



University of Connecticut

Department of Economics Working Paper Series

**Determinants and Effects of Maturity Mismatches in Emerging
Markets: Evidence from Bank Level Data**

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Working Paper 2006-29

August 2006

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This working paper is indexed on RePEc, <http://repec.org/>

Abstract

Despite the extensive work on currency mismatches, research on the determinants and effects of maturity mismatches is scarce. In this paper I show that emerging market banks' maturity mismatches are negatively affected by capital inflows and price volatilities. Furthermore, I find that banks with low maturity mismatches are more profitable during crisis periods but less profitable otherwise. The latter result implies that banks face a tradeoff between higher returns and risk, hence channeling short term capital into long term loans is caused by cronyism and implicit guarantees rather than the depth of the financial market. The positive relationship between maturity mismatches and price volatility, on the other hand, shows that the banks of countries with high exchange rate and interest rate volatilities can not, or choose not to hedge themselves. These results follow from a panel regression on a data set I constructed by merging bank level data with aggregate data. This is advantageous over traditional studies which focus only on aggregate data.

Journal of Economic Literature Classification: E44, F32, F34, F41

Keywords: mergentonline, bank level data, maturity mismatches, liquidity, profitability and debt structure ratios, price volatility.

1. **Introduction:**

Currency and maturity mismatches, poor corporate governance and weak law enforcement have been proposed as the leading causes of the severe financial crises in the emerging markets during the past 10 years. While in the aftermath of the crises myriad of empirical and theoretical studies focused on the vulnerability of bank balance sheets with excessive short term foreign currency denominated debt to capital reversals, research on the role and nature of maturity mismatches that do not necessarily stem from large currency devaluations is scarce up to this point.

This paper investigates the determinants and effects of maturity mismatches using bank level data.¹ In this respect we identify and test capital inflows and interest and exchange rate volatilities as possible determinants of maturity mismatches and compare the post crisis performance of banks with high and low maturity mismatches before the crisis as well as during non crisis periods. This analysis provides answers to the following three questions. First, can we observe the heavily cited negative effect of capital inflows and outflows on maturity mismatches when we use bank level data and include non crisis periods as well as crises periods. Second, are maturity mismatches associated with poor profitability performance when we consider the whole sample period, crisis periods and non crisis periods respectively. Finally, if domestic banks are vulnerable to interest rate and exchange rate risks, do they protect themselves by lowering maturity mismatches. Thus can price volatility be another determinant of maturity mismatches?

Studies using macroeconomic variables report the positive correlation between capital flows and maturity mismatches. While some research offers the channeling of cheap short term borrowings into long term credit financing

¹ Since data on foreign assets and liabilities are not available, maturity mismatch variable utilized comprises domestic currency as well as foreign currency denominated debt, hence proxies the overall mismatch in the banking sector.

unproductive investment as the source of maturity mismatches², others have blamed short term finance on insufficient financial development and hence the reluctance of foreign creditors to offer long term funds³. Despite these explanations there is also evidence that countries in financial distress are inclined to issue more short term debt, hence the cause of maturity mismatches could be unrelated directly to financial development and crony capitalism but rather stem from macroeconomic instabilities that countries face.

To gauge the relationship between capital flows and maturity mismatches, we estimate regression equations using different dependent and independent variables and controlling for macroeconomic fundamentals as well as country and time fixed effects. Different from the literature we use bank level data which in turn provides more degrees of freedom, allows us to differentiate between small and big banks and avoid causality problems that originate from the utilization of aggregate data. Our mixed findings are consistent with the literature and provide a partial support for the positive relationship between the two variables. We also find that capital inflows cause greater degree of maturity mismatches for bigger banks.

Given the findings, next we would like to analyze the nature of this positive relationship and find whether if it is due to the fact that the depth of financial markets allow banks to diversify risks more easily and finance long term projects using short term loans or if cronyism and implicit guarantees are the underlying determinants of increasing maturity mismatches during periods marked with high capital inflows. We implicitly investigate the validity of these two arguments by reporting the performances of banks with different maturity mismatches following capital flow reversals. If a country has a deep financial market, these capital reversals should be relatively less important compared to countries with shallow markets and thus banking sector performance following capital reversals should be superior. More specifically regression equations using different proxies for

² This hypothesis is thoroughly analyzed by the moral hazard literature. See Corsetti Pesenti and Roubini (1998).

³ See for example Caballero and Krishnamurty (2003), Demirguc-Kunt and Levine (2001), Fan, Titman and Twite (2004), Buch and Lusinyan (2003).

maturity mismatches as independent variables of interest and different profitability ratios as the dependent variable are estimated. Furthermore, we distinguish financial crisis and non crisis periods to take account of the different dynamics governing the system during these periods.

The three important results are as follows. First, maturity mismatches before financial crises are negatively related to profitability after the crisis or rather performance of banks with low maturity mismatches was superior to banks with high maturity mismatches. Second, in the absence of crisis, banks with high maturity mismatches have outperformed banks with low maturity mismatches. This observation implies that benefits of staying liquid outweigh the benefits associated with using this extra liquidity to increase revenue during crisis periods and that the opposite relationship holds in the absence of crises. Finally we find that banks with high maturity mismatches tend to be smaller than others.

In the last section we test whether if countries with high interest rate and exchange rate volatilities hedge themselves against associated risks by holding more liquid assets and lending more short term or if the high price volatilities constrain the debt structure of these banks to shift towards short term funds. More specifically we estimate regression models using maturity mismatches as dependent variables and interest rate and exchange rate volatility as independent variables of interest. Our findings support the latter of the two explanations above or namely that banks become more illiquid and shift towards short term finance during periods of high price volatility and therefore do not or choose not to protect themselves against volatility associated risks. We also find that compared to capital inflows price volatility is not as significant in determining maturity mismatches.

This paper is organized as follows. Part 2 discusses the data utilized and some preliminary findings that provide motivation for the rest of the paper. Part 3 studies the relationship between capital flows and maturity mismatches. Part 4 gauges the importance of maturity mismatches in economic performance for emerging market banks. Part 5 provides results from regression equations

estimating the relationship between interest rate and exchange rate volatility and maturity mismatches. Part 6 concludes.

Related Literature

An important theoretical framework suitable to analyze the effects of maturity mismatches encountered during our survey of current literature was the Diamond Dybvig (1991) partial equilibrium bank run model where bank runs lead to immature liquidation of long term investments and increase output volatility. Chang and Velasco (1998) apply this framework to show how short term foreign currency denominated debt coupled with capital reversals increase the probability of financial crisis. A different category of models that involve the debt structure of firms is based on the Bernanke Gertler Gilchrist (1998) financial accelerator framework which has been used extensively to study balance sheet effects of currency mismatches when the economy faces external shocks and ensuing large exchange rate depreciation. In this respect Gertler Gilchrist and Natalucci (2001) extend this model to an open economy and show that under fixed exchange rate regimes output volatility increases when the economy experiences external shocks.

Two other partial equilibrium models related to our paper are as follows. Bussiere, Fratzscher and Koeniger (2004) build a model to show how currency mismatches contribute to maturity mismatches which in turn increases output volatility. In their setup excess volatility of the exchange rate stimulates a switch from more costly long term debt to short term debt which in turn increases output volatility. Short term projects are more risky and increase the likelihood of a crisis. Rajan and Bird (2001) propose the optimizing behavior of banks as a determinant of maturity mismatches and show how financial crises can occur in the absence of moral hazard problems.

Some of the related empirical literature on the other hand can be summarized as follows.

Rodrik and Velasco (1999) point out the causal relationship between short term debt and the severity of currency crisis. Similar to part one of this paper they also

search for the determinants of maturity mismatches and find that higher M2/GDP which in turn is a proxy for financial depth and per capita income levels lead to greater maturity mismatches.

Valev (2004) investigates the relationship between economic volatility and the term structure of U.S. bank credit to emerging markets using bank level data. This analysis is similar in essence to part 5 of this paper. Different from Valev's analysis part 5 measures the effect of economic uncertainty on maturity mismatches of domestic banks versus foreign lenders. De la Torre and Schmukler (2004) on the other hand discuss how coping with maturity mismatches by limiting short term contracts can lead to an exchange of one risk for another. More specifically a short term contract can offer savers protection against real interest rate risk but at the same time lead to a default risk by exposing the borrower to interest rate risk and thereby limiting their capacity to meet their obligations.

Relevant to the analysis in part 4 of this paper, Tektas, Gunay and Gunay employ goal programming methodology to determine strategies like liquidity, foreign exchange holdings, credit risk, foreign exchange risk before and after financial crisis. The authors apply their optimal strategies to a risk averse and a risk taker bank in Turkey and show that increasing liquidity and capital adequacy increases rate of return on assets for both of these banks.

Bleakley and Cowen (2004) oppose the view that links the cause of financial crises to short term debt by pointing out that countries in financial distress would be inclined to issue more short term debt and thus have maturity mismatches. Furthermore they find no significant difference between the amount of investment by firms with low and high maturity mismatches during capital reversals in emerging markets. Using micro level data similar to this paper the authors show that their results are robust to different specifications of investment and capital flows. While the authors consider the effects on investment of non financial sector firms this paper in part 2 analyzes the profitability of banks and distinguishes between crisis periods and non crisis periods. Consistent with our

findings the authors point to the negative profitability effects of capital reversals on firms that have high maturity mismatches despite the absence of any effect on the level of investment. The paper uses liquidity measures⁴ such as quick ratio and current ratio as well as ratio of short term debt to total debt to approximate the degree of maturity mismatches since companies that are illiquid would be incapable of paying their maturing short term debt and hence increase the amount of short term debt to total debt by rolling over their debt. Hence throughout our paper, maturity mismatches refers to both liquidity variables as well as debt structure variables which will be defined below.

2. Data and Descriptive Statistics:

Contrary to the majority of the studies using aggregate data, bank level data is employed to identify the determinants and the effects of maturity mismatches. This methodology provides greater degrees of freedom and enables us to take account of smaller banks' behavior which would not be possible with aggregate data. Another appealing feature of using bank level data is to mitigate any causality concerns. More specifically our methodology implicitly assumes that macroeconomic variables are unlikely to be affected by individual bank balance sheet variables.

For these purposes IFS (International Financial Statistics) and mergentonline datasets are merged. The panel data set consists of 18 emerging market countries and 214 depository institutions that are listed in the stock exchanges of these countries. Annual data from 1990 to 2004 are employed in the analysis. The contents of these datasets are provided in appendix A. The IFS dataset provides macroeconomic and financial sector variables which are utilized as controls and sources of volatility. Balance sheet data along with profitability, debt management and asset management ratios are extracted from the mergentonline dataset. The latter is used to measure maturity mismatches and the performance of the individual banks.

⁴ Bleakley and Cowan (2004) use the difference between short term liabilities and current assets as a proxy for maturity mismatches.

While outliers in the bank ratio variables are eliminated by omitting variables that deviate 10 times the standard deviation from the mean, outliers in the other balance sheet variables are not omitted to include the largest and the smallest banks in the sample. The size of the bank is accounted for by using a weighting scheme that will explained in the following sections.

A preliminary synopsis of emerging bank debt structure is reported in table A. Country debt ratios in this table are weighted averages of individual bank ratios⁵. There are several important observations regarding these figures. First is that emerging market country banks have a high degree of short term debt to total debt ratios and these ratios are in general higher than figures reported for the corporate sector of these countries⁶. Another observation is that the increasing proportion of short term debt before a crisis decreases afterwards which supports the view that relatively unstable capital flows are mostly in the form of short term debt. Finally Korean and Malaysian banks have acquired relatively more long term debt in the last three years partially reflecting the tightening in bank regulation and the process of deleveraging in these countries.⁷

Table A

Weighted Short Term Debt / Total Debt												
	90-94	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	IMF ^(*)
Argentina	30.2	26.8	25.3	26.3	28.0	28.0	30.3	24.9	38.8	57.6	32.3	43.1
Brazil	74.9	94.0	90.1	66.7	84.3	91.4	83.6	82.2	74.0	82.0	91.1	23.5
Colombia	48.3	47.6	47.1	43.9	51.6	49.4	27.0	25.1	28.3	21.9	-	31.3
Egypt	-	-	-	-	-	17.3	23.5	-	20.7	-	-	-
Korea	8.6	1.3	0.8	4.7	28.6	23.8	27.7	33.0	23.4	12.4	14.5	46.0
Malaysia	63.6	84.6	75.8	76.5	74.6	74.3	79.9	73.3	66.5	69.3	64.4	35.8
Mexico	-	-	-	57.6	56.8	58.1	52.8	47.2	63.0	67.2	67.7	27.4
Panama	34.8	5.8	2.2	2.6	0.2	0.4	0.7	0.9	44.6	46.8	-	-
Peru	31.9	22.0	16.7	17.6	16.7	17.6	26.2	18.7	29.2	36.6	29.7	-
Poland	31.9	46.6	49.1	48.3	36.2	43.2	27.2	-	51.4	-	-	37.7
S. Africa	0.2	1.5	-	-	-	-	-	1.3	1.2	23.3	21.3	-
Turkey	39.1	49.3	75.1	62.8	32.5	-	-	-	-	-	-	55.3
Venezuela	-	-	57.1	62.2	47.0	67.6	62.6	67.9	74.2	60.7	63.7	-
Average	32.3	37.9	43.9	44.5	41.5	41.0	40.1	38.1	42.9	47.8	50.0	35.7

(*) Global Financial Stability Report, April 2005; corporate sector 1993 – 2003 average.

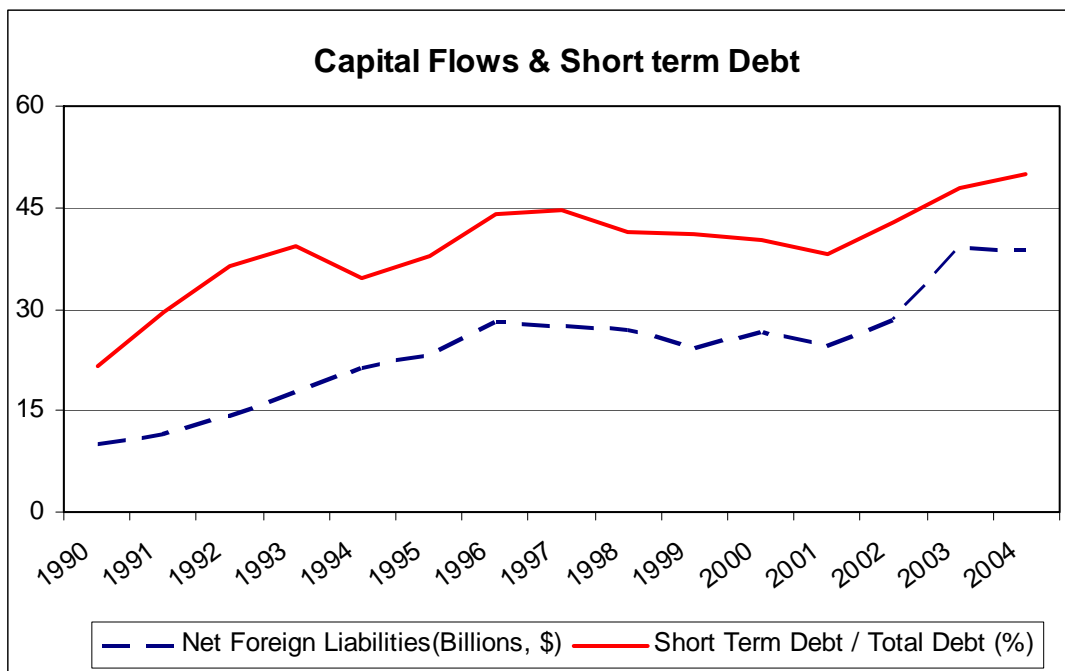
⁵ Weights are the total assets of the banks.

⁶ Except for Argentina and Korea weighted ratios are higher than the figures under the IMF column.

⁷ Leverage is equal to total debt over total assets

The positive relationship between capital inflows and short term debt ratios becomes more evident when we graph the two variables on the graph below. While short term debt / total debt variable is the last row in Table A which in turn reports GDP⁸ weighted average of debt ratios, capital inflows are approximated by GDP weighted depository institution net foreign liabilities.

As mentioned above prior to the Asian crisis increasing capital inflows were channeled into short term debt and following the crisis together with the developments in Brazil, Turkey and Argentina debt maturity structure of the emerging markets has shifted towards long term. The surge in emerging market capital inflows in the form of short term debt for the last two years on the other hand partially reflects the low yields in industrialized economies during this period.



Provided that the proportion of short term assets are constant, evidence above suggests that there may be a positive relationship between capital inflows and maturity mismatches.

⁸ In \$'s

Assuming that this relationship holds we would like to investigate whether maturity mismatches cause banking crises or magnify their effects. Although this relationship is either supported or assumed by numerous studies using macro data or theoretical models, bank level analysis is scarce up to this point.

Table B provides an introductory analysis of the effects of maturity mismatches. The maturity mismatch variable of concern is Short Term Debt / Current Assets and the effects of these mismatches are measured by reporting the average rate of return on equity and assets of the corresponding group of banks. Banks in each country are categorized into groups depending on their level of maturity mismatches.⁹

The main points that can be drawn from these summary statistics are the following.

For a majority of the countries banks with low maturity mismatches have performed better in terms of profitability 1 year after the crisis compared to banks with high maturity mismatches. Despite this observation, linkage between the two variables is not significant between countries. For example while banks with high maturity mismatches in Brazil outperform banks with low maturity mismatches in Malaysia, they are dominated by Brazil's own low maturity mismatch banks in terms of profitability performance.

Another observation is that the difference between the two groups' performance measures seems to narrow beyond the first year after the crisis. This observation signals the higher profitability of banks that channel their relatively higher short term debts into long term assets in the absence of crisis.

Finally the last column of the table shows us that for every country banks with lower maturity mismatches are on average bigger in terms of assets compared to the other group.

⁹ Banks with ratios greater than the median ratio are classified as high maturity mismatch (MM) group and as low MM otherwise.

Table B

		Performance After Crisis									
		MM Before Crisis	1 year after crisis		2 year after crisis		3 year after crisis		1-3 year average		% of Assets
			ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	
Argentina	Low MM	<0.93	3.58	0.85	9.63	1.02	10.75	0.67	7.99	0.85	14.16
	High MM	>0.93	8.81	1.55	14.48	0.50	12.15	1.50	11.81	1.18	4.24
Turkey	Low MM	<0.14	4.90	3.35	23.35	2.59	-	-	-	-	32.52
	High MM	>0.14	3.21	2.99	28.61	4.08	-	-	-	-	24.64
Brazil	Low MM	<0.43	20.47	2.42	15.85	1.46	14.14	0.52	16.82	1.47	12.76
	High MM	>0.43	4.91	0.86	6.92	1.01	12.55	1.61	8.13	1.16	6.28
Korea	Low MM	<0.37	10.86	0.55	16.50	0.35	6.53	0.45	11.29	0.45	17.31
	High MM	>0.37	-4.01	-0.33	4.05	0.24	3.86	0.24	1.30	0.05	7.69
Malaysia	Low MM	<0.21	1.15	0.10	1.76	0.17	8.72	0.88	3.88	0.38	10.45
	High MM	>0.21	0.49	0.03	2.60	0.20	10.55	0.84	4.55	0.36	6.21
Mexico	Low MM	<0.16	3.82	3.68	6.84	3.28	0.70	0.79	3.79	2.58	18.91
	High MM	>0.16	0.69	1.27	5.56	2.32	7.22	5.85	4.49	3.15	14.42

(*) The dates for the crisis are obtained from Kaminsky (2003) and balance sheet variables before crisis period are those reported on December 31st of the year before the crisis. The remaining countries in the sample are omitted due to small number of banks in the groups.

If we assume that the two conclusions mentioned above hold the next question that we ask in this paper is, to what degree do banks protect themselves against interest rate and exchange rate risks. More specifically do the banks of countries with high interest and exchange rate volatilities choose to hold more liquid assets and have lower maturity mismatches.

Table C below reports these volatilities along with weighted and non weighted quick ratios of the banks. The figures support the hypothesis mentioned above

and show that in the majority of the cases banks of countries with high interest rate and exchange rate volatility choose to remain more liquid.

Table C^(*)

	90-93	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Argentina												
i-r vol.	30.41	6.22	13.32	4.69	4.91	8.22	9.06	10.00	35.15	45.71	15.49	7.32
e-r vol.	5.93	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	12.73	2.73	1.28
weig. QR	0.97	1.09	1.06	1.00	0.97	0.97	0.88	0.82	0.96	1.39	1.47	1.47
Nonw.QR	1.16	1.12	1.12	1.00	0.95	0.96	0.87	0.79	1.00	1.09	1.15	1.23
Brazil												
i-r vol.	34.41	28.83	12.10	5.75	12.37	13.75	10.01	2.17	5.00	4.12	4.75	3.01
e-r vol.	24.57	22.94	1.48	0.58	0.59	0.66	7.23	1.75	4.11	5.47	3.51	2.30
weig. QR	0.18	0.39	0.44	0.49	0.49	0.48	0.43	0.37	0.41	0.46	0.53	0.44
nonw QR	0.36	0.40	0.49	0.48	0.55	0.53	0.52	0.53	0.55	0.51	0.54	0.40
Korea												
i-r vol.	1.30		1.88	3.74	2.75	7.85	2.33	1.52	3.24	0.64	2.41	1.45
e-r vol.	0.47	0.28	0.64	0.88	5.58	5.08	1.80	1.08	1.66	1.71	1.31	1.38
weig. QR	0.38	0.37	0.36	0.20	0.22	0.49	1.00	0.68	0.58	0.53	0.32	0.32
nonw QR	0.35	0.36	0.45	0.33	0.34	0.48	1.05	0.64	0.57	0.54	0.33	0.33
Malaysia												
i-r vol.	1.95	5.08	2.06	0.83	2.43	5.07	4.23	0.79	0.65	0.03	0.52	0.00
e-r vol.	0.59	1.31	0.85	0.41	3.79	4.57	0.00	0.00	0.00	0.00	0.00	0.00
weig. QR	0.32	0.20	0.22	0.20	0.21	0.14	0.17	0.18	0.16	0.18	0.19	0.24
nonw.QR	0.72	0.77	0.23	0.21	0.23	0.18	0.21	0.19	3.89	3.45	2.08	0.28
Mexico												
i-r vol.	4.92	10.52	20.70	8.75	5.42	6.26	5.26	4.48	8.62	4.53	5.64	4.07
e-r vol.	0.53	2.35	8.47	1.22	1.24	2.34	1.48	1.38	1.39	1.07	2.09	1.20
weig. QR	0.07	0.14	0.14	0.14	0.13	0.16	0.22	0.28	0.41	0.37	0.42	-
nonw.QR	0.30	3.91	6.28	21.03	0.21	0.40	0.49	0.49	0.54	0.42	0.49	-
Turkey												
i-r vol.	1.38	14.42	4.79	0.90	1.12	2.68	3.66	20.59	15.50	3.43	4.72	3.00
e-r vol.	3.85	10.77	3.58	5.22	5.54	3.66	4.62	2.32	9.77	3.25	3.10	3.00
weig. QR	0.27	0.24	0.27	0.24	0.25	0.28	0.32	0.40	0.34	0.37	0.48	-
nonw.QR	0.36	0.27	0.27	0.23	0.25	0.34	0.37	0.42	0.38	0.45	0.48	-

(*) Interest rate and exchange rate volatilities are annual averages of monthly percentage changes.

Weights are total assets and QR corresponds to quick ratio which is defined in appendix B.

3. Capital Flows and Maturity Mismatches:

Motivated by the limited evidence for the positive relationship between proportion of short term debt and capital inflows this section investigates whether depository institution balance sheets exhibit greater maturity mismatches when capital inflows increase.

$$\begin{aligned} \text{Maturity Mismatches} = & \beta_0 + \beta_1 \text{Capital Inflows} \\ & + \text{time and country fixed effects} + \text{other controls} \end{aligned} \quad (1)$$

A variety of fixed effects panel data GLS regressions as shown above are run using different dependent and independent variables which proxy maturity mismatches and capital inflows respectively. Definitions for the independent and dependent variables which represent capital flows and maturity mismatches respectively are provided in appendix B.

Feasible GLS procedure involves first the estimation of the variance covariance matrix of the residuals from a simple OLS regression and then using this matrix to weigh the observations and obtain coefficient estimates.¹⁰

There are two problems with the data that can render a panel study implausible. Most of the data is reported in local currency units and there are significant discrepancies in the inflation rates of these countries. To deal with these problems, independent variables are divided by GDP or converted to real dollar values using CPI and GDP deflator. While the former method emphasizes financially open economies the latter methods give more weight to the banks of relatively large countries.

The summary of the results corresponding to GDP ratios is displayed in table 1. Each variable along with its standard error corresponds to the coefficient of the independent variable in the first column obtained from a regression of the dependent variable listed in row 1 on this variable and other control variables.

The results show a mixed support for a positive relationship between maturity mismatches and capital inflows. The majority of the signs of significant coefficients corresponding to columns 2 through 5 which represent the strength of the banks in meeting their short term obligations are negative. Thus capital inflows lead to a disproportionate increase in current liabilities compared to

¹⁰ Missing observations are assigned 5 times the maximum value observed among the elements of the matrix in order to neglect them.

current assets when we control for country and time fixed effects along with other macroeconomic variables.

Similarly positive significant coefficients reported under columns 6 and 7 and the negative significant coefficients in column 8 shows us that banks' debt maturity structure switches from long term to short term as capital flows into the country .

While the most significant coefficients were recorded in regressions including the quick and the current ratio, BOP financial account, BOP net debt liabilities and deposit bank net foreign liabilities yielded significant coefficients robust to different specifications of maturity mismatches. The relatively greater importance of BOP net debt liabilities in affecting maturity mismatches compared to equity liabilities reflects the independence of bank balance sheets from private sector equity borrowing and possibility of the exposure of domestic banks to this extra amount of debt.

Tables 1.1 to 1.7 show the details of the GDP ratio regression results summarized above. The positive and negative relationship between lending rates and inflation with maturity mismatches show that as real interest rates increase for example, the drop in current assets due to increasing costs together with the choice of more short term borrowing with the rising rates causes greater maturity mismatches. While GDP growth and current account surpluses are negatively related to maturity mismatches which points to the ability and the choice of banks to switch from short term obligations to long term obligations as macroeconomic conditions improve. Conflicting with the above argument we find that budget deficits in a majority of the cases affect maturity mismatches positively. This observation is plausible if we consider the fact that banks' current assets increase as some of the short term debt instruments issued by the government are held by these banks. Finally, consistent with the findings of Rodrik and Velasco M2/GDP ratio increases the degree of maturity mismatches pointing to the lower costs associated with carrying mismatches in financially developed markets.

Regression results using capital inflows deflated by GDP deflator and CPI are represented in tables 1.8 and 1.9 respectively. The signs and significance of the control variables are similar to the GDP ratio regressions therefore are not included. Except for a few number of regression the significance and signs of the capital inflow variable coefficients are robust to the two different methods of deflating.

When we compare with the GDP ratio regressions, we observe the following. While net portfolio liabilities are more important determinants of maturity mismatches, deposit bank net foreign liabilities, total of central bank, government and deposit bank net foreign currency liabilities regressions yield less significant coefficients. The breakdown of significant coefficients with respect to the different dependent variables on the other hand is similar to table 1.

Overall the proportions of regressions yielding significant coefficients out of the total number of regressions are similar and equal 25/49, 23/49 and 26/49 for GDP ratio, GDP deflator and CPI regressions respectively.

Next, we run regressions based on country weighted average maturity mismatches. More specifically each firm's maturity mismatch ratio variable is multiplied by its total assets and divided by the total assets of the banking in a specific year. This method is employed to give more weight to the maturity mismatches of large banks which have a greater access to foreign funds and hence are more prone to be affected by these flows.

Experiments conducted up to now on the other hand give equal weight to every bank listed in the country's stock exchange. The regressions equations estimated can be represented as follows,

$$weighted\ maturity\ mismatch_j = \sum_{i=1}^{N_k} maturity\ mismatch\ proxy_{ij} * \frac{total\ assets_{ij}}{total\ assets_{kj}} \quad (2)$$

for $j = 1990\text{ to }2004$ and for $k = 1\text{ to }18$

, where k is the country index, N_k is the number of banks in the country and maturity mismatch proxies are the seven dependent variables discussed above.

Tables 1.10 and 1.11 display the results from the regressions with GDP ratios and CPI deflated variables and point to two important observations. First, all of the coefficients have the expected signs thereby signaling a positive capital inflow maturity mismatch association. Second, in both of the tables the proportion of regressions yielding significant coefficients has increased drastically such that out of 49 coefficients, 35 and 38 are significant for GDP ratio and CPI regressions respectively. The later observation supports the hypothesis above and shows us that bigger banks' maturity mismatches increase to a greater extent when there is an increase in capital inflows compared to smaller banks.

Control variable coefficients and regression results corresponding to variables deflated by the GDP deflator are not reported because of their similarity to previous regression results and CPI deflated variables results respectively.

There are two important explanations offered regarding this partial evidence supporting the positive relationship between maturity mismatches and capital inflows. One is that with relatively deeper financial markets depository institutions which are able to diversify risk can afford to and choose to finance long term projects using cheaper short term funds hence choose to have greater maturity mismatches. Second cronyism and implicit guarantees could be the reasons for using capital inflows to fund inefficient long term projects without hedging these long term asset positions by acquiring more long term debt.

The next section implicitly investigates the validity of these two arguments by reporting the performances of banks with different maturity mismatches following capital flow reversals. If a country has a deep financial market, these capital reversals should be relatively less important compared to countries with shallow markets and thus banking sector performance following capital reversals should be superior.

4. Maturity Mismatches and Profitability Performance:

In this section the relative profitability of banks with high and low maturity mismatches is compared. When conducting this experiment one has to take account of the different consequences of maturity mismatches during and in the absence of financial crises.

$$\text{Profitability}_{it} = \beta_0 + \beta_1 \text{Maturity Mismatches}_{it} + \text{time and country fixed effects} + \text{other controls}_{it} \quad (3)$$

In this respect GLS panel data regressions as shown above are performed initially for the whole sample period to determine the overall effect of maturity mismatches on profitability. Following this analysis, the relationship between maturity mismatches before a financial crisis and profitability afterwards is measured by omitting time periods of countries that are not included in the Kaminsky (2003) classification of crises list. Finally to check whether if there is an incentive for banks to lend long term using short term funds or similarly if large banks that can afford to have maturity mismatches are more profitable in the absence of large economic disturbances, the same experiment is conducted by excluding periods corresponding to crises.

A total of 49 regressions are run that correspond to the 7 different profitability and maturity mismatch variables for each sample period discussed above. Proxies for profitability along with the definitions are provided in appendix B. The variables that proxy maturity mismatches are the same as in part 3.

Table 2.1 reports regressions results corresponding to quick ratio as the independent variable of interest using the whole sample period. Initial observation is that all of the independent variables have positive coefficients and 4 out of 7 of them are significant at 5%.

The insignificance of Rate of Return on Investment (ROI) and Operating Margin (OM) can be due to the insufficient amount of observations of these two variables.

Positive coefficients provide a partial support for the hypothesis that the more liquid banks are the higher are their profits, for the whole sample period.

When we examine the control variable coefficients we observe that deposit bank net foreign liabilities are negatively related in a majority of the cases indicating the adverse effect of exposure to currency risk on profitability. M2/GDP ratio coefficient, which is a measure of financial depth, is positive in majority of the cases pointing to greater profitability in more developed financial markets.

Coefficients of macroeconomic fundamental variables on the other hand indicate a positive relationship between favorable macroeconomic conditions and bank performance. In this respect while banks make less profit when there is more inflation, budget deficit and current account deficit; GDP growth in most cases increases profitability.

Tables 2.2 to 2.6 report the coefficients and the corresponding standard errors of the maturity mismatch variables for the 49 regression equations that are estimated for the overall sample, crisis periods and non crisis periods respectively.

Summary of the results are provided in the table below. While the second column shows the proportion of regressions with a significant maturity mismatch coefficient, the third column reports the proportion of significant coefficients which imply a negative causal relationship between maturity mismatches and profitability.

	# of Significant Coefficients	# of Negative Relationships
Overall, Non Weighted	35/49	29/35
Overall, Weighted	23/49	21/23
Crisis, 1 year before	12/21	12/12
Crisis, 2 year before	8/21	8/8
Crisis, 3 year before	12/21	3/12
Non Crisis, Non Weighted	33/49	13/33

Non Crisis, Weighted	26/49	24/26
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There are two conflicting effects of maturity mismatches on profitability. The first effect is that banks which choose to lend more short term and seek long term finance would profit less due to insufficient amount of finance and low quality of loans to the private sector. On the other hand these banks with low maturity mismatches would be more capable of avoiding liquidity problems and hence credit and currency risks. Furthermore given the evidence in part 2 we know that smaller banks have higher maturity mismatches and would be characterized with higher profits in the absence of crises and lower profits during and immediately after the crises.

Table 2.2 and 2.3 reconciles these effects by using non weighted and weighted variables respectively with weights being total assets of the individual banks similar to part 3. The latter scheme gives more weight to larger banks and is used to measure the relationship between total maturity mismatches and total profitability in the country whereas choosing not to use weights provides estimates of the effect of average maturity mismatches on average profitability of the banking sector.

The most important observation is that in majority of the cases for both of the methods there is a negative relationship between maturity mismatches and profitability¹¹ which is due to the higher profitability of low maturity mismatch banks during and after financial crises¹² and the fact that this effect dominates the higher profitability of high maturity mismatch banks in the absence of crises. More specifically out of 35 and 23 significant coefficients in non weighted and weighted regressions 29 and 21 have the signs consistent with a negative relationship respectively.

¹¹ The signs of rows 1,2,3,4,7 and 5,6 are expected to be positive and negative respectively if profitability is affected negatively by maturity mismatches.

¹² There are 16 crisis periods in our sample: Argentina (02), Brazil (91,99), Colombia(95,97,98,99), Korea(97), Malaysia (97,98), Mexico(94), Philippines(97), Turkey(94,01), Venezuela(94,95).

While smaller number of significant coefficients in weighted regressions can be attributed to the loss in degrees of freedom after aggregating the data by taking weighted averages, the higher proportion of negative relationships under this scheme is due to the averaging out of smaller banks which are more profitable and have higher maturity mismatches.

Table 2.4 on the other hand tabulates the coefficients from the following set of regressions,

$$\begin{aligned} Profitability_{it} = & \beta_0 + \beta_1 Maturity Mismatches_{it-k} \\ & + time\ and\ country\ fixed\ effects + other\ controls_{it} + \varepsilon_{it} \end{aligned} \quad (4)$$

for $i = 1\ to\ 214$, $t = 1990\ to\ 2004$, $k = 1\ to\ 3$

The low proportion of significant coefficients are due to relatively small number of observations left after eliminating periods not corresponding to financial crises. Regressions using ROI, PTM, NPM, OM as dependent variables could not be run for the same reason.

The main observation is that in the 1 and 2 year before categories all of the significant coefficients indicate a negative relationship. More specifically banks that have had low maturity mismatches before the crisis were able to make more profits 1 and 2 years later.

The observation that majority of the coefficients reflect positive relationship for the 3 years before category on the other hand is consistent with the earlier descriptive statistics reporting greater profitability for smaller firms with high maturity mismatches in the absence of crises.

Finally the Domestic Credit column shows us that there is a weak negative causal relationship between maturity mismatches and credit extended by these banks and that this relationship disappears after the first year of the crisis. This result is consistent with the findings of Bleakley and Cowan (2004) or namely that corporate investment is not affected by capital reversals.

To check the robustness of the claim above that in absence of crisis greater maturity mismatches imply greater profitability, regressions omitting periods corresponding to crises are conducted.

The results in tables 2.5 and 2.6 provide support for the above hypothesis such that non weighted regressions giving equal weights to firms reflect a positive relationship between maturity mismatches and profitability. Finally the high proportion of coefficients showing a negative relationship under the weighted framework indicates greater profitability for countries with relatively liquid markets in the absence of crises.

Different profitability proxies were intended to provide a robustness check and did not reveal any clear distinction in terms of significance frequency except for high and low numbers of significance observed for GM, 1 and 2 year after the crisis and ROE in weighted regressions.

5. Price Volatility and Maturity Mismatches

Provided that there is evidence supporting the positive relationship between capital inflows and maturity mismatches and that the latter reduces profitability, we would like to examine if banks protect themselves from related price risks by staying more liquid and having low maturity mismatches or if the negative affects of volatility diminish current assets and constrain finance to comprise more short term debt.

More precisely we would like to measure the relationship between maturity mismatches and interest and exchange rate volatilities to test the hypothesis that the banking sector of countries with more volatile prices choose to stay more liquid and keep their maturity mismatches low.

In this respect we estimate the following regression equation using the same methods employed in the previous parts.

$$\begin{aligned}
\text{MaturityMismatch}_{it} = & \beta_0 + \beta_1 * \sigma_{it}^k + \text{time and country fixed effects} \\
& + \text{other controls}_{it} + \varepsilon_{it}
\end{aligned}
\tag{5}$$

for $i = 1$ to 214, $t = 1990$ to 2004, $k = \text{exchange rate or interest rate}$

, where σ_{it}^k corresponds to exchange rate and interest rate volatility.

While maturity mismatch and the control variables are the same as in parts 3 and 4, we use 3 and 2 different measures of exchange rate and interest rate volatility respectively.

There is mixed evidence in the literature advocating the use of trade weighted exchange rates. This rate is a good indicator of the exchange rate exposure of the country as a whole but is inappropriate when applied to every firm in the sample.¹³ Since there is no consensus in theory as to which exchange rate is suitable for each country we use dollar exchange rates, equally weighted and region adjusted¹⁴ exchange rates consisting of dollar, yen and euro¹⁵.

Lending and deposit rates are employed to measure interest rate volatility. The distinction between the two rates is motivated by the literature showing how the risk premium component of the interest rate spread increases as macroeconomic variables become more volatile, which in turn implies a greater volatility in interest earnings of banks relative to interest cost.¹⁶

Volatility of interest rates and exchange rates are calculated by dividing standard deviation of monthly values by the annual averages. While exchange rates employed are monthly averages of national currency per dollar, yen or euro, interest rates are in percentages.

The results are displayed in tables 3.1 to 3.4 and summarized below for convenience.

¹³ Dominguez and Tesar (2001) show that trade weighted exchange rates can lead to an under estimation of foreign exchange exposure.

¹⁴ This measure is used due to unavailability of trade weighted exchange rates. The weights are as follows: South America and Africa = 60% \$, 20% Euro, 20% Yen, East Asia=60% Yen, 20% 20% Euro, Europe=60% Euro, 20% Dollar, 20% Yen.

¹⁵ Up to Jan. 1999, DM is used instead for euro.

¹⁶ See Saunders and Schumacher (2000).

The third and fourth columns show the proportion of significant coefficients indicating a positive relationship between price volatility and maturity mismatches for the liquidity variables and debt structure variables which in turn correspond to columns 1 to 4 and 5 to 7 of tables 3.1 to 3.4 respectively.

	# of significant coefficients	# of liquidity vars. With a positive relationship	# of debt vars. with a positive relationship
Overall, Non Weighted	5/35	3/4	0/1
Overall, Weighted	15/35	7/7	5/8
Non Crisis, Non Weighted	10/35	0/3	7/7
Non Crisis, Weighted	19/35	13/13	5/6

As in the previous chapter we take account of bank size and the effects of banking crises by running regressions with weighted and non-weighted maturity mismatches and omitting the crisis periods from the sample respectively.

There are three main conclusions drawn from the above table. Most of the significant coefficients illustrate the negative relationship between price volatility and maturity mismatches. This observation implies that banks choose not to or are incapable of hedging themselves against currency and interest rate risks by staying more liquid and borrowing more long term.

Second observation is that larger banks' liquidity and maturity mismatches are affected negatively from excess interest rate and exchange rate volatility to a greater extent as general weighted regression coefficients indicating a significant negative relationship are more abundant compared to non weighted regressions except for non crisis debt structure regressions.

Finally the number of significant coefficients increases when we omit crisis periods although there are some exceptions when we categorize the dependent variables into liquidity and debt structure groups.

In this respect, while smaller banks' debt structure coefficients imply a strong negative relationship in the absence of crisis, all of the significant liquidity coefficients support a positive relationship under this category. This observation can reflect the choice of smaller banks to remain liquid due to their inability to borrow long term during periods of high price volatility.

Coefficients of the control variables are omitted from the tables since they are similar to ones in table 1.1 to 1.6. When we examine the breakdown of significant coefficients under different dependent and independent variable definitions we can observe that while there is no distinct inference from using different exchange rates¹⁷, lending rates seem to have a more significant effect on maturity mismatches under the weighted scheme.

The last observation reflects the fact that bank balance sheets are more vulnerable to lending rates, which is in turn consistent with increasing volatility of interest spreads during periods of high price volatility.

Overall the main conclusion of this section is that although compared to capital inflows price volatility is not as significant in determining maturity mismatches, the relationship suggests that banks become more illiquid and shift towards short term finance during periods of high price volatility and therefore do not or choose not to protect themselves against volatility associated risks.

The evidence supporting this behavior is stronger for larger banks and in non crisis periods. The former claim suggests that larger banks are less risk averse and are more capable of borrowing during periods of macroeconomic instability hence shifting these risks to consumers, investors, government and smaller banks. The later claim on the other hand hints at more strict regulation restricting banks to hold more liquid assets and limit their long term loans.

Although analyzing the answers to these questions is outside the scope of this paper, evidence in part 4 reporting the inferior performance of banks with high maturity mismatches before crises is consistent with the latter claim.

¹⁷ Experiments employing Euro and Yen exchange rates only did not produce conflicting results.

6. Conclusion:

This paper studies the nature of maturity mismatches in emerging market banking sectors which have been associated with severe financial crisis in some of these countries. We find that capital inflows and price volatility reduce maturity mismatches and that banks with low maturity mismatches before the crisis perform better in terms of profitability than other banks despite performing relatively poorly in the absence of crises.

Our analysis does not take account of interaction between currency mismatches and maturity mismatches due to absence of data on foreign liabilities and assets and their maturities at the individual bank level. It would be interesting for further research to measure how much of the deterioration in the debt structure of the banking sector is due to exchange rate effects and interest rate changes alone and model the interactions between interest rate and exchange rate associated risks.

Modeling the effects of maturity mismatches that allows for these interactions would require a general equilibrium framework. Despite our survey of the literature we failed to come across a general equilibrium model that studies how banks with long term assets and short term liabilities, some of which are foreign currency denominated, faces liquidity problems when capital reversals lead to depreciation of the real exchange rates. In this respect it would be interesting to build maturity mismatches into a Bernanke Gertler Gilchrist model or a sudden stop type model to explain the drops in output during capital reversals.

AppendixA:

Period: 1990-2004 Annual				
IFS		Mergent Online		
BOP Portfolio Investment Assets	Int. Transactions Merchandise Exports	Deposit Banks		
BOP Portfolio Investment Liabilities	Int. Transactions Merchandise Imports	Argentina	13	
INT. INV. Equity Liabilities	Int. Transactions Volume of Exports	Brazil	43	
INT. INV. Debt Liabilities	Int. Transactions Volume of Imports	Bulgaria	1	
INT. INV. Equity Assets	Int. Transactions Export Prices	Colombia	8	
INT. INV. Debt Assets	Int. Transactions Import Prices	Ecuador	5	
INT. INV. Portfolio Assets	Int. Transactions Export Price Index	Egypt	6	
INT. INV. Portfolio Liabilities	Int. Transactions Import Price Index	Korea	18	
INT. INV. Monetary Authority Assets	BOP Exports	Malaysia	18	
INT. INV. Monetary Authority Liabilities	BOP Imports	Mexico	15	
INT. INV. Government Assets	BOP Services Credit	Morocco	3	
INT. INV. Government Liabilities	BOP Services Debit	Nigeria	2	
INT. INV. Bank Assets	BOP Income Credit	Panama	4	
INT. INV. Bank Liabilities	BOP Income Debit	Peru	20	
INT. INV. Derivative Assets	BOP Current Transfers Credit	Philippines	13	
INT. INV. Derivative Liabilities	BOP Current Transfers Debit	Poland	9	
INT. INV. Assets	BOP Current Account	South Africa	13	
INT. INV. Liabilities	BOP Capital Account Credit	Turkey	7	
ER \$ End of Period	BOP Capital Account Debit	Venezuela, Rep. Bol.	16	
ER \$ Period Average	BOP Capital Account			
RER CPI Based, 2000=100	BOP Direct Investment Abroad	Total	214	
ER \$, Yen, Pound, End of Period Per SDR	BOP Direct Investment In Republic			
Monetary Authority Total Reserves - Gold	BOP Other Investment Assets			
Int. Liquidity Deposit Bank Assets	BOP Other Investment Liabilities	Balance Sheet	Ratios	
Int. Liquidity Deposit Bank Liabilities	BOP Financial Account			
Monetary Authority Foreign Assets	BOP Equity Securities Assets	Cash & Cash Equivalents	Profitability	Return on Equity (%)
Monetary Authority Foreign Liabilities	BOP Debt Securities Assets	Receivables		Return on Assets (%)
Monetary Authority Claim on Deposit Banks	BOP Equity Securities Liabilities	Other Current Assets		Return on Investment
Deposit Banks Reserves	BOP Debt Securities Liabilities	Total Current Assets		Gross Margin
Deposit Banks Foreign Assets	BOP Mon. Authority Assets	Long-term Receivables		Pre-Tax Margin
Deposit Banks Claims on Central Gov.	BOP General Gov. Assets	Investments and Advances		Net Profit Margin (%)
Deposit Banks Claims on Local Gov.	BOP Banks Assets	Loans and Lease Financing		Operating Margin (%)
Deposit Banks Claims on Non Fin Public	BOP Other Sector Assets	Gross Property, Plant & Equipment		Effective Tax Rate (%)
Deposit Banks Claims on Non Gov. Dom. Sectors	BOP Mon. Authority Liabilities	Accumulated Depreciation & A	Liquidity	Quick Ratio
Deposit Banks Claims on Other Banking Sector	BOP General Gov. Liabilities	Net Property & Equipment		Current Ratio
Deposit Banks Claims on Non Bank Fin Sector	BOP Banks Liabilities	Intangible Assets		Working Capital/Total Assets
Deposit Banks Demand Deposits	BOP Other Sector Liabilities	Other Assets	Debt Managem	Current Liabilities/Equity
Deposit Banks Time, Savings and Foreign Currency	BOP Financial Derivative Assets	Total Assets		Total Debt to Equity
Deposit Banks Other Securities	BOP Financial Derivative Liabilities	Accounts Payable		Long Term Debt to Assets
Deposit Banks Restricted Deposits	BOP Balance	Taxes Payable	Asset Managem	Revenues/Total Assets
Deposit Banks Foreign Liabilities	BOP Reserve Assets	Short-term Borrowings		Revenues/Working Capital
Deposit Banks Gov. Deposits	BOP Use of Fund Credit and Loans	Accrued Expenses		
Deposit Banks Gov. Lending Funds	BOP Exceptional Financing	Deposits		
Deposit Banks Credit From Mon. Authority	Gov. Budget Deficit	Other Current Liabilities		
Deposit Banks Liabilities to Other Bank. Inst.	Gov. Budget Revenue	Total Current Liabilities		
Deposit Banks Liabilities to Non Bank. Inst.	Gov. Budget Expenditure	Long-term Debt		
Deposit Banks Capital Accounts	Gov. Lending	Other Deferred Liabilities		
Monetary Survey Domestic Credit	Gov. Net Domestic Borrowing	Deferred Liabilities		
Monetary Survey M2	Gov. Net Foreign Borrowing	Minority Interest		
Monetary Survey M2 Seasonally Adjusted	Gov. Use of Cash Balances	Other Liabilities		
Banking Survey Liquid Liabilities	Gov. Domestic Debt Stock	Total Liabilities		
Interest Rates Discount Rate	Gov. Foreign Debt Stock	Common Stock		
Interest Rates Money Market Rate	National Accounts Exports	Additional Paid in Capital		
Interest Rates Treasury Bill Rate	National Accounts Gov. Expenditures	Retained Earnings		
Interest Rates Savings Rate	National Accounts Capital Formation	Other Stockholders' Equity		
Interest Rates Deposit Rate	National Accounts Change in Inventories	Stockholders' Equity		
Interest Rates Lending Rate	National Accounts Consumption	Total Liabilities & Stockholders' Equity		
Interest Rates Gov. Bond Yield	National Accounts Net Factor Income			
Prices Production Labor Share Prices	National Accounts Imports			
Prices Production Labor Wholesale Prices	National Accounts Net Transfers From Abroad			
Prices Production Labor CPI	National Accounts Gross National Income			
Prices Production Labor Wages	National Accounts GDP			
Prices Production Ind. Production	National Accounts GDP Real			
Prices Production Ind. Employment	GDP Deflator 2000=100			
Prices Production Unemployment	GDP Volume 2000=100			
Prices Production Labor Force	GDP Cons. of Fixed Capital			
Prices Production Employment	Population			
Prices Production Unemployment Rate				

Appendix B:

Banking Sector Variables:

Liquidity and Debt Management

Quick Ratio = A measure of a company's liquidity, used to evaluate creditworthiness. Equals quick assets divided by current liabilities.

Quick Assets = Cash and other assets which can or will be converted into cash fairly soon, such as accounts receivable and marketable securities; or equivalently, current assets minus inventory.

Current Ratio = Current assets divided by current liabilities. An indication of a company's ability to meet short-term debt obligations; the higher the ratio, the more liquid the company is.

Current Assets = A balance sheet item which equals the sum of cash and cash equivalents, accounts receivable, inventory, marketable securities, prepaid expenses, and other assets that could be converted to cash in less than one year. A company's creditors will often be interested in how much that company has in current assets, since these assets can be easily liquidated in case the company goes bankrupt.

Current Liabilities = A balance sheet item which equals the sum of all money owed by a company and due within one year.

Current Ratio (Balance sheet) = Current ratio defined above is reported separately by mergent online. For some banks and time periods although balance sheet items are reported ratios, corresponding ratios are missing. Therefore current ratio variable based on the balance sheet values is created.

Current Ratio (Balance sheet + Ratio) = This ratio is constructed to check robustness. Current liabilities are obtained by multiplying Current Liabilities/Equity ratio with Equity value from the balance sheet. This variable in turn is divided by current assets to determine the current ratio.

Short term debt = Loans and obligations with a maturity of less than one year.

Short term debt / Assets = Short term debt is as follows. First total debt to equity is multiplied with equity to obtain total debt. Second long term debt to assets ratio is multiplied with assets to obtain long term debt. Finally short term debt is found by subtracting long term debt from total debt.

Long term debt / Assets = As mentioned above this ratio is reported directly by mergentonline and represents the ratio of loans and obligations with a maturity of more than one year and total assets.

Profitability (variables are in percentages)

Return on Equity = A measure of how well a company used reinvested earnings to generate additional earnings, equal to a fiscal year's after-tax income (after preferred stock dividends but before common stock dividends) divided by book value, expressed as a percentage. It is used as a general indication of the company's efficiency; in other words, how much profit it is able to generate given the resources provided by its stockholders.

Return on Assets = A measure of a company's profitability, equal to a fiscal year's earnings divided by its total assets, expressed as a percentage.

Return on Investment = Equal to a fiscal year's income divided by common stock and preferred stock equity plus long-term debt.

Gross Margin = Gross income divided by net sales, expressed as a percentage.

Pre-Tax Margin = Net profit before taxes divided by net sales.

Net Profit Margin = Net profit divided by net revenues, often expressed as a percentage. This number is an indication of how effective a company is at cost control.

Operating Margin = Operating income divided by revenues, expressed as a percentage.

Capital Flow Variables:

BOP Net Portfolio Liabilities = The difference between portfolio investment liabilities and assets reported in the balance of payments accounts. The item includes transactions with nonresidents in financial securities of any maturity (such as corporate securities, bonds, notes, and money market instruments) other than those included in direct investment, exceptional financing, and reserve assets.

Net Portfolio Investment Position = Stock of net external liabilities. Reflects not only the sum of balance of payments transactions over time, but also price changes, exchange rate changes, and other adjustments.

CB + GOV + DB Net Foreign Liabilities = The sum of net foreign liabilities of the monetary authority, government and deposit banks.

BOP Financial Account = Net sum of direct investment, portfolio investment, financial derivatives and other investment in the balance of payments accounts.

BOP Net Debt Liabilities = Covers bonds, debentures, notes, etc., and money market or negotiable debt instruments.

BOP Net Equity Liabilities = Includes shares, stocks, participation, and similar documents that usually denote ownership of equity.

References:

Bernanke, Ben S., Gertler, Mark and Gilchrist, Simon, (1998): "The Financial Accelerator in a Quantitative Business Cycle Framework", NBER Working Paper No. W6455.

Bleakley, Hoyt and Kevin Cowan (2004): "Maturity Mismatch and Financial Crises: Evidence from Emerging Market Corporations", UCSD Discussion Paper 2004-16.

Buch, Claudia and L. Lusinyan, (2003): "Determinants of Short-Term Debt: A Note", Journal of International Financial Markets, Institutions and Money 13, 157–170.

Bussiere, Matthieu, Fratzscher, Marcel and Koeniger, Winfried (2004): "Currency Mismatch, Uncertainty and Debt Maturity Structure", ECB Working Paper No. 409.

Caballero, Ricardo and Arvind Krishnamurty (2003): "Excessive Dollar Debt: Financial Development and Underinsurance", Journal of Finance, vol. 58, 867-93.

Calvo A. Guillermo and Carmen M. Reinhart (2002): "Fear of Floating," The Quarterly Journal of Economics, MIT Press, vol. 117(2), pages 379-408.

Chang, Roberto and Andres, Velasco, (1998): "Financial crises in emerging markets: a canonical model," Working Paper 98-10, Federal Reserve Bank of Atlanta.

- "Banks, Debt Maturity and Financial Crisis", Journal of International Economics, vol. 51, 169-94.

de la Torre, Augusto and Sergio L. Schmukler (2003): "Coping with Risk through Mismatches: domestic and international financial contracts for emerging economies", World Bank, mimeo.

Diamond, Douglas W and Philip H. Dybvig, (1983): "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy*, University of Chicago Press, vol. 91(3), pages 401-19.

Diamond, Douglas W, (1991): "Debt Maturity Structure and Liquidity Risk," *The Quarterly Journal of Economics*, MIT Press, vol. 106(3), pages 709-37.

Eichengreen, Barry (2003): *Capital Flows and Crises*, MIT Press, Cambridge, 2003.

Eichengreen, Barry, Ricardo Hausmann and Ugo Panizza (2003): "Currency Mismatches, Debt Intolerance and Original Sin: why they are not the same and why it matters", NBER Working Paper No. 10036.

Fan, Joseph, Sheridan Titman, and Garry Twite, (2004): "An International Comparison of Capital Structure and Debt Maturity Choices" (unpublished; Austin: University of Texas).

Galindo, Arturo, Ugo Panizza, and Fabio Schiantarelli (2003): "Debt Composition and Balance Sheet Effects of Currency Depreciations: A Summary of the Micro-Evidence," *Emerging Markets Review*, Vol. 4, No. 4, pp. 330–39.

Gertler, Mark, Gilchrist, Simon and Natalucci, Fabio Massimo, (2003): "External Constraints on Monetary Policy and the Financial Accelerator", NBER Working Paper No. W10128.

International Monetary Fund, (April 2005): "Corporate Finance in Emerging Markets", *Global Financial Stability Report Market Developments and Issues*, Chapter 4.

Jeanne, Olivier (2000): "Debt Maturity and the Global Financial Architecture", CEPR Discussion Paper No. 2520.

Kaminsky, Graciela, "Varieties of Currency Crises" (December 2003): NBER Working Paper No. W10193.

Kaminsky, Graciela, and Sergio Schmukler (2002): "Short-Run Pain, Long-Run Gain: the effects of financial liberalization", IMF Working Paper No. 34.

Lumpkin, Stephen A. and O'Brien, James, (1997): "Thrift Stock Returns and Balance Sheet Interest Rate Sensitivity ", Board of Governors of the Federal Reserve System Working Paper No 94-29.

Neumeyer, Pablo A. and Perri, Fabrizio, 2005. "Business cycles in emerging economies: the role of interest rates," *Journal of Monetary Economics*, Elsevier, vol. 52(2), pages 345-380.

Rajan, Ramkishan S., Graham, Bird (2001): "Banks, Maturity Mismatches and Liquidity Crises: A Simple Model", *Economia Internazionale*, 56 (2), 2003, pp.185-92.

Reinhart, Carmen M., Rogoff, Kenneth S. and Savastano, Miguel A., (2003): "Debt Intolerance", NBER Working Paper No. W9908.

Rodrik, Dani and Andres Velasco (1999): "Short-Term Capital Flows", Annual World Bank Conference on Development Economics, 1999.

Sartoris, L. William, (1993): "The term structure of interest rates and the asset and liability decisions of a financial intermediary", *Journal of Economics and Business*, 1993, vol. 45, issue 2, pages 129-142.

Sinkey, Jr., J.F. and D.A. Carter, (2000): "Evidence on the financial characteristics of banks that do and do not use derivatives", *The Quarterly Review of Economics and Finance* 40, pages 431–449.

Tektas, Arzu, Nur Ozkan-Gunay and Gokhan Gunay (2005): "Asset and liability management in financial crisis", *The Journal of Risk Finance*; 2005; 6, 2.

Tirole, Jean (2002): *Financial Crises, Liquidity and the International Monetary System*, Princeton University Press, Princeton, New Jersey, 2002.

Tirole, Jean (2003): "Inefficient Foreign Borrowing: a dual- and common-agency perspective", *American Economic Review*, vol. 93, 1678-702.

Valev, Neven (2004): "Uncertainty and the Maturity Structure of International Credit", mimeo, Georgia State University.

Table 1 (*)

Independent Variables	Dependent Variables					
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets
BOP Net Portfolio Liabilities / GDP	0.42 (0.23)	0.06 (0.25)	-0.81 (1.08)	-1.38 (0.66)	-0.02 (0.02)	-0.05 (0.04)
Net Portfolio Investment Position / GDP	-2.38 (0.19)	-2.38 (0.22)	-0.61 (1.03)	-0.53 (2.02)	0.04 (0.04)	0.20 (0.08)
Deposit Bank Net Foreign Liab. / GDP	-3.42 (0.42)	-1.35 (0.58)	-2.05 (1.40)	-3.68 (2.20)	0.41 (0.07)	0.61 (0.11)
CB + GOV + DB Net For. Liabs/GDP	0.58 (0.19)	2.26 (0.36)	11.31 (1.17)	1.31 (1.44)	-0.06 (0.04)	0.19 (0.07)
BOP Financial Account / GDP	-1.46 (0.42)	-1.36 (0.47)	-16.09 (1.65)	-0.13 (1.49)	-0.09 (0.05)	0.48 (0.09)
BOP Net Debt Liabilities / GDP	0.54 (0.27)	-0.51 (0.30)	-4.36 (1.38)	-3.31 (1.00)	0.00 (0.02)	0.26 (0.04)
BOP Net Equity Liabilities	-15.03 (3.41)	-8.92 (4.00)	-2.46 (8.81)	2.35 (17.83)	1.88 (0.97)	4.35 (2.54)
						2.27 (8.66)

(*) Values in bold italics are significant at 5%, the numbers in parentheses are standard errors

Table 1.1

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Net Portfolio Liabilities / GDP	0.42	0.06	-0.81	-1.38	-0.02	-0.05	-1.50
	(0.23)	(0.25)	(1.08)	(0.66)	(0.02)	(0.04)	(0.52)
intercept	0.41	0.21	-6.66	-1.46	0.08	-0.03	-0.16
	(0.14)	(0.16)	(0.61)	(0.50)	(0.02)	(0.02)	(0.04)
m2 / gdp	-0.42	-4.34	-11.92	-6.26	0.29	0.31	-1.44
	(1.30)	(1.45)	(6.15)	(3.96)	(0.12)	(0.21)	(0.26)
current account deficit / gdp	-3.04	-1.35	-2.97	1.42	0.41	0.22	-0.36
	(1.18)	(1.32)	(5.69)	(3.37)	(0.12)	(0.18)	(0.23)
budget deficit / gdp	4.95	7.08	1.77	5.06	0.57	-0.70	0.68
	(0.95)	(1.06)	(4.40)	(3.16)	(0.10)	(0.19)	(0.20)
lending rate	0.0103	0.0152	0.0260	0.0186	0.0001	0.0001	-0.0014
	(0.0013)	(0.0015)	(0.0059)	(0.0039)	(0.0001)	(0.0002)	(0.0003)
gdp growth	-0.0076	-0.0019	-0.0878	0.0260	-0.0005	-0.0012	0.0032
	(0.0038)	(0.0043)	(0.0177)	(0.0110)	(0.0003)	(0.0006)	(0.0008)
inflation	-0.0048	-0.0077	-0.0111	-0.0042	0.0005	0.0008	-0.0002
	(0.0014)	(0.0016)	(0.0062)	(0.0044)	(0.0001)	(0.0002)	(0.0003)
inflation(-1)	-0.0016	-0.0040	-0.0205	-0.0093	0.0002	0.0005	-0.0014
	(0.0010)	(0.0012)	(0.0046)	(0.0031)	(0.0001)	(0.0002)	(0.0002)
gdp growth(-1)	-0.0130	-0.0251	-0.1063	-0.0489	0.0004	-0.0004	-0.0023
	(0.0038)	(0.0042)	(0.0172)	(0.0114)	(0.0004)	(0.0007)	(0.0009)
m2 / gdp (-1)	-0.24	0.08	-5.55	-1.90	0.06	0.07	-0.08
	(0.12)	(0.13)	(0.55)	(0.38)	(0.01)	(0.02)	(0.02)
current account deficit / gdp (-1)	0.28	-0.18	-2.41	-0.08	0.04	0.08	-0.10
	(0.15)	(0.17)	(0.74)	(0.43)	(0.02)	(0.02)	(0.03)
budget deficit / gdp (-1)	-0.31	0.17	-0.21	0.02	0.01	0.02	-0.04
	(0.08)	(0.09)	(0.35)	(0.24)	(0.01)	(0.01)	(0.02)
Adjusted R-squared	0.38	0.23	0.18	0.12	0.43	0.35	0.36

Table 1.2

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
Net Portfolio Investment Position / GDP	-2.38	-2.38	-0.61	-0.53	0.04	0.20	-0.22
	(0.19)	(0.22)	(1.03)	(2.02)	(0.04)	(0.08)	(1.11)
intercept	0.70	0.62	-0.74	-1.51	0.01	-0.25	-0.14
	(0.11)	(0.13)	(0.59)	(0.79)	(0.02)	(0.04)	(0.03)
m2 / gdp	-9.14	-8.76	4.32	-6.11	0.12	1.58	-2.61
	(1.21)	(1.38)	(6.36)	(10.15)	(0.18)	(0.35)	(0.36)
current account deficit / gdp	-7.56	-6.46	7.54	6.27	-0.03	1.13	0.71
	(0.98)	(1.12)	(5.19)	(7.35)	(0.16)	(0.26)	(0.28)
budget deficit / gdp	5.70	5.87	0.57	4.68	0.16	-0.63	1.00
	(0.81)	(0.93)	(4.10)	(6.25)	(0.12)	(0.25)	(0.24)
lending rate	0.0111	0.0125	0.0074	0.0020	0.0002	-0.0018	0.0029
	(0.0018)	(0.0020)	(0.0089)	(0.0125)	(0.0002)	(0.0004)	(0.0005)
gdp growth	0.0151	0.0161	0.0260	0.0560	-0.0003	0.0015	0.0007
	(0.0036)	(0.0041)	(0.0185)	(0.0246)	(0.0004)	(0.0009)	(0.0011)
inflation	0.0003	0.0000	0.0009	-0.0001	0.0005	0.0002	-0.0001
	(0.0010)	(0.0012)	(0.0051)	(0.0086)	(0.0001)	(0.0003)	(0.0003)
inflation(-1)	-0.0029	-0.0032	-0.0024	-0.0007	0.0000	0.0000	-0.0010
	(0.0004)	(0.0005)	(0.0022)	(0.0030)	(0.0001)	(0.0001)	(0.0001)
gdp growth(-1)	-0.0084	-0.0072	-0.0087	-0.0086	-0.0002	0.0017	0.0003
	(0.0028)	(0.0032)	(0.0146)	(0.0201)	(0.0004)	(0.0008)	(0.0010)
m2 / gdp (-1)	-6.53	-5.57	15.27	26.17	0.01	1.33	-1.07
	(1.27)	(1.45)	(6.56)	(10.27)	(0.19)	(0.36)	(0.38)
current account deficit / gdp (-1)	-3.32	-2.74	2.88	8.80	-0.06	1.02	-0.62
	(1.15)	(1.31)	(6.10)	(8.91)	(0.16)	(0.29)	(0.32)
budget deficit / gdp (-1)	-0.50	-0.22	-0.35	3.55	0.19	0.44	0.32
	(0.64)	(0.72)	(3.18)	(4.86)	(0.08)	(0.17)	(0.19)
Adjusted R-squared	0.38	0.23	0.18	0.12	0.43	0.35	0.36

Table 1.3

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
Deposit Bank Net Foreign Liab. / GDP	-3.42	-1.35	-2.05	-3.68	0.41	0.61	-10.53
	(0.42)	(0.58)	(1.40)	(2.20)	(0.07)	(0.11)	(1.66)
intercept	0.56	0.60	-0.93	-1.24	0.01	0.04	-0.09
	(0.10)	(0.13)	(0.37)	(0.57)	(0.01)	(0.02)	(0.03)
m2 / gdp	-2.56	-4.15	-5.02	6.53	-0.05	0.40	-0.78
	(0.94)	(1.31)	(3.35)	(5.30)	(0.14)	(0.21)	(0.29)
current account deficit / gdp	1.90	1.85	-18.52	-19.51	0.67	0.47	-1.26
	(1.20)	(1.66)	(4.61)	(6.30)	(0.21)	(0.24)	(0.36)
budget deficit / gdp	4.95	6.91	-1.24	2.42	0.55	0.40	-0.10
	(0.65)	(0.90)	(2.37)	(3.75)	(0.10)	(0.15)	(0.20)
lending rate	0.0070	0.0108	0.0048	0.0102	-0.0007	-0.0004	0.0004
	(0.0012)	(0.0017)	(0.0044)	(0.0064)	(0.0002)	(0.0002)	(0.0004)
gdp growth	0.0028	0.0081	0.0191	0.0364	0.0001	0.0004	-0.0033
	(0.0024)	(0.0034)	(0.0091)	(0.0132)	(0.0003)	(0.0005)	(0.0008)
inflation	-0.0050	-0.0071	-0.0041	-0.0085	0.0003	0.0005	-0.0001
	(0.0009)	(0.0012)	(0.0031)	(0.0049)	(0.0001)	(0.0002)	(0.0003)
inflation(-1)	-0.0008	-0.0016	-0.0009	-0.0016	-0.0001	0.0002	-0.0002
	(0.0004)	(0.0005)	(0.0014)	(0.0019)	(0.0000)	(0.0001)	(0.0001)
gdp growth(-1)	0.0097	0.0165	-0.0086	-0.0276	0.0007	-0.0028	0.0022
	(0.0027)	(0.0038)	(0.0103)	(0.0154)	(0.0004)	(0.0007)	(0.0009)
m2 / gdp (-1)	-1.54	-3.19	-13.69	-17.21	-0.01	0.32	-0.42
	(0.80)	(1.11)	(2.62)	(4.38)	(0.12)	(0.19)	(0.27)
current account deficit / gdp (-1)	2.10	0.09	-8.03	-9.84	1.09	0.43	0.22
	(1.64)	(2.28)	(6.30)	(8.67)	(0.26)	(0.36)	(0.53)
budget deficit / gdp (-1)	2.16	1.45	-0.67	0.08	0.18	0.23	-0.56
	(0.54)	(0.74)	(1.92)	(2.85)	(0.07)	(0.11)	(0.16)
Adjusted R-squared	0.38	0.23	0.18	0.12	0.43	0.35	0.36

Table 1.4

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
CB + GOV + DB Net For. Curr. Liabs/C	0.58	2.26	11.31	1.31	-0.06	0.19	1.54
	(0.19)	(0.36)	(1.17)	(1.44)	(0.04)	(0.07)	(0.97)
intercept	1.18	1.34	-1.75	-1.06	-0.02	0.03	-0.03
	(0.09)	(0.17)	(0.64)	(0.70)	(0.02)	(0.04)	(0.03)
m2 / gdp	-0.30	-1.92	-14.82	-2.23	-0.04	0.14	-0.90
	(0.87)	(1.70)	(6.40)	(7.14)	(0.17)	(0.30)	(0.31)
current account deficit / gdp	-1.85	-2.09	-4.93	4.26	-0.18	0.51	-0.66
	(0.77)	(1.51)	(6.56)	(5.64)	(0.16)	(0.22)	(0.26)
budget deficit / gdp	8.93	9.56	-9.33	8.12	0.54	0.70	-0.92
	(0.63)	(1.23)	(4.72)	(5.11)	(0.13)	(0.24)	(0.24)
lending rate	0.0096	0.0093	-0.0189	0.0103	-0.0008	-0.0004	0.0006
	(0.0012)	(0.0023)	(0.0092)	(0.0091)	(0.0002)	(0.0004)	(0.0004)
gdp growth	0.0065	0.0037	0.0443	0.0204	-0.0011	-0.0033	0.0070
	(0.0023)	(0.0045)	(0.0180)	(0.0170)	(0.0004)	(0.0007)	(0.0008)
inflation	-0.0049	-0.0073	-0.0119	-0.0086	0.0005	0.0007	-0.0002
	(0.0008)	(0.0016)	(0.0060)	(0.0062)	(0.0001)	(0.0002)	(0.0003)
inflation(-1)	-0.0013	-0.0007	0.0065	-0.0003	0.0001	-0.0001	-0.0003
	(0.0003)	(0.0007)	(0.0027)	(0.0027)	(0.0001)	(0.0001)	(0.0001)
gdp growth(-1)	-0.0329	-0.0371	-0.0583	-0.0812	0.0007	0.0017	-0.0014
	(0.0031)	(0.0060)	(0.0248)	(0.0246)	(0.0006)	(0.0010)	(0.0011)
m2 / gdp (-1)	-0.34	-0.33	-29.82	2.25	0.37	0.84	1.31
	(0.72)	(1.41)	(4.88)	(6.01)	(0.15)	(0.27)	(0.28)
current account deficit / gdp (-1)	-3.28	-4.56	5.26	8.00	-0.03	-0.48	0.43
	(1.05)	(2.05)	(8.99)	(7.86)	(0.22)	(0.30)	(0.34)
budget deficit / gdp (-1)	2.28	2.09	0.10	3.13	0.05	-0.26	0.51
	(0.49)	(0.96)	(3.67)	(3.66)	(0.08)	(0.15)	(0.17)
Adjusted R-squared	0.38	0.23	0.18	0.12	0.43	0.35	0.36

Table 1.5

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Financial Account / GDP	-1.46	-1.36	-16.09	-0.13	-0.09	0.48	-7.74
	(0.42)	(0.47)	(1.65)	(1.49)	(0.05)	(0.09)	(1.16)
intercept	0.85	0.61	-1.38	-1.37	0.02	-0.08	-0.21
	(0.12)	(0.13)	(0.51)	(0.44)	(0.01)	(0.02)	(0.03)
m2 / gdp	-1.63	-2.73	-11.68	3.67	0.28	0.34	-1.07
	(1.20)	(1.34)	(5.35)	(4.41)	(0.11)	(0.22)	(0.25)
current account deficit / gdp	-5.77	-3.97	-32.71	1.86	0.66	1.06	-1.21
	(1.38)	(1.55)	(5.99)	(4.80)	(0.14)	(0.25)	(0.29)
budget deficit / gdp	5.50	7.43	5.54	5.39	-0.26	0.19	0.49
	(0.82)	(0.91)	(3.68)	(3.15)	(0.08)	(0.15)	(0.16)
lending rate	0.0092	0.0145	0.0329	0.0199	0.0002	0.0000	0.0013
	(0.0013)	(0.0014)	(0.0057)	(0.0046)	(0.0001)	(0.0002)	(0.0003)
gdp growth	-0.0023	-0.0005	-0.0288	0.0171	-0.0005	-0.0007	-0.0022
	(0.0033)	(0.0037)	(0.0145)	(0.0118)	(0.0003)	(0.0006)	(0.0007)
inflation	-0.0060	-0.0095	-0.0380	-0.0074	0.0005	0.0013	-0.0013
	(0.0013)	(0.0014)	(0.0057)	(0.0049)	(0.0001)	(0.0002)	(0.0003)
inflation(-1)	-0.0020	-0.0031	-0.0117	-0.0054	0.0000	0.0003	-0.0005
	(0.0004)	(0.0004)	(0.0018)	(0.0014)	(0.0000)	(0.0001)	(0.0001)
gdp growth(-1)	-0.0128	-0.0222	-0.0690	-0.0391	0.0005	0.0009	0.0004
	(0.0034)	(0.0038)	(0.0157)	(0.0126)	(0.0004)	(0.0007)	(0.0008)
m2 / gdp (-1)	2.24	1.23	-33.66	-22.05	0.48	0.60	-1.02
	(1.07)	(1.20)	(4.23)	(4.06)	(0.11)	(0.21)	(0.23)
current account deficit / gdp (-1)	2.37	-1.86	-37.74	-0.13	0.39	0.58	-1.01
	(1.42)	(1.58)	(6.69)	(4.95)	(0.15)	(0.22)	(0.27)
budget deficit / gdp (-1)	3.53	2.18	2.33	0.44	0.11	0.06	0.57
	(0.79)	(0.88)	(3.31)	(2.80)	(0.07)	(0.13)	(0.15)
Adjusted R-squared	0.38	0.23	0.18	0.12	0.43	0.35	0.36

Table 1.6

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Net Debt Liabilities / GDP	0.54	-0.51	-4.36	-3.31	0.00	0.26	-1.35
	(0.27)	(0.30)	(1.38)	(1.00)	(0.02)	(0.04)	(0.61)
intercept	0.46	0.39	-7.05	-1.30	0.03	0.12	-0.75
	(0.22)	(0.23)	(1.00)	(0.95)	(0.02)	(0.05)	(0.46)
m2 / gdp	-1.26	-4.19	-22.98	4.70	0.38	0.67	-2.57
	(2.09)	(2.35)	(10.76)	(8.11)	(0.20)	(0.35)	(5.01)
current account deficit / gdp	-2.81	-0.78	0.86	2.77	0.42	0.32	-9.77
	(1.81)	(2.03)	(9.31)	(6.55)	(0.18)	(0.27)	(4.56)
budget deficit / gdp	5.96	8.55	1.97	9.51	-0.56	-0.71	3.90
	(1.45)	(1.63)	(7.17)	(6.18)	(0.17)	(0.29)	(4.24)
lending rate	0.0105	0.0151	0.0269	0.0177	0.0001	-0.0003	-0.0016
	(0.0020)	(0.0023)	(0.0096)	(0.0076)	(0.0002)	(0.0004)	(0.0050)
gdp growth	-0.0070	0.0017	-0.0539	0.0361	-0.0007	-0.0003	-0.0502
	(0.0062)	(0.0069)	(0.0311)	(0.0222)	(0.0006)	(0.0010)	(0.0138)
inflation	-0.0048	-0.0079	-0.0109	-0.0051	0.0005	0.0007	-0.0060
	(0.0022)	(0.0024)	(0.0102)	(0.0086)	(0.0002)	(0.0003)	(0.0048)
inflation(-1)	-0.0021	-0.0049	-0.0223	-0.0116	0.0002	0.0006	-0.0088
	(0.0016)	(0.0018)	(0.0076)	(0.0060)	(0.0002)	(0.0003)	(0.0040)
gdp growth(-1)	-0.0145	-0.0277	-0.1143	-0.0523	0.0008	-0.0011	-0.0272
	(0.0058)	(0.0064)	(0.0282)	(0.0219)	(0.0006)	(0.0011)	(0.0157)
m2 / gdp (-1)	-3.36	1.40	-47.72	-21.99	0.64	0.38	-17.88
	(1.86)	(2.09)	(9.35)	(7.65)	(0.19)	(0.34)	(4.83)
current account deficit / gdp (-1)	3.25	-2.73	-36.90	-2.88	0.49	1.30	-2.80
	(2.53)	(2.83)	(12.98)	(9.06)	(0.28)	(0.38)	(6.84)
budget deficit / gdp (-1)	3.09	1.33	-3.69	-0.39	0.17	-0.20	2.80
	(1.26)	(1.41)	(6.11)	(4.68)	(0.12)	(0.21)	(2.91)
Adjusted R-squared	0.38	0.23	0.18	0.12	0.43	0.35	0.36

Table 1.7

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Net Equity Liabilities / GDP	-15.03 (3.41)	-8.92 (4.00)	-2.46 (8.81)	2.35 (17.83)	1.88 (0.97)	4.35 (2.54)	2.27 (8.66)
intercept	-0.71 (0.25)	-1.50 (0.29)	-1.26 (0.73)	-0.76 (1.75)	0.05 (0.03)	0.16 (0.11)	-0.21 (0.20)
m2 / gdp	4.70 (1.80)	10.24 (2.11)	-0.18 (5.02)	-3.28 (13.54)	0.36 (0.19)	0.61 (0.48)	2.15 (1.06)
current account deficit / gdp	-13.21 (2.35)	-16.06 (2.76)	4.74 (7.05)	-1.37 (15.34)	0.00 (0.00)	0.00 (0.00)	-0.43 (1.33)
budget deficit / gdp	1.44 (1.27)	8.80 (1.49)	1.00 (3.69)	15.74 (7.28)	-0.13 (0.20)	0.05 (0.51)	0.53 (1.04)
lending rate	0.0111 (0.0029)	0.0256 (0.0034)	-0.0051 (0.0079)	0.0091 (0.0213)	-0.0003 (0.0003)	-0.0003 (0.0008)	0.0017 (0.0024)
gdp growth	0.0047 (0.0048)	0.0125 (0.0056)	0.0022 (0.0165)	0.0491 (0.0337)	-0.0014 (0.0006)	-0.0022 (0.0016)	-0.0005 (0.0014)
inflation	-0.0030 (0.0017)	-0.0090 (0.0020)	0.0023 (0.0047)	-0.0026 (0.0092)	-0.0004 (0.0002)	-0.0006 (0.0005)	0.0004 (0.0012)
inflation(-1)	0.0101 (0.0014)	0.0029 (0.0016)	-0.0052 (0.0040)	-0.0133 (0.0087)	-0.0001 (0.0003)	-0.0006 (0.0007)	-0.0006 (0.0008)
gdp growth(-1)	0.0405 (0.0061)	0.0151 (0.0072)	-0.0273 (0.0171)	-0.0449 (0.0329)	0.0005 (0.0009)	0.0004 (0.0025)	0.0061 (0.0033)
m2 / gdp (-1)	-8.26 (1.91)	-2.94 (2.24)	25.78 (5.74)	38.04 (11.17)	-0.51 (0.31)	-0.59 (0.81)	-0.72 (1.19)
current account deficit / gdp (-1)	16.46 (2.52)	6.71 (2.96)	-2.02 (7.60)	-3.60 (13.22)	0.23 (0.28)	0.34 (0.71)	1.30 (1.22)
budget deficit / gdp (-1)	6.46 (1.20)	5.41 (1.40)	3.33 (3.34)	8.69 (6.23)	0.00 (0.12)	0.15 (0.33)	0.47 (0.44)
Adjusted R-squared	0.38	0.23	0.18	0.12	0.43	0.35	0.36

Table 1.8^(*) (Real \$, Deflator)

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Net Portfolio Liabilities	-1.236 (0.182)	-0.732 (0.210)	1.208 (0.861)	-2.102 (0.680)	-0.027 (0.019)	0.083 (0.035)	-1.214 (0.456)
Net Portfolio Investment Position	-0.440 (0.030)	-0.420 (0.036)	-0.128 (0.149)	-0.470 (0.252)	0.030 (0.008)	0.060 (0.018)	0.078 (0.191)
Deposit Bank Net Foreign Liabilities	-0.003 (0.001)	-0.002 (0.001)	-0.005 (0.006)	-0.008 (0.004)	0.0000 (0.0001)	0.0000 (0.0002)	-0.003 (0.003)
CB + GOV + DB Net For. Curr. Liabilities	0.0004 (0.0007)	-0.0004 (0.0008)	-0.010 (0.003)	-0.002 (0.003)	0.000 (0.000)	0.0002 (0.0001)	-0.002 (0.002)
BOP Financial Account	-1.515 (0.122)	-0.967 (0.143)	-1.703 (0.556)	-1.377 (0.527)	-0.032 (0.015)	0.032 (0.029)	-1.050 (0.348)
BOP Net Debt Liabilities	-1.992 (0.133)	-1.335 (0.155)	-1.404 (0.647)	-3.731 (0.516)	-0.056 (0.015)	0.030 (0.027)	-2.409 (0.362)
BOP Net Equity Liabilities	-1.559 (0.476)	-0.601 (0.555)	1.460 (2.076)	2.177 (3.671)	-0.079 (0.182)	-0.407 (0.478)	-0.291 (1.625)

(*) All numbers are multiplied by 10⁴**Table 1.9^(*) (Real \$, CPI)**

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Net Portfolio Liabilities	-1.274 (0.179)	-0.776 (0.207)	1.063 (0.846)	-2.126 (0.671)	-0.027 (0.019)	0.086 (0.034)	-1.224 (0.453)
Net Portfolio Investment Position	-0.437 (0.030)	-0.418 (0.036)	-0.093 (0.150)	-0.459 (0.260)	0.030 (0.008)	0.068 (0.018)	0.142 (0.196)
Deposit Bank Net Foreign Liabilities	-0.004 (0.001)	-0.003 (0.001)	-0.007 (0.006)	-0.010 (0.004)	0.000 (0.000)	0.000 (0.000)	-0.006 (0.003)
CB + GOV + DB Net For. Curr. Liabilities	0.001 (0.001)	0.000 (0.001)	-0.012 (0.004)	-0.003 (0.003)	0.0001 (0.00007)	0.0002 (0.0001)	-0.002 (0.002)
BOP Financial Account	-1.478 (0.118)	-0.963 (0.138)	-1.536 (0.540)	-1.419 (0.521)	-0.030 (0.015)	0.035 (0.029)	-1.007 (0.342)
BOP Net Debt Liabilities	-2.037 (0.130)	-1.405 (0.151)	-1.640 (0.629)	-3.725 (0.505)	-0.056 (0.015)	0.034 (0.027)	-2.478 (0.355)
BOP Net Equity Liabilities	-1.624 (0.482)	-0.634 (0.563)	1.525 (2.110)	2.229 (3.738)	-0.082 (0.190)	-0.425 (0.498)	-0.304 (1.695)

(*) All numbers are multiplied by 10⁴

Table 1.10^(*) (Weighted dependent variables, GDP Ratios)

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Net Portfolio Liabilities	-0.389 (0.209)	0.416 (0.217)	-1.350 (0.375)	0.425 (0.216)	0.004 (0.002)	0.006 (0.002)	-0.071 (0.030)
Net Portfolio Investment Position	-0.059 (0.155)	-0.055 (0.162)	-0.724 (0.139)	-0.060 (0.162)	0.006 (0.001)	0.007 (0.001)	0.018 (0.021)
Deposit Bank Net Foreign Liabilities	-0.579 (0.085)	-0.589 (0.088)	-1.232 (0.131)	-0.590 (0.088)	0.0018 (0.0006)	0.0025 (0.0007)	-0.048 (0.010)
CB + GOV + DB Net For. Curr. Liabilities	-0.1436 (0.0666)	-0.1515 (0.0684)	-0.507 (0.103)	-0.151 (0.068)	-0.001 (0.000)	-0.0002 (0.0005)	-0.015 (0.008)
BOP Financial Account	-0.199 (0.086)	-0.200 (0.088)	-0.309 (0.136)	-0.199 (0.088)	0.002 (0.001)	0.002 (0.001)	0.002 (0.010)
BOP Net Debt Liabilities	-1.852 (0.595)	-2.100 (0.614)	-5.619 (1.973)	-2.033 (0.617)	0.028 (0.009)	0.025 (0.010)	-0.067 (0.022)
BOP Net Equity Liabilities	-0.164 (0.265)	-0.113 (0.274)	-1.318 (0.440)	-0.108 (0.274)	0.007 (0.002)	0.009 (0.002)	-0.007 (0.038)

(*) All numbers are multiplied by 10⁴

Table 1.11^(*) (Weighted dependent variables, deflated by CPI)

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
BOP Net Portfolio Liabilities	-5.473 (0.888)	-5.567 (0.914)	-3.103 (1.494)	-5.571 (0.912)	0.022 (0.006)	0.026 (0.007)	-0.576 (0.109)
Net Portfolio Investment Position	-1.555 (0.351)	-1.522 (0.372)	-2.608 (0.373)	-1.535 (0.371)	0.008 (0.002)	0.010 (0.003)	0.002 (0.052)
Deposit Bank Net Foreign Liabilities	-0.011 (0.006)	-0.014 (0.006)	-0.101 (0.008)	-0.014 (0.006)	-0.00001 (0.00004)	0.00009 (0.00004)	-0.006 (0.001)
CB + GOV + DB Net For. Curr. Liabilities	-0.016 (0.001)	-0.017 (0.001)	-0.027 (0.002)	-0.018 (0.001)	0.0001 (0.00001)	0.0001 (0.0000)	-0.003 (0.000)
BOP Financial Account	0.469 (0.347)	0.411 (0.356)	1.327 (0.543)	0.400 (0.356)	0.005 (0.002)	0.005 (0.003)	-0.053 (0.042)
BOP Net Debt Liabilities	-10.669 (2.577)	-10.545 (2.665)	-50.126 (12.216)	10.864 (2.674)	0.120 (0.049)	0.149 (0.055)	-0.337 (0.087)
BOP Net Equity Liabilities	-0.940 (1.294)	1.062 (1.338)	-1.015 (2.235)	1.028 (1.337)	-0.023 (0.010)	-0.030 (0.012)	-0.340 (0.186)

(*) All numbers are multiplied by 10⁴

Table 2.1

Independent Variables	Dependent Variables						
	ROE	ROA	ROI	GM	PTM	NPM	OM
quick ratio	2.26	1.02	0.33	0.06	6.76	3.96	2.02
	(0.71)	(0.15)	(3.21)	(0.04)	(1.61)	(1.47)	(2.39)
intercept	10.62	-2.21	-390.66	-0.99	26.39	-10.11	-27.53
	(4.86)	(1.04)	(339.92)	(0.29)	(11.31)	(9.30)	(51.56)
m2 / gdp	-68.31	21.60	321.96	14.37	230.14	170.82	0.00
	(45.01)	(9.16)	(2596.87)	(3.02)	(92.11)	(85.46)	0.00
current account deficit / gdp	-165.06	-20.09	0.00	-24.26	-258.62	-366.81	0.00
	(56.89)	(11.49)	0.00	(4.81)	(96.22)	(89.28)	0.00
budget deficit / gdp	-118.67	4.54	-2458.59	-15.09	-242.76	-126.29	0.00
	(31.13)	(6.29)	(2057.27)	(2.14)	(63.90)	(58.90)	0.00
lending rate	0.08	0.01	4.04	0.03	0.24	0.02	-2.12
	(0.06)	(0.01)	(4.78)	(0.00)	(0.13)	(0.12)	(1.31)
gdp growth	0.07	0.03	3.98	0.02	0.37	0.22	-0.52
	(0.11)	(0.02)	(15.44)	(0.01)	(0.24)	(0.22)	(2.49)
inflation	-0.10	-0.01	-3.64	-0.01	0.09	-0.18	3.47
	(0.04)	(0.01)	(2.77)	(0.00)	(0.08)	(0.08)	(2.43)
inflation(-1)	-0.02	0.00	7.95	-0.01	-0.06	-0.03	-1.96
	(0.02)	(0.00)	(2.49)	(0.00)	(0.04)	(0.03)	(1.57)
gdp growth(-1)	0.23	0.07	-2.36	-0.04	0.51	0.27	2.37
	(0.13)	(0.03)	(4.44)	(0.01)	(0.25)	(0.23)	(1.95)
m2 / gdp (-1)	-38.16	10.48	-807.76	-7.89	-234.63	-106.50	0.00
	(38.48)	(7.74)	(2689.35)	(2.54)	(84.88)	(78.16)	0.00
current account deficit / gdp (-1)	394.36	-1.78	0.00	5.98	343.66	303.68	0.00
	(76.53)	(15.90)	0.00	(5.65)	(153.29)	(142.07)	0.00
budget deficit / gdp (-1)	127.21	2.63	1007.02	0.32	-23.15	26.25	-225.72
	(24.81)	(5.12)	(2264.18)	(1.70)	(52.86)	(48.92)	(230.13)
dep. bank net foreign liabs/GDP	-149.03	-14.05	-1255.48	-2.15	-72.10	-37.04	0.00
	(20.68)	(4.03)	(1392.63)	(1.82)	(48.56)	(44.86)	0.00
Adjusted R_Squared	0.39723	0.396	0.394801	0.492204	0.4348836	0.431861	0.51152

Table 2.2 Non Weighted Regressions

Independent Variables	Dependent Variables						
	ROE	ROA	ROI	GM	PTM	NPM	OM
Quick Ratio	2.262 (0.714)	1.020 (0.149)	0.333 (3.206)	0.059 (0.043)	6.756 (1.609)	3.956 (1.471)	2.020 (2.395)
Current Ratio	-0.684 (0.528)	0.565 (0.108)	-3.125 (1.792)	0.078 (0.038)	7.168 (1.028)	4.706 (0.966)	6.334 (1.385)
Current Ratio (balance sheet)	0.159 (0.129)	0.004 (0.027)	2.556 (0.447)	-0.220 (0.061)	6.55456 (1.09284)	3.59950 (1.01323)	10.555 (1.503)
current ratio (balance sheet+ratio)	0.315 (0.130)	0.037 (0.028)	2.600 (0.462)	0.001 (0.007)	6.5975 (1.08980)	3.6360 (1.0108)	10.602 (1.496)
Short Term Debt / Assets	20.360 (7.742)	-5.963 (1.376)	138.125 (22.402)	-0.082 (0.042)	-59.238 (18.549)	-59.570 (16.179)	-8.010 (21.759)
Short Term Debt / Current A.	-0.535 (4.750)	-4.174 (0.834)	62.141 (13.270)	-0.080 (0.026)	-65.489 (8.330)	-59.449 (6.933)	-39.933 (10.990)
Long Term Debt / Assets	-12.083 (3.140)	-0.371 (0.544)	-52.086 (11.399)	0.012 (0.016)	15.381 (7.388)	1.561 (6.352)	36.120 (11.873)

Table 2.3 Weighted Regressions

Independent Variables	Dependent Variables						
	ROE	ROA	ROI	GM	PTM	NPM	OM
Quick Ratio	-0.021 (0.306)	1.050 (0.270)	-0.001 (0.043)	0.030 (0.007)	0.455 (0.168)	0.378 (0.151)	0.098 (0.049)
Current Ratio	-0.371 (0.219)	0.648 (0.195)	0.149 (0.030)	0.020 (0.005)	0.268 (0.122)	0.309 (0.108)	0.320 (0.032)
Current Ratio (balance sheet)	0.146 (0.168)	0.332 (0.150)	0.059 (0.024)	0.016 (0.004)	0.01098 (0.09328)	-0.01797 (0.08351)	0.157 (0.026)
current ratio (balance sheet+ratio)	-0.342 (0.221)	0.704 (0.196)	0.170 (0.030)	0.019 (0.005)	0.2545 (0.12219)	-0.2842 (0.1091)	0.321 (0.032)
Short Term Debt / Assets	1.106 (2.261)	-2.806 (2.030)	0.273 (0.321)	0.071 (0.054)	0.669 (1.256)	0.234 (1.125)	0.711 (0.365)
Short Term Debt / Current A.	0.439 (1.460)	-1.828 (1.310)	0.255 (0.207)	-0.108 (0.035)	1.383 (0.808)	0.395 (0.726)	0.259 (0.236)
Long Term Debt / Assets	1.355 (1.180)	-4.468 (1.039)	0.840 (0.162)	-0.049 (0.028)	-0.728 (0.655)	-0.913 (0.586)	0.319 (0.191)

Table 2.4 The Effects of Maturity Mismatches Before Financial Crisis on Profitability

Independent Variables	Dependent Variables											
	1 Year Before				2 Year Before				3 Year Before			
	ROE	ROA	GM	Dom. Credit	ROE	ROA	GM	Dom. Credit	ROE	ROA	GM	Dom. Credit
Quick Ratio	1.407 (6.083)	2.510 (1.323)	0.100 (0.021)	0.012 (0.020)	7.788 (3.922)	-0.525 (1.167)	0.091 (0.020)	-0.001 (0.004)	-0.863 (0.154)	-1.344 (1.237)	-0.073 (0.018)	0.000 (0.000)
Current Ratio	1.196 (5.774)	1.391 (0.978)	0.099 (0.019)	0.001 (0.015)	7.532 (2.749)	0.414 (0.848)	0.089 (0.019)	0.003 (0.004)	-0.653 (0.174)	-1.398 (0.209)	0.070 (0.019)	0.001 (0.000)
Current Ratio (balance sheet)	-0.605 (2.147)	0.013 (0.478)	11.216 (0.588)	0.009 (0.005)	7.160 (3.814)	0.738 (0.386)	12.986 (0.685)	0.004 (0.003)	0.062 (0.115)	0.005 (0.028)	-0.003 (0.089)	-0.001 (0.000)
current ratio (balance sheet+ratio)	10.432 (9.767)	2.031 (1.213)	0.103 (0.028)	0.005 (0.009)	6.364 (3.514)	0.014 (1.071)	0.085 (0.049)	0.156 (0.092)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Short Term Debt / Assets	-2.409 (0.329)	-0.290 (0.136)	-6.240 (1.967)	-0.619 (0.867)	-2.424 (3.929)	0.791 (1.217)	-6.857 (1.747)	0.884 (1.441)	0.886 (0.213)	8.570 (4.834)	6.967 (1.898)	-0.043 (0.106)
Short Term Debt / Current A.	-2.117 (0.280)	-0.254 (0.117)	-5.481 (1.694)	-2.302 (1.024)	1.916 (3.404)	0.027 (1.053)	-6.088 (1.496)	0.691 (1.251)	0.833 (0.202)	8.127 (4.574)	6.097 (1.635)	-0.030 (0.180)
Long Term Debt / Assets	0.068 (0.025)	-0.002 (0.007)	0.437 (0.087)	0.051 (0.080)	0.547 (0.173)	-0.036 (0.061)	0.240 (0.097)	0.001 (0.030)	-0.303 (0.060)	-0.477 (1.480)	0.308 (0.100)	-0.015 (0.035)

Table 2.5 Non Crisis, Non Weighted Regressions

Independent Variables	Dependent Variables						
	ROE	ROA	ROI	GM	PTM	NPM	OM
Quick Ratio	-0.562 (0.402)	0.037 (0.079)	-22.164 (4.340)	0.025 (0.029)	3.066 (1.124)	0.413 (1.018)	7.884 (2.098)
Current Ratio	-0.203 (0.298)	0.116 (0.059)	-6.421 (2.262)	0.002 (0.020)	2.262 (1.154)	0.093 (0.998)	3.137 (1.938)
Current Ratio (balance sheet)	0.206 (0.029)	0.009 (0.006)	0.362 (0.197)	-0.011 (0.014)	-1.29471 (1.24583)	-3.11033 (1.04518)	2.346 (0.549)
current ratio (balance sheet+ratio)	0.516 (0.100)	0.055 (0.019)	1.926 (0.387)	-0.001 (0.005)	-1.3080 (1.24573)	-3.1199 (1.0454)	2.359 (0.551)
Short Term Debt / Assets	55.177 (18.141)	26.949 (3.355)	-127.661 (51.757)	0.406 (0.054)	93.140 (25.259)	65.860 (26.302)	59.798 (20.381)
Short Term Debt / Current A.	-24.055 (5.935)	-1.654 (1.079)	-9.654 (3.894)	0.160 (0.021)	52.863 (15.367)	50.957 (15.654)	4.731 (1.454)
Long Term Debt / Assets	-12.224 (3.467)	-0.412 (0.600)	-8.394 (1.549)	-0.062 (0.009)	-47.753 (6.576)	-37.055 (6.273)	-5.502 (1.872)

Table 2.6 Non Crisis, Weighted Regressions

Independent Variables	Dependent Variables						
	ROE	ROA	ROI	GM	PTM	NPM	OM
Quick Ratio	0.318 (0.248)	0.626 (0.221)	-0.033 (0.035)	0.015 (0.006)	0.789 (0.132)	0.842 (0.116)	0.013 (0.040)
Current Ratio	-0.074 (0.185)	0.444 (0.165)	0.069 (0.026)	0.011 (0.004)	0.633 (0.098)	0.592 (0.087)	0.176 (0.029)
Current Ratio (balance sheet)	0.207 (0.141)	0.210 (0.126)	0.021 (0.020)	0.009 (0.003)	0.49202 (0.07415)	0.46381 (0.06597)	0.082 (0.022)
current ratio (balance sheet+ratio)	-0.052 (0.186)	0.481 (0.165)	0.083 (0.026)	0.010 (0.004)	0.6477 (0.09776)	0.6137 (0.0869)	0.175 (0.029)
Short Term Debt / Assets	1.060 (2.262)	-2.773 (2.031)	0.275 (0.321)	0.071 (0.054)	0.583 (1.256)	0.151 (1.125)	0.714 (0.365)
Short Term Debt / Current A.	0.418 (1.459)	-1.812 (1.310)	0.256 (0.207)	-0.108 (0.035)	1.344 (0.808)	0.359 (0.726)	0.259 (0.236)
Long Term Debt / Assets	2.463 (1.356)	-4.969 (1.198)	0.636 (0.190)	-0.075 (0.033)	2.978 (0.741)	2.648 (0.663)	-0.137 (0.221)

Table 3.1: Non Weighted, Overall Sample

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
E-R Volatility (\$)	-0.033 (0.012)	-0.009 (0.016)	0.050 (0.030)	0.113 (0.061)	-0.002 (0.002)	-0.004 (0.003)	0.002 (0.004)
E-R Volatility (\$, Euro, Yen equally weighted)	-1.199 (0.424)	-0.640 (0.591)	2.138 (1.477)	2.766 (2.261)	-0.034 (0.062)	0.129 (0.100)	0.040 (0.144)
E-R Volatility (\$, Euro, Yen, Region Adjusted)	-0.989 (0.429)	-0.513 (0.597)	2.252 (1.473)	3.123 (2.274)	-0.0529 (0.0630)	0.0940 (0.1010)	0.099 (0.147)
I-R Volatility (Lending Rates)	-0.0038 (0.0030)	-0.0046 (0.0041)	-0.010 (0.011)	-0.004 (0.016)	-0.0003 (0.0005)	-0.0003 (0.0007)	0.000 (0.001)
I-R Volatility (Deposit Rates)	0.343 (0.161)	0.144 (0.224)	-0.103 (0.592)	0.198 (0.857)	-0.054 (0.024)	-0.024 (0.038)	-0.023 (0.054)

Table 3.2: Weighted, Overall Sample

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
E-R Volatility (\$)	-0.006 (0.006)	-0.003 (0.009)	-0.030 (0.011)	-0.002 (0.009)	-0.001 (0.001)	0.000 (0.001)	0.002 (0.001)
E-R Volatility (\$, Euro, Yen equally weighted)	-0.141 (0.186)	-0.393 (0.258)	-1.119 (0.335)	-0.357 (0.257)	0.045 (0.016)	0.149 (0.039)	-0.019 (0.031)
E-R Volatility (\$, Euro, Yen, Region Adjusted)	-0.082 (0.187)	-0.331 (0.260)	-1.106 (0.336)	-0.296 (0.258)	0.0455 (0.0164)	0.1340 (0.0396)	0.023 (0.031)
I-R Volatility (Lending Rates)	-0.0062 (0.0024)	-0.0180 (0.0029)	-0.017 (0.004)	-0.019 (0.003)	-0.0009 (0.0002)	-0.0013 (0.0005)	0.0010 (0.0004)
I-R Volatility (Deposit Rates)	0.035 (0.088)	-0.068 (0.110)	0.009 (0.154)	-0.054 (0.109)	-0.025 (0.008)	0.023 (0.019)	-0.001 (0.015)

Table 3.3: Non Weighted, Non Crisis

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
E-R Volatility (\$)	0.003 (0.002)	0.006 (0.003)	0.008 (0.026)	0.014 (0.010)	0.0003 (0.0001)	0.001 (0.000)	-0.001 (0.000)
E-R Volatility (\$, Euro, Yen equally weighted)	0.172 (0.140)	0.278 (0.178)	1.049 (1.525)	0.695 (0.595)	0.015 (0.009)	0.039 (0.020)	-0.054 (0.023)
E-R Volatility (\$, Euro, Yen, Region Adjusted)	0.163 (0.140)	0.268 (0.178)	1.059 (1.532)	0.693 (0.600)	0.0149 (0.0087)	0.0343 (0.0204)	-0.052 (0.023)
I-R Volatility (Lending Rates)	0.0057 (0.0028)	0.0027 (0.0037)	0.030 (0.032)	0.017 (0.012)	0.0002 (0.0002)	0.0010 (0.0004)	-0.002 (0.001)
I-R Volatility (Deposit Rates)	0.369 (0.130)	0.280 (0.168)	2.185 (1.438)	0.901 (0.547)	0.003 (0.008)	0.063 (0.018)	-0.083 (0.022)

Table 3.4: Weighted, Non Crisis

Independent Variables	Dependent Variables						
	quick ratio	current ratio	current ratio (balance sheet)	current ratio (balance sheet+ratio)	short term debt / assets	short term debt / current assets	long term debt / assets
E-R Volatility (\$)	-0.036 (0.007)	-0.062 (0.010)	-0.089 (0.012)	-0.061 (0.010)	-0.001 (0.001)	0.002 (0.001)	-0.004 (0.001)
E-R Volatility (\$, Euro, Yen equally weighted)	-0.376 (0.229)	-0.965 (0.304)	-1.686 (0.395)	-0.929 (0.303)	0.053 (0.016)	0.086 (0.039)	-0.029 (0.032)
E-R Volatility (\$, Euro, Yen, Region Adjusted)	-0.340 (0.230)	-0.922 (0.305)	-1.694 (0.397)	-0.887 (0.305)	0.0530 (0.0162)	0.0727 (0.0391)	-0.035 (0.032)
I-R Volatility (Lending Rates)	-0.0087 (0.0029)	-0.0205 (0.0039)	-0.020 (0.005)	-0.021 (0.004)	-0.001 (0.000)	0.0000 (0.0005)	-0.0012 (0.0004)
I-R Volatility (Deposit Rates)	-0.158 (0.107)	-0.213 (0.145)	-0.128 (0.193)	-0.198 (0.145)	-0.026 (0.008)	0.007 (0.019)	-0.025 (0.015)