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**Early-Stage Globalization and Corporate Debt Maturity: The Case
of South Korea, 1980-94**

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**Early-stage globalization and corporate debt maturity: The case of South Korea,
1980-94 (*)**

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Abstract

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1. Introduction

What, if any, are the effects of globalization on corporate debt maturity? In particular, what have been the effects of increased access to international capital markets, diminished financial repression, and increased domestic financial development on the maturity of corporate debt during the early stages of globalization? The former questions are of particular importance for the South Korean economy, where the shortening of corporate debt maturity has occupied the center of the stage in multiple opportunities in the period spanning the 1990s and early 2000s. As a way of illustration, consider the following.

“Crunch time is approaching for South Korea, threatening a liquidity shortage similar to the one that nearly brought the economy to a standstill at the end of last year...The cause of the potential credit crunch: a huge wave of corporate debt that matures in the second half of the year. From large semiconductor makers to smaller firms in industries ranging from steel to shipping, roughly 28% of all corporate bonds outstanding in South Korea will come due around the same time. Economists and central bankers worry that without both shrewd financial planning by the Korean authorities and some improvement in the global economy, the wave of debt could prompt liquidity to dry up in one of Asia’s largest economies...In the six months starting in July, more than US\$ 27.9 billion of corporate debt will come to maturity, according to the Bank of Korea. The figure excludes companies that are already in default or in debt restructuring programs...The six month total is more than twice the amount of bonds that came due in the first half of 2001, and almost 30% heavier than the wave of debt that struck in the second half of 2000.” (Booth, 2001)

This type of account on the South Korean economy has become more and more frequent in the second half of the 1990s and the early 2000s. First was the Asian

crisis triggered by the financial turmoil in Thailand in June 1997 that eventually spread to South Korea (see Corden, 2002: 209-212, and Isard, 2005: 142-144). Later came the events of the second half of 2000, which were eventually followed by the events of the second half of 2001 described in the previous quotation. A natural question almost poses itself for consideration: What are the factors driving the shortening of corporate debt maturity in South Korea?

This paper traces the origins of the shortening of corporate debt maturity in South Korea back to the early 1990s when the process of globalization first gained momentum. Globalization is captured in this paper with variables such as financial liberalization, increased access to international bond and equity markets, and the increase in the development of the domestic equity and financial markets. A main finding is that a crucial factor behind the shortening of corporate debt maturity during the early stages of globalization was financial liberalization. This finding lends partial support to the idea that that the effects of financial liberalization can indeed be summarized as “short-term pain, long-term gain” (Kaminsky and Schmukler, 2002).

The remainder of this paper is organized as follows. Section two describes some specialized literature connected with this study and places this paper in context. Section three presents and discusses the main results of this investigation, including some robustness exercises. Section four concludes the paper.

2. Related literature: a brief detour

The issue of corporate debt maturity is, of course, not a new one. Given space limitations it is not possible to present a complete survey of the extensive literature on the subject. The reader interested in a comprehensive survey of corporate debt maturity is referred to Ravid (1996).

The empirical finance literature using country case studies to shed light on the maturity structure of corporate debt has concentrated on analyzing its effects on the value of the firm (recent case studies for European firms include the ones by Ozkan (2000) and Ozkan (2002) for a sample of British firms, and Heyman et al. (2003) for a sample of small Belgian firms. For the case of the US firms, see Barclay and Smith, 1995, for instance).

Some studies have concentrated on studying the cross-country evidence on the effects of various institutions and policies on the shortening of the maturity structure of corporate debt. Prominent among them is Demirguc-Kunt and Maksimovic's (1999) study of the capital structure of firms in 30 developing and developed countries during the period 1980-1991.

Other studies have concentrated their attention on the effects of specific policies or macroeconomic variables on the maturity of corporate debt. Among them, inflation has been a prominent choice. The impact of inflation on the shortening in the maturity structure of corporate debt has been emphasized by Klein (1975), Aarstol (2000), and Guerrero (2004).

The study that is probably closer to the present paper is Schmukler and Vesperoni (2001). They conduct a cross-country study of the effects of globalization on firms' financing choices in an unbalanced panel of firms in 8 Latin American and East Asian countries. Interestingly, South Korea is one of the countries in their study. However, there are important differences in their goals and methods, relative to those of the present paper. First, Schmukler and Vesperoni (2001) are not interested in deriving country-specific conclusions. Second they are mainly interested in studying the effects of financial crisis on firms' financing choices and for that reason their sample spans a period including the late 1990s. This paper purposefully excludes the

period following the Mexican crisis of December 1994, because the focus is on the effects of early globalization on corporate debt maturity. Finally, there is an important methodological difference between the present study and Schmukler and Vesperoni's, namely, that their panel was of an unbalanced nature and the one in this paper is a balanced panel, since the objective here is to track the same firms during two different periods: the 1980s, when international financial integration was relatively modest, and the early 1990s when international financial integration got a head start before the Mexican financial crisis of late 1994 brought international financial markets to a halt.

3. Uncovering the effects of early globalization on the maturity of corporate debt in South Korea, 1980-94.

This section is devoted to documenting the effects of early globalization on the ratio (long-term debt/total debt) for the case of South Korea during the period 1980-94.

The next subsection –subsection 3.1- defines the variables to be used in the regressions. In subsection 3.2., different econometric specification methods and their associated results are presented. Finally, in subsection 3.3., some relevant robustness exercises are discussed.

3. 1. Variables Definition

The dependent variable in all regressions is the ratio (long-term debt/total debt), denoted (LTD/TD). Following the recent empirical literature that studies firms' financing decisions (Demirguc Kunt and Maksimovic, 1999, Booth et al., 2001, Schmukler and Vesperoni, 2001, 2006, etc) the vector of observable firms' characteristics comprises five variables. The first variable is a proxy for the size of the firms: the logarithm of firms' net fixed assets, denoted Fixed Assets in the

regressions). The second variable is an indicator of asset tangibility: the ratio of net fixed assets to total assets (denoted Tangibility of Assets in the regressions). The third variable is an indicator of firms' revenues: the ratio of net sales to net fixed assets (denoted Net Sales/Fixed Assets in the regressions). The fourth variable is a proxy for the profitability of firms: the ratio of profits to total assets (denoted Profits/Total Assets in the regressions). Please find descriptive statistics for all these five variables in Table 1 below.

(Insert Table 1 here)

To capture the potential effects of expanding firms' financing opportunities through increased access to international bond and equity markets on the maturity of corporate debt, two proxies for firms' access to international debt and equity markets are included. The variable capturing access to international bond markets is a dummy variable that takes the value of one for periods in which a given firm issues bonds in international capital markets, and zero otherwise. The variable capturing access to international equity markets is defined as a dummy variable that takes the value one from the moment when a firm starts trading (or raising capital) in international equity markets, and zero otherwise.

Two alternative measures to proxy for financial liberalization were used. First, a multidimensional index that is the arithmetic average of individual indices that capture the degrees of liberalization of: interest rates caps, the degree of control of private credit by the central bank, the level of marginal and average reserve requirements, and restrictions to both capital inflows and capital outflows. Each of the individual indices takes three possible values: 1, 2, or 3, where 3 represents full financial liberalization, 2 partial financial repression, and 1 full financial repression. The information to construct these indices was taken from Kaminsky and Schmukler

(2002). This multidimensional index of financial liberalization is the one reported in the tables below. Results were unchanged when the multidimensional index of financial liberalization was replaced by a dummy variable that follows the stock market liberalization dates reported in Bekaert and Harvey (2000).

To control for the effect of rapid development of the domestic equity and credit markets on the maturity of corporate debt, the sum of stock market capitalization and the outstanding liabilities of the banking sector --both in percent of GDP-- was used to proxy for the degree of financial development, following Beck, Demirguc-Kunt and Levine (2000).

The rate of inflation (proxied by the rate of change of the Consumer Price Index), and the rate of growth of real GDP were used to control for the effects of the macroeconomic environment on the maturity of corporate debt. None of them came up significant, and so they are not reported in the regressions displayed in the tables below.

3. 2. Econometric specifications and baseline econometric results

Six different specification alternatives are used: (i) plain OLS estimates, (ii) the firm-Fixed Effects estimates, (iii) the Random Effects estimates, (iv) Instrumental Variables estimates where the set of microeconomic right hand side regressors (Fixed Assets, Tangibility of Assets, etc.) are instrumented by using the first lag of every variable, (v) Instrumental variable estimates that include firm-fixed effects and use the first and second lags of the microeconomic variables (Fixed Assets, Tangibility of Assets, etc) as instruments, and (vi) the Arellano and Bond estimator, a dynamic panel data procedure that controls both for the potential endogeneity of the micro variables that are used as right hand side regressors, as well as for potential time series problems of the endogenous variable, (LTD/TD).

The idea behind the inclusion of the OLS estimates is to provide the basic multivariate correlation embedded in the data. To control for potential autocorrelation, Prais-Winsten models with panel-corrected standard errors were also run, where the parameters are estimated by OLS and when computing the standard errors the disturbances are assumed to be heteroskedastic and contemporaneously correlated across panels; results did not vary much relative to the standard case and are not included here to save on space, but are available upon request. In any case, the OLS estimates are usually criticized when used with individual or firm-level data because they do not control for unobservable characteristics that could be biasing the estimated coefficients or introducing a potential reverse causation problem. To control for these unobservable characteristics, the firm-specific Fixed Effects estimation procedure is included. Because the fixed effects estimates disregard all the cross-sectional variation, an alternative (static) panel data technique is presented next: Random Effects estimates, a weighted average of the purely cross-sectional estimate and the Fixed Effects estimates (Finally, the purely cross-sectional estimates are not included here for a couple of reasons. First, they are subject to similar criticism than the one raised for the case of OLS estimates. Another problem of the “between groups”, or purely cross-sectional estimate, in the present context is that by the very nature of the experiment to be conducted here --the study of the changes of the ratio (long-term debt/total debt) over time as influenced by developments connected to globalization--, a method that completely disregards the time dimension of the data is simply inadequate for the purpose of this investigation.)

Given the potential endogeneity of most -if not all- of the observable firm characteristics (size, tangibility of assets, profitability, etc), instrumental variable

estimates that use the value of these variables lagged one and two periods is presented (in columns 5 and 6 of Table 2, respectively).

Table 2 below reports the results for all the procedures just described. Column (1) reports the OLS estimates, column (2) the firm-specific fixed effect estimates, column (3) the random effect estimates, column (4) the IV estimates, column (5) the IV estimates combined with a vector of firm-specific dummy variables, an estimation procedure that controls for the potential endogeneity introduced by both the observable and the unobservable characteristics of the firms in the sample. Finally, column (6) contains the results produced by the Arellano-Bond estimation procedure, a more sophisticated IV procedure that also takes care of potential problems of non-stationarity, by first differencing the data and including the lag of the dependent variable as a right hand side regressor.

(Insert Table 2 here)

As Table 2 shows, the most reliable microeconomic determinant of corporate debt maturity is the proxy for the tangibility of assets. Indeed, all specification methods give the same, uniform, message: more tangible assets lengthen the maturity of corporate debt. The result is always statistically significant at the 1% level, and quite stable (and economically relevant) quantitatively: increasing the tangibility of assets in one full percentage point increases the ratio (LTD/TD) in at least a third of a percentage point. This result is stronger than the one found for other emerging economies in similar studies (Schmukler and Vesperoni, 2001, 2006; Guerrero, 2004, Guerrero, 2006). There seems to be a very slight upward bias in the estimation of the effect of assets' tangibility on the maturity of corporate debt in the specifications that do not control for the potential endogeneity of the vector of microeconomic

determinants, as shown by simple inspection of the relevant row in Table 2 as one moves from columns (1)-(3) to columns (4)-(6).

No other microeconomic determinant of corporate debt is statistically significant for all econometric specifications; the proxy for size (the variable Fixed Assets) comes close, but fails the test for the last specification, the only specification that controls for time series problems like inertia. Fixed Assets displays a significant amount of inertia, and once the lag of the dependent variable, another significant displayer of inertia, is allowed in the estimation, the explanatory power of Fixed Assets vanishes. This result is not new; a similar one has been reported in case studies for Turkish and Argentine firms (see Guerrero, 2006, and Guerrero, 2004, respectively). A second problem with the proxy for size is that it alternates in sign across different econometric specifications.

Neither the proxy for revenues (Net Sales/Net Fixed Assets), nor the indicator for profitability (Profits/Total Assets) had any significant impact on the maturity of corporate debt. This result is also different from results previously found for other emerging economies (Schmukler and Vesperoni, 2001, 2006; Guerrero, 2004, etc).

Turning to the variables proxying for the effects of early-stage globalization, we first note from the relevant rows of Table 2 that neither one of the access variables carries any weight in explaining the maturity of corporate debt. Likely, this is more a reflection of the incipient nature of the process of financial integration of South Korean firms to the international markets during the period under consideration than a disqualification of the relevance of the variables, per se. The next proxy for financial integration to the international markets is the multidimensional index of financial liberalization. The results in this case resemble those found for the tangibility of assets both in terms of the statistical and economical significance across econometric

specifications. When the South Korean economy moved from a state of financial repression to a relatively more liberal one, corporate debt maturity shortened by roughly a tenth of the average value it had in the previous state. Finally, the variable that proxies for the degree of financial development of the domestic financial sector displays a similar problem than the one associated with Fixed Assets, namely that it loses its statistical significance in the last econometric specification, precisely the only one that explicitly controls for potential dynamic problems (the indicator for Financial Development displays a significant degree of inertia, as does the dependent variable, so once the lagged dependent variable is added to the specification, it steals a considerable degree of explanatory power from the financial development indicator.) Therefore, the overall effect of increased financial integration during the early stages of globalization is to shorten the maturity of corporate debt, a finding that is in line with the one reported previously by Schmukler and Vesperoni (2001) for an unbalanced panel of East Asian firms during the period 1980-99.

3. 3. Robustness (I): An alternative proxy for firms' access to international capital markets

Given the lack of significance of the access variables in the regressions reported in Table 2, a natural question is to what degree that result is being driven by the particular definition chosen to proxy for the access variables. Consequently, we introduce a different proxy in this subsection. Specifically, the two access variables are now proxied by the number of times that firms had access to either the international bonds or equity markets. The results are displayed in Table 3 below.

(Insert Table 3 here)

The results are not very different from the ones displayed in Table 2 before. Though there is a slight improvement in the significance of the access variable, the

access variable does not stay significant in either sense in most specifications. A second result is that the new proxy for access steals some statistical significance from the Financial Liberalization index and it also increases the variation of its quantitative effect across specifications.

3. 4. Robustness (II): The potential endogeneity of the variables proxying for firms' access to international capital markets

A legitimate concern with the regressions displayed in Tables 2 and 3 above is related to the potential endogeneity bias introduced by the access variables. To address that potential source of trouble, the following strategies were implemented. As a first attempt, first lags of the same proxies used in Table 2 were used –under the assumption that the lags were predetermined variables. As a second attempt, a twofold procedure was followed. First, in the case of the variable access to equity markets, lags of the same variable were used as instruments. Following both Schmukler and Vesperoni (2001; 2006) and Ozkan (2000), two lags were used as instruments. In the case of the variable access to bonds markets an instrument that indicates whether capital markets were open for the country was constructed. The instrument, first proposed by Schmukler and Vesperoni (2001), takes a value of one if two conditions are fulfilled: (i) At least one firm had access to international bonds markets during that period, and (ii) the firm was able to issue international bonds at least once during the sample period. Otherwise, the instrument takes a value of zero.

The results provided by the two strategies were quite similar. Table 4 presents the simpler case where first lags for the same access variables previously used in Table 2 are included as right-hand side regressors.

(Insert Table 4 here)

Results are almost identical to the ones presented in Table 2 before: the main microeconomic determinant of corporate debt maturity is the tangibility of assets, and financial liberalization is the main proxy for international financial integration affecting corporate debt maturity.

4. Concluding remarks

Using a balanced panel for publicly traded South Korean firms, this paper documented the evolution of corporate debt maturity during an early stage of international financial integration. This paper uncovered evidence that the increased financial liberalization brought about by the process of globalization significantly reduced the length of corporate debt for the case of publicly traded South Korean corporations during the period 1980-94. This result is particularly relevant in the South Korean case, given frequently aired concerns about the potentially disastrous macroeconomic effects that the shortening of corporate debt maturity could bring about. Furthermore, the findings of this paper seem to lend support to the hypothesis that financial liberalization can be adequately described as “short-term pain, long-term gain” (Kaminsky and Schmukler, 2002).

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Table 1
Summary Statistics for Micro variables

Variables		Mean	Std Dev	Max	Min	# of Obs.
(LTD/TD)	overall	0.368	0.15	0.90	0.01	N = 1215
	/1					/4
	between		0.11	0.62	0.17	n = 81
Fixed Assets	/2					/5
	within		0.10	0.82	-0.03	T-bar = 15
	/3					/6
Tangibility of Assets	overall	10.94	1.34	15.09	6.98	N = 1215
	between		1.08	13.39	8.37	n = 81
	within		0.80	13.29	8.28	T-bar = 15
Net Sales/ Fixed Asset	overall	0.379	0.16	1.01	0.01	N = 1215
	between		0.14	0.69	0.04	n = 81
	within		0.07	0.76	0.04	T-bar = 15
Profits/Total Assets	overall	4.537	8.09	138.94	0.23	N = 1215
	between		5.74	39.32	0.90	n = 81
	within		5.73	118.19	-25.89	T-bar = 15
	overall	0.021	0.03	0.18	-0.28	N = 1215
	between		0.02	0.08	-0.05	n = 81
	within		0.03	0.22	-0.20	T-bar = 15

Notes:

/1: Overall means combined between and within variation; /2: Between means across firms; /3: Within means across years; /4: N=total number of observations; /5: n= number of firms; /6: T-bar=average number of years of data available for the firms included in the sample.

Table 2. Baseline regression results

Estimation Method	OLS	FIXED EFFECTS	RANDOM EFFECTS	IV (ONE LAG INSTRUM.)	IV WITH FIRM--SPECIFIC DUMMIES	GMM ARELLANO--BOND VARS IN DIFF
Dependent Variable	LTD/TD	LTD/TD	LTD/TD	LTD/TD	LTD/TD	LTD/TD
Number of observations	1215	1215	1215	1134	1053	1053
Constant	0.175 t = 3.40***	0.561 t = 8.93***	0.447 z = 7.75***	0.118 t = 2.03**	0.519 t = 5.18***	0.009 z = 2.86***
FIXED ASSETS	0.01 t = 2.25***	-0.032 t = -4.44***	-0.019 z = -3.05***	0.015 t = 3.17***	-0.027 t = 2.31**	-0.012 z = 0.79
TANGIBILITY of assets	0.386 t = 12.28***	0.352 t = 7.77***	0.356 z = 8.73***	0.364 t = 9.63***	0.345 t = 4.32***	0.326 z = 4.56***
NET SALES/FIXED ASSETS	0.002 t = 3.79***	0.001 t = 0.94	0.001 z = 1.73*	0.003 t = 3.19***	0.001 t = 0.41	-0.001 z = -1.23
PROFITS/TOTAL ASSETS	-0.075 t = -0.70	-0.010 t = -1.04	-0.113 z = -1.16	0.014 t = 0.08	0.053 t = 0.20	-0.026 z = -0.22
Access to bond markets	0.019 t = 0.65	0.041 t = 1.84*	0.039 z = 1.72*	0.012 t = 0.43	0.040 t = 1.77*	0.033 z = 1.39
Access to equity markets	0.000 t = 0.37	0.000 t = 1.07	0.000 z = 1.00	0.000 t = 0.21	0.000 t = 0.93	0.000 z = 0.52
Financial Liberalization Index	-0.105 t = -3.39***	-0.084 t = -3.62***	-0.091 z = -3.92***	-0.102 t = -3.30***	-0.06 t = -2.36**	-0.081 z = -3.85***
Financial Markets Development Index	0.087 t = 5.88***	0.152 t = 9.53***	0.132 z = 8.76***	0.084 t = 4.80***	0.128 t = 6.18***	-0.026 z = -1.00
(LTD/TD)(t-1)						0.462 z = 11.32***
F-Statistic	41.73	24.54		33.43	15.71	
Chi-statistic	-	-	52.65	-	-	200.54
Sargan test Chi Stat	-	-	-			175.84
R ²	0.22	0.60	0.60	0.21	0.60	-

Notes: (***) means statistical significance at the 1% level; (**) means statistical significance at the 5% level.

Table 3. Robustness (I): Access is proxied by the number of times firms got access to international bond and equity markets

Estimation Method	OLS	FIXED EFFECTS	RANDOM EFFECTS	IV (ONE LAG INSTRUM.)	IV WITH FIRM--SPECIFIC DUMMIES	GMM ARELLANO--BOND VARS IN DIFF
Dependent Variable	LTD/TD	LTD/TD	LTD/TD	LTD/TD	LTD/TD	LTD/TD
Number of observations	1215	1215	1215	1134	1053	1053
Constant	0.237 t = 2.74***	0.665 t = 7.70***	0.532 z = 6.55***	0.145 t = 1.51	0.567 t = 4.28***	0.01 z = 2.99***
FIXED ASSETS	0.01 t = 2.46**	-0.032 t = -4.44***	-0.019 z = -2.95***	0.016 t = 3.35***	-0.025 t = -2.11**	-0.011 z = -0.73
TANGIBILITY of assets	0.384 t = 12.33***	0.352 t = 7.78***	0.354 z = 8.71***	0.362 t = 9.67***	0.339 t = 4.19***	0.311 z = 4.29***
NET SALES/FIXED ASSETS	0.002 t = 3.79***	0.000 t = 0.83	0.001 z = 1.67*	0.003 t = 3.17***	0.001 t = 0.39	-0.001 z = -1.20
PROFITS/TOTAL ASSETS	-0.072 t = -0.68	-0.099 t = -0.99	-0.109 z = -1.12	0.011 t = 0.06	0.03 t = 0.12	-0.042 z = -0.35
Number of Accesses to Int'l markets	0.002 t = 1.01	0.033 t = 2.15**	0.002 z = 1.88*	0.001 t = 0.42	0.001 t = 1.01	-0.0004 z = -0.35
Financial Liberalization Index	-0.15 t = -2.72***	-0.155 t = -3.79***	-0.154 z = -3.74***	-0.122 t = -2.15**	-0.101 t = -2.19**	-0.068 z = -1.85*
Financial markets Development Index (LTD/TD)(t-1)	0.081 t = 4.59***	0.144 t = 8.98***	0.124 z = 8.13***	0.081 t = 4.40***	0.124 t = 6.03***	-0.033 z = -1.17
F-Statistic	47.78	24.68		38.38	15.82	
Chi-statistic	-	-	187.10	-	-	207.98
Sargan test Chi Stat	-	-	-			176.93
R ²	0.22	0.60	0.60	0.21	0.59	-

Notes: (***) means statistical significance at the 1% level; (**) means statistical significance at the 5% level.

Table 4. Robustness (II): Addressing the potential endogeneity of the access to international bond and equity markets variables

Estimation Method	OLS	FIXED EFFECTS	RANDOM EFFECTS	IV (ONE LAG INSTRUM.)	IV WITH FIRM--SPECIFIC DUMMIES	GMM ARELLANO--BOND VARS IN DIFF
Dependent Variable	LTD/TD	LTD/TD	LTD/TD	LTD/TD	LTD/TD	LTD/TD
Number of observations	1215	1215	1215	1134	1053	239
Constant	0.23 t = 1.79*	0.572 t = 8.26***	0.447 z = 7.13***	0.117 t = 1.91*	0.522 t = 5.15***	0.009 z = 2.91***
FIXED ASSETS	0.01 t = 2.02**	-0.036 t = -4.51***	-0.021 z = -3.07***	0.015 t = 3.05***	-0.028 t = -2.34**	-0.01 z = -0.66
TANGIBILITY of Assets	0.369 t = 11.28***	0.406 t = 8.18***	0.389 z = 8.89***	0.363 t = 9.51***	0.361 t = 4.37***	0.306 z = 4.22***
NET SALES/FIXED ASSETS	0.002 t = 3.68***	0.000 t = 0.32	0.001 z = 1.27	0.003 t = 3.20***	0.001 t = 0.39	-0.001 z = -1.23
PROFITS/TOTAL ASSETS	-0.058 t = -0.51	-0.06 t = -0.57	-0.074 z = -0.72	0.014 t = 0.08	0.057 t = 0.22	-0.037 z = -0.32
Access to Int'l bond markets-proxy 2	0.015 t = 0.44	0.035 t = 1.36	0.032 z = 1.23	0.014 t = 0.41	0.031 t = 1.22	-0.01 z = -0.41
Access to Int'l equity markets-proxy 2	0.007 t = 0.34	0.016 t = 0.92	0.016 z = 0.88	0.000 t = 0.02	0.014 t = 0.78	-0.003 z = -0.13
Financial Liberalization Index	-0.104 t = -3.36***	-0.085 t = -3.65***	-0.092 z = -3.98***	-0.102 t = -3.28***	-0.063 t = -2.47**	-0.079 z = -3.71***
Financial markets Development Index (LTD/TD)(t-1)	0.093 t = 5.42***	0.158 t = 9.73***	0.137 z = 8.99***	0.084 t = 4.79***	0.129 t = 6.18***	-0.03 z = -1.11
						0.463 z = 11.32***
F-Statistic	37.16	21.93		33.56	15.7	
Chi-statistic	-	-	189.68	-	-	198.12
Sargan test Chi stat						176.40
R ²	0.11	0.60	0.60	0.21	0.60	-

Notes: (***) means statistical significance at the 1% level; (**) means statistical significance at the 5% level.