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**Did the 1995 Mexican Crisis Affect the Financial
Constraints of Listed Firms and
Their Role as Providers of Credit?**

by

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DID THE 1995 MEXICAN CRISIS AFFECT THE FINANCIAL CONSTRAINTS OF LISTED FIRMS AND THEIR ROLE AS PROVIDERS OF CREDIT?

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Abstract

The credit crunch that the Mexican economy experienced after the currency crisis of December 1994 has been widely documented. At the same time it was surprising how fast this economy recovered and achieved high growth rates achieved from 1996 to 2000. The big question is then: How was this growth financed? and Who took the place of domestic banks? This paper contributes to the understanding of these questions by focusing in two more specific questions: how the financing sources of listed companies were affected after the crisis? and how important were these companies as credit providers through trade credit? The data base comes from Mexican Stock Market and consists of an unbalanced panel of 376 public firms, of which only 64 are present for the whole sample.

The main results of the paper indicate that not all the firms were affected by the credit crunch, like the export oriented, the larger firms and in general firms with access to foreign markets. Between the affected firms, there seems to be a move towards suppliers' credit, although it was not enough to cover the reduction in other financing sources. It was found that smaller firms extended more credit both in terms of their sales and of their capital than larger ones. Also exporting firms gave more credit than non-exporting ones. There is also evidence suggesting that only exporting, medium size and larger firms increased the extended trade credit after the crisis.

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I. INTRODUCTION

It has been widely documented the credit crunch that experienced the Mexican economy after the currency crisis of December 1994. At the same time it was surprising how fast this economy recovered and the high growth rates achieved from 1996 to 2000. The big question is then: How was this growth financed? and Who took the place of domestic banks? This paper contributes to the understanding of these questions by focusing in two more specific questions: How the financing sources of listed companies were affected after the crisis? and How important were these companies as credit providers through trade credit?

There are at least two reasons that justify the analysis of the financing sources of listed companies. The first one is the availability of high quality and very complete data for these firms. Although this reason will not be enough without an additional justification. Listed companies are in general the larger firms in the economy and the ones with better access to financial markets, both domestic and foreign ones. Stated in a different manner these firms are the least affected by information problems and therefore the ones for which perfect markets theories apply the best. If this argument applies, the result of the banking crisis in these firms would had been only a change from domestic bank credit to other financing sources without any real effect on investment. It is by now widely that even listed are subject to important information problems, specially in development markets. So it is interesting to find out which firms were less affected and in relation to our second question, if these firms were the ones extending more credit to their clients.

To address these questions we first analyze the capital and debt structure of these firms to determine how it changed after the crisis and if these changes were homogenous across different types of firms. Once we characterized the groups of firms more affected, we test for the presence of more severe financial constraints after the crisis on these groups.

There is an extense literature covering the theoretical aspects driving trade credit (Emery, 1984, Mian & Smith 1994, Petersen & Rajan, 1996 and Shwartz, 1974). This literature finds three reasons why non-financial firms lend money, they have an information advantage at a lower cost, they have better ability to liquidate goods and they might be more interested in the survival of their clients. This is specially true when the client is a small firm. All these arguments imply a higher incentive to lend after the crisis, when domestic banks, which are the intermediaries more likely to be financing those small firms, almost cut all their credit. However, if the lending firm was also dramatically affected it might not have the resources to lend and the net effect on trade credit would be uncertain. Then the more obvious candidates to take the role of banks were exactly those firms with fewer financial constraints and with some information advantage, acting as financial intermediaries. The point of our analysis is precisely to test this hypothesis and to test if indeed trade credit increased after the crisis for this reason. An alternative explanation for

the expansion of trade credit considers that clients involved in financial problems did not pay as agreed and given the interest on selling their products the suppliers accept the conditions of their clients.

The data base comes from Mexican Stock Market and consists of an unbalanced panel of 376 public firms, of which only 64 are present for the whole sample. Even though this is not a representative sample of the Mexican production sector, it includes most of the largest firms and of the ones that have access to foreign financial markets and therefore if the previous hypothesis is true it will cover most of the supply side of the trade credit.

To complete the picture it is included an analysis of the trade credit received by the studied firms from their suppliers. Using this information it is possible to determine if this credit was used mostly by the firms without an access to the foreign financial markets and if the importance of it increased after the crisis. However, it is important to keep in mind that our sample, by covering the biggest firms, is not representative of the national demand side of the trade credit.

The main results of the paper indicate that the credit crunch affected the number of firms getting bank credit and corporate debt. The percentage of firms getting new credit from those sources decreased from 75% in 1994 to 48% in 2000. Also the financial resources that firms could get were also reduced from 12.2% of assets in 1994 to 6.9% in 2000.

It was interesting to find that a significant proportion of firms did not seem to have suffered of more financial restrictions, these were exporting firms and firms with access to foreign financial markets.

The source of financing that was more affected was corporate debt, which on average decreased its importance by half. This effect was particularly important for small firms for which the share of corporate debt to total decreased from 33% in 1993 to 6% in 2000. However, access to other sources of financing contributed to palliate the decrease on financial resources in such a way that the ratio of total debt to assets only decreased from 36% in 1994 to 33% in 2000.

Given the lack of importance that has played the Mexican stock market during the last decade, it was not surprising to find that stock market financing was an alternative used only by a very small number of firms. From 1990 to 2000 only 93 firms issued public offerings and of those 12 made it twice in the period, while the rest just once. Although it is important to note that the number of firms issuing equity in 1994, 1996 and 1997 was unusually high and representing around 10% of the listed firms.

Firms without access to dollar credit were more affected by the crisis both in terms of the amount of credit received and on the number of firms that could access credit, even suppliers' credit. Also these firms were the ones relying more in trade credit.

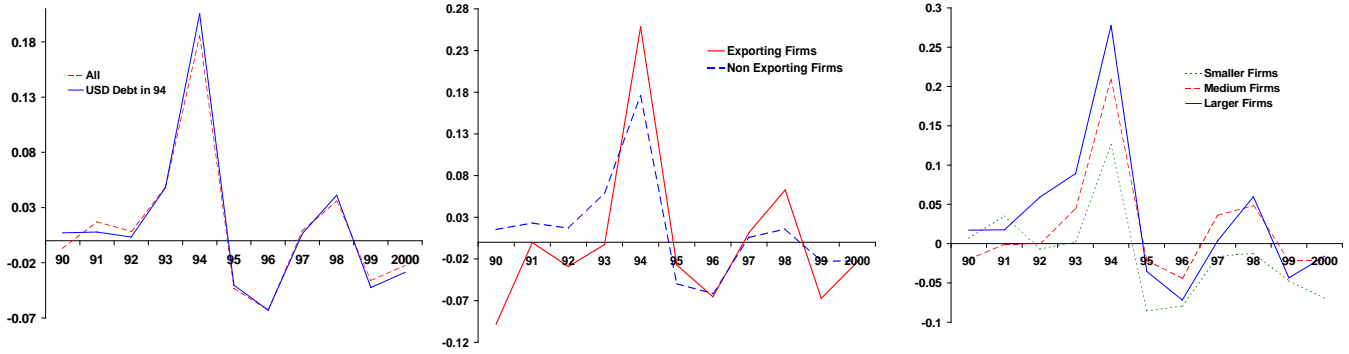
Regarding the determinants of trade credit it was found that before the crisis, receivables responded to the factors found for other countries: larger firms, exporting firms and in general firms with better access to financial markets tended to lend more. After the crisis none of the relevant variables had the expected effect in a robust way and the only relatively robust determinant of trade credit was cash flows, which might reflect that even those firms offering credit were more credit constraint than in the previous period. Alternatively it could be explained by the fact that large firms have better bargaining power than smaller ones, so firms stop paying small suppliers first. Results for the determinants of suppliers' credit indicate that this credit is a complement rather than a substitute of other financing resources, probably reflecting supply reasons. In terms of debt composition, the results are as expected: larger firms, firms with access to foreign credit and with more debt from other sources used relatively less trade credit.

II. DYNAMICS OF INVESTMENT AND CASH FLOWS DURING THE 90s

During the first half of the 90s investment was very dynamic. The average level of the investment capital ratio for the 1990 to 1993 period was 2% and it kept a positive trend throughout those years. Because of the crisis investment suffer dramatically in '95 and '96 achieving negative numbers, but it recover in '97 and '98, reaching the pre-crisis levels. The same pattern was followed by the different groups of firms. Although the larger firms had higher investment capital ratios for most of the period and the non-exporting had higher ratios before the crisis and the exporting firms from 1994 to 98 (Figure 2.1a).

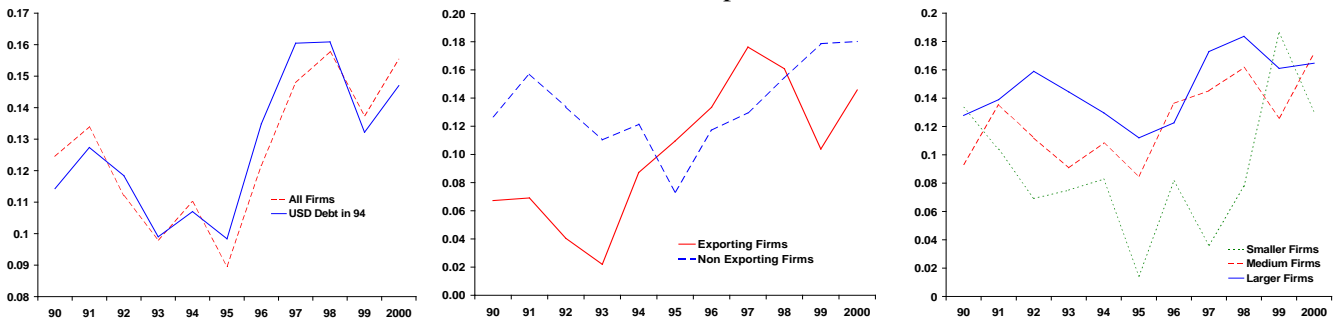
As shown in Figure 2.1b cash flows suffer only a mild decrease in '95 and the recovery was very fast. Only smaller firms experienced a more dramatic drop in their cash flows capital ratios from 8% in '94 to 1% in '95. The dynamic growth of cash flows imply that internal funds could be an important source of financing during those years where domestic bank lending was null.

Figure 2.1a
Investment / Capital $_{t-1}$ *



* Medians

Figure 2.1b
Cash Flows / Capital $t-1$ *



* Medians

III. THE EFFECT OF THE CRISIS ON THE DIFFERENT FINANCIAL SOURCES

The data base comes from Mexican Stock Market and consists of an unbalanced panel of 376 public firms, of which only 64 are present for the whole sample. Even though this is not a representative sample of the Mexican production sector, it includes most of the largest firms and of the ones that have access to foreign financial markets. Therefore we might expect that it provides a good representation of the firms providing trade credit during and after the credit crunch in Mexico.

3.1 Leverage Ratios and Debt Structure

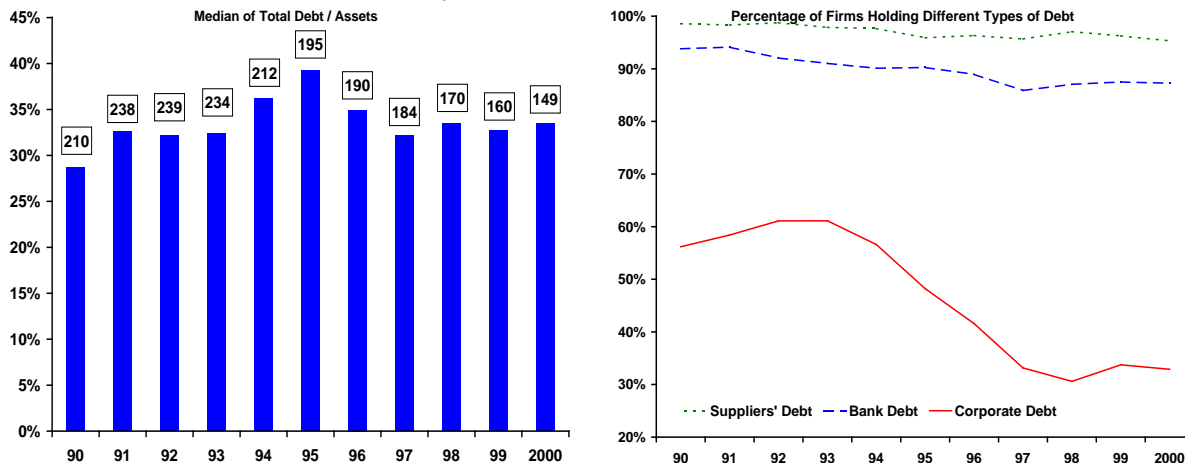
Even though after the 1994 currency crisis the Mexican economy experienced a credit crunch, at first sight this phenomenon is not fully reflected on the data of Mexican public firms. Figure 3.1 shows that the median of total debt to assets ratio experienced an increase from 36% in 1994 to 39% in 1995. The main explanation to this phenomenon is the huge devaluation that implied an immediate increase of the peso value of debt. Unfortunately, there is very few information regarding new credits, but the paper will cover some analysis using flows information. Second, the access to foreign credit by some firms and the export

opportunities created by the devaluation helped some firms, that were even benefited. Therefore what we observed was an unequal effect, that will be evident as we analyze variables by firms' groups.

After the initial increase, the ratio of total debt to assets decreased until 1997 reaching a level of 32% and then it increased again up to a level of 33% in 2000.

Looking at the share of firms that maintained each type of debt we find that all shares decreased. On Figure 3.1 we see that the proportion of firms with suppliers' debt was the less affected which after being at a level of 99% in 1990 decreased to 96% in 1995 and reached a level of 95% in 2000. The share of firms with bank credits decreased from a level of 94% on 1991 until 1997 when it reached 86% and since then it increased slightly to 87%. The share of firms with corporate debt has been by far the most affected, dropping from 61% on 1993 to a level of 31% on 1998 and since then it has achieved a slight recover.

Figure 3.1
Dynamics of Firm Indebtedness



* Median

□ Number of firms in the sample

Analyzing the debt structure of firms, we found that during the whole period bank credit had the largest share and that it was during 1993 when it represented the lowest share. The source of financing that was most affected by the crisis was corporate debt. On average suppliers' credit increased its importance in 9 percentage points after the 1994 crisis, the share of bank credit decreased slightly by 1 p.p. while the corporate debt decreased dramatically by 9 p.p. (Figure 3.2). The importance of corporate debt decreased to levels below the ones observed during 1989.

Figure 3.2
Mean of the Debt Structure

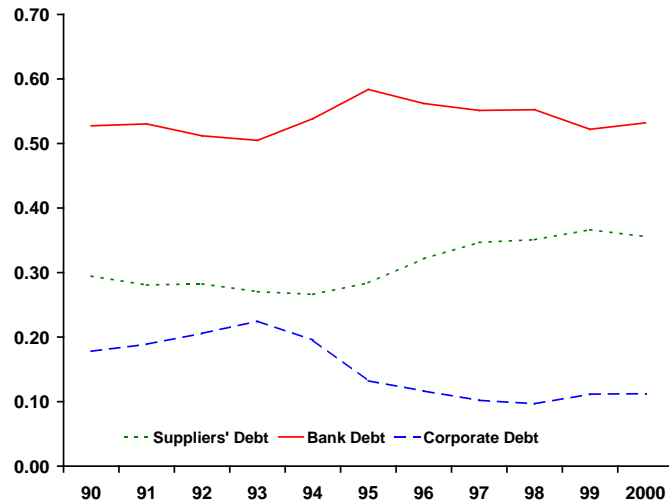


Table 3.1 presents data for new bank credits and new issues of corporate debt. Considering the share of firms that received new bank credits or issued corporate debt it decreased after 1994 going from 75% to 55% in 1996 and after a recover in 1998 it decreased again to 47% in 1999. The importance of these new credits with respect to assets also decreased from an average level of 12.2% before the crisis to a level lower of 5.7% in 1999.

Table 3.1
Firms Receiving New Bank Credit or Issuing New Corporate Debt

year	Number of Firms	% of Total Firms	New Credit / Assets*	New Credit / Total Debt*
90	147	70%	11.3%	35.9%
91	170	71%	10.6%	33.5%
92	168	70%	9.5%	30.1%
93	170	73%	7.8%	23.9%
94	159	75%	12.2%	31.3%
95	126	65%	9.2%	23.6%
96	104	55%	6.3%	18.1%
97	104	57%	8.7%	19.4%
98	111	65%	8.7%	19.8%
99	75	47%	5.7%	19.4%
2000	71	48%	6.9%	20.0%

* Medians

Up to this point it has not been mentioned anything regarding the resources obtained through public offerings, as it will be seen below very few firms have opted for obtaining financing via the stock market. Table 3.2 shows that from 1990 to 2000 only 93 firms made public offerings of equity and of those, 12 did it twice during the period and the rest only once. There are several reasons explaining the lack of importance of this market in Mexico, as it has been stressed by Babatz (1997) the regulation in Mexico during the analyzed period implied a poor protection of the rights of minority share holders, which is a major determinant of the development of stock markets (La Porta, et al 1996 and Martínez 1999). So even

when the number of firms issuing equity during 1996 and 1997, was unusually high for Mexican standards it was very low considering the size of the Mexican economy, the level of investment that took place during those years and the contraction of bank credit offered by domestic banks. More over from 1998 to 2000 only 6 firms made public offerings of equity, which is an incredible small number even for Mexican standards. For the rest of the paper we will focus on other sources of financing, as it should be clear by now that the stock market was not used, putting aside the mentioned exceptions, in a significant way as an alternative way of financing.

Table 3.2
Firms Issuing Public Offerings

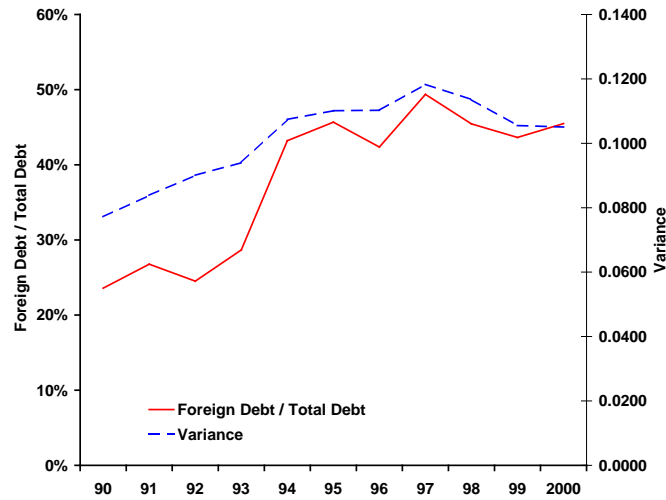
year	Number of Firms	% of Total Firms	Raised Capital / Equity
90	5	2%	17.6%
91	10	4%	54.0%
92	9	3%	17.4%
93	9	4%	39.0%
94	25	11%	48.0%
95	1	0%	99.3%
96	20	9%	41.2%
97	20	10%	68.6%
98	1	1%	79.5%
99	4	2%	27.4%
2000	1	1%	27.0%

3.2 Firms with dollar debt³ vs. firms without dollar debt

As was mentioned above domestic financing became very scarce after the 1994-1995 crisis, therefore we could expect that firms with access to foreign sources of financing became more leveraged than the ones without access to those sources. Although there is also the balance sheet effect, indicating that firms with higher dollar debt lost more with the depreciation and therefore were less prone to invest and therefore to engage in more debt. In this section we analyze this variable as well as the debt structure separating the two groups of firms. Before getting into the comparisons between categories it is important to check if actually foreign financing has been an important source for some firms. As shown in Figure 3.3 the level of foreign indebtedness went from 24% to 45% with a median of 36% for the whole period.

³ All along the paper we consider dollar credit as foreign credit, which for the case of Mexico is true for most of this credit given the restrictions faced by domestic banks to extend credit in a foreign currency.

Figure 3.3
Dynamics of Foreign Debt for Firms with This Type of Debt*



* Medians

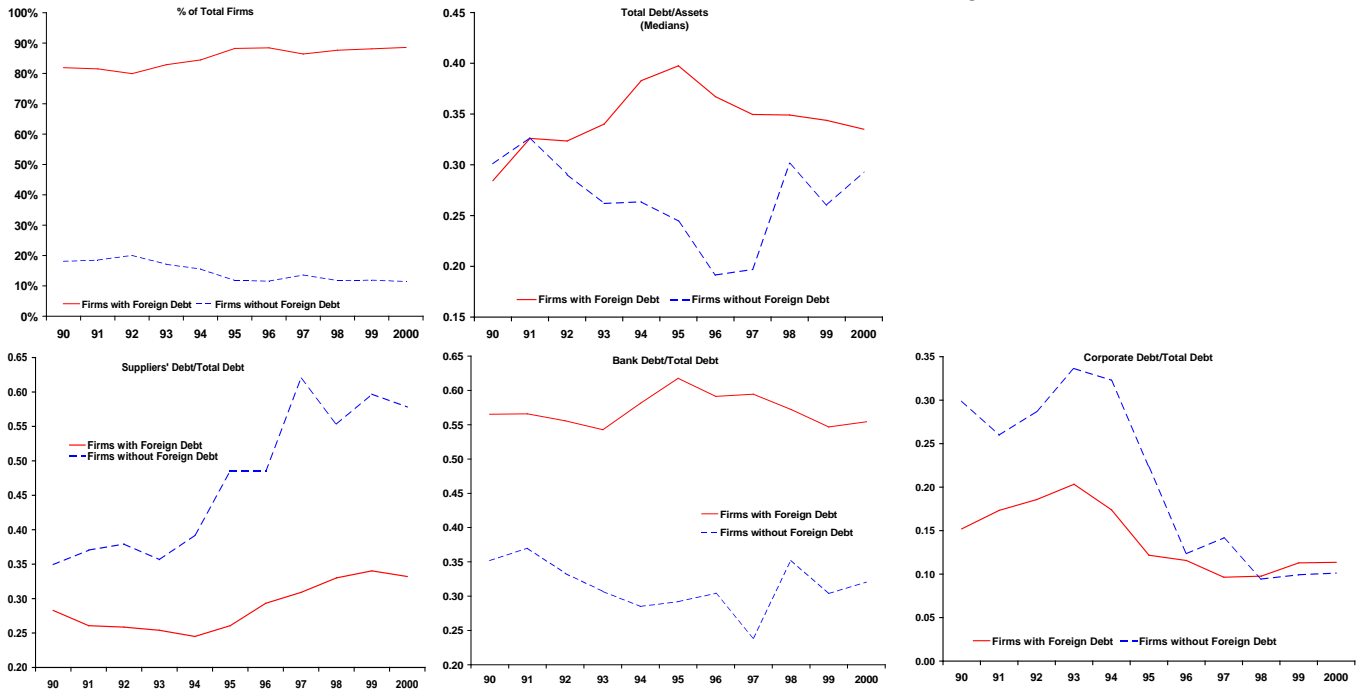
From 1990 to 1991 firms with dollar debt were less indebted than the rest, but from then on and specially since 1994, the former ones have maintained higher ratios of debt (Figure 3.4). Most of these firms with foreign debt received both bank credit and suppliers' credit and considering their leverage ratios, they were just slightly affected by the crisis. Firms without dollar debt had lower leverage ratios in 1994 (26% of total assets) and this share just recover slightly in 1998. It is probably not very surprising the low levels of firms in this group that during 1994 hold suppliers' credit (85%), bank credit (64%) and corporate debt (61%) and how those proportions decrease even further after the crisis.

The pattern followed by the debt structure after the crisis was very similar for those firms with dollar debt and those without it, but the corporate debt of the latter suffered a more dramatic decrease. However before the crisis firms with dollar credit maintained a relatively stable debt structure while firms without dollar debt moved away from bank credit and towards suppliers' credit. There is also an important difference in the debt structure for those firms with dollar debt the most important component is bank credit, which corresponds to more than 55% of total debt. For the firms without dollar debt, suppliers' credit gets the highest share, which after the crisis increased from a share of 48% in 1995 to a level of 58% in 2000.

Therefore firms without access to dollar credit were more affected by the crisis both in terms of the amount of credit received and on the number of firms that could access credit, even suppliers' credit. Also these firms were the ones relying more in trade credit.

Figure 3.4

Differences Between Firms with and without Foreign Debt

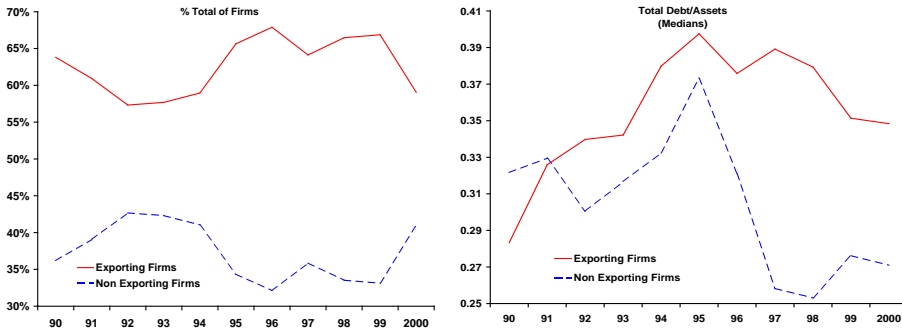


3.3 Exporting vs. non-exporting firms⁴

This division of firms turned out to be very similar to the previous one, especially after the crisis, when mainly the exporting firms were the ones that had access to foreign credit⁵. Although the difference between these two groups has increased less than between firms with and without foreign credit (Figure 3.5).

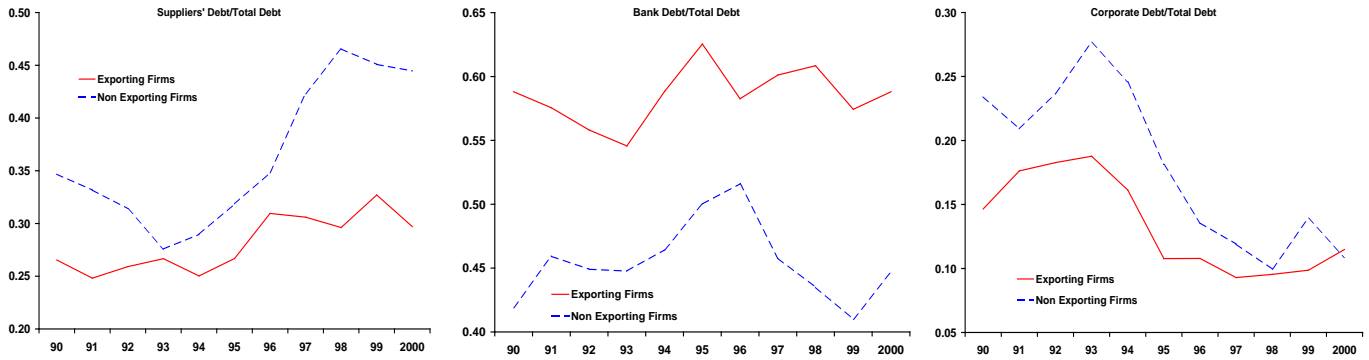
Figure 3.5

Differences Between Exporting and Non Exporting Firms



⁴ A firm is considered exporting for a given year if the dollar sales are positive for that year.

⁵ This result is shown in Martínez and Werner (2001).



Up to 1994 the debt structure of exporting firms was slightly different than the one of non-exporting firms. The latest had a larger share of suppliers' and corporate debt, while the former holds relatively more bank debt. After the crisis, the composition of debt of both groups grew far apart as non-exporting firms relied more on suppliers' credit while corporate debt decreased significantly meanwhile the debt composition of exporting firms remain basically unchanged. This is not surprising as exporting firms had more access to foreign credit either through banks or through the corporate debt market.

The difference between groups could have been worse considering that a higher proportion of non-exporting firms exit our sample or changed their status. From 1993 to 2000 35% of the non-exporting firms left the sample and 23% changed their status. While only 44% of the exporting firms were in any of these categories.

3.4 Small, medium and large firms⁶

Figure 3.6 shows that before the crisis smaller firms maintained the highest levels of debt to asset ratio while after it the larger firms became the most leveraged group. This result does not change when sales are used to normalize debt. From 1990 to 1994 smaller firms relied relatively more on corporate debt compared to medium size and larger firms. Since then, corporate debt collapsed leaving smaller firms basically with bank debt and trade credit.

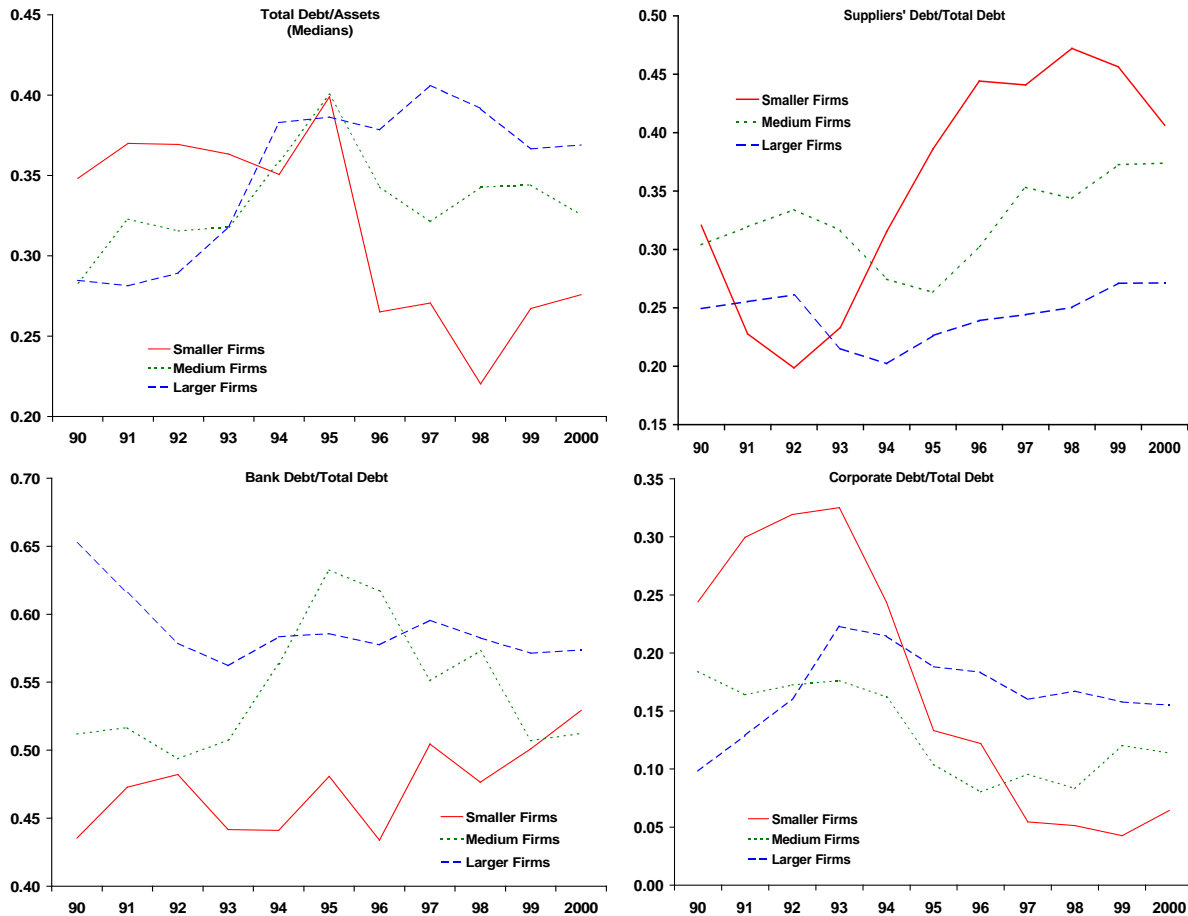
As mentioned in the corporate finance literature, in general small firms are more affected by asymmetric information problems and therefore debt financing tend to be more expensive than for bigger firms. More over they will rely more on banks and suppliers and less on corporate debt markets. As mentioned above these predictions are only borne out by the data after the crisis. A tentative explanation for this phenomenon might be that the credit expansion occurred during the first half of the 1990s did not

⁶ For each year the sample was divided in four groups of equal size using total assets and the two groups on the middle constituted the middle size firms. It is important to keep in mind that the called "small" firms or the 25% smallest firms are big in absolute terms, since the smallest firm in the sample had assets in the range of two million dollar.

discriminate between firms or that the information asymmetries were less severe, benefiting the smallest firms and that after the crisis creditors and savers became more prudent and more risk averse.

Figure 3.6

Differences Between Small, Medium and Large Firms



3.5 Firms by Sector

Regarding the indebtedness levels, as shown on Table 3.3, there are not significant differences between sectors. Only firms on manufacturing and construction sectors experienced a clear increase in their debt ratios after 1994, while the others suffered and initial increase on 1995 and then followed a more erratic pattern. In terms of the importance of foreign credit, there are important differences, going from firms in transportation and communications sector with a share of more than 70% of dollar debt on total debt to firms in retail with shares usually less than 15%. It is also important to note that the importance of this source of financing increase significantly on the mining, manufacturer and other services sectors, not surprisingly these are the sectors which prices are more closely related to the exchange rate.

Table 3.3
Debt Structure by Sector

Sector	Mining	Manufacturer	Construction	Retail	Transport & Comm.	Other serv.	Holding
Number of firms							
90	4	83	15	14	3	8	17
91	4	97	15	21	4	10	18
92	5	98	19	23	5	12	18
93	6	98	24	26	7	12	18
94	6	96	24	25	7	13	17
95	5	82	23	24	7	14	16
96	4	76	20	22	6	12	13
97	4	63	17	22	7	11	12
98	4	54	16	21	7	10	11
99	5	49	15	19	6	9	11
2000	5	46	15	16	6	8	11
Total Debt / Assets*							
90	0.21	0.28	0.32	0.31	0.16	0.24	0.32
91	0.24	0.33	0.28	0.37	0.29	0.31	0.39
92	0.11	0.32	0.30	0.32	0.44	0.27	0.42
93	0.25	0.32	0.34	0.35	0.32	0.25	0.40
94	0.24	0.35	0.40	0.42	0.40	0.35	0.45
95	0.25	0.39	0.30	0.43	0.36	0.45	0.45
96	0.22	0.36	0.36	0.37	0.37	0.29	0.38
97	0.19	0.32	0.39	0.41	0.45	0.38	0.42
98	0.27	0.33	0.39	0.40	0.52	0.30	0.43
99	0.29	0.34	0.35	0.40	0.38	0.34	0.37
2000	0.31	0.28	0.38	0.41	0.47	0.31	0.41
Dollar Debt / Total Debt*							
90	0.68	0.22	0.42	0.00	0.75	0.00	0.56
91	0.31	0.26	0.29	0.01	0.65	0.13	0.62
92	0.18	0.23	0.38	0.03	0.73	0.18	0.66
93	0.46	0.29	0.29	0.03	0.79	0.11	0.74
94	0.49	0.46	0.39	0.06	0.83	0.55	0.79
95	0.45	0.53	0.41	0.15	0.78	0.43	0.76
96	0.77	0.48	0.44	0.03	0.77	0.49	0.76
97	0.79	0.49	0.59	0.03	0.85	0.49	0.82
98	0.87	0.51	0.50	0.04	0.81	0.26	0.76
99	0.88	0.47	0.50	0.05	0.71	0.14	0.72
2000	0.69	0.47	0.38	0.05	0.68	0.64	0.71
Payables / Total Debt*							
90	0.10	0.21	0.11	0.64	0.16	0.13	0.16
91	0.16	0.17	0.11	0.47	0.27	0.13	0.12
92	0.32	0.19	0.08	0.45	0.21	0.05	0.13
93	0.14	0.16	0.10	0.43	0.12	0.03	0.13
94	0.20	0.17	0.11	0.39	0.08	0.05	0.15
95	0.20	0.15	0.11	0.37	0.07	0.02	0.15
96	0.20	0.16	0.11	0.48	0.17	0.03	0.16
97	0.14	0.20	0.11	0.54	0.14	0.02	0.17
98	0.16	0.21	0.14	0.50	0.08	0.04	0.15
99	0.14	0.23	0.15	0.46	0.06	0.21	0.19
2000	0.16	0.26	0.17	0.46	0.05	0.05	0.18

* Medians

This differences are also reflected on the share of trade credit on total debt, going from 47% in the retail industry to usually less than 20% on transportation and communication, on other services which are mostly restaurants and hotels. The large share of trade credit on the retail industries has been found in other countries (Petersen and Rajan, 1996). Although in this case most of the sectors experienced an increase in the importance of this type of credit, except mining, transport and communication and holding firms.

IV. TESTING THE EFFECT OF THE CREDIT CRUNCH ON FINANCIAL RESTRICTIONS

Section III concludes that small and non-exporting firms suffered a significant decrease on their leverage after the crisis. However, it is not clear if this change only responded to the changes in relative prices and more generally on investment opportunities or if the credit constraints became more binding and some profitable projects were not realized. This section analyzes if the crisis had a real effect on investment by testing if financial restrictions were aggravated after the crisis and precisely in those firms that experienced the major changes on their capital and debt structure. According to the results of the previous section we might expect that those firms were the non-exporting and the smaller or medium size firms.

According to the Modigliani and Miller theorem under perfect markets investment is independent of the capital structure of firms. Once we move out of perfect capital markets, information asymmetries and incentive problems make the cost of external finance greater than the cost of internal resources. The implication of these problems is that there is underinvestment and excess sensitivity of investment to cash flows.

The banking credit crunch experienced implied an aggravation of the information problems present in financial markets for several reasons. The huge increase on interest rates made it difficult to distinguish between good and bad projects or managers. Additionally, as banks stopped lending some firms were left without other financing alternative and for some others the alternatives became more expensive as they could not count on the monitoring provided by banks.

The adopted test for the aggravation of financial constraints could be derived by an investment model under perfect capital markets, but adding cash flows as a proxy for the availability of internal funds, as shown on equation (1). Under the null of perfect capital markets the cash flows coefficient must be not significant.

$$I_{it}/K_{it-1} = a_0 + a_1(CF_{it}/K_{it-1}) + a_2(Investment\ Opportunities) + v_{it} \quad (1)$$

Since we are interested on the change of financial constraints we added a dummy variable for the post-crisis period and interacted it with the cash flows variable. For those groups of firms that experienced more severe credit restrictions, the coefficient on this term should be positive. Table 4.1 shows the results for the different groups of firms, where the ratio of the change of sales over lagged capital was used to control for investment opportunities. All specifications correspond to a fixed effects estimation including year dummies that according to the Hausman test that was the most efficient specification. Also outlier observations were excluded.

The first column shows the results for the whole sample, indicating that indeed financial constraints were aggravated after the crisis, since the coefficient of the post crisis dummy interacted with cash flows is positive and significant. Then we divide the sample in two groups exporting and non-exporting firms and

also between small and medium size and large size firms. Results confirm our hypothesis indicating that exporting firms and larger firms did not suffer an increase on their borrowing constraints, but non-exporting and small size firms did suffer. For all the groups the change in sales resulted positive and significant implying that this variable resulted a good proxy for investment opportunities.

Table 4.1
Test for Financial Constraints

	Investment / Capital _{t-1}					
	All	Exporting	Non-Exporting	Small Size	Medium Size	Large Size
Cash Flows / K _{t-1}	0.024 (0.42)	0.194** (3.29)	-0.084 (0.70)	-0.512** (2.83)	0.129 ¹ (1.81)	0.164 ¹ (1.71)
d(Sales)/ K _{t-1}	0.066** (4.25)	0.159** (5.46)	0.043 ¹ (1.71)	0.103* (2.17)	0.037* (2.17)	0.179** (3.37)
Cash Flows / K _{t-1} * D(95-99)	0.186** (2.60)	0.014 (0.21)	0.379* (2.37)	0.615** (2.98)	0.117 (1.40)	-0.273 ¹ (1.76)
d(Sales)/ K _{t-1} * D(95-99)	-0.005 (0.19)	-0.066* (1.96)	-0.021 (0.43)	-0.462 (0.53)	0.008 (0.29)	-0.033 (0.47)
Observations	1709	1133	576	386	866	457
Number of firms	337	240	149	111	208	90
R- Squared	0.1224	0.2712	0.0856	0.0465	0.1314	0.2706

Fixed effects estimation

Absolute value of t-statistics in parentheses

¹ significant at 10% level; * significant at 5% level; ** significant at 1% level

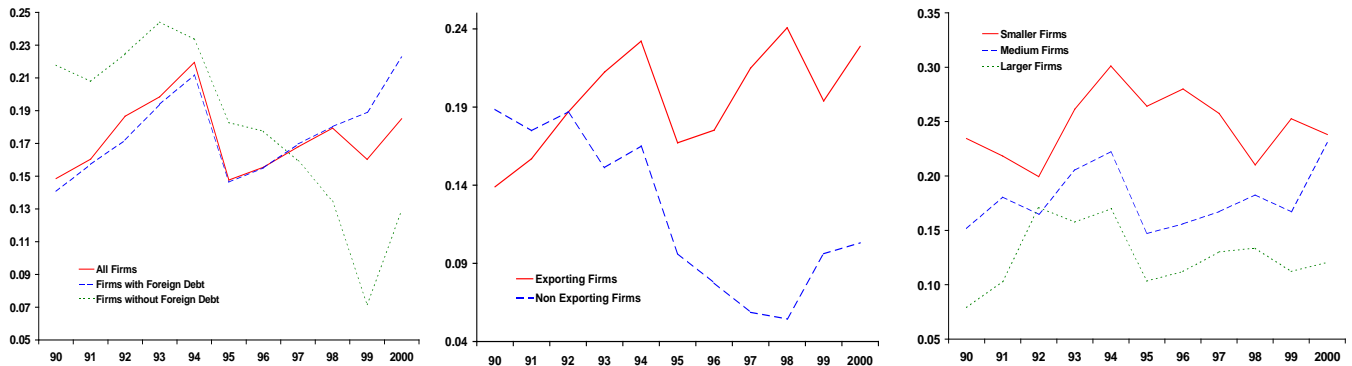
V. THE SUPPLY OF CREDIT TO CLIENTS OR RECIEVABLES

Besides the analysis of the composition of debt, it would be interesting to describe the importance of trade lending extended by the different groups of firms. More over it is important to explore two determinants of this type of lending acting in opposite directions. On one hand, firms with access to financial markets, exporting and larger firms, are more willing to lend to their clients when they need so. On the other hand, during difficult times firms stop paying first their smaller suppliers with less bargaining power.

Figure 5.1 shows the median share of clients' credit with respect to total capital for all the groups of firms mentioned before. Taking all the firms as a whole we observe an initial drop during the crisis going from 22% in 1994 to 15% in 1995 and then a mild increase reaching 18% in 1998. This dynamic responds to the crisis itself, that is in bad times firms are less willing to lend than in good ones. During recession times financial constraints become more severe, but also the credit risk is larger. The same phenomenon is observed in the different categories of firms as the mentioned ratio decreased between 4 and 7 percentage points. The groups of firms that experienced a slightly increase in the ratio of clients' credit to capital after 1995 were the ones with dollar debt, the exporting, the medium and large size ones. Firms without

dollar debt decreased their credit to clients from 24% of capital in 1994 to 13% in 2000, the non-exporting firms also decreased it from 17% in 1994 to 10% in 2000. For the whole period exporting and smaller firms gave more credit as a ratio of capital and than the rest. Even though smaller firms had higher credit ratios, their share in the trade credit as a whole has been minimal, while the larger ones represented 75% in 1994 and 78% in 2000 of the total trade credit extended by the analyzed firms.

Figure 5.1
Credit Extended to Clients (Receivables) / Capital_{t-1}*



* Medians

Using new credits to divide the sample of firms (Table 5.1), firms getting new credits maintained during most of the period a larger share of receivables with respect to capital than the rest of the firms. More importantly the mentioned ratio recovered after the drop during the recession years while for the other group it decreased even further. Also it is not surprising to find that firms getting new financial resources were more export oriented, had a larger share or dollar debt and were bigger than the rest.

Table 5.1
Characteristics of Firms Getting New Credits Vs. the Rest

year	Receivables / Total Capital t_{-1} *		Receivables / Total Debt*		Exports / Total Sales*		Dollar Debt / Total Debt*		Size (Total Assets)**	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
90	0.15	0.15	0.28	0.46	0.04	0.01	0.30	0.10	5694.7	4771.1
91	0.18	0.13	0.27	0.31	0.02	0.01	0.28	0.19	4529.7	4387.4
92	0.19	0.16	0.27	0.57	0.01	0.02	0.26	0.16	5637.5	3448.6
93	0.18	0.23	0.29	0.49	0.02	0.00	0.39	0.13	5741.7	2514.9
94	0.23	0.17	0.28	0.52	0.02	0.00	0.46	0.18	7723.9	4554.8
95	0.15	0.14	0.27	0.28	0.07	0.02	0.53	0.29	9371.9	3413.9
96	0.13	0.18	0.23	0.42	0.05	0.05	0.43	0.39	9684.3	3617.9
97	0.20	0.13	0.27	0.43	0.10	0.00	0.59	0.36	12032.8	4055.7
98	0.20	0.14	0.26	0.45	0.10	0.00	0.66	0.13	13484.7	2480.7
99	0.23	0.12	0.32	0.29	0.06	0.08	0.47	0.43	11528.3	7506.5
2000	0.24	0.10	0.29	0.24	0.14	0.04	0.59	0.20	12978.1	8019.4

* Medians

** Medians, Millions of 1994 Pesos

(1) Firms receiving new bank or corporate credits;

(2) Firms not receiving new bank or corporate credits.

Now we will present the regression analysis to explain the determinants of trade credit. For this purpose it is important to consider the following questions: Which types of firms are the ones extending credit to their clients?, Where did the resources come from? and if the answer of these questions changed after 1995 since at least for three factors the determinants of the supply and demand of credit by firms might have been affected:

1. After the crisis firms fully internalized the exchange rate risk and thus were more reluctant to expose themselves to currency mismatches in their balance sheet.
2. The credit in Mexico was very restricted after the crisis so firms with large cash flows or access to foreign sources of financing could have taken the role of intermediating resources towards other firms.
3. The crisis itself reduced current cash flows and growth opportunities, limiting the supply of all sources of credit.

To analyze the characteristics of the firms supplying trade credit and their changes after the crisis I estimated fixed effect regressions for the determinants of the ratio of clients' credit to capital adopting a similar specification as the one used in section III. The explanatory variables included cash flows from operation as a ratio of lagged capital. This variable is crucial considering that some Mexican firms suffered important credit restrictions. The literature of credit rationing defines this problem as the difference between the cost of internal and external resources. Therefore for more restricted firms, investment tends to be more sensitive to cash flows (Babatz, 1997, Galeotti et al, 1994, Hoshi et al, 1991 and Schiantarelli, 1995). For our purposes we could consider that besides using resources for investment, firms have also the option of extending credit to their credit rationed clients. That is for more restricted firms the supplied trade credit will be more sensitive to cash flows.

Several studies have identified the status of exporting firm as a critical one in terms of efficiency, growth potential and access to foreign credit and particularly since 1996 (Babatz, 1997, Conesa, 1997 and Martínez & Werner, 2001). Taking this into account a dummy variable for firms exporting any positive amount is included to capture this aspect.

It has been frequently stated and shown empirically that larger firms have better access to credit than smaller ones, basically for the presence of important fixed costs in monitoring, in gathering information and in the form of transaction costs. Therefore size dummies are also included to control for the access to credit and for bargaining power. Finally a dummy variable for the period after the crisis (1995-1999) was included as well as its interaction with the cash flow variable, the size and the export status dummies. In an alternative specification sectoral dummies were included to find out if trade credit is more common in particular sectors and if that changed with the crisis⁷.

The results are shown on Table 5.2 results are similar regardless of the chosen specification. The lag of the dependent variable is always significant, despite the fact that by definition this credit has a maturity of less than one year. Cash flows are positive and significant, except for small firms. According to this result all groups presented important credit constraints and internal cash flows were an important source to finance other firms. Regarding small firms, this result confirmed that credit extended by these firms is heavily determined by their clients' conditions given their lower bargaining power. Size dummies indicate that larger firms extended more credit. Taking the sample as a whole there isn't a significant difference between the credit extended by exporting and non-exporting firms. Although, among large size firms the exporting ones tended to lend more.

The effect of the economic crisis on the determinants of trade credit differ in significant ways between the considered groups of firms. The exporting, small and medium size firms experienced an increased in the sensitivity of cash flows and a constant reduction on the extended credit. Even though these results might indicate an increase in credit constraints, it is important to remind that in the investment regressions the exporting and medium size firms did not suffer a significant increase in sensitivity of cash flows. These differences might reflect that after the crisis firms became more reluctant to engage in balance sheet mismatches, so they were willing to borrow in foreign markets to investment projects to burst sales in dollars, but not to finance domestic clients. Therefore the firms with the mentioned characteristics were willing to increase the extended credit only as long as they had enough cash flows to finance their operations.

⁷ Variations of the growth of sales, of new credit received and of the age of the firm were included in previous versions, but since they were never significant they are not included in the presented regressions.

The larger size firms experienced a significant decreased in the sensitivity of cash flows, which also was found in the investment regressions. Together these results might reflect, not less credit constraint but that those firms were the ones with the worst balance sheet mismatches and that they needed more resources to service their debts. To test further the balance sheet effect on investment and credit we included different measures of the dollar debt in 1994, but under the simple specifications these variables were not significant. Aguiar (2001) develops a complete model to capture the mentioned effect and finds that it is significant but only in the cumulative investment three years after the crisis. Among the non-exporting firms only the larger firms increased their extended credit, while the rest did not experience any change in the determinants of trade credit.

Table 5.2
Determinants of Clients' Credit

	Dependent Variable: Clients' Credit / Capital _{t-1}					
	All	Exporting	Non-Exporting	Small Size	Medium Size	Large Size
Lag Dep. Var.	0.244** (10.97)	0.129** (4.27)	0.165** (4.17)	0.344** (5.21)	0.183** (7.06)	0.272** (5.09)
Cash Flows / Capital _{t-1}	0.651** (9.09)	0.629** (8.50)	0.691** (5.24)	-0.048 (0.37)	0.802** (9.51)	0.775** (3.49)
Exporter dummy	0.079 (1.62)			0.047 (1.00)	-0.001 (0.01)	0.500** (1.61)
Size dummy: med/small	0.074 (1.15)	-0.008 (0.19)	0.230 (1.30)			
Size dummy: medium	0.155 ¹ (1.91)	0.031 (0.52)	0.359 ¹ (1.70)			
Size dummy: large	0.246* (2.49)	0.095 (1.12)	0.595* (2.44)			
Cash Flows / Capital t-1 * D(95-99)	0.062 (0.72)	0.256** (2.90)	0.060 (0.37)	0.544** (4.09)	0.246** (2.57)	-0.888* (2.47)
Size dummy: med/small * D(95-99)	-0.061 (1.01)					
Size dummy: medium * D(95-99)	-0.111 ¹ (1.83)					
Size dummy: large * D(95-99)	-0.006 (0.10)					
Exporter dummy * D(95-99)	0.054 (1.28)					
D(95-99)	-0.051 (0.96)	-0.084** (3.96)	-0.077 (1.37)	-0.050 (1.53)	-0.126** (4.23)	0.104 (1.46)
Observations	1365	924	441	292	698	375
Number of firms	295	211	124	91	180	76
R- Squared	0.5359	0.3251	0.5362	0.6561	0.6192	0.2443

Fixed effects estimation

Absolute value of t-statistics in parentheses

¹ significant at 10% level; * significant at 5% level; ** significant at 1% level

In general we can say that after the crisis firms internalized the exchange rate risk so they were less willing to engage into balance sheet mismatches, while they underestimated that risk before 1994. These results may indicate that after the crisis firms were more reluctant to extend credit to clients, which is

mostly denominated in pesos with borrowed resources in dollars because of the exchange rate risk that this operation implied⁸. So the trade credit is mostly financed with internal resources and suppliers' credit. This is consistent with the results obtained by Martínez, Sánchez and Werner (2000), indicated that changes in the domestic interest rate affected negatively the credit to clients. That is, if the credit to clients was mostly financed with foreign credit we should expect it to be related to the foreign interest rate and probably to the sovereign risk, but not to other sources of fluctuation of the domestic rate.

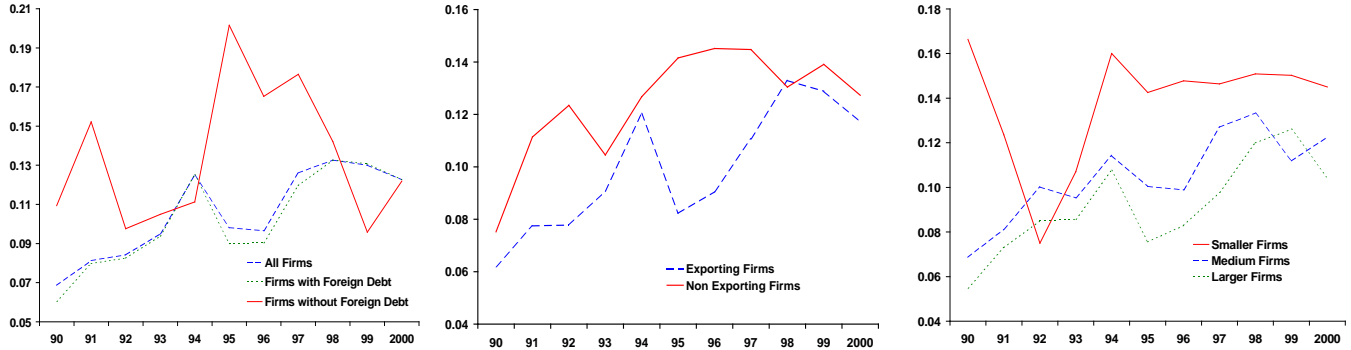
It is important to keep in mind that the presented regressions do not implied any causal relation, they only identified the characteristics common to the firms that extended larger amount of credit to their clients. It is also impossible to distinguish between demand and supply factors that might affect the characteristics of the supplier of credit.

VI. WHICH FIRMS WERE MORE DEPENDENT ON CREDIT FROM SUPPLIERS ?

Regarding suppliers' credit we might expect it to be a substitute of foreign or bank credit, that is those firms that have access to foreign credit faced less need for taking suppliers' credit. Figure 6.1 shows the dynamics of suppliers' credit as a ratio of capital for the different groups of firms. After the crisis firms without foreign debt, non-exporting and smaller had higher credit ratios. That is, firms with less access to foreign financial markets became more dependant on suppliers' credit. Also the ratio describes an ascending path after a drop in 1995, for most of the groups except for firms without dollar debt. During 2000 we observe a mild decrease for all firms except medium size and firms without dollar debt.

⁸ Martínez and Werner (2001) also find that foreign lenders were less willing to give credit to firms that did not have revenues in foreign currency.

Figure 6.1
Credit Received from Suppliers (Payables) / Capital $t-1$ *



* Medians

To analyze the determinants of suppliers' credit we used lagged capital to normalize the stock of trade credit. While evaluating the results it is important to remind that, differently to the firms supplying trade credit, the used sample is not a representative of the firms demanding trade credit since by definition they are either public or they have issued corporate debt.

For this case the interpretation of the inclusion of cash flows is some what different. In this case, the higher the difference between the cost of internal and external resources, the more reluctant firms would be to take debt when they have internal resources. That is a more negative coefficient on cash flows should imply more credit constraint.

Since these are not estimations of a structural model, they combine supply and demand effects. On one hand, the firms needing more resources will use all available sources specially since there might be complementarities between the different types of credit. On the other hand, suppliers' will be more willing to lend to firms that have access to other financial sources since that might decrease the default rate. More over banks or even markets might be more willing to lend to those firms that are monitored by other firms. Also larger firms or firms with more bargaining power will be able to delay their payments without the danger of being cut by their suppliers. This differences between smaller and larger firms might also reflect that for larger firms trade credit is more expensive than other financing alternatives, either because firms are less efficient in doing intermediation of resources than financial markets or institutions, or because they charge no-competitive rates. This follows from the fact that even though larger firms have also access to suppliers' credit they use it to a less amount than smaller firms. An alternative explanation is that suppliers exercise some market power with smaller firms so that they could lend them at interest rates above the marginal cost and higher than the ones that would be willing to

accept larger firms that could access credit at competitive rates. Therefore suppliers prefer to lend resources to smaller than larger firms.

Table 6.1 presents the results of the regressions including fixed effects, the adopted specifications are similar as the ones used for clients' credit. The first column of the table presents the results for the whole sample, while the rest of the columns show the results for the different groups: exporting, non-exporting, small, medium and large size firms. Under all the specifications the lag of the dependent variable is significant, showing that there is a high degree of inertia in trade relations given that by definition suppliers' credit is short term, i.e. shorter than one year. Against expectations cash flows are always positive and significant except for small size firms. As explained above, this might reflect that suppliers are more willing to lend to firms that have larger cash flows as the probability of repayment is higher for this firms.

Regarding the size of the firm, it doesn't affect in a significant manner our dependent variable. In terms of the effect of the crisis, we observe an increase in the cash flows coefficient for exporting and small size firms and to a less extent for larger size firms. This might reflect that for suppliers after the crisis the potential growth was higher for exporting and for smaller firms. That is cash flows as a proxy of good performance became a better indicator of higher likelihood of repayment than size. These results also show that the increase in trade credit received by exporters after the crisis is explained by the higher weight given to cash flows. The small firms that were able to maintain this type of financing despite the decreased in other sources was only to the extent that they kept generating cash flows. Non-exporting firms and medium size firms did not experience a change in the determinants of the trade credit, therefore the observed positive trend might be fully explained by an increase in their cash flows. These results imply that the determinants of suppliers' credit were affected by the crisis in a similar way as the ones of foreign credit as it is found by Martínez and Werner (2001).

Table 6.1

Determinants of Suppliers' Credit

	Dependent Variable: Suppliers' Credit / Capital _{t-1}					
	All	Exporting	Non-Exporting	Small Size	Medium Size	Large Size
Lag Dep. Var.	0.428** (17.18)	0.380** (11.67)	0.399** (6.26)	0.301** (4.48)	0.432** (12.53)	0.316** (5.18)
Cash Flows / Capital _{t-1}	0.272** (5.98)	0.181** (2.95)	0.298** (3.76)	-0.081 (0.84)	0.498** (6.41)	0.128** (2.94)
Exporter dummy	-0.003 (0.09)			0.022 (0.62)	-0.055 (0.95)	0.055 ¹ (1.91)
Size dummy: med/small	0.007 (0.17)	0.026 (0.71)	0.035 (0.30)			
Size dummy: medium	0.083 (1.60)	0.020 (0.41)	0.152 (1.12)			
Size dummy: large	0.047 (0.75)	0.057 (0.81)	0.121 (0.79)			
Cash Flows / Capital _{t-1} * D(95-99)	0.162** (2.96)	0.319** (4.36)	0.066 (0.61)	0.412** 4.05	0.134 (1.54)	0.122 ¹ (1.69)
Size dummy: med/small * D(95-99)	0.034 (0.88)					
Size dummy: medium * D(95-99)	-0.049 (1.28)					
Size dummy: large * D(95-99)	0.017 (0.47)					
Exporter dummy * D(95-99)	-0.033 (1.25)					
D(95-99)	-0.005 (0.14)	-0.057** (3.29)	0.016 (0.48)	-0.029 (1.19)	-0.028 (1.03)	-0.023 (1.64)
Observations	1356	917	439	291	695	370
Number of firms	295	211	124	91	179	76
R- Squared	0.7675	0.6868	0.8067	0.6084	0.7764	0.6145

Fixed effects estimation

Absolute value of t-statistics in parentheses

¹ significant at 10% level; * significant at 5% level; ** significant at 1% level**VII. FINAL REMARKS**

The main conclusion from this paper is that after the crisis some firms were severely affected by credit restrictions, but some were only barely affected. The most affected ones turned more to trade credit, although that was not enough to compensate the reductions of funds from other sources specially from debt markets. The groups of firms that suffered the least were, not surprisingly, the exporting and the ones with access to foreign financial markets. Small firms were severely affected by the issue of corporate debt, but access to trade and probably foreign bank credit contributed to alleviate the negative effect. Although, these firms as well as the non-exporting ones suffered a significant increase in their financial constraints as investment became more sensitive to cash flows.

Even though it was shown that some firms went to the stock markets to obtain financing specially during '96 and '97, these were relatively few. So this market was not an important alternative to the banking

credit. Besides the well known problems of the Mexican stock market, the fact of not having the monitoring performed by banks might have affected the cost of raising equity. So probably the financing through the stock market was convenient only for the least affected firms by information problems, that is the larger or the older ones.

Contrary to what was expected, larger firms neither increased significantly their lending nor were the ones lending the most. However, it is important to keep in mind that even though trade credit does not represent the highest share of capital for larger firms in terms of the intermediated resources they are the most important ones and their presence during the second half of the 90s was crucial.

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APPENDIX

Table 1

Investment / Capital _{t-1} *								
year	All firms	Foreign Debt Status		Exporting Status		Size		
		With	Without	Yes	No	Smaller	Medium	Larger
90	-0.01	0.01	-0.02	-0.10	0.02	0.01	-0.02	0.02
91	0.02	0.01	0.07	0.00	0.02	0.04	0.00	0.02
92	0.01	0.00	0.04	-0.03	0.02	-0.01	0.00	0.06
93	0.05	0.05	0.07	0.00	0.06	0.00	0.04	0.09
94	0.19	0.21	0.14	0.26	0.18	0.13	0.21	0.28
95	-0.04	-0.04	-0.04	-0.03	-0.05	-0.09	-0.02	-0.04
96	-0.06	-0.06	-0.07	-0.07	-0.06	-0.08	-0.04	-0.07
97	0.01	0.01	0.02	0.01	0.01	-0.02	0.04	0.00
98	0.04	0.04	0.02	0.06	0.02	-0.01	0.05	0.06
99	-0.04	-0.04	0.01	-0.07	-0.02	-0.05	-0.02	-0.04
2000	-0.02	-0.03	0.01	-0.02	-0.02	-0.07	-0.01	-0.02

* Medians

Table 2

Cash Flows / Capital _{t-1} *								
year	All firms	Foreign Debt Status		Exporting Status		Size		
		With	Without	Yes	No	Smaller	Medium	Larger
90	0.12	0.12	0.14	0.07	0.13	0.13	0.09	0.13
91	0.13	0.13	0.20	0.07	0.16	0.10	0.14	0.14
92	0.11	0.11	0.11	0.04	0.13	0.07	0.11	0.16
93	0.10	0.10	0.10	0.02	0.11	0.08	0.09	0.14
94	0.11	0.11	0.12	0.09	0.12	0.08	0.11	0.13
95	0.09	0.10	0.07	0.11	0.07	0.01	0.08	0.11
96	0.12	0.13	0.09	0.13	0.12	0.08	0.14	0.12
97	0.15	0.16	0.12	0.18	0.13	0.04	0.15	0.17
98	0.16	0.16	0.14	0.16	0.15	0.08	0.16	0.18
99	0.14	0.12	0.19	0.10	0.18	0.19	0.13	0.16
2000	0.16	0.14	0.24	0.15	0.18	0.13	0.17	0.16

* Medians

Table 3

year	Number of Firms	Total Debt / Assets*	Percentage of Firms that hold		
			Suppliers' Debt	Bank Debt	Corporate Debt
90	210	29%	99%	94%	56%
91	238	33%	98%	94%	58%
92	239	32%	99%	92%	61%
93	234	32%	98%	91%	61%
94	212	36%	98%	90%	57%
95	195	39%	96%	90%	48%
96	190	35%	96%	89%	42%
97	184	32%	96%	86%	33%
98	170	33%	97%	87%	31%
99	160	33%	96%	88%	34%
2000	149	33%	95%	87%	33%

* Medians

Table 4

year	Debt Structure		
	Suppliers'		Corporate
	Debt	Bank Debt	Debt
90	0.29	0.53	0.18
91	0.28	0.53	0.19
92	0.28	0.51	0.21
93	0.27	0.50	0.22
94	0.27	0.54	0.20
95	0.28	0.58	0.13
96	0.32	0.56	0.12
97	0.35	0.55	0.10
98	0.35	0.55	0.10
99	0.37	0.52	0.11
2000	0.36	0.53	0.11

Table 5

Year	Foreign Debt/Total *	Variance
90	24%	0.0772
91	27%	0.0838
92	25%	0.0901
93	29%	0.0940
94	43%	0.1074
95	46%	0.1101
96	42%	0.1103
97	49%	0.1183
98	45%	0.1136
99	44%	0.1055
2000	45%	0.1050

*Medians

Table 6

year	Firms with Foreign Debt					Firms without Foreign Debt				
	Percentage of Firms	Total Debt / Assets*	Suppliers' Debt	Bank Debt	Corporate Debt	Percentage of Firms	Total Debt / Assets*	Suppliers' Debt	Bank Debt	Corporate Debt
90	82%	0.28	0.28	0.57	0.15	18%	0.30	0.35	0.35	0.30
91	82%	0.33	0.26	0.57	0.17	18%	0.33	0.37	0.37	0.26
92	80%	0.32	0.26	0.56	0.19	20%	0.29	0.38	0.33	0.29
93	83%	0.34	0.25	0.54	0.20	17%	0.26	0.36	0.31	0.34
94	84%	0.38	0.25	0.58	0.17	16%	0.26	0.39	0.29	0.32
95	88%	0.40	0.26	0.62	0.12	12%	0.24	0.48	0.29	0.22
96	88%	0.37	0.29	0.59	0.12	12%	0.19	0.48	0.30	0.12
97	86%	0.35	0.31	0.59	0.10	14%	0.20	0.62	0.24	0.14
98	88%	0.35	0.33	0.57	0.10	12%	0.30	0.55	0.35	0.09
99	88%	0.34	0.34	0.55	0.11	12%	0.26	0.60	0.30	0.10
2000	89%	0.34	0.33	0.55	0.11	11%	0.29	0.58	0.32	0.10

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Table 7

Exporting firms					Non Exporting firms				
Percentage of Firms	Total Debt / Assets*	Suppliers' Debt	Bank Debt	Corporate Debt	Percentage of Firms	Total Debt / Assets*	Suppliers' Debt	Bank Debt	Corporate Debt
64%	0.28	0.27	0.59	0.15	36%	0.32	0.35	0.42	0.23
61%	0.33	0.25	0.58	0.18	39%	0.33	0.33	0.46	0.21
57%	0.34	0.26	0.56	0.18	43%	0.30	0.31	0.45	0.24
58%	0.34	0.27	0.55	0.19	42%	0.32	0.28	0.45	0.28
59%	0.38	0.25	0.59	0.16	41%	0.33	0.29	0.46	0.25
66%	0.40	0.27	0.63	0.11	34%	0.37	0.32	0.50	0.18
68%	0.38	0.31	0.58	0.11	32%	0.32	0.35	0.52	0.14
64%	0.39	0.31	0.60	0.09	36%	0.26	0.42	0.46	0.12
66%	0.38	0.30	0.61	0.10	34%	0.25	0.47	0.43	0.10
67%	0.35	0.33	0.57	0.10	33%	0.28	0.45	0.41	0.14
59%	0.35	0.30	0.59	0.11	41%	0.27	0.44	0.45	0.11

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Table 8

year	Smaller firms					Medium size firms					Larger firms				
	Number of Firms	Total Debt / Assets*	Suppliers' Debt	Bank Debt	Corporate Debt	Number of Firms	Total Debt / Assets*	Suppliers' Debt	Bank Debt	Corporate Debt	Number of Firms	Total Debt / Assets*	Suppliers' Debt	Bank Debt	Corporate Debt
90	53	0.35	0.32	0.44	0.24	105	0.28	0.30	0.51	0.18	52	0.28	0.25	0.65	0.10
91	60	0.37	0.23	0.47	0.30	119	0.32	0.32	0.52	0.16	59	0.28	0.26	0.62	0.13
92	60	0.37	0.20	0.48	0.32	120	0.32	0.33	0.49	0.17	59	0.29	0.26	0.58	0.16
93	59	0.36	0.23	0.44	0.33	117	0.32	0.32	0.51	0.18	58	0.32	0.22	0.56	0.22
94	53	0.35	0.32	0.44	0.24	106	0.36	0.27	0.56	0.16	53	0.38	0.20	0.58	0.21
95	49	0.40	0.39	0.48	0.13	98	0.40	0.26	0.63	0.10	48	0.39	0.23	0.59	0.19
96	48	0.27	0.44	0.43	0.12	95	0.34	0.30	0.62	0.08	47	0.38	0.24	0.58	0.18
97	46	0.27	0.44	0.50	0.05	92	0.32	0.35	0.55	0.10	46	0.41	0.24	0.60	0.16
98	43	0.22	0.47	0.48	0.05	85	0.34	0.34	0.57	0.08	42	0.39	0.25	0.58	0.17
99	40	0.27	0.46	0.50	0.04	80	0.34	0.37	0.51	0.12	40	0.37	0.27	0.57	0.16
2000	38	0.28	0.41	0.53	0.06	74	0.33	0.37	0.51	0.11	37	0.37	0.27	0.57	0.15

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* Medians

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Table 9

year	Credit Extended to Clients (Receivables) / Capital _{t-1} *							
	All firms	Foreign Debt Status		Exporting Status		Size		
		With	Without	Yes	No	Smaller	Medium	Larger
90	0.15	0.14	0.22	0.14	0.19	0.23	0.15	0.08
91	0.16	0.16	0.21	0.16	0.17	0.22	0.18	0.10
92	0.19	0.17	0.22	0.19	0.19	0.20	0.16	0.17
93	0.20	0.19	0.24	0.21	0.15	0.26	0.21	0.16
94	0.22	0.21	0.23	0.23	0.17	0.30	0.22	0.17
95	0.15	0.15	0.18	0.17	0.10	0.26	0.15	0.10
96	0.16	0.16	0.18	0.18	0.08	0.28	0.16	0.11
97	0.17	0.17	0.16	0.21	0.06	0.26	0.17	0.13
98	0.18	0.18	0.13	0.24	0.05	0.21	0.18	0.13
99	0.16	0.19	0.07	0.19	0.10	0.25	0.17	0.11
2000	0.19	0.22	0.13	0.23	0.10	0.24	0.23	0.12

* Medians

Table 10

Credit Extended to Clients (Receivables) / Total Assets *								
year	All firms	Foreign Debt Status		Exporting Status		Size		
		With	Without	Yes	No	Smaller	Medium	Larger
90	0.09	0.09	0.12	0.09	0.10	0.13	0.09	0.06
91	0.09	0.09	0.10	0.10	0.09	0.12	0.10	0.07
92	0.09	0.09	0.10	0.10	0.08	0.12	0.11	0.08
93	0.10	0.10	0.08	0.11	0.08	0.13	0.10	0.07
94	0.10	0.10	0.08	0.10	0.08	0.14	0.10	0.07
95	0.09	0.10	0.05	0.10	0.05	0.14	0.10	0.06
96	0.09	0.09	0.08	0.10	0.04	0.11	0.08	0.07
97	0.09	0.10	0.04	0.12	0.03	0.13	0.11	0.08
98	0.09	0.10	0.04	0.11	0.03	0.11	0.10	0.08
99	0.09	0.10	0.01	0.10	0.04	0.11	0.11	0.07
2000	0.08	0.09	0.02	0.09	0.05	0.12	0.09	0.07

* Medians

Table 11

Credit Received from Suppliers (Payables) / Capital _{t-1} *								
year	All firms	Foreign Debt Status		Exporting Status		Size		
		With	Without	Yes	No	Smaller	Medium	Larger
90	0.07	0.06	0.11	0.06	0.08	0.17	0.07	0.05
91	0.08	0.08	0.15	0.08	0.11	0.12	0.08	0.07
92	0.08	0.08	0.10	0.08	0.12	0.07	0.10	0.09
93	0.09	0.09	0.10	0.09	0.10	0.11	0.10	0.09
94	0.12	0.13	0.11	0.12	0.13	0.16	0.11	0.11
95	0.10	0.09	0.20	0.08	0.14	0.14	0.10	0.08
96	0.10	0.09	0.17	0.09	0.15	0.15	0.10	0.08
97	0.13	0.12	0.18	0.11	0.14	0.15	0.13	0.10
98	0.13	0.13	0.14	0.13	0.13	0.15	0.13	0.12
99	0.13	0.13	0.10	0.13	0.14	0.15	0.11	0.13
2000	0.12	0.12	0.12	0.12	0.13	0.15	0.12	0.10

* Medians