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Stock Market Responses to Bank Restructuring Policies during the East Asian Crisis

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During a crisis of confidence, announcements of deposit guarantees may give market participants short-term comfort. But stock market responses show that using public funds for bank bailouts is not a credible way to restore the health of the financial sector.

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Summary findings

The East Asian crisis began in Thailand in mid-1997 when an ailing financial sector, a slowdown in exports, and large increases in central bank credit to weak financial institutions triggered a run on the baht. Then the crisis spread to other countries in the region as common vulnerabilities and revaluations of risk in emerging markets triggered large capital outflows.

To better understand the impact of different policy responses to financial crises, Klingebiel, Kroszner, Laeven, and van Oijen investigate how stock markets in East Asian countries reacted to the initial policy announcements of bank and financial restructuring—especially how banking and nonfinancial sectors in Indonesia, the Republic of Korea, Malaysia, and Thailand fared in response to announcements of different restructuring measures.

They find that prices of bank stocks responded positively to announcements about government guarantees of bank liabilities. Nonfinancial companies gained in value when guarantees were announced, but their stock prices were negatively affected by announcements favoring public recapitalization schemes and generous liquidity support programs.

Possibly the market was concerned that public funds per se would not restore the health of the financial sector—that they would not be sufficient or would not be used to restructure bank balance sheets and operations and allow banks to engage in meaningful corporate restructuring. The announcements of increased public support may have been viewed as a signal that the financial institutions were in a financially weaker position than previously thought.

This paper—a product of the Financial Sector Strategy and Policy Department—is part of a larger effort in the department to better understand the costs and benefits of different measures for resolving financial crisies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rose Vo, room MC9-624, telephone 202-473-3722, fax 202-522-2031, email address hvo1@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at dklingebiel@worldbank.org or llaeven@worldbank.org. March 2001. (44 pages)

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1 Introduction

The East Asian crisis began in Thailand in mid-1997, when an ailing financial sector, an export slowdown, and large increases in central bank credit to weak financial institutions triggered a run on the Baht. The crisis then spread to other countries in the region as common vulnerabilities and revaluations of risks in emerging markets triggered large capital outflows. The East Asian crisis countries took a variety of steps to address problems in their banking systems. Recent papers have begun to review the policy responses of the East Asian crises countries and assess the success of the policies followed in the different countries in terms of restoring the health of the bank and corporate sectors (Claessens, Klingebiel, Djankov 1999; Lindgren et al. 1999).

To improve our understanding of the impact of different policy responses to financial crises, we investigate how stock markets across East Asian countries reacted to the initial policy announcements of bank and financial restructuring. More specifically, we examine separately how the banking and the non-financial sectors fared upon announcement of different bank restructuring measures in Indonesia, Korea, Malaysia, and Thailand. Our focus is on the announcement effect of five types of measures typically used by governments to restore overall public confidence and to revitalize financial and corporate sectors: liquidity support to banks, guarantees of bank liabilities, bank closures, the provision of public funds for the recapitalization of financial institutions, and the creation of publicly owned centralized asset management companies. This study will help to understand whether market participants perceived various policies as effective or ineffective in restoring the health of the financial sector.

The remainder of the paper is organized as follows. Section 2 reviews the related literature on stock price responses during financial crises. Section 3 briefly depicts the financial restructuring experiences in East Asia. Section 4 presents the method and data followed by Section 5 that lays out the analysis and summarizes the results. Section 6 concludes.

2 Related Literature on Stock Price Responses during Financial Crises

Our analysis incorporates the essentials of two similar approaches of research on the effects of financial crises on stock prices. The first one relates to the assessment of the market's perception of the effectiveness of policy measures that have been taken to resolve currency or banking crises. The second one concerns work that aims at investigating whether policy announcements affect stock prices during a financial crisis. In this section we briefly discuss these studies.

Ganapolsky and Schmukler (1998) investigate whether the policies announced by the Argentine government helped to prevent spillover effects of the Mexican crisis of 1994-95. Ganapolsky and Schmukler argue that those announcements that were successful in preventing contagion will have had positive impact on share prices. Ganapolsky and Schmukler find that the agreement of Argentina with the IMF had a strong positive impact on Argentinean stock market returns. However, policy measures such as the creation of a fiduciary fund for bank capitalization, the constitution of a fund

to purchase non-performing loans and the establishment of deposit insurance did not have a strong effect on stock prices.

The analysis of Ganapolsky and Schmukler suggests that the agreement between the Argentine government and the IMF during the Mexican crisis restored confidence on the local stock market. Kho and Stulz (1999) also focus on the impact of IMF agreements but they concentrate on the value of bank stocks during the Asian crisis. Their sample consists of the listed banks in six Asian and four Western countries. The results indicate that IMF agreements with Asian countries had little effect on the value of local banks. Moreover, the stock prices of Western banks were also unaffected by the IMF bail out news. This suggests that the announcement of the IMF agreements did not reduce systemic risks because that would have led to an increase in the market value of Western banks.

A similar analysis is provided by Kho, Lee, and Stulz (1999). The focus there is solely on US banks, which stock prices are followed during financial crises other than the East Asian one. They do find evidence of bank bailouts, and find that the value of banks with exposures to a crisis country is negatively affected by currency crises and that it responds positively to IMF or central bank bailouts. US banks without exposure to such countries are again mostly unaffected by crisis events in these countries.

Djankov, Jindra and Klapper (2000) concentrate on the market value of non-financial firms that have a credit relation with insolvent banks. Their main goal is to analyze the effects of the resolution of bank insolvency on the market value of firms that borrow from these banks. They focus on the East Asian financial crisis and distinguish between four different exit-routes for insolvent banks: closure, foreign sale, domestic merger, and nationalization. Their results indicate that the announcement of these resolutions have different effects on the value of the borrowing firms. In particular, they find that a closure leads to a reduction in the value of firms that used to borrow from the closed bank. This suggests that relationships between banks and firms in these three Asian countries added value to the firms and that closures are disruptive because they end these relationships.

Peek and Rosengren (forthcoming) investigate the impact of various policy announcements by the Japanese government on the premium that Japanese banks have to pay on their Eurodollar and Euro-yen interbank loans relative to competing international banks. The only announcements that appear to have had a systematic effect on the "Japan premium" are ones involving well-specified concrete actions by the government. The most prominent example was reduction in the premium that accompanied the announcement of the injection of funds into the banking system by the government.

All the previous papers look at whether announcements concerning bailouts, IMF agreements or the resolution of bank insolvencies affect stock prices. Kaminsky and Schmukler (1999) take a reverse approach and study whether market jitters (i.e. large movements in the price index of a national stock market) can be explained by government policy announcements during crises. This methodology is in sharp contrast with the standard event study methodology. Rather than defining event dates *ex ante* and assessing whether the market experienced abnormal returns on these dates, they select

event dates based upon market jitters. Kaminsky and Schmukler focus on the stock market returns of nine East Asian countries during the 1997-98 period. They find that large movements often coincide with news about agreements with international organizations such as the IMF and the World Bank. Their analysis therefore suggests that the announcement of such agreements, which tend to be accompanied by financial restructuring programs, in fact contains information that is not yet incorporated in equity prices.

Our work adds to this literature in two ways. First, we examine the impact of various policy announcements on both banks and non-financial firms. This allows us to study the response of the stock market at a more disaggregate level and permits us to investigate the impact of the policy announcements on the banking and non-financial sectors of the economy simultaneously. Second, we concentrate on a number of concrete policy measures to explore the immediate consequences of financial restructuring announcements that occur in the midst of a financial crisis. Our particular focus is on announcements made by East Asian governments during 1997 and 1998. The next section briefly introduces the different policies that were followed during the crisis period in these countries.

3 Financial Restructuring in East Asia: A Brief Review

A full blown financial crisis swept Thailand, Korea, and Indonesia and to a lesser extent Malaysia. The Thai devaluation in July of 1997 triggered a withdrawal of capital from the region as investors started to look more critically at financial sector weaknesses and macro-economic imbalances. The currency and banking crises resulted in a severe economic downturn in all East Asian economies. Governments in the four crises countries employed different restructuring strategies for their bank- and corporate sectors.

As is typical in most financial crises, the East Asian governments were slow to address financial distress (Waxman and Hunamalai, 1999). They tried to keep insolvent institutions afloat by injecting liquidity (Table 1)—and in doing so, incurred large fiscal costs. The delayed and sometimes partial response of governments to emerging weaknesses of financial institutions led to financial turbulence and runs on financial institutions. Governments responded to the crisis in public confidence (Indonesia, Malaysia, and Thailand) or foreign currency outflows (Korea) by issuing unlimited guarantees on financial systems' liabilities during 1997 and early 1998.

Bank restructuring strategies. The Government responses and progress on financial restructuring have varied considerably in the East Asian countries. Authorities in Korea and Malaysia moved relatively aggressively to strengthen their banking system through injections of public funds (with little conditionality attached) for recapitalizations, nationalizations, removal of bad debt, and mergers. The Thai authorities moved aggressively on finance companies, closing two-thirds of them. In contrast, the Thai government has given banks a transition period to raise capital and offered public funds with tight conditionality attached. Indonesia put a public recapitalization program in place, but bank restructuring is still today at an early stage.

Table 1
Financial distress resolutions and bank recapitalization strategies (as of Fall 1998)

	Indonesia	Republic of Korea	Malaysia	Thailand
Initial government response				
Substantial liquidity support	$21.7 billion (17.6% of GDP)	$23.3 billion (5% of GDP)	$9.2 billion (13% of GDP)	$24.1 billion (20% of GDP)
Government guarantees	Yes	Yes	Yes	Yes
When issued?	1/98	11/97	End-97	8/97
Financial distress resolutions				
Bank shutdowns	64 of 237	None	None	1 of 15
Shutdowns of other financial institutions	Not applicable	More than 117	None	57 of 91
Mergers of financial institutions	4 of 7 state banks to merge	11 of 26 absorbed by other banks	58 to be merged into 6 groups	3 banks and 12 finance companies
Nationalizations	12	4	1 and 3 finance companies	4
Bank recapitalization strategies				
Public funds for recapitalizations	Plan in place; some bonds issued	Government injected $ 8 billion into 9 commercial banks; 5 out of 6 major banks now 90% controlled by state	Danamodal injected $1.6 billion into 10 institutions	Plan in place; government injected $8.9 billion into private banks and $11.7 billion into public banks
Majority foreign ownership of banks	Allowed, 1 potentially	Allowed, 2 completed and 1 near finalization	Not allowed	Allowed, 2 completed and 4 pending

Source: Claessens, Djankov and Klingebiel (1999).

Asset resolution strategies. The crisis countries have also taken different approaches to asset resolution (Table 2). Authorities in Indonesia, Korea, and Malaysia have actively removed bad loans from banks and transferred them to centralized, government-owned and -managed asset management companies. The Indonesian government has transferred $66 billion of the assets of closed banks and the worst loans of intervened and state banks—equivalent to 116 percent of the banking system's non-performing loans and 48 percent of GDP—to the Indonesian Bank Restructuring Agency. The Korea Asset Management Corporation (KAMCO) purchased about 26 percent of non-performing loans (worth $37 billion) at an average of 45 cents to the dollar. Malaysia's Danaharta asset management company has bought 50 percent of non-performing loans (worth $14 billion) at discounts of 30–50 percent. In all three countries the transfer of assets has substantially reduced non-performing loans in banks. Thailand's government has left the responsibility for loan workout and asset recovery with banks.

Table 2
Asset resolution strategies (as of Fall 2000)

Strategy	Indonesia	Republic of Korea	Malaysia	Thailand
Set up centralized asset management company to which banking system's nonperforming loans	Yes. Asset management unit has accumulated $66 billion of assets.	Yes. Kamco has accumulated $37 billion assets.	Yes. Danaharta has purchased $14 billion of assets.	No. The workout of nonperforming loans is decentralized. Several large bank have established private asset management companies
Centralized asset management companies purchase assets at subsidized prices	Yes	Initially assets were purchased above market-clearing prices with recourse. Since February 1998 purchases have been attempted at market prices	Purchased assets are valued by independent outside auditors	Not applicable
Type of assets transferred	Worst assets	No particular strategy	Loans larger than 5 million ringgit and mostly loans secured by property or shares	Not applicable
Assets transferred	48% of 1999 GDP	10% of 1997 GDP	18% of 1997 GDP	Not applicable
Assets disposed of as share of total assets transferred	1.5%	40%	5%	Not applicable

Source: Claessens, Djankov and Klingebiel (1999), and Dado (2000).

After a steep decline in output in 1998, the macro-economic condition of the four crises countries improved considerably during 1999 and growth turned positive. Yet, while governments have made significant strides and spent substantial resources to clean up their financial systems, banks in all crises economies have remained inadequately capitalized as their main clients, corporations, remain financially distressed (Claessens, Djankov, Klingebiel 1999).

While the section above analyzed the financial restructuring strategies of the East Asian crises economies, it did not examine how the announcements of financial restructuring measures where received by the market. This will be assessed in the sections below.

4 Method and Data

4.1 Sample and Event Study Setup

We concentrate our analysis on four East Asian countries: Indonesia, Korea, Malaysia and Thailand. All four of these countries experienced a serious financial sector crisis during the late 1990s and, as laid out in the previous section, used a variety of policy measures in response to it. To be able to analyze how these financial restructuring efforts were perceived by investors, we need precise information on when they were communicated to the public. We therefore use a large number of sources to obtain accurate data on the policy announcements. First of all, we investigate all the issues of the Asian Wall Street Journal from June 1997 until September 1998[1]. Second, we use official documents that are reported on the homepages of the central banks and the local governments of the four countries involved, the World Bank and the IMF. These relate to press releases of the local governments and central banks about financial restructuring policies and to so called Adjustment Loans Agreement and Letters of Intents, that among others detailed financial restructuring strategies that were presented to the World Bank and the IMF by the crises countries. Third, we rely on published reports by the World Bank and the IMF and papers by Corsetti, Pesenti and Roubini (1998a,b), Enoch (2000) and Radelet and Sachs (1998). All of these provide detailed information about the policies of East Asian governments during the financial crisis.

To properly capture the perceived effect of a policy in the event study, determining the precise time at which the information hits the market is crucial. An important timing issue concerns the problem of inside information. At the time the government makes the announcement, the information may have already been leaked to key market participants. Policy announcements will then contain little information for stock prices as the news is already incorporated. To accommodate for such effects, we will use an event window that includes the first trading day before the announcement date. This allows us to capture market re-valuations that immediately precede policy announcements. To the extent that the market's lead exceeds this single day, our analysis will fail to detect market responses, and this procedure may underestimate the effect on the stock prices. Stretching the event window even further to include earlier trading days seems inappropriate, however, because it would increase the risk of erroneously attributing market developments to specific policy announcements or simply introducing noise that would bias our findings towards zero. This danger especially exists when the market is volatile, which will obviously be the case during a financial crisis. For this same reason, we decided to include only the first trading day after the event date in our analysis. Hence, the event window that we will use consists of three days: the event date, the first trading day before the event date and the first trading day after the event date.

In interpreting the market response, it is important to consider the credibility of the policy announcement. As Peek and Rosengren (forthcoming) found, general policy statements not associated with very specific action plans had little effect in Japan. If the market does not believe that the government will follow through, then a lack of a stock

[1] We stop at September 1998, because by that point in time major reform and restructuring strategies had been put in place by the respective governments.

market reaction may reflect a lack of credibility rather than a lack of perceived impact of such a policy. Thus, a negligible reaction to a policy announcement does not necessarily imply that the market believes that the measures would have no impact but it may also reflect an assessment by market participants that the measures will not be effectively implemented. As we will describe below, the Indonesian government, for example, made very similar policy announcements on multiple occasions, suggesting that the earlier announcements did not result in implementation of the policy.

4.2 Stock Market Data

Our stock market data are obtained from the Global Indices series of Datastream, which are provided on a daily basis in local currencies. Datastream constructs these indices for a large number of countries by selecting the most important and liquid stocks of their local markets. There are approximately 50 stocks in these indices for Indonesia and Thailand. For South Korea and Malaysia, Datastream selects around 100 stocks. Datastream then distinguishes between different sectors and industries.

The Global Indices are particularly useful for our purpose because they contain separate series for banks and non-financial firms.[2] In each of the countries we examine, bank stocks constitute a significant fraction of total market capitalization.[3] Thus, using the regular Datastream composite/market index for these countries would not allow us to distinguish movements in bank stocks from movements in the rest of the market. The Global Indices, however, allow us to obtain a clear indicator for the reactions on the stock market that are specific to banks by subtracting the return of non-financial stocks from the bank stocks return. Throughout the paper, we refer to this as the excess return of bank stocks.[4]

Table 3 provides the summary statistics for the daily stock returns. The data for the years 1997-1998 show that average daily returns on bank stocks were negative in all four countries over those two years. Except for Malaysia, banks seriously under-performed non-financial stocks over that period. Nevertheless, because of the extremely volatile nature of the markets during this period, average daily excess returns for the banks are not statistically different from zero in any of the countries. This is also true for daily excess returns, but is not the case for sub-periods. If we distinguish between 1997 and 1998, however, we find that the underperformance of banks in Indonesia and Malaysia is statistically significant in 1997. In Malaysia, bank stocks then recovered to outperform

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[2] As of May 2000, for example, the Global Indices series for banks contain 8 to 10 stocks for each of the four countries that we focus on. We were unable to retrieve, however, precisely which banks were represented in the series during the years for which we perform our analysis.

[3] The fraction in the total market capitalization of the bank stocks represented in the Datastream indices amounted to 5 percent of the total market capitalization in Indonesia, 11 percent in Korea, 13 percent in Malaysia, and 27 percent in Thailand, as of end 1997. These figures exclude banks that are not represented in the Datastream indices and non-bank financial institutions.

[4] Only the Datastream index for Korea and Thailand consists solely of banks. For Indonesia and Malaysia, Datastream just reports indices that cover the financial stocks of these markets, that is, including finance companies and merchant banks. Note that since many Thai banks owned finance companies and many Korean banks owned merchant banks the Datastream bank indices for these two countries will reflect to some degree the performance of non-bank financial institutions as well.

the rest of the market in 1998. In Korea, the bulk of the under-performance of banks is concentrated in 1998.

Table 3 also reports the summary statistics for 1999. Banks in Korea and Thailand continued to under-perform non-financial firms by a wide margin in 1999, although the excess (negative) returns for the banks are not statistically significant. In contrast, bank stocks in Malaysia statistically significantly outperform the rest of their country's market in 1999. Also, returns are positive for both banks and non-financials in 1999 for all four countries.[5]

Table 3: Summary Statistics for Daily Stock Return Data (in percentages).
All returns are in local currencies and logarithmic. Excess returns are calculated by subtracting the return of non-financial stocks from the bank stocks return. The mean daily *excess* returns for banks that are significantly different from zero are indicated by asterisks.

	Indonesia		Korea		Malaysia		Thailand	
	Mean	(sd)	Mean	(sd)	Mean	(sd)	Mean	(sd)
1997-1998								
Return Bank Stocks	-0.30	(5.02)	-0.13	(4.14)	-0.17	(3.78)	-0.23	(4.51)
Return Non-financials	-0.03	(3.01)	0.04	(3.11)	-0.13	(2.97)	-0.09	(2.84)
Excess Return Bank Stocks	-0.26	(4.16)	-0.18	(3.07)	-0.04	(1.84)	-0.13	(3.15)
1997								
Return Bank Stocks	-0.46	(3.69)	-0.21	(3.26)	-0.46	(3.00)	-0.40	(3.65)
Return Non-financials	-0.11	(2.24)	-0.14	(2.68)	-0.22	(2.26)	-0.19	(2.52)
Excess Return Bank Stocks	**-0.35	(2.52)	-0.08	(2.36)	**-0.24	(1.50)	-0.21	(2.27)
1998								
Return Bank Stocks	-0.12	(6.14)	-0.05	(4.86)	0.11	(4.41)	-0.05	(5.23)
Return Non-financials	0.06	(3.62)	0.22	(3.48)	-0.04	(3.54)	0.00	(3.13)
Excess Return Bank Stocks	-0.17	(5.32)	-0.28	(3.63)	0.15	(2.13)	-0.05	(3.86)
1999								
Return Bank Stocks	0.20	(6.80)	0.01	(3.86)	0.25	(2.12)	0.04	(3.62)
Return Non-financials	0.19	(2.30)	0.37	(2.70)	0.12	(1.62)	0.17	(2.07)
Excess Return Bank Stocks	0.00	(6.08)	-0.36	(3.30)	*0.13	(1.12)	-0.13	(2.78)

(sd) = standard deviation of the daily stock returns.
* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level
Source: Datastream Global Indices.

4.3 A Chronology of Financial Restructuring Announcements

Appendix 2 of this paper contains the results of our search for bank policy announcements. The chronology shows that there were relatively few financial restructuring announcements in Malaysia where the financial crisis appeared to be less pronounced. For Indonesia, the bulk of the announcements took place in 1998. Also, the Indonesian government seems to have made the same policy announcements on different dates. For example, both the phasing out of liquidity support and the tightening of loan

[5] During the first half of 2000, prices however dropped again. Also, prices of stocks reached pre-crisis levels only in local currency values, not in dollar terms.

classification and provisioning were announced by the government on several occasions in late 1997 and 1998.

The chronology also reveals that governments frequently made multiple policy announcements on a single day. Especially the announcement of IMF agreements tended to be accompanied by statements concerning different measures to reform the financial sector. As a result, we might face a mixed event as we investigate the impact of the announcement of a specific policy measure. This makes it more difficult to asses the effect of the specific announcement. We will attempt to disentangle the effects of the different policies in the next section.

As a preliminary analysis, we relate the policy announcements in Appendix 2 to the incidence of large movements in the prices of bank stocks. This will reveal whether the announcements tend to contain information for market participants that is relevant for the stock prices of banks. If the announcements were already communicated informally to the market or if they were fully anticipated by the market, we do not expect to observe many jitters around the event date. In that case, studying the short-term effects of policy announcements on stock prices will not be very promising.

To investigate whether bank stocks indeed tended to be moved by financial restructuring announcements, we selected the 25 largest swings in each year of the return on bank stocks and of the excess return on banks. We do this for each country and for each year. Assuming 250 trading days per year, these dates represent the 10% largest movements of the year (in absolute values). We then check which of these days fall inside the event window of the financial restructuring announcements (which includes the event date and the first trading day before and after that date).

The results of this exercise, which are reported in Table A2 of Appendix 2, show that policy announcements are frequently accompanied by relatively high or low returns on bank stocks and excess returns.[6] This holds for all four countries, suggesting that the announcement contained news that was relevant to the market in each country. In the next section, we analyze these responses in detail.

5 Analysis and Results

We focus on five types of bank policy announcements. These concern announcements regarding:

(1) the type of liquidity support policy of the central bank,
(2) a guarantees of bank liabilities,
(3) bank closures and interventions,
(4) capital support policy of the government,

[6] Depending on the country and the year, 8 percent to 52 percent of the large movements are associated with the policy announcements that we analyze. The bank jitters that do not coincide with policy announcements are mostly related to macro events, such as a change in the exchange rate regime, the lifting of investment restrictions, and political events, such as resignations of Ministers of Central Bank officials.

(5) the establishment of publicly-owned and managed asset management companies.

A recent paper by Honohan and Klingebiel (2000) has shown that this set of crisis management strategies can be systematically linked to fiscal costs of banking crises for a large sample of countries. Given their sizeable impact on fiscal costs we belief it is reasonable to presume that the announcement of these policies has had an impact on asset prices as well.

The first step we take is to extract these types of announcements from the chronology provided in Appendix 2 and to calculate the associated returns using an event window of three days. This will provide a data set of policy events and stock market responses. The second step then is to analyze these data in search of patterns in stock market responses.

Panels A-E of Table A1 in Appendix 1 show the outcome of the first step of our analysis. Each panel concentrates on a different policy announcement and the events are grouped per country. The panels also indicate whether or not the announcement was simultaneous with other financial restructuring announcements and it reports the other policy measures if this is indeed the case. The returns associated with each event are averages per day for the event window. By using averages in stead of cumulative returns, we create comparability across announcements that are made over the weekend. For those events, the window only consists of two trading days (instead of three). Statistically significant returns are bold faced and accompanied by * or **, depending on whether they are significant at the 10 percent or 5 percent level. Few of the individual entries are associated with a statistically significant stock market response.

Now that we have data on stock price responses to policy announcements, we can use them to determine whether there is a pattern in the response of the stock market. For this, we need to deal with two issues. First, we would like to exploit the responses to each type of policy announcement by using all the individual announcements. By focussing on a single event in the way we do in Table A1, i.e. by calculating t-statistics for each individual event, we neglect the information that is contained in the responses to similar announcements that are made at a different time or in another country. For example, it may be that closures and interventions negatively affect bank stocks in each country but that the effect of each announcement is generally too small to detect if one focuses on a single event. The second issue relates to the mixed nature of some of the announcements. As we argued earlier, it will be difficult to assess the effect of a specific announcement if the government declares different policy measures at the same time. Table A1 shows that our sample of policy events contains many mixed events. The Korean government for example, made announcements concerning all five policy variables on a single day (December 5, 1998).

We now proceed in the following way. First we determine the average stock price response for each type of policy announcement. We thereby neglect the specific country in which the event took place, and the relative importance of subsequent announcements in a country. In doing so, we further subdivide the announcements concerning liquidity support and capital support into announcement that either favor or disfavor the use of

public funds. We then have an indication of how the stock market reacted to each type of announcement while using all the relevant individual events. After that, we set-up a regression analysis that attempts to address the problems associated with mixed events and that allows us to assess the statistical significance of the results.

Through this type of analysis we wish to establish the impact of the announcements on the market, where we distinguish between financial and non-financials. As a benchmark for calculating abnormal returns we simply use a zero response, that is we set normal performance returns equal to zero on event dates, and consider returns that differ significantly from zero to be abnormal. Our analysis thus differs from standard event studies that use a model to create a benchmark for the asset returns during event dates.[7] To avoid issues of the appropriate model specification for our countries during the sample period, we assume that the mean return is constant at zero. The null hypothesis in our empirical work thus is that returns are equal to zero on event dates.

As a preliminary analysis, we investigate whether those policy announcements that suggest an increase in the use of public funds to support banks affect stock prices, thus combining several types of government support measures. If the transfer of funds was unanticipated by the market and credible, we expect that the prices of bank stocks will respond positively. The effect on the stock prices of non-financial firms is less obvious. On the one hand, if banks are important for these firms to conduct their business, public support for banks might affect stock prices positively. On the other hand, stock prices of non-financial may be negatively affected. The transfer of public funds to the financial sector might be costly for non-financial firms as the government needs to recoup the costs, by for example increasing overall taxes. Or the market may perceive that the measures announced will not effectively restore the health of the banking system and therefore, banks may continue to curtail their lending activities. The impact on the non-financials, however, must be interpreted with caution. For the banks, policy announcements related to their restructuring and bail-out are likely to be the key driving forces behind the daily movements; for the non-financials, this is less likely to be the case. To the extent that other news events are influencing the non-financials, any interpretation of the movements in the non-financials will be less precise.

We first pool all the announcements reported in Table A1 into one data set. Avoiding duplication, we obtain a sample of 39 events. We then determine which of these events involve an announcement that suggests the use of public funds to support banks. Assuming that government support for the establishment of asset management companies involved the transfer of public funds to banks, there are 22 of these announcements. We then regress the stock price responses on a constant and a dummy variable indicating (an increase in) the use of public funds. The results are reported in Table 4.

[7] Two widely used approaches, that are described in MacKinlay (1997), are the constant-mean-return model and the market model. The first model assumes that average asset return is constant. The second model corrects for movements in the overall market by relating asset returns to returns of the market index. The market model is used in Kho and Stulz (1999).

Table 4: Regression Results for the Announcement Effect of Public Support for Banks

The sample consists of the event dates that are reported in the Table A1 of Appendix 1, which are pooled into one database. Avoiding duplication, this produces a sample of 39 announcements. The dependent variables in the regressions are the average daily stock returns for each event, where the returns are calculated using a window of three days. The independent variables are discrete, where the dummy variable equals one if on the event date an announcement was made that indicate a transfer of public funds to banks. This holds for announcements that suggest that banks will be helped through the ease of liquidity support, the announcement of government guarantees for depositors and creditors, the announcement of public funds for bank recapitalizations and the announcement that the government will support the establishment of asset management companies. The t-statistics are calculated using heteroskedasticity consistent standard errors.

	Return Banks (t-Statistic)	Return Non-financials (t-Statistic)	Excess Return Banks (t-Statistic)
Constant	-0.82	0.36	***-1.18**
	(-0.64)	(0.91)	**(-2.01)**
Dummy for announcements that involve a transfer of public funds towards banks	***1.57**	-0.12	****1.69**
	(1.92)	(-0.22)	**(2.39)**
R-squared	0.09	0.00	0.14
Adj. R-squared	0.07	-0.00	0.12
Prob. (F-statistic)	0.06	0.83	0.02
Number of Observations	39	39	39

* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level

The announcement effect of public support for banks is positive when considering the return of bank stocks or their excess returns. This finding parallels that in Peek and Rosengren (forthcoming) that policy announcements involving the provision of funds to the banking sector have the strongest effect on the banking sector relative to other types of announcements of government policy towards the banks. For non-financials, there is no effect of these types of announcements relative to the others.

Table 5 contains the stock price responses for each of the different types of policy announcements. The averages are calculated from the data presented in Appendix 1 using all the events in each panel. The number of announcements involved is presented in parenthesis. Let us first look at the column for the return of bank stocks. The average response to the announcement of a guarantee on bank liabilities equals a little more than 1.6 percent per day. Assuming that there are three trading days in all the event windows, this implies a cumulative increase in bank stock prices of roughly 5 percent. Reactions of similar magnitude are found for the twelve announcements that relate to asset management companies. The non-financial stocks also move in a positive direction upon these announcements, suggesting that the market perceived them as good for both the banking and non-financial corporate sector. The government guarantee of bank liabilities even brings forth a larger positive movement from the non-financial sector than from the banking sector.[8]

[8] As noted above, this interpretation assumes that no other important news events affected the non-financial sector.

The announcements of bank closures or interventions tend to have a small effect on the stock returns of banks and a small negative excess return for them. Announcements of more freely available (more restrictive) liquidity support for banks lead to positive (negative) excess returns for the banks. The absolute returns to the non-financial sector go in the opposite way: non-financial decline (rise) when more liberal (more restrictive) liquidity support is announced. Public funds for recapitalization lead to a positive excess return for the banks, although both the banks and the non-financials have negative absolute returns. Although there are only four observations of announcements indicating that the government will not provide public funds for recaps, banks experience a positive excess return and both the banks and non-financials have positive absolute returns. These responses suggest that announcements regarding the non-availability of public funds for bank recapitalizations signal to the market that the banking problems were not as severe as had been expected and/or that the government may be able to contain the fiscal costs of the crisis. This interpretation would also be consistent with the positive reaction by both banks and non-financials to the announcement of restrictions on liquidity support.

Table 5: Policy Announcements and Stock Returns.

The table contains the stock price responses for five different types of policy announcements. The averages are calculated using the data presented in the tables in Appendix 1. For each type of policy announcement, the average daily return is calculated using all the events in the four countries. The number of announcements that is used is presented in parenthesis. The 'Excess Return of Banks' is calculated by subtracting the return on non-financial stocks from bank stocks return. The announcements concerning liquidity support and capital support are further subdivided into announcements that favor or disfavor the use of public funds for liquidity or capital support.

	Return Banks		Return Non-financials		Excess Return of Banks versus Non-financials	
	Return	(#)	Return	(#)	Return	(#)
Announcement that liquidity support will be freely available	0.12	(6)	-0.37	(6)	0.48	(6)
Announcement that provision of liquidity support will be restricted	0.74	(5)	1.09	(5)	-0.34	(5)
Announcement that all bank liabilities will be fully guaranteed	1.60	(8)	2.02	(8)	-0.42	(8)
Announcement regarding the closure or intervention into financial institutions	0.16	(17)	0.51	(17)	-0.35	(17)
Announcements that include the use of public funds for recapitalizing banks' balance sheets	-0.06	(9)	-0.92	(9)	0.87	(9)
Announcement that preclude the use of public funds for recapitalizing banks' balance sheets	1.29	(4)	0.40	(4)	0.89	(4)
Announcement regarding the establishment of a publicly-owned, centrally managed asset management company	1.24	(11)	0.64	(11)	0.60	(11)

(#) = total number of policy announcements used to calculate the response on the stock market

In the above discussion of the results of Table 5, we have not investigated the statistical significance of the stock market responses. Analyzing the significance requires us to calculate the standard errors for each policy announcement and for each stock return measure. Because the data comes from different countries and because the number of

trading days that is used to calculate the response to each individual varies, this is not a straightforward task.

To tackle both of these issues, we design a regression approach using all the individual announcements that are reported in Table A1 of Appendix 1. Again, we pool all the announcements reported in Table A1 into one data set. Next we transform the policy announcements to discrete variables that can be used as independent variables in a regression. Announcements of guarantees, closures or interventions in financial institutions and the establishment of a publicly owned centrally managed asset management companies to which non-performing loans of banks are transferred to are transformed into dummy variables that equal one if on the event date such an announcement was made. Liquidity support and capital support policies are captured by two separate variables that equal –1, 0 or 1. In the case of liquidity support, a (-1) then refers to announcements that imply that liquidity support will be restricted; a (1) then refers to those types of announcements that suggest that liquidity support will be freely available. In the case of capital support, a (-1) refers to those types of announcements that preclude the use of public funds for recapitalizing banks' balance sheets, a (1) refers to those types of announcements that imply that public funds will be made available. By including only the 39 events related to the announcement of restructuring policy measures in the analysis, our regression results gauge the announcement effect of each type of policy measure relative to a zero return benchmark. This allows us to determine which specific type of policy measures have had an effect on stock prices and the direction of the response.

Using the response to each announcement as dependent variables and the transformed policy announcements as independent variables, we then perform OLS regressions. By including indicator variables for each type of announcement, we can try to disentangle the effects of each type of policy announcement when there is a mixed event. We also include an indicator variable in the regressions to control for the effects of an IMF agreement on stock prices. This variable equals one if on the event date an IMF agreement was announced or if the government declared that it made significant progress during the IMF negotiations.

The results of the regressions are reported in Table 6 and are generally consistent with our earlier discussion. The return on banks is positive and statistically significant with respect to the announcement of guarantees on banks' liabilities. For the non-financials, announcements concerning guarantees on bank liabilities are positive and statistically significant. Stock prices of non-financials, however, seem to react negatively to announcements that liquidity support will be freely available and capital support will be provided to strengthen banks' balance sheets. Announcements with respect to the establishment of setting up a publicly owned asset management company have no effect on stock prices.

The IMF agreement dummy is negative and statistically significant in the regression for the return of non-financials. This suggests that the macro-economic policies laid out in the IMF agreements may have been perceived by the market as having adverse effects on non-financial firms or may have been viewed by market participants as a signal that the situation was more serious than expected. The sample of IMF related

events is limited to those days on which announcements were made concerning the five policy variables that we focus on. Our data set is not constructed to capture all the announcements of IMF agreements or progress in the negotiations.

Table 6: Regression Results for the Effect of the Announcements of Bank Policy Measures on Stock Returns

The sample consists of the event dates that are reported in the Table A1 of Appendix 1, which are pooled into one database. Avoiding duplication, this produces a sample of 39 announcements. The dependent variables in the regressions are the average daily stock returns for each event, where the returns are calculated using a window of three days. The independent variables are all discrete. The variable 'Liquidity Support' equals one if there was an announcement that liquidity support would be made freely available. It equals minus one if an announcement was made that liquidity support was to be restricted. The variables 'Guarantees for Depositors and Creditors' and 'Closure/Intervention' are dummies that equal one if the government announced guarantees on that date or if there was a closure or intervention in a financial institution respectively. The 'Capital Support' dummy equals one if capital support was available and minus one if capital support was not available. The 'Asset Management Company' variable is a dummy that equals one if the government announces its intention to set up a publicly-owned centrally managed asset management company. The 'IMF' variable is a dummy that takes the value one if on the event date, an IMF agreement was announced or if the government declared that it made significant progress in the IMF negotiations. The t-statistics are calculated using heteroskedasticity consistent standard errors.

	Return Banks (t-Statistic)	Return Non-financials (t-Statistic)	Excess Return Banks (t-Statistic)
Liquidity Support	-0.31	**-0.61	0.30
	(-0.57)	**(-2.18)**	(0.57)
Guarantees for Depositors and Creditors	**1.74	**1.30	0.44
	(2.18)	**(2.47)**	(0.67)
Closure/Intervention	-0.21	0.45	-0.66
	(-0.26)	(0.96)	(-0.91)
Capital Support	-0.86	***-1.18	0.32
	(-1.19)	**(-3.32)**	(0.43)
Public Asset Management Company	1.04	0.62	0.42
	(1.33)	(1.53)	(0.54)
IMF Agreement	-1.52	***-1.87	0.35
	(-1.54)	**(-5.25)**	(0.36)
R-squared	0.19	0.39	0.06
Adj. R-squared	0.07	0.30	-0.08
Number of Observations	39	39	39
Number of Non-mixed Events	18	18	18

* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level
*** indicates significantly different from zero at the 1% level

To conclude our data analysis, we briefly look at the differences in stock responses across countries. In constructing Table 5 and 6, we have ignored the specific country in which the announcement was made. To investigate whether policy announcements were interpreted differently across countries than Table 5 and 6 suggest, we reproduce Table 5 and 6 for each country. The results for the returns of bank stocks and non-financials are reported in Table 7 and 8 respectively.

Table 7: Policy Announcements and Bank Stock Returns in Four Asian Countries

The table contains the average return of bank stocks for the different types of policy announcements. The averages are calculated using the data presented in the tables in Appendix 1. For each country and for each type of policy announcement, the average daily return is calculated. The number of announcements that is used for this calculation is presented in parenthesis. The announcements concerning liquidity support and capital support are further subdivided into announcements that favor or disfavor the use of public funds for liquidity or capital support.

	Indonesia		Korea		Malaysia		Thailand	
	Ret.	(#)	Ret.	(#)	Ret.	(#)	Ret.	(#)
Announcement that liquidity support will be freely available	0.69	(1)	-0.10	(3)	0.47	(1)	-0.17	(1)
Announcement that liquidity support will be limited to those institutions that are deemed solvent	0.33	(3)	6.30	(1)			-3.58	(1)
Announcement that all bank liabilities will be fully guaranteed	3.14	(2)	2.59	(3)	3.24	(1)	-0.41	(2)
Announcement regarding the closure or intervention into financial institutions	-0.43	(5)	0.53	(4)			0.34	(8)
Announcements that include the use of public funds for recapitalizing banks' balance sheets	-1.50	(4)	1.85	(3)	-3.49	(1)	3.44	(1)
Announcement that preclude the use of public funds for recapitalizing banks' balance sheets			2.42	(2)	0.47	(1)	-0.17	(1)
Announcement regarding the establishment of a publicly owned centrally managed asset management company	-0.76	(3)	1.90	(5)	2.11	(3)		

(#) = total number of policy announcements used to calculate the response on the stock market

The figures in Table 7 indicate that the announcement of guarantees positively affected the value of bank stock in all countries but in Thailand. In turn, the positive effect of the announcement regarding the establishment of asset management companies was apparent in Korea, Malaysia, and Thailand[9], but not in Indonesia. A similar conclusion applies to the announcement effect of guarantees when we look at the returns of non-financial stocks. Table 8 shows that Thailand is again the only country in which these types of announcements did not seem to lead to a significant market appreciation. In addition, the response of non-financial stocks in Thailand is also different than the regression analysis would suggests with respect to announcements regarding liquidity and capital support. For example, the announcement of a more restrictive liquidity support policy was associated with a decline in stock prices of non-financials. This is in contrast with the regression results in Table 6.

[9] Contrary to the other three countries, Thailand did not set up a centralized, public asset management. The reported effect relates to the announcement of plans to create private asset management companies.

Table 8: Policy Announcements and Returns on Non-financial Stocks in Four East Asian Countries.

The table contains the average return of bank stocks for the different types of policy announcements. The averages are calculated using the data presented in the tables in Appendix 1. For each country and for each type of policy announcement, the average daily return is calculated. The number of announcements that is used for this calculation is presented in parenthesis. The announcements concerning liquidity support and capital support are further subdivided into announcements that favor or disfavor the use of public funds for liquidity or capital support.

	Indonesia		Korea		Malaysia		Thailand	
	Ret.	(#)	Ret.	(#)	Ret.	(#)	Ret.	(#)
Announcement that liquidity support will be freely available	-0.39	(1)	-0.41	(3)	0.14	(1)	-0.71	(1)
Announcement that liquidity support will be limited to those institutions that are deemed solvent	0.85	(3)	3.53	(1)			-0.65	(1)
Announcement that all bank liabilities will be fully guaranteed	2.58	(2)	3.08	(3)	2.95	(1)	0.79	(2)
Announcement regarding the closure or intervention into financial institutions	1.66	(5)	0.14	(4)			0.94	(8)
Announcements that include the use of public funds for recapitalizing banks' balance sheets	-0.93	(4)	-0.76	(3)	-1.90	(1)	-0.40	(1)
Announcement that preclude the use of public funds for recapitalizing banks' balance sheets			1.08	(2)	0.14	(1)	-0.71	(1)
Announcement regarding the establishment of a publicly owned centrally managed asset management company	0.81	(3)	0.36	(5)	0.94	(3)		

(#) = total number of policy announcements used to calculate the response on the stock market

The country-by-country break down of the data in Tables 7 and 8 suggests that the patterns we found in our earlier aggregate analysis seem to apply to Indonesia, Korea and Malaysia. The data for Malaysia and Korea fit in nicely with all the conclusions for the specific policy announcements. The data for Indonesia show only one major divergence, which relates to the announcement effect of establishing a publicly-owned asset management companies on the return of bank stocks which decline. This is somewhat surprising as one may have thought that the bailout effect, i. e. the transfer of assets to the AMCs at inflated prices would affect bank stock positively. One possible explanation for the negative stock market response may be that the market may have been concerned that the transfer of massive amounts of assets to a publicly owned agency adversely affected the overall payment discipline even of performing debtors. In addition, the market may have suspected that the massive amount of bad debt on the books of a government agency susceptible to political pressure and with limited resolution capacity may adversely affect the resolution of those loans remaining on the banks' books.

The responses for Thailand appear to have a somewhat different pattern. The announcement effect of public guarantees on both bank stocks and non-financial stocks are largely absent. Announcements regarding the non-availability of public funds for recaps and announcements regarding the provision of public funds for recaps both affect bank stock negatively. The negative announcement effect of "no public funds" for bank recaps may have adversely affected banks' stock prices because the market perceived that these institutions would be financially to weak to restructure on their own. Also, the market may have reacted negatively to the announcement of a public recap scheme because it perceived the capital support package as not generous enough to restore the financial health of the banking system. Moreover, the announcement effect of public guarantees on both bank and non-financials is largely absent. Bank returns in Thailand react negatively to the announcement of a guarantee whereas bank stocks in other countries react strongly positive. There are two potential explanations for this phenomenon. One, bank liabilities may have already been perceived to be covered by an (implicit) government guarantee. Or, the market perceived the issuance of a guarantee not as a credible way to address the ensuing banking crisis.

6 Implications and Lessons

Although we must be cautious in drawing strong policy conclusions from a small number of observations, our analysis of the reactions to bank restructuring policy announcements during the East Asian financial crisis has revealed some suggestive patterns that merit further investigation. The patterns are roughly consistent across Indonesia, Korea, and Malaysia but apply to Thailand to a lesser extent.

We find that the prices of bank stocks as well as non-financials respond positively to announcements relating to government guarantees on bank liabilities. Banks stocks did not respond to either announcements concerning the establishment of a government-owned centrally managed asset management company or announcements that include public recapitalization schemes aimed at strengthening banks' capital base and generous liquidity support programs. The non-financial companies, however, tended to react negatively to announcements with regards to the use of public funds for capital support and generous liquidity support for financial institutions.

Although we know that guarantees are costly over the long run (Honohan, Klingebiel 2000), these results suggest that markets perceived the announcement of government guarantees on bank liabilities as positive for both financial and non-financial corporations. Announcements of guarantees appear to have provided comfort to market participants over the short run. The stock price decline of non-financials as a reaction to announcements that include the use of public recapitalization schemes and more liberal liquidity support may have a number of explanations. The market may have been concerned that public funds per se would not restore the financial health of the institutions. Rather than perceiving that the funds would be used to restructure bank balance sheets and operations and allow banks to engage in meaningful corporate restructuring, funds provided by the government may not have been perceived as sufficient. Alternatively, the markets may have interpreted the announcements of increased public support as a signal that financial institutions were in a financially weaker

position than previously anticipated. Finally, the decline in the stock price for non-financial companies as a reaction to the announcement of generous liquidity support may indicate that markets did not perceive the extension of liquidity support a credible enough measure to address the financial problems in banks.

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Appendix 1

Table A1: Stock Returns and Financial Restructuring Announcements: Liquidity Support (A), Guarantees of Bank Liabilities (B), Closures/Interventions (C), Capital Support (D), Asset Management Companies (E).

The returns reported in the final three columns are the average daily returns for each event. We have used a three day event window to measure stock price responses: the event date, the first trading day after the event day and the first trading day before the day of the event. If the event falls in a weekend, the stock market response is calculated using the Monday and Friday returns only. If the first trading day before the event was more than 3 days back because the stock exchange was closed during the other days, the event window only consists of the event date and the first trading day after the event. An '(M)' indicates whether or not the event was mixed with other policy announcements. These are then reported in square brackets in the first column. * and ** denote that the stock price response was significantly different from zero at the 10% and 5% respectively when using a t-test. The standard deviation of the average daily return during the event is calculated as $\sqrt{(1/k)}\cdot\sigma(i,j)$, where k is the number of days used in calculating the response of the stock market (i.e. 2 or 3) and $\sigma(i)$ is the standard deviation of the daily stock returns for country i and return series j for the years 1997-1998 (See Table 1).

Panel A: Liquidity Support

	Event Date	Mixed Event (M)	Excess Return Bank Index	Return on the Bank Index	Return Non-Financials
Indonesia:					
• Bank Indonesia eases local bank's access to funds through lower interest rates and reserve requirements.	10/20/97		1.08	0.69	-0.39
• 10 insolvent banks are under close monitoring and will not receive special (i.e. at favorable terms) liquidity support unless they are subject to bank runs. Special liquidity support for other banks will be phased out. [IMF agreement, limited guarantees, closure of 16 small banks, no compensation for shareholder losses, institutional framework will be improved.]	11/01/97	M	0.52	2.85	2.33
• Access to liquidity support will be more restrictive and at higher interest rates. [Position of IBRA will be strengthened, corporate debt restructuring plans, details for proposed plans for bankruptcy and judicial reforms.]	04/08/98	M	-1.56	-2.20	-0.64
• Target date for restricting liquidity support is Nov. 1 1998. [Capital support for strong banks announced, ability to sell bad assets to AMC (IBRA) for these same banks announced.]	06/24/98	M	-0.50	0.34	0.84
Korea					
• Announcement of principle agreement for special loan for Korean First Bank (KFB) to meet liquidity needs. [Government support for troubled financial institutions by letting KAMCO buy up assets.]	08/18/97	M	-0.63	-1.45	-0.82
• Announcement that KFB and some merchant banks will receive special loans at below market rates. [Guarantees on all foreign liabilities of Korean Banks, capital support for KFB, more funds to KAMCO for buying up bad loans.]	08/25/97	M	0.95	0.46	-0.49
• Temporary liquidity support announced. [Full guarantee announced, more funds for buying bad loans, request to Japan to roll over st-debt owed by Korean banks, exchange rate band widened.]	11/19/97	M	0.61	0.68	0.07

• Large liquidity injections of recent weeks will be reversed. [Blanket guarantees only until end of 2000, insolvent fi's will be closed, recapitalization requirement without support, more funds for buying bad loans, amendment of law to allow participation by foreign investors.]	12/05/97	M	2.77	**6.30	**3.53
Malaysia					
• There will be a new facility, but it will include penalty rates and collateralization requirements. [Only public funds for recapitalizations of firms and banks in which government owns a stake, capital requirements lifted, guarantees for buyers if finance companies, transparency and better loan classification and provisioning standards, more rigorous supervision, limitation on single party lending.]	03/24/98	M	0.33	0.47	0.14
Thailand					
• BoT announces that it will continue to help fi's by providing liquidity support but subject to conditionality and at higher rates. [IMF agreement but funds cannot be used for bail out finance sector, recapitalization required without public support (shareholder losses if insufficient), AMC announced but only for assets of intervened institutions, stricter loan loss classification, foreign participation encouraged.]	08/14/97	M	0.54	-0.17	-0.71
• Announcement that access to liquidity support will be tightened in the future. [Revised agreement with IMF. Government commits to quickly decide on closure of suspended finance companies and to toughen loan classification and provisioning requirements.]	11/25/97	M	-2.93	-3.58	-0.65

* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level

Panel B: Guarantees of Liabilities	Event Date	Mixed Event (M)	Excess Return Bank Index	Return on the Bank Index	Return Non-Finan-Cials
Indonesia					
• Small depositors of all banks will be compensated if banks are closed, shareholder losses will not be compensated and liabilities of non-financial firms will not be guaranteed. [IMF agreement, special liquidity support will be phased out, closure of 16 small banks, no compensation for shareholder losses, institutional framework will be improved.]	11/01/97	M	0.52	2.85	2.33
• Guarantees for all creditors and depositors of commercial banks. [Establishment of IBRA which will be given great power to deal with weak banks, freeze on debt service suggested, corporate restructuring framework is being developed (no public funds), bankruptcy procedures will be strengthened.]	01/27/98	M	0.59	3.42	2.83
Korea					
• Guarantees on all foreign liabilities of Korean Banks. [Announcement that KFB and some merchant banks will receive special loans at below market rates, capital support for KFB, more funds to KAMCO for buying up bad loans.]	08/25/97	M	0.95	0.46	-0.49
• Full guarantee of principal and interest on all types of deposits of financial institutions. [Temporary liquidity support announced, more funds for buying bad loans, request to Japan to roll over st-debt owed by Korean banks, exchange rate band widened.]	11/19/97	M	0.61	0.68	0.07
• Blanket guarantees will be phased out and replaced by limited deposit insurance but not before end of 2000. [Large liquidity injections will be reversed, insolvent fi's will be closed, recapitalization requirement without support, more funds for buying bad loans, amendment of law to allow participation by foreign investors.]	12/05/97	M	2.77	**6.30	**3.53
Malaysia					
• Blanket guarantees for all depositors and creditors.	01/20/98		0.29	3.24	*2.95
Thailand					
• Government guarantees that the depositors and creditors of all finance and securities companies that are not suspended will be protected. [On 06/27/97, 16 finance companies were suspended.]	06/29/97	M	-2.42	-0.23	2.20
• Government announces that depositors and creditors of financial institutions are protected. [Announcement that IMF negotiations are progressing, suspension of 42 finance companies.]	08/05/97	M	0.04	-0.59	-0.63

* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level

Panel C: Closures/Interventions

	Event Date	Mixed Event (M)	Excess Return Bank Index	Return on the Bank Index	Return Non-Finan-Cials
Indonesia:					
• Closure of 16 banks (assets are 3% of banking sector). Weak banks have to submit rehabilitation plans, if these are insufficient they will be closed. [IMF agreement, special liquidity support will be phased out, limited guarantees, no compensation for shareholder losses, institutional framework will be improved.]	11/01/97	M	0.52	2.85	2.33
• Secret intervention in 54 banks: rights of shareholders and managers remain intact but IBRA places officials within banks.	02/14/98		**-5.77	-3.09	2.68
• IBRA takes control over 7 large and 7 small banks that account for 75% of the liquidity support (16% of bank sector liabilities).	04/04/98		2.52	3.96	1.45
• IBRA suspends rights of owners and management of the seven large banks over which they took control at 04/03/98.	04/14/98		-1.97	-3.12	-1.15
• Government intervenes in 7 (small and large) banks by taking them over, wiping out the stakes of current equityholders. [Announcement that 'strong' banks will be recapitalized by the government, full details will be developed by the end of September, measures to promote corporate restructuring, negotiations about repayment liquidity support with a few banks, tax stimulation of mergers.]	08/21/98	M	0.92	-2.73	**-3.65
Korea					
• 9 merchant banks suspended. [IMF agreement announced.]	12/02/97	M	2.50	1.69	-0.82
• Insolvent financial institutions will be closed. 2 commercial banks need to prepare rehabilitation plans and will be closed if these are insufficient. [Reversion of liquidity support, blanket guarantees will be phased out by end of 2000, recapitalization requirement without support, more funds for buying bad loans, amendment of law to allow participation by foreign investors.]	12/05/97	M	2.77	**6.30	**3.53
• Operations of 5 merchant banks suspended.	12/10/97		-0.32	-2.79	-2.47
• 5 small commercial banks and 2 merchant banks are closed.	06/29/98		*-3.40	-3.09	0.32
Malaysia					
None					
Thailand					
• Suspension of 16 finance companies. [On 06/29/97, guarantees announced.]	06/27/97	M	-1.16	2.28	**3.44
• 42 finance companies suspended. [Announcement that IMF negotiations are progressing, blanket guarantees.]	08/05/97	M	0.04	-0.59	-0.63
• Financial Restructuring Agency decides to close 56 of the 58 suspended finance companies.	12/08/97		*-4.06	-1.73	2.33
• Intervention in 1 severely undercapitalized medium-sized bank (Bangkok Metro Bank). Management will be replaced and bank is ordered to recapitalize within two weeks.	12/31/97		-0.52	0.57	1.09
• Bangkok Metro Bank is taken over by the central bank: equity completely written down.	01/23/98		-2.32	-2.55	-0.23
• Central bank takes control over 2 midsize banks: Equity is written down.	02/06/98		2.19	3.73	1.54
• Intervention in 7 finance companies that were unable to raise capital. Ordered to write down their capital.	05/18/98		-1.75	-2.46	-0.72
• Intervention in 2 banks and 5 finance companies. Shareholder stakes eliminated. [Provision of public funds to recapitalize fi's, capital requirements relaxed, development of framework for creation of private AMCs.]	08/14/98	M	**3.84	3.44	-0.40

* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level

Panel D: Capital Support Policy

	Event Date	Mixed Event (M)	Excess Return Bank Index	Return on the Bank Index	Return Non-Finan-Cials
Indonesia					
• Government announces that it will issue $18 billion in bonds to recapitalize banking sector through IBRA. [Announcement that the an AMC will absorb the assets of the 7 banks that were intervened in on April 4 as well as the troubled assets of other IBRA banks.]	04/10/98	M	-1.56	-2.20	-0.64
• Government announces that it will provide subordinated loans to banks whose capital has been increased by the owners. [Target date for restricting liquidity support, ability to sell bad assets to AMC (IBRA) for these same banks announced.]	06/24/98	M	-0.50	0.35	0.84
• Announcement that 'strong' banks will be recapitalized by the government. Full details will be developed by the end of September. [Intervention in 7 banks, measures to promote corporate restructuring, negotiations about repayment liquidity support with a few banks, tax stimulation of mergers.]	08/21/98	M	0.92	-2.76	**-3.65
• Key elements of recapitalization program announced: Government contributes 80% of the capital needed if a bank is eligible for capital support.	09/29/98		-1.12	-1.38	-0.27
Korea					
• Government announces that it will provide capital support to KFB by buying stocks and bonds. [Announcement that KFB and some merchant banks will receive special loans at below market rates, guarantees on all foreign liabilities of Korean Banks, more funds to KAMCO for buying up bad loans.]	08/25/97	M	0.95	0.46	-0.49
• Commercial banks need to achieve minimum capital standards by recapitalizing themselves (i.e. no capital support). [Reversion of liquidity support, blanket guarantees only until end of 2000, insolvent fi's will be closed, acceleration of disposal NPLs, amendment of law to allow participation by foreign investors.]	12/05/97	M	2.77	**6.30	**3.53
• Seoul Bank and Korean First Bank announce that the government will inject in total 1.4 billion won in these banks in exchange for shares.	12/08/97		*2.93	1.61	-1.32
• Letter of Intent states that existing shareholders will bear the first burden. In addition, Seoul Bank and Korean First Bank will be placed under intensive supervision and will be taken over, resulting in a equity write down. [IMF agreement, ceiling on foreign ownership will be completely lifted as of Dec 1998.]	12/24/97	M	-0.10	-1.46	-1.37
• Government pledges 16 trillion won to recapitalize financial institutions. [More funds available to buy up NPLs.]	05/20/98	M	**3.97	3.49	-0.48
Malaysia					
• Only public funds for recapitalizations of firms and banks in which government owns a stake. [There will be a new facility, but it will include penalty rates and collateralization requirements, capital requirements lifted, guarantees for buyers if finance companies, transparency and better loan classification and provisioning standards, more rigorous supervision, limitation on single party lending.]	03/24/98	M	0.33	0.47	0.14
• Announcement that a SPV will be established to spearhead recapitalization of the banking sector. It will serve as a strategic shareholder.	07/13/98		-1.59	-3.49	-1.90
Thailand					

• No capital support for troubled institutions. They should recapitalize themselves. [IMF agreement but funds cannot be used for bail out of financial sector, BoT will continue to provide liquidity support but subject to conditionality and at higher rates, blanket guarantees will be phased out, AMC announced but only for assets of intervened institutions, stricter loan loss classification, foreign participation encouraged.]	08/14/97	M	0.54	-0.17	-0.71
• Announcement that public funds will be available for recapitalizations. [Intervention in 2 banks and 5 finance companies: shareholder stakes eliminated, capital requirements relaxed, development of framework for creation of private AMCs.]	08/14/98	M	**3.84	3.44	-0.40

* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level

Panel E: Asset Management Companies	Event Date	Mixed Event (M)	Excess Return Bank Index	Return on the Bank Index	Return Non-Finan-Cials
Indonesia:					
• Announcement that the bad assets of four large state banks will be transferred to a new government owned 'credit settlement company'. [Four large state banks will be merged.]	01/01/98	M	-2.63	-0.41	2.22
• Announcement that the government will establish an asset management company. The AMC will absorb the assets of the 7 banks that were intervened in on April 4 as well as the troubled assets of other IBRA banks. [Government will issue $18 billion in bonds to recapitalize banking sector through IBRA.]	04/10/98	M	-1.56	-2.20	-0.64
• Statement that mid-July, a presidential decree will be issued providing appropriate legal power to the IBRA and its Asset Management Unit to deal with assets. The AMU will both serve as an entity to which bad assets of frozen banks by IBRA and as an entity to which bad assets of banks that are relatively strong that are recapitalized by the government. [Liquidity support restrictions, capital support for strong banks.]	06/24/98	M	-0.50	0.34	0.84
Note: from 16 October on, transfer of bad assets within IBRA from banks controlled by IBRA (after freeze, or intervention) to its Asset Management Unit.					
Korea					
• Government announces support for troubled financial institutions by letting KAMCO buy up assets. [Korea First Bank will receive a special loan to meet liquidity needs.]	08/18/97	M	-0.63	-1.45	-0.82
• More funds to KAMCO for buying up bad loans than announced before. [Announcement that KFB and some merchant banks will receive special loans at below market rates, guarantees on all foreign liabilities of Korean Banks, capital support for KFB.]	08/25/97	M	0.95	0.46	-0.49
• More funds to buy bad loans [Temporary liquidity support announced , full guarantee announced, request to Japan to roll over short-term debt owed by Korean banks, exchange rate band widened.]	11/19/97	M	0.61	0.68	0.07
• KAMCO fund will be expanded to buy more than 50% of the bad loans at the nation's banks. [Reversion of liquidity support, Blanket guarantees only until end of 2000, insolvent fi's will be closed, recapitalization requirement without support, more funds for buying bad loans, amendment of law to allow participation by foreign investors.]	12/05/97	M	2.77	**6.30	**3.53
• Government pledges 25 trillion won to buy bad loans from financial institutions. [Government pledges 16 trillion won for recapitalizations.]	05/20/98	M	**3.97	3.49	-0.48
Malaysia					
• Government announces that it will set-up an agency to buy non-performing loans.	05/20/98		**3.34	**5.03	1.69
• Government states that it hopes to raise 25 billion ringit to set up AMC.	06/04/98		0.98	0.06	-0.92
• Legislation passes parliament to launch AMC (Danaharta).	07/16/98		-0.79	1.25	2.04
Thailand					
• Development of framework for creation of private AMCs [Intervention in 2 banks and 5 finance companies. Shareholder stakes eliminated, provision of public funds to recapitalize fi's, capital requirements relaxed.]	08/14/98	M	**3.84	3.44	-0.40

Note: Government also made announcements concerning the set up of a AMC to deal with the assets of finance companies that were already suspended, but these are neglected here.

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* indicates significantly different from zero at the 10% level
** indicates significantly different from zero at the 5% level

Appendix 2: A Chronology of Financial Restructuring Announcements during the Asian Crisis and Bank Jitters

This appendix contains a chronology of policy announcements made by the governments of Indonesia, Korea, Malaysia and Thailand. It primarily contains announcements concerning the government's policy towards the financial sector. The sources for these events are: The Asian Wall Street Journal (all issues from June 1997-September 1998), official documents that are reported on the homepages of the IMF, central banks and local governments of the four countries involved, the IMF (1999a,b) reports and papers by Corsetti, Pesenti and Roubini (1998a,b), Enoch (2000) and Radelet and Sachs (1998).

We also relate these announcements to bank jitters, i.e. strong movements of bank stocks in the local market. A jitter is defined as a stock price movement whose absolute value is so large that it represent one of the 25 largest movements of that year. The jitters are determined for both the excess return on the banking index and the uncorrected return on the banking index. Excess returns are calculated as the return on bank stocks minus the return of non-financials. These data are taken from Datastream's Global Indices. The days for measuring whether a jitter occurred include the event day as well as the first trading day before and after the event date. The returns for the jitters are reported as well: an 'E' stands for excess return on bank index while a 'B' stands for the return on the bank index. Events that are accompanied by jitters are in *ITALICS* and the returns that represent jitters are both in *ITALICS* and underlined. The thresholds for the jitters are reported in Table A2.

Table A2: Absolute Value of Smallest Jitter (in %) and the number of jitters that fall within event window of the announcements.

	Indonesia	Korea	Malaysia	Thailand
Absolute Value of Smallest Jitter				
1997				
Excess Return Bank Stocks (E)	4.64	3.70	2.32	3.83
Return Bank Stocks (B)	6.72	5.88	4.28	6.21
1998				
Excess Return Bank Stocks (E)	8.32	6.18	2.95	6.32
Return Bank Stocks (B)	8.86	8.34	5.36	8.43
Number of jitters within event window of the announcements (Percentage out of total of 25 jitters between brackets)				
1997				
Excess Return Bank Stocks (E)	2 (8%)	8 (32%)	3 (12%)	6 (24%)
Return Bank Stocks (B)	2 (8%)	13 (52%)	2 (8%)	5 (20%)
1998				
Excess Return Bank Stocks (E)	8 (32%)	2 (8%)	7 (28%)	3 (12%)
Return Bank Stocks (B)	5 (20%)	2 (8%)	5 (20%)	2 (8%)

Indonesia

1997

July 12: Exchange rate band widened.

***Aug. 14**: Decision to let the rupiah float.*
08/14/97 *08/15/97*
E: -4.70 *E: -7.30*
B: -4.67 *B: -10.66*

Oct. 8: Government agrees to request IMF for long-term support funds and for help to strengthen the financial sector. IMF indicates that it will help Indonesia.

Oct. 20: Bank Indonesia eases local bank's access to funds through lower interest rates and reserve requirements.

***Oct. 30**: Announcement that Indonesia and IMF have agreed in principle on an aid package, which will be 'strong on financial sector reforms' and will involve more than $17 billion.*
10/30/97
E: 1.51
B: 8.76

Oct. 31/Nov. 1: *Letter of Intent: $33 billion rescue package. 16 banks are/will be closed (3% of assets). No guarantees except for small depositors (Rp 20 million = US$ 5000) of closed banks; in future when banking system is sound there will be an explicit deposit insurance scheme. Shareholder losses will not be compensated and liabilities of nonfinancial companies will not be guaranteed. Some banks will be closely monitored and will have to submit rehabilitation plans (there are already 10 banks that have contractual obligations for this), these banks will not be extended any special (below market rates) credit facilities unless they are hit by a bank run), if plans are insufficient they will be closed. Special liquidity support will be phased out gradually. Reduction of state ownership of banks. Institutional framework will be improved (central bank level, bank liquidation, collateral perfection, foreclosure, loan classification and loss provisioning).*
10/30/97
E: 1.51
B: 8.76

Nov. 1 : Closure of 16 banks.

Nov. 5: IMF formally approves stand-by credit.

1998

Jan. 1: Announcement that four large state banks will be merged and that their bad assets will be transferred to a new government owned 'credit settelement company'.

***Jan. 12**: IMF and Jakarta appear close to resolving differences so that a new package can be agreed upon.*
01/13/98
E: -12.43
B: -1.29

***Jan. 14**: Indonesia and IMF are near an accord on a bailout that will include an acceleration of long-overdue reforms. The provisional plan will raise capital requirements of banks and will allow foreign majority ownership of banks.*
01/13/98
E: -12.43
B: -1.29

***Jan. 15**: Second IMF package agreed upon: acceleration of old measures and new measures. No extra funds from IMF, but in the previous weeks there was the question of whether or not the IMF still supported Indonesian policies. Specific plans to restore banking system and to alleviate difficulties of the corporate sector are to be announced soon.*
01/16/98
E: 16.04
B: 23.89

***Jan. 21/22**: IMF states that Indonesia will come with an announcement of new measures to restore confidence in banking sector.*
01/21/98
E: -8.55
B: -2.99

***Jan. 26**: Announcement that next day, Indonesia will announce sweeping banking-sector reforms, which are worked out with the IMF. Details are not known but bankers following negotiations say major elements will be deposit insurance and the creation of a new restructuring agency.*

01/26/98		*01/27/98*	
E:	*-12.14*	*E:*	*11.69*
B:	-5.44	*B:*	*11.88*

***Jan. 27**: Announcements made by Indonesia for rehabilitation of banking sector. Guarantees for all depositors and creditors of commercial banks. Freeze on debt service suggested, which was already the actual state of affairs because repayments were not made anyway. Establishment of IBRA which will be given great power to deal with restructuring of weak banks. There is a process to put in place a framework for creditor and debtors to deal on a voluntary case-by-case basis and which will involve no public funds. Strengthening of bankruptcy procedures promised.*

01/26/98		*01/27/98*	
E:	*-12.14*	*E:*	*11.69*
B:	-5.44	*B:*	*11.88*

***Feb. 14**: Not public information, kept secret: IBRA' intervenes' in 54 banks that borrowed heavily on emergency facilities and which control 40% of the assets of the banking sector. Owners/managers were summoned to BI: no removal of management and no direct consequences for the position of shareholders, just close surveillance through officials of IBRA that were placed in banks.*
02/13/98
E: -8.95
B: -6.50

Feb. 26: Talks between steering committee of foreign bank creditors and corporate debtors started.

Feb. 27: BI promulgated new loan classification and loss provision. Announcement that by June, restrictions on foreign ownership of banks will be eliminated. Announcement that a group of institutions are working on a framework for corporate debt restructuring.

March 23: IMF team announces progress in discussions of first review

March 29: Progress towards new IMF deal is faster-than-expected.

April 1: Announcement of a tentative agreement between IMF and Indonesia. Justice minister is being ordered to quickly draft a new bankruptcy law.

April 4: Using liquidity support as an indicator, IBRA intervenes by de facto taking control over 7 large and 7 small banks: deposits transferred and IBRA will operate these banks (not a closure, two banks are listed) the rights of owners and managers of the 7 large banks are suspended. Banks involved received 75% of the total amount of liquidity support and hold 16% of the assets of the banking system.
04/03/98
E: 7.28
B: 10.77

April 8: IMF concludes first review and the revised terms for IMF-led package are announced. The banking (and structural) reforms agreed on Jan 15 will be expanded to accelerate the restructuring of banks and a government-backed plan to restructure $68 billion in foreign corporate debt though a roll-over where the central bank will take on the foreign exchange risk for companies. Access to liquidity support will be more restrictive and difficult (at higher rates). Position of IBRA will be strengthened. Details on bankruptcy and judicial reforms are provided (not effective yet).

April 10: Memorandum for IMF agreement made public. The government announces that it will issue $18 billion in bonds to recapitalize the banking sector through the IBRA and that it will establish an asset management company. The AMC will absorb the assets of the 7 banks that were intervened in on April 4 as well as the troubled assets of other IBRA banks.

April 14: IBRA suspends rights of owners and management of the 7 large banks that they intervened in on April 3.

April 22: Bankruptcy law amended.

April 24: Announcement that a Jakarta Court for bankruptcy will be set up.

June 4: After months of negotiations, Indonesia authorities reach an agreement with steering committee of creditor banks on a deal to support restructuring of external debt of the banking and corporate sector. For the debt of Indonesian banks, the agreement consists of a roll-over with full dollar guarantee from Bank of Indonesia. For corporate debt, framework for voluntarily restructuring provided with a government exchange guarantee to creditors and debtors who agree to restructure on certain minimum conditions. Debt restructuring agency Indra to be established on a scheme similar to FICORCA in Mexico. Indra does not take commercial risk but ensures foreign payments to the creditor on the basis of rupiah payments received from the debtor.

June 24/25: Additional IMF reforms agreed by Indonesia. Letter of Intent: Target date for restrictions on liquidity support is 1 Nov. The government will provide tier-two capital (subordinated loans) to banks whose capital has been increased by the owners. These same banks will be able to sell bad assets to an AMC, which will be a unit within IBRA, at fair prices.

July 16: Indonesia secures $6 billion in extra funds from IMF, World Bank and other international lenders.
07/16/98
E: 10.67
B: 11.93

July 29: Indonesia asks for cancellation of IMF arrangement to replace it with another. Letter of Intent: A program for the recapitalziation of stronger banks, in exchange for the infusion of capital by their owners, is being developed and will be announced by August 21.

Aug. 21: Government announces major bank restructuring package that covers banks that account for almost half of the banking systems assets. 7 banks are taken over by the government, wiping out the stakes of the equityholders. At least 3 of these will be closed. Government will claim funds by past owners (which includes Suharto associated). Based on LOI of Sept. 11, 1998, the measures also relate to a recapitalization

of stronger banks, finalization of restructuring plans for 4 large state-owned banks, additional measures to promote corporate restructuring such as debt-equity conversions, tax disadvantage of merger will be offset.

***Aug. 28 (Friday)**: IMF approval of an extended facility.*
08/31/98
E: -10.78
B: -8.60

***Sept. 9**: Announcement of Jakarta Initiative (to guide and streamline out-of-court corporate restructuring), which complements newly amended bankruptcy laws.*
09/10/98
E: -8.74
B: -7.80

Sept. 11: Memorandum: no new info.

Sept. 29: Bank Indonesia announces key elements of bank recapitalization program for the potentially viable private banks. To become eligible, banks need a minimum capital adequacy and viable plans. Information from letter of intent of October 19, 1998 and letter of intent of November 13, 1999 about this plan: Government contributes up to 80% of the capital needed in form of long-term government bonds. Shareholder equity will be written down commensurately with adequate provisioning for NPLs and other assets. Loan classification and provisioning is under way.

***Oct. 16**: Amended bank law passes parliament, which provides the IBRA with the power to deal with the assets of intervened banks.*
10/16/98
E: -2.96
B: 9.62

Korea

1997

Aug. 18: South Korea says it will help troubled financial institutions by buying assets of ailing institutions through KAMCO, which is allowed to raise its funding with 1.5 trillion won. Principle agreement about a special loan to Korea First Bank (KFB) from KAMCO to meet liquidity problems. It remains unclear whether the central bank will also provide special loans to KFB or other banks.

Aug. 25: Government announces that it will provide special loans at below market rates to KFB and some merchant banks. Guarantee of foreign/external liabilities of Korean banks. The government will provide capital support to KFB by acquiring stocks and bonds (no amounts named). The government allows KAMCO to form a 3.5 trillion won fund (in stead 1.5 trillion) to buy bad loans.

Nov. 19: Newly appointed Minister of Finance and Economics announces financial support measures to stem financial crisis: Announcement of full guarantee on principal and interest on all types of deposits of Korean fi's until end of 2000. Bailout fund to buy bad loans is boosted to 10 trillion from 3.5 trilllion. (Other announcement: Band for Won is widened.)

11/20/97
E: 4.37
B: 2.01

Nov. 20: Korea asks Japan to request its banks to roll over short-term owed by Korean banks/firms.

11/20/97	*11/21/97*
E: 4.37	E: 1.08
B: 2.01	*B: 6.88*

Nov. 21: Announcement that Korea would ask IMF for assistance. Financial reform is expected to be a key part of the IMF's conditions.

11/20/97	*11/21/97*
E: 4.37	E: 1.08
B: 2.01	*B: 6.88*

Nov. 27: Minister of Finance and Economics says that he expects financial aid from the IMF to far exceed the initial target of $20 billion. Additional market stabilization steps announced: domestic banks minimum currency reserves to cover losses from bad loans will be raised.

11/26/97	*11/27/97*	*11/28/97*
E: -3.83	*E: -7.00*	*E: -3.99*
B: -2.11	*B: -7.31*	*B: -8.17*

***Dec. 1 (Monday):** After claiming in the morning that the IMF deal was completed, Korea and the IMF state that the deal has yet to be finalized. Officials and bankers argue that the government and the IMF disagree about financial restructuring, where the government prefers to avoid outright closures.*

11/28/97	*12/01/97*	*12/02/97*
E: -3.99	*E: -4.67*	*E: 8.45*
B: -8.17	*B: -6.26*	B: 4.70

Dec. 2: 9 merchant banks are suspended. They need to develop plans for rehabilitation within 30 days. If these are rejected by the government, they will be closed. There will be no KAMCO program participation or financing from deposit insurance fund for the banks. The government also announces that they expect the IMF deal to be signed on Dec. 3.

12/01/97	*12/02/97*	*12/03/97*
E: -4.67	*E: 8.45*	*E: 3.72*
B: -6.26	B: 4.70	*B: 6.61*

***Dec. 3**: Announcement of agreement with the IMF on bailout for $55 billion. No details supplied about the conditions that Korea must meet. IMF states that financial-sector reforms will be far reaching.*

12/02/97	*12/03/97*	*12/04/97*
E: 8.45	*E: 3.72*	E: 0.17
B: 4.70	*B: 6.61*	*B: 7.57*

***Dec. 5 (Friday)**: Letter of Intent/Financial restructuring policy made public: Large liquidity injections of recent weeks will be reversed. Present blanket guarantees will be phased out and replaced by limited deposit insurance schemes. Insolvent fi's will be closed. 2 cb's need to prepare rehab plans; if these are insufficient they will be closed. Other cb's need to make full provisioning and need to agree to achieve minimum capital standards, make rehab plans and achieve recapitalization themselves (i.e. shareholders carry burden). All support will be on market-oriented terms and solely as a part of viable rehabilitation plans. Loss sharing rules between creditors and debtors will be established. Disposal of non-performing loans is accelerated so as to buy up 50% of the bad loans of the nation's banks. Restructuring could involve mergers and acquisitions by domestic and foreign institutions. Amendment of law to allow participation of foreign investors (after elections). Consolidated deposit insurance company will be created which will be financed by government backed bonds. Foreign banks will be able to acquire Korean banks and set up units in Korea.*

12/04/97	*12/05/97*	*12/08/97*
E: 0.17	E: 0.13	*E: 8.00*
B: 7.57	*B: 7.58*	B: 3.73

***Dec. 8**: Seoul Bank and Korean First Bank announce that the government will inject 1.1 trillion won and 300 billion won respectively by absorbing new shares.*

12/08/97	*12/09/97*
E: 8.00	E: 0.66
B: 3.73	*B: -6.47*

***Dec. 10**: Operations of 5 merchant banks suspended. These need to submit restructuring plans before the end of January.*

12/09/97	*12/11/97*
E: 0.66	E: -1.86
B: -6.47	*B: -7.12*

***Dec. 12 (Friday)**: ceiling on aggregate foreign ownership of listed shared from 26 to 50.*

12/11/97	*12/12/97*	*12/15/97*
E: -1.86	E: -0.36	E: 2.24
B: -7.12	*B: -7.85*	*B: 13.33*

***Dec. 15**: Responding to a request of Korea, IMF declares that it will consider speeding up a bailout.*

12/15/97	*12/16/97*
E: 2.24	E: 3.50
B: 13.33	*B: 7.56*

***Dec. 24**: IMF accelerates loan disbursement of $10 billion. Letter of Intent: Stresses that existing shareholders will bear first burden. 2 large cb's (SB and KFB) will be placed under intensive supervision and as of Feb 25, government will take control over these institutions, write down equity of current shareholders, replace management and transfer bad assets to KAMCO. (Ceiling on foreign ownership will be raised to 55 as of Dec 30. By the end of 1998, the ceiling will be completely lifted.)*

12/23/97
E: -0.23
B: -8.21

Dec. 29: Key reform bill passes national assemble: unification of regulatory bodies for the financial sector. Newly elected government commits to restructuring program this way. Japanese and US banks declare that they are willing to convert their short-term loans to Korean banks into longer-term loans guaranteed by the central bank of Korea.

Dec. 30: Bridge merchant bank was established to pay off depositors and manage suspended merchant banks.

1998

Jan. 7/8: Talks between Seoul officials and commercial bankers on further roll-overs of South Korean short-term bank debt were positive, but no agreements were reached. Foreign banks suggest to convert Korean commercial bank debt into government bonds. South Korea's Finance Ministry suggests that it may be open to guaranteeing the repackaged commercial debt. Talks resume on Jan. 19.

Jan. 11: South Korean officials object against plans for large-scale conversion of short-term commercial bank debt into government bonds.

Jan. 16: Agreement with foreign banks for a complete roll over of bank debt that is due in the 1Q98.

Jan. 29: Agreement (in principle) between Korea and foreign banks to restructure short-term debt (debt service suspended through roll-over) finalized: $26 billion will be converted into debt with 1-3 years of maturity, which will be backed partially by the government. Korea thereby resisted to bailout foreign banks.

Jan. 30: Revocation of licenses of 10 merchant banks that were suspended early december.

Jan. 31: Government recapitalizes the Seoul Bank and KFB after writing down capital of existing shareholders.

Feb. 2: Korea agrees to third IMF program.

Feb. 7: Letter of Intent: Establishment of special unit to coordinate and monitor bank restructuring. All cb's have to report capital adequacy ratios based on full provisioning; if below 8%, recapitalization plans required by June. If these are not approved, appropriate measures will be adopted. KAMCO will purchase loans meanwhile.

March 15: Agreement to roll-over $21 billion of Korean commercial bank debt into long-term debt with government guarantees.

May 1: Credit ceilings on export financing lifted.

***May 2(Saturday)**: Letter of Intent: 12 banks had insufficient capital ratios at the end of 1997 and rehab plans are required from these banks.*
05/04/98
E: -3.37
B: -9.82

***May 20:** Ministry of Finance and Economy pledges 50 trillion won to buy bad loans (25 trillion won for loans at a 50% discount) from fi's, recapitalize banks (16 trillion) and to shore up depositor's insurance (9 trillion). Up to that time, banks had to recapitalize themselves and public funds would only be used as a last resort. However, the recapitalizations might be associated with nationalization of banks.*
05/21/98
E: 7.98
B: 5.54

***June 18**: Korean banks, prodded by the government, announce a list of 55 non-viable firms which will be forced into bankruptcy.*
06/17/98
E: 0.94
B: 9.00

***June 29**: First commercial bank closures: 5 small ones (7% of the total for the commercial banking sector). 2 merchant banks closed.*
06/30/98
E: -8.48
B: -7.69

Aug 20: Eligibility to obtain funds for export financing extended.

Malaysia

Note: Malaysia did not have an IMF program.

1997

Oct. 19: Government announces that loan classification will be more strict (non-performing after three months of nonpayment).

***Dec. 5 (Friday)**: Finance Minister announces economic plan. Companies will not be bailed out and 'banks need to be protected against any excesses of their customers'. Measures require stricter and earlier disclosure of NPLs, increase of bank provisions for bad debts and bar fresh lending to "nonproductive" activities such as property development and stock purchases. Measures are aimed at achieving a substantial reduction in credit growth.*

12/08/97
E: 6.04
B: 16.58

***Dec. 30:** Malaysian central banks says that it is speeding up plans for mergers among the country's 35 finance companies. The merger plan calls for five or six large finance companies to absorb the other firms and will be proposed to the companies this week.*

12/30/97	*12/31/97*
E: 6.64	*E: 2.56*
B: 8.96	B: 2.64

1998

***Jan. 2 (Friday):** Authorities intensify efforts to consolidate finance sector, specifying that it would like to see merger deals finalized by March 31.*

01/02/98	*01/05/98*
E: -5.77	E: -1.13
B: -8.30	*B: -5.37*

***Jan. 20**: Announcement of blanket guarantee for all depositors.*

01/19/98	*01/20/98*
E: 4.83	*E: -3.03*
B: 12.01	B: -2.57

***Feb. 5:** Malaysia toughens stance on merging finance firms. Finance ministry presents a blue print for merging 39 finance companies into 6 groups. The government can't force companies to merge, but officials say finance companies that don't merge won't be bailed out should they run in difficulty.*

02/04/98	*02/05/98*	*02/06/98*
E: 10.83	*E: 3.23*	*E: 4.16*
B: 7.50	B: 4.85	B: 5.15

***Feb. 24:** Government reaffirms that there will be no bailouts of domestic businesses hat falter because of their debt burdens.*

02/24/98
E: 4.34
B: 4.59

March 3: Central bank announces the country's sixth–largest bank (Sime) had recorded massive losses and that it will need fresh capital to stay in business.

March 5: Prime Minister pledges to use state funds to aid the country's ailing banks because these would collapse otherwise. The premier didn't say how much money might be used, or how it would be employed.

March 12: Deputy Prime Minister declares that Malaysia is committed to pursuing reforms similar to those prescribed by the IMF, which includes letting troubled firms go bankrupt. The government will not bailout troubled firms.

March 24: Further details of economic program announced. There will be a new liquidity support facility, but it will include penalty rates and full collateralization. Public funds for recapitalizations will be available but the government will only inject capital into government-owned banks or in companies and banks in which the government holds a stake. Sharp raise in capital requirement for finance companies (minimum as well as ratio). Buyers of finance companies will get a one-year government guarantee on the value of their acquisition. All banks will be subjected to intensive and rigorous supervision (including stress tests). Greater transparency and better loan classification and provisioning standards. Limitation on single party lending,

May 13: Government reveals that stress-tests show that three banks need capital injections. Amount needed is still being studied.

May 20: *Government says that it will set up an agency to buy non-performing loans.*
05/21/98
E: 6.08
B: 8.74

June 4: Government states that it hopes to raise 25 billion ringgit ($6.37 billion) to fund the AMC.

July 13: Announcement by Finance minister of SPV to complement Danaharta: Strategic shareholder that should recapitalize and restructure weak banks by taking equity stakes.

July 16: Legislation passes parliament to launch AMC (Danaharta).

Aug. 6: Malaysia's Finance Minister says that the recapitalization fund, called Danamodal, will involve a $3.9 billion program.

Thailand

1997

March 3: Announcement of problems in 10 unnamed finance companies and measures to strengthen soundness of financial institutions: full provisions need to be made against possible loan losses. Increased capital requirement for 10 financial institutions (if not met, FIDF will buy new shares and initiate changes).
03/03/97
E: na
B: na

March 10: Official statement that the government is intended to buy $4 billion in bad property debt from financial institutions.

March-June: 66 finance companies secretly receive substantial liquidity support.

June 14 (Saturday): *Cabinet issues 4 decrees that allow greater foreign ownership of banks and finance companies and that provides for financial assistance to merging banks and finance companies.*
06/16/97
E: -3.93
B: -3.23

June 27*: Suspension of operations of 16 finance companies, which are told to merge with other institutions.*
06/26/97
E: 1.36
B: 7.29

June 29: Prime Minister of Thailand states that the depositors and creditors of all finance and securities companies other than those that are suspended will be protected.

July 2*: Managed float established and IMF negotiations begin.*

07/02/97		07/03/97	
E:	0.24	E:	0.11
B:	*8.97*	*B:*	*9.24*

July 11: Bank of Thailand (BoT) denies that it has plans to suspend 5 medium-small sized banks.

Aug. 4: BoT announces that progress is made on IMF negotiations and that the cabinet is expected to approve an economic recovery plan the next day. The Thai government said that the measures probably include a reduction of government support for financial institutions and the establishment of a deposit insurance corporation.

Aug. 5: Incomplete policy package announced. 42 finance companies suspended until they are either re-capitalized, merged or liquidated (rehabilitation plans required within 60 days). The 33 remaining finance companies and the 15 commercial banks will enjoy government guarantees for all deposits and most of their creditors (excluding holders of debentures, convertible debentures and creditors with subordinated rights). Set up of a deposit insurance program. Announcement by the central bank that it had spent $19.3 before the managed float began to keep the 91 finance companies alive.

Aug. 13: Thailand and the IMF declare that they have reached an agreement on a policy package to accompany a $16 billion loan. Officials stress that the funds can't be used to bail out Thailand's finance sector.

Aug. 14: Letter of Intent: Main goal of program: isolate weaker institutions and support remaining ones through liquidity injections and guarantees to depositors and creditors. However, all liquidity support will

be subject to conditionality and at higher rates. Creditors of finance companies that are suspended will incur losses but the claims of depositors and creditors of other finance companies and banks are guaranteed. Banks should make loan loss provisions on the basis of stricter classification requirements and raise additional capital. Severely undercapitalized institutions that cannot raise their capital to the legally required level will be taken over by the Financial Institutions Development Fund, which will involve capital write downs of existing shareholders. No public funds for corporate or household borrowers. Establishment of AMC is announced, which only serves to handle assets of intervened fi's. Participation of foreigners in banks will be encouraged. All other kinds of improvements for financial sector are announced in general terms.

Aug. 19: *Government approval of IMF plan.*
08/18/97
E: -4.12
B: -5.93

Aug. 20: IMF approval of credit.

Aug. 25: *Central bank says it will tighten its rules on the classification of nonperforming loans, effective Jan. 1 (from 12 months to 6 months).*
08/25/97
E: -1.60
B: -7.94

Aug. 27: BoT announces that it will propose a tax break for banks and finance companies that set aside provisions against bad debt.

Oct. 6*: Minister of Finance says that it pans to enact a law to protect depositors and creditors from future failures in the financial sector. This will involve setting up a super-agency that will oversee the deposit insurance program and an asset management company to recover bad debts.*
10/07/97
E: -4.39
B: -1.03

Oct. 10: Thai Finance Minister says that capital adequacy ratios will be raised from 8.5% to 12%.

Oct. 13 and 14: Thai government announces detailed strategy for restructuring financial sector: Law will be amended so that control by BoT over fi's can be exercised over institutions that have large losses and that are unable to recapitalize. BoT threatens that for those banks, shareholder equity will be written down to absorb losses and management will be replaced. Clarification of policy concerning suspended finance companies: creation of AMC and Financial Restructuring Agency (FRA) to implement and oversee this resolution process. FRA will also have responsibility for deposit guarantees. Loan classification and provisioning will be tightened by the year 2000. Foreign ownership limits on Thai banks and finance companies will be removed. 5 emergency decree will be passed by the cabinet within the next week to set up the agency and to strengthen the power of the central bank.

Nov. 14: Details on loan provisioning and accrued interest.

Nov. 18: Thailand's new government announces that it will stick to the IMF program. The government will close loss-making finance firms and separate their good assets from bad assets.

Nov. 25: *Thailand revises agreement with IMF. Publication of full letter of intent. Liquidity access must be tightened. Government is committed to decide on shut-down of the suspended finance companies within the next few days and to deal with the assets of those permanently closed shortly thereafter.*

11/24/97	*11/25/97*
E: -4.79	*E: -4.77*
B: -5.21	*B: -7.67*

Dec. 8: Decision by FRA to close 56 of the 58 suspended finance companies.
12/08/97
E: -5.51
B: 1.24

Dec. 31: Intervention takes place in 1 severely undercapitalized bank, Bangkok Metro Bank, that relied heavily on liquidity support and that was unable to raise private capital: management is replaced and the bank is ordered to raise new capital within two weeks.

1998

Jan. 23: Bangkok Metro Bank is taken over by the central banks. Its capital is written down after which it is recapitalized by FDIF through a conversion of its loans.
01/22/98
E: -6.32
B: -8.49

Feb. 6: Central bank seizes control of two midsize banks. Equity is almost completely written down and the banks are recapitalized by the FDIF. The same was done for a the Bangkok Bank of Commerce, which has been under government control since May 1996.

Feb. 24: Thai plan further modified, agreement on third IMF program. Acceleration of restructuring of financial system with respect to privatization of intervened banks. Best practice banking standards and better supervision BoT. Acceleration of asset classification and loan provisioning policies through memoranda of understanding with undercapitalized banks but no immediate enforcement (for which banks feared).

March 4: Thai central bank announces that the total amount of loans they had outstanding to troubled financial institutions equaled $16.4 billion on Feb. 19 and that it has spent $25.5 billion since mid-1996 to prop up troubled financial institutions.

March 22: Central banks says that commercial banks need to raise $5 billion in new capital to comply with tightened capital rules that will be officially announced this month.

March 31: New rules for Thai banks officially announced by the central bank: new loan-classification system and new provisisoning levels.

May 13: Thai central bank governor says there will be no more closures of domestic financial institutions but that the central bank may have to step in to help some survive.

May 14: Thai central bank says it may take over two cash-strapped finance companies.

May 18: Intervention in 7 finance companies that were unable to raise capital, need to write down capital.

May 26: Agreement on fourth IMF program.

June 3: Thai central bank relaxes loan-classification rules for category of 'doubtful loans'.

***July 28:** Thailand's cabinet approved a plan to raise capital for the AMC ($486 million).*
07/29/98
E: -7.54
B: -7.40

Aug. 4: Thailand's central bank and the private sector reach a broad framework for the restructuring of nonperforming loans. Legally nonbinding framework which lays down the steps through which creditors and debtors can work through a restructuring of debts.

Aug. 5: The Bank of Thailand announces that it will offer a five-year money back guarantee to foreign investors taking over troubled Thai banks and finance companies.

***Aug. 14**: Thai government announces a bank-rescue plan. Nationalization of 2 small commercial banks and 5 finance companies; equity written down and government loans are converted into equity. Provision of public funds ($7 billion) to recapitalize all remaining financial institutions: government will issue bonds and swap these for preferred shares in banks. Banks are allowed to set up their own private asset management companies. Capital requirements are relaxed. Resolution plans announced for four nationalized banks. Most of these plans were already made public by government officials on Aug. 13.*

08/13/98	*08/14/98*
E: 7.75	E: 4.91
B: 4.24	*B: 11.63*

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