Corporate Financial Policies and Performance Prior to Currency Crises

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Abstract

Using company level data from 17 countries that have su¤ered a currency crisis during the past decade, this paper documents that …rms have increasing leverage and declining pro…tability prior to a crisis. After sorting companies into two groups based on their exchange rate beta, we show that companies that bene…t from currency depreciations have higher leverage, lower earnings to revenue ratios and lower interest coverage ratios compared to …rms that are harmed by currency deprecations. These results are consistent with the recent literature that puts the …nancial policies and performance of corporations as the central issue in currency crises.

KEYWORDS: currency crises, corporate leverage, capital structure, pro…tability, exchange rates.

JEL classi…cation: F3, F4, G3

Are currency crises caused by irresponsible macroeconomic policies? The answer used to be an unqualified yes: a currency crisis was a just retribution for government mismanagement. However, the recent crisis in Asia has led many observers to question this view. Most of the afflicted economies had budget surpluses and healthy foreign exchange reserves. While current account deficits were large in some countries (Thailand and Malaysia), they were very modest in others (South Korea and Indonesia). Thus it is difficult to argue that currency depreciations were needed because of macroeconomic reasons.

This paper contributes to the growing literature that places the corporate sector and its policies as the central issue in currency crises. In order to examine the role of corporations and their policies in currency crises, this paper considers micro level data of those countries that have suffered a currency crisis in the last ten years. We compile a database that contains data on firms in seventeen countries. We analyze the firms' financial policies and profitability ratios First we sort companies into two groups using individual companies' stock market returns. In the first group we have companies whose stock returns decrease when the domestic currency appreciates with respect to the U.S. dollar (negative exposure companies) and in the second group those companies whose stock returns increase (positive exposure companies). After sorting the companies into these two groups, we show that those companies with negative exposure have higher leverage than those companies that have positive exposure, even tough all companies increase their leverage prior to a currency depreciation. In addition, we analyze companies profitability and liquidity using several standard ratios, and show that profitability decreases for all companies before a currency crisis, but the effect is more pronounced for the negative exposure companies. We also show, in a multivariate regression framework controlling for firm characteristics, that companies that benefit from a currency depreciation have higher leverage than companies that are harmed by the depreciation.

We also examine how firms' leverage affects the amount of currency depreciations. We find that it is especially the leverage of negative exposure companies that affects the magnitude of currency depreciations. Finally, we argue that countries with the weakest corporate governance mechanisms are more prone for this phenomenon of excessive leverage leading to a currency depreciation because of forced reliance on debt in financing investments. We operationalize this by using the variables developed by La Porta et. al. in addition to leverage ratios to explain the magnitude of currency depreciations.

The results of this paper provide support for the implications derived in Bris and Koskinen (2001), who argue that excessive leverage and risky investments among exporting companies lead to currency depreciations. Aghion et al. (2000) and Krugman (1999) also argue that firms' financial distress is the important factor causing currency crises. Shocks (or loss of confidence) cause depreciations which then cause financial distress problems for corporations and further depreciations. The hypothesis underlying

such argument is that currency depreciations decrease …rms' pro…tability. In order for these models to hold empirically, one would expect the increase in leverage and decline in pro…tability be more pronounced among positive exposure …rms. Our data doesn't support that.

In addition to these …nancial distress models, Johnson et al. (2000) emphasize problems in corporate governance as an explanation to the Asian crisis and show that lack of outside investor protection is related to the amount of depreciation in emerging markets. We obtain results, consistent with Johnson et al. (2000), and we are able to provide an alternative explanation for these …ndings: poor corporate governance mechanisms lead to forced debt …nancing and thus, through high leverage, ultimately to currency depreciations[1].

There are several other papers that depart from the traditional macroeconomic reasoning in explaining currency crises. Corsetti, Pesenti and Roubini (1998a, 1998b, 1999) argue that creditors' capital was at least implicitly guaranteed in some Asian countries, if …nancial di¢culties were to arise. This would naturally lead to overinvestment in risky projects at the expense of safer ones. Chang and Velasco (1998a, 1998b) model a currency crisis in a same way as Diamond and Dybvig (1983) model a bank run. With foreign borrowing and a …xed exchange rate, a run on banks becomes a run on the currency. In Caballero and Krishnamurthy (1999) out‡ow of capital can lead to domestic …re sales, because a country has a lack of international collateral, thus deepening a capital account crisis to a full …nancial crisis. Allen and Gale (2000) argue that currency crises can serve as a risk sharing mechanism between domestic bank depositors and international bond markets

The next section of the paper describes the data and its sources. In Section II we analyze the stock price reaction of the companies in our sample to a currency depreciation, based on our measures of exchange rate exposure. In Section III we study the relationship between leverage and exchange rates. In Section IV we relate exchange rate exposure to several di¤erent measures of pro…tability. In Section V we provide cross-sectional evidence on the determinants of a company's capital structure and on the amount of a currency depreciation. Section VI concludes the paper.

I Data

A Sample description

[1] Mitton (2001) provides company level evidence, that corporate governance variables also help to explain how individual companies performed in the Asian crisis.

Throughout the paper, a crisis is de…ned as the event in which a government decides to let its previously …xed currency ‡oat or administratively devalues it. We only consider currencies that can ‡oat within a band or that are …xed. Bands can be either nominal or real, so crawling peg currencies are also considered …xed for our purposes.

We obtain information about currency crises that have occurred in the period 1985-2000. These are partly compiled in Kaminsky and Reinhart (1996). Additionally, Italy, the United Kingdom and the countries that experienced the Asian crises of 1997 are also included in the sample. When a country has su¤ered several crises in the period 1985-2000 (this is the case, for instance, for Brazil, Chile, Spain, and Turkey), exclusively the last one is considered. The …nal sample of crises includes seventeen countries, and its description is in Table I. There have been other major currency depreciations not included in the …nal sample for a variety of reasons. For example, we do not include the Russian crisis in 1998 because of a lack of data on Russian …rms. We also eliminate Bolivia, Chile, Colombia, Israel, Peru, and Uruguay, because we lack stock price data before the crises. For some countries the most recent crisis has not been considered due to the unavailability of data after the crisis[2]. Brazil, for instance, su¤ered its last crisis in 1999. Finally, some Asian countries, like Japan, that experienced considerable depreciations did not have a system of …xed rates prior to the crises.

For each country in the sample, Datastream provides a Global Market Index, that includes a varying number of …rms per country[3]. Datastream also provides accounting information regarding all the available …rms in the corresponding market, for a window of …ve years around the year of the currency crisis.

We are able to …nd information in Datastream for 3,617 …rms from the seventeen countries we consider. Among those, 2,081 …rms are from Asia[4], 1,403 from European countries, and 133 …rms from Latin America. We compare the number of …rms in our sample with the total number of …rms in the corresponding exchange as of December of the corresponding crisis year, from the International Federation of Stock Exchanges. On average, our sample contains 54.75 percent of all the …rms listed in a country's main stock exchange. This percentage is lower for Latin American countries, where currency depreciations happened earlier and

[2] We require six years of past information, and two years of post-crisis data, on stock prices for the …rms available in the sample in order to perform the estimation.

[3] There are 50 stocks from Brazil, 50 from Venezuela, 90 from Mexico, 50 from Finland, 50 from Norway, 120 from Spain, 70 from Sweden, 50 from Turkey, 550 from the UK, 160 from Italy, 50 from Indonesia, 100 from South Korea, 90 from Malaysia, 50 from the Phillippines, 100 from Singapore, 70 from Taiwan, 50 from Thailand, included in each market index.

[4] Pomerleano, with a sample of …rms that include Japan and Hong Kong, employs data from 734 companies.

hence the lack of data problem is more severe.

[Insert Table IA]

In Table IA we have calculated the domestic stock market return at the time of the currency depreciation, as well as in the …ve months that surround the crisis. On average stock prices decline by 1.83% in the month following the depreciation month. We also calculate the currency depreciation relative to the US dollar[5]. At the same time, the average currency depreciation in our sample amounts to 27.01 percent in the 5 months that surround the crises. The largest depreciation happened in Brazil (94.7 percent), the lowest in Venezuela (3.56 percent appreciation in …ve months). The average debt-to-value ratio (book values) for the total sample is 51.2 percent, with South Korea having the highest ratio (75.18 percent), and Brazil the lowest (25.15 percent). By regions, Asian countries display the highest debt levels, with an average of 57.68 percent. European countries had a 45.81 percent debt ratio and the average for Latin America is 31.52 percent.

Table IB describes the exchange rate regimes for the countries in our sample. Strictly speaking, only Brazil, Mexico, and the Philippines had …xed exchange rates prior to their currency devaluations. In addition to the countries in the ERM, Finland, Norway and Sweden maintained the exchange rate within a band with respect to the ECU. Other countries (South Korea, Indonesia, Singapore, and Taiwan) …xed their real exchange rates with respect to either the dollar or a basket of currencies. Malaysia and Venezuela allowed for ‡uctuations with respect to the dollar. Figure 1 shows that, although pegged to the dollar, Latin American currencies were the ones that ‡uctuated the most before the crises. Brazil pegged the real only six months before its last devaluation, and Mexico su¤ered several crises before the ones we consider in this paper. Asian exchange rates are not excessively volatile in the last six years before the crises (the standard deviation of the monthly change in exchange rates is 0.84 percent in Asia, 1.54 percent in Europe, and 5.52 in Latin America).

[Insert Table IB]

[Insert Figure 1]

In the next section we survey the literature on exchange rate exposure and propose a new methodology that allows us to di¤erentiate …rms depending on whether they bene…t from or are harmed by currency depreciations. We regress the stock return of every …rm on exchange rate changes and the component of the domestic market return that is orthogonal to the changes in the exchange rate.

[5] Throughout the paper, exchange rates are calculated as units of dollars per domestic currency.

II Exchange rate exposure

For the past twenty years, …nancial researchers have paid a great deal of attention to how to measure a …rm's exposure to exchange rate movements. The basic models can be grouped into two categories: accounting - based exposure and stock price - based exposure. The studies by Claessens et al. (1998) and Allayannis (1996) belong to the …rst group. They respectively use the percentage of exports on sales, and the ratio of net exports to sales as a measure of a …rm's exposure to currency risk. In our framework, however, we encounter three problems with this methodology: …rst, as Allayannis et al. (2000) show, exporting …rms were the ones that hedged the most prior to the Asian crises of 1997. This means that the percentage of exports is not a good measure of exchange rate exposure for Asian countries. The second problem is lack of data. The number of …rms for which data on exports is available is reduced in emerging markets[6]. Finally, it is possible that a …rm that only operates in the domestic market is nonetheless exposed to exchange rate risk, if competitors are foreign …rms that sell to the country where the domestic …rm operates[7]. Therefore, movements in the exchange rate a¤ect the competitiveness of the domestic …rm and therefore its pro…ts. Among the studies that focus on stock price - based exposure, Jorion (1990, 1991), Bodnar and Gentry (1993), and Amihud (1994) regress a company's stock return on exchange rate changes and additional control variables such as a market portfolio return[8].

Jorion (1991) uses a two-factor model, with the value-weighted stock market return as the …rst factor and the orthogonal component of innovations in a trade-weighted exchange rate as the second factor. The orthogonalization eliminates spurious pricing of the exchange rate factor because of a possible correlation between exchange rate and market return.

Finally, Bodnar and Wong (2000) suggest that the inclusion of a market portfolio increases the precision of the residual exposure estimates. However, if the market portfolio has a non-zero exposure, including a market portfolio as a regressor shifts the distribution of the residual exposure estimates with respect to the total exposure counterparts. Therefore residual exposure estimates re‡ect the deviation of the …rm's

[6] In their paper on the Asian crises of 1997, Allayannis et al. (2000) are able to …nd data on exports only for the largest 50 companies in each country.

[7] For example, shipbuilders in China argued for a devaluation of the renminbi in 1998, since Japanese and South Korean shipbuilders became more competitive as a result of the 1997 crises (Financial Times, July 6, 1998).

[8] In the early studies of Dumas (1978), Adler and Dumas (1984) and Hodder (1982), exposure was measured by the regression coe¢cient of the real value of the …rm on the exchange rate. Although these models are easy to implement, they …nd the percentage of …rms with a signi…cant exposure to exchange rate movements to be low.

exposure from the market's portfolio exposure. As most studies use a value-weighted portfolio, dominated by large …rms with a more negative exposure to exchange rate movements, the residual exposure estimates su¤er from a positive shift. The solution the authors suggest is the use of an equal-weight market portfolio to correct for the correlation between …rm size and the sign of the exchange rate exposure.

.1 An alternative approach

We measure the exchange rate exposure by partly following the methodology in Jorion (1991). However, our procedure is exactly the opposite of Jorion's: in explaining individual companies' stock returns, we use as regressors the change in exchange rate and the component of market return that is orthogonal to the change in exchange rate. By using this methodology, we are able to circumvent the critique made by Bodnar and Wong (2000). Hence we are able to estimate which companies have a negative and positive exchange rate exposure in absolute sense, and hence do not have to rely on estimates of currency exposure that are calculated relative to the market as a whole.

First we estimate the following regression for each country in our sample:

$$R^j_{mt} = \circ^j_o + \circ^j_1 R^j_{xt} + o^j_{st} \qquad 8j = 1; :::; 18 \tag{1}$$

where R^j_{mt} is the market return, and R^j_{xt} is the change in the exchange rate in country j. We estimate the $\circ$ coe¢cients using monthly data from month $t = ¡72$ to month $t = ¡37$ relative to the currency depreciation month. Next, we calculate $F^j_{mt} = R^j_{mt} ¡ (\hat{b}^j_o + \hat{b}^j_1 R^j_{xt})$ from the previous regression, and use the estimated orthogonal component of market return in the regression:

$$R_{ijt} = \pm_i + \bar{}^x_i R^j_{xt} + \bar{}^m_i F^j_{mt} + ²_{ijt} \tag{2}$$

where R_{ij} is the stock return of …rm i in country j, R^j_x is the monthly change in the exchange rate in country j, and F^j_m is the estimated orthogonal component for market j. The estimated $\bar{}^x_i$ are, as stated, measures of …rm i's exposure to exchange rate risk. Additionally, to avoid non-synchronous movements in exchange rates and stock returns, we use monthly data.

In Table II we show for each country the average exchange rate beta and the orthogonal market beta, as well as the each individual market exposure coe¢cient to exchange rate movements, following the methodology outlined above. The average exchange rate beta is the size-weighted average of the exchange rate betas calculated for the …rms in a particular country. The market exposure is, for every country, the estimate of $\circ$ in the regression (1).

Ten countries in our sample have a negative exchange rate exposure. All European countries, except Turkey, have a negative value for $°_1$, whereas in all Asian countries, except for the Philippines and Thailand, $°_1$ is positive. In Thailand, for instance, the country exposure is ¡7:042 . Indonesia, in the other extreme, displays a country exposure of 4.607.

[Insert Table II]

We expect exporting …rms to display a negative exchange rate beta, while domestic …rms should have a positive exposure. Seoul Foods, for instance, a South Korean …rm that manufactures bread and snack foods (arguably a non-exporting …rm) has a beta of 2:509. An exporting …rm such as Shin Corporation[9], from Taiwan, has a beta of ¡7:5041. The results for the average market betas are consistent with Bodnar and Wong (2000), since we …nd markets to be exposed to currency movements.

Therefore, and in the absence of data on the structure of the balance sheet for each …rm, we are able to characterize every …rm in the sample into two categories depending on its exposure to exchange rate movements: …rms that bene…t from currency depreciations, and …rms that su¤er from depreciations. It is worth noting, that exporting …rms may have an insigni…cant exchange rate beta if they hedge their currency exposure. However, this is consistent with the argument in this paper: so exporting …rms that hedge their currency exposure shouldn't have an incentive to increase their leverage prior to a currency crisis.

We rank …rms in a particular country by their exchange rate beta. Firms are not comparable in terms of exchange rate exposure across countries. Therefore we rank each …rm with respect to the other companies in the same country by splitting the sample between …rms with negative and positive exchange rate beta.

In the next sections, we analyze the stock price reaction to a currency crisis, and the di¤erent e¤ects of the currency depreciation on …rms depending on whether the …rm has negative or positive exposure to currency movements.

III Stock price e¤ects

A good test of the outlined methodology is to analyze stock price e¤ects around the currency depreciation for …rms with positive and negative exchange rate beta. One expects …rms with negative exchange rate beta

[9] Shiang Shin Corporation, located in Taiwan, is engaged in the manufacturing and exporting of Nitrile Gloves, Latex Surgical Gloves, Latex Examination Gloves, Vinyl Examination Gloves and other Disposable Medical Products. Its main markets are in the U.S.A., Europe, Australia, Japan, Central & South America.

to react positively to the currency crisis, since their revenues increase (either because they are exporting …rms, or because their competitors have an opposite exposure to the exchange rate).

We follow the standard procedure of estimating $\beta_{ijt} = R_{ijt} - \left[\hat{\alpha}_i + \hat{b}_i^m R_{m_jt}\right]$; where $\hat{\alpha}_i$ and $\hat{b}_i^m$ are the estimates in the regression $R_{ijt} = \alpha_i + \bar{}_i^m R_{m_jt} + \varepsilon_{ijt}$. The estimation is performed for a window running from $t = -72$ to $t = -36$ months relative to the depreciation month for each country. Results are reported in Table III, where we display cumulative abnormal returns for different subperiods around the crises. For the overall sample (4,607 …rms), the announcement return (two months around the date of the currency depreciation) is -6.7, signi…cantly different from zero at the one percent level. In Table IA, we report a 1.83 percent negative market return at t = 0. Across regions, the CAR at from $t = -1$ to $t = +1$ is -6.55 percent in European countries, -8.15 percent for the Asian economies, and -5.83 percent for Latin America; with the three coe¢cients signi…cant at the 1 percent level[10]. Harvey and Roper (1999) show that in Asian markets there is a consistent pattern of stock price declines prior to the devaluation. However, they focus on raw returns rather than CARs.

[Insert Table III]

Interestingly, we …nd a distinctive pattern of returns for negative and positive exchange rate beta …rms in the period following the currency depreciation. For the whole sample, negative beta …rms display a positive CAR of 373.24 percent, and a negative 92.73 percent for the group of positive exchange rate beta …rms (only the former signi…cant at the one percent level). The same pattern is found in Europe: negative exchange rate beta …rms bene…t and positive exchange rate beta …rms su¤er from the currency depreciation. Likewise, in Asia negative exchange rate beta …rms are the ones that bene…t the most from the currency depreciation

IV Firm leverage and exchange rate exposure

In this section we empirically test the hypothesis that …rms display increases in leverage prior to currency depreciations. Furthermore, we sort …rms into two groups based on their exchange rate exposure. The rationale for di¤erentiating between companies based on their currency exposure is that …rms that bene…t from a currency depreciation may have an incentive to increase their leverage, because if the risks of high

[10] Additionally, the sample of European …rms include a majority of …rms with negative exposure to exchange rates. Bartov and Wong (2000) show that if the market portfolio has a non-zero exposure to exchange rate movements, the distribution of returns shift with respect to the total market exposure. Therefore, we expect negative CARs for European …rms.

leverage materialize, the …rms expect a currency depreciation as a form of a bailout (see Bris and Koskinen, 2001).

We focus on a sample of countries that have su¤ered currency crises since 1985 and analyze the …nancial policies of …rms in those countries depending on their currency exposure. The testable hypothesis outlined above implies that, prior to a currency depreciation, we should observe an increase in corporate borrowing, and a decline in pro…tability.

We obtain data from Datastream on each …rm's debt-to-value ratio[11]. The debt-to-value ratio is analyzed in the last three years preceding the currency devaluation, as well as two years after the devaluation. We gather data on a …rm's total debt-to-value ratio, as well as on the percentage of short-term debt to total debt.

[Insert Table IV]

[Insert Table IV-B]

The Results are in Tables IV, IV-B and V. In Table IV we analyze changes in leverage prior to the crises; in Table IV-B we show the same results disaggregated at the country level. We …nd that …rms that bene…t from a currency depreciation (those with negative exchange rate beta) increase their debt-to-value ratios 3.42 percent in median (signi…cant at the one percent level) in the three-year period that precedes the devaluation, while …rms that su¤er from a depreciation increase leverage by 3.55 percent (signi…cant at the one percent level). Negative exchange rate beta …rms increase their leverage more than positive exchange rate beta …rms in Europe (3.77 percent versus 1.4 percent) and Latin America (3.54 percent versus and insigni…cant 0.43 percent). The result is reversed for Asia, negative exchange rate beta …rms increase their leverage by 2.69 percent; positive exchange rate beta …rms do so by 4.25 percent. A two-tailed Wilcoxon rank test reject the hypothesis that increments in leverage prior to a currency depreciation di¤er for negative and positive exchange rate beta …rms. However, we see that for Europe and Asia (and for the sample as a whole), the debt-to-value ratio is signi…cantly higher for negative exchange rate beta …rms than for positive exchange rate beta …rms three years prior to the devaluation, and the di¤erence persists in the devaluation month.

In the two years that follow the devaluation, positive exchange rate beta …rms increase their leverage signi…cantly more than negative exchange rate beta …rms (2.15 percent for positive ERB …rms; negative

[11] Throughout the paper, we consider the debt-to-value ratio as the object of study. The results do not change qualitatively when we use the debt-to-equity ratio instead.

ERB …rms do not change their debt levels in the two years that follow the crises). This result is driven by Asian …rms (3.58 percent for positive ERB …rms; 1.58 for negative ERB …rms). Leverage, however, continues to be higher for negative exchange rate beta …rms, especially in Asia.

On country level, we …nd that …rms in Finland, Spain, UK, Mexico and most Asian countries (with the exception of Thailand and Philippines) increase their leverage prior to a currency crisis (signi…cant increases at the 1% level) Finland and Korea have especially high leverage before their currencies were devalued (65.39% and 58.68% debt-to-value ratios, respectively), while in Sweden and Turkey the negative ERB …rm had a considerable higher leverage than positive ERB …rms.

[Insert Table V]

We also analyze the changes in short-term debt ratios. Results are in Table V. For the overall sample, the median short-term debt to total debt ratio does not change signi…cantly around the currency depreciation. The countries in our sample were mostly …nanced with short term debt prior to the crises. We …nd short-term debt ratios of 62.63, 52.83 and 54.8 per cent in Asia, Europe and Latin America respectively.

Our results are consistent with Pomerleano (1998), Harvey and Roper (1999), and Claessens et al. (1998). Pomerleano (1998) documents the rapidly increasing debt ratios in Asia, specially short-term, from 1992 to 1996. However, he does not provide a disaggregated analysis by …rm characteristics. Harvey and Roper (1999) report that the median leverage ratio across the 261 …rms in their sample was 68.6 percent in 1992, and 114 percent in 1996. The leverage increase was mostly short-term again. In Claessens et al. (1998), Asian …rms also display increasing debt ratios, and their data suggest that the ratio of short term debt to total debt in the Asian economies was signi…cantly larger than in the US or Germany (the median short-term debt share increases from 47.26 percent in 1988 to 60.43 percent in 1996; this ratio is 25.9 percent in 1996 in the US, 45.3 percent in Germany).

In general, these results con…rm that …xed exchange rate economies display increasing corporate leverage prior to a currency depreciation, particularly among companies that bene…t from currency depreciations. To what extent the excess leverage induces currency crises will be the objective of Section V. In the next section we analyze alternative measures of performance, pro…tability and investment.

V Other Variables

A Pro…tability

Harvey and Roper (1999), Claessens et al. (1998), and Pomerleano (1998) report a signi…cant decline in pro…tability in Asian economies prior to the 1997 crises (decreasing Return on Assets in Claessens et al., 1998; declining Return on Equity in Harvey and Roper, 1999; and decreasing Return on Equity and Return on Capital Employed in Pomerleano, 1998). We want to examine whether this result extends to other regions and whether it is uniform across …rms with di¤erent characteristics.

[Insert Table VI]

We obtain data on two measures of pro…tability (Earnings Before Interest and Taxes over Total Revenues, and Return on Capital Employed). Results are in Tables VI and VII. We do …nd signi…cant declines in pro…tability under both measures and in the three regions under consideration. For the overall sample, the EBIT to revenues ratio decreases by 13.57 percent. This decline is more severe for negative ERB (-15.08 against -8.18 per cent for positive ERB …rms, signi…cantly di¤erent at the 1 per cent level). The other measure of pro…tability we use, the return on capital employed, leads to the same conclusion: the ROCE decreases by 27.9 percent for the overall sample, 28.6 for negative ERB …rms and 23.69 for positive ERB …rms. Following the devaluation, both measures of pro…tability show that negative ERB …rms perform better than positive ERB …rms in Asia.

[Insert Table VII]

B Financial Fragility

Radelet and Sachs (1998) blame …nancial panic as a cause of the East Asia crises of 1997. They identify the ratio of short-term debt to foreign exchange reserves as an indicator of a country's risk. Having short-term debt in excess of foreign exchange reserves could have triggered a crisis in the same way as in Diamond and Dybvig (1983) the inability of banks to face their short-term payments creates a bank run. Radelet and Sachs (1998) report that this ratio was above one for Indonesia, Thailand and South Korea prior to 1997. However, it was also below one for some other countries a¤ected by the crises, such as Taiwan and the Philippines.

We study …nancial fragility in a similar fashion to Radelet and Sachs (1998), except that we use …rm level data. In our analysis, the current ratio measures the ability of a creditor to pay o¤ its short-term

debts. The current ratio is calculated as current assets to current liabilities, and it reflects the current liquidity of the firm. Pomerleano (1998) argues that this would be a good measure of a firm's financial fragility, although the ratio is not reported in his study.

[Insert Table VIII]

We report in Table VIII the current ratio for 2,907 firms in our sample. For the overall sample, the ratio falls from 1.38 to 1.33 in the three years preceding the corresponding crises (a significant 4.57 percent in median), consistent with the country level results in Radelet and Sachs (1998). The evolution of the current ratio differs across firms. While negative ERB firms decrease their current ratio by 4.8 percent (significant at the 1 percent level), the change for positive ERB firms is insignificantly different from zero.

For the US, the current ratio for the total sample of Compustat firms (5,108 firms with data available) in the years 1995 through 1998 is respectively 3.29, 3.70, 4.04, and 3.34. It compares to an average ratio of 1.33 for our total sample of 2,907 firms at the onset of their respective crisis. So we can conclude that firms in countries that suffered currency crises showed early warnings of distress. It is also significant that after the crises, firms' fragility increases even further (-3.43 percent for the overall sample, significant at the 1 percent level), with positive ERB firms showing the worst performance (a significant 7.91 decline against a 2.12 decline for negative ERB), two years after the currency crises. The increase in financial fragility after the crisis is due to Asian firms, while the firms in Europe show increasing current ratios.

[Insert Table IX]

Table IX complements the previous result. We display the interest coverage ratios for the firms in the sample, and find a clear deterioration of the solvency of the exporting sector prior to the onset of the corresponding crises. For the overall sample, the interest coverage ratio decreases by 35.68 percent in the three years preceding the currency depreciation. Negative exchange rate beta firms experience a decrease of 37.21 percent in their interest coverage ratio, while firms with a positive exchange rate beta decrease their interest coverage ratio by 28.77; both coefficients are significantly different from zero at the 1 percent level. More importantly, we should note the situation of virtual bankruptcy of negative ERB Asian firms prior to the devaluation, with an interest coverage ratio of only 1.00.

It is also interesting to note that for the overall sample, the interest coverage ratio increases (18.44 percent) during the two years following the currency crises. This result holds for both types of firms,

but is larger for negative ERB …rms (21.34 against a 6.44 percent increase). At the regional level, we observe important di¤erences. While for Asian …rms the interest coverage ratio deteriorates in the two years that follow the crises for both types of …rms, in Latin America and Europe the increase in the interest coverage ratio is larger for positive ERB …rms, although the di¤erence is not signi…cant at the ten percent level. Analysis of the interest coverage ratio reveals thus the special characteristics of the Asian crises with respect to the turbulences in Europe and Latin America.

C Investments

We analyze the investment policies in our sample of …rms from three di¤erent regions by obtaining data on changes in total assets. In Table X we summarize changes in net investments measured by changes in total assets for a period of …ve years.

[Insert Table X]

Overall, companies invest 62.41 percent less than they did before the onset of a currency crisis. Negative exchange rate beta …rms have a larger decrease than positive exchange rate beta …rms (67.46% decline compared to 47.89% decline). Firms in Asian and Latin American countries display signi…cant higher investment rates compared to European …rms. Claessens et al. (1998) report, in line with our results, relatively higher investment rates (measured as new dollar investments as a share of existing …xed assets) in Asian …rms than in U.S. and German …rms.

D Summary of the …ndings

Our analysis suggests that …rms in countries that have su¤ered dramatic exchange rate depreciations in the last decade, follow a similar pattern of investment and …nancial policies. We have documented a signi…cant decline in pro…tability in the corporate sector, that it is more accentuated for those …rms with negative exposure to exchange rate movements. Although investment rates are declining, companies still increase the size of their total assets. This results suggests that corporations must rely on external …nancing to engage in new investments. As shown in Tables IV and V debt, either long- or short-term, is the more likely source of …nancing. Whether debt …nancing arises as an optimal instrument because of the underdevelopment of equity markets, or because …rms …nd it optimal to lever up when exchange rates are …xed and devaluations are possible, will be studied in the next sections.

We document an increasing …nancial fragility (measured by the ratio of current assets to current liabilities). Other studies have shown the same pattern (Pomerleano (1998), Harvey and Roper (1999)).

Tables IX additionally shows a signi…cant decline in the coverage ratios in countries su¤ering currency depreciations.

In the next section we analyze …rst whether micro variables (the …rm's exposure to exchange rates being the most important one) a¤ect the extent of a country's currency depreciation. Then we study cross-sectionally the determinants of a …rm decision to rely on debt …nancing when exchange rates are …xed and depreciations are possible.

VI Cross-sectional analysis

A Firm leverage and currency depreciations

The argument made in Bris and Koskinen (2001) is that small, exporting countries where the corporate sector displays declining pro…tability, are more likely to su¤er currency crises when the exchange rate is …xed and the government cannot commit ex-ante not to let the currency depreciate. Firms in these …rms tend to rely heavily on debt …nancing, since through currency depreciation the costs of …nancial distress are passed on to the economy as a whole.

We therefore test directly the previous hypothesis by focusing on the seventeen countries that su¤ered a currency crises included in our sample. The endogenous variable in our regressions is the exchange rate change in the two months that surround the currency crisis. The magnitude of this variable is obviously negative for the countries in our sample, and lower the more severe the crisis was. Johnson et al. (2000) measure the severity of the Asian crises with the nominal exchange rate depreciation from the end of 1996 to January 1999. The countries in our sample have relatively …xed exchange rates over the sample period, so a better measure of the crises is the currency depreciation once the government support of the currency is abandoned. Secondly, using the debt-to-value ratio as an explanatory variable of the currency depreciation over a long horizon creates causality problems, that we avoid by measuring the currency depreciation in a di¤erent subperiod. Finally, the amount of depreciation at t = 0 is not a good measure of the total depreciation; South Korea, for instance, let the currency ‡oat three months after the …rst speculative attacks against the won started (after repeated interventions by the Central Bank of Korea, South Korea abandoned its defense of the battered won on November 17, 1997). Additionally, most currencies depreciated dramatically in the months following the crisis[12]. We show the values of this

[12] The Indonesian central bank widened the rupiah trading band from 12 percent to 8 percent in July 1997. The band was …nally abandoned in August 14, and in the next two months the rupiah lost 25:35 percent with respect to the dollar.

variable in Table I. On average, depreciation amounts to 27.01 percent in a period of …ve months.

The results in the previous sections show that countries that su¤ered currency crises display signi…cant increases in corporate debt-to-value ratios. We intend to analyze whether the corporate sector contributed to the severity of the crisis with high levels of leverage. We di¤erentiate between …rms with negative and positive exchange rate sensitivity by calculating the weighted average debt to equity ratio for …rms in either group. That is, for every country we calculate:

$$\left\langle \frac{D}{E} \right\rangle_{x}^{-} = \frac{\sum_{\beta_x^i < 0} w_i \left(\frac{D}{E} \right)_i}{\sum_{\beta_x < 0} w_i}$$

and similarly:

$$\left\langle \frac{D}{E} \right\rangle_{x}^{+} = \frac{\sum_{\beta_x^i \geq 0} w_i \left(\frac{D}{E} \right)_i}{\sum_{\beta_x \geq 0} w_i}$$

where β_x^i denotes a …rm's exchange rate beta, and w_i is the company's average sales in the three years that precede the corresponding currency crisis. Note that, within a country, the weighted average debt-to-equity ratio can be written as:

$$\left\langle \frac{D}{E} \right\rangle_{x} = \frac{\left(\frac{D}{E} \right)_{x}^{-} \sum_{\beta_x^i < 0} w_i + \left(\frac{D}{E} \right)_{x}^{+} \sum_{\beta_x^i \geq 0} w_i}{\sum_{i} w_i}$$

that is, we decompose the average leverage into two components: one attributable to …rms with negative ERB, and the other corresponding to …rms with positive ERB.

La Porta et al. (1998) argue that laws a¤ecting investor protection have consequences for corporate …nance. We therefore control in our analysis for di¤erences in e¢ciency of the judicial system, rule of law, corruption, and risk of expropriation across countries. Those variables are averages calculated over di¤erent time horizons, so their interpretation must be taken with caution. For instance, the e¢ciency of the judiciary system is calculated by La Porta et al. as the average between 1980 and 1983, while the currency crises we consider date from 1992. In our regressions, we employ the complete time series of data that they use in their paper[13], and calculate the …ve year average prior to the corresponding currency crisis date. Comparing the mean values of the variables in our sample with all the countries considered by La Porta et al. (1998) we do not observe dramatic di¤erences (the mean values for the variables 'E¢ciency of

[13] We are grateful to Florencio López de Silanes for providing us with these unpublished data.

the Judicial System', 'Rule of Law', 'Corruption', and 'Risk of Expropriation' are 7.10, 6.78, 6.59, and 7.96 for our sample, and 7.67, 6.85, 6.9, and 8.05, for a total sample of 49 countries). Johnson et al. (2000) …nd that these four measures of legal institutions predict the changes in exchange rates in emerging markets better than the standard macro measures. They report a negative relationship between these variables and the currency depreciation from 1997 to 1998 (low values for 'Corruption', and 'Risk of Expropriation' mean respectively high levels of corruption and expropriation risk). We control as well for the country's GDP. In terms of GDP, the recent currency crises have a¤ected to relatively small European countries, and large Asian and Latin American Economies.

[Insert Table XI]

We provide di¤erent speci…cations due to the reduced number of degrees freedom. In Panel I we only make use of capital structure and corporate governance variables. The results in Models I and II provide empirical support to our claim that the relevant factor in explaining the severity of a currency crisis is not the average debt to value ratio, but the debt to value ratio for …rms with negative exposure to exchange rate changes. Even when we control for the variables in La Porta et al. (1998), the average debt to value ratio is of the wrong sign (Model III) or is only marginally signi…cant (Model IV), whereas this parameter is signi…cant for negative ERB …rms (at 10% level in Model V and at 1% level in Model VI).

In Panel II, we add two macroeconomic variables to our analysis, budget and current account de…cits relative to the GDP. We observe that the average debt to value ratio lacks explanatory power (Models VIII and X); whereas the coe¢cient for the negative ERB debt to equity value is signi…cant at the 10 percent level in Model XII. The GDP and budget de…cit one year prior to the crises are signi…cantly di¤erent from zero across di¤erent model speci…cations. The results are mixed for the current account variable. We see in Table XI that the coe¢cients of the variables E¢ciency of the Judicial System, and Rule of Law are negative[14], consistent with the results in Johnson et al. (2000). We also …nd that smaller countries depreciated their currencies the most.

B Firm leverage and currency exposure

We complete the cross-sectional analysis by testing whether …rms' currency exposure measured by their exchange-rate betas a¤ects …rms' …nancing policies prior to a currency depreciation. If …nancial distress

[14] A negative coe¢cient for a given variable implies that larger variables of that variable are associated with less severe currency depreciations.

is likely to induce a government to let the currency depreciate as a way of bailing out companies, then we should expect …rms that bene…t the most from a currency depreciation to have a higher leverage than companies that su¤er from depreciation prior to a currency crisis.

We test this extreme by performing a regression analysis at the …rm level where the explanatory variable is the …rm's debt-to-value ratio (book values) as of December prior to the corresponding currency crisis. The set of explanatory variables includes the …rm's exchange rate beta, calculated over a window of t = ¡60 to t = ¡24 months relative to the event month. We also use as explanatory variables the measures of corporate law from La Porta et al. (1998) described in the previous subsection. Rajan and Zingales (1995) argue that highly levered companies are more likely to give up pro…table investment opportunities. Hence, growth opportunities (proxied by the market value of assets divided by the book value of assets) should be negatively related to debt-to-equity ratios. We calculate the average market to book ratio in the three years preceding the currency crises for 4,232 …rms in our sample.

In Rajan and Zingales (1995), size is measured by the logarithm of sales. They obtain a positive coe¢cient in their regressions, although, in their view, a negative relationship between size and debt levels is sensible if size is also a proxy for the information outside investors have. Our measure of size is a three-year average of a …rm's sales in the three years before the relevant currency depreciation. Additionally, and despite disagreeing theoretical predictions regarding the e¤ect of pro…tability on leverage, they …nd a negative relationship between EBITDA (normalized by the book value of assets) and book debt-to-value ratios. Our measure of pro…tability is EBIT normalized by total assets. We further control for the log of the GDP per capita in dollars.

[Insert Table XII]

The results from the regression are reported in Table XII. For the total sample (1.601 …rms with data available), we …nd results consistent with Rajan and Zingales (1995), since pro…tability and size have respectively negative and positive coe¢cients in general. We also …nd, consistent with the results in Tables IV and V, that Asian …rms display, prior to the crises, relatively higher levels of debt than those in European and Latin American …rms.

Finally, and focusing on the coe¢cient for the exchange rate beta, we consistently …nd a negative relationship between a …rm's exposure to exchange rate movements and book leverage.

VII Conclusion

This paper uses company level data from seventeen countries that have su¤ered a currency crisis during the past decade. Companies are sorted into two groups depending on whether they bene…t from or are harmed by currency appreciations. The sorting is done using companies individual stock returns that are regressed on their home currency's movement against the U.S. dollar and on the part of market return that is orthogonal to the currency movement. Using this grouping we are able to show that there are di¤erences in companies' leverage and pro…tability depending on their exchange rate beta. While leverage increases and pro…tability declines for all companies, these e¤ects are more pronounced for negative exchange rate beta companies. Moreover, controlling for …rm characteristics, the …rms that bene…t from currency depreciations also have higher leverage prior to a crisis than …rms that are harmed by currency depreciations. Finally, the amount of currency depreciation is positively related to leverage in companies that bene…t from depreciations.

Whether the corporate sector's choice between foreign and domestic debt a¤ects the probability and the severity of currency crises is still an open question. The measure of leverage that is reported in this paper does not distinguish among di¤erent sources of debt …nancing. Neither does this paper consider the di¤erence between debt issues and stock repurchases; both increase the debt-to-equity ratio. Disaggregated data on debt …nancing for emerging and developing economies such as the ones that we consider are not easily available, so indirect measures are necessary. The analysis, however, would have interesting implications, and deserves further research.

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Country	Devaluation Month (t = 0)	N. Obs.	Firms in Main Exchange	Percent in Sample	Market Return t=0	Currency Depreciation t = 0	Currency Depreciation t=-2 to t=+2	Average Leverage
Total		3,617	7,729	46.80%	-1.83%	-19.31%	-27.01%	51.20%
Brazil	March, 1995	15	570	2.63%	-13.09%	-46.29%	-94.70%	25.15%
Mexico	December, 1994	29	206	14.08%	-4.54%	-35.03%	-42.47%	39.39%
Venezuela	December, 1995	7	159	4.40%	8.37%	-41.52%	3.56%	29.95%
United Kingdom	September, 1992	1,191	2,440	48.81%	-3.38%	-8.41%	-15.85%	29.34%
Spain	May, 1993	88	379	23.22%	4.86%	-8.64%	-10.88%	43.16%
Finland	September, 1992	24	62	38.71%	-15.74%	-14.17%	-13.22%	59.97%
Italy	September, 1993	14	259	5.41%	8.27%	-3.24%	-11.42%	42.49%
Norway	December, 1992	49	123	39.84%	15.72%	-7.88%	-20.31%	50.33%
Sweden	November, 1992	82	205	40.00%	5.11%	-19.84%	-31.35%	28.18%
Turkey	March, 1994	37	176	21.02%	14.65%	-55.05%	-72.13%	50.77%
Indonesia	August, 1997	165	281	58.72%	-8.35%	-17.80%	-34.02%	52.57%
South Korea	November, 1997	713	776	91.88%	-17.25%	-49.84%	-54.64%	75.18%
Malaysia	July, 1997	367	703	52.20%	-6.08%	-9.42%	-16.99%	38.21%
Philippines	July, 1997	153	221	69.23%	-4.68%	-9.09%	-19.72%	28.96%
Singapore	July, 1997	209	334	62.57%	-4.77%	-5.05%	-4.86%	36.23%
Taiwan	October, 1997	320	404	79.21%	-7.65%	-7.97%	-14.23%	34.03%
Thailand	July, 1997	154	431	35.73%	29.46%	-22.16%	-27.31%	55.43%

Table IA. Sample Description.

This table displays the number of firms in the sample, number of firms in the corresponding exchange, market return in the devaluation month, and currency depreciation in the crisis month and around the crisis month; and average leverage. Average leverage is the weighted average (by size) of the debt-to-value ratio for all firms in each country. The sample includes all firms with available information in Datastream for seventeen countries that have suffered a currency crises in the period 1985-2000. Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream. The number of firms in the main exchange is as of December of the corresponding crisis year, and it is obtained from the International Federation of Stock Exchanges' web page, at www.fibv.com/stats/ta11.xls.

Brazil	Fixed against the dollar six months before the crisis.
Spain	The exchange rate is maintained within a margin of ±15 percent around the bilateral central rates against other participating currencies, with the exception of Germany and the Netherlands, in which case the exchange rate is maintained within a margin of ±2.25 percent.
Finland	Unilaterally pegged to Ecu.
Indonesia	Explicit real exchange rate targeting with the nominal rate falling from 1900 rupieh to the US $ in 1990 to 2400 by the beginning of 1997
South Korea	The Korean won followed periods of fixity to the US $ but had a more flexible exchange rate regime. The Won depreciated in nominal terms from 1990 until the beginning of 1993 (from 700 to almost 800 won per dollar). Next, it traded in a very narrow range of 800 to 770 won/$ between the beginning of 1993 and the middle of 1996. Then, it started to depreciate by about 10% reaching a rate of 884 at the end of 1996
Mexico	Fixed peso-dollar exchange rate
Malaysia	A 10% range of 2.7 to 2.5 ringitt to the US$ for most of the years between 1990 and the beginning of 1997
Norway	The krone was first pegged to the Ecu on October 19, 1990, within a margin of ±2.25 per cent from a fixed rate of NKr7.9940 per Ecu.
Philippines	The Peso fluctuated in a 15% range of 28 to 24 between 1990 and the beginning of 1995 but was practically fixed at a 26.2 rate to the US dollar from the spring of 1995 until the beginning of 1997
Sweden	Behaved as an ERM country, although not officially in the system.
Singapore	The currency actually appreciated in nominal terms throughout the 1990s going from a rate of 1.7 in 1990 to a rate of 1.4 by the end of 1996.
Italy	The exchange rate is maintained within a margin of ±15 percent around the bilateral central rates against other participating currencies, with the exception of Germany and the Netherlands, in which case the exchange rate is maintained within a margin of ±2.25 percent.
Taiwan	Real exchange rate targeting allowing its currency to fall from a rate of 24 New Taiwan dollars per US$ in 1990 to a rate of 27.8 by the end of 1996.
Thailand	The Thai Bath was effectively fixed in a narrow 25.2 to 25.6 to the US$ from 1990 until 1997
Turkey	Managed floating exchange rate.
United Kingdom	The exchange rate is maintained within a margin of ±15 percent around the bilateral central rates against other participating currencies, with the exception of Germany and the Netherlands, in which case the exchange rate is maintained within a margin of ±2.25 percent.
Venezuela	The exchange rate is maintained within margins of ±7.5 percent.

Table IB

Exchange Rate Regimes in countries that have suffered Currency Crises

The Table describes the Exchange Rate Regimes of seventeen countries that have suffered currency crises since 1990. The description corresponds to the regime prevailing one month prior to the last currency depreciation considered in Table 1.

Source: Nouriel Roubini, "An Introduction to Open Economy Macroeconomics. Currency Crises and the Asian Crisis", in http://www.stern.nyu.edu/~nroubini/NOTES/macro5.htm#9, and Lexis-Nexis

Country	N	Average Exchange Rate Beta	Average Market Beta	Country Exposure	Negative Exchange Rate Beta		Positive Exchange Rate Beta	
					% Firms	% Significant	% Firms	% Significant
Total	3,617	0.301	0.814		53.71%	4.15%	46.29%	5.02%
Brazil	15	-1.362	-0.991	-1.322	33.33%	20.83%	66.67%	13.16%
Mexico	29	21.040	0.369	-2.221	82.76%	10.00%	17.24%	16.00%
Venezuela	7	0.925	0.523	2.259	0.00%	0.00%	100.00%	42.86%
United Kingdom	1,191	-0.030	0.959	-0.472	84.89%	9.97%	15.11%	6.13%
Spain	88	2.580	0.926	-0.821	64.77%	5.45%	35.23%	10.53%
Finland	24	0.010	1.059	-0.201	66.67%	21.05%	33.33%	15.79%
Italy	14	-0.380	0.896	-0.263	71.43%	9.38%	28.57%	13.82%
Norway	49	-0.350	0.941	-0.621	69.39%	10.00%	30.61%	6.25%
Sweden	82	-0.200	0.852	-1.189	78.05%	10.91%	21.95%	20.75%
Turkey	37	-0.470	1.080	0.897	10.81%	14.29%	89.19%	7.04%
Indonesia	165	1.710	0.911	4.607	28.48%	35.42%	71.52%	6.67%
South Korea	713	0.050	0.738	1.262	79.24%	9.71%	20.76%	2.30%
Malaysia	367	0.890	1.152	0.633	44.96%	0.69%	55.04%	6.25%
Philippines	153	-0.340	0.516	-0.695	37.25%	11.90%	62.75%	7.46%
Singapore	209	-0.820	0.835	0.228	83.25%	10.71%	16.75%	19.47%
Taiwan	320	0.260	0.897	0.853	68.13%	9.09%	31.88%	3.57%
Thailand	154	1.140	0.821	-7.042	9.09%	15.14%	90.91%	9.52%

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table II. Exchange rate beta.

The third and fourth columns of this table display the average exchange rate beta and market beta for countries that have suffered a currency crises in the period 1985-2000. The fifth column displays the country exposure coefficient to exchange rate movements. This coefficient is calculated as follows. For every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. The last four columns show the percentage of positive and negative ERB firms for each country and for the sample as a whole. Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream.

Region	Exchange Rate Beta	N	From t=-36 to t=-13 CAR	p-value	From t=-12 to t=-2 CAR	p-value	From t=-1 to t=+1 CAR	p-value	From t=+2 to t=+36 CAR	p-value
Total		4,607	-15.95% ***	(<0.0001)	31.83% ***	(<0.0001)	-6.70% ***	(<0.0001)	58.96% ***	(<0.0001)
	Negative	3,103	27.08% ***	(<0.0001)	223.53% ***	(<0.0001)	-40.84% ***	(<0.0001)	373.24% ***	(<0.0001)
	Positive	1,501	-36.72% ***	(<0.0001)	-60.70% ***	(<0.0001)	9.78% ***	(<0.0001)	-92.73% ***	(<0.0001)
Europe		2,150	-12.70% ***	(<0.0001)	36.64% ***	(<0.0001)	-6.55% ***	(<0.0001)	64.09% ***	(<0.0001)
	Negative	1,705	35.40% ***	(<0.0001)	243.37% ***	(<0.0001)	-42.88% ***	(<0.0001)	400.64% ***	(<0.0001)
	Positive	445	-36.91% ***	(<0.0001)	-67.39% ***	(<0.0001)	11.74% ***	(<0.0001)	-105.26% ***	(<0.0001)
Asia		2,335	-46.04% ***	(<0.0001)	-12.86% ***	(<0.0001)	-8.15% ***	(<0.0001)	11.74% ***	(0.0030)
	Negative	1,330	-80.89% ***	(<0.0001)	-33.67% ***	(<0.0001)	-14.53% ***	(<0.0001)	18.47% ***	(0.0025)
	Positive	1,005	-35.04% ***	(<0.0001)	-6.30% ***	(0.0008)	-6.14% ***	(<0.0001)	9.61% *	(0.0905)
Latin America		119	-51.97% ***	(<0.0001)	-10.82% ***	(0.0045)	-5.83% ***	(<0.0001)	-74.27% ***	(<0.0001)
	Negative	68	-17.43% **	(0.0153)	-4.96%	(0.2787)	-5.11% ***	(0.0001)	-6.28%	(0.6228)
	Positive	51	-66.08% ***	(<0.0001)	-13.21% **	(0.0292)	-6.12% ***	(0.0016)	-102.02% ***	(<0.0001)

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table III. Stock Market Effect.

This table displays the Cumulative Abnormal Returns from 72 months prior to the currency depreciation up to 36 months after the crisis, for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. Cumulative Abnormal Returns are value weighted, with weights determined by the average market value (in dollars) from t=-72 to t=-36 relative to the crises date. 'Europe' includes firms from Finland, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s .Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream.

Region	Exchange Rate Beta	N	t = - 3	t = - 2	t = - 1	t = 0	t = + 1	t = + 2	From t=-3 to t=0 % Change	From t=-3 to t=0 p-value	From t=0 to t=+2 % Change	From t=0 to t=+2 p-value
Total		3,617	31.51%	33.78%	35.48%	37.11%	40.48%	37.89%	3.45% ***	(<0.0001)	0.94% ***	(<0.0001)
	Negative	2,465	32.43%	35.07%	37.50%	38.27%	41.52%	38.27%	3.42% ***	(<0.0001)	0.00% ***	(<0.0001)
	Positive	1,152	29.08%	30.07%	31.03%	34.64%	37.89%	37.50%	3.55% ***	(<0.0001)	2.15% ***	(<0.0001)
			(0.0004) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(0.0054) ***	(0.3662)	(0.7633)		(<0.0001) ***	
Europe		1,403	27.01%	31.03%	31.51%	31.03%	31.03%	30.07%	3.57% ***	(<0.0001)	0.00%	(0.6077)
	Negative	1,132	27.54%	31.03%	31.97%	31.51%	31.51%	30.07%	3.77% ***	(<0.0001)	0.00%	(0.6394)
	Positive	271	23.08%	27.80%	28.06%	29.82%	29.08%	28.06%	1.40% **	(0.0122)	0.00%	(0.8319)
			(0.3834)	(0.0444) **	(0.0350) **	(0.2587)	(0.2947)	(0.3779)	(0.3118)		(0.8678)	
Asia		2,081	37.89%	37.89%	40.48%	42.53%	48.98%	46.81%	3.32% ***	(<0.0001)	2.28% ***	(<0.0001)
	Negative	1,240	41.52%	41.86%	45.95%	46.81%	53.05%	49.50%	2.69% ***	(<0.0001)	1.58% ***	(<0.0001)
	Positive	841	31.51%	31.51%	33.33%	37.11%	42.53%	43.18%	4.25% ***	(<0.0001)	3.84% ***	(<0.0001)
			(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(0.0002) ***	(0.2827)		(0.0010) ***	
Latin America		133	22.78%	20.00%	21.88%	23.94%	26.20%	28.57%	2.65% *	(0.0567)	4.45% ***	(0.0002)
	Negative	93	24.81%	21.57%	23.08%	27.79%	29.58%	31.97%	3.54% **	(0.0486)	4.46% ***	(0.0007)
	Positive	40	20.64%	17.36%	17.01%	21.26%	20.00%	21.26%	0.43%	(0.6296)	0.42%	(0.1379)
			(0.4026)	(0.1656)	(0.1260)	(0.2180)	(0.3386)	(0.1982)	(0.7748)		(0.5781)	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table IV. Debt to Value Ratio.

This table displays the median Debt to Value Ratio for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. The ratio equals Total Debt to Value (book value of equity plus debt). Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Tests of significance are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Country	Exchange Rate Beta	N	t = - 3	t = - 2	t = - 1	t = 0	t = + 1	t = + 2	From t=-3 to t=0 % Change	From t=-3 to t=0 p-value	From t=0 to t=+2 % Change	From t=0 to t=+2 p-value
Finland		24	51.33%	55.56%	60.94%	65.39%	58.51%	55.95%	13.19% ***	(0.0059)	-0.32%	(0.4038)
	Negative	16	42.71%	54.96%	64.66%	70.84%	58.51%	56.14%	17.51% *	(0.0547)	0.08%	(0.9097)
	Positive	8	57.72%	64.13%	57.25%	57.62%	60.65%	55.14%	6.69%	(0.1250)	-5.02%	(0.5469)
			(0.6052)	(0.7234)	(0.5312)	(0.4870)	(0.4576)	(0.2697)	(0.5181)		61.58%	
Italy		14	40.12%	49.24%	29.60%	16.67%	24.81%	38.59%	6.58% *	(0.0781)	0.18%	(0.8457)
	Negative	10	56.39%	58.59%	48.45%	24.24%	32.64%	34.55%	6.60%	(0.2500)	-7.27%	(0.3750)
	Positive	4	0.99%	8.26%	7.41%	8.26%	24.81%	38.59%	1.40%	(0.2500)	10.86%	(0.2500)
			(0.1116)	(0.1116)	(0.1360)	(0.3036)	(0.6824)	(0.9436)	(0.8597)		6.83% *	
Norway		49	43.98%	36.31%	40.12%	48.72%	53.27%	45.06%	-0.09%	(0.7925)	0.42%	(0.5108)
	Negative	34	43.50%	36.86%	42.59%	47.33%	52.57%	42.19%	0.46%	(0.6567)	-2.48%	(0.9096)
	Positive	15	48.72%	36.31%	37.50%	49.24%	53.27%	47.09%	-0.64%	(1.0000)	2.91%	(0.1937)
			(0.8976)	(0.6625)	(0.3913)	(0.7284)	(0.8367)	(0.9308)	(0.6993)		28.29%	
Spain		88	32.87%	32.89%	34.84%	41.18%	39.02%	39.94%	5.35% **	(0.0357)	-0.14%	(0.9697)
	Negative	57	37.68%	34.21%	38.84%	43.50%	40.83%	40.12%	1.62%	(0.1835)	-1.23%	(0.4956)
	Positive	31	23.95%	27.79%	28.04%	37.09%	36.71%	39.02%	7.47% *	(0.0921)	1.45%	(0.4873)
			(0.3112)	(0.4029)	(0.1714)	(0.5409)	(0.8515)	(0.8923)	(0.4516)		35.29%	
Sweden		82	19.36%	16.67%	16.66%	21.26%	18.03%	22.46%	0.87%	(0.2134)	0.05%	(0.4164)
	Negative	64	22.78%	20.00%	21.88%	24.81%	26.47%	28.57%	-0.41%	(0.3176)	2.91%	(0.2061)
	Positive	18	6.54%	6.54%	9.09%	8.66%	7.82%	5.59%	0.99%	(0.3281)	-0.99% *	(0.0913)
			(0.0304) **	(0.0079) ***	(0.0057) ***	(0.0445) **	(0.0743) *	(0.0172) **	(0.4153)		13.18%	
Turkey		37	21.88%	37.11%	26.33%	20.32%	29.58%	19.36%	8.75%	(0.2121)	0.03%	(0.2980)
	Negative	4	43.18%	66.89%	57.85%	66.14%	49.97%	41.36%	13.47%	(0.5000)	-32.75%	(0.2500)
	Positive	33	17.36%	30.68%	18.37%	17.69%	22.48%	18.03%	8.75%	(0.3484)	0.01%	(0.8756)
			(0.2580)	(0.1747)	(0.0712) *	(0.0246) **	(0.0465) **	(0.2803)	(0.7254)		3.35% **	
United Kingdom		1,191	25.37%	30.07%	31.03%	30.56%	30.07%	28.57%	3.47% ***	(<0.0001)	0.02%	(0.6729)
	Negative	1,011	25.93%	30.56%	31.51%	30.56%	30.56%	29.08%	3.73% ***	(<0.0001)	0.01%	(0.9561)
	Positive	180	21.88%	25.08%	26.20%	28.57%	27.54%	26.74%	0.85%	(0.1379)	0.04%	(0.3290)
			(0.2722)	(0.0177) **	(0.1490)	(0.5321)	(0.3062)	(0.3464)	(0.1513)		45.69%	
Indonesia		165	32.43%	33.11%	42.69%	47.92%	67.00%	77.01%	9.06% ***	(<0.0001)	29.92% ***	(<0.0001)
	Negative	47	28.57%	28.06%	40.09%	45.94%	67.21%	77.12%	13.08% *	(0.0595)	29.18% ***	(<0.0001)
	Positive	118	35.90%	35.48%	43.82%	48.45%	66.22%	76.99%	7.94% ***	(<0.0001)	30.11% ***	(<0.0001)
			(0.1461)	(0.2556)	(0.5428)	(0.9660)	(0.7870)	(0.8270)	(0.4712)		94.30%	
Korea		713	54.75%	55.95%	56.90%	58.68%	63.50%	55.16%	2.97% ***	(<0.0001)	-0.45% *	(0.0610)
	Negative	565	55.85%	56.52%	57.98%	60.32%	64.54%	56.14%	2.93% ***	(<0.0001)	-0.60% *	(0.0531)
	Positive	148	48.98%	52.60%	47.92%	50.25%	57.63%	51.10%	2.97% ***	(0.0045)	-0.12%	(0.6724)
			(0.0017) ***	(0.0093) ***	(0.0002) ***	(0.0010) ***	(0.0013) ***	(0.0033) ***	(0.9555)		70.77%	
Malaysia		367	20.00%	22.48%	23.66%	29.58%	34.21%	37.89%	2.95% ***	(<0.0001)	4.22% ***	(<0.0001)
	Negative	165	16.67%	20.00%	19.33%	28.06%	31.27%	36.31%	2.08% ***	(0.0003)	4.79% ***	(<0.0001)
	Positive	202	24.24%	26.47%	28.06%	31.26%	36.31%	40.12%	5.09% ***	(0.0001)	3.90% ***	(<0.0001)
			(0.1923)	(0.2395)	(0.1314)	(0.2334)	(0.1464)	(0.4019)	(0.7839)		61.97%	
Philippines		153	9.09%	8.26%	12.28%	11.50%	21.26%	21.88%	0.03%	(0.3399)	0.01% ***	(<0.0001)
	Negative	57	8.67%	1.96%	9.08%	1.96%	6.54%	14.53%	0.04%	(0.1973)	0.01% ***	(0.0004)
	Positive	96	11.07%	10.71%	15.97%	20.26%	27.54%	26.20%	0.02% **	(0.0200)	0.02% ***	(0.0061)
			(0.9522)	(0.6306)	(0.3261)	(0.0298) **	(0.0479) **	(0.2148)	(0.0065) ***		17.45%	
Singapore		209	21.26%	20.00%	25.09%	28.57%	33.33%	31.51%	2.75% ***	(0.0000)	0.65% ***	(0.0025)
	Negative	174	21.26%	26.47%	27.54%	29.08%	33.33%	32.66%	3.36% ***	(0.0000)	0.26% **	(0.0307)
	Positive	35	21.26%	11.50%	19.68%	23.66%	30.34%	30.56%	0.00%	(0.7238)	4.12% ***	(0.0079)
			(0.9948)	(0.0141) **	(0.0180) **	(0.1451)	(0.3873)	(0.6645)	(0.1460)		15.37%	
Taiwan		320	37.89%	40.48%	47.09%	49.50%	59.68%	51.34%	5.58% ***	(<0.0001)	4.07% ***	(<0.0001)
	Negative	218	37.50%	40.48%	47.09%	48.85%	57.08%	48.85%	4.98% ***	(<0.0001)	2.69% ***	(0.0002)
	Positive	102	40.29%	40.12%	45.80%	50.50%	62.62%	55.25%	6.51% ***	(0.0000)	5.17% ***	(0.0001)
			(0.8267)	(0.4519)	(0.5643)	(0.9322)	(0.3676)	(0.6166)	(0.4685)		48.14%	
Thailand		154	28.31%	27.54%	26.74%	28.57%	28.06%	29.58%	0.93%	(0.4472)	0.41% **	(0.0356)
	Negative	14	27.01%	23.59%	25.37%	28.57%	24.81%	30.31%	0.57%	(0.3125)	2.66%	(0.3013)
	Positive	140	28.57%	28.06%	27.01%	28.57%	29.08%	29.58%	1.26%	(0.8021)	0.02% *	(0.0734)
			(0.4174)	(0.2851)	(0.8165)	(0.8373)	(0.8943)	(0.2179)	(0.3278)		47.99%	
Brazil		15	18.51%	18.03%	22.48%	20.64%	25.48%	32.43%	0.07%	(1.0000)	10.12%	(0.0005)
	Negative	5	11.50%	8.26%	23.08%	22.62%	21.88%	26.47%	0.78%	(1.0000)	8.43%	(0.1250)
	Positive	10	22.48%	20.56%	20.26%	20.64%	29.08%	33.96%	-1.68%	(1.0000)	10.12% ***	(0.0078)
			(0.3827)	(0.5613)	(0.6098)	(0.8170)	(1.0000)	(0.6682)	(0.8026)		79.89%	
Mexico		29	31.51%	31.97%	36.71%	37.07%	45.06%	43.18%	9.43% **	(0.0210)	8.50% ***	(<0.0001)
	Negative	24	29.78%	31.51%	35.69%	34.64%	43.18%	38.99%	8.87% **	(0.0322)	8.07% ***	(<0.0001)
	Positive	5	42.86%	45.71%	47.64%	50.00%	65.19%	68.05%	11.69%	(1.0000)	17.43% *	(0.0625)
			(0.5040)	(0.3722)	(0.2825)	(0.1400)	(0.1942)	(0.1259)	(0.3848)		3.65% **	
Venezuela	Positive	7	27.76%	31.03%	22.18%	26.17%	29.29%	21.88%	-4.24%	(1.0000)	-3.91%	(0.2969)

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table IV b. Debt to Value Ratio at the country level.

This table displays the median Debt to Value Ratio for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = a_0 + a_1 R_{st} + \eta_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_0 + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_0 + \beta_i^s R_{sjt} + \beta_i^m F_{mjt} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{mj} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Tests of significance are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Region	Exchange Rate Beta	N	t = - 3	t = - 2	t = - 1	t = 0	t = + 1	t = + 2	From t=-3 to t=0 % Change	From t=-3 to t=0 p-value	From t=0 to t=+2 % Change	From t=0 to t=+2 p-value
Total		2,175	59.43%	67.96%	60.73%	58.63%	57.00%	56.70%	0.00%	(0.1141)	0.00%	(0.5679)
	Negative	1,603	58.18%	66.73%	58.56%	56.80%	54.91%	55.26%	0.00% *	(0.0885)	0.00%	(0.8855)
	Positive	572	64.17%	73.30%	67.15%	65.66%	60.76%	60.00%	0.00%	(0.9284)	0.00%	(0.1704)
			(0.0074) ***	(0.0675) *	(<0.0001) ***	(<0.0001) ***	(0.0025) ***	(0.0020) ***	(0.5130)		(0.1992)	
Europe		993	52.76%	62.47%	54.22%	52.83%	48.83%	46.92%	0.00%	(0.3051)	-0.12% ***	(0.0092)
	Negative	829	51.79%	58.81%	53.03%	50.41%	47.88%	45.13%	0.00%	(0.1382)	0.00% *	(0.0947)
	Positive	164	58.26%	73.44%	61.03%	66.65%	56.33%	52.63%	0.50%	(0.3940)	-1.37% ***	(0.0079)
			(0.1003)	(0.1384)	(0.0452) **	(0.0042) ***	(0.0244) **	(0.2311)	(0.1465)		(0.1021)	
Asia		1,113	63.38%	69.58%	64.55%	62.63%	62.61%	63.32%	0.00%	(0.2876)	0.11%	(0.1129)
	Negative	724	62.85%	69.93%	63.02%	61.01%	62.10%	63.27%	0.00%	(0.4667)	0.68% *	(0.0936)
	Positive	389	65.58%	68.42%	69.59%	65.81%	63.53%	63.71%	0.00%	(0.4286)	0.00%	(0.6997)
			(0.3450)	(0.9483)	(0.0201) **	(0.0824) *	(0.5040)	(0.3068)	(0.6986)		(0.4283)	
Latin America		69	60.46%	82.80%	66.48%	54.80%	53.45%	51.18%	0.43%	(0.3674)	0.01%	(0.8595)
	Negative	50	59.76%	72.89%	66.61%	54.87%	54.02%	51.78%	0.53%	(0.4127)	1.00%	(0.2270)
	Positive	19	63.97%	440.40%	59.89%	54.73%	52.47%	49.51%	0.43%	(0.8125)	-10.84% **	(0.0480)
			(0.5906)	(0.0012) ***	(0.9179)	(0.7391)	(0.5538)	(0.6329)	(0.8715)		(0.0322) **	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table V. Percentage of Short-Term Debt on Total Debt.

This table displays the ratio of Short-Term Debt to Total Debt for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream. Tests of significance are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Region	Exchange Rate Beta	N	t = - 3	t = - 2	t = - 1	t = 0	t = + 1	t = + 2	From t=-3 to t=0 % Change	From t=-3 to t=0 p-value	From t=0 to t=+2 % Change	From t=0 to t=+2 p-value
Total		2,018	10.23%	10.09%	9.38%	8.72%	8.20%	8.79%	-13.57% ***	(<0.0001)	0.37% ***	(<0.0001)
	Negative	1,508	9.95%	9.73%	8.91%	8.18%	7.79%	8.31%	-15.08% ***	(<0.0001)	0.01% ***	(<0.0001)
	Positive	510	12.17%	11.60%	11.15%	10.75%	9.49%	10.51%	-8.18% ***	(0.0070)	0.99% ***	(0.0036)
			(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(0.0025) ***		(0.8617)	
Europe		1,022	10.60%	10.29%	9.22%	8.38%	7.98%	8.16%	-20.78% ***	(<0.0001)	-4.52%	(0.4039)
	Negative	853	10.58%	10.23%	9.04%	8.21%	7.86%	8.07%	-21.48% ***	(<0.0001)	-4.93%	(0.4398)
	Positive	169	11.51%	10.66%	9.71%	9.17%	8.64%	8.86%	-11.71% **	(0.0152)	-2.76%	(0.7518)
			(0.6542)	(0.5665)	(0.1528)	(0.0424) ***	(0.0750) *	(0.0300) **	(0.0179) **		(0.9189)	
Asia		908	9.61%	9.86%	9.67%	9.06%	8.54%	10.31%	-8.68% ***	(0.0003)	11.31% ***	(<0.0001)
	Negative	586	8.97%	8.87%	8.83%	8.05%	7.71%	9.24%	-9.74% ***	(0.0012)	16.56% ***	(<0.0001)
	Positive	322	12.34%	12.40%	11.73%	11.56%	10.30%	11.53%	-6.40% *	(0.0941)	6.03% ***	(0.0009)
			(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(0.5924)		(0.1905)	
Latin America		88	10.02%	10.12%	9.28%	8.87%	7.62%	8.38%	-8.71%	(0.4574)	-3.78%	(0.1213)
	Negative	69	9.96%	10.13%	9.33%	8.44%	7.62%	8.02%	-11.79%	(0.2910)	-8.19%	(0.5248)
	Positive	19	12.96%	9.07%	9.22%	9.76%	7.84%	10.08%	-1.41%	(0.8203)	41.59% **	(0.0343)
			(0.1884)	(0.8432)	(0.8765)	(0.5778)	(0.3535)	(0.3277)	(0.4517)		(0.1533)	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table VI. EBIT to Revenues Ratio.

This table displays the median EBIT to Revenues Ratio for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Tests of significance are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Region	Exchange Rate Beta	N	t = - 3	t = - 2	t = - 1	t = 0	t = + 1	t = + 2	From t=-3 to t=0 % Change	From t=-3 to t=0 p-value	From t=0 to t=+2 % Change	From t=0 to t=+2 p-value
Total		3,696	9.80%	9.31%	8.54%	7.58%	6.56%	6.68%	-27.19% ***	(<0.0001)	-19.59% ***	(<0.0001)
	Negative	2,626	10.27%	9.61%	8.68%	7.74%	6.77%	7.15%	-28.06% ***	(<0.0001)	-16.25% ***	(<0.0001)
	Positive	1,070	7.83%	8.54%	8.24%	7.09%	5.92%	5.37%	-23.69% ***	(<0.0001)	-32.38% ***	(<0.0001)
			(<0.0001) ***	(0.0003) ***	(0.2323)	(0.0595) *	(0.1323)	(0.1323) ***	(0.0885) *		(0.0002) ***	
Europe		1,393	19.64%	17.61%	14.33%	12.02%	11.39%	11.90%	-33.26% ***	(<0.0001)	-7.80% ***	(<0.0001)
	Negative	1,131	19.89%	17.77%	14.51%	12.00%	11.25%	11.91%	-34.30% ***	(<0.0001)	-6.74% ***	(<0.0001)
	Positive	262	18.04%	16.64%	13.92%	12.16%	11.91%	11.63%	-32.53% ***	(<0.0001)	-10.72% ***	(0.0042)
			(0.7453)	(0.7472)	(0.3705)	(0.6772)	(0.1228)	(0.1323)	(0.4934)		(0.2736)	
Asia		2,217	5.99%	6.68%	6.53%	6.01%	4.79%	4.00%	-20.38% ***	(<0.0001)	-34.91% ***	(<0.0001)
	Negative	1,437	6.06%	6.62%	6.29%	5.88%	4.66%	4.11%	-20.88% ***	(<0.0001)	-30.18% ***	(<0.0001)
	Positive	780	5.70%	6.89%	6.87%	6.23%	4.94%	3.79%	-19.44% ***	(<0.0001)	-41.42% ***	(<0.0001)
			(0.8772)	(0.0692) *	(0.0053) ***	(0.0344) **	(0.0345) **	(0.1323)	(0.8837)		(0.0364) **	
Latin America		86	17.32%	15.07%	13.63%	10.63%	7.15%	11.08%	-35.48% ***	(0.0002)	-3.60%	(0.9961)
	Negative	58	17.32%	15.07%	12.24%	10.85%	7.59%	11.08%	-35.48% ***	(0.0001)	-8.30%	(0.3831)
	Positive	28	17.24%	19.33%	17.44%	9.72%	4.12%	10.61%	-17.71%	(0.4961)	17.36%	(0.1867)
			(0.7898)	(0.6064)	(0.0488) **	(0.9118)	(0.8443)	(0.1323)	(0.3943)		(0.1114)	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table VII. Return On Capital Employed.

This table displays the median Return on Capital Employed (ROCE) for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream. Tests of significance are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Region	Exchange Rate Beta	N	t = - 3		t = - 2		t = - 1		t = 0		t = + 1		t = + 2	From t=-3 to t=0 % Change		From t=-3 to t=0 p-value	From t=0 to t=+2 % Change		From t=0 to t=+2 p-value
Total		2,907	1.38		1.38		1.35		1.33		1.25		1.27	-4.57%	***	(0.0004)	-3.43%	***	(<0.0001)
	Negative	2,025	1.40		1.38		1.33		1.32		1.26		1.27	-4.80%	***	(0.0005)	-2.12%	***	(0.0020)
	Positive	882	1.32		1.38		1.39		1.36		1.23		1.25	-3.85%		(0.2655)	-7.91%	***	(0.0019)
			(0.0332)	**	(0.6448)		(0.0790)	*	(0.0567)	*	(0.7461)		(0.2969)	(0.8773)			(0.0431)	**	
Europe		1,254	1.39		1.34		1.32		1.33		1.34		1.37	-2.73%		(0.1450)	1.37%	***	(0.0008)
	Negative	1,019	1.39		1.34		1.32		1.34		1.35		1.37	-1.96%		(0.7296)	0.95%	**	(0.0406)
	Positive	235	1.43		1.36		1.33		1.29		1.32		1.41	-7.32%	***	(0.0036)	3.94%	***	(0.0006)
			(0.6215)		(0.7654)		(0.7256)		(0.2417)		(0.5769)		(0.5310)	(0.0077)	***		(0.0213)	**	
Asia		1,538	1.34		1.41		1.37		1.32		1.15		1.12	-6.77%	***	(0.0019)	-13.42%	***	(<0.0001)
	Negative	928	1.38		1.42		1.35		1.29		1.13		1.12	-9.67%	***	(<0.0001)	-10.50%	***	(<0.0001)
	Positive	610	1.28		1.36		1.40		1.42		1.19		1.12	-2.41%		(0.7143)	-17.79%	***	(<0.0001)
			(0.0492)	**	(0.8304)		(0.1459)		(0.0043)	***	(0.0355)	**	(0.8826)	(0.0250)	**		(0.1025)		
Latin America		115	1.58		1.63		1.53		1.54		1.35		1.50	-4.47%		(0.4372)	-6.49%	*	(0.0733)
	Negative	78	1.66		1.65		1.49		1.56		1.35		1.44	-5.56%		(0.2613)	-6.74%	**	(0.0127)
	Positive	37	1.36		1.61		1.72		1.49		1.43		1.69	4.29%		(0.5678)	5.56%		(0.6695)
			(0.0567)	*	(0.9314)		(0.0688)	*	(0.4607)		(0.1031)		(0.0966)	* (0.2901)			(0.0903)	*	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table VIII. Current Ratio.

This table displays the median Current Assets to Current Liabilities Ratio for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream. Tests of significance are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Region	Exchange Rate Beta	N	t = - 3	t = - 2	t = - 1	t = 0	t = + 1	t = + 2	From t=-3 to t=0 % Change	From t=-3 to t=0 p-value	From t=0 to t=+2 % Change	From t=0 to t=+2 p-value
Total		1,663	5.11	3.79	3.07	2.84	2.98	3.79	-35.58% ***	(<0.0001)	18.44% ***	(<0.0001)
	Negative	1,282	5.24	3.69	2.83	2.54	2.86	3.73	-37.21% ***	(<0.0001)	21.34% ***	(<0.0001)
	Positive	381	4.49	3.95	3.96	3.70	3.38	3.90	-28.77% ***	(<0.0001)	6.44% ***	(0.0001)
			(0.9228)	(0.0147) **	(<0.0001) ***	(<0.0001) ***	(0.0011) ***	(0.1587)	(0.0422) **		(0.0010) ***	
Europe		1,117	7.52	5.28	4.26	4.06	4.27	5.33	-45.79% ***	(<0.0001)	33.46% ***	(<0.0001)
	Negative	936	7.58	5.29	4.21	4.05	4.28	5.47	-46.74% ***	(<0.0001)	32.33% ***	(<0.0001)
	Positive	181	6.89	5.02	4.53	4.34	4.05	4.96	-41.60% ***	(0.0038)	37.81% ***	(<0.0001)
			(0.6189)	(0.8635)	(0.2404)	(0.6763)	(0.2555)	(0.3102)	(0.2047)		(0.5246)	
Asia		415	1.21	1.35	1.33	1.27	1.29	1.27	-14.38% ***	(<0.0001)	-9.10%	(0.4628)
	Negative	270	1.15	1.17	1.07	1.00	1.02	1.02	-14.36% ***	(<0.0001)	-4.82%	(0.4779)
	Positive	145	2.16	3.31	3.67	3.35	2.96	2.70	-16.37%	(0.4311)	-16.47% **	(0.0189)
			(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(<0.0001) ***	(0.5722)		(0.0227) **	
Latin America		131	3.02	3.18	2.48	2.22	2.13	2.72	-43.38% ***	(0.0081)	15.08% ***	(0.0033)
	Negative	76	3.23	3.39	2.38	2.00	1.84	2.16	-42.84% ***	(0.0052)	11.82% **	(0.0429)
	Positive	55	2.74	2.87	2.65	3.06	2.62	3.38	-45.95%	(0.4383)	23.88% **	(0.0266)
			(0.6254)	(0.2217)	(0.1312)	(0.0041) ***	(0.0292) **	(0.0007) ***	(0.3364)		(0.6297)	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table IX. Interest Coverage.

This table displays the median EBITDA to Interest Expense for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream. Tests of significance are based on a t Wilcoxon signed rank test.are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Region	Exchange Rate Beta	N	t = - 3		t = - 2		t = - 1		t = 0		t = + 1		t = + 2		From t=-3 to t=0 % Change		p-value	From t=0 to t=+2 % Change		p-value
Total		2,565	15.59%		11.60%		8.61%		9.30%		3.05%		3.84%		-62.41%	***	(<0.0001)	-92.84%	***	(<0.0001)
	Negative	1,937	14.99%		9.75%		6.56%		7.46%		2.52%		3.66%		-67.46%	***	(<0.0001)	-92.07%	***	(<0.0001)
	Positive	628	17.76%		16.05%		13.23%		15.22%		4.16%		4.42%		-47.89%	***	(<0.0001)	-95.46%	***	(<0.0001)
			(0.0003)	***	(<0.0001)	***	(<0.0001)	***	(<0.0001)	***	(0.0012)	***	(0.2249)		(0.0001)	***		(0.8249)		
Europe		1,363	15.99%		3.69%		1.57%		4.50%		6.11%		7.42%	*	-82.86%	***	(<0.0001)	-75.71%	***	(<0.0001)
	Negative	1,102	15.66%		2.20%		0.61%		3.81%		5.75%		6.34%		-84.62%	***	(<0.0001)	-79.98%	***	(<0.0001)
	Positive	261	19.28%		9.13%		6.09%		7.23%		8.46%		10.32%		-72.31%	***	(<0.0001)	-60.51%	***	(<0.0001)
			(0.0061)	***	(<0.0001)	***	(<0.0001)	***	(<0.0001)	***	(0.0011)	***	(<0.0001)	***	(0.1302)			(0.0631)	*	
Asia		1,078	15.10%		16.41%		13.44%		12.99%		0.18%		0.00%		-45.47%	***	(<0.0001)	-100.00%	***	(<0.0001)
	Negative	747	14.46%		15.79%		12.41%		10.60%		-1.26%		0.00%		-51.86%	***	(<0.0001)	-100.00%	***	(<0.0001)
	Positive	331	17.37%		17.95%		14.93%		17.86%		2.02%		0.00%		-30.15%		(0.1188)	-100.00%	***	(<0.0001)
			(0.0531)	*	(0.0242)	**	(0.0004)	***	(<0.0001)	***	(<0.0001)	***	(0.7950)		(0.0138)	**		(0.2757)		
Latin America		124	16.65%		16.26%		3.47%		11.45%		8.33%		9.95%		-54.34%	**	(0.0195)	-80.83%	***	(<0.0001)
	Negative	88	13.37%		13.43%		1.99%		10.19%		8.33%		8.42%		-23.05%		(0.1831)	-73.79%	***	(<0.0001)
	Positive	36	47.90%		30.14%		10.32%		24.37%		7.87%		13.39%		-96.60%	*	(0.0532)	-95.91%	***	(0.0001)
			(0.0010)	***	(0.0013)	***	(0.0112)	**	(0.1407)		(0.4395)		(0.1365)		(0.0692)	*		(0.1749)		

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table X. Changes in Net Investment.

This table displays the median change in net investment for a sample of firms in countries that have suffered a currency crises in the period 1985-2000. 'Europe' includes firms from Finland, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Stock returns, Exchange rates, Market Returns and accounting variables are from Datastream. Tests of significance are based on a t Wilcoxon signed rank test.are based on a Wilcoxon signed rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.rank test. We also include the p-value for a test of equal medians between negative and positive exchange rate beta firms. This test is based on a two-tailed Wilcoxon rank test.

Panel I: Capital Structure and Corporate Governance Variables

	Model I		Model II		Model III		Model IV		Model V		Model VI	
Variable	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value
Intercept	-0.2320 **	(0.0191)	-0.0665 ***	(0.0014)	-0.4672	(0.1057)					4.3429 ***	(0.0013)
Average Debt to Equity Ratio	0.0092	(0.1429)			0.0868 *	(0.0786)	-0.0132 *	(0.0989)				
Debt to Equity Ratio for β_x^-			-0.1939 *	(0.0814)					-2.8769 *	(0.0675)	-6.0641 ***	(0.0016)
Debt to Equity Ratio for β_x^+			-0.9166	(0.1924)					-5.5980	(0.1134)	-1.7423 **	(0.0127)
Corruption Index (Lower Score, High Corruption)					-0.0905 **	(0.0363)					-1.8915 ***	(0.0070)
Efficiency of Judicial System					0.0276 ***	(0.0036)					-0.2060	(0.1457)
GDP					-0.0003 ***	(<0.0001)					0.0031 **	(0.0282)
Rule of Law					0.0613 ***	(0.0078)					0.9184 **	(0.0160)
Legal Mother is Germany							-0.2841 **	(0.0407)	1.4069	(0.1508)		
Legal Mother is Spain and France							-0.2964 **	(0.0175)	0.9175	(0.2258)		
Legal Mother is United Kingdom							-0.0938 **	(0.0106)	1.0146	(0.1168)		
Legal Mother is Scandinavia							-0.1684 **	(0.0130)	-1.9114	(0.1454)		
Number of Observations	17		17		17		17		17		17	
Adjusted R-squared	-0.0660		0.1148		-0.1642		0.4998		0.5077		0.6615	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Panel II: Capital Structure, Corporate Governance Variables, and Macro Variables

	Model VII		Model VIII		Model IX		Model X		Model XI		Model XII	
Variable	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value
Intercept	-0.2582 **	(0.0106)	-0.1544 **	(0.0138)	-0.1459 ***	(0.0091)	-0.3464	(0.1393)	-0.5731 *	(0.0533)		
Average Debt to Equity Ratio			-0.3016	(0.1243)			-0.4097	(0.1681)				
Debt to Equity Ratio for β_x^-					-0.4822	(0.1745)			-0.0939	(0.7132)	-0.3243 *	(0.0957)
Debt to Equity Ratio for β_x^+					-0.2952	(0.2424)			-0.0332 *	(0.0549)	0.3362	(0.2556)
Corruption Index (Lower Score, High Corruption)							-0.0495 **	(0.0431)	0.0151 ***	(0.0047)		
Efficiency of Judicial System							0.0039 ***	(0.0048)	0.0003 ***	(<0.0001)		
GDP	1.4009	(0.5993)	0.0002 ***	(<0.0001)	0.0003 ***	(0.0000)	0.0002 ***	(<0.0001)	0.0390 **	(0.0138)		
Rule of Law							0.0549 ***	(0.0093)				
Legal Mother is Germany											-0.2400 **	(0.0243)
Legal Mother is Spain and France											-0.2961 **	(0.0160)
Legal Mother is United Kingdom											-0.0952 ***	(0.0080)
Legal Mother is Scandinavia											-0.1324 **	(0.0100)
Current Account Deficit One Year Prior to Crisis	0.34078 ***	(<0.0001)	0.7805	(0.2774)	0.7319	(0.2532)	0.0899	(0.6886)	-0.0484	(0.5392)	0.4323	(0.1982)
Budget Deficit One Year Prior to Crisis	0.02166 ***	(<0.0001)	0.0126 ***	(<0.0001)	0.0145 ***	(<0.0001)	0.0127 ***	(<0.0001)	0.0151 ***	(<0.0001)	0.0089 ***	(<0.0001)
Number of Observations	17		17		17		17		17		17	
Adjusted R-squared	0.3851		0.1112		0.6113		-0.1527		0.4816		0.5447	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table XI. Currency Depreciation and Firm Leverage.

This table reports the results of the regression of the amount of depreciation from months t = -2 to t = +2 on the variables listed under the variables column for countries that have suffered a currency crises in the period 1985-2000. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Exchange rates and accounting variables are from Datastream. The variables "Rule of Law", "Corruption", "Risk of Expropriation", and "Efficiency of the Judicial System" are from La Porta et al. (1998). GDP data is obtained from Economist Intelligence Unit database. P-values, T-Statistics and Standard Errors have been corrected for heteroskedasticity following the approach in White (1980).

	Model I		Model II		Model III		Model IV		Model V		Model VI	
							Latin America		Asia		Europe	
Variable	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value
Intercept							0.1646 ***	(0.0028)	0.5092 ***	(0.0000)	0.1706 ***	(<0.0001)
Exchange Rate Beta	-1.46E-07 ***	(0.0001)	-1.34E-07 ***	(0.0008)	-1.12E-07 ***	(<0.001)	-3.95E-08	(0.2321)	-1.90E-02 ***	(0.0001)	-3.16E-02 ***	(0.0022)
Firm Size	0.0232 ***	(<0.0001)	0.0230 ***	(<0.0001)	0.0238 ***	(<0.001)	-0.0542 **	(0.0242)	0.0352 ***	(0.0003)	-0.0021	(0.3751)
EBIT / Total Assets	-2.60E-06 **	(0.0191)	-2.57E-06 **	(0.0212)	-2.48E-06	(0.6520)	3.90E-03	(0.4226)	(<0.0001) ***	(0.0001)	-1.17E-03 *	(0.0606)
Market to Book Ratio	0.0025 ***	(0.0091)	0.0023 **	(0.0134)	0.0022 *	(0.0765)	0.0000	(0.4759)	-0.0030	(0.3132)	0.1601 ***	(<0.0001)
Corruption Index (Lower Score, High Corruption)	-0.2011 ***	(<0.0001)	-0.1734 ***	(0.0056)								
Efficiency of Judicial System	-0.0123	(0.1050)	-0.0100	(0.2243)								
Enforceability of Contracts	0.0829 *	(0.0587)	-0.0411	(0.3758)								
Log GDP per Capita	0.2890 ***	(<0.0001)	0.2573 ***	(<0.0001)								
Risk of Expropriation (Lower Score, High Risk)	-0.7698 ***	(<0.0001)	-0.5784 ***	(0.0004)								
Government Repudiation of Contracts (Lower Score, High Risk)	-0.0255	(0.1426)	0.0251	(0.2811)								
Rule of Law	0.1292 ***	(<0.0001)	0.0749 **	(0.0321)								
Dummy for Asian Countries	0.0378	(0.3313)	0.0511	(0.3626)								
Dummy for European Countries	-0.3145 ***	(0.0009)	-0.2046	(0.1961)								
Dummy for Latin American Countries	-0.6093 ***	(<0.0001)	-0.4920 **	(0.0251)								
Legal Mother is Germany			-0.1817 **	(0.0480)								
Legal Mother is France and Spain			-0.1466	(0.1495)								
Legal Mother is United Kingdom			-0.1023 **	(0.0353)								
Number of Observations	1,601		1,601		1,601		53		856		689	
R-square	0.7805		0.7805		0.9656		0.0518		0.0624		0.3470	

***, ** and *** indicate that the coefficient is significantly different from zero at the 0.1, 0.05 and 0.01 levels or better, respectively.**

Table XII. Firm Leverage and Currency Exposure.

This table reports the results of the regression of a firm's debt-to-value ratio on the variables listed under the variables column for countries that have suffered a currency crises in the period 1985-2000. Europe' includes firms from Finland, Norway, Spain, Sweden, Turkey and the United Kingdom. 'Asia' includes firms from Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. 'Latin America' includes firms from Brazil, Mexico, and Venezuela. Firms are divided into two groups base on their exchange rate beta, which is calculated as follows: for every country in our sample, we estimate the regression $R_{mt} = g_o + g_1 R_{st} + n_{st}$, where R_{mt} is the corresponding market return, and R_{st} is the change in the exchange rate for the same period. We estimate the g coefficients using monthly data from month t = -72 to month t = -37 relative to the currency depreciation month. Next, we estimate $F_{mt} = R_{mt} - (\hat{\gamma}_o + \hat{\gamma}_1 R_{st})$ from the previous regression, and use the estimated residual in the regression $R_{ijt} = \delta_o + \beta_i^s R_{s_j t} + \beta_i^m F_{m_j t} + \varepsilon_{ijt}$, where R_{ij} is the stock return of firm I in the country j, R_{sj} is the monthly change in the exchange rate in the country j, and F_{m_j} is the residual for market j. The measure of firm i's exposure to exchange rate risk is β_i^s. Exchange rates and accounting variables are from Datastream. The variables "Log GDP per capita", "Rule of Law", "Corruption", and "Efficiency of the Judicial System" are from La Porta et al. (1998). P-values have been corrected for heteroskedasticity following the approach in White (1980). All R-squares are adjusted. Model III is estimated with country-fixed effects. The coefficient for the exchange rate beta variable has been multiplied by 10^6.

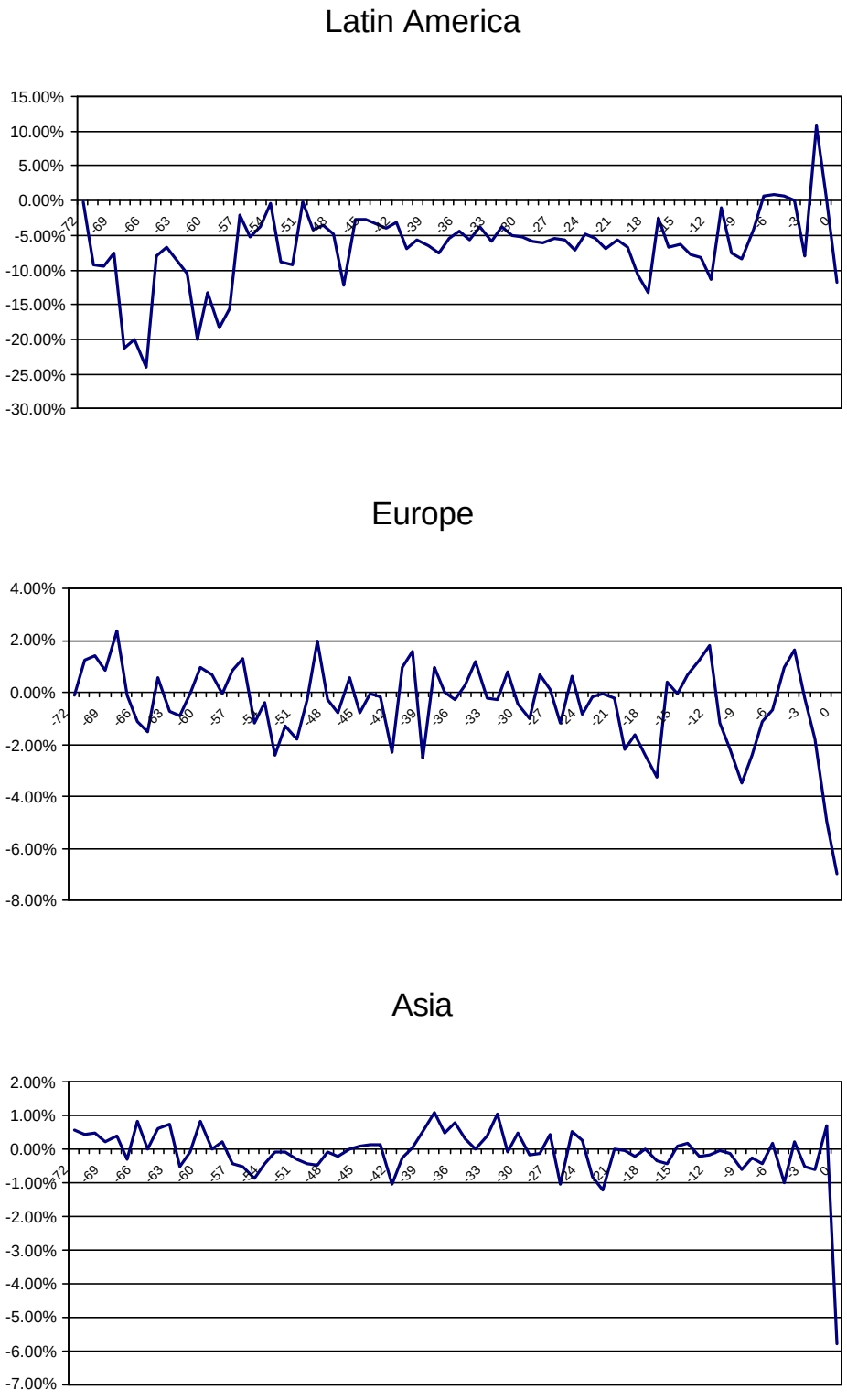

Figure 1
Exchange Rate Changes before Currency Crises
The graph shows the average appreciation / depreciation of the nominal exchange rate US dollar / domestic currency in the 72 months preceding the currency crises in Latin America (Brazil, Mexico, and Venezuela), Europe (Finland, Italy, Norway, Spain, Sweden, Turkey, and the United Kingdom), Asia (Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand), considered in the paper.

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