GRADUATE SCHOOL OF ECONOMICS (EPGE)
GETULIO VARGAS FOUNDATION (FGV)

DEBT COMPOSITION AND BALANCE SHEET EFFECTS OF EXCHANGE AND INTEREST RATE VOLATILITY IN BRAZIL: A FIRM LEVEL ANALYSIS

MARCO BONOMO BETINA MARTINS

MAY 9TH, 2003

1. Introduction

The macroeconomic environment interacts with the firms' balance sheet structure in a two-way relation. On one hand the macroeconomic environment is central in shaping the capital markets, determining what kind of contracts are feasible and enforceable. Moreover, it also affects the incentives faced by firms when selecting its financial contracts. Conversely, the firms' balance sheet structure affects crucially the result of macroeconomic policies, influencing policymakers' choices of regimes and policy rules. In this paper we study how this interaction evolved in Brazil since 1990. In order to analyze the balance sheet effects properly we need to use a panel data set with firm level variables.

In Brazil, the macroeconomic environment changed drastically in the last 12 years. The first important change was the trade liberalization, which occurred in the early 1990's. Simultaneously, there was a financial liberalization, which increased the access of Brazilian firms to foreign liabilities. The Real plan in 1994 also contributed to unveil the new incentives. Furthermore, the end of high inflation contributed for the strengthening of credit relations and for the lengthening of debt maturities. This first period of stabilization (1994-1998) was characterized by low volatility of the exchange rate, which was kept almost fixed in real terms. Of course, this had a counterpart in high interest rate volatility. In the beginning of 1999 the exchange rate was allowed to float. This change of exchange rate regime was complemented by the adoption of an inflation targeting monetary regime. As a result, exchange rate became very volatile while interest rate policy became focused on bringing inflation to target.

The first set of interesting questions we tackle concerns how the macroeconomic environment affects the balance sheet structure. How did the balance sheet structure change from high inflation period before the Real plan to the first period of Real plan, when exchange rate was under a crawling peg? Did the subsequent regime of free-floating exchange rates and inflation targeting induced a different balance sheet structure? How the capital markets development were influenced by the macroeconomic environment in the last decade?

The second set of questions is related to the balance sheet effects of macroeconomic policy. What were the balance sheet effects of interest rates before the Real plan and after the Real plan when exchange rates were pegged? What were the effects of exchange rate and interest rates in the free-floating exchange rate and inflation-targeting regime? What were the balance sheet effects of exchange rate in each one of the three periods?

Those are the more general questions we would like to answer. In order to answer those questions is necessary to tackle a larger set of specific questions related to the investigation of the determinants of firms' liability composition and balance sheet effects. The latter issue has been explored recently in the literature.

It has been argued that a devaluation of exchange rate might reduce economic activity because the financial situation of dollar-indebted firms could deteriorate (Aghion, Bacchetta and Banerjee, 2001). Additionally, the existence of imported inputs could also be an extra channel for a contractionary effect (Reif, 2001). Both effects could offset the traditional competitiveness effect, according to which exchange rate devaluations are expansionary.

Bleakley and Cowan (2002) and Forbes (2002) tested the empirical relevance of those effects. The former work used a panel data for over 500 non-financial firms in five Latin American countries, dominated by Brazilian firms (52,5% of the observations). They found that holding foreign-currency denominated debt was associated with more investment during exchange rate devaluations, contrary to the predicted sign. On the other hand, Forbes (2002) found that more

indebted firms had lower net income growth after a large depreciation. Although she used a larger sample of countries, she only examined large depreciations.

Another balance sheet effect could result from an increase in interest rate, because firms with a relatively large magnitude of short-term debt would have a reduction in their cash flow. Balance sheet effect of interest rates is the focus of the credit channel literature. According to this literature, capital market imperfections create a wedge between internal and external finance. As a consequence, variables related to the availability of internal funds and collateral as cash flow and net worth become an important determinant of investment. An increase in interest rate can lead to the deterioration of the financial situation of firms with more fragile financial condition, augmenting the contractionary impact of interest rates due to the traditional channel (see Bernanke, Gertler and Gilchrist , 1998).

As a consequence, both exchange rate and interest rate balance sheet effects depend on the importance of capital market imperfections. At firm level, investment is the candidate variable potentially more influenced by balance sheet effects. Balance sheet effects might additionally affect production. Since this variable was not available, we chose sales, which is somewhat related, as our second variable. The specific balance sheet effects, related to exchange rate variation or interest rates, should all affect the firm through cash flow deterioration. For that reason, we also single out firms' cash flow as our third dependent variable.

We do several tests for the balance sheet effect. First we tested the same equation as Bleakley and Cowan (2002), and we found a significant negative effect of firm's dollar indebtedness on investment when exchange rate is devalued. We then test a different specification based on the credit channel tradition. Our results provide evidence for both imperfect capital markets and for the existence of balance sheet effects of exchange rate and interest rate. Both imperfect capital markets and substantial firms' indebtedness are necessary conditions for balance sheet effects. The evidence for capital market imperfections is stronger in the first subperiod (1990-1994). However, this period was characterized by high inflation and low financial intermediation. The evidence of balance sheet effects is concentrated in the subperiod of free-floating exchange rate and inflation targeting (1999-2001). This is not surprising when we take into account that in this period financial intermediation was higher and exchange rate fluctuations more important.

We proceed as follows. In the next section we describe our database. In section 3, we study the determinants of the balance sheet structure in Brazil in the last 12 years. In section 4, we investigate the existence of balance sheet effects in Brazil through dynamic panel data estimations using firm level data. The last section concludes.

2. Database Description

This section describes the sample and variables under study. Our main data consists of firm-level accounting information for Brazilian non-financial corporations and country-level data, organized as a panel data set. The time period under investigation ranges from 1990 to 2001, with yearly observations[1].

Balance-sheet data are taken from Economática for publicly traded companies. Additionally, we have data describing the firm's ownership structure and reported ADR issues collected from CVM, as well as measures of export orientation (exports/production) and imported inputs at industry level obtained at the FUNCEX.

In Table 1 we report the number of observations in the sample per year and the annual descriptive statistics for the variables (and its interactions) under estimation. The sample size changes through the years as new firms are listed and incorporated in the dataset and bankrupt firms are not removed from the sample. We drop observations that have an absolute value of the z-score (calculated with the variable mean and standard deviation) greater than three.

Our main dependent variables are *Investment*, measured as the change in net property and equipment[2], *Total Sales* and *Cash Flow*. During the estimation procedure, all firm variables were calculated as ratios to capital stock measured as the net property and equipment at the beginning of the year. In the appendix we describe all the variables used in detail.

3. Macroeconomic Environment and Balance Sheet Structure

In this section we study how the macroeconomic environment affected the balance sheet structure in Brazil. We start by describing those changes in the first subsection. We then investigate empirically the determinants of firms' liability structure, in the subsequent subsection.

3.1 Recent Macroeconomic Reforms in Brazil

The reforms in Brazil changed substantially the macroeconomic environment. This should affect incentives involving firms' decisions about how to finance their activities, and specially investment. As the equity market in Brazil remained in the whole period as a marginal source of funds, the sources of funds for investment were either retained profits or debt. Given the high level of interest rates, and the scarcity of long-term loans caused by the macroeconomic instability, the internal source was presumably very important, specially before the stabilization. As for the determinants of debt denomination and maturity, the availability of external sources, the uncertainty about future exchange rates, interest rates, and inflation, all should affect the ratio of dollar-debt and long-term debt.

In the early nineties tariffs were substantially reduced, with average nominal tariff plunging from 39.6% in 1988 to 11.2% in 1994. Trade liberalization should make firm performance more sensitive to exchange rate – competitive effect becomes more important. There was also an

[1] Quarterly accounting numbers and monthly market variables are available and used in the construction of some variables.

[2] We used the price index of investment available in the PWT (Penn World Table) to deflate investment.

important financial liberalization that gave firms more access to foreign assets and liabilities. Financial liberalization should make financial flows more sensitive to both interest and exchange rates. However, macroeconomic instability was still responsible for a reduced supply of foreign and domestic long-term credit.

In 1994, the Real plan succeeded in finishing the chronic inflation process. Brazil has had one of the world's longest high inflation processes. Long-term debt and financial assets practically disappeared, and even shorter-term financial instruments became indexed to the inflation rate or to the daily interest rate. Firms' financial structure changed accordingly due to both new incentives provided by the low inflation environment, and to new financial regulation, which outlawed indexation on short-run contracts. Inflation stabilization increased debt maturity and reduced indexation. When uncertainty about the sustainability of the crawling-peg exchange rate regime increased, firms started to hedge against the exchange rate devaluation risk.

In January 1999, exchange rate has been allowed to float. As a result exchange rate became much more volatile and interest rate became less volatile. This was coupled with an inflation-targeting regime.

In this environment firms would have more incentive to bear interest rate risk and to hedge exchange rate risk. On the other hand, with the free-floating regime, the risk of adoption of capital controls was reduced, what stimulated further the supply of foreign credit.

An important issue is that the balance sheet effects should depend on how firms hedge their debt. Some firms may hedge totally their dollar debt, while others hedge only partially or do not hedge at all (see for example a news report - O Globo, 06/23/2002). This will affect substantially the way the amount of dollar debt influences the effect of devaluation at firm level, since only the amount that is not hedged should be relevant. In Brazil, firms have often hedged their dollar liabilities against exchange rate fluctuations and there are several instruments for that available in the Brazilian economy, such as exchange rate futures contracts, dollar indexed government bonds, swaps, dollar currency, foreign assets, etc. In the recent period, a frequent hedging mechanism for firms is to buy swaps between dollar-indexed payments and interests in domestic currency from banks. This mechanism is preferred because banks make tailor-made contracts according to the firm necessity. Banks do not run exchange rate risk because they can buy dollar indexed government bonds. Thus, in net terms, government provided hedge to firms, with banks' intermediation.

3.2 Analysis of the debt composition

In this section we investigate the determinants of debt composition, paying special attention to the macroeconomic environment. First, we digress about the factors that should affect the debt composition. Then, we test some of our hypothesis.

3.2.1 Considerations about the determinants of debt composition

With imperfect capital markets, supply of funds can be as important determinant of the debt composition as demand. In particular the availability of external funds would depend on the liquidity of the international capital markets and on the international assessment of the country

risk. Thus, the foreign supply of external debt was a very important determinant of the dollar debt.

The same was true about the domestic long-run debt. In Brazil, because of the macroeconomic instability there is no private supply of long-run debt for investment. The main provider of long-term loans is the Brazilian National Development Bank (BNDES). The interest rates charged on those loans is much more stable than the market rates.

As for the demand of loans, one could think in a natural segmentation between short-term and long-term depending on its use. First one should try to match the maturities in order to reduce risk. Thus, if it is long-term investment, one should try to get long-term loans with fixed real interest rates because this would reduce its risk. If it is for working capital, one should get short-term loans. Although considerations of risk lead to a natural segmentation, important differences in costs or shortage of the desired type of loan could lead to mismatch.

The external funds are presumably more risky because of the exchange rate variation. The incentive to borrow in external currency would come either from the unavailability of domestic funds, as often happens for long-run loans, or from its lower cost. Even in this case, the use of the loan should play a role. External loans are less risky if it is for investment in export activities. It is also attractive if it is used to import inputs, since those have their prices set in dollars. Other consideration that should matter is the firm's ownership. An external loan is less risky in the perspective of a foreign share holder, since she has presumably other assets in dollars. Thus, a foreign loan should be more attractive for a foreign owned firm.

Finally, given the high level of interest rates, and the scarcity of long-term loans caused by the macroeconomic instability, the firms' internal savings was presumably a very important source of funds for investment, especially before the stabilization.

3.2.2 Empirical analysis of the debt composition

In Table 3 we show the evolution of the debt structure of firms in our sample. The proportion of debt in total assets increased in the sample period from 16.6% in 1990 to 21.8% in 2001, indicating that there was a reduction in financial repression during the period. The proportion of long-term debt also increased from 37.7 to 46.8%, in the same period. The substantial structural reduction in inflation and financial openness should have contributed for both increases. Those factors also led to a large increase of dollar-debt participation, from 37.7% in 1993 to 62.0% in 2001. The participation of foreign currency increased in both short and long-term debt. The proportion of long-term debt also increased both in the local currency and dollar debt. Thus, it is clear in the data that the lengthening of debt maturities and debt internationalization were a marked feature of the last decade.

In order to investigate the factors determining such changes, we estimate equations for the ratio of long-term debt D_{LT} over total debt D_T, and of dollar-debt D_{FC} over total debt. We estimated the following equation:

$$\ln\left(\frac{r_{it}}{1-r_{it}}\right) = c + a \cdot m_t + b \cdot f_{it} + e_{it}$$

where r_{it} is a debt ratio, m_t's are variables capturing the macroeconomic environment and f_{it}'s are firms' individual features. We also ran a dynamic version of this model, including the lagged dependent variable.

Alternatively we ran a TOBIT version with the dependent variable being the ratios in levels. Naturally, because the ratios are always between 0 and 1, the truncation values where 0 and 1. The TOBIT model is an appealing specification when the range bounds have a relatively large proportion of observations. We checked that this is the case in our sample for the ratio variables.

Table 4 reports the results for the ratio of long-term debt. We start by running OLS regressions with cluster-adjusted standard errors. First we use dummies for the subperiods we chose as a way of capturing the difference in macroeconomic environment. Since the sample goes from 1990 to 2001, the coefficients of 90-94 and 99-01 subperiod dummies represent the difference effect on the participation of long-term loans. There is a statistically significant increase in the proportion of long-term loans in the last subperiod, which corresponds to the free-floating inflation targeting regime.

Then, we use macroeconomic volatilities in the place of subperiod dummies. The volatility of interest rates affects more substantially firms with large proportion of short-term debt. Thus, a higher volatility of interest rates should induce an increase in the proportion of long-term debt. On the other hand inflation volatility should affect more firms with higher proportion of long-term debt. As a consequence, an increase of inflation volatility should decrease the proportion of long-term debt. Those results verified in OLS regressions we ran, in the second column. The coefficients have the right sign and are statistically significant at 1%. Additionally, factors that affect the demand for foreign loans should also affect the demand for long-term debt, since the market for domestic long-term debt is very small. Then the volatilities of real exchange rate and the volatility of the change of real interest rate are included. A higher volatility of the real exchange rate is associated with the free-floating regime, which has a lower frontier risk, which should have a positive influence on the supply of foreign loans. The real devaluation of the exchange rate is a component of the real cost of dollar-debt, and its higher volatility should affect the demand side negatively. The coefficients of those volatilities have the right sign but only the coefficient of the volatility of the real exchange rate is statistically significant at 10%. The individual features we use as explanatory variables are size, as measured by the total assets, a dummy indicating if the firm has issued American Depositary Receipts (ADR), a dummy for tradable activity, and a dummy for foreign ownership. The results indicate that larger firms and firms that had issued ADR's have a higher proportion of long-term debt (both significant at 1%), which was the expected result. Firms performing tradable activities have lower proportion of long-term asset (significant at 1%), and foreign ownership does not seem to influence the debt maturity. When try to capture the macroeconomic effects through the use of year dummies, the firm specific effects are unchanged. The values of the time dummies suggest a different classification of periods: a first period with relatively higher proportion of long-term loans before the stabilization (1990-1993), a second period with relatively lower proportion of long-term loans (1994-1996) and a latter period with a recovery of the proportion of long-term loans (1997-2001). When we run within groups' regression to take care of possible fixed effects (in column 3), all macroeconomic volatility coefficients cease from being statistically different from zero.

Then, we experiment with a dynamic specification by including the dependent variable lagged once as an explanatory variable. The coefficient of the lagged dependent value is around 0.4 in all estimations and highly significant. We use GMM difference and system estimators. First we use the period dummies specification. The sign of the recent period dummy changed, but became statistically insignificant. Then, we experimented using year dummies, instead of the period dummies. An increasing pattern results from the system estimator, while the difference GMM estimates for the dummies coefficients increase until 1997 and decrease afterwards. The size variable became insignificant.

Finally we use a Tobit model on the ratio starting by the specification which has the period dummies and the individual features. The period dummies are both positive and significant, indicating that a relatively higher proportion of long-term for the first and last subperiods. The results for the coefficient of individual characteristics are similar to those obtained in the OLS model.

We perform the same regressions changing the dependent variable for proportion of foreign debt. The results are presented in Table 5. The subperiod dummies are significantly negative for the first subperiod and positive for the second. This indicates that the macroeconomic environment improved from the first subperiod to the second, and from the second subperiod to the third. This should reflect the reduction in risk assessed by the foreign credit suppliers first when inflation was stabilized, and then when the floating exchange-rate/inflation-targeting regime was adopted. We then use macro volatilities to further assess the impact of the macroeconomic environment. A higher volatility of inflation is again associated with a lower proportion of foreign debt. This result can be rationalized only if we consider that the amount of foreign debt is determined mainly by the supply side. Thus, as the volatility of inflation is associated with larger macroeconomic instability, the supply of foreign credit to Brazil is increased when inflation becomes less volatile. The proportion of dollar debt is again positively related to the volatility of real exchange rate, what can be justified by the effect of the lower frontier risk associated with the floating exchange rate regime affecting the supply of credit. It is also negatively related to the volatility of the real devaluation of the exchange rate, which affects the debtor risk and reduces its demand. As expected, the fact that the firm had issued an ADR affects positively the proportion of foreign debt, what is probably a supply side effect. The volatility of interest rate is insignificant. The variables size, and the tradable and foreign ownership dummies are all statistically insignificant. The within-group estimation does not change the results. When we use year dummies, the results are unchanged. The estimated coefficients are higher for more recent years.

When we use the dynamic specification, the lagged variable is not statistically significant. Thus, it is not surprising that the results for the subperiod dummies are kept. When we use year dummies the results for the GMM system are in line with those obtained in the OLS regressions.

When we use the Tobit model, the volatily and alternatively the subperiod dummies estimates are qualitatively similar. The main change is that the size and tradable variable becomes negative and significantly different from zero, which was not predictable. The pattern of the time dummies is a bit changed, but the main trait is maintained; that is, more recent coefficients tend to be larger.

On the whole the results for the share of foreign currency loans are more robust than the ones for the share of long-term loans.

4. Debt Composition and Balance Sheet Effects of Interest Rate and Exchange Rate

Bleakley and Cowan (2002) found that the balance sheet effect of exchange rate devaluation has a sign different than expected in a sample where more than half of observations were due to Brazilian firms. We intend to investigate this result by running different specifications of the investment equation. However, we start by running again the same regressions in a sample containing only Brazilian firms in order to see if their results are reproduced.

4.1 Bleakley and Cowan regressions

We ran the following version of Bleakley and Cowan's (2002) regression:

$$I_{it} = c + a D^{FC}_{it-1} \cdot \Delta \ln(RER)_t + \Delta \ln(RER)_t +$$

$$+ a_f D^{FC}_{it-1} + a_T D^{T}_{it-1} + e_{it}$$

where I_{it} is the firm's investment.

We report our results in Table 6. We run OLS and within-group regressions. We find the expected negative sign for the interaction effect for most specifications, capturing a negative balance sheet effect of devaluation. Moreover this effect becomes statistically significant at 1% level in the within-groups regression. When we add the interaction of exchange rate devaluation with sector imports and exports, that main effect continues significant at 1% level. The direct effect of the real exchange rate devaluation is itself positive and statistically significant for all four regressions. Our total debt effect is negative as theirs, but, it is significant only in the within-gorup regression for the specification that includes interaction with exports and imports. The dollar-debt direct effect is positive and statistically significant (at least at 10%), as Bleakley and Cowan found. The interaction effect of imports has the expected negative sign, but is not statistically significant. The one with exports has the same negative sign, and has even higher p-values.

We also experiment with a dynamic version of Bleakley and Cowan's specification by adding the lagged investment as one of the explanatory variables. First we estimate by OLS, within-groups, GMM-difference and GMM-system regressions the basic equation without interaction with exports and imports. The coefficients of the lagged dependent variable in OLS and within-group estimation are negative, small, statistically significant, and almost identical. This same coefficient has the same value at the GMM system estimation but has slightly larger value for the GMM difference estimation. In fact, the GMM system results are almost identical to the ones generated by the within-groups estimation method. However, none of the GMM's pass the Sargan test. When we add exports and imports, the external debt becomes negative (and significant for the GMM difference method), the domestic debt positive (and statistically significant at 10%). But the GMM system estimates for the exchange rate interaction with the dollar debt, and with imports continue to be negative and statistically significant (the former at 5% and the latter at 10%). In the GMM difference results the interaction term changes sign for dollar debt and ceases to be statistically significant in both cases. However, only the GMM difference estimation for this specification passes the Sargan test. We have in the appendix the same regressions having sales as a dependent variable (see Table A.1). The results change completely and none of the variables is significantly different from zero.

It is possible to speculate why our results are different from those of Bleakley and Cowan. First, our sample is different from theirs, since it contains only Brazilian firms and three more years of data (1990, 2000 and 2001). Second, our variables are normalized by capital stock (K), what makes them stationary. Third, we used within-group estimators to take into account firm specific effects, since in this case OLS estimators are biased upwards.

4.2 An alternative investment specification

Bleakley and Cowan's specification are subject to some criticism. Although the exchange rate variable related to the balance sheet effect should be the real exchange rate devaluation, the competitiveness effect should influence investment through the level of multilateral real exchange rate. However, the multilateral exchange rate is highly correlated with the real exchange rate[3]. Hence, what matters most in the remark we made is the difference between level and devaluation rate. Thus, not only their results are reverted in our estimation, but also their interpretation of their positive interaction sign is questionable, since they attribute it to the prevalence of the substitution effect.

The balance-sheet effect should affect firms' investment when market imperfections create a wedge between the cost of internal and external finance. With perfect capital markets investment is determined only by its prospective rate of return compared with its financial opportunity cost.

When capital markets are imperfect firms it becomes cheaper to use internal sources to invest and the wedge between internal and external cost of finance may depend on the value of their collateral. In extreme conditions, internal finance may be the only source of funds for investing. As a result of imperfect capital markets, investment becomes sensitive to variables representing the financial condition of the firm, as cash flow and net worth. We start by testing the sensitiveness of investment to cash flow. Since the cash flow should be affected by the exchange rate balance sheet effect and by the interest rate balance sheet effect, and in this first specification we decided not to include those variables. We estimate the following dynamic specification for investment

$$I_{it} = c + I_{it-1} + \alpha_i r_{it} + \alpha_c CF_{it-1} + \alpha_e e_t E_{it} + \alpha_i e_t I_{it} + \varepsilon_{it}$$

where r_{it} is the firm's financial cost, CF_{it} the cash flow, e_t the multilateral real exchange rate.

In this specification, r_{it} intends to capture the firm's opportunity or financial cost, the multilateral exchange rate influences its profitability through the substitution effect interacting with exports or imports, and the cash flow captures market imperfection.

Table 7 reports the results with the macroeconomic environment being captured alternatively by the period dummies or by the year dummies. The cash flow has the expected positive sign in the GMM specifications, becoming significant at 10% in the GMM difference estimation. None of the other coefficients of firm variables were statistically significant. The user cost, the imports and exports interactions coefficients alternate signs. When we added the cash flow lagged twice, following Ferrua and Meneses (2002), we reduce the p-value of the cash-flow lagged once, while also obtaining a positive coefficient for the cash flow lagged twice. In this specification, the user cost's coefficient in the GMM estimations become negative, although not yet significant. Thus this equation suggests that capital markets are imperfect in Brazil. The estimated coefficient for the lagged dependent variable satisfy Bond's rule of thumb according to which it should be between the OLS and the within-group estimate only for the GMM system specification.

We experiment with interactions between cash flow and exchange rate devaluation in Table 8. The coefficients for the two lags have opposite signs. Then, we test if the interaction between the dollar debt and real exchange rate devaluation depends on firm's cash flow. One would expect that firms with lower cash flow should have stronger negative effect of devaluation. Then we would expect a positive sign for the interaction coefficient. However, we found a negative sign, although non-significant.

[3]The correlation between the two real exchange rates was 0,911 for the period under study.

In Table 9 we test directly the exchange rate and interest rate balance sheet effects. We use year dummies to control for macroeconomic effects. Instead of including cash flow as an explanatory variable, we include the interactions between real exchange rate depreciation and dollar debt and between (log of) real interest rate and debt in local currency. The real exchange rate depreciation interaction has the expected negative sign in all specifications other than the OLS, but it is not significant. The interest rate interaction sign depends on the equation, although it is always not significant. We experiment with a proxy for the cost of external debt, by summing the US Treasury bond rate, the Brazilian risk to the real devaluation rate. We interact the dollar debt with this proxy, instead of interacting it with the real devaluation rate. The results do not change. Again, the estimated coefficient for the lagged dependent variable satisfy Bond's rule of thumb only for the GMM system specification.

In Table 10 we test for non-linear exchange rate balance sheet effect by adding an interaction between the dollar debt and square of the exchange rate real devaluation. In the GMM estimation the signs of this term are negative, indicating that an exchange rate devaluation has a larger contractionary effect on investment than the expansionary effect of an equivalent exchange rate appreciation. However, while the linear term interaction term has the expected negative sign and is statistically significant in the GMM system estimation, the quadratic term is never significant.

Since the balance sheet effect should be more important for short-run debt, we estimate an investment equation where the interaction terms are split between short and long-term debts (Table 11). Thus, we found, using the GMM-system estimation method, that interactions involving short-term local and foreign currency debt and long-term local currency debt are all always negative. Furthermore, the short-term foreign currency and the long-term local currency interaction terms tend to be significant in most specifications. Thus, only the long-term foreign currency term alternates signs. This could be explained because mainly financially strong firms should have access to long-term foreign capital markets. And those firms should be the less vulnerable to the balance sheet effect of exchange rate devaluation. The results change for the GMM difference, but the GMM system estimates are the only ones that satisfy Bond's rule of thumb. We conclude that some further evidence is found for the balance sheet in this more detailed specification.

Finally, we investigate the relation between the exchange and interest rates balance sheet effects and cash flows. In Tables 12 and 13 we have a dynamic specification with two lags for firms' cash flows. We investigate how the interaction terms relate to cash flows. In Table 10 the debt is split only in local currency and dollar debt. The dollar debt interaction coefficients are always negative and statistically significant in the GMM system estimations. The local debt interaction term alternates signs. When we further subdivide the each debt denomination in short and long-term, the results worsen. Although almost all interaction terms tend to be significant, the only negative coefficient is that of the interaction between long-term debt and real exchange rate depreciation.

4.3 Were the effects modified by the structural changes in Brazilian economy?

The main question in this subsection is if the effects of exchange rate and interest rates were affected by two important macroeconomic reforms: the Real Plan, in 1994, and the change in exchange rate and monetary regime, in 1999. The other question is if the model fitness improves if we assume different coefficients for the subperiod. For that we take the period of 1995 to 1998

as our basis period and use dummies for the high inflation (1990-1994) and floating exchange rate (1999-2001) subperiods interacting with the explanatory variables.

Table 14 presents the results for the investment equations, which include cash flow as explanatory variable. Cash flow was more important to explain investment in the 1990-1994 and 1999-2001 periods, since the interaction between the cash flow variable with those periods dummies tend to be positive.

In Table 15 we investigate how exchange rate and interest rate balance sheet effects change in each subperiod. We report the specification with firm level controls[4]. If there is a negative balance sheet effect of exchange depreciation, this could be captured only for the last subperiod. The coefficient of the exchange rate interaction term without dummy, which corresponds to the 1995-1998 subperiod, is positive and statistically significant for the GMM system estimation. The coefficient of the interaction term multiplied by the 1999-2001 dummy variable is negative and with larger magnitude than that of the base period, and statistically significant when firm level controls are used. Interestingly, the coefficient for the basis period for the interaction between local currency debt and interest rates is also positive, but the interaction with the dummy for the most recent period is negative and with a larger magnitude than that, although none of them are statistically significant. However, there is strong evidence for the interest balance sheet effect in the first subperiod, which is consistent with view that capital markets were less developed in this subperiod.

When we try to investigate more specific effects of interaction of short and long-term debt (Table 16), we don't find a clear pattern in the results, possibly because there is overfitting due to the excess of explanatory variables.

4.4 Can we capture the effect of hedge?

Since it is plausibly argued that the balance sheet effect is not as strong because an important part of firms are hedged against exchange rate variations, we decided to investigate the issue by constructing a hedge variable[5]. We calculate for each year and for each firm which holds dollar debt, the correlation between the financial income (normalized by capital stock) and the variation in the real exchange rate depreciation. When the firm is not hedged, this covariance should be negative, but when it is hedged this covariance should be close to zero. We set the dummy to 1 (not hedged) whenever the correlation was smaller than –0.2.

The coefficient of the interaction variable multiplied by the hedge should be negative, since this represents the additional effect in firms that are not hedged. However, we found that this coefficient is positive and statistically significant at 1% level (Table 17), meaning that the "unhedged" firms are the ones responsible for the exchange rate balance sheet effect. We perform a further test in our hedge variable by testing the same specification with cash flow as a dependent variable. This time we found a negative and significant coefficient for our variable (Table 18).

[4] The other specifications generated several implausibly large coefficient estimates, which seems to be an evidence of multicolinearity. Those results are reported in the appendix.

[5] The value of firms' hedge is not directly available from our sources. The proportion of dollar debt hedged is sometimes reported in a note under the published balance sheet, what makes difficult to adopt a general procedure for collecting this information.

5. Conclusion

We used firm level data to investigate balance sheet effects of exchange rate and interest rates in the Brazilian economy. There is some evidence of a balance sheet effect of exchange rate depreciation, contrary to what was found by Bleakey and Cowan (2002). This evidence is consistent with the imperfection of capital markets, which makes investment positively related to cash flows. The evidence of exchange rate balance sheet effect is concentrated mainly in the 1999-2001 subperiod, while the evidence for the interest balance sheet effect is concentrated in the first subperiod.

We can speculate about the reasons for a weak exchange rate balance sheet effect taking into account the difference of results in subperiods, and the recent macroeconomic history in Brazil. Before 1994, when inflation was high, capital markets were less developed. Then, the potential for balance sheet effects was high. However, external financial intermediation was low due to high inflation, and exchange rates were following a stable crawling peg. From 1995 to 1998, financial intermediation increased but again there was no sizeable variation in the real exchange rate. From 1999 to 2001, exchange rates were floating, and our subperiod analysis suggests that the negative effect comes to that part of the sample. In fact, this helps to explain the difference between our results and those of Bleakley and Cowan (2002). We have two years more of data in that subperiod, when the number of firms were also higher than average.

As for the interest rate balance sheet effect, volatility of real interest rate was much higher in the first subperiod, decreasing substantial after that, as shown in Figure 1. Before the inflation stabilization, there was also little supply of external loans and long-term domestic loans. As a consequence the proportion of short-term local currency debt was at its peak, decreasing steadily afterwards, as shown in Table 3. Those factors taken together contributed for an important interest rate balance sheet effect only in the first subperiod.

References

Aghion, P., Bacchetta, P. and Banerjee, A. 2001. “Currency Crises and Monetary Policy in an Economy with Credit Constraints”. European Economic Review. 45 (7): 1121-1150.

Bernanke, B., Gertler, M. and Gilchrist, S. 1998. “The financial accelerator in a quantitative business cycle framework”. NBER Working Paper 6455.

Bleakley, H. and Cowan, K. 2002. “Corporate dollar debt and devaluations: Much ado about nothing?”. Mimeo. MIT.

Ferrua Neto, L. and Menezes Filho, N. 2002. “Irreversibilidade de Custos e Decisões de Investimento das Firmas Brasileiras. In: *Anais do Encontro Brasileiro de Econometria*

Forbes, K. 2002. “How do large depreciations affect firm performance?”. NBER Working Paper 9095.

O Globo. 06/23/2002. “A ameaça do dólar nos balanços”. 33.

Reif, T. 2001. “The real side of currency crises”. mimeo. Columbia University.

Carvalhal, A., Leal, R., Valadares, S., Procianoy, J., Aloy, R. and Lapagess, A. 2000. “Ownership, Control and Corporate Valuation of Brazilian Companies”. OECD Global Corporate Governance Forum. The World Bank.

Nucci, F and Pozzolo, A. 2001. “Investment and the exchange rate: An analysis with firm-level panel data”. European Economic Review. 45: 259-283.

Appendix - Variables description
In this section we present the description of the variables used throughout the study.

Country-level variables
The sources of macroeconomic data are: Brazilian Central Bank, IPEA database, FUNCEX (Center of International Commerce Studies) web site and IFS system.

Nominal interest rate
Is the rate on loans issued by the financial sector. Corresponds to the *selic* rate on 30 days (source: Central Bank of Brazil).

Real interest rate
Corresponds to the nominal interest rate adjusted by the inflation price index variation over the same time period.

Nominal exchange rate
Is the ratio between Real and US dollars, collected monthly, end of period (source: Central Bank of Brazil).

Real exchange rate
Corresponds to the nominal exchange rate adjusted by the inflation price index.

Multilateral real exchange rate
Corresponds to the relative cost of a common basket of goods measured in terms of a common numeraire. We calculated a bilateral real exchange rate for each Brazilian trade partner as follows:

$$RER_{(Brazil/\,Country_i)} = \frac{\frac{e_{Country_i/\,USA}}{e_{Brazil/\,USA}} * WPI_{Country_i}}{WPI_{Brazil}}$$

in which e corresponds to the nominal exchange rate between the countries and WPI corresponds to the wholesale price index. The multilateral real exchange rate is than an average of those bilateral exchange rates weighted by Brazilian international trade weights (FUNCEX).

Inflation (IPCA)
A broad consumer price index, collected monthly. This index was used to deflate all variables in the study except investment. During the estimation procedure, we accumulated the monthly variation to construct the annual series (source: IBGE).

Price Level on Investment
An investment price index used to deflate the investment variable. It is available in the Penn World Table (source: Penn Data homepage).

Exports orientation (Exp)

Corresponds to the ratio of exports to production, calculated annually at industry level. (source: FUNCEX homepage).

Imported inputs (Imp)
Corresponds to the proportion of imported inputs, calculated annually at industry level (source: FUNCEX homepage).

Current Account (%GDP)
Corresponds to the current account in the Balance of Payments (source: IFS).

Capital Inflow (%GDP)
Is a measure of net capital inflows, corresponding to the financial account in the Balance of Payments (source: IFS).

Bank Credit (%GDP)
Is a measure of credit to the private sector and corresponds to the account claims on the private sector held by deposit banks (source: IFS).

Inflow of Credit (%GDP)
Is a measure of inflow of credit to private firms and corresponds to the sum of the following accounts: debt securities liabilities and other investment liabilities to other sectors (source: IFS).

Country Risk
Our measure of Brazilian sovereign risk is the Spread over Treasury of the C-Bond (Brazilian Capitalization Bond), the most liquid Brazilian bond. It was issued in January, 1995 and matures in April, 2014.

Country-level constructed variables

Real interest rate volatility - s(ln(1+r))
It is the volatility of the log of the real interest rate, accumulated during the year.

Inflation price index variation volatility - s (IPCA)
It is the volatility of the broad consumer price index annual variation.

Real exchange rate volatility - s (lnRER)
It is the volatility of the log of the real exchange rate.

Real exchange rate variation volatility - s (DlnRER)
It is the volatility of the log of the real exchange rate annual variation.

Firm-level variables
The source of all firm-level variables used in the paper is Economática system.

Sales to Capital Stock ratio
It is a measure of total sales during the year to capital stock at the beginning of the year. The capital stock variable corresponds to the account *net property and equipment*.

Investment to Capital Stock ratio
It is a measure of the change in capital stock during the year to the capital stock at the beginning of the year, adjusted by the price level of investment.

Cash Flow to Capital Stock ratio
Corresponds to the *Net Income* account accumulated during the year to the capital stock at the beginning of the year.

Debt in Foreign Currency to Total Debt ratio
It is a measure of the stock of debt denominated in foreign currency converted into local currency (using the exchange rate for the period in which the balance sheet is reported) to the total debt at the end of the year.

Long Term Debt to Total Debt ratio
It is a measure of the stock of long-term debt to the total debt at the end of the year.

Total Debt to Capital Stock ratio
It is a measure of the total debt at the end of the year to the capital stock at the beginning of the year.

Short Term Debt to Capital Stock ratio
It is a measure of the short-term debt at the end of the year to the capital stock at the beginning of the year.

Long Term Debt to Capital Stock ratio
It is a measure of the long-term debt at the end of the year to the capital stock at the beginning of the year.

Debt in Foreign Currency to Capital Stock ratio
It is a measure of the stock of debt denominated in foreign currency converted into local currency (using the exchange rate for the period in which the balance sheet is reported) to the capital stock at the beginning of the year.

Debt in Local Currency to Capital Stock ratio
It is a measure of the stock of debt calculated in Reais to the capital stock at the beginning of the year.

Short Term Debt in Foreign Currency to Capital Stock ratio

It is a measure of the stock of short-term debt denominated in foreign currency converted into local currency (using the exchange rate for the period in which the balance sheet is reported) to the capital stock at the beginning of the year.

Short Term Debt in Local Currency to Capital Stock ratio
It is a measure of the stock of short-term debt calculated in Reais to the capital stock at the beginning of the year.

Long Term Debt in Foreign Currency to Capital Stock ratio
It is a measure of the stock of long-term debt denominated in foreign currency converted into local currency (using the exchange rate for the period in which the balance sheet is reported) to the capital stock at the beginning of the year.

Long Term Debt in Local Currency to Capital Stock ratio
It is a measure of the stock of long-term debt calculated in Reais to the capital stock at the beginning of the year.

Financial Expenses to Capital Stock ratio
It is a measure of financial expenses accumulated during the year to the capital stock at the beginning of the year.

Tobin'Q
It is a measure of the firms' profitability constructed as the market value of assets divided by its the replacement cost. The numerator is the book value of assets minus the book value of common equity and deferred taxes plus the market value of common equity. The denominator is the book value of assets.

Controls variables

Economática industry classification
Classifies the firm according to its main activities. Economática has up to 18 different industries.

Ownership structure
It is a dummy variable that takes on a value of one if the firm has foreign ownership (Source: CVM).

Tradable industry
It is a dummy variable that takes on a value of one if the firm is in a tradable industry (agriculture, food & beverage, manufacturing, mining, pulp & paper, oil & gas, chemical, vehicle & parts, transportation services - Source: Economática).

ADR issued
It is a dummy variable that takes on a value of one if the firm has issued an ADR in the US market (Source: CVM).

Size
Corresponds to a tercile ranking classification for the firms, changeable every year, based on the total assets reported in the balance sheet. The firm takes on a value of one if it's a small company, two if it's medium and three if it's large (Source: Economática).

Table 1

Annualized Volatility		
Period	1995 to 1998	1999 to 2001
Real exchange rate	2.79%	17.95%
Real interest rate	2.29%	1.71%

Price Index: IGPDI seasonally adjusted (3 months - simple moving average)
From March 1999.

Figure 1

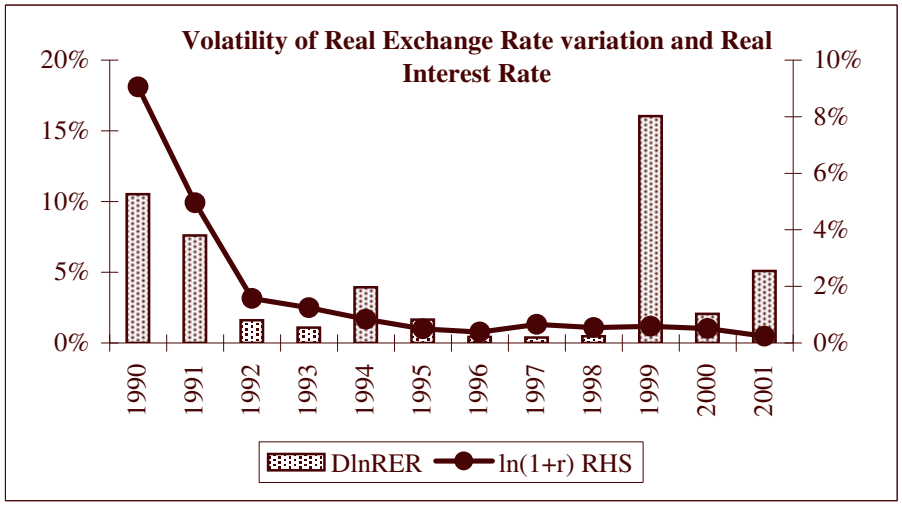

Table 2 - Sample Statistics

Panel A: Number of firms in sample per year

1990	197
1991	205
1992	214
1993	220
1994	228
1995	249
1996	262
1997	267
1998	285
1999	321
2000	302
2001	271
Total	3021

Panel B: Descriptive Statistics

	N. OBS *year*	**MEAN**	**STDEV**
Country level data			
Δln(RER)	12	(0.025)	0.170
ln(1+r)	12	0.134	0.145
MultRER	12	0.798	0.131
σ (lnRER)	12	0.053	0.047
σ (ΔlnRER)	12	0.042	0.046
σ (ln(1+r))	12	0.020	0.027
σ (IPCA)	12	0.060	0.089
Firm level data	*year x firm*		
Sales/K	2493	2,916.27	38,738.18
I/K	3020	0.492	8.283
CF/K	2085	0.086	3.639
D_{FC}/D_T	490	0.537	0.324
D_{LT}/D_T	2835	0.417	0.309
D_T/K	2696	40.281	1117.554
D_{ST}/K	2664	12.941	292.281
D_{LT}/K	2664	27.797	1026.798
D_{FC}/K	462	3.271	17.663
D_{LC}/K	599	93.036	2218.973
D_{ST_FC}/K	350	1.520	10.699
D_{ST_LC}/K	491	6.359	97.657
D_{LT_FC}/K	357	2.742	14.574
D_{LT_LC}/K	495	106.275	2345.145
Financial Expenses / K	2582	4.476	93.837
Tobin's Q	2526	(1.975)	23.228
Macro & firm level data interactions			
D_{FC}/K_{-1}* Δln(RER)	383	0.230	1.389
D_{FC}/K_{-1}* Δln(RER) ^{2}	383	0.051	0.286
D_{FC}/K_{-1}* [Δln(RER) + UST + Country Risk]	357	0.628	3.089
D_{LC}/K_{-1}* ln(1+r)	497	18.881	415.386
D_{ST_FC}/K_{-1}* Δln(RER)	288	0.091	0.602
D_{ST_LC}/K_{-1}* ln(1+r)	400	1.102	18.229
D_{LT_FC}/K_{-1}* Δln(RER)	293	0.211	1.264
D_{LT_LC}/K_{-1}* ln(1+r)	411	21.760	438.853
CF/K_{-1}* Δln(RER)	1828	0.005	0.351

Observations considered outliers were removed from the sample (values greater than 3 standard deviations)
Pooled data from Economática and Government sources covering all publicly traded companies during the period under study.

Table 3 - Debt Structure

Date	Total Debt / Total Assets	Debt Maturity Composition		Debt Currency Composition	
		Short Term	Long Term	Foreign Currency	Local Currency
1990	16.59%	62.31%	37.69%	-	-
1991	12.70%	64.27%	35.73%	-	-
1992	13.82%	60.33%	39.67%	-	-
1993	16.52%	61.25%	38.75%	37.69%	62.31%
1994	13.76%	60.67%	39.33%	36.46%	63.54%
1995	15.92%	63.00%	37.00%	39.68%	60.32%
1996	18.88%	59.16%	40.84%	33.05%	66.95%
1997	20.09%	54.44%	45.56%	50.03%	49.97%
1998	20.13%	56.29%	43.71%	65.05%	34.95%
1999	21.70%	55.46%	44.54%	62.07%	37.93%
2000	19.88%	53.34%	46.66%	62.75%	37.25%
2001	21.81%	53.25%	46.75%	62.03%	37.97%

Date	Short Term Foreign Currency	Long Term Foreign Currency	Short Term Local Currency	Long Term Local Currency
1990	-	-	-	-
1991	-	-	-	-
1992	-	-	-	-
1993	29.53%	25.37%	51.83%	32.70%
1994	38.22%	22.27%	42.15%	36.28%
1995	27.56%	34.31%	46.29%	34.95%
1996	31.53%	21.37%	41.24%	31.03%
1997	34.94%	35.25%	27.98%	32.64%
1998	37.05%	41.96%	29.53%	31.21%
1999	28.93%	44.05%	33.47%	32.59%
2000	32.36%	44.91%	28.87%	34.91%
2001	35.59%	42.56%	31.80%	35.18%

Table 4 - Estimation of Debt Maturity Composition

Dependent Variable : Long Term Debt / Total Debt (D_{LT}/D_T)

	OLS [c.a.]	OLS [c.a.]	OLS [c.a.]	WG	GMM Diff	GMM Sys	GMM Diff	GMM Sys	TOBIT [c.a.]	TOBIT [c.a.]	TOBIT [c.a.]
$D_{LT}/D_{T\,(-1)}$					**0.446**	**0.424**	**0.446**	**0.388**			
					[0]	[0]	[0]	[0]			
σ_lnRER $_{(-1)}$		**3.660**		**1.748**						**1.097**	
		[0.091]		[0.425]						[0.001]	
σ_ΔlnRER $_{(-1)}$		**-0.133**		**0.070**						**-0.321**	
		[0.903]		[0.952]						[0.087]	
σ_lnRIR $_{(-1)}$		**12.095**		**4.207**						**4.360**	
		[0.005]		[0.221]						[0]	
σ_IPCA $_{(-1)}$		**-3.940**		**-1.889**						**-1.120**	
		[0.004]		[0.126]						[0]	
Size	**0.410**	**0.538**	**0.554**	**0.173**	**0.552**	**-0.015**	**1.759**	**-0.141**	**0.131**	**0.160**	**0.169**
	[0]	[0]	[0]	[0.058]	[0.569]	[0.983]	[0.201]	[0.898]	[0]	[0]	[0]
ADR	**0.393**	**0.344**	**0.337**		**yes**	**yes**	**yes**	**yes**	**0.093**	**0.080**	**0.076**
	[0.004]	[0.012]	[0.016]						[0.001]	[0.004]	[0.006]
Tradable	**-0.609**	**-0.588**	**-0.566**		**yes**	**yes**	**yes**	**yes**	**-0.068**	**-0.059**	**-0.057**
	[0]	[0]	[0]						[0.021]	[0.042]	[0.051]
Foreign Ownership	**-0.157**	**-0.177**	**-0.179**		**yes**	**yes**	**yes**	**yes**	**-0.031**	**-0.037**	**-0.041**
	[0.632]	[0.596]	[0.597]						[0.656]	[0.598]	[0.57]
Constant	**-0.710**	**-1.050**	**-0.553**	**-0.526**	**0.282**	**0.399**	**0.001**	**0.057**	**0.121**	**0.041**	**-0.004**
	[0.021]	[0.006]	[0.032]	[0.03]	[0.352]	[0.829]	[0.997]	[0.969]	[0.035]	[0.534]	[0.862]
Period Dummies											
D 90_94	**0.170**				**1.934**	**0.475**			**0.098**		
	[0.236]				[0.161]	[0.632]			[0]		
D 99_01	**0.214**				**-1.152**	**-0.007**			**0.033**		
	[0.034]				[0.257]	[0.991]			[0.088]		
Year Dummies											
D 1991			**-0.106**								**0.037**
			[0.413]								[0.253]
D 1992			**0.073**					**0.129**			**-0.053**
			[0.701]					[0.567]			[0.161]
D 1993			**-0.161**				**-1.009**	**0.187**			**-0.189**
			[0.404]				[0.145]	[0.662]			[0]
D 1994			**-0.730**				**-1.668**	**0.354**			**-0.238**
			[0.004]				[0.246]	[0.809]			[0]
D 1995			**-0.735**				**-0.366**	**0.244**			**-0.204**
			[0.004]				[0.288]	[0.872]			[0]
D 1996			**-0.712**				**-0.164**	**0.285**			**-0.156**
			[0.007]				[0.547]	[0.851]			[0.001]
D 1997			**-0.382**				**-0.011**	**0.573**			**-0.144**
			[0.138]				[0.97]	[0.713]			[0.002]
D 1998			**-0.341**				**-0.083**	**0.640**			**-0.149**
			[0.158]				[0.747]	[0.694]			[0.002]
D 1999			**-0.404**				**-0.014**	**0.560**			**-0.140**
			[0.107]				[0.961]	[0.737]			[0.004]
D 2000			**-0.236**				**-0.015**	**0.597**			**-0.161**
			[0.374]				[0.95]	[0.723]			[0.001]
D 2001			**-0.313**				**-0.301**	**0.471**			**0.211**
			[0.236]				[0.263]	[0.787]			[0]
R - squared	**9.0%**	**9.7%**	**10.2%**	**0.6%**							
N uncensored	**1947**	**1947**	**1947**	**1947**	**1370**	**1639**	**1370**	**1639**	**1947**	**1947**	**1947**
Left censored									**316**	**316**	**316**
F - statistic	**14.750**	**12.150**	**6.840**	**1.920**							
	[0]	[0]	[0]	[0.087]							
Likelihood Ratio									**255.660**	**293.710**	**303.940**
									[0]	[0]	[0]
Wald (joint)					**30.500**	**31.170**	**28.560**	**30.200**			
					[0.000]	[0.000]	[0.000]	[0.000]			
Wald (time)							**8.136**	**7.841**			
							[0.616]	[0.644]			
AR(1)					**-5.194**	**-6.365**	**-5.647**	**-6.112**			
					[0.000]	[0.000]	[0.000]	[0.000]			
AR(2)					**-0.099**	**0.293**	**-0.001**	**0.197**			
					[0.921]	[0.770]	[0.999]	[0.844]			
Sargan					**20.670**	**50.520**	**25.400**	**57.980**			
					[0.055]	[0.000]	[0.031]	[0.000]			

P-values are reported in brackets.

[c.a.] OLS and Tobit p-values were adjusted for clustering.

We used the (ln(ratio/(1-ratio)) as the dependent variable in the estimations, except for the Tobit model.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 5 - Estimation of Debt Currency Composition

Dependent Variable : Debt in Foreign Currency / Total Debt (D_{FC}/D_T)

	OLS [c.a.]	OLS [c.a.]	OLS [c.a.]	WG	GMM Diff	GMM Sys	GMM Diff	GMM Sys	TOBIT [c.a.]	TOBIT [c.a.]	TOBIT [c.a.]
$D_{FC} / D_{T\,(-1)}$					-0.302	-0.206	-0.389	-0.125			
					[0.332]	[0.534]	[0.126]	[0.677]			
σ_lnRER $_{(-1)}$		40.219		43.994						6.249	
		[0.015]		[0.003]						[0.034]	
σ_ΔlnRER $_{(-1)}$		-12.684		-13.364						-1.849	
		[0.04]		[0.018]						[0.103]	
σ_lnRIR $_{(-1)}$		19.262		11.434						-3.170	
		[0.743]		[0.843]						[0.756]	
σ_IPCA $_{(-1)}$		-28.782		-30.572						-4.561	
		[0.005]		[0.001]						[0.012]	
Size	-0.008	0.097	0.088	-0.288	1.462	-1.771	-0.227	-2.450	-0.104	-0.087	-0.095
	[0.972]	[0.678]	[0.718]	[0.509]	[0.603]	[0.104]	[0.92]	[0.074]	[0.001]	[0.007]	[0.003]
ADR	0.704	0.643	0.675		yes	yes	yes	yes	0.132	0.123	0.135
	[0.065]	[0.096]	[0.077]						[0.001]	[0.002]	[0.001]
Tradable	-0.178	-0.142	-0.145		yes	yes	yes	yes	-0.082	-0.078	-0.076
	[0.606]	[0.684]	[0.675]						[0.026]	[0.034]	[0.031]
Foreign Ownership	-0.329	-0.451	-0.411		yes	yes	yes	yes	0.077	0.060	0.064
	[0.61]	[0.477]	[0.536]						[0.306]	[0.431]	[0.379]
Constant	-0.275	-0.800	-0.266	0.242	-0.028	4.572	0.730	6.124	0.804	0.766	0.615
	[0.687]	[0.392]	[0.75]	[0.863]	[0.9]	[0.239]	[0.119]	[0.12]	[0]	[0]	[0]
Period Dummies											
D 90_94	-0.758				-1.582	-1.465			-0.176		
	[0.031]				[0]	[0]			[0.002]		
D 99_01	0.633				1.536	2.637			0.120		
	[0.008]				[0.109]	[0.076]			[0.001]		
Year Dummies											
D 1994			-1.259								-0.012
			[0.158]								[0.922]
D 1995			-0.939					0.945			0.038
			[0.233]					[0.082]			[0.76]
D 1996			-1.135				-0.417	1.035			-0.033
			[0.203]				[0.573]	[0.03]			[0.785]
D 1997			-0.109				0.467	0.656			0.129
			[0.895]				[0.442]	[0.259]			[0.282]
D 1998			0.401				0.737	1.931			0.321
			[0.641]				[0.389]	[0.013]			[0.005]
D 1999			0.374				-0.159	2.586			0.275
			[0.674]				[0.795]	[0.006]			[0.017]
D 2000			0.394				-0.523	2.660			0.293
			[0.671]				[0.351]	[0.004]			[0.011]
D 2001			0.321				-0.941	2.364			0.282
			[0.731]				[0.117]	[0.007]			[0.015]
R - squared	7.7%	7.9%	12.5%	9.5%							
N uncensored	393	393	393	393	141	199	141	199	393	393	393
Right censored									48	48	48
F - statistic	2.770	3.170	3.880	5.510							
	[0.015]	[0.003]	[0]	[0]							
Likelihood Ratio									42.570	38.340	68.280
									[0]	[0]	[0]
Wald (joint)					16.270	50.110	2.369	22.620			
					[0.023]	[0.000]	[0.796]	[0.000]			
Wald (time)							55.810	19.880			
							[0.000]	[0.006]			
AR(1)					-2.116	-2.608	-1.877	-2.183			
					[0.034]	[0.009]	[0.061]	[0.029]			
AR(2)					1.619	1.288	1.471	1.588			
					[0.105]	[0.198]	[0.141]	[0.112]			
Sargan					14.910	8.822	11.610	11.940			
					[0.037]	[0.921]	[0.236]	[0.850]			

P-values are reported in brackets.

[c.a.] OLS and Tobit p-values were adjusted for clustering.

We used the (ln(ratio/(1-ratio)) as the dependent variable in the estimations, except for the Tobit model.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 6 - Effects of Foreign Currency Debt and Interactions and Exchange Rate Movements on Investment

Dependent Variable: I/K

	OLS	WG	OLS	WG	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$					**-0.003**	**-0.003**	**-0.002**	**-0.003**	**-0.040**	**-0.017**
					[0]	[0]	[0]	[0]	[0.093]	[0.041]
Δln(RER)	**0.643**	**0.684**	**1.253**	**1.401**	**0.640**	**0.680**	**0.645**	**0.909**	**1.076**	**1.477**
	[0]	[0]	[0]	[0.023]	[0]	[0]	[0.003]	[0]	[0.033]	[0]
$(D_{FC}/K)_{-1}$	**0.003**	**0.003**	**0.004**	**0.010**	**0.003**	**0.003**	**0.000**	**0.003**	**-0.189**	**-0.044**
	[0.047]	[0.003]	[0.722]	[0.1]	[0.049]	[0.001]	[0.675]	[0]	[0.051]	[0.113]
$(D_T/K)_{-1}$	**-0.001**	**-0.002**	**0.001**	**-0.007**	**0.000**	**0.000**	**0.001**	**0.000**	**0.126**	**0.043**
	[0.52]	[0.371]	[0.948]	[0.014]	[0.828]	[0.676]	[0.376]	[0.855]	[0.098]	[0.09]
$(D_{FC}/K)_{-1}$ * Δln(RER)	**-0.016**	**-0.036**	**0.002**	**-0.045**	**-0.019**	**-0.032**	**-0.011**	**-0.036**	**0.030**	**-0.034**
	[0.167]	[0.002]	[0.93]	[0.001]	[0.083]	[0.006]	[0.316]	[0]	[0.615]	[0.043]
Exp * Δln(RER)			**-0.694**	**-0.270**					**0.282**	**-0.271**
			[0.13]	[0.687]					[0.757]	[0.586]
Imp * Δln(RER)			**-1.726**	**-2.664**					**-3.955**	**-2.827**
			[0.12]	[0.224]					[0.172]	[0.078]
Constant	**-0.105**		**-0.108**		**-0.105**		**0.042**	**-0.111**	**0.064**	**-0.126**
	[0]		[0]		[0]		[0.099]	[0]	[0.097]	[0]
R - squared	**7.6%**	**9.2%**	**10.1%**	**11.7%**	**8.7%**	**10.4%**				
N	**380**	**325**	**266**	**225**	**380**	**325**	**234**	**325**	**162**	**225**
Wald (joint)	**39.060**	**24.520**	**43.480**	**25.620**	**459.700**	**300.400**	**60.190**	**449.200**	**46.470**	**278.900**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
AR(1)	**-0.191**	**-2.229**	**-0.457**	**-2.261**	**-0.372**	**-2.357**	**-1.825**	**-1.894**	**-2.575**	**-1.818**
	[0.849]	[0.026]	[0.648]	[0.024]	[0.710]	[0.018]	[0.068]	[0.058]	[0.010]	[0.069]
AR(2)	**0.088**	**-2.435**	**-0.479**	**-2.168**	**0.002**	**-2.527**	**0.634**	**0.662**	**-0.887**	**0.158**
	[0.930]	[0.015]	[0.632]	[0.030]	[0.999]	[0.011]	[0.526]	[0.508]	[0.375]	[0.874]
Sargan Test							**43.990**	**476.500**	**35.630**	**348.000**
							[0.061]	[0.000]	[0.887]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table7 - Effects of Cash Flow, Financial Expenses and Multilateral Exchange Rate on Investment

Dependent Variable: I/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
(I/K) $_{-1}$	**-0.001**	**-0.047**	**-0.053**	**-0.043**	**-0.054**	**-0.044**	**-0.007**	**-0.277**	**-0.318**	**-0.122**	**-0.305**	**-0.124**
	[0.767]	[0.316]	[0.356]	[0.319]	[0.341]	[0.314]	[0.618]	[0.007]	[0.037]	[0.057]	[0.043]	[0.053]
(CF/K) $_{-1}$	**-0.004**	**0.065**	**0.167**	**0.038**	**0.167**	**0.034**	**-0.015**	**0.018**	**0.206**	**0.054**	**0.195**	**0.052**
	[0.925]	[0.097]	[0.096]	[0.115]	[0.081]	[0.153]	[0.719]	[0.413]	[0.059]	[0.107]	[0.051]	[0.105]
(CF/K) $_{-2}$							**0.027**	**0.203**	**0.307**	**0.127**	**0.289**	**0.131**
							[0.543]	[0.277]	[0.232]	[0.232]	[0.25]	[0.254]
(Fin Exp/K)	**0.002**	**0.002**	**-0.004**	**0.002**	**-0.005**	**0.002**	**0.001**	**0.003**	**-0.004**	**-0.002**	**-0.007**	**-0.004**
	[0.221]	[0.025]	[0.548]	[0.458]	[0.486]	[0.66]	[0.071]	[0.065]	[0.616]	[0.711]	[0.521]	[0.568]
Exp * MultRER	**-0.067**	**-0.832**	**-0.770**	**0.252**	**0.021**	**0.415**	**-0.097**	**-0.733**	**1.043**	**0.231**	**0.188**	**0.156**
	[0.754]	[0.293]	[0.309]	[0.488]	[0.976]	[0.426]	[0.715]	[0.498]	[0.536]	[0.568]	[0.808]	[0.7]
Imp * MultRER	**-1.573**	**-2.885**	**2.893**	**-1.488**	**3.575**	**-1.688**	**-1.652**	**-2.934**	**6.463**	**-2.094**	**4.408**	**-3.079**
	[0.145]	[0.092]	[0.151]	[0.12]	[0.057]	[0.236]	[0.167]	[0.151]	[0.135]	[0.149]	[0.057]	[0.215]
Constant	**1.309**		**-0.879**	**1.262**	**-0.201**	**0.076**	**0.363**		**-0.206**	**0.491**	**-0.065**	**0.247**
	[0]		[0]	[0]	[0.007]	[0.637]	[0.088]		[0.233]	[0]	[0.475]	[0.308]
Period Dummies												
D 90_94					**-0.532**	**-0.097**					**0.052**	**-0.153**
					[0.006]	[0.247]					[0.873]	[0.027]
D 99_01					**0.395**	**0.381**					**-0.062**	**0.739**
					[0.313]	[0.189]					[0.896]	[0.138]
Year Dummies												
D 1992	**-0.644**	**-1.146**		**-0.708**								
	[0.028]	[0]		[0.006]								
D 1993	**-0.808**	**-1.242**	**0.389**	**-0.806**			**0.180**	**-1.268**		**0.127**		
	[0]	[0]	[0.462]	[0]			[0.198]	[0.057]		[0.528]		
D 1994	**-1.702**	**-2.119**	**-0.044**	**-1.735**			**-0.727**	**-1.402**	**-0.578**	**-0.778**		
	[0]	[0]	[0.899]	[0]			[0]	[0]	[0.023]	[0]		
D 1995	**-1.247**	**-1.584**	**1.109**	**-1.305**			**-0.268**	**-1.129**	**-0.158**	**-0.519**		
	[0]	[0]	[0]	[0]			[0.042]	[0]	[0.78]	[0.001]		
D 1996	**-1.263**	**-1.530**	**1.066**	**-1.272**			**-0.306**	**-1.000**	**0.509**	**-0.537**		
	[0]	[0]	[0]	[0]			[0]	[0]	[0.003]	[0]		
D 1997	**-0.795**	**-1.094**	**1.310**	**-0.771**			**0.201**	**-0.454**	**0.788**	**0.138**		
	[0.009]	[0]	[0]	[0.031]			[0.526]	[0.055]	[0.004]	[0.735]		
D 1998	**-1.127**	**-1.417**	**0.500**	**-1.177**			**-0.173**	**-0.695**	**-0.216**	**-0.307**		
	[0]	[0]	[0.214]	[0]			[0.005]	[0]	[0.588]	[0]		
D 1999	**-0.316**	**-0.284**	**1.383**	**-0.486**			**0.733**	**0.397**	**-0.104**	**0.484**		
	[0.567]	[0.64]	[0.005]	[0.28]			[0.22]	[0.591]	[0.912]	[0.351]		
D 2000	**-0.894**	**-0.997**	**0.214**	**-0.957**			**0.084**	**-0.135**	**-0.178**	**0.052**		
	[0]	[0]	[0.701]	[0]			[0.596]	[0.665]	[0.713]	[0.835]		
D 2001	**-0.909**	**-0.873**	**0.724**	**-1.071**			**0.067**	**-0.298**	**-0.521**	**-0.143**		
	[0]	[0.001]	[0.007]	[0]			[0.734]	[0.515]	[0.465]	[0.45]		
R - squared	**2.6%**	**4.8%**					**2.2%**	**11.5%**				
N	**1262**	**1247**	**1032**	**1247**	**1032**	**1247**	**1021**	**987**			**809**	**987**
Wald (joint)	**5.513**	**10.930**	**3.190**	**6.761**	**24.400**	**15.670**	**9.084**	**85.920**			**59.200**	**45.900**
	[0.357]	[0.053]	[0.671]	[0.239]	[0.001]	[0.028]	[0.169]	[0.000]			[0.000]	[0.000]
Wald (time)	**438.800**	**268.300**	**146.500**	**288.200**			**158.900**	**161.600**				
	[0.000]	[0.000]	[0.000]	[0.000]			[0.000]	[0.000]				
AR(1)	**-0.110**	**-1.537**	**-1.567**	**-1.490**	**-1.552**	**-1.482**	**0.006**	**-0.472**			**-1.492**	**-1.430**
	[0.912]	[0.124]	[0.117]	[0.136]	[0.121]	[0.138]	[0.995]	[0.637]			[0.136]	[0.153]
AR(2)	**0.979**	**0.365**	**1.075**	**1.003**	**1.066**	**1.016**	**0.977**	**-0.334**			**0.834**	**0.970**
	[0.328]	[0.715]	[0.282]	[0.316]	[0.286]	[0.309]	[0.329]	[0.738]			[0.404]	[0.332]
Sargan Test			**308.900**	**1204.000**	**317.300**	**1223.000**					**262.900**	**1065.000**
			[0.000]	[0.000]	[0.000]	[0.000]					[0.000]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 8 - Effects of Cash Flow and Interactions, Debt in Foreign Curreny and Multilateral Exchange Rate on Investment

Dependent Variable: I/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**-0.014**	**-0.275**	**-0.481**	**-0.225**	**-0.063**	**-0.045**	**-0.043**	**-0.033**
	[0.049]	[0]	[0]	[0]	[0.004]	[0.001]	[0.09]	[0.064]
$(CF/K)_{-1}$	**-0.058**	**0.007**	**0.862**	**-0.136**	**-0.003**	**0.010**	**-0.011**	**0.013**
	[0.096]	[0.896]	[0.031]	[0.148]	[0.828]	[0.411]	[0.367]	[0.236]
$(CF/K)_{-2}$	**0.055**	**0.243**	**1.502**	**0.260**	**-0.012**	**0.000**	**-0.017**	**0.001**
	[0.326]	[0.074]	[0]	[0.01]	[0.368]	[0.995]	[0.196]	[0.888]
$(CF/K)_{-1} * \Delta\ln(RER)$	**0.432**	**0.733**	**-14.441**	**-3.986**				
	[0.128]	[0.212]	[0.279]	[0.221]				
$(CF/K)_{-2} * \Delta\ln(RER)$	**0.112**	**-0.894**	**2.093**	**0.234**				
	[0.603]	[0.001]	[0.095]	[0.626]				
$[(CF/K)_{-1} + (CF/K)_{-2}] /2 * \Delta\ln(RER) * (D_{FC}/K)_{-1}$					**-0.012**	**-0.016**	**-0.007**	**-0.017**
					[0.162]	[0.147]	[0.406]	[0.106]
$(D_{FC}/K)_{-1} * \Delta\ln(RER)$					**-0.063**	**-0.033**	**-0.061**	**-0.041**
					[0]	[0.145]	[0.018]	[0.114]
Exp * MultRER	**-0.206**	**-0.229**	**1.098**	**3.298**	**0.707**	**0.200**	**0.327**	**0.109**
	[0.463]	[0.84]	[0.195]	[0.263]	[0.332]	[0.13]	[0.529]	[0.343]
Imp * MultRER	**-0.999**	**-3.130**	**1.147**	**-4.507**	**0.638**	**0.390**	**0.435**	**0.308**
	[0.43]	[0.128]	[0.66]	[0.417]	[0.376]	[0.2]	[0.499]	[0.259]
Constant	**0.354**		**0.126**	**-0.287**	**0.334**	**-0.654**	**0.059**	**-0.147**
	[0.078]		[0.273]	[0.237]	[0.004]	[0]	[0.112]	[0.01]
Period Dummies								
D 90_94			**0.572**	**-0.358**			**-0.446**	**-0.502**
			[0.172]	[0.422]			[0.002]	[0]
D 99_01			**-0.437**	**-0.108**			**-0.173**	**0.074**
			[0.138]	[0.646]			[0.236]	[0.372]
Year Dummies								
D 1993	**-0.039**	**-0.857**						
	[0.646]	[0.016]						
D 1994	**-0.209**	**-0.693**						
	[0.7]	[0.252]						
D 1995	**-0.317**	**-0.947**				**0.384**		
	[0.007]	[0]				[0]		
D 1996	**-0.246**	**-0.839**			**-0.178**	**0.579**		
	[0.001]	[0]			[0.407]	[0]		
D 1997	**0.154**	**-0.418**			**-0.343**	**0.499**		
	[0.622]	[0.058]			[0.081]	[0]		
D 1998	**-0.210**	**-0.668**			**-0.145**	**0.548**		
	[0.009]	[0]			[0.314]	[0]		
D 1999	**0.642**	**0.321**			**-0.556**	**0.467**		
	[0.279]	[0.651]			[0.002]	[0.004]		
D 2000	**0.050**	**-0.208**			**-0.288**	**0.542**		
	[0.773]	[0.506]			[0.242]	[0]		
D 2001	**-0.029**	**-0.392**			**-0.369**	**0.486**		
	[0.893]	[0.357]			[0]	[0]		
R - squared	**1.5%**	**11.3%**						
N	**1141**	**1104**	**790**	**952**	**127**	**177**	**127**	**177**
Wald (joint)	**21.650**	**132.900**	**3642.000**	**5576.000**	**51.600**	**40.100**	**101.100**	**247.200**
	[0.003]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Wald (time)	**31.430**	**52.100**			**59.500**	**154.300**	**-1.576**	**-1.512**
	[0.000]	[0.000]			[0.000]	[0.000]	[0.115]	[0.131]
AR(1)	**1.301**	**0.665**	**-1.565**	**-1.092**	**-1.509**	**-1.519**	**0.885**	**1.151**
	[0.193]	[0.506]	[0.118]	[0.275]	[0.131]	[0.129]	[0.376]	[0.250]
AR(2)	**1.311**	**-0.331**	**1.650**	**1.008**	**0.426**	**0.448**	**65.070**	**284.800**
	[0.190]	[0.741]	[0.099]	[0.314]	[0.670]	[0.654]	[0.787]	[0.000]
Sargan Test			**404.000**	**2041.000**	**69.870**	**272.800**		
			[0.000]	[0.000]	[0.705]	[0.000]		

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 9 - Effects of Debt Currency Composition, Interest Rate and Exchange Rate Movements and Multilateral Exchange Rate on Investment

Dependent Variable: I/K

	OLS	WG	GMM-Diff	GMM-Sys	OLS	WG	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**-0.008**	**-0.085**	**-0.026**	**-0.079**	**-0.014**	**-0.433**	**-0.321**	**-0.161**
	[0.761]	[0.078]	[0.642]	[0.281]	[0.919]	[0.018]	[0.207]	[0.43]
$(D_{FC}/K)_{-1}$	**0.000**	**-0.003**	**-0.052**	**0.054**	**-0.094**	**0.048**	**0.047**	**0.158**
	[0.999]	[0.958]	[0.417]	[0.514]	[0.128]	[0.703]	[0.717]	[0.436]
$(D_{FC}/K)_{-1}$* Δln(RER)	**0.009**	**-0.346**	**-0.059**	**-0.677**				
	[0.806]	[0.595]	[0.929]	[0.435]				
$(D_{FC}/K)_{-1}$* [Δln(RER)+ UST+ Country Risk]					**0.395**	**-0.242**	**-0.306**	**-0.714**
					[0.116]	[0.679]	[0.604]	[0.412]
$(D_{LC}/K)_{-1}$	**0.091**	**0.141**	**0.337**	**-0.033**	**0.117**	**0.053**	**0.154**	**-0.084**
	[0.396]	[0.57]	[0.192]	[0.718]	[0.212]	[0.807]	[0.445]	[0.402]
$(D_{LC}/K)_{-1}$* ln(1+r)	**-0.700**	**-0.333**	**-1.802**	**0.590**	**-0.836**	**0.366**	**-0.449**	**1.103**
	[0.436]	[0.837]	[0.292]	[0.515]	[0.292]	[0.803]	[0.732]	[0.294]
Exp * MultRER	**0.081**	**0.474**	**0.296**	**0.127**	**0.086**	**0.497**	**0.243**	**0.111**
	[0.403]	[0.331]	[0.466]	[0.292]	[0.392]	[0.37]	[0.582]	[0.413]
Imp * MultRER	**0.086**	**1.350**	**0.740**	**0.535**	**0.036**	**1.178**	**0.348**	**0.511**
	[0.668]	[0.034]	[0.261]	[0.208]	[0.849]	[0.07]	[0.666]	[0.169]
Constant	**2.578**		**-9.504**	**14.912**	**-0.134**		**0.209**	**-0.331**
	[0.709]		[0.461]	[0.328]	[0.304]		[0.219]	[0.122]
Year Dummies								
D 1993	**-3.591**	**-19.433**		**-16.083**				
	[0.605]	[0.061]		[0.295]				
D 1994	**-3.185**	**-18.978**	**10.130**	**-15.687**				
	[0.644]	[0.068]	[0.433]	[0.307]				
D 1995	**-2.719**	**-18.529**	**9.982**	**-15.205**				
	[0.695]	[0.074]	[0.437]	[0.323]				
D 1996	**-2.612**	**-18.369**	**9.675**	**-15.036**	**0.110**	**0.304**		**0.206**
	[0.705]	[0.077]	[0.453]	[0.327]	[0.421]	[0.023]		[0.212]
D 1997	**-2.615**	**-18.319**	**9.424**	**-15.084**	**0.109**	**0.418**	**-0.154**	**0.155**
	[0.705]	[0.077]	[0.466]	[0.324]	[0.459]	[0.006]	[0.522]	[0.383]
D 1998	**-2.571**	**-18.309**	**9.757**	**-15.054**	**0.155**	**0.361**	**-0.087**	**0.116**
	[0.71]	[0.077]	[0.448]	[0.327]	[0.184]	[0.019]	[0.683]	[0.395]
D 1999	**-2.647**	**-18.563**	**9.358**	**-15.049**	**0.031**	**0.152**	**-0.261**	**0.193**
	[0.703]	[0.071]	[0.471]	[0.324]	[0.814]	[0.504]	[0.283]	[0.331]
D 2000	**-2.570**	**-18.470**	**9.578**	**-15.044**	**0.168**	**0.279**	**-0.149**	**0.185**
	[0.708]	[0.074]	[0.456]	[0.326]	[0.288]	[0.148]	[0.408]	[0.267]
D 2001	**-2.660**	**-18.569**	**9.440**	**-15.072**	**0.054**	**0.169**	**-0.236**	**0.186**
	[0.702]	[0.072]	[0.463]	[0.325]	[0.631]	[0.406]	[0.26]	[0.237]
R - squared	**26.6%**	**32.6%**			**9.2%**	**19.7%**		
N	**223**	**188**	**137**	**188**	**205**	**171**	**123**	**171**
Wald (joint)	**18.350**	**186.000**	**63.310**	**64.700**	**23.330**	**49.840**	**58.370**	**41.530**
	[0.010]	[0.000]	[0.000]	[0.000]	[0.001]	[0.000]	[0.000]	[0.000]
Wald (time)	**1659.000**	**971.600**	**312.700**	**811.100**	**3.818**	**8.628**	**5.715**	**2.323**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.701]	[0.196]	[0.456]	[0.888]
AR(1)	**-1.231**	**-2.108**	**-2.119**	**-1.998**	**-1.768**	**-1.938**	**-2.075**	**-1.981**
	[0.218]	[0.035]	[0.034]	[0.046]	[0.077]	[0.053]	[0.038]	[0.048]
AR(2)	**-0.983**	**-2.307**	**-0.326**	**-0.721**	**-1.295**	**-2.933**	**-1.071**	**-0.436**
	[0.326]	[0.021]	[0.745]	[0.471]	[0.195]	[0.003]	[0.284]	[0.663]
Sargan Test			**75.340**	**267.100**			**73.340**	**245.200**
			[0.999]	[0.000]			[0.597]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 10 - Effects of Debt Currency Composition, Non linear effects of Exchange Rate Movements and Multilateral Exchange Rate on Investment

Dependent Variable: I/K

	OLS	WG	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**0.024**	**-0.074**	**0.023**	**-0.075**	**-0.034**	**-0.042**	**-0.031**	**-0.044**
	[0.673]	[0.009]	[0.679]	[0.009]	[0.107]	[0.005]	[0.149]	[0.005]
$(D_{FC}/K)_{-1}$	**-0.019**	**-0.088**	**-0.018**	**-0.089**	**-0.127**	**-0.029**	**-0.124**	**-0.029**
	[0.099]	[0.04]	[0.104]	[0.041]	[0.005]	[0.134]	[0.006]	[0.14]
$(D_T/K)_{-1}$	**0.020**	**0.067**	**0.020**	**0.068**	**0.092**	**0.028**	**0.089**	**0.027**
	[0.062]	[0.035]	[0.062]	[0.036]	[0.011]	[0.126]	[0.014]	[0.133]
$(D_{FC}/K)_{-1} * \Delta\ln(RER)$	**-0.010**	**-0.037**	**0.004**	**-0.045**	**-0.028**	**-0.041**	**-0.019**	**-0.040**
	[0.618]	[0.003]	[0.883]	[0]	[0.129]	[0.002]	[0.21]	[0.001]
$(D_{FC}/K)_{-1} * \Delta\ln(RER)^2$			**-0.100**	**0.057**			**-0.063**	**-0.007**
			[0.002]	[0.196]			[0.312]	[0.827]
Exp * MultRER	**0.023**	**0.479**	**0.025**	**0.478**	**0.328**	**-0.051**	**0.327**	**-0.063**
	[0.788]	[0.281]	[0.767]	[0.281]	[0.389]	[0.51]	[0.392]	[0.414]
Imp * MultRER	**-0.016**	**1.278**	**-0.017**	**1.268**	**0.802**	**0.194**	**0.806**	**0.204**
	[0.933]	[0.022]	[0.93]	[0.022]	[0.289]	[0.559]	[0.288]	[0.481]
Constant	**-8.079**		**-7.820**		**-1.405**	**6.983**	**-0.994**	**7.297**
	[0.538]		[0.543]		[0.775]	[0.029]	[0.84]	[0.024]
Year Dummies								
D 1993	**7.133**	**-12.579**	**6.872**	**-12.683**		**-8.005**		**-8.314**
	[0.588]	[0.123]	[0.595]	[0.123]		[0.013]		[0.011]
D 1994	**7.451**	**-12.063**	**7.211**	**-12.176**	**2.138**	**-7.616**	**1.732**	**-7.925**
	[0.57]	[0.141]	[0.575]	[0.14]	[0.663]	[0.017]	[0.724]	[0.014]
D 1995	**7.949**	**-11.671**	**7.689**	**-11.774**	**1.816**	**-7.157**	**1.406**	**-7.468**
	[0.546]	[0.154]	[0.551]	[0.152]	[0.708]	[0.028]	[0.771]	[0.023]
D 1996	**8.023**	**-11.529**	**7.763**	**-11.629**	**1.605**	**-7.000**	**1.183**	**-7.312**
	[0.541]	[0.157]	[0.546]	[0.156]	[0.743]	[0.03]	[0.809]	[0.025]
D 1997	**8.021**	**-11.482**	**7.762**	**-11.585**	**1.359**	**-7.079**	**0.951**	**-7.390**
	[0.541]	[0.161]	[0.546]	[0.16]	[0.786]	[0.027]	[0.849]	[0.022]
D 1998	**8.078**	**-11.487**	**7.818**	**-11.586**	**1.589**	**-7.028**	**1.175**	**-7.339**
	[0.539]	[0.159]	[0.544]	[0.158]	[0.746]	[0.03]	[0.811]	[0.025]
D 1999	**7.991**	**-11.744**	**7.739**	**-11.849**	**1.291**	**-7.024**	**0.885**	**-7.333**
	[0.544]	[0.144]	[0.548]	[0.143]	[0.795]	[0.032]	[0.858]	[0.026]
D 2000	**8.071**	**-11.619**	**7.810**	**-11.719**	**1.504**	**-7.000**	**1.088**	**-7.310**
	[0.537]	[0.154]	[0.542]	[0.153]	[0.759]	[0.028]	[0.825]	[0.023]
D 2001	**8.052**	**-11.730**	**7.790**	**-11.832**	**1.339**	**-7.012**	**0.928**	**-7.321**
	[0.54]	[0.146]	[0.545]	[0.145]	[0.785]	[0.03]	[0.85]	[0.025]
R - squared	**23.5%**	**32.2%**	**23.7%**	**32.3%**				
N	**266**	**225**	**266**	**225**	**162**	**225**	**162**	**225**
Wald (joint)	**6.338**	**116.000**	**20.920**	**111.500**	**29.920**	**39.580**	**32.690**	**44.730**
	[0.386]	[0.000]	[0.004]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Wald (time)	**2170.00**	**1323.00**	**2146.00**	**1328.00**	**136.60**	**826.40**	**132.90**	**796.10**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
AR(1)	**-1.05**	**-2.01**	**-1.10**	**-2.01**	**-2.02**	**-1.77**	**-2.02**	**-1.77**
	[0.293]	[0.045]	[0.274]	[0.044]	[0.043]	[0.076]	[0.043]	[0.076]
AR(2)	**-0.94**	**-2.33**	**-1.05**	**-2.32**	**0.03**	**-0.05**	**-0.01**	**-0.07**
	[0.348]	[0.020]	[0.293]	[0.021]	[0.974]	[0.957]	[0.993]	[0.941]
Sargan Test					**68.13**	**224.80**	**67.60**	**261.30**
					[0.996]	[0.000]	[1.000]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 11 - Effects of Debt Currency and Maturity Composition and Interactions on Investment

Dependent Variable: I/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**-0.159**	**-0.056**	**0.065**	**-0.129**	**0.034**	**-0.069**	**-0.524**	**-0.171**
	[0.084]	[0.426]	[0.594]	[0.001]	[0.548]	[0.1]	[0.186]	[0.017]
$(D_{ST\_FC}/K)_{-1}$	**0.053**	**-0.008**	**-0.513**	**0.072**	**-0.058**	**0.037**	**-0.855**	**0.152**
	[0.604]	[0.936]	[0.054]	[0.229]	[0.545]	[0.595]	[0.083]	[0.157]
$(D_{ST\_LC}/K)_{-1}$	**-0.361**	**-0.224**	**0.055**	**0.253**	**-0.134**	**0.391**	**0.536**	**0.417**
	[0.479]	[0.594]	[0.928]	[0.28]	[0.772]	[0.153]	[0.397]	[0.081]
$(D_{LT\_FC}/K)_{-1}$	**-0.070**	**-0.075**	**-0.222**	**-0.149**	**-0.078**	**-0.166**	**-0.177**	**-0.169**
	[0.083]	[0.024]	[0.01]	[0.007]	[0.003]	[0]	[0.159]	[0]
$(D_{LT\_LC}/K)_{-1}$	**0.315**	**1.424**	**3.037**	**1.699**	**1.896**	**2.281**	**2.661**	**1.722**
	[0.482]	[0]	[0]	[0.035]	[0]	[0]	[0.011]	[0.049]
$(D_{ST\_FC}/K)_{-1}$*Δln(RER)	**-1.988**	**1.006**	**0.293**	**-1.546**	**1.865**	**-0.833**	**1.708**	**-1.983**
	[0.099]	[0.367]	[0.83]	[0.006]	[0.057]	[0.102]	[0.396]	[0.04]
$(D_{ST\_LC}/K)_{-1}$*ln(1+r)	**2.878**	**1.826**	**-5.888**	**-1.205**	**1.199**	**-2.075**	**-11.937**	**-2.145**
	[0.42]	[0.494]	[0.416]	[0.44]	[0.684]	[0.232]	[0.25]	[0.173]
$(D_{LT\_FC}/K)_{-1}$*Δln(RER)	**0.596**	**-0.638**	**0.900**	**0.252**	**-0.912**	**-0.013**	**1.296**	**0.240**
	[0.211]	[0.108]	[0.345]	[0.093]	[0.037]	[0.946]	[0.315]	[0.279]
$(D_{LT\_LC}/K)_{-1}$*ln(1+r)	**0.609**	**0.191**	**-11.382**	**-6.678**	**-3.387**	**-10.234**	**-11.090**	**-5.944**
	[0.819]	[0.951]	[0.03]	[0.099]	[0.306]	[0.003]	[0.123]	[0.274]
Size							**yes**	**yes**
ADR							**yes**	**yes**
Tradable							**yes**	**yes**
Foreign Ownership							**yes**	**yes**
Constant	**-0.833**		**0.435**	**-0.764**	**0.034**	**-0.081**	**-6.417**	**-0.482**
	[0]		[0.004]	[0]	[0.144]	[0.081]	[0.174]	[0.124]
Period Dummies								
D 90_94					**-0.447**	**-0.514**		
					[0.001]	[0]		
D 99_01					**-0.180**	**-0.020**		
					[0.038]	[0.758]		
Year Dummies								
D 1995	**0.391**	**0.305**		**0.484**				**0.502**
	[0.004]	[0.001]		[0.001]				[0.076]
D 1996	**0.661**	**0.552**	**-0.339**	**0.590**			**6.827**	**0.680**
	[0]	[0]	[0.21]	[0]			[0.159]	[0.002]
D 1997	**0.804**	**0.713**	**-0.205**	**0.773**			**6.657**	**0.708**
	[0]	[0]	[0.192]	[0]			[0.161]	[0.001]
D 1998	**0.823**	**0.504**	**-0.297**	**0.784**			**6.777**	**0.834**
	[0]	[0]	[0.064]	[0]			[0.158]	[0]
D 1999	**0.786**	**0.402**	**-0.722**	**0.682**			**6.015**	**0.753**
	[0]	[0.004]	[0.007]	[0]			[0.196]	[0.003]
D 2000	**0.913**	**0.504**	**-0.336**	**0.739**			**6.527**	**0.738**
	[0]	[0]	[0.114]	[0]			[0.178]	[0.003]
D 2001	**0.821**	**0.456**	**-0.502**	**0.645**			**6.320**	**0.717**
	[0]	[0.003]	[0.005]	[0]			[0.181]	[0.009]
R - squared	**40.4%**	**63.4%**						
N	**171**	**153**	**102**	**153**	**102**	**153**	**94**	**143**
Wald (joint)	**199.200**	**774.000**	**684.200**	**81.020**	**991.800**	**553.400**	**2980.000**	**567.000**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Wald (time)	**80.540**	**51.530**	**29.650**	**74.240**			**21.560**	**40.330**
	[0.000]	[0.000]	[0.000]	[0.000]			[0.003]	[0.000]
AR(1)	**-1.471**	**-3.288**	**-2.360**	**-2.750**	**-2.561**	**-2.437**	**-2.069**	**-2.438**
	[0.141]	[0.001]	[0.018]	[0.006]	[0.010]	[0.015]	[0.039]	[0.015]
AR(2)		**-1.078**	**-1.020**	**0.161**	**-0.859**	**-0.586**	**0.148**	**1.926**
		[0.281]	[0.308]	[0.872]	[0.390]	[0.558]	[0.882]	[0.054]
Sargan			**4.206**	**255.100**	**64.540**	**199.800**	**1.401**	**210.700**
			[1.000]	[0.000]	[1.000]	[0.354]	[1.000]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 12 - Effects of Cash Flow, Debt Currency and Interactions on Cash Flow

Dependent Variable: CF/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(CF/K)_{-1}$	**-0.424**	**-1.313**	**-3.635**	**-2.399**	**-2.286**	**-2.734**	**-1.557**	**-2.035**
	[0.327]	[0.068]	[0.008]	[0.001]	[0.136]	[0]	[0.065]	[0.017]
$(CF/K)_{-2}$	**1.304**	**8.309**	**-1.947**	**10.586**	**-3.166**	**12.789**	**9.309**	**9.051**
	[0.059]	[0.061]	[0.351]	[0.007]	[0.422]	[0]	[0.058]	[0.035]
$(D_{FC}/K)_{-1}$* Δln(RER)	**-3.026**	**-12.113**	**-0.426**	**-15.449**	**3.542**	**-18.434**	**-13.373**	**-13.863**
	[0.022]	[0.046]	[0.927]	[0.007]	[0.635]	[0]	[0.046]	[0.018]
$(D_{LC}/K)_{-1}$* ln(1+r)	**6.776**	**-8.828**	**-12.341**	**2.831**	**-20.411**	**0.022**	**-9.908**	**7.798**
	[0.001]	[0.495]	[0.097]	[0.005]	[0.006]	[0.992]	[0.504]	[0.029]
Size					**yes**	**yes**		
ADR					**yes**	**yes**		
Tradable					**yes**	**yes**		
Foreign Ownership					**yes**	**yes**		
Constant	**-0.711**	**1.122**	**0.344**	**-2.069**	**-0.604**	**-12.463**	**-0.631**	**-0.824**
	[0.039]	[0.148]	[0.629]	[0.052]	[0.632]	[0.054]	[0.038]	[0.028]
Period Dummies								
D 90_94							**-2.497**	**-1.379**
							[0.181]	[0.202]
D 99_01							**2.424**	**1.802**
							[0.042]	[0.061]
Year Dummies								
D 1995	**0.101**	**0.912**						
	[0.76]	[0.362]						
D 1996	**0.447**	**1.344**	**-0.804**	**1.526**	**0.347**	**2.201**		
	[0.143]	[0.204]	[0.246]	[0.078]	[0.781]	[0.089]		
D 1997	**0.549**	**1.396**	**-0.600**	**1.992**	**0.354**	**-0.313**		
	[0.082]	[0.136]	[0.286]	[0.138]	[0.763]	[0.835]		
D 1998	**0.376**	**3.251**	**-0.194**	**2.310**	**1.098**	**2.186**		
	[0.215]	[0.055]	[0.82]	[0.044]	[0.428]	[0.146]		
D 1999	**1.260**	**0.915**	**2.391**	**1.784**	**2.280**	**0.677**		
	[0.144]	[0.417]	[0.355]	[0.136]	[0.291]	[0.696]		
D 2000	**0.222**	**1.785**	**-0.818**	**4.048**	**0.388**	**3.267**		
	[0.543]	[0.107]	[0.446]	[0.016]	[0.839]	[0.037]		
D 2001	**0.863**		**-2.189**	**1.733**	**-1.612**	**0.062**		
	[0.065]		[0.209]	[0.203]	[0.481]	[0.978]		
				3.788		**2.705**		
				[0.016]		[0.054]		
R - squared	**19.0%**	**45.3%**						
N	**258**	**226**	**165**	**226**	**150**	**210**	**165**	**226**
Wald (joint)	**5708.000**	**1058.000**	**1905.000**	**194.000**	**926.700**	**151.800**	**3448.000**	**564.700**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Wald (time)	**8.225**	**5.315**	**8.020**	**12.190**	**4.975**	**12.440**		
	[0.313]	[0.622]	[0.331]	[0.095]	[0.663]	[0.087]		
AR(1)	**-1.446**	**-1.976**	**-0.771**	**-1.701**	**-0.769**	**-2.061**	**-1.597**	**-1.005**
	[0.148]	[0.048]	[0.441]	[0.089]	[0.442]	[0.039]	[0.110]	[0.315]
AR(2)	**-1.313**	**-2.162**	**-0.904**	**-1.999**	**-0.834**	**-1.832**	**-2.230**	**-1.840**
	[0.189]	[0.031]	[0.366]	[0.046]	[0.404]	[0.067]	[0.026]	[0.066]
Sargan			**1.095**	**435.400**	**0.970**	**117.700**	**128.000**	**558.500**
			[1.000]	[0.000]	[0.987]	[0.000]	[0.000]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 13 - Effects of Cash Flow, Debt Currency and Maturity Composition and Interactions on Cash Flow

Dependent Variable: CF/K

	OLS	WG	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(CF/K)_{-1}$	**0.435**	**-2.056**	**0.036**	**-3.295**	**0.765**	**0.008**	**-1.850**	**-0.095**	**1.878**	**-0.044**
	[0.278]	[0.016]	[0.908]	[0]	[0.066]	[0.975]	[0.024]	[0.494]	[0.065]	[0.848]
$(CF/K)_{-2}$	**-0.505**	**1.658**	**2.893**	**1.170**	**0.879**	**3.083**	**1.398**	**3.343**	**0.991**	**2.948**
	[0.471]	[0.036]	[0.01]	[0.069]	[0.087]	[0.008]	[0.037]	[0]	[0.205]	[0.021]
$(D_{ST\_FC}/K)_{-1}$*Δln(RER)	**20.422**	**10.139**	**12.495**	**8.111**	**4.639**	**11.739**	**11.526**	**11.307**	**-1.920**	**12.042**
	[0]	[0]	[0.001]	[0]	[0.04]	[0.002]	[0]	[0]	[0.467]	[0.002]
$(D_{ST\_LC}/K)_{-1}$*ln(1+r)	**3.030**	**6.693**	**1.384**	**8.724**	**21.989**	**1.409**	**6.158**	**4.385**	**32.476**	**2.112**
	[0.228]	[0]	[0.071]	[0]	[0.174]	[0.156]	[0]	[0.034]	[0.344]	[0.002]
$(D_{LT\_FC}/K)_{-1}$*Δln(RER)	**-8.444**	**-12.530**	**-11.214**	**-13.395**	**-4.939**	**-11.324**	**-12.234**	**-11.735**	**-1.336**	**-11.354**
	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0.385]	[0]
$(D_{LT\_LC}/K)_{-1}$*ln(1+r)	**14.365**	**3.176**	**5.492**	**0.756**	**1.608**	**5.524**	**4.102**	**6.046**	**6.701**	**6.775**
	[0.01]	[0.021]	[0.077]	[0.661]	[0.565]	[0.063]	[0.026]	[0.007]	[0.095]	[0.038]
Size			**-0.244**	**0.383**					**yes**	**yes**
			[0.15]	[0.446]						
ADR			**0.178**						**yes**	**yes**
			[0.175]							
Tradable			**-0.245**						**yes**	**yes**
			[0.16]							
Foreign Ownership			**0.118**						**yes**	**yes**
			[0.691]							
Constant	**1.369**		**1.624**		**-1.043**	**1.413**	**-0.083**	**-0.508**	**3.549**	**2.916**
	[0.008]		[0.017]		[0.044]	[0.046]	[0.192]	[0.006]	[0.235]	[0.018]
Period Dummies										
D 90_94							**2.054**	**1.970**		
							[0.063]	[0.036]		
D 99_01							**0.610**	**0.506**		
							[0.078]	[0.038]		
Year Dummies										
D 1995	**-1.972**	**-1.270**	**-1.163**	**-1.404**		**-1.805**				**-2.118**
	[0.004]	[0.022]	[0.015]	[0.045]		[0.028]				[0.014]
D 1996	**-1.827**	**-1.186**	**-1.231**	**-0.868**	**1.065**	**-1.896**			**-3.458**	**-1.919**
	[0.005]	[0.023]	[0.021]	[0.064]	[0.034]	[0.021]			[0.237]	[0.025]
D 1997	**-1.737**	**-1.220**	**-1.060**	**-0.858**	**0.936**	**-1.616**			**-3.698**	**-1.745**
	[0.002]	[0.01]	[0.018]	[0.026]	[0.068]	[0.028]			[0.242]	[0.024]
D 1998	**-1.793**	**-1.303**	**-1.019**	**-1.148**	**1.043**	**-1.606**			**-3.871**	**-1.609**
	[0.001]	[0.001]	[0.023]	[0.017]	[0.021]	[0.026]			[0.23]	[0.042]
D 1999	**-1.867**	**-0.570**	**-0.673**	**-0.313**	**1.248**	**-1.209**			**-3.229**	**-1.296**
	[0]	[0.138]	[0.198]	[0.306]	[0.029]	[0.1]			[0.252]	[0.117]
D 2000	**-1.669**	**-0.901**	**-0.946**	**-0.744**	**0.995**	**-1.508**			**-3.580**	**-1.478**
	[0.003]	[0.023]	[0.048]	[0.064]	[0.063]	[0.054]			[0.232]	[0.072]
D 2001	**-1.747**	**-0.725**	**-0.933**	**-0.538**	**1.060**	**-1.476**			**-3.503**	**-1.410**
	[0.001]	[0.051]	[0.041]	[0.125]	[0.047]	[0.039]			[0.232]	[0.069]
R - squared	**92.3%**	**98.2%**	**95.9%**	**98.6%**						
N	**143**	**126**	**136**	**120**	**85**	**126**	**85**	**126**	**79**	**120**
Wald (joint)	**92350**	**220200**	**427200**	**159300**	**667400**	**150600**	**409200**	**3320000**	**353400**	**218700**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Wald (time)	**17.660**	**18.640**	**14.140**	**16.940**	**17.130**	**13.470**			**4.697**	**12.560**
	[0.014]	[0.009]	[0.049]	[0.018]	[0.017]	[0.062]			[0.697]	[0.084]
AR(1)	**1.921**	**-2.224**	**1.625**	**-2.461**	**-0.133**	**-2.420**	**-1.778**	**-2.008**	**-0.342**	**-1.740**
	[0.055]	[0.026]	[0.104]	[0.014]	[0.894]	[0.016]	[0.075]	[0.045]	[0.732]	[0.082]
AR(2)	**2.308**	**-1.467**	**1.126**	**-1.330**	**1.341**	**-1.048**	**-0.580**	**-0.550**	**-0.962**	**-0.897**
	[0.021]	[0.142]	[0.260]	[0.183]	[0.180]	[0.294]	[0.562]	[0.583]	[0.336]	[0.370]
Sargan					**0.289**		**55.680**	**163.500**	**0.044**	
					[1.000]		[0.701]	[0.000]	[1.000]	

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 14 - Effects of Cash Flow and Financial Expenses on Investment - Subperiods Analysis

Dependent Variable: I/K

	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**-0.269**	**-0.093**	**-0.060**	**-0.049**	**-0.271**	**-0.104**	**-0.307**	**-0.111**
	[0.036]	[0.034]	[0.282]	[0.32]	[0.033]	[0.017]	[0.088]	[0.145]
$(CF/K)_{-1}$	**0.129**	**-0.103**	**-0.112**	**-0.233**	**0.143**	**-0.094**	**0.070**	**0.027**
	[0.633]	[0.363]	[0.363]	[0.251]	[0.59]	[0.383]	[0.753]	[0.783]
$(CF/K)_{-1}$ * D_90_94	**0.749**	**0.373**	**0.187**	**0.201**	**0.716**	**0.342**	**0.565**	**0.429**
	[0.316]	[0.338]	[0.393]	[0.393]	[0.324]	[0.344]	[0.342]	[0.326]
$(CF/K)_{-1}$ * D_99_01	**0.186**	**0.193**	**0.331**	**0.285**	**0.240**	**0.207**	**0.248**	**0.021**
	[0.575]	[0.415]	[0.192]	[0.188]	[0.433]	[0.376]	[0.444]	[0.887]
$(CF/K)_{-2}$	**0.315**	**0.241**			**0.292**	**0.221**	**0.358**	**0.064**
	[0.14]	[0.208]			[0.143]	[0.229]	[0.239]	[0.533]
$(CF/K)_{-2}$ * D_90_94	**-0.604**	**-0.381**			**-0.600**	**-0.365**	**-0.376**	**-0.355**
	[0.326]	[0.349]			[0.316]	[0.324]	[0.46]	[0.39]
$(CF/K)_{-2}$ * D_99_01	**-0.542**	**-0.378**			**-0.510**	**-0.367**	**-0.089**	**-0.293**
	[0.328]	[0.299]			[0.341]	[0.289]	[0.793]	[0.401]
$(Fin\ Exp/K)_{-1}$	**0.168**	**0.059**	**0.089**	**0.045**	**0.177**	**0.066**	**0.108**	**-0.002**
	[0.169]	[0.314]	[0.171]	[0.219]	[0.149]	[0.303]	[0.379]	[0.972]
$(Fin\ Exp/K)_{-1}$ * D_90_94	**-0.608**	**-1.540**	**-0.016**	**0.006**	**-1.386**	**-1.820**	**-1.433**	**-1.527**
	[0.432]	[0.187]	[0.707]	[0.848]	[0.158]	[0.137]	[0.224]	[0.394]
$(Fin\ Exp/K)_{-1}$ * D_99_01	**-0.010**	**-0.007**	**-0.007**	**0.000**	**-0.010**	**-0.011**	**0.348**	**0.068**
	[0.45]	[0.486]	[0.441]	[0.957]	[0.443]	[0.431]	[0.167]	[0.307]
Size							**-0.493**	**-0.136**
							[0.082]	[0.498]
ADR							**yes**	**yes**
Tradable							**yes**	**yes**
Foreign Ownership							**yes**	**yes**
Constant	**-0.040**	**0.102**	**-0.406**	**-0.296**	**-0.221**	**-0.416**	**-0.043**	**-1.478**
	[0.514]	[0.3]	[0.044]	[0.084]	[0.277]	[0.037]	[0.576]	[0.502]
Period Dummies								
D 90_94			**-0.331**	**0.439**	**0.110**	**0.524**		
			[0.444]	[0]	[0.813]	[0]		
D 99_01			**1.726**	**0.840**	**0.927**	**1.128**		
			[0.028]	[0.12]	[0.187]	[0.079]		
N	**901**	**1116**	**1155**	**1421**	**901**	**1116**	**823**	**1025**
Wald (joint)	**3913.000**	**8943.000**	**30.520**	**100.500**	**7560.000**	**18970.000**	**8933.000**	**10620.000**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
AR(1)	**-1.452**	**-1.456**	**-1.555**	**-1.462**	**-1.443**	**-1.462**	**-1.421**	**-1.457**
	[0.146]	[0.146]	[0.120]	[0.144]	[0.149]	[0.144]	[0.155]	[0.145]
AR(2)	**0.956**	**0.993**	**1.055**	**0.997**	**0.933**	**0.992**	**1.118**	**1.029**
	[0.339]	[0.321]	[0.291]	[0.319]	[0.351]	[0.321]	[0.263]	[0.303]
Sargan	**212.500**	**1102.000**	**311.000**	**1160.000**	**209.900**	**1041.000**	**224.800**	**638.400**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

P-values are reported in brackets.
GMM difference and system estimators use instruments lagged 2 and 3 periods.
GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.
AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).
The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 15 - Effects of Debt Currency Composition and its interactions with Interest Rate and Exchange Rate Movements on Investment - Subperiods Analysis

Dependent Variable: I/K

	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**0.044**	**0.072**
	[0.762]	[0.613]
$(D_{FC}/K)_{-1}$	**-0.332**	**-0.537**
	[0.141]	[0.068]
$(D_{FC}/K)_{-1}$ * D_90_94	**1.849**	**2.027**
	[0.308]	[0.248]
$(D_{FC}/K)_{-1}$ * D_99_01	**0.335**	**0.528**
	[0.133]	[0.068]
$(D_{FC}/K)_{-1}$* Δln(RER)	**5.949**	**5.589**
	[0.135]	[0.051]
$(D_{FC}/K)_{-1}$* Δln(RER) * D_90_94	**-0.654**	**-0.718**
	[0.308]	[0.248]
$(D_{FC}/K)_{-1}$* Δln(RER) * D_99_01	**-5.972**	**-5.620**
	[0.134]	[0.051]
$(D_{LC}/K)_{-1}$	**0.211**	**-1.552**
	[0.865]	[0.234]
$(D_{LC}/K)_{-1}$ * D_90_94	**-1.310**	**-1.675**
	[0.004]	[0.001]
$(D_{LC}/K)_{-1}$ * D_99_01	**-0.353**	**1.662**
	[0.774]	[0.203]
$(D_{LC}/K)_{-1}$* ln(1+r)	**1.353**	**9.475**
	[0.81]	[0.144]
$(D_{LC}/K)_{-1}$* ln(1+r) * D_90_94	**-0.275**	**-0.351**
	[0.004]	[0.001]
$(D_{LC}/K)_{-1}$* ln(1+r) * D_99_01	**-0.539**	**-10.417**
	[0.924]	[0.114]
Size	**-0.296**	**0.247**
	[0.48]	[0.159]
ADR	**yes**	**yes**
Tradable	**yes**	**yes**
Foreign Ownership	**yes**	**yes**
Constant	**0.070**	**-0.706**
	[0.114]	[0.137]
N	**184**	**256**
Wald (joint)	**94.750**	**304.200**
	[0.000]	[0.000]
AR(1)	**-2.227**	**-2.310**
	[0.026]	[0.021]
AR(2)	**0.516**	**0.756**
	[0.606]	[0.450]
Sargan	**51.540**	**195.100**
	[0.531]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 16 - Effects of Debt Currency and Maturity Composition and Interactions and Multilateral Exchange Rate on Cash Flow - Subperiods Analysis

Dependent Variable: I/K

	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	-0.108	0.044	-0.104	0.050	-0.216	0.051
	[0.449]	[0.732]	[0.499]	[0.721]	[0.269]	[0.713]
$(D_{ST\_FC}/K)_{-1}$	0.265	-0.082	0.441	-0.039	0.406	0.068
	[0.675]	[0.839]	[0.469]	[0.924]	[0.127]	[0.848]
$(D_{ST\_FC}/K)_{-1}$ * D_90_94	4.514	4.834	5.564	4.458	1.253	2.444
	[0.097]	[0.061]	[0.094]	[0.107]	[0.569]	[0.37]
$(D_{ST\_FC}/K)_{-1}$ * D_99_01	-0.516	-0.035	-0.678	-0.077	-0.783	-0.112
	[0.421]	[0.931]	[0.278]	[0.849]	[0.008]	[0.771]
$(D_{ST\_LC}/K)_{-1}$	6.242	2.589	5.734	2.653	23.103	8.439
	[0.381]	[0.375]	[0.462]	[0.376]	[0]	[0.125]
$(D_{ST\_LC}/K)_{-1}$ * D_90_94	-4.998	-1.258	-5.533	0.142	-7.889	-1.961
	[0.011]	[0.347]	[0.06]	[0.875]	[0]	[0.339]
$(D_{ST\_LC}/K)_{-1}$ * D_99_01	-6.529	-2.383	-5.684	-2.470	-23.907	-8.065
	[0.348]	[0.405]	[0.457]	[0.403]	[0]	[0.141]
$(D_{LT\_FC}/K)_{-1}$	0.435	0.206	1.148	0.201	-2.007	-0.530
	[0.658]	[0.568]	[0.374]	[0.619]	[0.005]	[0.415]
$(D_{LT\_FC}/K)_{-1}$ * D_90_94	-3.603	-3.314	-4.775	-0.249	18.373	4.889
	[0.475]	[0.173]	[0.53]	[0.94]	[0.014]	[0.427]
$(D_{LT\_FC}/K)_{-1}$ * D_99_01	-0.506	-0.384	-1.253	-0.380	1.917	0.328
	[0.602]	[0.294]	[0.324]	[0.346]	[0.005]	[0.615]
$(D_{LT\_LC}/K)_{-1}$	1.222	0.026	1.777	0.069	-0.756	-2.110
	[0.636]	[0.983]	[0.528]	[0.956]	[0.672]	[0.23]
$(D_{LT\_LC}/K)_{-1}$ * D_90_94	-0.083	-0.734	0.542	0.180	-0.399	-1.256
	[0.822]	[0.044]	[0.345]	[0.677]	[0.403]	[0.016]
$(D_{LT\_LC}/K)_{-1}$ * D_99_01	1.265	3.167	1.172	3.102	3.424	5.263
	[0.661]	[0.034]	[0.718]	[0.059]	[0.09]	[0.007]
$(D_{ST\_FC}/K)_{-1}$ * Δln(RER)	13.910	15.959	18.932	15.926	1.230	8.703
	[0.023]	[0.01]	[0.013]	[0.017]	[0.725]	[0.174]
$(D_{ST\_FC}/K)_{-1}$ * Δln(RER) * D_90_94	-1.598	-1.711	-1.970	-1.578	-0.444	-0.865
	[0.097]	[0.061]	[0.094]	[0.107]	[0.569]	[0.37]
$(D_{ST\_FC}/K)_{-1}$ * Δln(RER) * D_99_01	-11.168	-15.775	-16.558	-15.797	0.631	-9.238
	[0.076]	[0.012]	[0.028]	[0.021]	[0.858]	[0.168]
$(D_{ST\_LC}/K)_{-1}$ * ln(1+r)	-21.800	-15.504	-10.438	-15.255	-102.232	-42.572
	[0.56]	[0.292]	[0.808]	[0.308]	[0.001]	[0.116]
$(D_{ST\_LC}/K)_{-1}$ * ln(1+r) * D_90_94	-1.048	-0.264	-1.161	0.030	-1.655	-0.411
	[0.011]	[0.347]	[0.06]	[0.875]	[0]	[0.339]
$(D_{ST\_LC}/K)_{-1}$ * ln(1+r) * D_99_01	24.019	14.709	10.467	14.603	107.760	40.656
	[0.508]	[0.305]	[0.804]	[0.32]	[0]	[0.132]
$(D_{LT\_FC}/K)_{-1}$ * Δln(RER)	-10.480	-6.672	-21.598	-6.556	36.600	8.208
	[0.556]	[0.287]	[0.34]	[0.339]	[0.003]	[0.454]
$(D_{LT\_FC}/K)_{-1}$ * Δln(RER) * D_90_94	1.275	1.173	1.690	0.088	-6.504	-1.731
	[0.475]	[0.173]	[0.53]	[0.94]	[0.014]	[0.427]
$(D_{LT\_FC}/K)_{-1}$ * Δln(RER) * D_99_01	9.578	6.503	20.800	6.406	-36.943	-8.252
	[0.592]	[0.304]	[0.358]	[0.355]	[0.003]	[0.452]
$(D_{LT\_LC}/K)_{-1}$ * ln(1+r)	1.166	3.483	-1.034	3.465	12.268	16.435
	[0.923]	[0.569]	[0.938]	[0.58]	[0.145]	[0.081]
$(D_{LT\_LC}/K)_{-1}$ * ln(1+r) * D_90_94	-0.017	-0.154	0.114	0.038	-0.084	-0.264
	[0.822]	[0.044]	[0.345]	[0.677]	[0.403]	[0.016]
$(D_{LT\_LC}/K)_{-1}$ * ln(1+r) * D_99_01	-9.765	-20.533	-12.146	-20.337	-20.949	-32.232
	[0.506]	[0.018]	[0.476]	[0.028]	[0.047]	[0.004]
Size					-0.154	-0.022
					[0.281]	[0.81]
ADR					yes	yes
Tradable					yes	yes
Foreign Ownership					yes	yes
Constant	0.033	-0.112	-0.019	-0.134	0.036	0.041
	[0.289]	[0.025]	[0.634]	[0.193]	[0.302]	[0.87]
Period Dummies						
D 90_94			-0.272	-0.634		
			[0.421]	[0.001]		
D 99_01			0.352	0.026		
			[0.035]	[0.797]		
N	102	153	102	153	94	143
Wald (joint)	3797.000	15590.000	4093.000	22320.000	9045.000	29530.000
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
AR(1)	-2.489	-2.363	-2.430	-2.294	-2.564	-2.627
	[0.013]	[0.018]	[0.015]	[0.022]	[0.010]	[0.009]
AR(2)	-1.265	0.034	-1.397	0.389	0.678	1.897
	[0.206]	[0.973]	[0.162]	[0.697]	[0.498]	[0.058]
Sargan	51.830	142.900	49.330	137.300	45.220	116.700
	[1.000]	[0.978]	[1.000]	[0.988]	[1.000]	[1.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 17 - Analysis of Firm's Hedge Structure

Dependent Variable: I/K

	GMM - Diff	GMM - Sys
$(I/K)_{-1}$	**-0.074**	**-0.048**
	[0]	[0]
$(D_{FC}/K)_{-1}$ * Δln(RER)	**-0.078**	**-0.059**
	[0.012]	[0.002]
$(D_{FC}/K)_{-1}$* Δln(RER) * Dhedge	**0.098**	**0.093**
	[0.013]	[0.005]
Constant	**-17.477**	**10.428**
	[0]	[0]
Year Dummies		
D 1993		**-11.425**
		[0]
D 1994	**18.038**	**-11.005**
	[0]	[0]
D 1995	**17.682**	**-10.675**
	[0]	[0]
D 1996	**17.769**	**-10**
	[0]	[0]
D 1997	**18**	**-10**
	[0]	[0]
D 1999	**17.486**	**-10.487**
	[0]	[0]
D 2000	**17.565**	**-10.354**
	[0]	[0]
D 2001	**17.446**	**-10.429**
	[0]	[0]
N	**198**	**271**
Wald (joint)	**41.320**	**56.670**
	[0.000]	[0.000]
Wald (time)	**880.200**	**3024.000**
	[0.000]	[0.000]
AR(1)	**-1.763**	**-1.687**
	[0.078]	[0.092]
AR(2)	**0.031**	**-0.159**
	[0.975]	[0.874]
Sargan	**68**	**296**
	[0.059]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table 18 - Analysis of Firm's Hedge Structure

Dependent Variable: CF/K

	GMM - Diff	GMM - Sys	GMM - Diff	GMM - Sys
$(CF/K)_{-1}$	**0.545**	**0.641**	**0.624**	**0.638**
	[0.387]	[0.341]	[0.306]	[0.313]
$(CF/K)_{-2}$			**0.511**	**0.227**
			[0.301]	[0.524]
$(D_{FC}/K)_{-1}$	**-0.314**	**-0.263**	**-0.326**	**-0.263**
	[0]	[0.017]	[0]	[0.013]
$(D_{FC}/K)_{-1}$ * Δln(RER)	**3.323**	**3.420**	**3.057**	**3.259**
	[0.113]	[0.123]	[0.049]	[0.081]
$(D_{FC}/K)_{-1}$* Δln(RER) * Dhedge	**-2.705**	**-2.384**	**-2.929**	**-2.523**
	[0.065]	[0.167]	[0.057]	[0.183]
Constant	**0.094**	**0.260**	**0.096**	**0.316**
	[0.28]	**[0.08]**	**[0.313]**	**[0.108]**
N	**177**	**245**	**162**	**223**
Wald (joint)	**56230.000**	**67.260**	**54050.000**	**1403.000**
	[0.000]	[0.000]	[0.000]	[0.000]
AR(1)	**1.254**	**1.276**	**1.342**	**1.627**
	[0.210]	[0.202]	[0.180]	[0.104]
AR(2)	**-1.552**	**-1.655**	**-1.690**	**-1.681**
	[0.121]	[0.098]	[0.091]	[0.093]
Sargan	**201**	**782**	**182**	**687**
	[0.000]	[0.000]	[0.000]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table A .1. - Effects of Foreign Currency Debt and Exchange Rate Movements on Sales

Dependent Variable: Sales/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(Sales/K)_{-1}$	**0.774**	**-0.280**	**-1.120**	**1.415**	**-0.561**	**1.209**
	[0]	[0.562]	[0.284]	[0]	[0.518]	[0]
$(D_{FC}/K)_{-1}$	**-81.9**	**33.8**	**15.4**	**4.5**	**-1124.1**	**-3202.6**
	[0.491]	[0.218]	[0.19]	[0.929]	[0.579]	[0.299]
$(D_T/K)_{-1}$	**7.7**	**24.7**	**40.2**	**59.2**	**2265.3**	**893.0**
	[0.47]	[0.441]	[0.289]	[0.231]	[0.221]	[0.188]
$(D_{FC}/K)_{-1}$ * Δln(RER)	**1140.1**	**346.7**	**315.1**	**278.0**	**2437.4**	**28683.1**
	[0.389]	[0.33]	[0.239]	[0.56]	[0.716]	[0.34]
Exp * Δln(RER)					**-96360.2**	**-178531.0**
					[0.15]	[0.249]
Imp * Δln(RER)					**-108207.0**	**-67549.1**
					[0.201]	[0.598]
Constant	**24406.5**		**-1039.0**	**29123.7**	**9448.8**	**30639.8**
	[0.138]		[0.314]	[0.183]	[0.192]	[0.336]
Year Dummies						
D 1995	**-24339.6**	**-8497.1**		**-37309.0**		**-38778.0**
	[0.139]	[0.273]		[0.18]		[0.25]
D 1996	**-24304.5**	**-8400.7**	**154.3**	**-32902.0**	**-5927.8**	**-36750.0**
	[0.138]	[0.271]	[0.943]	[0.155]	**[0.322]**	[0.269]
D 1997	**-21881.8**	**-4079.5**	**25858.5**	**-40534.1**	**13139.1**	**-41570.7**
	[0.13]	[0.508]	[0.167]	[0.12]	[0.281]	[0.195]
D 1998	**-25911.2**	**-12674.3**	**-9032.0**	**-43528.8**	**-19354.5**	**-43842.8**
	[0.131]	[0.167]	[0.221]	[0.127]	[0.2]	[0.2]
D 1999	**-24624.5**	**-11114.1**	**513.0**	**-30519.6**	**11126.9**	**-6568.9**
	[0.139]	[0.234]	[0.587]	[0.181]	[0.194]	[0.874]
D 2000	**-24264.4**	**-11649.0**	**1076.1**	**-30407.9**	**-22570.5**	**-29476.2**
	[0.139]	[0.235]	[0.261]	[0.181]	[0.163]	[0.365]
D 2001	**-30503.3**	**-16550.8**	**-4327.6**	**-41647.9**	**-21936.8**	**-37912.0**
	[0.146]	[0.224]	[0.209]	[0.188]	[0.148]	[0.385]
R - squared	**73.9%**	**10.4%**				
N	**329**	**277**	**199**	**277**	**132**	**184**
Wald (joint)	**102.700**	**2.279**	**3.990**	**1030.000**	**3.114**	**2104.000**
	[0.000]	[0.685]	[0.407]	[0.000]	[0.794]	[0.000]
Wald (time)	**4.169**	**3.450**	**3.560**	**4.523**	**2.858**	**5.119**
	[0.760]	[0.841]	[0.829]	[0.718]	[0.898]	[0.645]
AR(1)	**-1.232**	**-1.451**	**-1.211**	**0.974**	**-1.245**	**0.977**
	[0.218]	[0.147]	[0.226]	[0.330]	[0.213]	[0.329]
AR(2)	**-0.459**	**0.582**	**-0.742**	**-0.987**	**-1.383**	**-0.626**
	[0.646]	[0.560]	[0.458]	[0.324]	[0.167]	[0.531]
Sargan			**4.032**	**42.500**	**20.050**	**60.610**
			[0.999]	[0.924]	[0.891]	[0.996]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table A .2. - Effects of Foreign Currency Debt and Exchange Rate Movements on Investment

Dependent Variable: I/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**0.063**	**-0.089**	**-0.072**	**-0.050**	**-0.034**	**-0.042**	**-0.072**	**-0.046**
	[0.434]	[0]	[0]	[0]	[0.107]	[0.005]	[0]	[0]
$(D_{FC}/K)_{-1}$	**0.001**	**0.002**	**0.001**	**0.001**	**-0.127**	**-0.029**	**0.001**	**0.001**
	[0.57]	[0.275]	[0.405]	[0.561]	[0.005]	[0.134]	[0.344]	[0.4]
$(D_T/K)_{-1}$	**0.000**	**0.000**	**-0.002**	**0.000**	**0.092**	**0.028**	**-0.002**	**0.000**
	[0.826]	[0.624]	[0.296]	[0.665]	[0.011]	[0.126]	[0.25]	[0.599]
$(D_{FC}/K)_{-1} * \Delta\ln(RER)$	**-0.005**	**-0.024**	**-0.025**	**-0.023**	**-0.028**	**-0.041**	**-0.026**	**-0.025**
	[0.719]	[0.196]	[0.103]	[0.057]	[0.129]	[0.002]	[0.111]	[0.029]
Exp * MultRER					**0.328**	**-0.051**		
					[0.389]	[0.51]		
Imp * MultRER					**0.802**	**0.194**		
					[0.289]	[0.559]		
Exp-Imp*MultRER							**0.373**	**-0.037**
							[0.339]	[0.632]
Constant	**-15.695**		**-17.147**	**10.784**	**-1.405**	**6.983**	**-17.117**	**9.844**
	[0.405]		[0]	[0]	[0.775]	[0.029]	[0]	[0]
Year Dummies								
D 1993	**14.794**	**-20.980**		**-11.785**		**-8.005**		**-10.842**
	[0.434]	[0]		[0]		[0.013]		[0]
D 1994	**15.077**	**-20.564**	**17.741**	**-11.365**	**2.138**	**-7.616**	**17.775**	**-10.441**
	[0.424]	[0]	[0]	[0]	[0.663]	[0.017]	[0]	[0]
D 1995	**15.561**	**-20.168**	**17.523**	**-11.002**	**1.816**	**-7.157**	**17.505**	**-10.046**
	[0.41]	[0]	[0]	[0]	[0.708]	[0.028]	[0]	[0]
D 1996	**15.636**	**-20.010**	**17.362**	**-10.815**	**1.605**	**-7.000**	**17.345**	**-9.874**
	[0.407]	[0]	[0]	[0]	[0.743]	[0.03]	[0]	[0]
D 1997	**15.656**	**-19.986**	**17.251**	**-10.849**	**1.359**	**-7.079**	**17.215**	**-9.911**
	[0.406]	[0]	[0]	[0]	[0.786]	[0.027]	[0]	[0]
D 1998	**15.770**	**-19.892**	**17.303**	**-10.740**	**1.589**	**-7.028**	**17.286**	**-9.785**
	[0.403]	[0]	[0]	[0]	[0.746]	[0.03]	[0]	[0]
D 1999	**15.635**	**-19.967**	**17.184**	**-10.818**	**1.291**	**-7.024**	**17.114**	**-9.863**
	[0.407]	[0]	[0]	[0]	[0.795]	[0.032]	[0]	[0]
D 2000	**15.729**	**-19.898**	**17.223**	**-10.738**	**1.504**	**-7.000**	**17.209**	**-9.797**
	[0.403]	[0]	[0]	[0]	[0.759]	[0.028]	[0]	[0]
D 2001	**15.682**	**-19.962**	**17.103**	**-10.757**	**1.339**	**-7.012**	**17.065**	**-9.814**
	[0.406]	[0]	[0]	[0]	[0.785]	[0.03]	[0]	[0]
R - squared	**21.4%**	**27.7%**						
N	**380**	**325**	**234**	**325**	**162**	**225**	**234**	**325**
Wald (joint)	**0.860**	**23.910**	**37.590**	**60.390**	**29.920**	**39.580**	**33.170**	**46.230**
	[0.930]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Wald (time)	**5466.00**	**69160000.00**	**946.30**	**3030.00**	**136.60**	**826.40**	**283.30**	**1605.00**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
AR(1)	**-0.909**	**-2.255**	**-1.908**	**-1.838**	**-2.024**	**-1.773**	**-1.936**	**-1.854**
	[0.363]	[0.024]	[0.056]	[0.066]	[0.043]	[0.076]	[0.053]	[0.064]
AR(2)	**-0.467**	**-2.556**	**-0.141**	**-0.824**	**0.033**	**-0.054**	**-0.119**	**-0.787**
	[0.640]	[0.011]	[0.888]	[0.410]	[0.974]	[0.957]	[0.905]	[0.432]
Sargan Test			**55.240**	**215.400**	**68.130**	**224.800**	**65.470**	**244.800**
			[0.867]	[0.000]	[0.996]	[0.000]	[0.943]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table A .3. - Effects of Cash Flow, Total Debt and Multilateral Exchange Rate on Investment with Controls

Dependent Variable: I/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**-0.002**	**-0.044**	**-0.830**	**-0.057**	**-0.845**	**-0.402**	**-0.846**	**-0.282**	**-0.862**	**-0.228**
	[0.71]	[0.345]	[0.001]	[0.403]	[0]	[0.004]	[0]	[0.003]	[0]	[0.006]
$(CF/K)_{-1}$	**-0.043**	**0.046**	**0.234**	**-0.067**	**0.033**	**-0.181**	**0.128**	**-0.118**	**0.085**	**-0.103**
	[0.139]	[0.293]	[0.339]	[0.651]	[0.77]	[0.304]	[0.273]	[0.197]	[0.026]	[0.051]
$(CF/K)_{-2}$					**0.183**	**-0.191**	**0.208**	**0.047**	**0.155**	**0.037**
					[0.354]	[0.081]	[0.361]	[0.485]	[0.499]	[0.397]
$(D_T/K)_{-1}$							**0.017**	**0.003**	**0.017**	**0.006**
							[0.004]	[0.627]	[0]	[0.01]
Exp * MultRER									**2.272**	**-0.030**
									[0.335]	[0.967]
Imp * MultRER									**7.183**	**0.341**
									[0.174]	[0.884]
Size	**0.160**	**0.177**	**-4.431**	**6.198**	**-2.462**	**9.363**	**-2.372**	**3.975**	**-1.965**	**3.498**
	[0.013]	[0.304]	[0.184]	[0.045]	[0.499]	[0.055]	[0.442]	[0.123]	[0.453]	[0.08]
ADR	**0.026**		**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**
	[0.878]									
Tradable	**0.154**		**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**
	[0.209]									
Foreign Ownership	-0.201		**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**
	[0.073]									
Constant	**0.906**	**-1.144**	**0.821**	**0.777**	**1.226**	**-17.799**	**0.830**	**-8.255**	**0.744**	**-3.896**
	[0]	[0]	[0.346]	[0.916]	[0.712]	[0.05]	[0.716]	[0.104]	[0.731]	[0.348]
Year Dummies										
D 1992	**-0.699**			**-4.491**						
	[0.008]			[0.314]						
D 1993	**-0.905**	**-1.306**	**1.629**	**-6.320**		**-9.063**		**-3.342**		**-2.804**
	[0]	[0]	[0.381]	[0.208]		[0.095]		[0.141]		[0.087]
D 1994	**-1.911**	**-2.214**	**2.792**	**-15.567**	**0.492**	**-16.809**	**1.047**	**-7.025**	**0.963**	**-5.880**
	[0]	[0]	[0.291]	[0.038]	[0.659]	[0.054]	[0.51]	[0.1]	[0.442]	[0.051]
D 1995	**-1.523**	**-1.790**	**-0.590**	**-16.747**	**-1.456**	**-17.621**	**-1.093**	**-7.150**	**-1.196**	**-5.979**
	[0]	[0]	[0.413]	[0.04]	[0.628]	[0.058]	[0.598]	[0.123]	[0.572]	[0.065]
D 1996	**-1.508**	**-1.722**	**-0.064**	**-16.664**	**-0.645**	**-18.098**	**-0.196**	**-7.407**	**-0.064**	**-6.263**
	[0]	[0]	[0.914]	[0.039]	[0.832]	[0.057]	[0.921]	[0.116]	[0.972]	[0.067]
D 1997	**-1.107**	**-1.348**	**-0.978**	**-15.360**	**-0.506**	**-17.252**	**-0.171**	**-6.709**	**-0.055**	**-5.572**
	[0]	[0.002]	[0.43]	[0.048]	[0.863]	[0.064]	[0.931]	[0.147]	[0.976]	[0.078]
D 1998	**-1.407**	**-1.656**	**-0.715**	**-16.123**	**-1.230**	**-17.581**	**-0.843**	**-7.054**	**-0.954**	**-6.056**
	[0]	[0]	[0.35]	[0.043]	[0.708]	[0.062]	[0.705]	[0.132]	[0.669]	[0.068]
D 1999	**-0.912**	**-1.149**	**-0.318**	**-16.354**	**-0.736**	**-17.470**	**-0.316**	**-6.535**	**-1.492**	**-5.659**
	[0.006]	[0.035]	[0.697]	[0.041]	[0.813]	[0.062]	[0.882]	[0.148]	[0.627]	[0.059]
D 2000	**-1.338**	**-1.602**	**-0.829**	**-17.514**	**-1.221**	**-17.692**	**-0.893**	**-6.900**	**-0.667**	**-6.224**
	[0]	[0]	[0.281]	[0.037]	[0.715]	[0.061]	[0.691]	[0.141]	[0.733]	[0.064]
D 2001	**-1.395**	**-1.682**	**-1.140**	**-18.413**	**-1.709**	**-18.872**	**-1.362**	**-7.561**	**-1.828**	**-6.779**
	[0]	[0]	[0.291]	[0.034]	[0.624]	[0.06]	[0.588]	[0.133]	[0.51]	[0.062]
R - squared	**2.8%**	**4.1%**								
N	**1448**	**1411**	**1161**	**1411**	**919**	**1123**	**910**	**1110**	**733**	**894**
Wald (joint)	**9.786**	**7.133**	**14.300**	**10.290**	**1107.000**	**31.000**	**467.000**	**38.160**	**560.300**	**30.890**
	[0.134]	[0.309]	[0.026]	[0.113]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]
Wald (time)	**456.300**	**315.200**	**14.380**	**7.831**	**45.490**	**4.524**	**39.740**	**7.645**	**49.630**	**11.430**
	[0.000]	[0.000]	[0.156]	[0.645]	[0.000]	[0.874]	[0.000]	[0.570]	[0.000]	[0.247]
AR(1)	**-0.536**	**-1.496**	**-1.180**	**-1.650**	**-0.796**	**-2.609**	**-0.791**	**-1.715**	**-0.598**	**-1.532**
	[0.592]	[0.135]	[0.238]	[0.099]	[0.426]	[0.009]	[0.429]	[0.086]	[0.550]	[0.125]
AR(2)	**0.983**	**0.410**	**-0.822**	**0.872**	**-1.060**	**-0.154**	**-1.167**	**0.643**	**-1.189**	**0.831**
	[0.326]	[0.682]	[0.411]	[0.383]	[0.289]	[0.877]	[0.243]	[0.520]	[0.234]	[0.406]
Sargan Test			**17.340**	**30.700**	**96.790**	**76.790**	**117.300**	**494.400**	**125.700**	**1094.000**
			[0.001]	[0.163]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table A .4. - Effects of Cash Flow and Interactions, Total Debt, Expected Profitability and Multilateral Exchange Rate on Investment

Dependent Variable: I/K

	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	-0.010	-0.047	-0.053	-0.045	-0.270	-0.112	-0.493	-0.239	-0.268	-0.108	-0.481	-0.225
	[0.326]	[0.346]	[0.355]	[0.27]	[0.011]	[0.01]	[0]	[0]	[0.013]	[0.015]	[0]	[0]
$(CF/K)_{-1}$	-0.049	0.027	0.100	-0.006	0.507	0.024	0.806	-0.154	0.545	0.011	0.862	-0.136
	[0.102]	[0.703]	[0.358]	[0.83]	[0.058]	[0.303]	[0.029]	[0.158]	[0.037]	[0.644]	[0.031]	[0.148]
$(CF/K)_{-2}$					0.561	0.177	1.511	0.270	0.578	0.196	1.502	0.260
					[0.089]	[0.014]	[0]	[0.016]	[0.079]	[0.045]	[0]	[0.01]
$(CF/K)_{-1} * \Delta\ln(RER)$	0.059	0.215	-0.156	-0.008	-2.481	-0.149	-13.356	-3.483	-2.839	-0.259	-14.441	-3.986
	[0.806]	[0.838]	[0.714]	[0.981]	[0.29]	[0.564]	[0.261]	[0.161]	[0.205]	[0.396]	[0.279]	[0.221]
$(CF/K)_{-2} * \Delta\ln(RER)$					-0.446	-0.411	2.090	0.270	-0.518	-0.394	2.093	0.234
					[0.615]	[0.206]	[0.062]	[0.546]	[0.561]	[0.323]	[0.095]	[0.626]
$(D_T/K)_{-1}$	0.005	-0.013	-0.002	0.002	0.004	0.004	-0.009	-0.008	0.004	0.002	-0.007	-0.008
	[0.124]	[0.001]	[0.788]	[0.673]	[0.308]	[0.12]	[0.004]	[0.232]	[0.506]	[0.346]	[0.026]	[0.216]
$(Sales/K)_{-1}$ **							-0.002	-0.002			-0.002	-0.001
							[0.571]	[0.205]			[0.002]	[0.036]
Q Tobin									0.003	0.004		
									[0.352]	[0.201]		
Exp * MultRER	-0.383	-2.584	-0.804	-0.572	0.411	-0.020	2.332	4.749	0.650	-0.102	1.098	3.298
	[0.207]	[0.291]	[0.628]	[0.412]	[0.773]	[0.965]	[0.053]	[0.296]	[0.669]	[0.821]	[0.195]	[0.263]
Imp * MultRER	-1.035	-7.849	-5.029	-2.642	-0.441	-2.146	10.301	-5.959	-1.100	-2.571	1.147	-4.507
	[0.417]	[0.109]	[0.248]	[0.121]	[0.868]	[0.219]	[0.049]	[0.429]	[0.656]	[0.234]	[0.66]	[0.417]
Constant	1.405		-0.832	1.767	-0.339	0.643	-0.704	-0.821	-0.336	0.889	0.126	-0.287
	[0]		[0]	[0.001]	[0]	[0.022]	[0.009]	[0.497]	[0.015]	[0.006]	[0.273]	[0.237]
Period Dummies												
D 90_94											0.572	-0.358
											[0.172]	[0.422]
D 99_01											-0.437	-0.108
											[0.138]	[0.646]
Year Dummies												
D 1992	-0.633	-1.156		-0.622								
	[0.027]	[0]		[0.018]								
D 1993	-0.981	-1.404	0.515	-1.037		-0.197		-0.209		-0.270		
	[0]	[0]	[0.178]	[0]		[0.064]		[0.311]		[0.087]		
D 1994	-1.357	-2.110	0.369	-1.332	0.070	-0.272	0.433	-0.220	0.027	-0.307		
	[0.001]	[0.004]	[0.568]	[0.003]	[0.852]	[0.576]	[0.13]	[0.755]	[0.944]	[0.597]		
D 1995	-0.429	-1.009	0.900	-0.547	-0.264	-0.580	0.088	-0.020	-0.398	-0.719		
	[0.626]	[0.053]	[0.081]	[0.46]	[0.642]	[0.002]	[0.786]	[0.977]	[0.578]	[0.001]		
D 1996	-1.233	-1.747	1.527	-1.159	0.563	-0.470	1.101	0.144	0.618	-0.624		
	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0.858]	[0]	[0]		
D 1997	-0.872	-1.646	0.005	-1.223	0.907	-0.029	1.236	0.744	0.859	-0.125		
	[0.003]	[0.015]	[0.996]	[0.041]	[0.044]	[0.945]	[0.014]	[0.514]	[0.115]	[0.792]		
D 1998	-1.199	-1.805	0.651	-1.345	-0.056	-0.357	0.378	0.412	-0.066	-0.481		
	[0]	[0.001]	[0.057]	[0]	[0.808]	[0.115]	[0.168]	[0.661]	[0.807]	[0.056]		
D 1999	-0.417	0.244	2.086	-0.327	0.907	0.463	-0.788	0.110	1.204	0.736		
	[0.471]	[0.766]	[0.042]	[0.551]	[0.328]	[0.489]	[0.188]	[0.898]	[0.238]	[0.425]		
D 2000	-0.995	-0.777	0.054	-1.010	-0.218	-0.051	0.910	0.046	-0.507	-0.175		
	[0]	[0.012]	[0.926]	[0]	[0.625]	[0.863]	[0.007]	[0.946]	[0.34]	[0.591]		
D 2001	-1.001	-0.340	0.988	-0.954	0.109	-0.171	-0.135	-0.238	0.102	-0.272		
	[0]	[0.568]	[0.003]	[0]	[0.745]	[0.549]	[0.735]	[0.718]	[0.742]	[0.416]		
R - squared	0.6%	2.0%										
N	1347	1335	1124	1335	870	1045	809	976	709	865	790	952
Wald (joint)	12.620	155.500	13.990	3.646	338.500	346.400	4167.000	3387.000	555.800	1662.000	3642.000	5576.000
	[0.050]	[0.000]	[0.030]	[0.724]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Wald (time)	162.500	39.280	89.440	156.400	61.740	66.230	37.830	45.270	49.310	36.020		
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]		
AR(1)	-1.400	-1.859	-1.834	-1.785	-1.730	-1.529	-1.380	-1.070	-1.696	-1.525	-1.565	-1.092
	[0.162]	[0.063]	[0.067]	[0.074]	[0.084]	[0.126]	[0.168]	[0.285]	[0.090]	[0.127]	[0.118]	[0.275]
AR(2)	1.324	-0.408	1.413	1.351	1.060	1.157	1.581	1.015	1.016	1.160	1.650	1.008
	[0.186]	[0.684]	[0.158]	[0.177]	[0.289]	[0.247]	[0.114]	[0.310]	[0.310]	[0.246]	[0.099]	[0.314]
Sargan Test			754.600	3149.000	301.800	1213.000	511.100	1732.000	253.700	1027.000	404.000	2041.000
			[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

** Multiplied by 1000.

Table A .5. - Effects of Debt Currency Composition, Interest Rate and Exchange Rate Movements and Multilateral Exchange Rate on Investment

Dependent Variable: I/K

	OLS	WG	OLS	WG	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**-0.037**	**-0.080**	**-0.156**	**-0.441**	**-0.009**	**-0.058**	**-0.323**	**-0.266**
	[0.008]	[0.117]	[0.37]	[0.025]	[0.875]	[0.189]	[0.224]	[0.231]
$(D_{FC}/K)_{-1}$	**-0.005**	**-0.006**	**-0.032**	**0.048**	**-0.090**	**0.018**	**-0.005**	**0.056**
	[0.271]	[0.924]	[0.713]	[0.724]	[0.178]	[0.745]	[0.97]	[0.662]
$(D_{FC}/K)_{-1}$* Δln(RER)	**-0.017**	**-0.347**			**0.209**	**-0.332**		
	[0.215]	[0.62]			[0.734]	[0.572]		
$(D_{FC}/K)_{-1}$* [Δln(RER)+ UST+Country Risk]			**0.145**	**-0.240**			**-0.101**	**-0.210**
			[0.664]	[0.694]			[0.857]	[0.692]
$(D_{LC}/K)_{-1}$	**-0.014**	**0.177**	**-0.028**	**0.067**	**0.433**	**-0.016**	**0.227**	**-0.158**
	[0.844]	[0.524]	[0.759]	[0.781]	[0.16]	[0.838]	[0.369]	[0.173]
$(D_{LC}/K)_{-1}$* ln(1+r)	**0.298**	**-0.620**	**0.436**	**0.243**	**-2.354**	**0.439**	**-0.894**	**1.679**
	[0.644]	[0.732]	[0.59]	[0.88]	[0.242]	[0.595]	[0.575]	[0.149]
Exp * MultRER	**0.076**	**0.402**	**0.091**	**0.373**	**0.383**	**0.160**	**0.286**	**0.139**
	[0.445]	[0.457]	[0.404]	[0.544]	[0.439]	[0.26]	[0.609]	[0.453]
Imp * MultRER	**0.182**	**1.544**	**0.144**	**1.500**	**1.284**	**0.485**	**0.892**	**0.285**
	[0.412]	[0.031]	[0.538]	[0.034]	[0.041]	[0.217]	[0.185]	[0.405]
SIZE	**0.018**	**-0.061**	**0.028**	**0.025**	**-0.005**	**0.148**	**0.146**	**0.148**
	[0.64]	[0.826]	[0.572]	[0.945]	[0.984]	[0.081]	[0.625]	[0.206]
ADR	**0.035**		**0.037**		**yes**	**yes**	**yes**	**yes**
	[0.497]		[0.513]					
Tradable	**0.104**		**0.117**		**yes**	**yes**	**yes**	**yes**
	[0.074]		[0.092]					
FO	**0.100**		**0.114**		**yes**	**yes**	**yes**	**yes**
	[0.039]		[0.031]					
Constant	**-0.782**		**-0.389**		**0.510**	**-1.302**	**0.203**	**-0.860**
	[0]		[0.151]		[0.036]	[0]	[0.333]	[0.048]
Year Dummies								
D 1995	**0.493**	**0.459**				**0.538**		
	[0]	[0.004]				[0.001]		
D 1996	**0.554**	**0.557**	**0.112**	**0.225**	**-0.351**	**0.610**		**0.187**
	[0]	[0]	[0.481]	[0.166]	[0.384]	[0]		[0.347]
D 1997	**0.555**	**0.666**	**0.118**	**0.377**	**-0.536**	**0.622**	**-0.113**	**0.198**
	[0]	[0]	[0.478]	[0.024]	[0.064]	[0]	[0.698]	[0.25]
D 1998	**0.619**	**0.647**	**0.178**	**0.317**	**-0.329**	**0.641**	**-0.124**	**0.136**
	[0]	[0]	[0.2]	[0.096]	[0.243]	[0]	[0.643]	[0.441]
D 1999	**0.533**	**0.403**	**0.079**	**0.112**	**-0.754**	**0.600**	**-0.376**	**0.146**
	[0]	[0.08]	[0.608]	[0.596]	[0.012]	[0]	[0.235]	[0.467]
D 2000	**0.620**	**0.496**	**0.197**	**0.244**	**-0.368**	**0.635**	**-0.092**	**0.224**
	[0]	[0]	[0.296]	[0.207]	[0.221]	[0]	[0.675]	[0.316]
D 2001	**0.548**	**0.405**	**0.113**	**0.135**	**-0.610**	**0.579**	**-0.273**	**0.177**
	[0]	[0.043]	[0.446]	[0.493]	[0.008]	[0]	[0.306]	[0.34]
R - squared	**19.0%**	**28.0%**	**5.0%**	**19.3%**				
N	**200**	**167**	**187**	**154**	**119**	**167**	**109**	**154**
Wald (joint)	**42.340**	**204.000**	**45.790**	**61.790**	**81.610**	**141.400**	**43.230**	**16.420**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.126]
Wald (time)	**320.700**	**65.190**	**2.937**	**6.621**	**56.630**	**135.900**	**2.518**	**2.363**
	[0.000]	[0.000]	[0.817]	[0.357]	[0.000]	[0.000]	[0.866]	[0.883]
AR(1)	**-1.365**	**-2.099**	**-1.958**	**-2.089**	**-1.954**	**-1.909**	**-1.903**	**-1.844**
	[0.172]	[0.036]	[0.050]	[0.037]	[0.051]	[0.056]	[0.057]	[0.065]
AR(2)	**-2.253**	**-2.570**	**-2.338**	**-3.350**	**1.242**	**0.900**	**0.785**	**0.989**
	[0.024]	[0.010]	[0.019]	[0.001]	[0.214]	[0.368]	[0.433]	[0.322]
Sargan Test					**67.770**	**298.400**	**63.100**	**278.700**
					[0.937]	[0.000]	[0.789]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.

Table A .6. - Effects of Debt Currency Composition and its interactions with Interest Rate and Exchange Rate Movements on Investment - Subperiods Analysis

Dependent Variable: I/K

	GMM-Diff	GMM-Sys	GMM-Diff	GMM-Sys
$(I/K)_{-1}$	**-0.001**	**0.108**	**-0.082**	**-0.063**
	[0.993]	[0.222]	[0.557]	[0.64]
$(D_{FC}/K)_{-1}$	**-0.314**	**-0.249**	**-0.316**	**-0.067**
	[0.138]	[0.097]	[0.158]	[0.703]
$(D_{FC}/K)_{-1}$ * D_90_94	**-619.135**	**-833.845**	**-374.862**	**-289.767**
	[0]	[0]	[0.022]	[0.095]
$(D_{FC}/K)_{-1}$ * D_99_01	**0.319**	**0.233**	**0.315**	**0.057**
	[0.125]	[0.111]	[0.149]	[0.748]
$(D_{FC}/K)_{-1}$* Δln(RER)	**3.142**	**2.252**	**3.805**	**1.533**
	[0.049]	[0.193]	[0.04]	[0.389]
$(D_{FC}/K)_{-1}$* Δln(RER) * D_90_94	**-1751.900**	**-2356.440**	**-1063.580**	**-820.669**
	[0]	[0]	[0.021]	[0.094]
$(D_{FC}/K)_{-1}$* Δln(RER) * D_99_01	**-3.171**	**-2.291**	**-3.830**	**-1.566**
	[0.047]	[0.191]	[0.039]	[0.381]
$(D_{LC}/K)_{-1}$	**-0.402**	**-0.217**	**-0.295**	**0.172**
	[0.424]	[0.62]	[0.559]	[0.758]
$(D_{LC}/K)_{-1}$ * D_90_94	**-614.388**	**-824.131**	**-372.595**	**-288.218**
	[0]	[0]	[0.02]	[0.088]
$(D_{LC}/K)_{-1}$ * D_99_01	**0.287**	**0.427**	**0.300**	**-0.012**
	[0.562]	[0.285]	[0.536]	[0.981]
$(D_{LC}/K)_{-1}$* ln(1+r)	**3.681**	**0.938**	**3.247**	**-1.082**
	[0.195]	[0.742]	[0.246]	[0.757]
$(D_{LC}/K)_{-1}$* ln(1+r) * D_90_94	**2924.370**	**3924.270**	**1776.360**	**1375.740**
	[0]	[0]	[0.019]	[0.086]
$(D_{LC}/K)_{-1}$* ln(1+r) * D_99_01	**-2.857**	**-2.663**	**-3.252**	**-0.146**
	[0.329]	[0.31]	[0.258]	[0.965]
Size				
ADR				
Tradable				
Foreign Ownership				
Constant	**0.060**	**0.029**	**0.026**	**-0.087**
	[0.035]	[0.309]	[0.61]	[0.185]
Period Dummies				
D 90_94			**-0.580**	**-0.693**
			[0.065]	[0.028]
D 99_01			**0.071**	**0.179**
			[0.594]	[0.023]
N	**206**	**282**	**206**	**282**
Wald (joint)	**384.900**	**1629.000**	**422.700**	**1855.000**
	[0.000]	[0.000]	[0.000]	[0.000]
AR(1)	**-2.147**	**-2.154**	**-2.230**	**-2.263**
	[0.032]	[0.031]	[0.026]	[0.024]
AR(2)	**-0.734**	**-0.969**	**-0.427**	**-0.405**
	[0.463]	[0.333]	[0.669]	[0.686]
Sargan	**63.550**	**211.000**	**65.050**	**215.700**
	[0.864]	[0.000]	[0.787]	[0.000]

P-values are reported in brackets.

GMM difference and system estimators use instruments lagged 2 and 3 periods.

GMM results are one step estimates with heteroskedasticity-consistent standard errors and test statistics.

AR(1) and AR(2) are tests for first-order and second-order serial correlation, asymptotically N(0,1).

The Wald (joint) statistics tests the hypothesis that the coefficients are jointly zero.