step towards an explicit blanket guarantee when they ensured that the stability of the banking system would be secured under all circumstances (Nyberg and Vihriälä, 1994). Pressures on the system declined significantly after that announcement. In Turkey, during the 1994 episode and in Honduras in 1999, the blanket guarantee seems to have been highly successful, but pressures on the banking system were substantially lower than in the other episodes. Similarly, during the second episode in Turkey in 2000, a reversal in liquidity support ensued, albeit a short-lived one. A political crisis that erupted in February 2001, contributed to the resurgence of liquidity pressures, with overnight interest rates rising sharply (to over six thousand percent) and the collapse of the exchange rate regime. A similar pattern occurred in Sweden. A sharp decline in liquidity support followed, but as pressures on the currency returned, liquidity support rose sharply again.

[13] In the case of Nicaragua, most of liquidity support was granted to banks that were ultimately resolved. However, all liquidity support provided to these institutions remained in the balance sheet of the central bank until end-2001, which explains why liquidity support levels did not decline (Sacasa, 2001). In Jamaica, a substantial slowdown in liquidity support ensued but it is not clear whether this slowdown responded to the blanket guarantee—with a lag of one month—or whether it resulted from the implementation of capital injections by the government in problem banks, which began a month after the guarantee was introduced. Furthermore, liquidity provision may have been used by shareholders to recoup some of the losses given that more resources than those necessary to bail out depositors were provided while shareholders retained their rights in the institutions (IMF, 2002). In Thailand, liquidity pressures after the introduction of the blanket guarantee in August 1997 remained, in part because foreign creditors continued withdrawing resources rapidly. The credibility of the guarantee may have also suffered from the announcement of the closure of 42 finance companies in August 1997, after the authorities publicly stated two months earlier that no more finance companies would be closed (Siamwalla, 2000).

[14] See Jácome (2004) and De La Torre et al. (2001) for a detailed review of the crisis in Ecuador and weaknesses in the handling of the crisis.

guarantee announcement, severe market turbulence occurred due to the release of an unrealistic new state budget, the nomination of Habibie as Vice President, and the virtual reopening of a previously closed bank by one of the President's sons.[15] The resulting deterioration of public confidence in banks caused a substantial drain of resources from domestic banks. Soon thereafter, the crisis intensified with street riots in response to rising food and fuel prices, contributing to the overall economic and political instability and the lack of public confidence in the domestic financial system.[16]

In virtually all cases examined, an interesting pattern that arises is that foreign liabilities seem largely insensitive to the announcement of guarantees.[17] In some cases, such as Jamaica,[18] Thailand, and Malaysia, it seems that capital outflows subside for some time but this period only lasts at most two months. In other cases, such as Finland, Indonesia, Japan, Korea, Norway, Sweden, and Turkey, foreign liabilities decline sharply after the announcement of a guarantee, most notably when there are also significant pressures on the currency and hence a drain in foreign reserves. Korea is the most evident case of this problem. Korea had already announced a guarantee on external liabilities of banks in August 1997, and this guarantee was reinforced with the rescue of Korean First Bank in October 1997. The guarantee was then extended to deposits in November 1997 as pressures built up. A month later, however, panic spread when it became known that the stock of usable reserves was much smaller, and the size of external short-term debt much larger than the market had previously believed.[19] A sharp deterioration in market conditions followed as some foreign creditors perceived that the available foreign assets were not sufficient to honor the guarantee.

Turning to those cases were guarantees were limited to specific financial institutions—the last 5 cases in Figure 1—its effects on liquidity pressures are not clear, although problems

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[15] See Batunanggar (2002) and Enoch et al. (2001) for a more detailed discussion about the handling of the Indonesian crisis.

[16] In the case of Norway, the rise in liquidity support after the October 1991 policy package announcement (see Section II) may in part be explained by the fact that the package included subsidized deposits from the Central Bank to banks. Banks may have considered it optimal to take advantage of this window, keeping the central bank claims on the banking system high.

[17] It is worth mentioning that the behavior of foreign liabilities may be affected by exchange rate fluctuations because, due to data limitations, they are assumed to be denominated in U.S. dollars, while the original currency may be not.

[18] The liquidity support series for Jamaica has been adjusted to construct a consistent time series, by returning to the balance sheet of the central bank a transfer of part of its claims on banks to FINSAC. The transfer took place in April 1997 for about 11 billions of domestic currency units.

[19] Official foreign reserve data included illiquid deposits at offshore Korean banks, overstating the amount of usable reserves. Furthermore, official data omitted foreign debt contracted by offshore entities, underestimating external indebtedness substantially. See IMF (1999).

seem to have remained limited to the affected institutions. Perhaps the guarantee contributed to limiting contagion effects to other financial institutions.[20] [21]

Overall, the analysis so far suggests that the announcement of blanket guarantees tends to be associated with a slowdown – at times even a sharp decline – in liquidity support. In those cases where liquidity support did not decline, there were other factors that may have influenced the observed outcome, such as limited political commitment to address problems as in Indonesia, the financial transactions tax in Ecuador, or the political crisis in Turkey. However, guarantees appear ineffective in reversing the decline in foreign liabilities, primarily in cases where currency pressures are high. Moreover, even in those cases where the guarantee seems to have been successful, other events such as the approval of an IMF program or a bank restructuring package may have also contributed to the alleviation of pressures. For instance, in Thailand and Turkey, an IMF program was approved during the same month the guarantee was put in place. In order to examine these aspects more formally, we turn to a simple econometric analysis, presented in the next section.

A. Empirical Analysis

In the previous section, we focused on examining the experience of countries who implemented blanket guarantees by means of a simple graphical analysis. Such analysis suggested that countries generally experience an improvement in depositor confidence following the extension of a blanket guarantee, and proposed explanations for those cases where it may have been unsuccessful. Here we turn to regression analysis to formalize the previous findings. However, in doing so, we first expand the sample to include countries that also experienced a systemic banking crisis, but did not use blanket guarantees. By adding these other countries we control for the possibility that liquidity pressures decline eventually even without using blanket guarantees. Therefore, our final sample for the regressions includes the 20 crises episodes described in the previous section (Tables 1 and 2, excluding

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[20] In the case of the Czech Republic, no significant change is detected following the guarantee, possibly because liquidity support was already on a declining trend when the guarantee was announced. In this case, restructuring programs were put in place at a number of banks and to avoid a significant deterioration in market confidence, the government raised the coverage of deposit insurance substantially, from CZK$100,000 to CZK$4,000,000, but only for those banks (IMF, 1996).

[21] In the case of Lithuania, two banks were closed and soon after, a law was passed to fully compensate their depositors. However, deposits kept falling and consequently liquidity support rose further. In Chile, as market conditions deteriorated, the government announced full protection to depositors of intervened banks, and it seems that the announcement slowed the decline in deposits. However, the policy measure was undermined by the conflicting intention of the government of imposing a 30 percent loss to depositors and foreign creditors of banks in liquidation. Foreign creditors reacted by cutting credit lines until they were assured that no losses would be imposed (Barandiarán and Hernández, 1999). Finally, in both Paraguay and Dominican Republic, the situation became complex when the interventions uncovered unrecorded deposits, which were initially excluded from the coverage. This exclusion put pressure on other financial institutions rumored to have engaged in similar practices. Eventually, all depositors were compensated as a law was passed to compensate unrecorded deposits up to US$15,000 per depositor.

those corresponding to the ongoing 2007-2008 crisis) plus 22 additional cases from the Laeven and Valencia (2008) crisis database.[22]

The dependent variable in the baseline regressions corresponds to the first difference in the natural logarithm of the liquidity support indicator used in the previous section, i.e., claims of the monetary authorities on the banking sector expressed as a percentage of the total deposits and foreign liabilities of the banking system. We attempt to control for other policy announcements that may have impacted public confidence around the same time that a blanket guarantee was announced by adding among the regressors indicators of IMF programs and bank restructuring policies. To this end, we identify dates when IMF programs were approved and bank restructuring policies announced (details are provided in Table A2 in the appendix). This qualitative information is incorporated by adding dummy variables that take the value of 1 for the date of approval (and onwards) of IMF programs and announcement of bank restructuring policies, and 0 otherwise. A similar approach is used to account for the announcement of blanket guarantees.

Bank restructuring policies matter because if credible, they show policymakers' commitment to clean up existing anomalies. They may enhance the credibility of a blanket guarantee, or may even be sufficient to restore confidence without the need for a blanket guarantee. IMF participation may also have an impact on public confidence not only because of its role as lender of last resort but also because its lending is tied to conditionality aimed at resolving macroeconomic imbalances. We also include among the regressors the first difference in the natural logarithm of the currency pressures index mentioned in the previous section. The inclusion of this last variable serves two purposes. First, it captures liquidity pressures arising from currency shifting by depositors. Second, it serves as an indirect measure of macroeconomic imbalances. If credible macroeconomic policies are implemented, one would expect pressures on the currency to abate. A more direct measure of credible macroeconomic policies is difficult to construct and it is not clear that it would perform significantly better than the indirect measures we include: IMF programs and currency pressures index. Finally, because there may be unobserved, country-specific factors affecting the credibility of blanket guarantees, such as the preexistence of a deposit insurance scheme, we run the regressions using a fixed effects estimator.[23]

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[22] The Laeven and Valencia (2008) database includes 42 crisis episodes. Of these episodes we do not consider the United States and United Kingdom (2007-08) because their financial crises were still unfolding as of the writing of this paper. Furthermore, we include two cases not included in Laeven and Valencia (2008): Honduras (1999) and Turkey (1994), where a blanket guarantee was used but a systemic banking crisis did not materialize.

[23] Other country-specific factors that may play a role include the pre-existing deposit insurance scheme, initial fiscal soundness indicators, political stability, and other institutional aspects. Because it is not clear which is more important, their combined effect is controlled for by means of country fixed effect regressions.

Table 3 shows the regression output. The blanket guarantee indicator includes four possible alternatives. The first one includes those cases where the entire banking system was covered—referred to as definition *a*—whereas the second one extends this set with episodes where the announcement covered only specific institutions—definition *b*. In alternative specifications we modified the dates for Mexico and Finland to be December 1993 and February 1993 respectively. As mentioned in the previous section, Finland took a first step towards a blanket guarantee in August 1992, although it was formally introduced only in February 1993, whereas Mexico was implicitly under a blanket guarantee since December 1993. Definitions *c* and *d* in the table correspond to the same countries as in *a* and *b* but with the revised dates for Finland and Mexico.

The first four regressions differ from the others in that the indicator controlling for a blanket guarantee and IMF program[24] has been lagged in the last four regressions. The reason for these alternative lagged specifications arises from a measurement problem. The analysis is performed with end-of-period monthly data while liquidity support may take place anytime during a month. It is possible that the measure employed in the first four regressions includes the liquidity support drawn before the guarantee was announced. In that case, even if markets react immediately, its measured effects would only show up a month later. A similar reasoning follows with IMF programs.

The results presented in Table 3 confirm the preliminary conclusions from the graphical analysis performed earlier. The announcement of a blanket guarantee is negatively associated with the expansion of liquidity support. One could interpret this result as evidence consistent with the idea that a blanket guarantee is successful in improving public confidence. Notice, however, that the results are not statistically significant for the first four regressions. For the last four regressions, columns (5) and (6) are significant and also show greater quantitative importance. This latter characteristic holds as well for columns (7) and (8) (definitions *c* and *d*). A possible explanation for this difference in results regarding the importance of blanket guarantees arises from the aforementioned measurement issue, since liquidity support is measured as end-of-month stocks while blanket guarantees may have been announced at any time during the month. Furthermore, the blanket guarantee seems to have been more successful in those cases where it covered all banks, than when it was aimed at specific institutions. This is evident from the difference in magnitude among the coefficients on the blanket guarantee measures *a* and *c* (*all* banks) and those for measures *b* and *d*.

The positive sign on the IMF program variable is surprising, since it suggests that liquidity pressures accelerate after the announcement of the blanket guarantee. A likely driver of this result is that the IMF comes into the picture when confidence is already deteriorating rapidly. Such deterioration is only reversed when concrete action is implemented to resolve banking

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[24] Whenever an IMF program was already in place, but a new program was approved, the date of approval of the new program is used.

sector problems and macroeconomic imbalances. Indeed, the variable capturing bank restructuring policies, most notably bank recapitalization schemes, has a highly statistically significant and quantitatively far more important coefficient than the announcement of a blanket guarantee. It stresses the importance of demonstrating a clear commitment to address problems. It also emphasizes that the sooner a credible plan can be implemented the quicker public confidence will be restored and the lesser the need for a blanket guarantee. However, the announcement of other policies—most notably those addressing macroeconomic imbalances—also play an important role, as captured indirectly by the currency pressures index, whose coefficient is highly statistically and quantitatively significant. If depositors anticipate a weakening of the currency they will rebalance their portfolios by reducing their exposure to assets denominated in domestic currency. Assuming they perceive banks to be sufficiently solid, they may shift currencies without withdrawing resources from the bank. But even if this is the case, banks may still react to the anticipation of currency depreciation by taking long positions in foreign assets, exacerbating the pressures on the currency and weakening liquidity positions in domestic currency.[25] The reduction of liquidity in domestic currency markets may induce banks to use liquidity support from the central bank. However, credible macroeconomic policies may restore confidence in the currency, reducing pressures on it and consequently, alleviating stress in the banking system.

We next examine further the impact of blanket guarantees on liquidity support by splitting its impact into short-run and medium-term effects.[26] These regressions are performed by creating two blanket guarantee dummy variables, one taking the value of one during the first three months following the announcement, denoted "short run effect", and a second one taking the value of one from the fourth month onwards, denoted "medium-term effect".[27] Table 4 shows the results.

The differentiation between short and medium term effects yields some interesting results. Across the different regressions performed, there is a clear pattern of a much larger impact of guarantees on liquidity support after the third month than during the first three months. However, the results are statistically significant only when the blanket guarantee covers all banks. The fact that blanket guarantees seem more effective in the medium-term rather than in the short term seems puzzling, since one would expect the opposite, namely, that any

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[25] Provided that foreign and domestic currency holdings are not perfect substitutes for cash reserve requirements and other liquidity considerations.

[26] The short- and medium- terms are loosely used in this context just to characterize the response of liquidity support immediately after the blanket guarantee announcement and some months thereafter.

[27] While not reported here, we also ran regressions with the growth of deposits as depended variable. Results had the expected sign but were not statistically significant. The problem is that aggregate deposit series are affected by exchange rate movements. Ideally, one would use bank-level deposit series broken down by currency to control for exchange rate fluctuations and flight to quality within the banking system, but such data are not available for our sample of countries. For instance, in the case of Indonesia, between October and December 2007, private national banks lost 35 trillion rupiah in deposits, while state-owned banks and foreign and joint-venture banks gained 12 and 2 trillion rupiah, respectively (Batunanggar, 2002).

positive effect of a blanket guarantee is larger in the period immediately after its announcement. We will defer a potential explanation for this result momentarily until we analyze the behavior of foreign liabilities, which is key to understand this result.

We now turn the analysis to the evolution of foreign liabilities, i.e., banks' liabilities to non-residents. We do so by running the same type of regressions as before, but using the first difference in the natural logarithm of banks' foreign liabilities as dependent variable. Table 5 and Table 6 show the regression output. As already shown in the graphical analysis, banks' foreign liabilities do not seem to respond to the blanket guarantee, despite the fact that in most cases, they were protected (see Table 1). In fact, the blanket guarantee variable—as well as the IMF program variable—enters with a negative sign in the regression, implying that the decline in foreign liabilities accelerated after the guarantee announcement. A rationale for this result could be that non-residents have a wider range of assets available to them, and/or they face lower exiting transaction costs. One could argue that they have far more to lose if they trust the announcement and the guarantee is not fulfilled than if they leave and the guarantee is fully honored. This effect could be exacerbated by banks desire to decrease exposure to foreign exchange risk by decreasing foreign liabilities using resources provided by the central bank. While statistically insignificant, the currency pressures index is quantitatively important in explaining the behavior of foreign liabilities. These results help explain in part why liquidity pressures remain, and even rise in some cases, after the introduction of a blanket guarantee. Finally, the bank restructuring policies variable enters with the expected sign, meaning that external creditors of banks become more confident about the banking system once concrete action to address problems is implemented, but it is statistically insignificant.

As before, we also run the experiment of splitting the effects of blanket guarantees into their short-run and medium-term impact on foreign liabilities. The results are quite interesting and help to better understand the outcomes from similar regressions on liquidity support presented earlier (the explanation we deferred to this part of the paper). It appears that foreign creditors' runs accelerate immediately after the announcement of a blanket guarantee. These runs increase liquidity pressures on banks, and cause the overall effect of blanket guarantees on the provision of liquidity support to be weaker in the short run than in the medium term. Over the medium term, foreign creditors' runs ease somewhat, suggesting that those who preferred to run, did so immediately. Why would outflows by foreign creditors accelerate following the announcement of a blanket guarantee? Perhaps they fear that governments will give priority to residents if the guarantee has to be honored. Alternatively, while foreign liabilities may be covered, the lack of foreign exchange may imply that the government would honor them in its equivalent in domestic currency, which from the perspective of foreign investors implies a potential loss in value—especially in the context of a depreciating currency. As mentioned earlier, non-residents runs may be compounded by banks' own desire to reduce short positions in foreign currency.

An issue that deserves further attention is that of sample selection bias. Perhaps the specific group of crises used in this paper is biasing results in our favor. In fact, such selection bias is likely to work against us in obtaining these results. First, we are including all modern systemic banking crises episodes where a blanket guarantee was used. It is possible that we are missing non-systemic crises where a blanket guarantee was used—just as Honduras 1999 and Turkey 1994—and averted a systemic crisis, hence being highly successful. Second, a large number of episodes used in this sample include countries that went into severe crisis because of substantial macroeconomic imbalances and irregularities in the financial sector. Such environment is conducive to low credibility of policy announcements and therefore it is less likely to yield favorable results in terms of the effectiveness of blanket guarantees.

The results presented in this section suggest that blanket guarantees tend to be successful in terms of improving public confidence, even after controlling for the announcement of bank restructuring policies and—at least indirectly—macroeconomic policies, and after taking into account the potential role of country-specific unobserved factors through fixed effects regressions. However, the quantitative impact of blanket guarantees seems much weaker than that of credible bank restructuring policies and of credible macroeconomic policies, and guarantees seem to be ineffective in restoring confidence of foreign creditors.

IV. THE COSTS OF USING BLANKET GUARANTEES

Despite the suggested failure of blanket guarantees to restore confidence of foreign creditors (Kane and Klingebiel, 2004), the previous section did find evidence consistent with theoretical predictions of the positive impact of guarantees on liquidity pressures. This benefit of blanket guarantees, however, comes at the cost of potentially higher fiscal outlays of bank restructuring programs. This question has been investigated by Honohan and Klingebiel (2003), who find—in a sample of 40 countries—that blanket guarantees increase fiscal costs significantly. In rough terms, their estimates suggest that fiscal costs could be halved in the absence of such guarantees. Their result is intuitive, given the sizable fiscal contingency entailed. In terms of real effects, Bordo et al. (2001) find neither positive nor negative effects from blanket guarantees on output losses.

Blanket guarantees may increase fiscal costs directly by raising outlays to pay off depositors of failed institutions or to support the absorption of assets and liabilities of a failed bank by an operating institution.[28] However, it may also increase fiscal outlays indirectly, by exacerbating risky behavior at banks and potentially increasing the costs of dealing with the problems at a later date. Using data from Laeven and Valencia (2008), we find a positive and significant correlation between the use of a blanket guarantee and fiscal outlays, as documented by Honohan and Klingebiel (2003). The pairwise correlation between the use of

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[28] Some legislations allow for the use of public funds (or the deposit insurance system) to back the value of assets being acquired, to make the resolution more attractive.

guarantees and fiscal outlays is about 0.3.[29] The fiscal costs included in those figures correspond to outlays aiming at recapitalizing financial institutions, paying off depositors, setting up an institutional framework to deal with non-performing assets, and other restructuring strategies. The countries in the sample correspond to episodes of systemic banking crises, as well as the case of Honduras which, as shown earlier, used a blanket guarantee in a non-systemic episode.[30] Furthermore, here we consider only a "full" blanket guarantee; that is, only those countries where guarantees covered liabilities at all banks.

Figure 2 shows the gross fiscal costs per country, with the darker columns indicating the blanket guarantee users. It is clear from the figure that, while fiscal costs tend to be higher in countries that resort to the use of blanket guarantees, there is a large variation in this relationship, with some countries such as Finland, Honduras, and Sweden employing guarantees while containing fiscal costs.

While the idea that blanket guarantees increase fiscal costs is intuitively appealing, it is worth recalling from the analysis presented earlier that blanket guarantees are most of the time implemented at times of significant turmoil, together with other policy measures. In severe crises, the underlying shock and/or vulnerabilities may be larger and therefore one natural consequence is higher fiscal costs of cleaning up the banking system. However, it is also the case in severe crises that in an attempt to address the deteriorating public confidence, multiple policy measures tend to be adopted. It is therefore difficult to disentangle the fiscal costs attributable to each policy. One example of such a strategy of mixed policies is when central banks provide substantial liquidity support followed by the announcement of a blanket guarantee.

Table 7 shows the interaction between provision of liquidity support and the use of blanket guarantee for the sample of countries shown in Figure 2. Extensive liquidity support is defined as in Laeven and Valencia (2008), and corresponds to those cases where liquidity support exceeds 5 percent of total deposits and more than doubles the level of the preceding year. Among countries that used blanket guarantees, those that incurred large fiscal costs also tend to use extensive liquidity support.

Similarly, the use of blanket guarantees has been more common in severe crises, suggesting that the positive correlation between the use of blanket guarantees and fiscal costs is in large part driven by the severity of the shock. Figure 3 depicts the blanket guarantee cases against

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[29] The correlation is 0.31 if we consider that Norway used a blanket guarantee and 0.37 if we consider that Norway did not use a guarantee. We treat Norway differently because it did not explicitly announce a blanket guarantee.
[30] We drop the crisis episode of Turkey in 1994 from the analysis in this section of the paper to avoid the potential bias of attributing erroneously costs to the more severe, systemic banking crisis in 2000 that could have been due to losses originated from the 1994 episode. We also drop from the sample Brazil (1990) and Ukraine (1998) because they show up with zero fiscal costs.

two measures of crisis severity, one corresponding to the highest value of the currency pressures index used in the previous section, and the other corresponding to the peak of liquidity support.

In order to examine the interactions between fiscal costs, blanket guarantees, and crisis intensity more formally, we conduct an econometric analysis that involves regressing fiscal costs for the episodes depicted in Figure 2 on a blanket guarantee dummy variable, a measure of crisis intensity (the currency pressures index), and an indicator for the use of extensive liquidity support. The last two variables are as defined previously. In an extension of the basic specification, we also introduce interaction terms between the blanket guarantee and crisis intensity variables, and the blanket guarantee and liquidity support variables. The results are shown in Table 8. Furthermore, the regressions are run separately with Norway treated as a country that issued a blanket guarantee (first five columns) and Norway treated as a case with no blanket guarantee (last five columns).[31] Moreover, we include two measures of extensive liquidity support, the first borrowed from Laeven and Valencia (2008) and used in Table 7, and an alternative measure using the 33rd percentile of liquidity support in the sample as threshold.

A quick inspection of the regression results in Table 8—ignoring the interaction terms for now—suggest that results that are broadly in line with those presented by Honohan and Klingebiel (2003). Blanket guarantees appear positively associated with fiscal costs. In columns 1 to 3 and 6 to 8, the coefficient on the blanket guarantee dummy variable enters quantitatively important and statistically significant coefficient in half of the regressions, even after controlling for the intensity of the underlying shock that caused the crisis and the provision of liquidity support.

However, what appears to be influencing significantly this result is the policy mix of announcing a blanket guarantee when public confidence has deteriorated sharply and consequently liquidity support has risen substantially.[32] In fact, after allowing for interaction effects with the intensity of the crisis and the provision of extensive liquidity support, we no longer find that blanket guarantees add significantly to fiscal costs. In particular, in panel A of Table 8, the magnitude of the coefficient on the blanket guarantee variable declines significantly when introducing the interaction terms. In panel B, the total effect of blanket guarantees on fiscal costs is much smaller as well. Therefore, the simple correlation between fiscal costs and guarantees merely reflects that guarantees tend to be employed in severe crises when fiscal costs tend to be high and have been used mostly when liquidity support has reached very high levels. If extensive liquidity support fuels inflation and currency

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[31] We obtain qualitatively similar results when using peak liquidity support as a measure of crisis intensity.

[32] Jácome (2008) studies a number of systemic and non-systemic banking distress episodes in Latin America and identifies an association between extensive provision of liquidity support and post-crisis macroeconomic disruptions.

depreciation, and this in turn deteriorates the quality of banks' loan portfolio, then introducing the blanket guarantee at that point in time causes the correlation between fiscal costs and blanket guarantees to increase.

The results described above do not imply that blanket guarantees are not costly, but that previous results on its fiscal impact may be overstated given other factors coming into play. In most cases where blanket guarantees have been used, multiple events take place (including the provision of extensive liquidity support) that influence the ultimate fiscal costs of the crisis without being directly driven by the blanket guarantee.

In major crises such as those analyzed here, policymakers often use the opportunity to conduct a large-scale bank restructuring program, in some cases addressing problems that existed before the crisis. For example, in Indonesia, out of the 56.8 percent of GDP in fiscal outlays that can be attributed to the crisis, about two-thirds corresponded to recapitalization of banks, much of which related to the recapitalization of state-owned banks that had suffered for close to a decade from bad loans caused by poor banking practices (such as connected lending) and fraudulent behavior.[33] In Turkey, already in 1999, one year before the onset of the crisis, losses at state-owned banks were estimated at 12 percent of GDP (IMF, 2000). In Japan, banks had experienced losses since the collapse of the stock and real estate markets in the early 1990's, years before it was widely accepted that the country's banking system faced a crisis.

Examples of other factors influencing the final outcome include institutional impediments, such as the case of Ecuador, where legal impediments did not permit the implementation of purchase and assumption operations and therefore cash payments had to be used to honor the guarantee (IMF, 2000, and Jácome, 2004). The excessive monetization exerted substantial pressure on the currency, deteriorating further the quality of banks' loans portfolios and ultimately increasing fiscal costs.

The fact that episodes where blanket guarantees were used in conjunction with massive liquidity support are also those which experienced large fiscal costs may suggest—from the perspective of minimizing fiscal costs—that it may be better to announce blanket guarantees sooner rather than later. Using them at an early stage would imply to put them in place before public confidence deteriorates substantially. However, the final outcome will always depend on the credibility of the guarantee, the accompanying policies, and the severity of the underlying shock. In terms of effectiveness, while in our sample those countries which implemented blanket guarantees at an early stage (for example, Mexico 1993, Honduras 1999, and Turkey 1994) benefited from some improvement in public confidence early on,

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[33] See Enoch et al. (2001) for a description of the problems that surfaced since the early 1990's with connected lending and fraud.

pressures returned after some time—except in the case of Honduras—as policymakers failed to follow up with credible policy actions.

V. POLICY IMPLICATIONS

As mentioned in the introduction, blanket guarantees imply higher fiscal contingencies and potential moral hazard problems. Moral hazard arises because banks no longer feel disciplined by depositors to avoid excess risk taking. With the backing of a blanket guarantee, it is often attractive for banks to engage in risky activities or, in case the bank is distressed, to "gamble for resurrection" while the guarantee is in place. Regulatory scrutiny is necessary to avoid such moral hazard. Another consequence of guarantees is that depositors no longer feel the need to screen banks. For instance, following the announcement of a blanket guarantee by the Irish authorities (effective on September 29, 2008), there was a large migration of deposits from the United Kingdom where a limited guarantee was put into place for Irish banks. In light of these moral hazard considerations, blanket guarantees should only be used as a temporary measure.

Regarding the timing of the guarantee, our results suggest that when guarantees are used late in the game, after liquidity support has reached significant magnitudes, fiscal costs tend to be high. This would suggest that it is preferable to use guarantees before a meltdown occurs, in order to stem the cost associated with the use of extensive liquidity support. At the same time, it is generally not so much the timing as the credibility of the guarantee that will determine its ultimate success or failure.

Our results also suggest that blanket guarantees prove unsuccessful in reversing the flow of foreign liabilities. We attribute this result to the fact that in an environment of financial instability, foreign creditors with access to a wide range of assets may have far more to lose if they stay and the guarantee is not honored than if they leave and nothing happens. In that regard, even if they perceive a small risk of the guarantee not being honored, they may find optimal to reduce their exposure to that country. An alternative explanation lies in the intention of banks to lower their foreign exchange risk exposure during banking and currency crises. Most likely, both factors help explain why we observe a continued decline in foreign liabilities of banks after a blanket guarantee is announced. Such outflows of liabilities should be of concern to policymakers, as they may add to liquidity pressures faced by the domestic financial system.

VI. CONCLUSIONS

The evidence presented in this paper suggests that blanket guarantees can be effective in slowing down the deterioration in public confidence often associated with major financial crises, but that this critically depends on the guarantee being credible. At the same time, however, blanket guarantees tend to increase the fiscal costs of resolving banking crises. A substantial part of these fiscal costs arise from the fact that guarantees tend to be used in

severe crises in combination with extensive liquidity support. Fiscal costs also tend to be higher when the guarantee is announced after a prolonged use of extensive liquidity support.

Foreign liabilities appear insensitive to the announcement of blanket guarantees. Following the announcement of blanket guarantees, many countries observe a continued decline in foreign liabilities.

The success of a guarantee can be significantly enhanced if accompanied by credible policy actions that adequately address underlying problems, such as undercapitalization of banks and macroeconomic imbalances that lead to pressures on the banking system.

Table 1. Selected Blanket Guarantee Episodes

Country	Date of guarantee	Duration (months)	Coverage
Denmark	Oct 2008	unspecified	All bank deposits.[34]
Ecuador	Dec 1998	37	All deposit liabilities (including offshore entities of the financial group) and foreign trade credit lines of banks under restructuring.
Finland	Aug 1992 (first announced) Feb 1993 (passed in Parliament)	75	All liabilities, except for shareholders.
Germany	Oct 2008	unspecified	All private savings accounts.
Honduras	Sept 1999	48	All banking system deposits.
Iceland	Oct 2008	unspecified	All deposits in domestic commercial and savings banks and their branches in Iceland. "Deposit" refers to all deposits by general customers and companies which are covered by the Deposit Division of the Depositors' and Investors' Guarantee Fund.
Ireland	Sept/Oct 2008 (first limited to only six financial institutions, then extended to all)	24	All retail, commercial, institutional and interbank deposits, covering bonds, senior debt and dated subordinated debt (lower tier II).
Indonesia	Jan 1998	78	All deposits and other credits of all domestic banks (excluding shareholders' capital, subordinated debt, and insider deposits).
Jamaica	Feb 1997	11	All deposits in licensed deposit-taking institutions, pension funds managed by authorized institutions, and policy-holders funds in insurance companies.
Japan	Nov 1997	89	All deposits, including interbank deposits.
Korea	Aug 1997 (external liabilities) Nov 1997 (extended to deposits)	37	All liabilities (excluding shareholders' capital and subordinated debt) of banks, securities companies, insurance companies, merchant banks, mutual savings and finance companies, and credit unions. Overseas branches were also included.
Malaysia	Jan 1998		Deposits only of commercial banks, finance companies and merchant banks, including overseas branches of domestic banking institutions.
Mexico	Dec 1993 (first announcement)[35] Dec 1994 (second announcement)	109	All bank liabilities, including inter-bank deposits but excluding subordinated debt.
Nicaragua	Aug 2000 (deposits of Interbank) Jan 2001 (all deposits)	18	All deposit liabilities except for related parties.
Sweden	Sep 1992	46	All liabilities, except for shareholders.
Thailand	Jun 1997 (finance companies) Aug 1997 (extended to banks)	89	All deposits, contingent and foreign liabilities (excluding shareholders' capital and subordinated debt) of banks and finance companies. Deposits and/or claims of related parties were excluded unless proven that transactions were at arms' length.
Turkey	May 1994	66	All savings deposits.
Turkey	Dec 2000	43	All liabilities (including contingent) of domestically incorporated banks except for owners' deposits, deposits linked to criminal activities, subordinated debt, and equity

Source: Laeven and Valencia (2008); IMF Staff reports for Turkey (1994) and Honduras (1999); and press releases.

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[34] The guarantee is part of an agreement with banks to set up an entity to take over insolvent banks, whose losses would be covered by private banks up to 2 percent of GDP, and the state would cover losses above that level. According to the agreement, subsidiaries of foreign banks in Denmark and depositors in branches of foreign banks in Denmark are covered. Subsidiaries of Danish banks in other countries are not covered. Depositors in branches of Danish banks in other countries may be covered if other banks in the country concerned have a comparable arrangement.

[35] The administering deposit insurance agency, FOBAPROA, was in charge of announcing at the end of each year the coverage limits for the subsequent year. As asset quality of banks deteriorated in 1993, fears about the stability of the banking system led to omit the usual notice and instead an intention to cover all liabilities (except subordinated debt) was announced, and similar actions followed in December 1994 (see IMF (1995) and Haber (2005)).

Table 2. Selected Bank-Specific Guarantee Announcements

Country	Date	Coverage
Chile	Jan 1983	Explicit guarantee announced to depositors of intervened banks.
Czech Republic	Jun 1996	Deposit insurance coverage was raised substantially (from CZK 100,000 to 4,000,000) for 18 banks that had entered a restructuring program.
Dominican Republic	Apr 2003	When intervened, the authorities announced that all legitimate deposits of Baninter would be honored with Central Bank certificates. Later on, the same treatment was applied in the resolution of other two banks.
Lithuania	Dec 1995	The Government passed a law extending full coverage to 2 closed banks.
Paraguay	Jul 1995	All recorded deposits in intervened banks (Unrecorded deposits were initially excluded, although later in May 1996 a law was passed to compensate for them as well).
United Kingdom	Sept 2007	All liabilities of Northern Rock outstanding as of Sept 16, 2007.

Source: Laeven and Valencia (2008)

Table 3. Impact of Blanket Guarantees on Liquidity Support

COEFFICIENT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				Dependent variable: Δ Log of Liquidity Support				
Δ Log of currency pressures index	0.366**	0.364**	0.363**	0.363**	0.353**	0.355**	0.359**	0.360**
	(0.171)	(0.170)	(0.170)	(0.170)	(0.169)	(0.169)	(0.172)	(0.172)
Blanket guarantee (a)	-0.0709							
	(0.054)							
Blanket guarantee (b)		-0.0393						
		(0.047)						
Blanket guarantee (c)			-0.0711					
			(0.053)					
Blanket guarantee (d)				-0.0397				
				(0.046)				
Lagged Blanket guarantee (a)					-0.121**			
					(0.057)			
Lagged Blanket guarantee (b)						-0.0960*		
						(0.049)		
Lagged Blanket guarantee (c)							-0.0954	
							(0.059)	
Lagged Blanket guarantee (d)								-0.076
								(0.049)
IMF program	0.0302	0.03	0.0271	0.0284				
	(0.052)	(0.055)	(0.052)	(0.054)				
Lagged IMF program					0.0159	0.0244	0.00913	0.0165
					(0.044)	(0.047)	(0.043)	(0.045)
Bank restructuring policies	-0.129***	-0.141***	-0.131***	-0.142***	-0.102***	-0.114***	-0.114***	-0.123***
	(0.038)	(0.041)	(0.038)	(0.041)	(0.034)	(0.037)	(0.034)	(0.037)
Constant	0.0655***	0.0642***	0.0674***	0.0653***	0.0712***	0.0715***	0.0723***	0.0721***
	(0.014)	(0.014)	(0.015)	(0.015)	(0.012)	(0.012)	(0.013)	(0.013)
Observations	966	966	966	966	966	966	966	966
Number of clusters	42	42	42	42	42	42	42	42
R-squared	0.026	0.025	0.026	0.025	0.03	0.029	0.028	0.027

Clustered standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Definitions of Blanket guarantee: a) When it covers all banks. b) When it covers all banks but also announcements covering only specific institutions. c) and d) are the same as a) and b) but with Mexico as of Dec. 93 and Finland as of Feb. 93

Table 4. Short-Term and Medium-Term Effects of Guarantees on Liquidity Support

COEFFICIENT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable: Δ Log of Liquidity Support							
Δ Log of currency pressures index	0.361**	0.356**	0.365**	0.363**	0.360**	0.360**	0.363**	0.362**
	(0.169)	(0.169)	(0.171)	(0.172)	(0.170)	(0.171)	(0.171)	(0.172)
Blanket guarantee (a) (short run effect)	0.004							
	(0.073)							
Lagged blanket guarantee (a) (short run effect)					-0.034			
					-0.053			
Blanket guarantee (a) (medium term effect)	-0.108*				-0.110**			
	(0.055)				(0.050)			
Blanket guarantee (b) (short run effect)		0.045						
		(0.064)						
Lagged blanket guarantee (b) (short run effect)						-0.024		
						(0.044)		
Blanket guarantee (b) (medium term effect)		-0.080				-0.0910**		
		(0.047)				(0.042)		
Blanket guarantee (c) (short run effect)			-0.016					
			(0.067)					
Lagged blanket guarantee (c) (short run effect)							-0.029	
							(0.054)	
Blanket guarantee (c) (medium term effect)			-0.0967*				-0.0933*	
			(0.056)				(0.052)	
Blanket guarantee (d) (short run effect)				0.029				
				(0.059)				
Lagged blanket guarantee (d) (short run effect)								-0.020
								(0.044)
Blanket guarantee (d) (medium term effect)				-0.071				-0.0776*
				(0.048)				(0.043)
IMF program	0.026	0.029	0.025	0.029				
	(0.052)	(0.054)	(0.051)	(0.052)				
Lagged IMF program					0.011	0.020	0.007	0.015
					(0.043)	(0.045)	(0.042)	(0.044)
Bank restructuring policies	-0.109***	-0.120***	-0.118***	-0.127***	-0.103***	-0.113***	-0.113***	-0.121***
	(0.035)	(0.038)	(0.035)	(0.038)	(0.036)	(0.038)	(0.036)	(0.038)
Constant	0.0633***	0.0611***	0.0658***	0.0627***	0.0687***	0.0691***	0.0703***	0.0702***
	(0.014)	(0.014)	(0.015)	(0.015)	(0.012)	(0.012)	(0.013)	(0.013)
Observations	966	966	966	966	966	966	966	966
Number of clusters	42	42	42	42	42	42	42	42
R-squared	0.029	0.029	0.028	0.028	0.029	0.028	0.028	0.027

Clustered standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Definitions of Blanket guarantee: a) When it covers all banks. b) When it covers all banks but also announcements covering only specific institutions. c) and d) are the same as a) and b) but with Mexico as of Dec. 93 and Finland as of Feb. 93

Table 5. Impact of Blanket Guarantees on Foreign Liabilities

COEFFICIENT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable: Δ Log of foreign liabilities							
Δ Log of currency pressures index	-0.106	-0.106	-0.107	-0.107	-0.109	-0.108	-0.108	-0.108
	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)
Blanket guarantee (a)	-0.0277***							
	(0.008)							
Blanket guarantee (b)		-0.0247***						
		(0.008)						
Blanket guarantee (c)			-0.0249***					
			(0.008)					
Blanket guarantee (d)				-0.0223***				
				(0.007)				
Lagged Blanket guarantee (a)					-0.0208*			
					(0.010)			
Lagged Blanket guarantee (b)						-0.0155		
						(0.009)		
Lagged Blanket guarantee (c)							-0.0176*	
							(0.010)	
Lagged Blanket guarantee (d)								-0.013
								(0.009)
IMF program	0.000104	0.00299	-0.00148	0.00126				
	(0.020)	(0.020)	(0.020)	(0.020)				
Lagged IMF program					-0.00288	-0.00171	-0.00392	-0.00282
					(0.014)	(0.015)	(0.014)	(0.015)
Bank restructuring policies	0.0133	0.0114	0.0117	0.0101	0.012	0.00952	0.0103	0.00829
	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.008)	(0.009)	(0.008)
Constant	-0.00889*	-0.00873*	-0.00837*	-0.00829*	-0.00940**	-0.00942**	-0.00914**	-0.00927**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.003)	(0.004)	(0.004)
Observations	956	956	956	956	956	956	956	956
Number of clusters	42	42	42	42	42	42	42	42
R-squared	0.009	0.009	0.009	0.009	0.008	0.007	0.008	0.007

Clustered standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Definitions of Blanket guarantee: a) When it covers all banks. b) When it covers all banks but also announcements covering only specific institutions. c) and d) are the same as a) and b) but with Mexico as of Dec. 93 and Finland as of Feb. 93

Table 6. Short-Term and Medium-Term Effect of Guarantees on Foreign Liabilities

COEFFICIENT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				Dependent variable: Δ Log of foreign liabilities				
Δ Log of currency pressures index	-0.105	-0.105	-0.107	-0.107	-0.108	-0.107	-0.108	-0.107
	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)
Blanket guarantee (a) (short run effect)	-0.037***							
	(0.009)							
Lagged blanket guarantee (a) (short run effect)					-0.027***			
					(0.010)			
Blanket guarantee (a) (medium term effect)	-0.0230**				-0.015			
	(0.010)				(0.010)			
Blanket guarantee (b) (short run effect)		-0.0345***						
		(0.012)						
Lagged blanket guarantee (b) (short run effect)						-0.0173*		
						(0.010)		
Blanket guarantee (b) (medium term effect)		-0.0200**				-0.011		
		(0.010)				(0.010)		
Blanket guarantee (c) (short run effect)			-0.0358***					
			(0.009)					
Lagged blanket guarantee (c) (short run effect)							-0.0230**	
							(0.010)	
Blanket guarantee (c) (medium term effect)			-0.0199**				-0.012	
			(0.010)				(0.010)	
Blanket guarantee (d) (short run effect)				-0.0331***				
				(0.011)				
Lagged blanket guarantee (d) (short run effect)								-0.014
								(0.010)
Blanket guarantee (d) (medium term effect)				-0.0174*				-0.009
				(0.009)				(0.009)
IMF program	0.001	0.003	-0.001	0.001				
	(0.020)	(0.021)	(0.020)	(0.020)				
Lagged IMF program					-0.003	-0.002	-0.004	-0.003
					(0.014)	(0.015)	(0.014)	(0.015)
Bank restructuring policies	0.011	0.009	0.009	0.008	0.010	0.008	0.008	0.007
	(0.010)	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Constant	-0.00862*	-0.00837*	-0.008	-0.00789*	-0.00924**	-0.00937**	-0.00903**	-0.00929**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.003)	(0.004)	(0.004)
Observations	956	956	956	956	956	956	956	956
Number of clusters	42	42	42	42	42	42	42	42
R-squared	0.009	0.009	0.009	0.009	0.008	0.008	0.008	0.007

Clustered standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Definitions of Blanket guarantee: a) When it covers all banks. b) When it covers all banks but also announcements covering only specific institutions. c) and d) are the same as a) and b) but with Mexico as of Dec. 93 and Finland as of Feb. 93

Table 7. Blanket Guarantee and Extensive Liquidity Support

		Extensive liquidity support 1/	
		Yes	No
Blanket Guarantee	**Yes**	Ecuador Finland Indonesia Jamaica Korea Malaysia Mexico Nicaragua Sweden Thailand Turkey Average fiscal cost (percent of GDP): **26.8**	Japan Honduras Average fiscal cost (percent of GDP): **7.7**
	No	Argentina (80) Argentina (89) Argentina (01) Bolivia Brazil (94) Bulgaria Chile Colombia (82) Colombia (98) Cote d'Ivore Dominican Republic Estonia Norway Paraguay Russia Ukraine Uruguay Venezuela Average fiscal cost (percent of GDP): **14.6**	Argentina (95) Croatia Czech Republic Ghana Latvia Lithuania Philippines Sri Lanka Vietnam Average fiscal cost (percent of GDP): **6.2**

1/ Liquidity support above 5 percent of deposits and
 twice the size of previous year's value

Table 8. Blanket Guarantees, Crisis Intensity, and Fiscal Costs

COEFFICIENT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Dependent variable: Log(fiscal costs)									
	Panel A: Extensive Liquidity Support defined as in Laeven and Valencia (2008) 1/									
Blanket guarantee	0.518	0.315	0.402	-0.190	-0.311	0.694**	0.52	0.583*	-0.190	-0.068
	(0.344)	(0.338)	(0.327)	(0.916)	(1.007)	(0.336)	(0.327)	(0.322)	(0.916)	(0.991)
Extensive Liquidity Support		0.935***	0.702*	0.525	0.551		0.903***	0.678*	0.456	0.433
		(0.320)	(0.358)	(0.330)	(0.348)		(0.326)	(0.357)	(0.330)	(0.345)
Crisis Intensity			0.265*	0.274*	0.246			0.266*	0.272*	0.299
			(0.153)	(0.153)	(0.180)			(0.150)	(0.150)	(0.182)
B. guarantee*Ext. Liq. Support				0.737	0.655				0.965	1.051
				(0.976)	(1.052)				(0.969)	(1.037)
B. guarantee*Intensity					0.111					-0.112
					(0.366)					(0.311)
Constant	2.174***	1.575***	1.253***	1.350***	1.383***	2.128***	1.538***	1.219***	1.352***	1.321***
	(0.173)	(0.226)	(0.283)	(0.271)	(0.293)	(0.172)	(0.231)	(0.290)	(0.269)	(0.296)
Observations	39	39	39	39	39	39	39	39	39	39
R-squared	0.066	0.245	0.298	0.318	0.319	0.114	0.283	0.338	0.371	0.373
	Panel B: Extensive liquidity support defined as peak support above 33rd percentile									
Blanket guarantee	0.518	0.468	0.531*	0.248	0.13	0.694**	0.668**	0.700**	0.248	0.429
	(0.344)	(0.330)	(0.313)	(0.589)	(0.813)	(0.336)	(0.312)	(0.305)	(0.590)	(0.787)
Extensive Liquidity Support		0.665**	0.426	0.284	0.303		0.675**	0.447	0.23	0.205
		(0.304)	(0.322)	(0.340)	(0.351)		(0.302)	(0.314)	(0.339)	(0.347)
Crisis Intensity			0.321**	0.328**	0.305*			0.311**	0.317**	0.349*
			(0.155)	(0.156)	(0.174)			(0.151)	(0.152)	(0.176)
B. guarantee*Ext. Liq. Support				0.412	0.352				0.665	0.763
				(0.701)	(0.770)				(0.687)	(0.750)
B. guarantee*Intensity					0.0955					-0.146
					(0.405)					(0.352)
Constant	2.174***	1.748***	1.330***	1.408***	1.436***	2.128***	1.687***	1.291***	1.422***	1.382***
	(0.173)	(0.237)	(0.295)	(0.307)	(0.323)	(0.172)	(0.237)	(0.299)	(0.304)	(0.325)
	39	39	39	39	39	39	39	39	39	39
R-squared	0.066	0.17	0.251	0.26	0.261	0.114	0.222	0.299	0.322	0.325

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Crisis intensity measured as the peak of the currency pressures index used in the regressions of Section 3. In panel A, extensive liquidity support assumes the value of 1 if liquidity provided by the central bank exceeds 5 percent of deposits and if it at least doubles with respect to the outstanding stock of the previous year, and 0 otherwise. In panel B, extensive liquidity support assumes the value of 1 if peak liquidity support exceeds the 33rd percentile in the sample and 0 otherwise. Columns (1)-(5) considers Norway as having used a blanket guarantee, whereas the remaining columns do not.

Figure 1. Effectiveness of Depositors' Guarantees in Selected Countries (in percent)
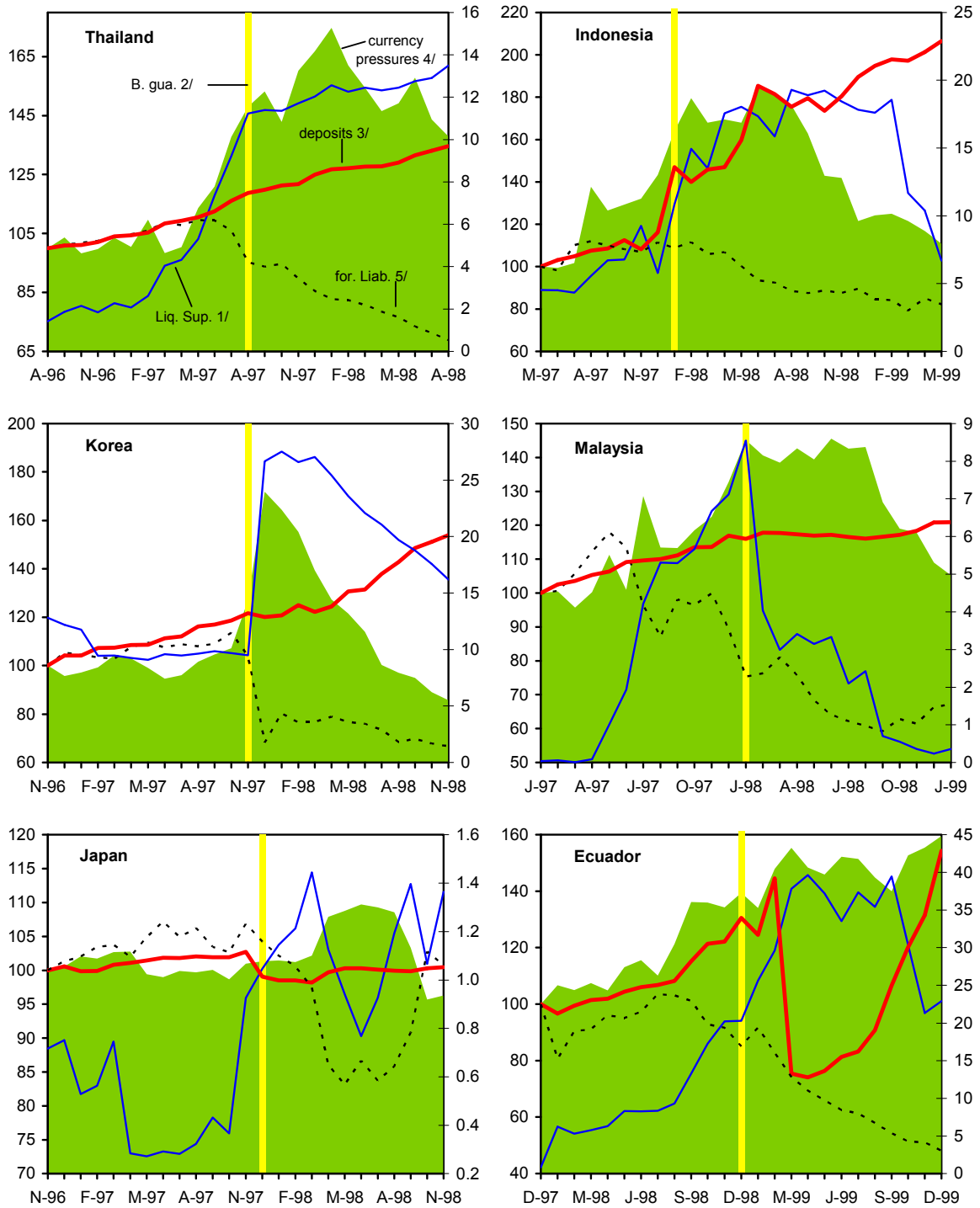
Source: IMF International Financial Statistics and Authors' Calculations

1/ Liquidity support is measured as the claims of monetary authorities on the banking system, expressed as a percentage of the sum of deposits and foreign liabilities.
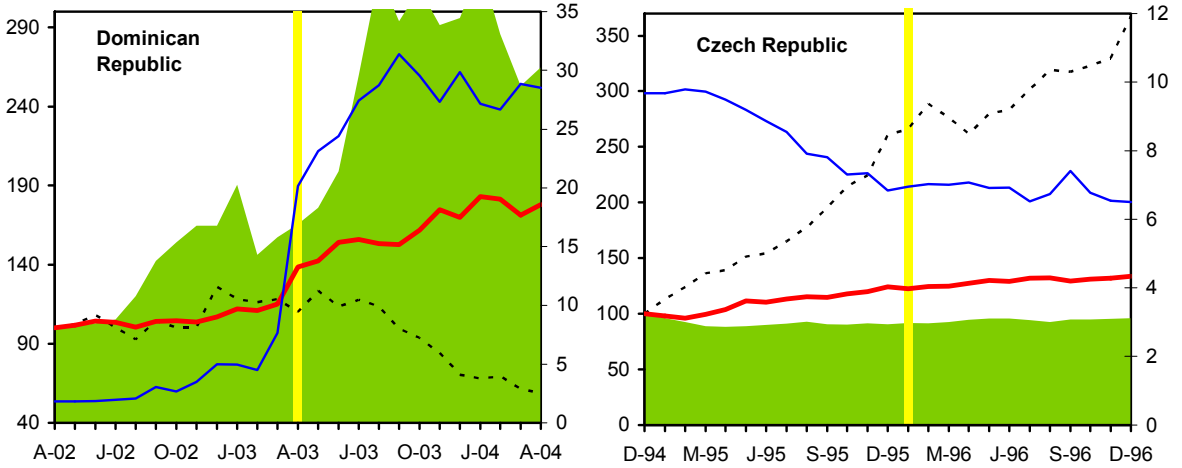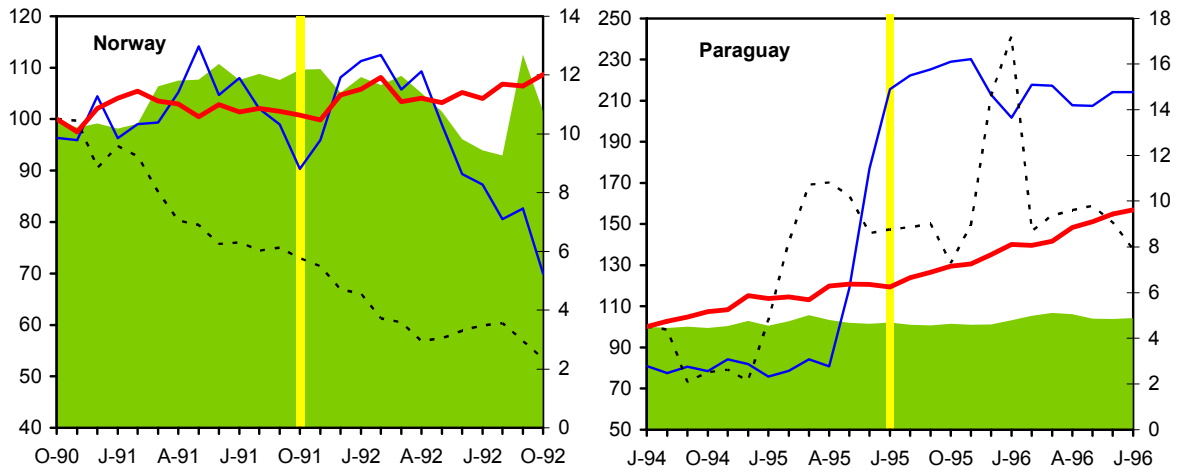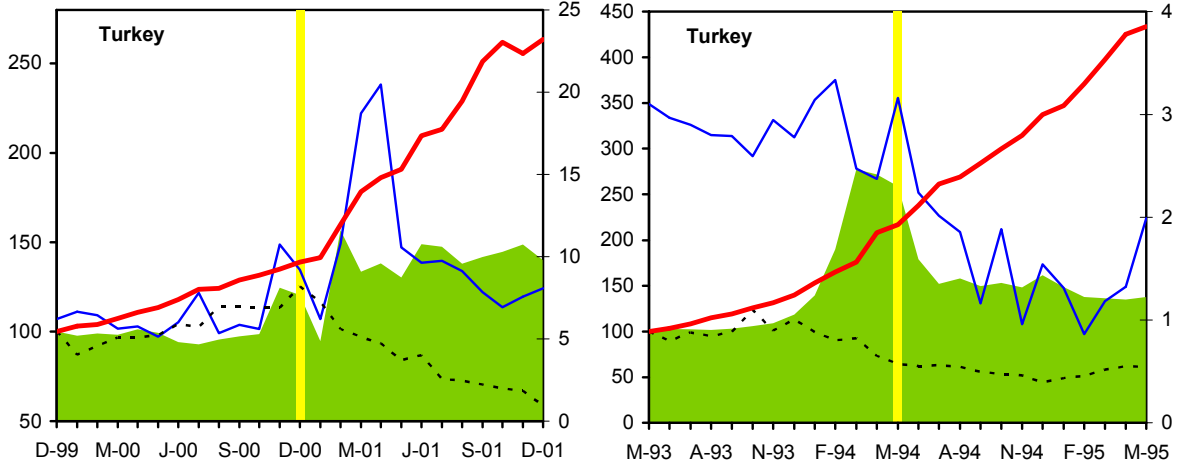
2/ Date on which a blanket guarantee was announced.

3/Total deposits in the banking system (index number).

4/ Foreign liabilities of the banking system (index number).
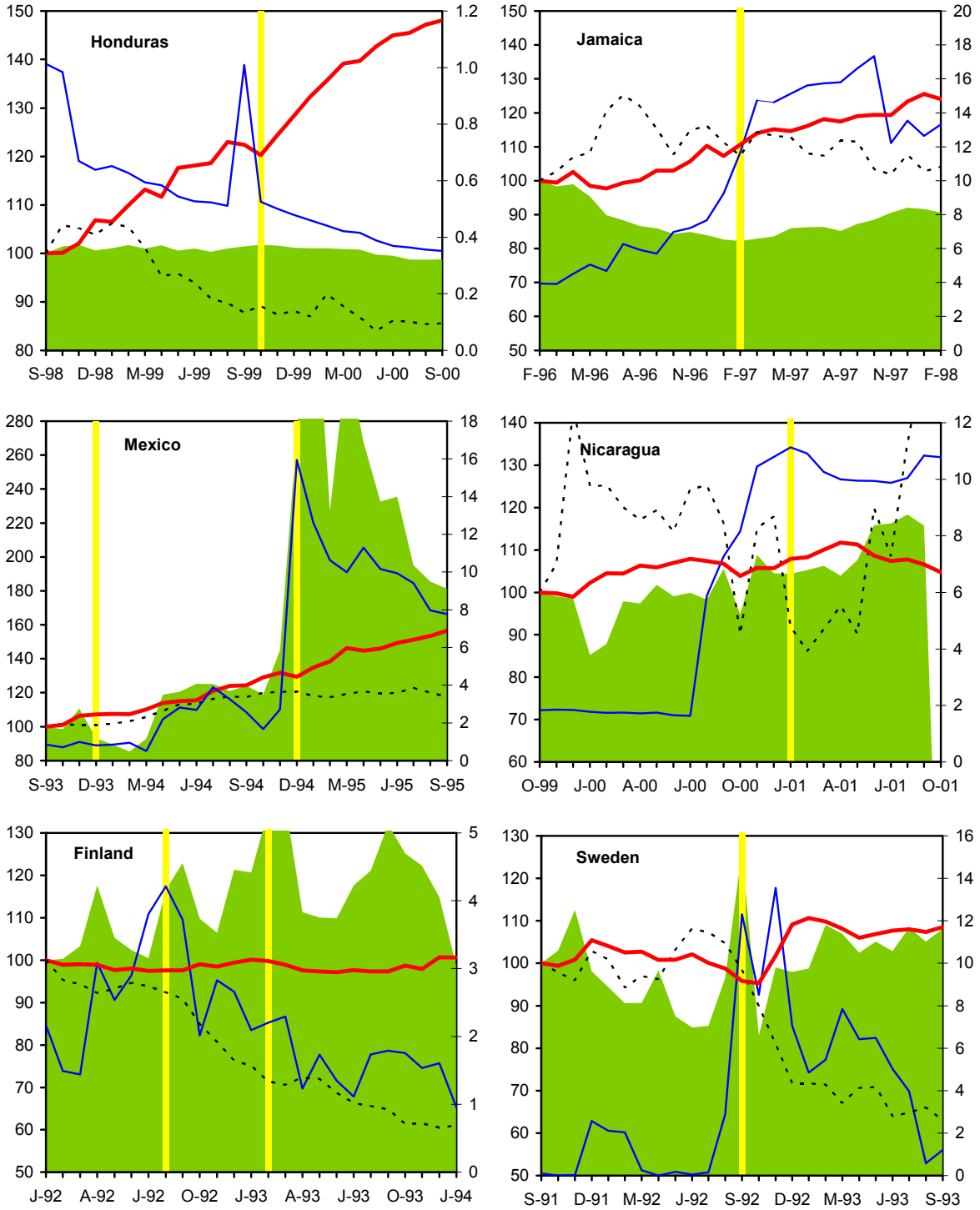
Source: IMF International Financial Statistics and Authors' Calculations

Source: IMF International Financial Statistics and Authors' Calculations
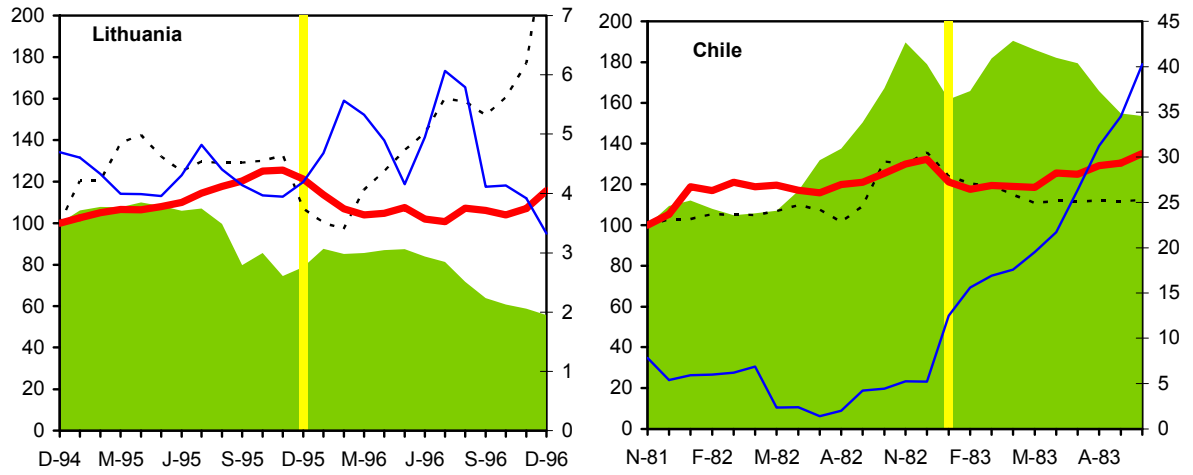
Source: IMF International Financial Statistics and Authors' Calculations

Figure 2. Fiscal Costs and Blanket Guarantees
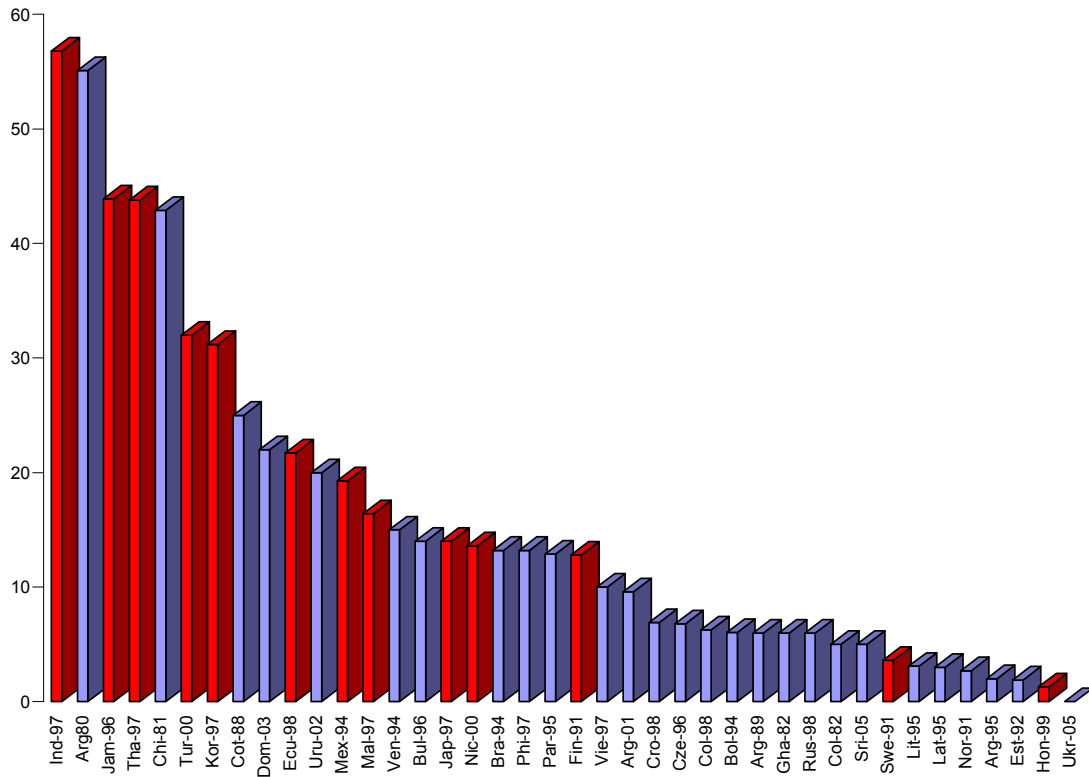
Source: Laeven and Valencia (2008).

Figure 3. Crisis Intensity and Blanket Guarantees
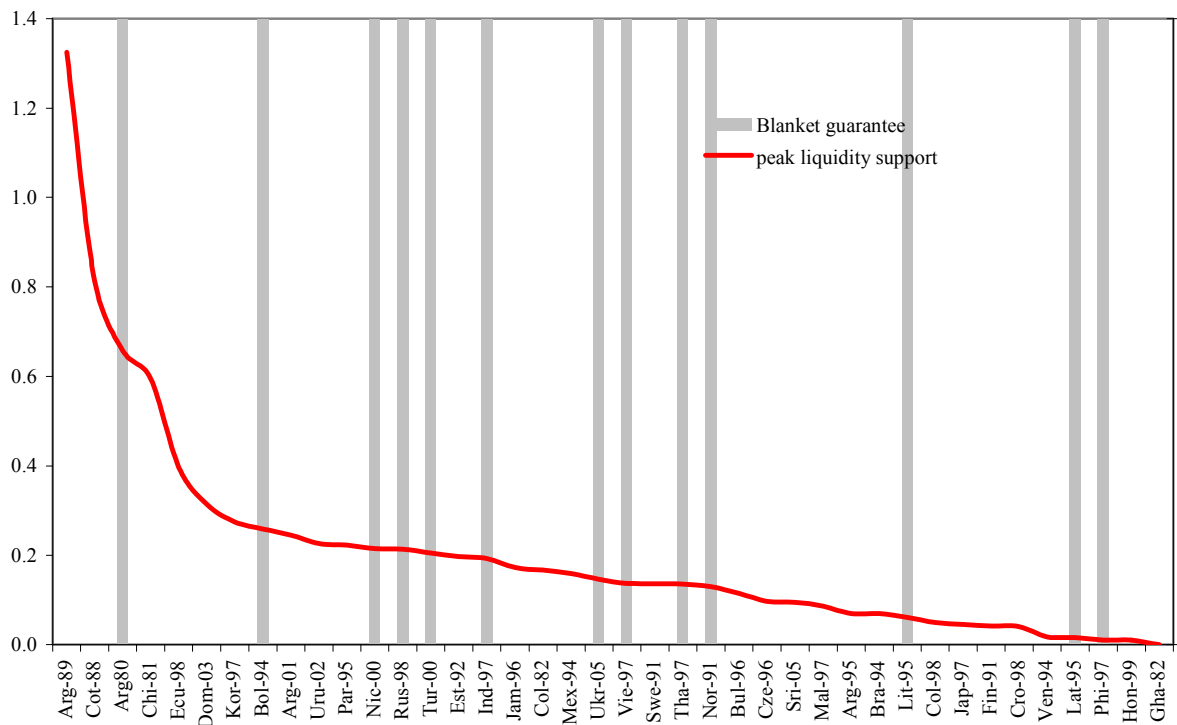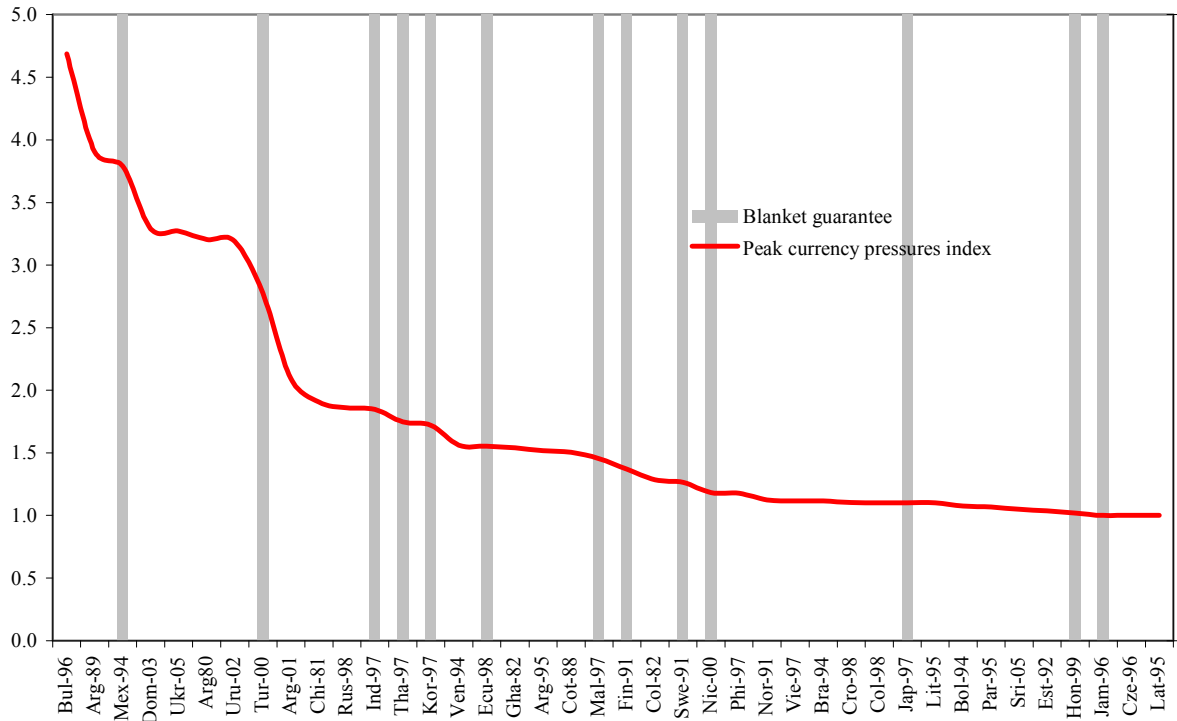
Source: Laeven and Valencia (2008), IMF International Financial Statistics, and Authors' calculations

Appendix

Table A1. Sequence of Events in Selected Crisis Episodes

Country	Date	Significant events
Ecuador	Apr-98	• A small bank (Solbanco) is liquidated and depositors faced losses. The event triggers runs on other banks.
	Aug-98	• New government inaugurated. • A mid-sized bank (Prestamos) is liquidated and depositors compensated only partially.
	Sept-98	• The largest bank (Filanbanco) requests liquidity assistance from the central bank. By the end of the month, 11 banks had already requested liquidity assistance.
	Dec-98	• A law is passed creating the Deposit Insurance Agency (DIA), announcing a **blanket guarantee**, and introducing a financial transactions tax.
	Jan-99	• 6 small to medium-sized banks are closed and Filanbanco is taken over by the DIA but kept open.
	Feb-99	• Currency allowed floating.
	Mar-99	• Bank holiday and deposit freeze. • The second largest bank (Progreso) unilaterally closes for business after the deposit freeze.
	Jun-99	• Gradual unfreezing of deposits begin
	July-99	• Results of international audits on banks are announced.
	Sept-99	• Three of the remaining 5 large private banks are taken over as they were found undercapitalized, but were kept open. • Government defaults on its external debt.
Finland	Sept-91	• The central bank takes control of Skopbank, a commercial bank under intense surveillance since 1989, and injects a significant amount of capital (3 percent of GDP).
	Jan-92	• A special working group is appointed to review the banking situation.
	Mar-92	• The Government provides significant capital injections in banks. It was offered to all banks and virtually all applied.
	Apr-92	• The Government Guarantee Fund (GGF) is established as an operational crisis management institution to provide financial support directly or indirectly to banks. • Business failures continue to grow rapidly.
	Jun-92	• GGF acquires Skopbank from the Central Bank. • GGF extends support to 41 savings banks and merged them into one bank (Savings Bank of Finland, which was the hardest hit by the crisis, accounting for half the losses)
	Aug-92	• The government announces that the stability of the Finnish banking system would be secured under all circumstances, the first step towards a **blanket guarantee**.
	Sep-92	• Finnish Markka is allowed to float.
	Nov-92	• The GGF supports the merger of STS-Bank with KOP (a large bank).
	Dec-92	• The GGF injects additional resources into Skopbank.
	Jan-93	• As problems become evidently larger than expected, a bill is sent to Parliament to increase funds assigned to GGF.
	Feb-93	• The bill sent to Parliament in January is passed with some modifications and an amendment is introduced a couple of weeks later whereby the authorities reaffirm the commitment to safeguarding the stability of the banking system declaring a **blanket guarantee**.
	Oct-93	• Reforms to strengthen bank supervision are implemented.
Honduras	Sep-99	• A small bank, Banco Corporativo is intervened.
	Oct-99	• Banco Corporativo is liquidated and legislation introducing a blanket guarantee is approved.
	Jun-01	• A small bank is closed.
	May-02	• Two small banks are taken over by a government agency FOSADE and the blanket guarantee that was going to expire in September is extended for another year.
Indonesia	July-97	• Pressures on the currency are felt after the drop of the Thai Baht. • The exchange rate bad is widened to 12 percent from 8 percent.
	Aug-97	• Indonesia abandons the exchange rate band.
	Oct-97	• Closure of 16 banks (2.5 percent of system) and announcement of close monitoring of another 34 banks, without revealing names. The announcement included limited protection to depositors.
	Nov-97	• Stand-by arrangement with the IMF is approved. • Rumors about actions by one of president Soeharto's sons to reopen one of the closed banks affected markets. • Bank run on Bank Central Asia, the largest bank in the country, • President Suharto's son acquires Bank Alfa in a transaction that virtually involved reopening his previously closed bank, undermining the credibility of the restructuring program.
	Dec-97	• Rumors about President Suharto's health affect the system. By mid-December, 154 banks (half of the total assets of the banking system) had experienced runs on deposits.
	Jan-98	• The newly announced government budget is perceived as unrealistic by the market and therefore

Country	Date	Significant events
		confidence deteriorates further.
		• A second IMF-supported program is announced.
		• The authorities announced the creation of the Indonesian Bank Restructuring Agency (IBRA), a corporate debt restructuring plan, and a **blanket guarantee**.
	Feb-98	• Political instability escalates as riots due to rising food prices occur.
		• The President announces that creditors to the previously closed 16 banks would be compensated.
		• President Suharto is re-elected.
	Mar-98	• Head of the IBRA is dismissed, and while some progress had been attained, no visible change in management of banks had been implemented.
	Apr-98	• A new liquidity support scheme is announced. IBRA closes 7 banks—deposits transferred to Bank Negara Indonesia--and other 7 are taken over.
	May-98	• Riots intensify following an increase in fuel prices. Suharto faces calls to resign.
		• President Suharto steps down on May 21st and hands over power to vice-president Habibie.
		• Bank Central Asia is hit hard by deposit runs and is taken over by IBRA.
	June-98	• International lenders and Indonesian companies agree on corporate debt rescheduling.
	Aug-98	• Review of 16 non-IBRA banks is finished. Overall insolvency of the financial system is estimated at 30 percent of GDP.
		• IBRA closes 3 banks and deposits are transferred to another operating bank.
	Sept-98	• Indonesia's bilateral external debt to Paris Club is refinanced.
		• The Government announces a plan for a joint recapitalization scheme of the banking system.
	Oct-98	• Amendments to the banking law are passed.
	Mar-99	• Joint recapitalization plan is unveiled, as a result, 38 banks are closed and 7 more are taken over by the IBRA.
	Apr-99	• Announcement of a recapitalization plan for state banks.
Jamaica	Oct-95	• The fourth largest bank, Century National Bank (CNB), runs into significant liquidity problems.
	July-96	• CNB is intervened and the government assumes temporary management and announces initially limited coverage of depositors.
	Dec-96	• Citizens bank (6 percent of the system) is affected by runs following rumors of insolvency.
	Jan-97	• Eagle (2 percent of the system) is affected by runs.
		• The Government establishes FINSAC with the mandate to restructure, merge, and capitalize financial institutions.
	Feb-97	• The Prime Minister announces a **blanket guarantee**.
	Mar-97	• FINSAC begins making capital injections in the financial sector with Eagle Financial Network.
	Apr-97	• FINSAC purchases loans granted by the central bank as liquidity support to the financial system. In return, it pays with its own securities.
	May-97	• FINSAC makes further capital injections in 4 financial institutions.
	Oct-97	• Parliament passes the amendment to the Financial Institutions act and to the Banking act.
		• During the last quarter they also pass the amendments to the Building Societies Act and to the Industrial and Provident Societies Act.
	Feb-98	• Finsac acquires shares in the largest bank and intervenes Workers Financial Entities.
	Mar-98	• Parliament passes the deposit insurance scheme law.
		• Horizon merchant bank is intervened.
Japan	Jan-97	• Nippon Credit Bank (NCB), an internationally active bank, started to have funding problems, which were exacerbated by the downgrading by the rating agencies.
	Apr-97	• NCB announced its restructuring plan including a capital injection from private sources and the Bank of Japan.
		• Another problem bank, Hokkaido Takushoku Bank (HTB) announces its merger with another institution.
	May-97	• Pressures throughout South East Asia followed after the Japanese authorities hinted an increase in interest rates—one of the first signs of the Asian crisis.
	Sept-97	• HTB previously announced merger falls apart.
	Oct-97	• The authorities step in to take action against troubled banks in western Japan.
	Nov-97	• Sanyo securities is suspended and defaults unsecured interbank loans. While the default is relatively small, it is the first in the history of the Japanese interbank market.
		• The interbank market paralyzes and foreign banks squeezed credit exposures to Japanese banks.
		• HTB fails and massive deposit outflows occur following the announcement.
		• Yamaichi Securities, one of the big four securities houses, fails but it is kept open to ensure a gradual unwinding.
		• The failure of Tokuyu City Bank is announced (fourth collapse in November). Rumors spread about further problems in the banking industry.
		• On Nov. 26th the Bank of Japan and Ministry of Finance issued a joint statement reassuring their commitment towards financial stability and issued a **blanket guarantee**. The effects of the announcement on public confidence were reflected on a sharp rebound of the stock market.
	Dec-97	• The Prime Minister announces a cut in personal income taxes.

Country	Date	Significant events
	Feb-98	• S&P downgrades two major Japanese banks. • The lower house of parliament approved a 30 trillion yen bailout package to strengthen the blanket guarantee and recapitalize ailing banks.
	Mar-98	• All major banks collectively apply for capital injections.
	Apr-98	• Prompt corrective action regulation is introduced.
	May-98	• Moody's downgrades five top Japanese banks and announced that it could cut ratings of other four.
	Jun-98	• A report in a monthly magazine mentions that Long Term Credit Bank of Japan (LTCB) was in poor financial health. Active sales spread to other banks.
	Oct-98	• LTCB is nationalized (the largest failure Japan faced during the crisis). • New legislation is passed increasing tools to deal with problem banks.
	Dec-98	• NCB is nationalized.
	Mar-99	• A new wave of capital injections takes place, much larger than the 1998 one.
Korea	Jan-97	• The 14th largest conglomerate goes bankrupt.
	Apr-97	• Between March and April further defaults from large conglomerates occur.
	Jul-97	• Pressures on the currency are felt. • Kia motors requests its creditors to restructure its debt.
	Aug-97	• Government announces readiness to guarantee foreign currency liabilities of Korean financial institutions.
	Oct-97	• Government rescues Korea First Bank and undertakes Kia Motors. Korea receives downgrades from various credit agencies.
	Nov-97	• Two more conglomerates fail. • The Government announces a widening of the exchange rate band to 10 percent from 2.25 percent and a **blanket guarante**e to all depositors in the financial system. • KAMCO, an asset management corporation to buy non-performing loans is established. • The authorities request Japan to persuade its banks to roll-over short term debt.
	Dec-97	• An IMF-sponsored package is announced. • The authorities suspended temporarily 9 merchant banks and announce that no more merchant banks would be suspended, but end up suspending 5 more a week later. • The government injects capital in Seoul Bank and Korea First Bank. One large conglomerate applies for court protection. • Confidence deteriorates significantly when it becomes known that Korea had a much lower level of usable reserves and a larger stock of short-term debt than markets had believed. • The currency is allowed to float. • Presidential elections take place. • Legislation is passed strengthening the independence of Bank of Korea and creating the Financial Supervision Commission.
	Jan-98	• A group of U.S. banks agree in giving Korean institutions a little more time to pay off their loans.
	Apr-98	• 4 merchant banks are closed
	Jun-98	• The government closes commercial banks for the first time (5 small ones), two merchant banks, and merges two merchant banks with commercial banks. • New loan classification and loss provisioning rules are introduced.
Malaysia	July-97	• Heavy interventions to defend the currency following Thai's currency depreciation. • Prime Minister launches bitter attack on "rogue speculators" and blames George Soros.
	Oct-97	• The authorities issue a directive prohibiting new real estate loans except for low income housing.
	Jan-98	• The authorities announce a strengthened loan classification regulation. • A **blanket guarantee** is declared.
	Mar-98	• The authorities announce a package to strengthen the financial sector, including enhanced supervision and regulation, bank recapitalization, and consolidation of finance companies.
	Jun-98	• An asset management company is established to acquire non-performing loans.
	Aug-98	• An agency is established to recapitalize banks.
	Sept-98	• Adoption of capital controls, an exchange rate peg, and measures to stimulate bank lending.
Mexico	Nov-93	• NAFTA is approved.
	Dec-93	• FOBAPROA omits announcing limits to deposit insurance coverage for the subsequent year and therefore a period of an implicit **blanket guarantee** begins.
	Jan-94	• Riots in Chiapas.
	Mar-94	• Presidential candidate Donato Colosio is assassinated.
	Aug-94	• Ernesto Zedillo is elected president.
	Sep-94	• Assassination of the ruling party leader
	Nov-94	• Banks Union and Cremi are intervened.
	Dec-94	• President Zedillo is sworn in. • Banco Oriente is intervened. • Tensions in Chiapas resume.

Country	Date	Significant events
		• On Dec. 20th, the authorities widened the exchange rate intervention band and announce two days later the free floating of the peso.
	Jan-95	• The Central bank begins granting liquidity assistance in U.S. dollars.
		• A financial rescue package for Mexico is announced.
	Feb-95	• A strengthened provisioning framework for loan losses is implemented.
	Mar-95	• A temporary capitalization program, PROCAPTE, is implemented.
		• Banpais and Banco Obrero are intervened.
	Apr-95	• A debt restructuring program for small and medium-sized businesses is implemented.
	May-95	• BBV signs letter of intent to acquire 70 percent of Probursa. Throughout the year 1995, 13 new subsidiaries of foreign banks were authorized.
	Jun-95	• Banorte assumes management of Bancen.
		• A debt restructuring program—this time for mortgage debtors—is implemented.
Nicaragua	Aug-00	• Intervention of Interbank (25 percent of system's assets) and announcement of full guarantee of its deposits. Despite the announcement, deposit outflows continued. Rumors affect other banks.
	Oct-00	• Resolution of Interbank by transfer of assets and liabilities to Banpro.
	Nov-00	• Bancafe's resolution is announced (Nov 17), but only limited compensation to is offered.
		• The announcement triggers runs at other banks (Banic loses 30 percent of deposits in one week).
		• Bancafe is resolved (Nov 26) transferring assets and liabilities to Banco de Finanzas. Despite the initial announcement, all depositors are protected.
	Dec-00	• Banic (12 percent of system's assets) is found undercapitalized and requested a capitalization plan.
	Jan-01	• Bamer (7 percent of system's assets) also affected by runs is found undercapitalized and requested a capitalization plan.
		• A limited deposit insurance law is passed with a transitional period with a **blanket guarantee**.
	Mar-01	• Bamer is resolved by transferring assets and liabilities to Bancentro. All depositors were protected.
	Aug-01	• Banic is intervened and resolved under a P&A with Banpro.
Norway	Jun-88	• Sunmorsbanken (a medium-sized bank) is found undercapitalized. The Commercial Banks Guarantee Fund (CBGF)—privately funded--guarantee all its commitments.
	Nov-88	• Tromso and Sparebanken Nord are found to have exhausted their primary capital.
	Jul-89	• Sparebanken Nord and Tromso merge to become Sparebanken Nord-Norge and shortly after a capital injection is performed. Up to 1990 this would be the only case of government economic support.
	Oct-89	• A small bank, Norion, is found to have exhausted its capital. The Ministry of Finance put the bank under administration (it would take until 1999 to wind up the bank).
	Jan-90	• It is decided to merge Sunmorsbanken with Christiania Bank (the largest commercial bank).
	Dec-90	• Fokus Bank (third largest commercial bank) receives a guarantee from the CBGF. In order to bolster confidence, the CBGF declared its willingness to provide preference capital to member banks. However, CBGF and SBGF (saving banks guarantee fund) resources are almost depleted.
	Mar-91	• The government creates the Government Bank Insurance Fund (GBIF) as response to the limited resources available at CBGF and SBGF and the existing losses in banks' balance sheets. The GBIF could lend to the other funds so they can inject risk capital in banks.
	Jun-91	• Den Norske, Christiania, and Samvirkebanken receive capital support from GBIF's resources.
	Aug-91	• Large losses are found in two medium-sized regional savings banks (Rogaland and Midt-Norge) and apply for capital injections from the SBGF.
	Sep-91	• Christiania Bank is found insolvent, Fokus bank nearly insolvent, and Den Norske bank
Paraguay	Dec-94	• A number of undercapitalized institutions are authorized to remain in operation under the condition that they would increase provisioning.
	Mar-95	• 10 of the 34 banks in the system continued to present capital deficiencies.
	May-95	• Public confidence is shaken when an accounting discrepancy of about US$4m in the value of local currency held in the Central Bank's vault was highly publicized.
		• Banco General and Bancopar (third and fourth largest and among the list of undercapitalized banks identified in 1994) fail to meet clearing obligations and are intervened, but kept open.
		• Interventions triggered flight to quality away from private domestic banks and the intervened institutions in particular.
	Jun-95	• Another commercial bank, Bancosur, and a finance company are intervened.
		• A new liquidity facility is announced by the Central Bank, by which banks with excess liquidity had to lend to those under stress.
	Jul-95	• A small commercial bank, Banco Mercantil, two finance companies and a savings and loans association are intervened.
		• The Central Bank announces a **blanket guarantee** of all recorded deposits in the financial system.
	Nov-95	• Three finance companies are intervened.
		• Congress passes a bill restituting unrecorded deposits, but it is vetoed by the President.
	Jun-96	• The scope of the central bank's lender of last resort facilities are extended to provide longer-term credit to distressed banks.

Country	Date	Significant events
		• A new banking law is passed and limited deposit insurance, compulsory to all institutions, is introduced.
	Jul-96	• Reserve requirements are reduced.
	Nov-96	• The central bank purchases loans to distressed banks.
	Dec-96	• Adoption of Congressional Law restituting unrecorded deposits up to US$ 15,000 per account.
Sweden	Mar-92	• Two banks—Nordbanken (state-owned and third largest) and Forsta Sparbanken (largest savings bank)—that had received capital injections from the state in the fall of 1991 ran into capital problems again. The government announces a restructuring plan for Nordbanken and Forsta is merged into Sparbanken Sveridge.
		• Gota bank—fourth largest—is recapitalized by its owners following significant credit losses.
	Jun-92	• Problems at banks get worse with mounting credit losses and collapsing property prices.
	Aug-92	• ERM crisis spillovers.
	Sept-92	• Gota Bank fails, but the government makes it clear that all its obligations are guaranteed.
		• UK and Italy leave the ERM; the Riskbank raises overnight rates to 500 percent.
		• Riskbank buys bonds issued by a large mortgage institution and allows banks to borrow at subsidized rates.
		• The government announces several measures which received broad political support. It included the intention to request Parliament to extend a **blanket guarantee**, the use of foreign reserves as currency deposits in the banks, and made more liquidity support available.
	Nov-92	• Krona allowed floating.
	Jan-93	• Securum, the asset management company, started operating as an independent company.
	May-93	• A crisis resolution agency to implement the Government's program of capital support is founded and begins operations.
Thailand	Mar-97	• Central Bank announced solvency problems at 10 finance companies.
		• Bank of Thailand begins extending liquidity support to finance companies
	May-97	• The currency is attacked; a substantial amount of reserves is used to defend the peg.
	Jun-97	• Finance Minister resigns and the Prime Minister assures multiple times that the Baht won't be devalued.
		• The Bank of Thailand announces the suspension of 16 finance companies. Depositors received in return securities at extended maturities.
		• Authorities announced that no more finance companies would be closed and assured that all liabilities of the remaining ones were protected.
	Jul-97	• The Bank of Thailand announced managed float of the currency and calls the IMF for technical assistance. The currency depreciates 15-20 percent.
	Aug-97	• The Bank of Thailand and Ministry of Finance issued a joint statement suspending 42 finance companies and announcing a **blanket guarantee** for the remaining finance companies and banks.
		• A stand-by arrangement with the IMF is approved.
	Oct-97	• A financial sector restructuring strategy is announced and an emergency decree is passed increasing powers to intervene banks and making explicit the government's financial support of the Bank of Thailand.
	Nov-97	• Change of government and a new letter of intent with the IMF is signed.
	Dec-97	• Intervention and capitalization of Bangkok Metropolitan Bank.
	Jan-98	• Intervention and capitalization of 2 banks and establishing of a new state-owned commercial bank to take control over the higher-quality assets.
	Feb-98	• A third letter of intent with the IMF is signed.
	Mar-98	• New prudential regulation is introduced.
	May-98	• 7 more finance companies are intervened.
	Aug-98	• Authorities announce a comprehensive financial sector restructuring plan.
Turkey	Oct-00	• Some private banks are taken over by the SDIF.
	Nov-00	• Funding problems at Demirbank trigger a sell off of public securities. Interest rates increase significantly as pressures rise.
	Dec-00	• A **blanket guarantee** is declared and the IMF letter of intent is made public.
	Feb-01	• The Prime Minister publicly declares that there is a deep political crisis.
		• Overnight interest rates surpassed 4000 percent on Feb 20th and a day after the currency free floats, depreciating 40 percent.
	May-01	• Implementation of banks' restructuring plan begins.

Table A2. IMF Programs and Bank Restructuring Policies 1/

Country	IMF program approval date	Bank restructuring policies date
Argentina (80)	...	...
Argentina (89)	Nov-89	...
Argentina (95)	Apr-95	Apr-95 (Trust fund created to restructure banks)
Argentina (00)	Jan-02	...
Bolivia	...	Sep-95
Brazil (90)	Jan-92	...
Brazil (94)	...	Nov-95 (Implementation of PROER)
Bulgaria	Nov-95	Sep-96 (Implementation of restructuring plan begins with placement in conservatorship of 9 banks)
Chile	Jan-83	...
Colombia (82)	...	...
Colombia (98)	...	Jun-99 (FOGAFIN creates capitalization credit line)
Cote d'Ivore	Mar-88	...
Croatia	...	Feb-99 (New law grants new powers and is used first with Dubrovacka Banca)
Czech Republic	...	Oct-96 (NPL sales begin)
Dominican Republic	Apr-03	...
Ecuador	...	Aug-99 (Release of international audits and actions against undercapitalized banks)
Estonia	Sep-92	...
Finland	...	Jun-92 (GGF begins providing capital support)
Ghana	...	...
Honduras	...	...
Indonesia	Nov-97	Mar-99 (Bank Recapitalization begins)
Jamaica	...	Mar-97 (Finsac begins recapitalization plan).
Japan	...	Feb-98 (Funding and Strategy for a bank recapitalization plan are released).
Korea	Dec-97	Feb-98 (Bank recapitalization Strategy begins, with funding approved at the National Assembly)
Latvia	Apr-95	...
Lithuania	...	...
Malaysia	...	Mar-98 (Banking sector strengthening package is announced, including recapitalization)
Mexico	Jan-95	Mar-95 (Implementation of PROCAPTE)
Nicaragua	...	...
Norway	...	Jun-91 (CGF begins injecting capital in large banks)
Paraguay	...	...
Philippines	Mar-98	Feb-98 (Strengthening of prudential norms)
Russia	July-99	July-99 (Signing of Bank restructuring Law by the President, aiming at large banks)
Sri Lanka	...	...
Sweden	...	May-93 (Gov. Agency in charged of providing capital support to banks begins operations).
Thailand	Aug-97	Oct-97 (Special funds for bank restructuring approved)
Turkey (94)	...	...
Turkey (00)	Dec-00	May-01 (Bank restructuring plan implemented, including recapitalization)
Ukraine	Sep-98	...
Uruguay	Apr-02	Aug-02 (Bank restructuring strategy begins right after bank holiday)
Venezuela	Jul-95	Jul-94 (8 banks are intervened, closed, recapitalized or nationalized)
Vietnam	...	...

1/ If a program or a comprehensive restructuring strategy—excluding deposit freezes, bank holidays, or extensive liquidity support—is not implemented in the sample period, it is denoted by "...".

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