Corporate Distress in East Asia: Assessing the Impact of Interest and Exchange Rate Shocks

STIJN CLAESSENS, SIMEON DJANKOV, AND GIOVANNI FERRI

STIJN CLAESSENS is a principal economist in the Financial Economics Group at the World Bank in Washington, D.C.

SIMEON DJANKOV is a financial economist in the Financial Economics Group at the World Bank in Washington, D.C.

GIOVANNI FERRI is a principal financial economist in the East Asia and Pacific region at the World Bank in Washington, D.C.


Leverage has been high and increasing in Indonesia, Japan, Korea, and Thailand. Foreign exchange short-term borrowing became important in the last few years, especially in Korea, Malaysia, and Thailand. These vulnerabilities in corporate financial structures have been an important factor in triggering and aggravating East Asia’s financial crisis, and leading many corporations to bankruptcy (Ferri, Hahm, and Bongini [1998]).

In this research, we quantify the impact of the currency and interest rate shocks on individual non-financial corporations’ liquidity and solvency. We find that 63% of firms in the five affected countries (Indonesia, Korea, Malaysia, the Philippines, and Thailand) are currently illiquid, and 30% are technically insolvent. About half of the solvent firms are illiquid, moreover, suggesting that many more firms are at risk of insolvency unless liquidity constraints are relieved.

The worst affected is Indonesia, with 77% illiquid and 65% insolvent firms, followed by Korea and Thailand. Malaysia has the fewest insolvent firms, 8%, but 62% illiquid firms. Taiwan has no insolvent firms. The debt obligations of insolvent firms are 29% of the total debts of our sample of firms.

Extrapolating from this sample, non-performing loans amount to 21% of the combined GDPs of the five most affected countries, and non-performing assets represent more than a third of the combined GDPs. Financial distress in East Asia’s corporate sector is systemic.

DATA AND FINANCIAL STRUCTURES

The data are compiled from annual reports of the non-financial companies listed on the major stock exchanges in the region and come from Worldscope and Extel data bases. We focus on the five East Asian countries most affected by the crisis: Indonesia, Korea, Malaysia, the Philippines, and Thailand. We also include Taiwan as a benchmark, as it has been less affected.

The complete data set consists of 317 companies in Indonesia, 392 companies in Korea, 772 companies in Malaysia, 170 companies in the Philippines, 564 companies in Thailand, and 265 companies in Taiwan. Because some of the information essential
Germany, and the United States.

EXHIBIT 2

Short-Term Debt Share for Six East Asian Countries,

Germany, and the United States.

EXHIBIT I
The impact of interest rate differentials on the currency and equity markets of Asia is a complex interplay of several factors. A detailed examination of the relative performance of currencies and equity indices in East Asia reveals some interesting patterns.

**Methodology and Results**

Increases in interest rates (or drops in earnings) in the six countries assessed here were very reminiscent of the 1996-1997 period. The high rate of interest payments in some of these countries led to significant erosion of their export earnings, which further exacerbated the currency crisis. The impact of interest rate hikes on the currency and equity markets was particularly pronounced in countries like Indonesia, Thailand, and Malaysia, and to a lesser extent, Singapore.

In conclusion, the results suggest that interest rate policies should be carefully managed to avoid negative consequences for the currency and equity markets. The need for coordinated action among East Asian countries is clear, as their economies are closely intertwined.
EXHIBIT 6
Illiquid Firms in Six East Asian Countries after the Currency Rate Shock

EXHIBIT 7
Illiquid and Insolvent Firms in Six East Asian Countries

vent. For all countries, the interest rate shock is less important than the currency shock. If only 22% of East Asian firms would be technically insolvent. The added effect of the interest rate shock brings the total up to almost a third?

Indonesia is by far the hardest hit country, with two-thirds of firms estimated to be insolvent. Here, as expected, the damage to the corporate sector stems mainly from the great depreciation of the currency and, not so much from the increase in interest rates. In Korea, 40% of corporations are technically insolvent. Here, the interest rate shock also plays an important role. Half of Korean insolvent firms are so because of the combination of the interest rate shock and current.

It is useful to focus on the differences between liquidity and insolvency problems. Exhibit 7 reports the distribution of corporations according to their joint status as regards liquidity and solvency for each of the six East Asian countries. Note that the share of firms that are illiquid although technically solvent is rather large; it averages 35% for the five East Asian countries. This implies that many solvent firms are at risk of insolvent, or in their liquidity positions are very weak, in the sense that they cannot even cover...
The share of non-performing loans could be as high as 6.9% in Korea, and more than a third of the combined 4.9% of GDP. The share of non-performing loans could be as high as 7% in the Philippines, with the high amount of 7% in the Philippines due to the non-performing loans in the Philippines. The share of non-performing loans non-performing loans to GDP could be as high as 5% in Korea, and more than a third of the GDP. The share of non-performing loans could be as high as 7% in the Philippines, with the high amount of 7% in the Philippines. The share of non-performing loans could be as high as 7% in the Philippines, with the high amount of 7% in the Philippines.
GDP in these countries. Financial distress in East Asia’s corporate sector is widespread.

ENDNOTES

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1. We use interest and exchange rates of September 20, 1998.

2. The data in this section refer to larger samples of firms, rather than the more limited sample that we use for the simulation exercise.

3. The pre-crisis spread is the average of the onshore/offshore rates on March 27, 1997 (April 10, 1997, for Indonesia, due to data availability).

4. Again, the pre-crisis rate was the average of the spread between the offshore three-month interbank rate and the onshore Central Bank of China call rate, observed at the end of March 1997, and the post-crisis sovereign spread is that observed at the end of August 1998.

REFERENCES
