WPS2094

POLICY RESEARCH WORKING PAPER   2094

What Triggers Market Jitters?

A Chronicle of the Asian Crisis

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Movements in stock prices in
East Asia during the crisis in
1997–98 were triggered by
both local and neighbor-
country news. Having the
highest impact was news
about agreements with
international organizations
and credit rating agencies.
But some changes seem to
have been driven by herd
instincts in the market itself,
including overreactions to
bad news.
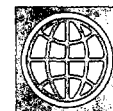
Summary findings

In the chaotic financial environment of East Asia in 1997–98, daily changes in stock prices of as much as 10 percent became commonplace. Kaminsky and Schmukler analyze what type of news moved the market in those days of extreme market jitters.

They find that movements are triggered by both local and neighbor-country news. News about agreements with international organizations and credit rating agencies have the most weight.

Some of those large changes in stock prices, however, cannot be explained by any apparent substantial news but seem to be driven by herd instincts in the market itself.

On average, the one-day market rallies are sustained while the largest one-day losses are recovered — suggesting that investors overreact to bad news.

Produced by the Policy Research Dissemination Center

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1. Introduction

The Asian crisis has resurrected once again, and even more intensely, the debate about the origins of crises and the behavior of investors at the onset of financial turmoils. Many have argued in favor of a "fundamentals" approach. That is, crises occur when the economy is in a state of distress with a deteriorating current account, a growth slowdown or even a deep recession, the bursting of stock and real state price bubbles, and short-term foreign debt reaching dangerous levels (see, for example, Corsetti, Pesenti, and Roubini, 1998; Kaminsky, 1998; and Krugman, 1979). Many others have argued in favor of self-fulfilling crises with collapses of the pegs even in countries with immaculate market fundamentals (see, for example, Eichengreen and Wyplosz, 1993, and Obstfeld, 1996). Even for those that support the "fundamentals" approach to the crisis, it is very difficult to pinpoint the exact timing of the crisis based just on the behavior of fundamentals (see, for example, Kaminsky and Reinhart, 1996). While most of the "fundamentalists" argue that extended credit is at the core of crises,[1] they have to concede, like Kindleberger (1978), that the fuel that ignites a crisis "may be some incident which snaps the confidence of the system [and] makes people think of the dangers of failure" (page 107). That is, rumors may be the trigger to a speculative attack.

In the new literature of the 1990s, rumors take a life of their own, with rational investors not confirming rumors and following the herd. In this new framework, speculative attacks occur even when market fundamentals are not deteriorating, as in the fundamentals approach, and even when governments are not validating expectations, as in the self-fulfilling attack literature. The new literature on herding behavior starts with the hypothesis that it is costly to acquire information. These information frictions can make investors follow the market, rather than take the time and expense to make their own assessments about market fundamentals (see, for example, Banerjee, 1992). The "herding" behavior approach has also supporters in international economics. For

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[1] The source of extended credit varies across models. For example, Krugman (1979) focuses on the monetization of government deficits while McKinnon and Pill (1994) stress the role of foreign capital inflows channeled through domestic banks, deposit insurance, moral hazard, and overlending.

example, Calvo and Mendoza (1995) argue that the volatility of capital at the onset of the Mexican crisis in 1994 can be explained, in part, by herding behavior.

The possibility that rational investors take portfolio decisions without paying too much attention to the state of the economy may be at the base of the "excess volatility" of financial markets. Still, there can be different mechanisms and conditions that generate this weak relation between market fundamentals and capital flows. For example, Calvo and Mendoza (1997) focus on the effects of the globalization of financial markets. In that paper, as the number of markets grows and the share of that country's assets in the investor's portfolio declines, the payoff of gathering information on country-specific information becomes smaller and the incentives for herding behavior grow stronger.

In Rigobon (1998) investors are also confused about the true fundamentals –they do not know the productivity of the domestic capital– and thus face a signal extraction problem when making their investment decisions. In this paper, agents observe a signal every period, with the quality of the signal depending on the level of investment. In particular, it is assumed that the quality of a good signal declines with the level of investment. The intuition behind this assumption, as the author describes it, is that an economy might be booming, not because its fundamentals are good, but because agents' actions are fueling the economy. Thus, good signals are informative at the onset of a boom in investment and become less informative as the boom in investment matures. Similarly, bad signals are informative at the onset of a recession but as the recession progresses, they also become less informative.

In Kodres and Pritsker (1998), information asymmetries and the ability to cross-hedge using other asset markets are at the root of financial contagion, with international market comovement occurring in the absence of any relevant information and even in the absence of direct common factors across countries. For example, a negative shock to one country can lead informed investors to sell that country's assets and buy assets of another country, increasing their exposure to the idiosyncratic factor of the second country. Investors can hedge this new position by selling the assets

of a third country, completing the chain of contagion from the first country to the third country. Information asymmetries can greatly magnify this contagion effect. This is because uninformed investors do not know whether the demand changes that they observe within a market following a shock are due to the hedging of macroeconomic risk across markets, or due to informed investors trading on private information within the market. Interestingly, this model also suggests an explanation for why financial markets have been more susceptible to contagion after an outbreak of banking and financial crises, as has been the case in Asia in 1997. The reason lies, as discussed by Kodres and Pritsker, in the increase in informational asymmetries brought about by the collapse of credit markets. When credit markets are not functioning properly, firms' survival will be tightly linked to their ability to access emergency lines of credit. Hard to obtain information on alternative sources of credit makes informed investors knowledge on credit markets very valuable and accentuates informational asymmetries and contagion. In contrast, in tranquil times, most companies are not credit-constrained, making the informational advantage of the informed traders less crucial. With information asymmetries diminishing, the magnitude of the contagion effects will fall.

The different theories suggest varying reactions of financial markets to news. According to the hypothesis of self-fulfilling attacks, rumors, on average, have persistent effects on financial markets because governments validate rumors and implement policies that deteriorate market fundamentals. In contrast, according to the fundamentals approach, rumors may have less persistent effects if they are unrelated to market fundamentals. Herding behavior models also have some predictions about the incentives to acquire information. For example, in Calvo and Mendoza (1997), investors have less incentive to gather good news in a bull market, with incentives to verify good news increasing in a bear market. Hence, good rumors generate more herding behavior and thus possibly over-reaction in good times.

While theories abound, the empirical evidence on the process of acquisition of information is still very scarce. Rather than limiting our analysis to the test of one particular model of herding

or fundamental behavior of investors, the goal of this paper is to fill the void in the empirical literature and examine the reaction of financial markets to news, either rumors or fundamentals in crisis episodes. Presumably, it is in these episodes when contagion effects could be at their peak (see, Kodres and Pritsker (1998)). We examine the Asian crisis from the beginning of 1997 until the end of May 1998. In particular, we focus on the analysis of financial markets of nine countries: Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand. As always during crisis times, the amount of daily news and rumors increases dramatically making it hard to control for every piece of new information. Thus, in our initial study of the behavior of financial markets during the Asian crisis, we concentrate on the days of market jitters, which we define as the twenty largest one-day changes (downturns or upturns) in each country's stock market prices . This reduces our study to the analysis of just one hundred eighty daily changes in all countries in our sample.

We review the coincident reports in the international financial press to examine the causes of the extreme one-day market changes. News releases about monetary and fiscal policies or about agreements with the International Monetary Fund, about the state of the economy or even about political stability are at the core of market jitters. However, sometimes market volatility increases even in the absence of any news. Interestingly, market-moving news releases are not always of a local origin, suggesting spillover effects across countries. This paper examines not only the impact effect of news but also the effect of news over time to see whether the largest swings in stock prices indicate a change in the mood of investors.

The rest of the paper is organized as follows. The next section presents a short chronology of the crisis and reports the distribution of the individual stock returns over the sample and in days of market jitters. Section 3 describes our classification of the news. Sections 4 and 5 are the core of the paper and report all the results about what triggers market jitters. Section 6 concludes.

2. A Characterization of Markets in Crisis

To motivate our classification of the news that rocks markets, we first present a brief chronology of the crisis. Next, we describe the distribution of stock market returns during the crisis and in days of market jitters.

2.1 A Chronology of the Crisis[2]

While the official onset of the Asian crisis is marked by the devaluation of the Thai baht on July 2, 1997, the speculative attack against some of the Asian currencies starts earlier on. For example, the first episode of notable pressure on the Thai baht occurred in July 1996, following the collapse of the Bangkok Bank of Commerce and the injections of liquidity by the Bank of Thailand to support the financial system. The attack peaks on May 14, 1997 amid concerns of political instability, with the stock market declining almost 7 percent. Concerns about the baht heighten on June 19, when Thailand's Finance Minister Virava –a supporter of the peg– resigns and the stock market suffers one of the largest declines (about 11 percent). The suspension of operations of 16 cash-strapped finance companies fuels more worries about the fragility of the financial sector in Thailand and leads to further withdrawals of foreign funds, which in turn trigger the floating of the Thai baht on July 2. The abandonment of the peg in Thailand is followed by a more freely float of the Philippines peso on July 11 and the abandonment of the defense of the Malaysian ringitt on July 14.

With the crisis still confined to these countries, volatility in financial markets surges dramatically, fueled in part by inflammatory statements by government officials. For example, on July 24, the ringgit hits a 38-month low, following Malaysian Prime Minister Mahathir bitter attack on "rogue speculators." But market jitters are also prompted by the introduction (or elimination) of restrictions on financial market transactions. For example, on September 3, the Malaysian

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[2] This section draws from Baig and Goldfajn (1998); Frankel and Schmukler (1998); Kaufman, Mehrez, and Schmukler (1998); Radelet and Sachs (1998); and Roubini (1998).

government bans short-selling on equity markets and imposes restrictions on forward sales of the ringgit, with the stock market in Kuala Lumpur collapsing about 8 percent. Restrictions are partly removed on September 5, leading to a stock market rally in Malaysia and neighboring countries. Thus, while economic fragility is at the core of the crisis, political uncertainty provokes more instability in financial markets.

By August 1997, the crisis has engulfed Indonesia, with the rupiah starting to float on August 14. In October, the currency crisis spreads to Taiwan, with the devaluation of the Taiwanese dollar creating doubts about the sustainability of the Hong Kong dollar peg. Tension escalates in the region and in a matter of days, the Hang Seng index loses about 30 percent.[3] The announcement of the financial aid package for Indonesia on November 3 helps to restore calm to the region.[4] However, the calm is not long lasting and the crisis continues to spread. Now the epicenter of the crisis moves to Korea, with stocks collapsing around Asia on November 7 as currency jitters shock Korea. Only the reports leading to the announcement that Korea would seek a rescue package from the IMF on November 21 calm markets somewhat. However, the gains are short-lived, as the stock market loses all its gains after the announcement takes place and it becomes clear that growth will collapse in response to the increase in taxes and spending cuts required in the IMF bailout package.

As the Korean crisis continues to deepen, Japan also starts to take the center of the stage after the announcement on November 24 that Yamaichi Securities Co. Ltd., the fourth largest securities house in Japan, is closing its doors. In December the crisis escalates, with rumors that the Indonesian President Suharto is extremely ill and concerns that Korea's financial crisis could lead to a debt moratorium. On December 11, Korean financial markets experience further declines

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[3] Interestingly, while during the period October 20 to November 3 the Hang Seng index experiences eight of the largest fluctuations, there is basically a complete absence of any relevant news, economic or political, local or foreign, explaining those market jitters.

[4] On that day, Hong Kong sees some of the most dramatic gains, with the Hang Seng index rising about 6 percent during the day.

following Moody's downgrade of Korea's foreign currency bonds. On December 19, foodstuff trader Toshoku Ltd files for bankrupcy, raising the specter of more to follow, and the Japanese stock market collapses. By early January, Indonesia adds to the ongoing panic by reneging on promised structural reforms.

By mid-January, somewhat calmer markets return on news that international banks have agreed to roll over much of Korea's short-term debt and as Korea is upgraded by international credit companies on January 19. Indonesia's willingness to agree to a tough IMF package is also welcomed. Again, calm proves to be short-lived as Indonesia starts to flirt with the idea of introducing a currency board and the IMF makes clear that is not going to support the Indonesian plans to peg the rupiah to the dollar. From February onwards up to the end of May, markets do not stage a comeback nor do they collapse, with markets rallying somewhat on the announcement of trade surpluses in Thailand (March 13) and tumbling on news of unrest and looting in Indonesia (May 6, May 13-18). Our sample ends in May with the resignation of President Suharto.

2.2 Financial Markets in Crisis: Returns and Volatility

The crisis that erupts in Thailand in July 1997 engulfs, within a couple of months, Indonesia, Hong Kong, Japan, Korea, Malaysia, the Philippines, Singapore, and Taiwan. This section examines the behavior of stock markets in these nine countries.[5]

As it is traditional in the empirical literature that examines the behavior of world-wide stock markets, we focus our analysis on the national stock indices valued in U.S. dollars. Table 1 provides some stylized evidence on the behavior of stock markets in these countries in the 1990-1996 period and since 1997. The table displays for each country the mean, standard deviation, minimum, and maximum of the daily percent changes in stock market prices. While in the early 1990s, stock

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[5] The nine stock indices in the sample are: Hang Seng Stock Index (Hong Kong), Jakarta Composite Index (Indonesia), Nikkei 500 (Japan), Korea Composite Index (Korea), Kuala Lumpur Index (Malaysia), Philippines Composite Index (Philippines), Stock Exchange of Singapore All Index (Singapore), Taiwan Weighted Index (Taiwan), and the Stock Exchange of Thailand (Thailand).

markets in Asia soar, increasing about 0.04 percent on average per day, between January 1997 and May 1998 the average daily change in these markets is negative for all markets except Taiwan. For instance, stock markets in Indonesia, Korea, and Thailand decline at an average 0.53, 0.32, and 0.27 percent per day, respectively. Volatility also surges dramatically. For example, the standard deviation of the daily changes in prices increases from an average of 1.4 percent in the early 1990s to 2.9 percent since January 1997, with maximum daily moves increasing from an average of 8.0 percent to 15.4 percent over all countries. While volatility increases on average in all countries in the region, Indonesian and Korean financial markets are the ones that exhibit more jittery financial markets, with daily changes reaching 20 percent in the case of Korea and about 29 percent in the case of Indonesia. Only Taiwan exhibits less volatility since 1997 when compared to the early 1990s.

Figure 1 plots stock market prices in the nine countries in our sample. The figure also shows the days of extreme market volatility for each country, the twenty days with largest (positive or negative) daily changes in the stock market, which are the focus of our paper. Note that market jitters start earlier in Thailand, with about eight of the largest daily changes occurring before the beginning of October. In contrast, December 1997 and January 1998 are the most volatile months in Korea, with thirteen out of the twenty big changes taking place during those months. The collapse in Indonesia starts even later, with fifteen of all the twenty largest daily changes occurring in 1998. Interestingly, while there is a pronounced negative trend in all markets since 1997, about seventy six of the one hundred and eighty largest changes are positive. This suggests large reversals in the mood of investors. In fact, as already shown in Table 1, stock market returns in days of market jitters are on average positive for about one third of the countries.

Part of the increase in volatility in the dollar value of stock prices since 1997 reflects volatility in the exchange rate. To examine the contribution of exchange rate fluctuations to the volatility of the stock market index in U.S. dollars, we decompose the daily fluctuations into movements in the stock index in local currency and movements in the exchange rate. The bottom right panel in

Figure 1 reports the contribution of exchange rate movements to the daily fluctuations of the stock indices in U.S. dollars in days of market jitters and over all the sample (January 1, 1997 to May 25, 1998). The exchange rate effect varies somewhat across countries. For example, in one extreme is Hong Kong with a fixed exchange rate system in the sample examined and all the movements in financial markets reflecting only fluctuations in stock prices in local currency. On the opposite end is Indonesia, with a dramatic collapse of the value of the rupiah. In this last case, exchange rate movements explain about 70 percent of the daily change of the stock index in dollars since 1997. For the rest of the countries, movements in the exchange rate explain about 50 percent or less of the daily fluctuations of the stock market index in dollars.

Figure 2 displays the distribution of the largest swings over time, distinguishing between rallies (the positive bars) and collapses (the negative bars).[6] The height of market volatility occurs in the months of October through January. In fact, volatility jumps on October 28, when the Hong Kong market collapses, with seven out of the nine countries posting losses averaging about 9 percent. During November and December, a total of 47 large fluctuations take place, of which 27 are negative. Markets rebound sharply in mid-January. Seven out of the nine countries post large gains on January 14 and six out of nine on January 19. Markets remain jittery to some degree until February, calming somewhat after mid-February 1998. These large swings are the focus of the paper.

3. The News that Rocks Financial Markets

As examined in Section 2, the news that rocks financial markets during the Asian crisis is not confined to economic news. In fact, political events, such as the resignation of the President Suharto in Indonesia, are also at the heart of the gyrations of financial markets since January 1997. Thus, to study the onset and propagation of the Asian crisis, it is important to collect all news, local and foreign, that can provide information to investors on both the state of the economy

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[6] For example, a bar equal to three means that three markets experience large rallies on that day.

and future policy actions. Our source of information is Bloomberg, however, we checked that the analysis in Bloomberg is consistent with that of financial newspapers, such as the Financial Times, and find that the alternative sources of information largely coincide.[7]

News releases are classified according to the country of origin and the sector in which the news originates. News can originate in more than one country, and there might be news from more than one sector in any given day. In our sample, all news releases originate in the nine countries in our sample or in the United States and China. We classify news in eight categories: (1) agreements with international organizations or financial community; (2) credit ratings by international agencies; (3) economic news, including both real, financial, and external sectors news; (4) monetary policy; (5) fiscal policy; (6) political news, including political events and talk; (7) capital controls; and (8) "no news." In turn, we classify all the releases of information by the country of origin. For each country, foreign news releases are the ones originated in any of the neighbor countries or in the United States.

As summarized in Table 2, most of the large price changes are related to local news (74 percent on average for all countries), with the swings in stock prices in Indonesia, Japan, and Korea being the ones that are most related to domestic news (19, 20, and 18 out of 20 news for each stock market, respectively). Still, for some countries, foreign news matters the most. For example, the news releases that move markets in Singapore are mostly of a foreign origin. Regarding the type of news that generates market jitters, 33 events (18 percent) are of a political nature, 29 (16 percent) are related to economic news, and 23 (13 percent) are related to agreements with the international community. Finally, in 62 events (34 percent), the fluctuations of stock prices cannot be linked to the release of economic or other information.[8]

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[7] The Appendix Table tallies the identifiable sources of news that move financial markets in the selected days, along with the associated percentage changes in the stock market index in the nine countries and our classification of the news. It also reports in bold characters the returns in days of market jitters.

[8] Interestingly, the absence of fundamental economic or political news coincident with many of the dramatic stock market moves in the nine Asian countries since January 1997 is not exceptional. For example, Kaminsky (1998) finds that about half of the largest U.S. stock market swings since the beginning of the

The press information is then transformed into dummy variables, so as to be able to estimate the impact of all the different news on the markets. These dummy variables take a value of 1, -1 when there are information releases and zero if in a specific day there is no news related to that particular type of information. In particular, the variable agreements with multilateral or bilateral organizations and the international financial community takes the value 1 (-1) whenever the country accepts or becomes closer to (moves away from) accepting an agreement with these institutions and 0 otherwise. The variable credit rating agencies takes the value 1 whenever international credit agencies upgrade a country, -1 whenever they downgrade it, and 0 otherwise.

The variable capturing information on the economy is equal to 1 (-1) when the releases suggest a better (worse) outlook for either the financial, real, or external sectors of the economy. The variable for monetary policy is equal to 1 (-1) when the releases of information suggest an expansionary (contractionary) monetary policy and 0 otherwise. The variable fiscal policy is equal to 1 whenever the government pursues expansionary fiscal policy, -1 whenever the governments pursues contractionary fiscal policy, and 0 otherwise. The variable capital controls takes the value 1 whenever restrictions on capital movements are lifted, -1 whenever more restrictions are imposed, and 0 otherwise. The variable political news takes the value 1 whenever there are events that generate political stability, -1 in the opposite cases, and 0 otherwise.[9]

The literature on herding behavior of investors and contagion effects stresses that sometimes investors just follow the market in the belief that market indices might embody relevant information, without using resources to uncover the behavior of market fundamentals in the different

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1980s are unrelated to the arrival of news. These findings are not new, in fact, many studies of asset pricing have rejected the view that new information is the driving force behind asset price movements. For example, Roll (1988) shows that economic news releases explain at most one-third of the monthly variation in individual stock returns.

[9] Note that "political stability" may have different meanings in different episodes. For instance, the illness of President Suharto provokes instability when it is unclear who the successor is going to be and the type of policies that a future government is going to implement. In contrast, President Suharto's announcement that he is going to resign brings stability because, at that time, this change in government means that Indonesia can avoid disaster.

countries. In these circumstances, we could observe the stock market in one country collapsing just because the stock market in another country collapses, with no particular information release justifying that move. Thus, market jitters on those days with "no news" may reflect precisely those herd instincts of the market itself.[10] To capture the possible "herding" behavior, we create a dummy variable that equals 1 when the analysis in the financial press indicates that there are no apparent news releases and zero otherwise. Later on, we also examine whether investors "moods" spread across national borders, that is, whether herding behavior is contagious, or they are contained within the domestic frontier. To do so, we classify the days with no news into days with no local news and days with no foreign news. Days with no local news are the days in which market instabilities start in the local economy. If instead, the financial headlines indicate that market rallies or downturns start in a neighbor country, we classify those days as days with no foreign news.

4. What Triggers Market Jitters?

This section estimates the effect of the different types of news releases on the stock markets of the nine countries.[11] First, the section examines the average response of the markets to different types of news. It also examines the average response in days of no news, that is, the average response when some stock markets move because other markets (in the same or foreign country)

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[10] On most of the days with no news, the financial press refers to investors' concerns about the domestic economy although no economic news releases occur in those days. This is why we interpret the swings in those days as the product of herding behavior. However, market jitters in days of no news and concerns about the economy could also suggest the presence of noise traders, with rallies or downturns completely unrelated to market fundamentals. Moreover, the fluctuations on those days may reflect investors' delayed reaction to previous news, with investors taking several days to grasp the full effect of some of the economic releases. Also, market jitters in those days could also be a reaction to news only known by the so-called "informed" investors. Still, the sheer magnitude of the reaction suggests that the actions of those informed traders may have been imitated by a wider spectrum of investors –the herd. In all the cases, it is impossible to isolate the cause triggering market jitters using just the information from press releases. With this caveat in mind, we continue to identify days of no news with days of herding behavior.

[11] See Baig and Goldfajn (1998) and Ganapolsky and Schmukler (1998) for an analysis of the effects of international agreements and political announcements on financial markets during the Asian and the Tequila crises. See also Edison (1996) for another approach to studying financial market reactions to news.

move or just because of investors' concerns unexplained by the release of any information. We can interpret this last response as the pure "herding" behavior effect.[12] That is, this response captures the average reaction of investors when they follow the market and do not take the time and expense to make their own assessment about the market fundamentals.

Second, this section also seeks to determine whether domestic developments are at the source of stock market volatility or whether information from other countries explains a large fraction of stock price movements. That is, we study whether markets mostly move in response to fluctuations in domestic fundamentals or there are cross-country spillover effects. Since we classify the days with no apparent news in days in which domestic markets follow foreign markets and days in which panics or euphorias are confined to one country, we can also examine whether herding behavior is contagious.

Third, this section examines several claims of the theories of herding behavior and financial contagion concerning the asymmetric response of investors to good and bad news in good and bad times. For example, Rigobon (1998) indicates that bad news becomes no news as the recession in the economy deepens. Also, Kodres and Pritsker (1998) suggest that in bad states, with collapses in the banking sector, the asymmetries in information deepen, magnifying the contagion effect.

To examine whether news releases originating in different sectors of the economy have different effects on the stock markets, we run regressions of price changes on the dummy variables representing each of the announcements. Our regression is[13]

$$(1) \qquad R_t^j = \alpha_0 + \sum_{i=1}^n \alpha_i D_t^i + \epsilon_t^j,$$

where R_t^j is the change in the dollar value of the stock market index in country j (in percent) from

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[12] In fact, herding behavior may be also reflected into an over-reaction or under-reaction to fundamental news. This type of herding behavior cannot be tested in this framework. Over or under-reactions can be tested only in the context of a completely specified model of the economy.

[13] We run both pooled and panel regressions. We only report the results from the pooled estimation because the panel regression results are similar and the fixed effects are not significantly different from zero.

the market closing in $t-1$ to the market closing in t, and D_t^i is a dummy variable related to sector i and reflecting the news releases after markets closing in $t-1$ to the closing in t. There are eight dummy variables ($n=8$), the first seven are related to the different "news," the last one D^8 is the "no news" dummy. The coefficients of interest are the α_i, which measure the impact of news originating in different sectors and the average impact effect in days of no news.

The results are reported in Table 3, column 1. With the exception of fiscal news, all other information releases have significant impact effects on stock market returns. In particular, news related to agreements with international organizations and credit rating agencies are the ones with larger effect on returns, with coefficients indicating that, on average, stock prices change between 10 and 11 percent in the days with these type of news releases. Interestingly, and in contrast to the claim that IMF programs add to the panic and to the virulence of the financial crisis, we find that, on average, stock markets rally on the day agreements are announced. Not surprisingly, changes in country ratings also add to the volatility of the markets, with stock markets downturns averaging about 10 percent in days of credit downgrades. These dramatic effects are not surprising because credit downgrades can, in fact, create havoc in the economies by sharply reducing the ability of a country to borrow in international markets and thus fueling a profound credit crunch, a further deterioration of the economy, and a collapse in the stock market. This credit-crunch effect has been recently examined by Radelet and Sachs (1998), who stress that when a credit rating agency downgrades sovereign debt of a country, all debt instruments from that country might have to be downgraded accordingly because of the sovereign ceiling doctrine. As a result, commercial banks in the country that turn out to be rated as sub-investment grade can no longer issue internationally recognized letters of credit for domestic exporters and importers, isolating the country from international capital markets.

New information on political issues, capital controls, and the economy has a somewhat smaller effect, the coefficients in these cases oscillate around 7.[14] The effects of monetary policy are more

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[14] Only the effect of economic news is significantly smaller than the effect of information about interna-

modest and averaging about 4 percent. Finally, on average, the days of no information releases are days with market downturns. On average, market prices fall about 2-1/2 percent on those days.[15]

Next, we examine whether the origin of news or rumors matters. We run the following regression

$$(2) \qquad R_t^j = \alpha_0 + \sum_{i=1}^{n} \alpha_i D_t^i + \sum_{i=1}^{n-1} \beta_N \alpha_i DF_t^i + \beta_{NN} \alpha_8 DF_t^8 + \epsilon_t^j,$$

where DF is the news or rumors with a foreign source, with the first seven dummies capturing the news and the last dummy (DF^8) capturing foreign rumors or jitters in foreign markets in days of "no news." In (2), we test separately whether the effects of news releases or rumors with a foreign origin have different effects from those of domestic news or rumors. The test of whether the overall effect of foreign news (rumors) is different from that of domestic news (rumors) is a test of whether β_N (β_{NN}) is significantly different from zero. As shown in Table 3, column 2, foreign news releases seem to have a smaller effect on stock prices. However, this effect is not statistically different from zero, suggesting that there are important cross-country spillover effects during the Asian crisis. Similarly, rumors or concerns in one country trigger market jitters of similar magnitudes both in the domestic and foreign markets.

Herding behavior theories suggest that reactions to good news may be different from reactions to bad news. To examine this hypothesis, we have to classify the news into "good" and "bad" news. News indicating political stability, a stable economy, the upgrade of credit ratings, and agreements with international organizations are classified as "good" news. News about expansionary fiscal or monetary policy are also classified as good news and so are the removal of capital controls. We

tional agreements and credit ratings.

[15] To examine whether the results just described depend on the particular sample selected, we carry out sensitivity analysis using different samples. In particular, we estimate equation (1) using only the top 10 and the top 15 days of market jitters. The results are quite robust, with the order of the effects of the different sources of news not being affected by the sample selected, that is agreements with international organizations and credit ratings are the news releases that trigger the largest average daily swings in financial markets and monetary and fiscal policies the smallest. These results are available from the authors upon request.

test this hypothesis by running the following regression,

$$(3) \qquad R_t^j = \alpha_0 + \sum_{i=1}^{n} \alpha_i D_t^i + \sum_{i=1}^{n-1} \beta \alpha_i DG_t^i + \epsilon_t^j,$$

where DG is a release of good news and $n = 8$. Again, the test of whether the overall effect of good news is different from that of bad news is a test of whether β is significantly different from zero. As shown in column 3, good news seems to have a smaller effect on stock markets providing some support for Kodres and Pritsker conclusion that bad news and financial crises accentuate informational asymmetries and generate more contagion and herding behavior.

The coefficients in the above regressions capture the average reaction of the market to information releases. Sometimes, however, good news may fail to lift investors spirits and markets continue to collapse while bad news may still prompt a rally. The possibly changing sign of the response can be particularly important when examining the response of financial markets to changes in monetary and fiscal policies. For example, one of the most controversial issues during the Asian crisis has been whether contractionary monetary policy can stabilize financial markets, as supported by the International Monetary Fund, or send the economy into a tail spin with profound collapses in output and financial markets, as suggested by Radelet and Sachs (1998) and Stiglitz (1998) among others. In fact, as examined by Kindleberger (1978)

"Tight money in a given financial center can serve either to attract funds or to repel them, depending on the expectations that a rise in interest rates generates. With inelastic expectations –no fear of crisis or of currency depreciation– an increase in the discount rate attracts funds from abroad, and helps to provide the cash needed to ensure liquidity; with elastic expectations of change –of falling prices, bankruptcies, or exchange depreciations– raising the discount rate may suggest to foreigners the need to take more funds out rather than bring new funds in."

The effects of fiscal policy have also been at the center of the policy debate during the Asian crisis, with many emphasizing the stabilizing role of contractionary fiscal policy and as many

supporting the opposite view. For example, at the onset of the crisis, the IMF demands that the affected countries run a fiscal surplus of 1 percent of GDP so as to avoid a further collapse of their economies. In contrast, Radelet and Sachs (1998) argue that fiscal targets simply add to the contractionary force of the crisis.

To examine whether the behavior of financial markets during the Asian crisis supports one or the two sides in this policy debate, we estimate our baseline regression, shown in equation (1), but this time using the absolute values of the stock market changes and the absolute values of the news variables. This methodology allows us to relate the swings in the stock market to the different news regardless of the sign of the relationship. Interestingly, once we ignore the sign of the relationship between the news and the stock market swings, we find that fiscal and monetary policies do have profound impacts on the stock market, with stock market swings (downturns or rallies) almost reaching 9 percent in those days. Moreover, these average effects are substantially larger than those estimated in column (1).[16] The results indicate that sometimes news releases about contractionary fiscal and monetary policies trigger dramatic rallies in financial markets but they cause striking downturns in other episodes. We should also note, that, overall, all the coefficients in this regression are larger than those in column (1) suggesting that, for example, sometimes agreements with international organizations or the elimination of capital controls fail to restore investors' confidence. Still, with the exception of monetary and fiscal policies, the coefficients of the other news in column 4 are not significantly different from those in column 1. Finally, the regression in absolute values allows us to capture a better measure of volatility in financial markets in days of no news. Now, the coefficient of the "no news" dummy variable, α_8, measures the average daily swings in days of "no news," regardless of the sign. In contrast, in column (1), the coefficient α_8 measures average returns in those same days, but in this case downturns are offset by market rallies with this coefficient becoming substantially smaller. Once

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[16] Still, these responses are statistically smaller than the response of financial markets to either international agreements or credit ratings news.

we focus on the mean of the swings in absolute values, we find that markets are about as volatile in days of no news as in days of relevant economic information, 7.1 versus 6.88 percent, suggesting the presence of important herding behavior and contagion effects.

As we discussed in the introduction, frictions in information may lead to herding behavior with signals having a different information content over the crisis cycle. Moreover, investors may react differently to "good" and "bad" news as the crisis progresses. To examine this hypothesis, we need to allow for the possibility of time-varying coefficients, that is, we need to estimate rolling regressions as follows,

$$(4) \qquad R_t^j = \alpha^0 + \sum_{i=1}^{n} \alpha_t^i DG_t^i + \sum_{i=1}^{n} \beta_t^i DB_t^i + \epsilon_t^j,$$

where DG is good news and DB is bad news.[17] Since for some of the news, such as news concerning fiscal policy, there are not enough releases to allow us to estimate time-varying coefficients, we only estimate time-varying regressions for four types of news, that is n is equal to four. The results are reported in Figure 3, where we plot the time-varying coefficients for the different dummy variables. Note that, the response to good news about international agreements seems somewhat larger after international banks agree to rollover Korea's short-term debt in January 1998. In contrast, the daily swings in financial markets in days of no news become more pronounced as the crisis deepens, with moody investors driving prices down still further even in the absence of any fundamental news. While the results suggest a somewhat changing reaction to news and in days of "no news" as the crisis progresses, the estimates do not provide a strong overall evidence favoring the hypothesis of changing informational content of news over the course of a crisis.

5. Are Market Jitters Persistent?

While we focus on the days of extreme market jitters, these days may just capture one-day episodes that do not have long sustained large effects on financial markets. To study whether

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[17] Note that now, the dummy variables DG^i (DB^i) take the value 1 when there are "good" ("bad") news releases and zero otherwise. Also, since the "no news" dummy cannot be decomposed into "good" and "bad," we can just estimate one coefficient. That is, for that dummy variable $\alpha_t = \beta_t$.

market jitters imply a persistent change in the mood of investors, we rely on event-study methods commonly used in the finance literature.

The main question we ask is whether the behavior of the stock market following these events is sufficiently different from its behavior in the days leading up to the event. To do so, we need to define *normal* returns (μ_τ, where τ denotes the date of the event), which reflect the typical behavior of the stock market in the days before each event.[18] In practice, we estimate the normal return by computing the mean daily return over the ten business days that preceded each event

$$(5) \qquad \mu_\tau = \sum_{j=1}^{10} R_{\tau-j}/10.$$

Once we obtain the estimates of normal returns for each event, we compute *abnormal* returns, $R_t - \mu_\tau$ for $t = \tau - 10, ..., \tau + 10$. Each study uses a 21-day window, which includes ten days before and ten days after the event.[19]

Figure 4 summarizes the event-study results in some detail. The four plots show the cumulative abnormal returns over that window for all stock markets around the time of large one-day market rallies or downturns. The events are divided between those days with news and days with no apparent sources of new information. The top figures are the events related to no news releases. The left figures are the events with positive market jitters. Day zero is the day of market jitters.

The results suggest an asymmetric response of financial markets after the one-day largest market rallies and downturns. In particular, according to this event study analysis, large daily market rallies tend to be sustained while market downturns are usually reversed within the following 10 days. Typically, after experiencing a large gain, the stock market rally continues. For example,

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[18] Sometimes in the financial literature, the typical event study uses a broader market index return as a proxy for normal returns. This is because those event studies focus on the possible abnormal returns in a particular industry and control for the state of the economy using a broader market index. This is not the purpose of our analysis. Instead, we want to examine whether different news releases have a lasting impact on financial markets relative to their behavior before that particular piece of news.

[19] Sometimes the days of market jitters in each country are separated by less than 21 days. In these cases, we estimate the event studies using the overlapping events too.

cumulative abnormal returns are about 15 percentage points at day 10. Although differences do not appear substantial, in the short run, cumulative abnormal returns seem to increase more in the case of positive movements with news, relative to the no-news episodes. A different picture emerges from the analysis of large daily downturns. On average, after experiencing a correction, markets recover, with the recovery being somewhat faster for those events with no news. The pattern during market rallies is consistent with investors following momentum trading, buying previous winners. This is not the case in market downturns, when investors do not seem to be selling previous losers, and in fact may be buying in the deeps.

Figure 4 also examines whether the type of news or the country of origin of the news affects the degree of persistence of market jitters. We classify positive (negative) shocks as persistent when the cumulative abnormal returns are still positive (negative) ten days after the day with the large shock. The tables at the bottom of Figure 4 show that the origin of news does not basically affect the degree of persistence of the shocks in the stock market. Basically all positive shocks are persistent while negative shocks are of a more mean-reverting nature. With respect to the country of origin of the news, bad news releases originated in Korea and Taiwan have somewhat more persistent effects that bad news originated in other countries.

6. Conclusions

The abruptness and virulence of the 1997-98 Asian crisis have resurrected once again the debate about the causes of crises. There are many that support the view that deteriorating market fundamentals are at the core of the crisis. Others have suggested self-fulfilling crises or investors' herding behavior. This paper does not attempt to inquire into the origin and the extent of the Asian crisis. Its goal is more limited, it only examines the sources of the largest daily swings in financial markets. While the goal is more limited than a general inquiry into the causes of the Asian meltdown, it is nonetheless quite relevant in view of the chaotic financial environment of East Asia in 1997-1998, where daily changes in stock prices of as much as 10 percent become

commonplace. This paper examines the events that trigger those market jitters and proposes a methodology for capturing herding behavior and contagion effects using high frequency data. The analysis is concentrated in the twenty largest one-day swings in stock prices (in dollars) in nine Asian countries from January 1997 to May 1998 (a total of one hundred eighty daily changes).

Our main results indicate that some of the largest one-day swings cannot be explained by any apparent substantial news, economic or political, but seem to be driven by herd instincts of the market itself. Interestingly, our results also indicate that rumors or concerns unrelated to the release of relevant information affect foreign markets as strongly as they affect domestic financial markets, suggesting the presence of important contagion effects. Moreover, as the crisis deepens, daily reactions in the absence of relevant news become more pronounced perhaps indicating an increase in uncertainty and asymmetries in information, which can magnify the contagion effect, as in Kodres and Pristker (1998). When news releases do matter, the ones that have more weight on financial markets are those releases about agreements with the international community and credit rating agencies. News releases about monetary and fiscal policies are also at the center of the daily instabilities. In fact, over several episodes, tight policies contribute to rallies but in others they steer the market into deep downturns. Interestingly, there is also some evidence that investors, overall, react instantaneously more strongly to bad news compared to their reactions to good news. Again, we could argue that bad news in crisis episodes may increase uncertainty, accentuating herding behavior.

While the instantaneous reactions to bad news are stronger than those to good news, our event-study analysis indicates that the one-day market rallies are sustained and trend-changing while news or rumors that trigger market panics do not have persistent effects. These results suggest a recurring pattern of asymmetric response of investors to "good" and "bad" news that should be explained by the different theories of herding behavior and contagion in particular, and more in general by theories of investors behavior. Interestingly, the pattern during market rallies is consistent with investors following momentum trading, buying previous winners. This is not

the case in market downturns, when investors do not seem to be selling previous losers. All our results come from observations in "crisis" times. One issue that would be interesting to examine is the reaction of markets to news in "good" times. This type of evidence would allow us to make progress in our understanding of the way investors acquire new information about the state of the economy and also about their investment-trading strategies.

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Table 1
Stock Market Returns in U.S. Dollars
(in Percent)
Summary Statistics

| Country | January 1, 1990 - December 31, 1996 | | | | January 1, 1997 - May 25, 1998 | | | | | |
| | | | | | All Days | | | | Days of Market Jitters | |
	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation
Hong Kong	0.10	1.36	-8.45	5.86	-0.08	2.54	-13.69	18.84	-0.99	8.15
Indonesia	0.03	0.86	-4.81	3.25	-0.53	4.87	-17.03	28.67	-2.89	15.28
Japan	-0.01	1.43	-7.50	11.01	-0.09	1.51	-5.53	6.82	-0.13	4.02
Korea	-0.02	1.45	-8.09	8.71	-0.32	4.02	-19.16	20.47	-0.80	12.89
Malaysia	0.06	1.23	-7.34	9.92	-0.40	3.44	-12.75	16.09	1.67	10.49
Philippines	0.09	1.48	-6.03	9.19	-0.24	2.65	-9.96	14.22	0.35	7.76
Singapore	0.03	0.94	-6.31	4.97	-0.19	1.82	-8.92	10.27	-1.00	5.74
Taiwan	0.03	2.09	-9.79	10.53	0.01	1.71	-9.50	5.14	-1.92	4.27
Thailand	0.01	1.65	-8.57	8.96	-0.27	3.44	-13.38	18.35	3.31	9.46
Average	0.04	1.39	-7.43	8.05	-0.23	2.89	-12.21	15.43	-0.27	8.67

Table 2
Origins of Market Turbulence
Country of Origin

Market Jitters in:	Number of News Originating in:											Domestic Economy	Foreign Economy
	Hong Kong	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	USA	China		
Hong Kong	13	0	2	2	0	0	0	0	0	1	2	13	7
Indonesia	0	19	0	0	0	0	0	0	0	1	0	19	1
Japan	0	0	20	0	0	0	0	0	0	0	0	20	0
Korea	0	1	0	18	1	0	0	0	0	0	0	18	2
Malaysia	0	6	0	0	13	0	0	0	0	1	0	13	7
Philippines	0	1	0	0	1	15	0	0	0	3	0	15	5
Singapore*	1	7	0	0	3	1	7	0	0	3	0	7	15
Taiwan	1	0	1	1	0	0	0	13	0	4	0	13	7
Thailand	0	2	1	0	0	0	0	0	16	1	0	16	4
Total	15	36	24	21	18	16	7	13	16	14	2	134	48

*The number for Singapore adds to more than twenty since one of its market jitters is attributed to news from three countries.

Sector of Origin

Market Jitters in:	Number of News of Type:							
	Political News	Economic News	Capital Controls	Fiscal Policy	Monetary Policy	International Agreements	Credit Ratings	No News
Hong Kong	2	1	0	1	1	1	1	13
Indonesia	8	2	0	2	1	4	0	3
Japan	4	7	0	1	1	1	0	6
Korea	1	3	0	0	2	7	4	3
Malaysia	3	3	2	1	1	5	1	4
Philippines	2	1	0	0	4	0	0	13
Singapore	4	3	1	0	1	3	0	8
Taiwan	5	7	2	0	1	0	0	5
Thailand	4	2	2	2	0	2	1	7
Total	33	29	7	7	12	23	7	62

Table 3
Regression Analysis

	Dependent Variables			
	Percent Change in Stock Market Prices	Percent Change in Stock Market Prices	Percent Change in Stock Market Prices	Absolute Percent Change in Stock Market Prices [1]
Explanatory Variables	OLS	Non-Linear Least Squares		OLS
Constant	-0.45	-0.52	2.69	
	(-0.64)	(-.74)	(1.07)	
Political News	7.53 ***	8.09 ***	11.62 ***	8.17 ***
	(6.40)	(6.22)	(3.68)	(7.9)
Economic News	6.07 ***	6.24 ***	9.22 ***	6.88 ***
	(4.56)	(4.50)	(3.25)	(9.12)
Capital Controls	7.29 ***	7.62 ***	10.55 *	9.82 ***
	(2.70)	(2.73)	(1.88)	(5.45)
Fiscal Policy	0.76	-0.16	0.71	8.83 ***
	(0.03)	(-.054)	(0.19)	(7.20)
Monetary Policy	3.90 *	3.94 *	6.34 *	8.26 ***
	(1.92)	(1.83)	(1.88)	(7.51)
International Agreements	9.63 ***	10.49 ***	13.25 ***	10.75 ***
	(6.51)	(5.97)	(3.67)	(12.26)
Credit Ratings	10.67 ***	11.08 ***	13.95 ***	10.99 ***
	(3.95)	(3.97)	(3.66)	(5.39)
No News	-2.44 **	-2.09 *	-5.58 **	7.10 ***
	(-2.15)	(-1.66)	(-2.09)	(16.83)
Differential Effect of Good News			-0.61 *	
			(-1.94)	
Differential Effect of Foreign News		-0.22		
		(-1.22)		
Differential Effect of No News and Foreign		0.48		
		(0.43)		
Number of Observations	180	180	180	180
Adjusted R-Squared	0.42	0.42	0.43	0.45
L-M Test for Heteroskedasticity	2.09	0.91	2.50	3.89 **

Notes: ***, **, and * indicates statistical significance of 1, 5, and 10 percent respectively.

T-statistics in parentheses

1. Robust standard errors are used, since the L-M test suggests the presence of heteroskedasticity.

Figure 1
Stock Market Indices in U.S. Dollars and Days of Stock Market Jitters
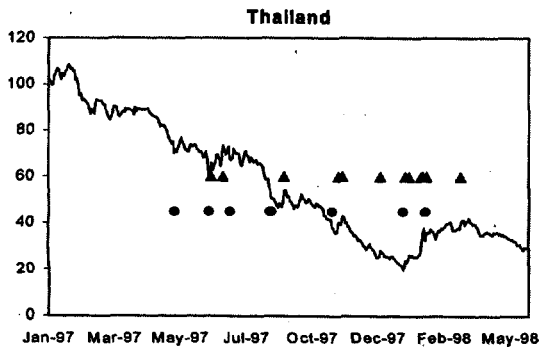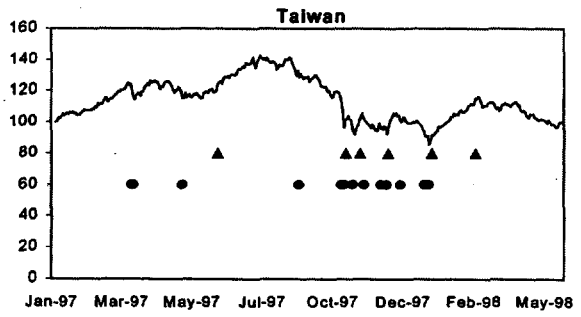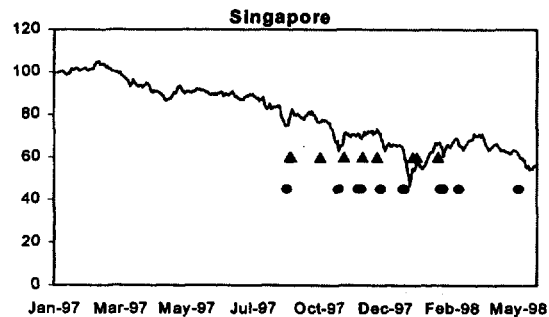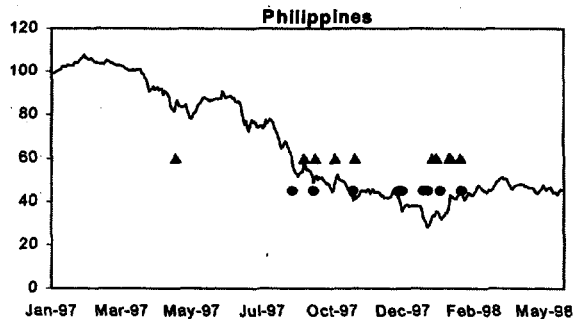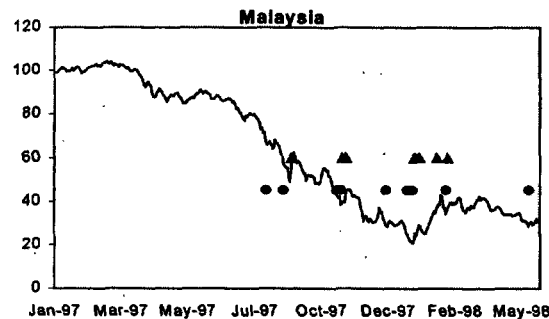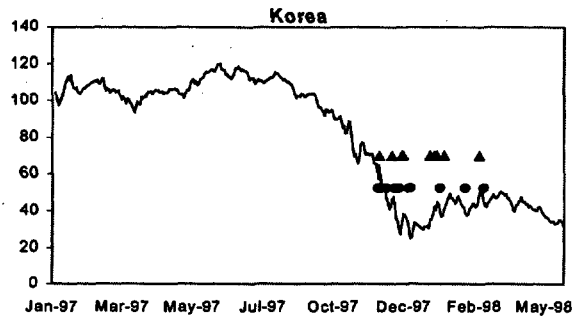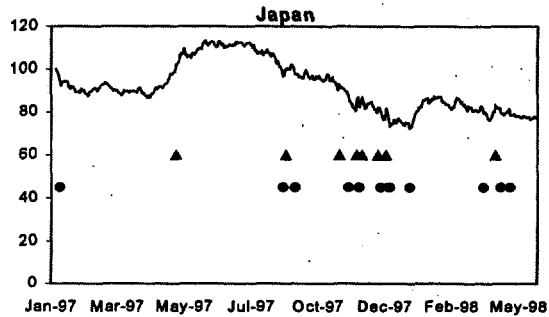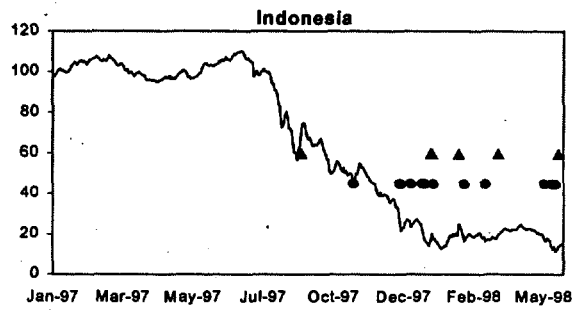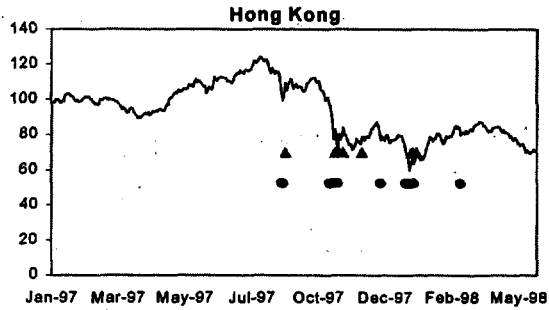
Proportion of Daily Returns Explained by Exchange Rate Fluctuations (in Percent) January1, 1997- May 25, 1998		
	Days of Market Jitters	All Days
Hong Kong:	0	0
Indonesia:	74	67
Japan:	34	51
Korea:	50	38
Malaysia:	36	39
Philippines:	34	40
Singapore:	23	32
Taiwan:	25	21
Thailand:	39	44

Notes: January 1, 1997 = 100

Triangles: Days of Positive Market Jitters   Circles: Days of Negative Market Jitters

Figure 2
Evolution of Market Turbulence
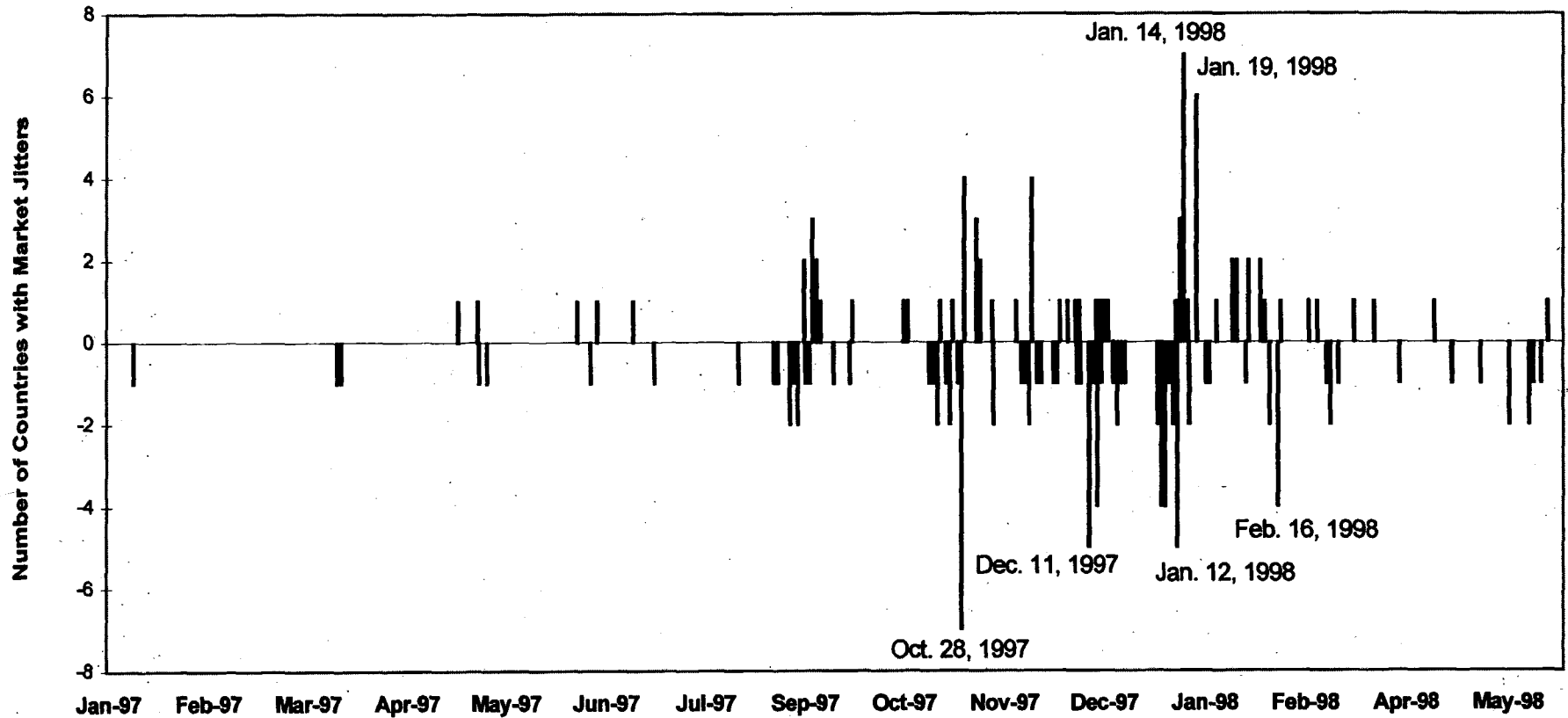
Notes: Bars indicate the number of countries that experience market jitters on a particular day. Positive (negative) bars indicate market upturns (downturns).

Figure 3
Time-Varying Effect of News on Stock Markets

No News

International Agreements

Economic News

Political News
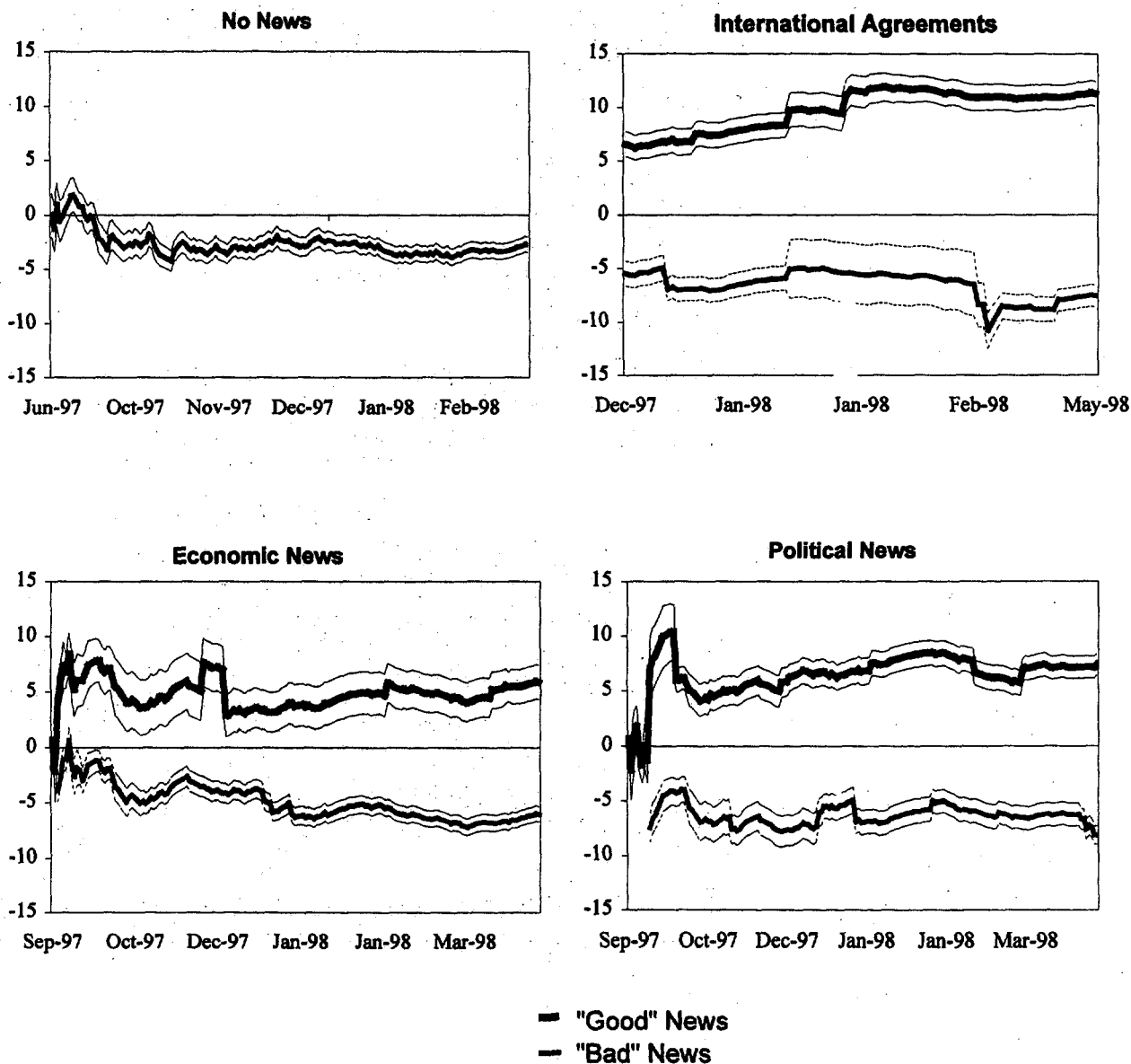
■ "Good" News

▬ "Bad" News

Note: These plots report the evolution of the coefficient α^j and β^j in equation (4):

$$R_t^j = \alpha^0 + \sum_{i=1}^{n} \alpha_t^i DG_t^i + \sum_{i=1}^{n} \beta_t^i DB_t^i + \varepsilon_t^j.$$

Confidence bands represent +/- one standard error.
DG (DB) takes value of 1 if there is "good" news ("bad" news) and zero otherwise.
For each series, the initial values of both coefficients were estimated using a sample composed of the first 20 observations. Each subsequent values were estimated by adding one observation to the sample until all observations were included.

Figure 4
Market Jitters: Event-Study Analysis

Cumulative Abnormal Returns in Days of Market Rallies

Days with No News   Number of Events: 19

Days with News   Number of Events: 57

Cumulative Abnormal Returns in Days of Market Downturns

Days with No News   Number of Events: 43

Days with News   Number of Events: 61
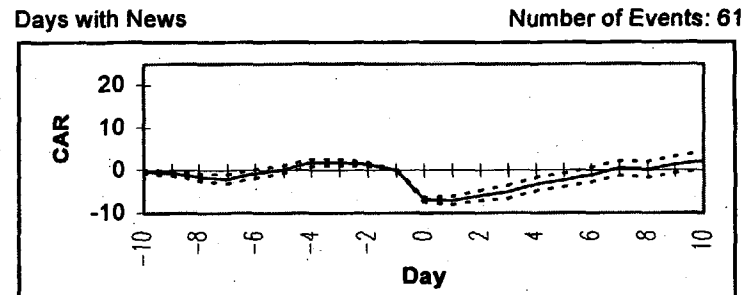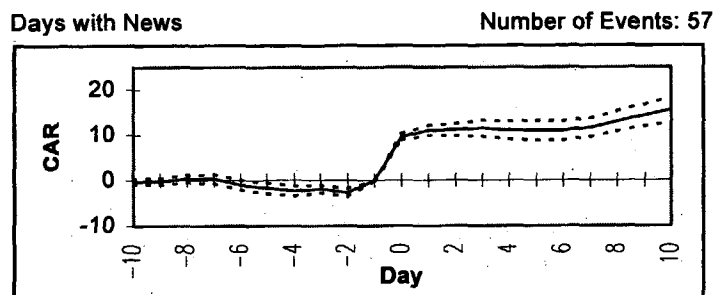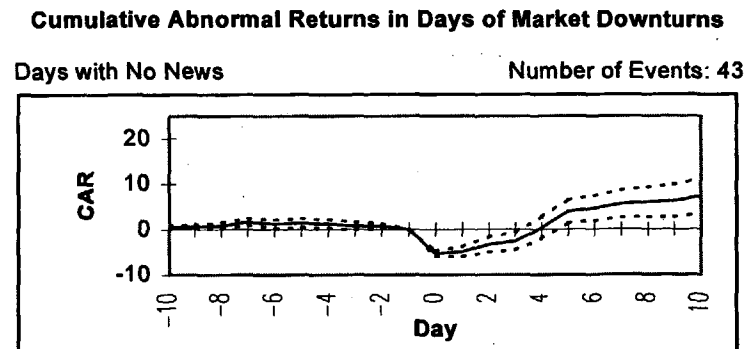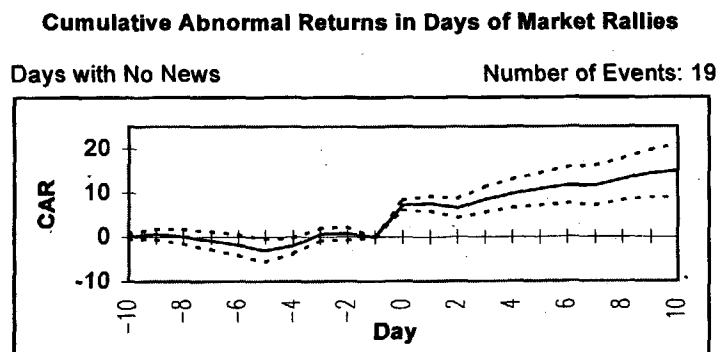
Proportion of Days with Persistent Market Jitters

News of Type:	Market Rallies	Market Downturns
Political News	0.61	0.20
Economic News	1.00	0.57
Capital Controls	0.80	0.50
Fiscal Policy	1.00	0.50
Monetary Policy	1.00	0.67
International Agreements	0.79	0.33
Credit Ratings	0	0.50
No News	0.68	0.37

News Originating in:	Market Rallies	Market Downturns
Hong Kong	1.00	0.33
Indonesia	0.83	0.21
Japan	0.63	0.42
Korea	0.56	0.82
Malaysia	0.67	0.36
Philippines	0.80	0.40
Singapore	1.00	0.33
Taiwan	0.83	0.50
Thailand	0.67	0.38

Solid line is the mean of cumulative aggregate returns (CAR) in percent.

Dashed lines are +/- one standard deviation from the mean.

Persistent positive (negative) movements are defined as movements with CARs that remain postive (negative) on day 10.

Appendix Table
Daily Returns (in Percent) and News in Days of Market Jitters

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
1/9/97	-1.89	-0.77	-2.81	2.68	0.03	0.44	0.10	-0.13	1.22	Bad loans may hobble economic growth. (Japan, NN, 1)
3/21/97	0.12	-1.10	N/A	-2.49	-1.19	-0.17	-1.52	-3.19	-0.28	Govt. suspends pork exports due to epidemic. (Taiwan, EN, -1)
3/24/97	2.06	-0.90	-1.07	-2.00	0.14	0.64	1.09	-3.82	1.70	Farm losses will hurt economic growth. (Taiwan, EN, -1)
5/5/97	2.41	1.05	N/A	N/A	-0.15	4.93	0.99	0.79	N/A	Inflation falls to 4.6. (Philippines, EN, 1)
5/12/97	0.42	0.38	3.53	-2.13	-1.96	N/A	1.58	-3.56	-1.85	JPN: No news. (Japan, NN, 1) TAI: Foreign investors move $1.1bn out on news of resignations of senior govt. officials. (Taiwan, PN, -1)
5/14/97	1.80	-0.89	1.15	N/A	-1.48	1.10	-0.22	2.87	-6.93	Baht drops amid concern about political stability. (Thailand, NN, 1)
6/16/97	1.98	0.93	1.09	-0.06	-0.21	-0.37	-0.01	3.77	0.38	Higher profits in semiconductor makers and local property market is reviving. (Taiwan, EN, 1)
6/19/97	2.11	-0.48	-0.15	-0.28	0.78	3.56	0.68	-0.93	-10.78	Finance Minister Viravan resigns. (Thailand, PN, -1)
6/23/97	-0.93	1.05	-0.71	-2.24	-0.74	-2.52	0.63	0.56	7.32	New finance minister to announce measures to boost the finance industry. (Thailand, PN, 1)
7/4/97	-1.55	0.25	0.28	0.82	-0.84	0.56	0.59	1.86	6.99	Devaluation of the baht will revive economy. (Thailand, NN, 1)
7/11/97	2.52	-1.52	-0.20	-0.08	0.34	-3.75	0.16	-0.51	-7.49	Thai baht tumbles as regional currency concerns widens. (Thailand, NN, 1)
8/11/97	-1.13	-3.21	-1.74	1.79	-6.45	-3.06	-4.21	-0.23	-2.59	Japanese trade surplus with the US widens. (USA, EN, -1)
8/22/97	-1.46	-3.75	-1.72	-0.49	-0.50	-1.06	0.02	-0.05	-7.47	Central bank discloses that net foreign reserves fell 25 in 9 months to defend baht. (Thailand, EN, -1)
8/25/97	1.10	-7.17	-1.94	0.16	-2.53	-2.88	0.50	-0.10	-7.59	Standard & Poor may cut ratings for Thailand sovereign debt. (Thailand, CR, -1)
8/28/97	-4.31	-7.75	-0.32	-1.73	-6.54	-9.50	-4.60	-2.11	-2.76	PHI, SNG: Tighter credit as reserve requirements rise. (Malaysia, MP, -1)
8/29/97	-5.15	-7.37	-1.45	-1.80	-1.24	-2.95	-0.98	N/A	-2.32	Local interest rates surge. (Hong Kong, NN, 1)
9/1/97	-5.18	-0.60	-2.98	-3.46	N/A	-2.68	-2.82	N/A	-2.12	HK: Higher interest rates may erode corporate profits. (Hong Kong, NN, 1) JPN: Concern about Asian turmoil raises concern that Japanese economy is not improving (Japan, NN, 1)
9/3/97	6.90	7.02	3.01	0.00	-7.81	-2.21	0.36	2.66	-1.69	HK, JPN: Japanese finance minister announces that Japan will not try to weaken the dollar. (Japan, PN, 1) MAL: Trading restrictions have been imposed. (Malaysia, CC, -1)
9/4/97	-3.59	4.15	0.16	-0.33	-4.25	2.06	0.05	-3.37	-0.97	Doubt whether island's stock market would be able to withstand slide in regional equity markets. (Taiwan, NN, 1)
9/5/97	2.56	13.29	-0.36	1.75	14.92	1.60	3.99	1.55	5.82	IND: Rupiah strong despite cut in interest rates. (Indonesia, MP, 1) MAL: Curbs on trading end and large public projects are shelved. (Malaysia, CC/FP, 1/1) SNG: Malaysia takes steps to liberalize their equity markets. (Malaysia, CC, 1)

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
9/8/97	1.65	2.58	-0.09	-0.44	7.45	0.03	2.85	-1.52	8.05	MAL: 3 major public works projects are delayed. (Malaysia, FP, -1) THA: Deregulation package (including cuts in govt. spending), will help bring down interest rates and shore up the rupiah. (Indonesia, FP, -1)
9/9/97	1.30	-0.30	2.04	-1.42	1.57	9.04	2.49	-0.76	0.34	Central Bank able to buy dollars in spot markets—pressure on the peso may be easing. (Philippines, NN, 1)
9/12/97	1.11	-1.79	-2.74	0.58	1.58	0.40	0.06	0.44	-4.73	Govt. says that economy posts its biggest contraction in the April-June period. (Japan, EN, -1)
9/18/97	N/A	0.10	0.30	N/A	-2.73	-5.95	-0.63	0.59	2.21	Currency falls amid concern that loan defaults and political tension could cause an outflow of investment. (Philippines, NN, 1)
9/19/97	-0.25	0.92	-0.35	-2.23	-0.42	5.15	-0.05	1.15	0.04	Central bank lowers rates for reserve repurchase instruments. (Philippines, MP, 1)
10/8/97	0.17	2.06	1.04	-3.19	7.54	0.78	0.18	0.45	-1.04	Finance Minister says that the budget would restore the economy's health. (Malaysia, PN, 1)
10/9/97	-3.87	2.92	-1.04	-0.17	3.50	7.05	0.34	2.48	-1.03	Borrowing costs come down as the central bank cuts the overnight borrowing rate. (Philippines, MP, 1)
10/16/97	1.37	-2.84	2.49	-4.37	-0.63	-0.49	-1.40	-3.39	-1.70	Compaq, Sears Roebuck, and Merck announces disappointing earnings. (USA, EN, -1)
10/17/97	0.22	3.13	-0.34	1.07	-3.70	-0.19	0.24	5.48	-0.99	Market shares and earnings of Taiwanese computer companies in the US fall. (Taiwan, EN, -1)
10/20/97	-4.78	-4.31	-2.51	-4.44	-4.95	-1.39	-2.73	-9.98	-6.19	HK: Stocks fell as banks raised mortgage lending rates. (Hong Kong, NN, 1) TAI: Central Bank says that it would let market forces determine the Taiwan dollar rate. (Taiwan, CC, 1)
10/21/97	-4.58	0.98	0.09	0.15	-1.45	-1.85	-1.87	5.01	-0.70	Govt. unveils a series of measures to bolster stocks by cutting the minimum deposit needed to buy shares and raised the deposit required to bet against them. (Taiwan, CC, 1)
10/22/97	-6.37	-3.48	1.35	6.91	-5.57	-4.67	-3.30	0.79	-2.89	Rising interest rates and calls to abandon the currency peg sends stocks tumbling. (Hong Kong, NN, 1)
10/23/97	-10.73	0.32	-2.08	-0.19	-2.67	-2.33	-3.55	1.65	N/A	HK: Chief executive says that interest rates may have to go up to defend currency. (HK, PN, -1) SNG: Report by SBC Warburg says that Singapore's GDP growth to slow to 2— down from the 6 projected earlier. (Singapore, EN, -1)
10/24/97	6.72	0.99	-0.35	-6.53	-2.46	-3.26	-1.36	-1.81	N/A	Interest rates fall allaying concern that the peg to the US would break. (Hong Kong, NN, 1)
10/27/97	-6.08	-1.04	-1.74	-8.45	0.98	0.22	0.71	-1.21	-0.22	Concern that rising interest rates may erode corporate profits. (Hong Kong, NN, 1)
10/28/97	-14.72	-10.74	-2.52	-8.73	-9.06	-6.22	-7.23	-7.03	-7.58	Worst plunge in US stocks since the 1987 crash. US stocks crashed on concern that Asian economies were slowing down. (USA, NN, 1) SNG: Stocks plunge following crash in Hong Kong. (Hong Kong, NN, 1)
10/29/97	17.26	5.11	3.11	1.58	3.22	5.22	3.40	-1.80	-2.24	Markets surge as US stocks soared in the busiest day ever. (USA, NN, 1)

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
11/3/97	5.76	9.53	N/A	7.76	12.18	1.02	7.35	N/A	0.97	HK: China eases credit. (China, MP, 1) MAL: Ringgit soars along with the rupiah after bank reforms in Indonesia. (Indonesia, EN, 1) SNG: Stocks soar in the wake of IMF rescue package for Indonesia. (Indonesia, IA, 1)
11/4/97	-4.31	-0.16	N/A	6.73	0.82	4.09	0.50	3.46	10.83	TAI: Stocks rally after surge in DOW. (USA, NN, 1) THA: PM may quit paving the way for a new govt. (Thailand, PN, 1)
11/7/97	-2.98	-3.78	-3.46	-7.66	-3.43	0.10	-1.05	-3.54	8.64	JPN: Bank of Yokohama to liquidate its entire equity portfolio. Concern about banks' exposure to bankruptcies (Japan, EN, -1) TAI: Stocks drop on concern that currency may weaken if Korean Won continues to depreciate (Korea, NN, 1) THA: News that Democrat party leader Chuan Leekpai may be next Prime Minister. (Thailand, PN, 1)
11/17/97	4.54	-0.87	6.60	-6.75	-1.97	2.08	1.37	2.35	-5.40	Premier hints that public spending may be used to stimulate the economy. (Japan, PN, 1)
11/18/97	-1.69	-0.75	1.20	-0.88	-9.24	-3.19	-0.52	-1.87	-0.90	United Engineers bails out parent company. Stocks fall on concern that regulatory environment is lax. (Malaysia, EN, 1)
11/19/97	-0.90	-5.18	-5.68	-0.63	-4.55	0.32	-1.71	-2.14	-1.82	Govt. issues confusing signals about propping up the financial sector. (Japan, EN, -1)
11/20/97	-096	-6.55	2.02	-12.39	-13.64	-0.05	-0.75	-0.19	-3.10	KOR: Govt. widens trading band to shore up financial sector. (Korea, MP, 1) MAL: Stock plunges on concern of more corporate bailouts of troubled companies by cash rich units. (Malaysia, NN, 1)
11/21/97	4.83	-2.49	3.58	11.40	6.87	-0.29	1.51	1.96	0.87	HK, KOR: Govt. seems poised to turn to the IMF to contain the financial crisis. Stocks rise. (Korea, IA, 1) JPN: ruling party moves towards using public funds to shore up Japan's financial system. (Japan, EN, 1) MAL: Strong ringgit boosts stocks. (Malaysia, NN, 1)
11/24/97	0.30	3.97	N/A	-14.40	0.64	-0.93	2.57	2.94	-2.00	IMF imposes tax raises and spending cuts as part of bailout. Growth may slow down. (Korea, IA, 1/)
11/25/97	-2.48	-4.15	N/A	-6.03	-5.65	-2.60	-1.56	-3.34	-4.67	Uncertainty exists about whether ruling party KMT would win the county polls. (Taiwan, PN, -1)
11/28/97	-0.53	N/A	0.05	-9.41	-1.73	0.17	-0.36	-0.24	-2.49	Korean stocks tumble on concerns of slowing economic growth. (Korea, NN, 1)
12/1/97	2.09	N/A	0.43	-6.14	-4.44	-0.29	-0.11	-4.71	-4.22	Ruling KMT loses majority in local govt. elections casting doubts over its future. (Taiwan, PN, -1)
12/2/97	4.17	-4.25	0.37	-7.95	0.59	-0.02	0.94	3.42	-1.54	Japanese PM said that he would do anything necessary to safeguard the financial system. (Japan, PN, 1)
12/4/97	2.37	2.70	-2.31	8.74	3.46	0.94	0.82	2.85	2.84	Govt. promises to increase access to financial markets in return for $55bn IMF bailout. (Korea, IA, 1)
12/8/97	1.68	-0.99	-2.21	-13.37	11.58	3.19	1.88	2.37	N/A	KOR: Short term foreign debt is far higher than earlier announced; lack of funds may cause financial companies to shut down. (Korea, EN, -1) MAL: Govt. announces measures to avoid asking the IMF for help. (Malaysia, IA, -1)

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
12/9/97	-2.04	-9.81	2.95	-15.08	-6.57	1.18	-2.04	-1.02	-5.06	JPN: PM Hashimoto favors spending $77bn in govt. money to help banks and other financial institutions write off bad loan. (Japan, PN, 1) KOR: Govt. suspends 5 cash strapped companies. (Korea, EN, -1)
12/11/97	-5.68	-5.78	-2.76	-14.68	-10.21	-8.80	-3.28	-1.75	N/A	JPN: Investors are concerned that ruling party will not be able to deliver a proposal to stabilize the financial system and boost the economy with publicly financed bonds. (Japan, NN, 1) KOR: Moody cuts rating of South Korean foreign currency bonds to Baa2. (Korea, CR, -1) MAL: High interest rates and weakening currency cause stocks to drop. (Malaysia, MP, -1) PHI: Poor economic outlook in Philippines. (Philippines, NN, 1)
12/12/97	1.84	-18.67	-2.47	-7.49	-3.43	-3.30	-1.65	0.22	-5.64	Suharto may have serious health problems. (Indonesia, PN, -1)
12/15/97	-1.71	-18.59	-2.25	18.62	-5.94	-5.70	-4.32	-3.19	-5.18	IND, Philippines: Possible freeze on loan repayments; Suharto's health fails. (Indonesia, FS/PN, -1/-1) KOR: Hopes of accelerated assistance from the IMF. (Korea, IA, 1) SNG: Technology stocks fall - mirrors Wall Street decline amid concerns on Asian turmoil. (USA, NN, 1) TAI: Interest rates raised to support currency as currency declines in response to currency declines in the rest of Asia. Trader's bet that computer technology companies will have slow sales. (Taiwan, MP/NN, -1/1)
12/16/97	-0.84	5.34	0.53	13.98	-2.18	-7.62	-2.44	-0.81	0.32	KOR: All 3 Presidential candidates to abide by IMF deal. (Korea, PN, 1) PHI: Stocks decline after peso slides. (Philippines, NN, 1)
12/17/97	3.28	2.95	6.16	-0.40	5.00	4.44	2.60	2.79	1.84	PM Hashimoto calls for a $15.4bn income tax cut to stimulate the economy. Tax cuts to be implemented in current fiscal year as part of an economic stimulus package. (Japan, FP, 1)
12/18/97	0.59	9.96	-2.14	N/A	3.85	2.70	1.94	-0.14	9.39	Thailand stocks rose after Japanese tax cut. (Japan, FP, 1)
12/19/97	-3.31	4.03	-4.23	N/A	-1.37	0.78	0.80	-2.33	-2.56	Trading company Toshuku files for bankruptcy; raises specter of more to follow. (Japan, EN, -1)
12/22/97	-2.27	-1.11	-4.19	-10.36	-1.55	-0.08	-2.15	-0.76	-1.73	JPN: Stocks fall on credit worries of more bankruptcies. (Japan, NN, 1) KOR: Moody's cuts Korea's credit rating to junk status (Korea, CR, -1)
12/23/97	1.90	-1.88	N/A	-21.28	-2.91	-1.68	0.00	-0.56	-5.13	International credit rating agencies downgrade the Korea's foreign currency debt. (Korea, CR, -1)
12/24/97	-0.25	-10.65	N/A	2.51	-1.21	0.04	1.14	0.10	0.14	Rupiah slides as a research report from IndoSuez securities puts foreign debt at twice the govt. forecast. (Indonesia, EN, -1)

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
1/5/98	-3.59	-11.34	N/A	N/A	-7.23	-4.87	-2.48	N/A	N/A	IND: Govt. may announce a smaller budget for 1998 tomorrow, deepening problems for companies. (Indonesia, FP, -1) MAL: S&P cuts foreign currency ratings. (Malaysia. CR, -1)
1/6/98	-1.64	-12.79	-1.10	4.61	-9.75	-10.49	-5.37	-2.36	-3.77	IND: Austere Indonesian budget mandated by IMF may deepen recession. (Indonesia, NN, 1) MAL: Ringgit falls as region's woes keep foreign investors away. (Malaysia, NN, 1) PHI: Banks widen bands in which the currency can be traded. (Philippines, MP, 1) SNG: Stocks falls after Indonesian, Malaysian, and Philippine currencies plunge. (Indonesia/Malaysia/Philippines. (NN/NN/MP, 0/0/-1)
1/7/98	-5.95	-14.39	1.90	0.58	-6.41	-2.69	-3.53	-3.55	-0.94	HK: High local interest rates to protect currency threaten profits in Hong Kong's real estate sector. (Hong Kong, NN, 1) IND: Stocks fall on concerns about corporate failure. (Indonesia, NN, 1) TAI: Weak currency and rising interest rates cause stocks to fall in Taiwan. (Taiwan, NN, 1) SNG: Stocks fall as banks concerned that Asian currency woes would lead to bad debts. (Singapore, NN, 1)
1/8/98	-3.14	N/A	-0.30	1.06	-6.87	-4.24	-7.90	-0.52	-3.62	IMF may withdraw its bailout package for Indonesia. (Indonesia, IA, -1)
1/9/98	-3.94	N/A	0.14	-3.60	0.84	-7.25	-3.86	0.13	-1.64	PHI: Fear that economy is headed for a recession. (Philippines, NN, 1) SNG: Stocks plunge as investors bail out of region. (Singapore, NN, 1)
1/12/98	-9.06	-7.27	-3.30	13.77	-4.52	2.09	-9.35	-5.90	-8.58	HK: Peregrine files for liquidation. (Hong Kong, EN, -1) JPN: PM fails to announce new economic stimulus measures in speech to Parliament. (Japan, PN, -1) KOR: Govt. takes steps to ease a cash crunch. (South Korea, MP, 1) SNG: Stocks fall on Indonesian financial problems amid concerns that loans to Indonesia may become bad debt. (Indonesia, NN, 1) THA: Baht's decline triggers concern over effect on company profits. (Thailand, NN, 1)
1/13/98	7.08	14.47	0.48	0.27	6.55	4.36	9.78	2.19	6.03	HK: Morgan Stanley strategists' comments that the Asian bear market may be in its final stages. (Hong Kong, NN, 1) IND: Govt. says that it will postpone 15 power and highway projects to demonstrate commitment to reforms. (Indonesia, FP, -1) SNG: Merger of two Singaporean banks boosts investors' confidence.(Singapore, EN, 1)

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
1/14/98	5.71	20.88	2.65	7.73	13.27	7.41	5.90	4.51	11.93	HK: Bank rates for 3 month loans fell by 2.3. (Hong Kong, NN, 1) Philippines: US Treasury Deputy Secretary Lawrence Summers is dispatched to hold meetings with the Thai and Indonesian leaders. (US, PN, 1) IND, MAL, THA: IMF announces reform package for Indonesia and Suharto commits to the IMF package (Indonesia, IA/PN, 1/1) SNG: Deputy PM assures the nation that Singapore is not in danger of a banking crisis. (Singapore, PN, 1) TAI: Intel and Motorola announces strong earnings. (US, EN, 1)
1/15/98	-7.25	-12.82	N/A	10.32	-3.04	4.25	-1.54	-0.02	-3.42	HK: Speculation that property companies may default. (Hong Kong, NN, 1) KORN: Officials to travel to the US to ask international creditors to refinance $25bn short term debt. (Korea, IA, 1) IND: Promises of economic reform (phasing out food/oil subsidies and ending family monopolies) were met with skepticism. (Indonesia, PN, 1)
1/19/98	5.44	-7.91	1.15	10.13	10.57	6.01	4.00	1.23	8.42	HK: Falling interest rates and brisk sale of apartments raise stocks. (Hong Kong, NN, 1) KOR: Upgraded by international credit companies. (Korea, CR, 1) MAL: Michel Camdessus makes favorable comment about economy. (Malaysia, IA, 1) PHI: Peso rises prompting optimism that Philippines would be the 1st to emerge from SE Asian crisis. (Philippines, NN, 1) SNG: Stocks rises as investors returned to the market. (Singapore, NN, 1) THA: May be able to loosen terms of IMF bailout. Camdessus says that govt. deserves full support. (Thailand, IA, 1)
1/21/98	-2.01	-9.42	1.84	-9.99	-4.69	-3.16	-0.06	2.60	2.89	Investors question whether Korean economy and corporate profits could rebound fast enough. (Korea, NN, 1)
1/22/98	-4.03	-9.58	0.16	-6.70	-4.39	-5.00	-2.43	-0.84	-3.20	Suharto plans to serve a seventh term in office. (Indonesia, PN, -1)
1/26/98	0.54	3.35	2.45	9.64	0.84	3.57	1.19	N/A	0.15	Govt. negotiators close an agreement with international creditors to exchange $25bn of commercial bank debt for long term loans. (Korea, IA, 1)
1/30/98	N/A	N/A	-2.65	N/A	N/A	7.32	N/A	N/A	10.19	PHI: Stocks soar on investor confidence. (Philippines, NN, 1) THA: Plans to lift currency controls. (Thailand, CC, 1)
2/2/98	N/A	N/A	-0.08	-4.57	N/A	13.29	N/A	N/A	16.85	PHI: Stocks surge on hopes of economic recovery. (Philippines, NN, 1) THA: Lifts currency controls. (Thailand, CC, 1)
2/4/98	-2.13	6.70	-0.29	-2.23	-2.13	-1.36	0.31	0.04	-14.36	Thailand stocks fall as investors concluded that prices were out of line with earning prospects. (Thailand, NN, 1)

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
2/5/98	1.35	-3.62	1.92	-3.33	6.14	-0.77	3.61	2.03	8.64	SNG: PM says that Singapore is willing participate in a plan to guarantee payment of goods shipped to Indonesia for use in its export industries. (Singapore, PN, 1) THA: Stocks rally as investors bet that the worst of the financial turmoil is over. (Thailand, NN, 1)
2/10/98	-0.12	25.21	0.65	-3.93	10.60	3.08	1.36	-0.39	4.01	IND: Suharto said that the government should "fix a certain exchange rate". (Indonesia, PN, 1) MAL: Ringgit surges on expectations that Indonesia may introduce a currency board. (Indonesia, PN,1)
2/11/98	-0.62	-3.27	N/A	-5.08	-1.35	7.45	0.29	2.09	N/A	Peso surges on growing foreign investments that are wagering that the worst is over (Philippine, NN, 1)
2/12/98	-1.63	-10.44	N/A	-3.03	-11.76	-5.14	-2.84	0.55	N/A	MAL: The IMF may not support Indonesian plans to peg the rupiah to the dollar. (Indonesia, IA, -1) PHI: Stocks fall on concern that weakening regional currency may slow economic recovery. (Philippine, NN, 1)
2/16/98	-1.52	-17.24	-0.99	-8.86	-7.95	-4.66	-6.40	-0.09	-5.05	IND: The IMF warns that it may withhold emergency credit to Indonesia if it pegged the currency. (Indonesia, IA/MP, -1/-1) KOR, MAL, SNG: The IMF may not support Indonesian plans to peg the rupiah to the dollar. (Indonesia, IA, -1)
2/17/98	1.06	8.81	0.04	-2.12	6.59	2.01	4.00	0.64	6.54	Indonesia plans to go ahead and peg its currency. (Indonesia, PN, 1)
2/26/98	3.06	4.43	0.40	0.98	2.04	1.96	1.77	3.30	2.37	New Central Banker vows to defend the currency. (Taiwan, PN, 1)
3/2/98	-1.43	4.35	2.59	9.97	0.90	1.00	0.02	0.96	0.67	Japanese lenders agree to reschedule $24bn in short term Korean debt. (Korea, EN, 1)
3/4/98	-0.67	-7.44	-0.35	-0.12	-7.54	-2.19	-3.37	-2.44	-3.53	Central Bank announces that Sime Bank incurred 1.57 bn ringgit in losses for the 6 months ending 1998. (Malaysia, EN, -1)
3/5/98	-4.94	-6.48	-1.91	-8.84	-4.95	-1.37	-0.53	-2.77	-5.70	HK: Beijing's 1998 budget will do little to boost economic growth. (China, FP, -1) KOR: Bank stocks fall on concern that losses of banks in Malaysia will be repeated across Asia. (Malaysia, NN, 1)
3/9/98	0.69	-11.42	-1.70	-1.46	-2.41	-0.25	-2.32	-0.02	0.04	IMF to postpone disbursement of $3bn from Indonesia's aid package because of delay in implementing reforms. (Indonesia, IA, -1)
3/13/98	1.38	1.70	2.58	1.69	4.28	0.22	1.51	-0.12	6.86	Sixth consecutive monthly trade surplus for Thailand. (Thailand, EN, 1)
3/20/98	1.02	10.86	0.47	2.55	0.98	0.32	-1.16	0.49	0.87	Govt. scotches proposal to peg rupiah to the dollar raising the likelihood of an IMF agreement. (Indonesia, IA/MP, 1/1)
3/30/98	-1.98	-1.72	-3.60	-4.72	-1.14	-0.86	-1.87	-0.69	-0.24	Govt. figures shows that Feb. industrial output fell by 3.3. (Japan, EN, -1)
4/10/98	N/A	N/A	3.77	0.61	0.54	N/A	N/A	-0.09	1.25	The Bank of Japan intensifies its sale of dollars to prop up the currency. (Japan, MP, -1)
4/16/98	-1.61	-2.37	-2.83	-2.83	-3.21	-1.54	-2.18	-0.49	N/A	G7 fails to come up with a solution to revive the sluggish Japanese economy. (Japan, IA, -1)

Date	HK	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	News in Bloomberg
4/27/98	-2.65	-1.62	**-3.69**	-1.88	-2.94	-3.09	-1.13	-2.09	-1.99	Key economic indicators paint gloomy picture. Unemployment rose, industrial output, and consumer spending fell. (Japan, EN, -1)
5/6/98	-0.44	**-11.34**	N/A	N/A	**-7.75**	-3.42	-1.89	-0.13	N/A	Student riots create political uncertainty (Indonesia, PN, -1) Worries of unrest in Indonesia (Indonesia, PN, -1)
5/13/98	-3.84	**-18.34**	-0.47	0.19	-5.28	-3.21	**-4.98**	-1.26	-4.40	Student protests calling for Suharto's ouster escalate in Indonesian capital. (Indonesia, PN, -1)
5/14/98	1.30	**-11.37**	0.01	0.81	4.66	-2.14	-1.28	-0.05	0.46	Violent protests against the Suharto regime erupt. (Indonesia, PN, -1)
5/18/98	-1.35	**-17.81**	-1.51	1.18	-4.07	0.08	-3.09	-1.38	-3.88	Calls for Suharto's resignation mount; cabinet reshuffle viewed skeptically as more radical measures are believed to be needed to restore the battered economy. (Indonesia, PN, -1)
5/20/98	1.07	**11.39**	0.50	4.06	3.68	2.78	0.08	1.88	2.83	Suharto may step down. (Indonesia, PN, 1)

CC: Capital Controls
FP: Fiscal Policy
MP: Monetary Policy
IA: International Agreements (IMF, World Bank, US Banks etc.)
CR: Credit Ratings
PN: Political News (includes Political Talk and Political Events)
NN: No News (in the market)
EN: Economic News (includes Financial Sector, Real Sector, and External Sector)
HK   Hong Kong
IND   Indonesia
JPN   Japan
KOR   Korea
MAL   Malaysia
PHI   Philippines
SNG   Singapore
TAI   Taiwan
THA   Thailand

Notes:
Bold numbers represent market jitters.

The variable international agreements takes the value of 1 (-1) whenever the country accepts or becomes closer to (moves away from) accepting an agreement with international institutions. Credit ratings upgrade (downgrades) are denoted by 1 (-1).Good (Bad) economic news are denoted by 1 (-1). Expansionary (contractionary) monetary or fiscal policies are denoted by 1 (-1). The variable capital controls takes the value 1 whenever restrictions on capital movements are lifted, -1 whenever more restrictions are imposed. The variable political news takes the value 1 whenever there are events that generate political stability, -1 in the opposite cases.

The parenthetical statements after each news event explain the country from which the news originated, our classification of the news, and the value of the corresponding dummy variable respectively. For example, for the last day of market jitters (May 5, 1998) the news of President Suharto's possible resignation originated in Indonesia, it is classified as political news (PN), and it takes the value of 1 because the event added political stability.

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4-7