Equity market liberalization and firm growth

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Abstract

Using a sample of 686 investable firms from 26 emerging market countries, I show that equity market liberalizations do not result in an increase in externally-financed growth rates for participating firms. In fact, I find to the contrary. The average firm appears to rely less and not more on external-financing once they become investable. These findings are in line with recent work which shows that firms issue less equity capital post-liberalization, and suggest that the gains from equity market liberalizations may not be attributable to a reduction in financing constraints.

JEL Classification: G15 ; G32.

Key Words: External financing; Investability; Firm growth.

1. Introduction

The decision on the part of countries to liberalize their domestic equity markets has attracted considerable academic attention. Although not without its detractors (see Rodrik, 1998), this line of enquiry has shown equity market liberalizations in a good light. For example, studies performed at the level of the firm suggest that equity market liberalizations benefit firms because they, amongst others, serve to increase investment and improve operating performance (see Bae and Goyal, 2010; and Mitton, 2006), enhance firm visibility and improve corporate governance (see Bae et al., 2006), and ultimately enhance firm value (see Bae and Goyal, 2010; and Mitton and O'Connor, 2012). At the aggregate level, equity market liberalizations result in enhanced investment, and economic growth (See Bekeart et al. 2005, 2007, 2010; Quinn and Toyoda, 2008).

However, with the exception of some recent work, the central theoretical prediction which underpins equity market liberalizations has been largely ignored. Equity market liberalizations, by definition, refer to instances in which restrictions on the foreign ownership of domestic equity are lifted. As a result, post-liberalization we should then expect to observe greater equity issuance, potential changes in debt issuance and shifts in debt maturity structure, and ultimately a relaxation in financing constraints.[1] While the extant literature provides *indirect* evidence to suggest that this may in fact be the case (e.g. the "investable premium" of Mitton and O'Connor (2012) and the improvement in operating performance witnessed by investable firms as documented by Mitton (2006) are both consistent with a relaxation in financing constraints), more recent *direct* tests suggest that this may not be so. Flavin and O'Connor (2010) and McLean et al. (2011) examine the post-liberalization capital issuance activity of investable firms. Surprisingly, neither Flavin and O'Connor (2010) nor McLean et al. (2011) document a significant change in equity issuance once firms become investable. Flavin and O'Connor (2010) uncover no significant change in post-liberalization net equity issuance for investable firms. Also for investable firms, McLean et al. (2011) actually document a significant *decrease*. Taken together, these findings suggest that, if

[1] While there is no direct theoretical link between equity market liberalizations and corporate debt issuance, equity market liberalization may promote greater debt issuance e.g. greater use of long-term debt, if investors are now more willing to invest in firms that now have foreign investors. Schmukler and Vesperoni (2006) document a shift towards short-term debt for firms after stock market liberalizations. Flavin and O'Connor (2010) find to the contrary using a firm-specific (and presumably less noisy) measure of equity market liberalizations i.e. the investable measure.

anything, equity market liberalizations result in a *decrease*, and not an *increase* in the use of external equity financing, and a potential increase in financing constraints.

In this paper, I examine this issue further. I do so by examining the contribution made by external (debt and equity) finance in explaining the post-investable improvements in operating performance documented by, amongst others, Mitton (2006). To do so, I begin with the constrained/predicted growth rates of Demirguc-Kunt and Maksimovic (1998). These measures *predict* the maximum growth rates that a firm can achieve given access to internal funds and short-term external debt financing only (denoted as SFG_t), or internal funds, short and long-term debt financing (denoted as SG_t), respectively. Then, using these *predicted* growth rates, I calculate the difference between a firms' *actual* and *predicted* growth rate, since the difference is a measure of access to external financing, and more precisely a firms' externally-financed growth rate (EFG). Equity market liberalizations should result in an increase in externally-financed growth rates for investable firms. In this paper, I test this proposition.

To do so, I form a panel of 686 investable firms, and 2,104 firms in total from 26 emerging market countries. Using a series of firm-fixed effects regressions which span the period from 1980 to 2000, and control for numerous determinants of externally-financed growth, I document a *decrease* in externally-financed growth rates for investable firms. For some categories of firms, I document no significant change, but never an increase in externally-financed growth rates. My findings, together with those of Flavin and O'Connor (2010) and McLean et al. (2011), suggest that the *relative* contribution made by external financing (i.e. long-term debt and equity financing) vis-à-vis internal financing to firm growth, as documented by Mitton (2006), is less because firms use less external financing once they become investable.

Collectively, these findings serve to better inform our understanding of the effects of equity market liberalizations. First, they do not suggest that firms do not benefit from becoming investable. Ample evidence exists to suggest otherwise (see Mitton, 2006; Bae et al., 2006; Bae and Goyal, 2010; and Mitton and O'Connor, 2012). What they do suggest is that the source(s) of the gains documented in the literature do not result from greater risk sharing and a reduction in financing constraints. The gains are likely to result from improvements in a firms information environment resulting from corporate governance improvements (see Bae et al. 2006). This contrasts notable with the experience of firms cross-

listing in the U.S. because the "cross-listing premium" is a function of improved governance (see Doidge et al. 2004, 2009; Lang et al. 2003), reduced financing constraints (see Reese and Weisbach, 2002; Lins et al 2005; Khurana et al. 2009), and greater recognition (see King and Segal, 2009). However, these findings also leave some questions unanswered. McLean et al. (2011) suggest that investable firms use less external finance once they become investable because they are mature firms with little need for external financing. On the other hand, as pointed out by Laeven et al. (2003), financial liberalization disproportionately benefits small firms more. Large firms, largely financially unconstrained pre-liberalization, witness deterioration in their ability to source external capital as liberalization proceeds. Since, by definition, investable firms are large firms, the former explanation likely explains my findings.

The paper proceeds as follows. In the next section, I outline the measures of externally-financed growth. Section 3 describes the sample of firms used in this study. Section 4 presents and discusses the empirical findings. Section 5 concludes.

2. Measures of Externally Financed Growth

To construct measures of externally-financed firm growth rates, we adopt Demirguc-Kunt and Maksimovic's (1998) application of a firm-based financial planning model. This approach has been subsequently adopted by, amongst others, Khurana et al. (2008). The following draws heavily on Khurana et al. (2008). The construction of a firm's externally-financed growth rate (EFG) at time t involves two steps. The first step involves the construction of what are termed "constrained or predicted growth rates". They represent the maximum growth that a firm can achieve if the firm relies solely on say, internal funds, internal funds and short-term debt, and internal funds and short and long-term debt financing. The second involves using these "constrained or predicted growth rates" to calculate a firm's externally-financed growth rate. Externally-financed growth represents the difference between a firm's *realized* growth rate (normally measured on an annual basis using either sales or asset growth) and the firm's "constrained or predicted growth rate". A priori, if equity market liberalizations result in greater externally-financed growth rates for firms, then we would expect to observe an increase in the difference between a firm's realized growth rates and their "constrained or predicted growth rate". I begin by outlining the "constrained or predicted growth rates" of Demirguc-Kunt and Maksimovic (1998).

Demirguc-Kunt and Maksimovic (1998), building on the "percentage of sales" approach to financial planning construct three "constrained or predicted growth rates", which they denote as IG_t, SFG_t, and SG_t. IG_t is the maximum growth that a firm can achieve if it relies solely on internal funds. SFG_t is the maximum growth rate that a firm can attain through the use of both internal cash-flows and short-term debt, and finally, SG_t is the maximum growth rate achievable using internal funds, short and long-term debt external financing. I concentrate on the latter two.[2] The starting point for each begins with the expression for the external financing need (EFN) of a firm, which is given by:

$$EFN_t = g_t * Assets_t - \left[1 + g_t * E_t * b_t \right] \quad (1)$$

Simply put, the external financing need for a firm at time t is given by the difference between the product of assets at time t ($Assets_t$) times' sales growth at time t (g_t) and the product of earnings after interest and taxes (E_t), the proportion of earnings retained for reinvestment at time t (b_t), and 1 plus sales growth at time t. Firms have an external financing need if $g_t * Assets_t > \left[1 + g_t * E_t * b_t \right]$ i.e. the required investment of a firm growth at rate g_t $g_t * Assets_t$ is not adequately covered by internal funds $\left[1 + g_t * E_t * b_t \right]$. Using this expression for a firm's external financing need, we can then proceed to derive two measures of constrained firm growth. The first, which is denoted as SFG_t, is the maximum growth rate that a firm can attain through the use of both internal cash-flows and short-term debt. If we further assume a constant short-term debt to assets ratio to ensure a feasible growth estimate for the firm, then SFG_t is obtained by setting the retention ratio (b_t) in the expression for firm's external financing need to (1) i.e. the firm pays no dividend and solving for g_t. The implied growth rate, denoted as SFG_t is then given by:

$$\left(SFG_t = \frac{ROLTC_t}{1 - ROLTC_t} \right) \quad (2)$$

$ROLTC_t$ is the ratio of earnings after interest and taxation ($EAIT_t$) to long-term capital.[3] Long-term capital is defined as the assets of the firm not financed using short-term debt, and is calculated by

[2] Emerging market firms typically use short-term debt, for a variety of reasons, as their major source of external financing (see Opazo et al. 2009).

[3] I'm forced to use earnings before interest and taxation in place of earnings after interest and taxation expense because Worldscope coverage of interest and taxation expense for emerging market firms is limited.

multiplying a firm's total assets by 1 minus the ratio of short-term liabilities to total assets. SFG_t is referred to as the maximum short-term financed growth rate.

The second constrained growth rate denoted as SG_t is the maximum growth rate achievable using internal funds, short and long-term debt to maintain a constant book leverage ratio (i.e. total debt to assets). Further assume the following. First, the payout ratio remains at zero, second, that the firm does not issue equity or increase leverage beyond the realized level, and third, the retention ratio (b_t) is set to (1). The estimate of SG_t is then estimated by first; replacing total assets in the expression or external financing need with book equity, and second, setting Eq. (1) to zero. Solving for g_t, the result, now denoted as SG_t is given by:

$$\left(SG_t = \frac{ROE_t}{1 - ROE_t} \right) \tag{3}$$

ROE_t is the return on equity. SG_t is referred to as the maximum sustainable growth rate.

With the constrained or predicted growth rates defined, the second and final step involves calculating a firm's externally-financed growth rate. Externally-financed growth rates (EFG) for a firm in each year are given by difference in the annual realized sales (or asset) growth rate less the constrained or predicted growth rates just outlined. These measures of external-financed growth examine if each firms *actual* growth (using realized sales or asset growth) is greater than *predicted* by the maximum short-term financed growth rate (SFG_t) or the maximum sustainable growth rate (SG_t). The greater the difference between the actual and predicted growth rate, the greater is that part of growth externally-financed. Following the notation in Khurana et al. (2008), I denote these two externally-financed growth rates as EXCESS SFG and EXCESS SG. Both of these measures serve as dependent variables in our empirical setup.

The benchmark empirical setup involves regressing each of these two measures of externally-financed growth on the investable dummy (a firm specific measure of equity market liberalizations), a set of firm-level control variables, and time and firm fixed effects. I follow Khurana et al. (2008) and include the following firm-level control variables. These are dividends (DIV/TA), firm performance using profitability (EBIT/TA) and asset turnover (NS/NFA), firm size (SIZE), growth opportunities (NFA/TA), and a measure of a firm's reliance on long-term debt (LTD/TA). The reason underlying the

inclusion is as follows. Firms that pay sizable dividends (DIV/TA), that are profitable (EBIT/TA) and with considerable asset turnover (NS/NFA) are expected to have sizable internal funds, and as a result, less of a reliance on external funds. The obvious implication is that these firms will have low externally-financed growth rates. In contrast, small firms (SIZE), firms with a greater reliance on long-term debt (LTD/TA), and firms with sizable growth opportunities (NFA/TA) tend to rely more on external funds.[4] These firms are expected to have higher externally-financed growth rates. DIV/TA is total dividends to total assets, profitability is measured as earnings before interest and taxation to total assets (EBIT/TA), and asset turnover is measured as the ratio of net sales to net fixed assets (NS/NFA). I measure firm size (SIZE) as the natural log of total assets, expressed in real U.S. dollars. Reliance on long-term debt is measured as the ratio of long-term debt divided by lag total assets (LTD/TA). Finally, growth opportunities are measured as the ratio of net fixed assets to total assets (NFA/TA). All firm-level financial information is sourced from Worldscope for each year from 1980 to 2000. Finally, I exclude all financial firms.

To examine the relationship between equity market liberalization and externally-financed growth rates, I estimate the following:

$$\text{EXCESS SG}_{it} = \beta_1 \text{INVESTABLE}_{it} + \beta_2 \left(\text{DIV}_{it}/\text{TA}_{it}\right) + \beta_3 \left(\text{EBIT}_{it}/\text{TA}_{it}\right) + \beta_4 \left(\text{NS}_{it}/\text{NFA}_{it}\right) \quad (4a)$$
$$+\beta_5 \text{SIZE}_{it} + \beta_6 \left(\text{LTD}_{it}/\text{TA}_{it-1}\right) + \beta_7 \left(\text{NFA}_{it}/\text{TA}_{it}\right) + \alpha_t + \alpha_i + \varepsilon_{it}$$

$$\text{EXCESS SFG}_{it} = \beta_1 \text{INVESTABLE}_{it} + \beta_2 \left(\text{DIV}_{it}/\text{TA}_{it}\right) + \beta_3 \left(\text{EBIT}_{it}/\text{TA}_{it}\right) + \beta_4 \left(\text{NS}_{it}/\text{NFA}_{it}\right) \quad (4b)$$
$$+\beta_5 \text{SIZE}_{it} + \beta_6 \left(\text{LTD}_{it}/\text{TA}_{it-1}\right) + \beta_7 \left(\text{NFA}_{it}/\text{TA}_{it}\right) + \alpha_t + \alpha_i + \varepsilon_{it}$$

Where in addition to the variables described earlier, α_t and α_i are time and firm-fixed effects.[5] Finally, INVESTABLE_{it} is a firm-specific measure of equity market liberalizations (as opposed to an all-encompassing country-wide measure). More specifically, it is a 0/1 dummy which is 1 if the firm in deemed investable, and 0 otherwise. If equity market liberalization impacts positively on externally-

[4] As pointed out by Khurana et al. (2008), growth opportunities decrease in the ratio of net fixed assets to total assets (NFA/TA). Hence, I would expect to find a negative relationship between externally-financed growth and NFA/TA.

[5] I find that my conclusions remain unaltered if I cluster by country or by country and time as McLean et al. (2011) do (see Petersen (2009) and Thompson (2011)). The standard errors clustered by country and country and time tend to be larger than the standard errors clustered by firm alone.

financed growth, then, a priori, I would expect β_1 to be positive. In the next section, I describe the sample of firms used in this study.

3. Sample Description

I begin by sourcing an initial sample of all 2,784 firms from the major markets of the IFC Emerging Market Database that were deemed investable at any time between 1980 and 2000. Like Mitton (2006), I measure the openness of a firm's stock to foreign investors using the "investable" measure provided by the EMDB.[6] The IFC designates a firm as investable if its stock is free from both country-level and firm-level restrictions on foreign investment. It also requires that the stocks have sufficient size and liquidity to be realistically available to foreign investors. I define a firm as investable in a given year if the firm's stock appears in the IFC investable index by December of that year.

To be included in the final sample, firms must have financial data available in the Worldscope database and satisfy a number of minimum-data requirements, also consistent with Mitton (2006). First, firms that become investable in the sample period are required to have financial data available at least one year before and one year after the year in which they are first deemed investable. Second, firms that never become investable are required to have financial data available one year either side of the median year in which firms are first investable in their respective countries. From the initial sample, I lose all firms from Egypt, Jordan, Morocco, Slovakia, and Zimbabwe due to insufficient financial data.

The final sample, outlined in Table 1 consists of 686 investable firms from twenty six countries. They are Argentina, Brazil, Chile, China, Colombia, Czech Republic, Greece, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Portugal, Russia, South Africa, Sri Lanka, Taiwan, Thailand, Turkey, and Venezuela. The total number of non-investable firms is 1,418, which added to the number investable firm's results in a final sample of 2,104 firms, or 13,821 firm-year observations. In Table 1, I outline by country, the number of investable (# Inv) and non-investable (# NI) firms, the number of firm-year observations (# Obs), and the total number of firms (# Total). The number of sample firms per country varies significantly, ranging from a minimum of 7 in Russia to a high of 298 in Malaysia. Malaysia provides the greatest number of firm-year observations with 2,242, or

[6] Amongst others, Mitton and O'Connor (2012), Flavin and O'Connor (2010), and McLean et al. (2011) all use the investable firm-specific measure of equity market liberalizations.

16.22% of the total firm-year observations. Korea (89) provides the largest number of investable firms, while Hungary provides a single investable firm. The final sample covers the period from 1980 to 2000. The median investable firm in my sample first becomes investable in 1990 (see column labeled "First Invest" in Table 1). Firms from, amongst others, Korea (1981) and Portugal (1986) become investable much earlier. Firms from the Czech Republic (1997) and Russia (1997) become investable much later.

4. Findings

Table 2 contains the coefficient estimates arising from estimating Eq's. (4a and 4b) with and without time fixed effects.[7] I also present estimates of Eq's. (4a and 4b), where the dependent variable is calculated using asset growth (and not sales growth as before). Columns 1-4 contain the coefficient estimates when EXCESS SG is the dependent variable. The remaining columns (5-8) use EXCESS SFG as measure of external financing growth (EFG). If equity market liberalizations permit greater access to external financing for investable firms which in turn serve to relax financing constraints, and ultimately result in greater externally-financed growth, then, a priori, I would expect the coefficient estimates on the investable dummy to be statistically positive.[8] Surprisingly, this is not what I find. In fact, I find to the contrary. The coefficient estimates suggest that irrespective of the dependent variable employed (EXCESS SG or EXCESS SFG), the measurement of external financing growth (Using sales or asset growth), or given the inclusion or exclusion of time fixed effects, and without exception, the coefficient estimates on the investable dummy are negative, and always statistically different to zero.[9] The coefficient estimates range from -0.047 to -0.122 and suggest that, if anything, and contrary to expectations, equity market liberalizations result in a *decrease* in externally-financed growth rates for investable firms. These findings suggest that the growth effects associated with stock market liberalizations, documented by amongst others, Mitton (2006), are not the result of a relaxation in financing constraints. Recent work by Flavin and O'Connor (2010) and McLean et al. (2011) corroborate my findings. Both find that investable

[7] Khuranna et al. (2008) estimate equations (4a and 4b) with firm fixed effects but without time fixed effects. When I exclude time fixed effects, and as expected, the coefficient estimates tend to be much larger, and the standard errors much smaller.

[8] The analysis presented in Gupta and Yuan (2009) suggest that equity market liberalizations do reduce financing constraints.

[9] I also estimate a series of pooled ordinary least squares estimates with country, time, and industry fixed effects included (as Khurana et al. (2008) also do). When I do so, I find that my conclusions are qualitatively unchanged. The estimates are available from me upon request.

firms do not issue more equity financing once firms become investable. In fact, McLean et al. (2011) document a significant decrease in equity issues (and an increase in debt issuance) once firms become investable.[10] In summary, my findings, when added to theirs, suggests that investable firms use less equity financing once they become investable, resulting in a decrease in externally-financed growth rates.[11]

The coefficient estimates on the firm-level control variables suggest that externally-financed growth rates are smaller for dividend paying, profitable firms, and firms with a reliance on long-term debt financing. In contrast, and contrary to expectations, larger firms have higher externally financed growth rates. Khurana et al. (2008) find the same. The coefficient estimates on the remaining two control variables (NFA/TA) and (NS/NFA) tend to switch sign depending on the where external financing growth is measured using sales or asset growth.[12]

Table 2 suggests that firm growth is financed more using internal funds, at least relative to external finds once firms become investable. In Tables 3 and 4, I estimate Eq's. (4a and 4b), but now by level of financial development, corporate governance, and financing constraints. I do so since the analysis performed in Table 2 is likely to mask the differential effect that investability is likely to have across firms. Studies closely related to this one suggest that this is the case. Mitton and O'Connor (2012) show that the "investable premium" is much larger for firms with sizable pre-investable financing constraints. Both Bae and Goyal (2010) and O'Connor (2012) attribute the greatest value gains from equity market liberalizations to better-governed firms. In Table 3, I estimate Eq's. (4a and 4b) for firms from countries with above and below-median financial development. Using financial development indicators from the World Bank, I measure financial development using either domestic credit to the private sector (as a % of GDP) (DCPS) or market capitalization of listed firms, also as a % of GDP (MCAP).[13] In Table 4, I estimate Eq's. (4a and 4b), now by strength of corporate governance, and by level of financing constraints. To measure the strength of corporate governance, I use an indicator variable that takes the

[10] Chari and Henry (2008) also find no significant change in external financing using a country-level indicator of equity market liberalizations.
[11] The evidence is mixed in relation to the relationship between equity market liberalizations and debt issuance. McLean et al. (2011) document a significant increase in net debt issuance; Flavin and O'Connor (2010) document a decrease. Agca et al. (2007) also document a decrease using leverage ratios (debt to assets). My findings suggest that irrespective of the relationship, there is no increase in externally-financed growth rates (using either long-term debt or equity).
[12] Khurana et al. (2008) also document sign changes for some of their control variables, depending on the regression specification employed.
[13] Table 1 outlines the financial development indicators by country. They suggest that financial markets are well-developed in Malaysia, but not so in Venezuela.

value of one if the firm is a dual-class share firm (DC), and zero for a single-class share firm (SC).[14] To classify firms as either SC or DC, I employ the 'Currently a Multiple Share Company' from Worldscope. It identifies multiple share companies as "…companies which currently have more than one type of common/ordinary share." Of the total number of investable firms (see Table 1), 476 are single-class share firms, and the remaining 210 are dual-class share firms. All 89 Korean investable firms are single-class share firms. Brazil (35) provides the greatest number of dual-class investable firms. I proxy for the level of financing constraints using corporate dividend payouts (see Fazzari et al. (1988)). Dividend payouts are measured using dividends to assets.[15] I classify financially constrained investable firms as those with below-median pre-investable dividend payouts. The bottom panel of Table 4 presents the coefficient estimates for firms with above- and below median dividend payouts.

The coefficient estimates presented in Table 3 suggest that the earlier findings presented in Table 2 are the sole preserve of investable firms from countries with well-developed financial markets. The coefficients estimates on the investable dummy for these firms largely mirror those for the entire sample of firms; they are negative and always statistically significant. In contrast, and almost without exception, for firms from countries with low quality financial markets, and for whom presumably investability is likely to have the largest impact, the coefficient estimates are much smaller, and statistically indifferent to zero. While these coefficient estimates do highlight how equity market liberalizations are likely to impact firms differently, nevertheless, the findings here do not point to a greater reliance on external financing once firms become investable. For firms where financial markets are not well-developed, external financing does not appear to play a greater role once firms become investable. Furthermore, I find that these conclusions remain unaltered irrespective of the measure of financial development that I employ.

Table 4 contains the estimates by strength of corporate governance and level of financing constraints. The top panel contains the estimates by strength of corporate governance; the bottom by (pre-investable) level of financing constraints. The tests by level of corporate governance will further shed

[14] Durnev and Kim (2005, 2007) show using CLSA and S&P corporate governance data that in firms where control rights exceed cashflow rights (e.g. dual-class share firms), corporate governance standards tend to be lower in these firms, relative to firms where no such differences (or much smaller differences) exist between control and cashflow rights (e.g. single-class share firms). Consistent with the view, the consumption of private benefits tends to be greater in firms with dual-class shares compared to firms with single-class share structures (DeAngelo and DeAngelo, 1985; Grossman and Hart, 1988, and more recently, Masulis et al., 2009).

[15] I use dividends to assets and not dividends to earnings or dividends to cashflow because the sample sizes using either earnings or cashflow are smaller.

light on the underlying sources of the "investable premia" documented by Mitton and O'Connor (2012) and O'Connor (2012).[16] The former uncover an "investable premium" in the region of 9% for investable firms, and the latter finds that only single-class share investable firms enjoy such a premium. Hence, if reduced financing constraints explain at least part of the "investable premium" for single-class share firms, then I would expect β_1 to be positive and statistically significant for these firms. If β_1 is not positive, this then would that the underlying sources of the "investable premium" lay elsewhere, probably a result of improvements in a firm's corporate governance practices (see Bae et al. 2006).

The coefficient estimates suggests that neither dual nor single class share firms experience an increase in externally-financed growth once they become investable. For both, and almost without exception, the coefficient estimates on the investable dummy are negative and statistically significant. These findings suggest that the "investable premium" is likely the result of, amongst other factors, an improvement in corporate governance, in part presumably arising from greater participation from foreign institutional investors.[17] Since institutional investors appear reluctant to invest in poorly-governed firms (see Leuz et al. (2009)), poorly governed firms do not enjoy an "investable premium" because they experience neither an improvement in corporate governance nor a decrease in financing constraints (see O'Connor, 2012).

Finally, I tend to reach similar conclusions when I classify firms by level of financing constraints. For both sets of firms, the coefficient estimates on the investable dummy are statistically negative. In fact, if anything, the bottom panel suggests that financially-constrained firms (firms with below-median dividend payout), and those firms with potentially the most to gain from becoming investable rely even less on external financing once they become investable. For these firms, the promise of reduced financing constraints from becoming investable fails to materialize.[18]

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[16] The "cross-listing premium", similar to the "investable premium" is a result of, amongst others, reduced financing constraints, and improvements in corporate governance, and greater recognition (see Lins et al. 2005; Reese and Weisbach, 2003; Doidge et al 2009; and King and Segal, 2009).

[17] Consistent with this view, Bae et al. (2006) document an improvement in a firm information environment post-liberalization. Aggarwal et al. (2011) and Ferreira and Matos (2008) highlight the role played by foreign institutional investors in improving corporate governance.

[18] Mitton and O'Connor (2012) find no "investable premium" for financially-constrained and unconstrained firms when they use dividend payouts to proxy for financing constraints. When they use investment-cashflow sensitivities to gauge the extent of financing constraints, they do find a large "investable premium" for financially-constrained firms. I don't have access to data which would allow me to estimate investment-cashflow sensitivities. Thus, I am unable to perform a similar exercise to them.

5. Concluding Remarks

In this paper I document results which are consistent with recent evidence which suggests that investable firms use less, and not more, external-financing once they become investable. Flavin and O'Connor (2010) and McLean et al. (2011) examine the post-investable external capital issuance behavior of investable firms, and find that there is a *decrease* in the issuance of equity capital, while the evidence regarding debt issuance is mixed. In this paper, I examine this issue further, but adopt a different approach. Specifically, I examine the contribution made by external-financing to the performance of investable firms by examining how their externally-financed growth rates change once they become investable.

To do so, I calculate the difference between firms' *actual* and *predicted* growth rate using the constrained/predicted growth rates of Demirguc-Kunt and Maksimovic (1998). The difference between a firms actual and predicted growth rate is a measure of the extent of a firm's external-financing activity. If equity market liberalizations result in a relaxation of financing constraints, then this difference should increase, once firms become investable. This is not what I find.

My findings are in line with both Flavin and O'Connor (2010) and McLean et al. (2011). I find that investable firms experience a *decline* in their externally-financed growth rates once they become investable. When I further disaggregate my original sample by level of financial development, financing constraints, and corporate governance, I uncover no evidence which suggests that equity market liberalizations result in a reduction in financing constraints, and ultimately increases in externally-financed growth rates. While I and others can only speculative as to why this occurs, what these findings do suggest is that the gains from become investable are not the result of reduced financing constraints, but more likely from improvements in corporate governance.

References

1. Agca, S., De Nicola, G., and E. Detragiache (2007), 'Financial reforms, financial openness, and corporate borrowing: international evidence', IMF working paper no. 186.
2. Aggarwal, R., Erel, I., Ferreira, M., and P.Matos (2011), 'Does governance travel around the World? Evidence from institutional investors', Journal of Financial Economics, Vol. 100, 154-181.
3. Bae, K., Bailey, W., and C. Mao (2006), 'Stock market liberalization and the information environment', Journal of International Money and Finance, Vol. 25, 404-428.
4. Bae, K., and V. Goyal (2010), 'Equity market liberalization and corporate governance', Journal of Corporate Finance, Vol. 16, pp. 609-621.
5. Bekaert, G., Lundblad, C., and C. Harvey (2005), 'Does financial liberalization spur economic growth?' Journal of Financial Economics, Vol. 77, 3-55.
6. Bekaert, G., Harvey, C., Lundblad, C., and S. Siegel (2007), 'Growth opportunities and market integration', Journal of Finance, Vol. 62, 1081-1138.
7. Bekaert, G., Lundblad, C., and C. Harvey (2010), 'Financial openness and productivity', World Development, Vol. 39, 1-19.
8. Chari, A., and P. Henry (2008), 'Firm-specific information and the efficiency of investment', Journal of Financial Economics, Vol. 87, 636-655.
9. Claessens, S., Djankov, S., Fan, J., and L. Lang (2002), 'Disentangling the incentives and entrenchment effects of large shareholders', Journal of Finance, Vol. 57, pp. 2741-2771.
10. DeAngelo, H., and L. DeAngelo (1985), 'Managerial ownership of voting rights: a study of public corporations with dual classes of common stock', Journal of Financial Economics, Vol. 14, pp. 33-39.
11. Demirguc-Kunt, A., and V. Maksimovic (1998), 'Law, finance and firm growth', Journal of Finance, Vol. 53, 2107-2131.
12. Doidge, C., Karolyi, G.A., and R. Stulz (2004), 'Why are foreign firms listed in the U.S. worth more?' Journal of Financial Economics, Vol. 71, 205-238.
13. Doidge, C., Karolyi, G.A., Lins, K., Stulz, R., and D. Miller (2009), 'Private benefits of control, ownership, and the cross-listing decision', The Journal of Finance, Vol. 64, 425-466.
14. Durnev, A., and E. Kim (2005), 'To steal or not to steal: firm attributes, legal environment, and valuation', Journal of Finance, Vol. 60, pp. 1461-1493.
15. Durnev, A., and E. Kim (2007), 'Explaining differences in the quality of governance among companies: evidence from emerging markets', Journal of Applied Corporate Finance, Vol. 19, pp. 16-24.
16. Fazzari, S., Hubbard, G., and B. Petersen (1988), 'Financing constraints and corporate investment', Brookings Papers on Economic Activity, Vol. 1, 141-195.
17. Ferreira, M., and P. Matos (2008), 'The colors of investors' money: The role of institutional investors around the world', Journal of Financial Economics, Vol. 88, 499-533.
18. Flavin, T., and T. O'Connor (2010), 'The sequencing of stock market liberalization events and corporate financing decisions', Emerging Markets Review, Vol. 11, 183-204.
19. Grossman, S., and O. Hart (1988), 'One share-one vote and the market for corporate control', Journal of Financial Economics, Vol. 20, pp. 175-202.
20. Gupta, N., and K. Yuan (2009), 'On the growth effects of stock market liberalizations', The Review of Financial Studies, Vol. 22, 4715-4752.
21. Khurana, I., Martin, X., and R. Perreira (2008), 'Cross-listing and firm growth', Review of Finance, Vol. 12, 293-322.
22. Kim, E., and V. Signal (2000), 'Does financial liberalization reduce financing constraints?' Financial Management, Vol. 32, pp. 5-34.

23. King, M., and D. Segal (2009), 'The long-term effects of cross-listing, investor recognition, and ownership structure on valuation', Review of Financial Studies, Vol. 22, 2393–2421.
24. Laeven, L. (2003), 'Does financial liberalization reduce financing constraints?' Financial Management, Vol. 32, 5-34.
25. Lang, M., Lins, K., and D. Miller (2003), 'ADRs, analysts, and accuracy: does cross-listing in the U.S. improve a firm's information environment and increase market value?" Journal of Accounting Research, Vol. 41, 317–345.
26. Leuz, C., Lins, K., and D. Miller (2009), 'Do foreigners invest less in poorly governed firms?' The Review of Financial Studies, Vol. 22, 3245-3285.
27. Lins, K., Strickland, D., and M. Zenner (2005), 'Do non-U.S. firms issue equity on U.S. stock exchanges to relax capital constraints?' Journal of Financial and Quantitative Analysis, Vol. 40, 109-133.
28. Masulis, R., Wang, C., and F. Xie (2009), 'Agency costs at dual-class companies', Journal of Finance, Vol. 64, pp. 1697-1727.
29. Mitton, T. (2006), 'Stock market liberalization and operating performance at the firm level', Journal of Financial Economics, Vol. 81, pp. 625-647.
30. Mitton, T., and T. O'Connor (2012), 'Investability and firm value', European Financial Management (In Press).
31. McLean, R.D., Pontiff, J., and M. Zhao (2011). 'Equity market liberalization, fundamental volatility, and external finance', Unpublished working paper, Boston College.
32. O'Connor, T. (2012), 'Investability, corporate governance and firm value', Research in International Business and Finance, Vol. 26, 120-136.
33. Opazo, L., Raddatz, C., and S. Schmukler (2009), 'The long and short of emerging market debt', World Bank Policy Research Working Paper No. 5056.
34. Petersen, M.A. (2009), 'Estimating standard errors in finance panel data sets: comparing approaches', Review of Financial Studies, Vol. 22, 435-480.
35. Quinn, D., and A. Toyoda (2008), 'Does capital account liberalization lead to economic growth? An empirical investigation', Review of Financial Studies, Vol. 21, 1403-1449.
36. Reese, W., and M. Weisbach (2002), 'Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings', Journal of Financial Economics, Vol. 66, 65-104.
37. Rodrik, D. (1998), 'Who needs capital account convertibility?' Princeton Essays in International Finance, Vol. 207, 1-10.
38. Schmukler, S., and E. Vesperoni (2006), 'Financial globalization and debt maturity in emerging economies', Journal of Development Economics, Vol. 79, 183-207.
39. Thompson, S. (2011), 'Simple formulas for standard errors that cluster by both firm and time', Journal of Financial Economics, Vol. 99, pp. 1-10.

TABLE 1

Sample Description

The table reports summary statistics of the sample by country. Investable dates are taken from the Emerging Markets Database (EMDB). # Obs is the number of firm-year observations; # Inv is the number of investable firms; # NI is the number of non-investable firms, and # Total is the total number of firms. First Invest is the first year in which the sample of investable firms enters the sample. "Invest & SC" and "Invest & DC" refers to the number of single- and dual-class investable firms. Financial development indicators are sourced from the World Bank. DCPS is credit provided to the private sector in the country (as a % of GDP), and MCAP is market capitalization of listed firms in the country (as a % of GDP).

	Sample Description				Key Date	Financial Development Indicators		Investable Single and Dual-Class Share Firms	
	# Invest	# NI	# Total	# Obs	First Invest	DCPS	MCAP	Invest & SC	Invest & DC
Argentina	17	8	25	180	1988	0.239	0.584	7	10
Brazil	37	48	85	567	1990	0.347	0.376	2	35
Chile	25	33	58	431	1992	0.635	0.800	22	3
China	28	82	110	533	1991	1.246	0.538	1	27
Colombia	7	8	15	126	1990	0.269	0.115	6	1
Czech Rp.	4	13	17	62	1997	0.540	0.214	4	0
Greece	34	59	93	701	1986	-	0.990	20	14
Hungary	1	8	9	50	1993	0.322	0.258	1	0
India	49	198	247	1,111	1990	0.288	0.321	49	0
Indonesia	31	75	106	729	1990	0.219	0.179	5	26
Israel	10	11	21	129	1993	0.869	0.581	10	0
Korea	89	139	228	1,598	1981	1.010	0.372	89	0
Malaysia	82	216	298	2,242	1981	1.406	1.299	82	0
Mexico	29	29	58	456	1981	0.130	0.216	7	22
Pakistan	16	55	71	433	1993	0.298	0.108	15	1
Peru	12	11	23	120	1992	0.259	0.198	2	10
Philippines	23	36	59	357	1991	0.444	0.689	17	6
Poland	13	17	30	148	1994	0.278	0.191	13	0
Portugal	16	19	35	291	1986	1.398	0.573	12	4
Russia	5	2	7	28	1997	0.119	0.150	5	0
Sth Africa	28	53	81	905	1981	0.289	0.066	23	5
Sri Lanka	10	1	11	68	1994	1.389	1.602	10	0
Taiwan	58	110	168	897	1989	-	-	57	1
Thailand	46	148	194	1331	1988	1.084	0.244	2	44
Turkey	12	35	47	40	1988	0.237	0.350	12	0
Venezuela	4	4	8	288	1996	0.120	0.067	3	1
	TOTALS				COUNTRY SAMPLE MEDIANS			TOTALS	
	686	1,418	2,104	13,821	1990	0.310	0.321	476	210

TABLE 2

Regression Estimates

This table reports coefficient estimates from firm-fixed effects with t-statistics (absolute value) reported in parentheses. The t-statistics are calculated using standard errors clustered at the firm level. INVESTABLE is a dummy variable that is set equal to one in years in which the firm is designated as investable. The dependent variables are Excess SG and Excess SFG. Excess SG is a firm's actual sales or asset growth rate (as indicated) which exceeds its predicted sustainable growth rate (SG). The predicted sustainable growth rate (SG) is calculated as $(ROE/(1-ROE))$ where ROE is the return on equity. Excess SFG is a firm's actual sales or asset growth rate (as indicated) which exceeds its predicted short-term financed growth rate (SFG). For each firm, SFG is calculated as $(ROLTC/(1-ROLTC))$ where ROLTC is the ratio of earnings after interest and tax to long-term capital. Long-term capital denotes the assets of a firm not financed by short-term debt, and is calculated as the product of a firm's total assets and 1 minus the ratio of short-term liabilities to total assets. DIV/TA is total dividends divided by total assets. EBIT/NS is earnings before interest and taxation to net sales. NS/NFA is net sales to net fixed assets. Firm Size [SIZE] is proxied using the log of assets in real US$. LTD/TA is long-term debt to total assets and NFA/TA is net fixed assets to total assets. A full set of firm and time fixed-effects are included but not reported. # Obs is the number of firm-year observations. The overall R-Squared is reported. Statistical significance is denoted by ***, **, * for the 1%, 5 and 10% levels, respectively.

	Measures of Externally Financed Growth (EFG)							
	Excess SG				Excess SFG			
	Sales Growth		Asset Growth		Sales Growth		Asset Growth	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INVESTABLE	-0.049***	-0.100***	-0.051***	-0.109***	-0.047***	-0.112***	-0.050***	-0.122***
	(3.11)	(6.62)	(3.75)	(8.18)	(3.26)	(7.68)	(3.87)	(9.11)
DIV/TA	-2.110***	-1.656***	-2.049***	-1.428***	-1.533***	-0.864***	-1.429***	-0.596***
	(5.75)	(4.84)	(7.00)	(5.28)	(5.96)	(3.44)	(7.18)	(2.91)
EBIT/NS	-0.417***	-0.360***	-0.358***	-0.273***	-0.168***	-0.082**	-0.104***	0.010
	(8.70)	(7.84)	(10.68)	(8.39)	(4.06)	(2.04)	(3.92)	(0.33)
NS/NFA	0.021***	0.023***	-0.033***	-0.031***	0.036***	0.039***	-0.019***	-0.016***
	(4.47)	(4.56)	(7.42)	(7.16)	(7.94)	(7.61)	(4.93)	(3.99)
SIZE	0.189***	0.144***	0.219***	0.152***	0.224***	0.159***	0.256***	0.170***
	(12.84)	(11.04)	(15.86)	(12.46)	(16.25)	(12.41)	(18.94)	(13.85)
LTD/TA	0.010	-0.034	-0.011	-0.042	-0.087*	-0.149***	-0.114***	-0.168***
	(0.09)	(0.54)	(0.21)	(0.78)	(1.67)	(2.73)	(2.56)	(3.51)
NFA/TA	0.192***	0.175***	-0.122**	-0.155***	0.122**	0.094	-0.219***	-0.264***
	(2.94)	(2.68)	(2.16)	(2.71)	(2.20)	(1.61)	(4.45)	(4.87)
Firm Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	No	Yes	No	Yes	No	Yes	No
# Obs	13,821	13,821	13,821	13,821	13,821	13,821	13,821	13,821
R-Squared	0.033	0.027	0.048	0.049	0.025	0.010	0.034	0.017

TABLE 3

Regression Estimates

This table reports coefficient estimates from firm-fixed effects with t-statistics (absolute value) reported in parentheses. Seperate regressions are reported for firms in countries with high (above-median) or low (below-median) financial development. DCPS is credit provided to the private sector in the country (as a % of GDP), and MCAP is market capitalization of listed firms in the country (as a % of GDP). The t-statistics are calculated using standard errors clustered at the firm level. INVESTABLE is a dummy variable that is set equal to one in years in which the firm is designated as investable. The dependent variables are Excess SG and Excess SFG. Excess SG is a firm's actual sales or asset growth rate (as indicated) which exceeds its predicted sustainable growth rate (SG). The predicted sustainable growth rate (SG) is calculated as $(ROE/(1-ROE))$ where ROE is the return on equity. Excess SFG is a firm's actual sales or asset growth rate (as indicated) which exceeds its predicted short-term financed growth rate (SFG). For each firm, SFG is calculated as $(ROLTC/(1-ROLTC))$ where ROLTC is the ratio of earnings after interest and tax to long-term capital. Long-term capital denotes the assets of a firm not financed by short-term debt, and is calculated as the product of a firm's total assets and 1 minus the ratio of short-term liabilities to total assets. A full set of firm-level control variables, firm and time fixed-effects are included but not reported. # Obs is the number of firm-year observations. The overall R-Squared is reported. Statistical significance is denoted by ***, **, * for the 1%, 5 and 10% levels, respectively.

	Measures of Externally Financed Growth (EFG)							
	Excess SG				Excess SFG			
	Sales Growth		Asset Growth		Sales Growth		Asset Growth	
	Domestic Creditor to Private Sector (DCPS)							
	High DCPS	Low DCPS	High DCPS	Low DCPS	High DCPS	Low DCPS	High DCPS	Low DCPS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INVESTABLE	-0.063***	-0.027	-0.048***	-0.043*	-0.068***	-0.010	-0.053***	-0.031
	(3.06)	(0.98)	(2.79)	(1.79)	(3.47)	(0.34)	(3.12)	(1.45)
Firm Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Included	Included	Included	Included	Included	Included	Included	Included
# Obs	7,659	4,564	7,659	4,564	7,659	4,564	7,659	4,564
R-Squared	0.051	0.031	0.055	0.047	0.045	0.017	0.053	0.029
	Measures of Externally Financed Growth (EFG)							
	Excess SG				Excess SFG			
	Sales Growth		Asset Growth		Sales Growth		Asset Growth	
	Market Capitalization (MCAP)							
	High MCAP	Low MCAP	High MCAP	Low MCAP	High MCAP	Low MCAP	High MCAP	Low MCAP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INVESTABLE	-0.065***	-0.042	-0.062***	-0.037	-0.068***	-0.024	-0.069***	-0.015
	(3.28)	(1.41)	(3.77)	(1.38)	(3.89)	(0.85)	(4.46)	(0.61)
Firm Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Included	Included	Included	Included	Included	Included	Included	Included
# Obs	8,496	4,428	8,496	4,428	8,496	4,428	8,496	4,428
R-Squared	0.042	0.024	0.049	0.044	0.025	0.027	0.025	0.053

TABLE 4

Regression Estimates

This table reports coefficient estimates from firm-fixed effects with t-statistics (absolute value) reported in parentheses. Seperate regressions are reported for single and dual class firms, and for firms with high (above-median) and low (below-median) dividend payout. Dividend payout is measured as dividends to assets. The t-statistics are calculated using standard errors clustered at the firm level. INVESTABLE is a dummy variable that is set equal to one in years in which the firm is designated as investable. The dependent variables are Excess SG and Excess SFG. Excess SG is a firm's actual sales or asset growth rate (as indicated) which exceeds its predicted sustainable growth rate (SG). The predicted sustainable growth rate (SG) is calculated as $(ROE/(1-ROE))$ where ROE is the return on equity. Excess SFG is a firm's actual sales or asset growth rate (as indicated) which exceeds its predicted short-term financed growth rate (SFG). For each firm, SFG is calculated as $(ROLTC/(1-ROLTC))$ where ROLTC is the ratio of earnings after interest and tax to long-term capital. Long-term capital denotes the assets of a firm not financed by short-term debt, and is calculated as the product of a firm's total assets and 1 minus the ratio of short-term liabilities to total assets. A full set of firm-level control variables, firm and time fixed-effects are included but not reported. # Obs is the number of firm-year observations. The overall R-Squared is reported. Statistical significance is denoted by ***, **, * for the 1%, 5 and 10% levels, respectively.

	Measures of Externally Financed Growth (EFG)							
	Excess SG				Excess SFG			
	Sales Growth		Asset Growth		Sales Growth		Asset Growth	
	Single & Dual-Class Share Firms							
	Single Class	Dual Class	Single Class	Dual Class	Single Class	Dual Class	Single Class	Dual Class
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INVESTABLE	-0.045**	-0.066**	-0.057***	-0.050*	-0.042***	-0.060**	-0.058***	-0.037
	(2.50)	(2.03)	(3.74)	(1.78)	(2.58)	(2.01)	(3.98)	(1.45)
Firm Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Included	Included	Included	Included	Included	Included	Included	Included
# Obs	9,604	4,217	9,604	4,217	9,604	4,217	9,604	4,217
R-Squared	0.039	0.027	0.059	0.038	0.025	0.031	0.034	0.042
	Measures of Externally Financed Growth (EFG)							
	Excess SG				Excess SFG			
	Sales Growth		Asset Growth		Sales Growth		Asset Growth	
	Dividend Payout							
	High DP	Low DP	High DP	Low DP	High DP	Low DP	High DP	Low DP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INVESTABLE	-0.031	-0.060***	-0.021	-0.079***	-0.045**	-0.047**	-0.034*	-0.069***
	(1.43)	(2.60)	(1.13)	(3.99)	(2.21)	(2.28)	(1.94)	(3.69)
Firm Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Included	Included	Included	Included	Included	Included	Included	Included
# Obs	6,909	6,912	6,909	6,912	6,909	6,912	6,909	6,912
R-Squared	0.033	0.014	0.045	0.019	0.027	0.020	0.033	0.028