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Patterns of International Capital Raisings

Juan Carlos Gozzi
Ross Levine
Sergio L. Schmukler

The World Bank
Development Research Group
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Abstract

This paper documents several new patterns associated with firms issuing securities in foreign markets that motivate the need for and help guide future research. Besides noting that these international capital raisings grew almost four-fold from 1991 to 2005, accounting for 35 percent of all capital raised through security issuances, the paper has three main findings. First, a large and growing fraction of capital raisings, especially debt issuances, occurs in international markets, but a very small number of firms accounts for the bulk of international capital raisings, highlighting the distributional implications of financial globalization. Second, changes in firm performance following equity and debt issuances in international markets are qualitatively similar to those following domestic issuances, suggesting that capital raisings abroad are not intrinsically different from domestic ones. Third, after firms start accessing international markets, they significantly increase the amount raised in domestic markets, suggesting that international and domestic markets are complements.

This paper—a product of the Growth and the Macroeconomics Team, Development Research Group—is part of a larger effort in the department to understand financial development and financial globalization. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at sschmukler@worldbank.org.

Patterns of International Capital Raisings*

Juan Carlos Gozzi,[a] Ross Levine,[a,b] Sergio L. Schmukler[c]

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[a] Brown University, [b] NBER, [c] World Bank

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E-mail addresses: juan_carlos_gozzi_valdez@brown.edu, ross_levine@brown.edu, sschmukler@worldbank.org.

1. Introduction

Financial globalization has reshaped international and corporate finance over the last two decades. About 30 percent of all capital raised by firms through issuances of stocks and bonds over the period 1991-2005 occurred in securities markets outside their home countries. Obstfeld and Taylor (2004) show that a historically unprecedented percentage of the world's financial capital now flows across international borders. Furthermore, the amount raised by firms in foreign markets grew almost four-fold after 1991, approaching one trillion U.S. dollars in 2005.

Yet, basic questions about the internationalization of capital markets remain incompletely answered. Why do firms sell stocks and bonds in foreign markets? What are the effects of firms issuing securities in foreign markets on firm performance? What are the cross-firm distributional effects from international capital raisings? The lack of firm-level information on equity and debt issuances in both foreign and domestic markets limits our understanding of the causes and effects of financial globalization at the macro and micro level.

To help address these questions, we provide the first documentation of several salient firm-level patterns associated with international capital raisings.[1] First, we illustrate the characteristics of firms that raise capital through the issuance of equity and debt abroad and document how these firms differ from both firms that only raise capital domestically and firms that do not issue securities locally or internationally. We analyze numerous firm-level characteristics, including firm size, growth, investment, profitability, capital structure, exports, and corporate valuation. Second, we show what happens to firms after issuing equity or debt abroad and compare these patterns to firms that raise capital domestically. Third, we compare

[1] In fact, the international finance literature increasingly stresses the desirability of using firm-level evidence to understand the underpinning of financial globalization, which has been studied extensively at the aggregate level. See, for example, Forbes (2006), Kose, Prasad, Rogoff, and Wei (2006), and Henry (2007). Moreover, a separate, though complementary, literature studies firm-level patterns in international trade. For a survey, see Bernard, Jensen, Redding, and Schott (2007).

how firms use domestic bond and equity markets before and after they internationalize. Rather than testing hypotheses or formulating new theories, we contribute to the literature by documenting new patterns and relating them to existing theories. As a result, our research both advertises the need for and helps guide the direction of future research.

This paper contributes to a rich literature on the internationalization of capital markets. In particular, Henderson, Jegadeesh, and Weisbach (2006) analyze aggregate patterns of capital raising activity around the world and document how internationalization varies across security types and regions. We extend their work by analyzing the extent of internationalization at the firm level. This allows us (1) to compare the characteristics of firms that raise equity or debt internationally with those of firms that only raise equity or debt domestically, (2) to trace the evolution of firm performance following capital raisings both at home and abroad, and (3) to analyze changes in the capital raising activities of firms after they internationalize.

Our research also relates to studies of the international cross-listing of stocks. Several papers analyze the characteristics of firms that list their shares abroad, either through direct cross-listings or depositary receipts (Pagano, Roell, and Zechner, 2002; Lang, Lins, and Miller, 2003; Lang, Raedy, and Yetman, 2003; and Claessens and Schmukler, 2007). In contrast, we focus on capital raisings, not on equity market cross-listings. Moreover, while most studies ignore debt issuances, we analyze both equity and debt markets. Indeed, we find that debt issues in public markets are a much more important source of capital for firms than equity issues, and debt markets are far more internationalized than equity markets.

Three broad categories of findings emerge from our analysis. We first summarize the findings and then relate these patterns to existing theories of international capital raisings.

First, a large and growing fraction of capital raisings, especially debt issuances, is conducted in international markets, but only a small fraction of firms actually uses international markets, and of this small fraction, a very small sub-sample accounts for the bulk of international capital raisings. In 2005, firms from developing and developed countries raised, respectively, 51 and 39 percent of their total security issuances outside of their home countries. This share is higher for debt than equity issues. Firms raised 35 percent of their debt capital abroad over the period 1991-2005, while raising 10 percent of their equity capital abroad. Furthermore, about 15 percent of the almost 46,000 firms that issued any securities in public markets during our sample period accessed international markets, and only one-tenth of these international firms (less than 700 firms) collected about two-thirds of all the funds raised internationally. Finally, firms raising capital abroad are larger, slower growing, more leveraged, more profitable, and export more than firms that only raise capital domestically.

Second, changes in firm performance following equity and debt issuances in international markets are qualitatively similar to those that follow the issuance of securities in domestic markets. Whether firms issue securities in domestic or international markets, they tend to become large, but experience a decrease in their growth rate and profitability following capital raisings. These patterns suggest that issues in international markets are not intrinsically different from those in domestic markets. Furthermore, the differences between firms that raise capital abroad and those that only issue securities domestically exist many years before firms actually access international markets.

Third, although issues abroad tend to be significantly larger than issues at home, firms (1) continue to issue securities in both international and domestic markets after accessing international markets, and (2) significantly increase the amount of money raised in domestic

markets after internationalizing. For firms from developing (developed) countries, the median security issuance of both equity and debt is about 18 (2) times larger in international markets than in domestic markets. Furthermore, firms do not opt out of domestic markets once they internationalize. Indeed, after accessing international markets, firms significantly *increase* their capital raisings at home, while continuing to use international markets. For example, the typical developed country firm increases the average annual amount raised in domestic markets by 200 percent following internationalization, and also captures a larger fraction of the total domestic market.

Our findings relate to three theories of the causes and effects of international capital raisings. First, the segmentation view argues that firms internationalize to circumvent regulations, poor accounting systems, taxes, and illiquid domestic markets that discourage foreign investors from purchasing their shares (Black, 1974; Solnik, 1974; Stapleton and Subrahmanyam, 1977; Errunza and Losq, 1985; Alexander, Eun, and Janakiramanan, 1987; and Domowitz, Glen, and Madhavan, 1998). Thus, firms internationalize to gain access to less expensive capital (Miller, 1999 and Foerster and Karolyi, 1999). Second, the ‘‘bonding’’ view argues that firms internationalize to bond themselves to a better corporate governance framework that limits the extraction of private benefits by corporate insiders (Stulz, 1999; Coffee, 2002; Reese and Weisbach, 2002; and Doidge, Karolyi, and Stulz, 2004). This makes firms more attractive to potential investors, reducing their cost of capital, and inducing an enduring improvement in firm performance. Third, the market timing view suggests that firms raise capital abroad to exploit temporarily high prices for their securities during ‘‘hot’’ markets (Errunza and Miller, 2000 and Henderson, Jegadeesh and Weisbach, 2006).

While the patterns we document do not formally reject or confirm existing theories, they suggest that there are large gaps in the ability of these theories to account for noteworthy features of international capital raisings. For instance, the finding that the evolution of firm characteristics following international capital raisings are qualitatively similar to those that follow domestic capital raisings are difficult to reconcile with the bonding view, which argues that capital raisings in international markets are intrinsically different from capital raisings in domestic markets and should therefore have qualitatively different effects on firm performance. Similarly, our finding that firms do not opt out of domestic markets after raising capital abroad, but actually increase their participation in these capital markets both in absolute and relative terms, does not fit the predictions of simple segmentation arguments that international markets offer unambiguously better services and/or less expensive capital than local markets. In terms of market timing, the argument that hot international markets for firms' securities are driving the decision to raise capital abroad does not fully explain why only a very few firms actually raise capital abroad.[2] Finally, as we discuss in great depth below, corporate finance theory does not yet fully account for why firms issue debt and equity in both foreign and domestic markets.

Furthermore, theories of internationalization need to account for two patterns associated with international capital raisings that are not the focus of existing research. First, debt markets tend to be more internationalized than equity markets. Second, firms that raise capital abroad are different from firms that only raise capital at home *before* they internationalize; these differences in firm characteristics do not emerge after firms internationalize. In sum, our findings indicate that current theories have substantive limitations in accounting for the firm-level experiences and

[2] DeAngelo, DeAngelo, and Stulz (2007) make a similar argument when analyzing SEOs in the U.S., arguing that many firms do not issue stocks during an open financing window, which is inconsistent with theories that highlight market timing as the driving force for stock issues.

highlight directions for developing more precise theories of the internationalization process and its implications.

Our findings relate to research on lowering the barriers to international capita flows. Chari and Henry (2004a,b) find that equity market liberalizations reduce the cost of capital and increase investment, while Patro and Wald (2005) find that firms' stock returns increase during stock market liberalizations and that a majority of firms have lower mean returns and lower dividend yields after liberalization. Schmukler and Vesperoni (2006) find that stock market integration is associated with a decrease in long-term debt and a shortening of debt maturities for the average firm in seven emerging economies. In this paper, we do not directly study the effects of relaxing regulatory barriers to capital flows. Instead, we analyze the changes in firm performance and capital raising activity associated with security issuances in international capital markets.[3]

This paper also identifies patterns relevant for the large corporate finance literature on the motivations of issuing debt and equity. For instance, Pagano, Panetta, and Zingales (1998) analyze Italian IPOs and find capital structure rebalancing and mispricing exploitation as predominant reasons for going public. Loughran and Ritter (1995, 1997) and Baker and Wurgler (2000, 2002), among others, stress that market timing drives security issuances. On the other hand, Kim and Weisbach (2006) and DeAngelo, DeAngelo, and Stulz (2007) find that investment financing is an important motivation for equity issues. We contribute to this literature

[3] There is also considerable research on the portfolio allocation decisions of international investors. Edison and Warnock (2004) find that U.S. investors tend to purchase shares from larger firms, firms with fewer restrictions on foreign ownership, and firms that are cross-listed on U.S. exchanges. Aggarwal, Klapper, and Wysocki (2004) find that actively managed U.S. mutual funds tend to invest more in firms from countries with better legal environments and in firms that increase transparency. Ferreira and Matos (2007) analyze institutional investors' equity holdings in 27 countries and find that foreign institutions tend to invest on firms that are globally visible, either through higher foreign sales, analyst coverage, or cross-listings abroad. Didier, Schmukler, and Rigobon (2008) find that U.S. mutual funds hold only a small set of countries and companies when investing abroad. In this paper, we do not analyze the portfolio allocation decisions of U.S. or institutional investors, but rather firms' decision to issue securities abroad.

by tracing the evolution of firm characteristics, including firm capital structure, investment, and profitability, after firms issue debt and equity securities in domestic and international markets. These time-series patterns for a broad array of firms from around the world provide new evidence regarding the motivation for security issuances. As shown above, we also find that firms issue debt and equity securities in both domestic and foreign markets following internationalization, suggesting that future research needs to account for these corporate financing patterns.

To analyze the firm-level patterns associated with international capital raisings, we construct a new database. The dataset includes 168,514 equity and debt issues in domestic and international capital markets, conducted by 45,969 firms from 116 countries, and covers the period 1991-2005. We match these data with comprehensive information on firm balance sheets and income statements for 23,366 firms.

The remainder of the paper is organized as follows. Section 2 describes the data. Section 3 documents the extent of internationalization of securities markets and analyzes the characteristics of those firms that raise capital abroad. Section 4 analyzes the evolution of firm characteristics and performance following capital raisings in international markets and compares these patterns to firms that only raise capital in domestic securities markets. Section 5 examines the international and domestic capital raising activity of firms that have accessed international markets. We conclude in Section 6.

2. Data

To document patterns of international capital raisings and analyze the characteristics and performance of firms that raise capital through security issues in international capital markets,

we assemble a comprehensive dataset on firms' security issuances in capital markets around the world and match this information with balance sheet and income statement data.

Our data on firms' capital raising activity come from Security Data Corporation's (SDC) New Issues Database, which provides transaction-level information on new issues of common and preferred equity and bonds with an original maturity of more than one year, starting in the 1970s. Given that SDC does not collect data on debt issues with a maturity of less than one year, our dataset does not include commercial paper issues with such short-term maturities. Moreover, since we focus on security issues, we do not consider bank lending.

The SDC database is divided into twelve regional sub-databases covering different markets: Asian Pacific Domestic (Hong Kong, Indonesia, Malaysia, Philippines, Singapore, Taiwan, and Thailand,); Australian/New Zealand Domestic (Australia, New Zealand, and Papua New Guinea); Canadian Domestic (Canada); Continental European Domestic (Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, and Switzerland); Indian and Subcontinent (Bangladesh, India, Pakistan, and Sri Lanka); International (Eurobonds and other cross-border issues); Japanese Domestic (Japan); Korean Domestic (South Korea); Latin American Domestic (Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Panama, Peru, Uruguay, and Venezuela); United States (United States); United Kingdom Domestic (United Kingdom); and Rest of the World (countries not included in other SDC regional sub-databases, such as China). The academic version of SDC to which we have access does not include the Canadian and Korean Domestic sub-databases. Therefore, we exclude all Canadian and South Korean firms from our analysis. While data for

public issues in the U.S. start in the 1970s, coverage of other markets starts later, with most regional databases starting in 1991. Therefore, we restrict our sample to the period 1991-2005.

SDC collects data on security issuances mostly from filings with local regulatory agencies and stock exchanges. These data are augmented with data from other sources such as offering circulars, prospectus, surveys of investment banks, brokers, and other financial advisors, news sources, trade publications, and wires. Although SDC constitutes the most comprehensive databases on security issuances around the world, SDC's coverage may be less comprehensive for those regions for which it relies mostly on informal sources, instead of collecting data from filings with regulatory agencies and stock exchanges.

Since our analysis focuses on corporate capital raising activity, we exclude all public sector bond issuances, comprising debt issued by national, local, and regional governments, government agencies, regional agencies, and multilateral organizations. We also exclude security issuances by investment funds, investment companies, and real estate investment trusts (REITs), as well as mortgage-backed securities and other asset-backed securities. Moreover, since we focus on capital raising activity in public markets we exclude all private placements.[4] After these exclusions, we are left with a database covering 168,514 security issuances by 45,969 firms from 116 economies over the period 1991-2005. See Appendix Table 1 for a list of the economies included in our dataset and their regional and income level classification. Appendix Table 2 presents data on the number of observations and firms covered by region and income level.

[4] Note that excluding private placements may affect the observed regional patterns of capital raising activity, as some regions may have more active private markets than others. This may be particularly relevant for debt markets, as private bond markets in some regions are as active, or even more active, than public bond markets.

To classify security issuances as domestic or international, we consider the main exchange where the issues are listed and compare it to the issuing firm's nationality.[5] For offerings that take place in more than one market, we consider issues in each market as separate issues. In the case of subsidiaries, one could consider the nationality of the firm's parent company instead of its own nationality for classifying issues as foreign or domestic. That is, for instance, an equity issue by a British subsidiary of a U.S. firm in the London Stock Exchange would be classified as international, instead of domestic as in our classification. Which approach provides a better criterion for classifying security issues depends on the degree of integration of financing decisions between firms and their subsidiaries, among other factors. If financial decisions are highly integrated, considering firms' parent nationality may provide a more accurate classification of security issuances. On the other hand, if financing decisions are relatively decentralized, considering subsidiaries' own nationality may be a better criterion. All the results reported in the paper are obtained classifying issues as foreign or domestic based on issuers' nationality. In unreported robustness tests, we classified issues by subsidiaries based on their parents' nationality and obtained results similar to those reported throughout the paper.

To analyze the characteristics and performance of firms that raise capital through security issues in international capital markets, and compare them to firms that raise capital in domestic markets and to firms that do not raise capital, we match the data on security issuances from SDC with firm-level accounting and income statement data from Worldscope.[6] After eliminating firms

[5] SDC classifies Eurobonds as being listed on the Luxembourg exchange, although these securities are issued all over Europe and trade mostly over the counter. This implies that Eurobond issues by firms from Luxembourg are classified as domestic issues, even though they may trade in other European countries. However, the number of firms from Luxembourg carrying out bond issuances at home according to SDC is relatively low. We re-did all our analyses excluding these firms and obtained results similar to those reported below.

[6] We exclude U.S. firms from this analysis, given that Worldscope's coverage of U.S. firms is very limited. Also, note that the U.S. is one of the main markets where foreign firms raise capital. Moreover, as reported below, U.S. firms tend to raise significantly less capital in international markets than firms from other countries. Therefore, excluding U.S. firms is not likely to affect our conclusions on the characteristics and performance of firms that raise

with missing data, outliers, and firms with less than three annual observations for our variables of interest, we are left with a sample of 23,366 firms from 58 economies covering the period 1991-2005, totaling 201,543 firm-year observations.[7,8] Of these firms, 14,228 issued securities in public markets over the sample period according to SDC, while the remaining 9,138 did not raise capital in public capital markets over this period.[9]

Throughout the paper we group issues into equity and debt. Equity issues include initial public offerings (IPOs) and seasoned equity offerings (SEOs). Debt issues include convertible and non-convertible debt issues and preferred shares issues. Preferred shares have features of both equity and debt securities and therefore could be classified in either of the two categories. Given that these issues represent a relatively low percentage of capital raisings, the criterion used to classify them does not affect the observed patterns of capital raising activity. All the results reported in the paper classify preferred shares issues as debt issues. As a robustness test, we classified preferred shares issues as equity issues and obtained results similar to those reported throughout the paper.

3. Which Firms Raise Capital Abroad?

This section analyzes the extent of internationalization of capital raising activity around the world and the characteristics of those firms that issue securities in international capital markets. In particular, we address three questions. First, what is the role of international capital markets

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capital in international markets. As a robustness test, we included the small sample of U.S. firms with firm-level data available from Worldscope and obtained results similar to those reported below.

[7] Appendix Table 3 shows the number of observations and firms classified by their capital raising activity by region and income level.

[8] Firms from Japan and the U.K. represent about 22 and 12 percent of the observations in our dataset of firm-level characteristics, respectively. This reflects mostly Worldscope's data coverage. We re-did all our analyses excluding firms from both countries and reached the same conclusions reported below.

[9] The number of firms with capital raising activity in our merged dataset is lower than the number of firms included in the SDC dataset because the merged dataset excludes U.S. firms and because several firms that raise capital through security issuances according to SDC do not have accounting data available from Worldscope.

relative to domestic markets in providing firm financing and has this changed over time? Second, what fraction of domestic firms raises capital in international markets? Third, what are the characteristics of firms that raise capital abroad, compared to firms that only raise capital domestically and to firms that are listed in their domestic stock markets but do not raise capital by issuing securities over our sample period?

3.1 Patterns of Global Capital Raising Activity[10]

As a first step towards analyzing the extent of internationalization of capital markets, Figure 1 shows the evolution of the aggregate amount of capital raised by firms from developed and developing economies through security issues in public markets over the period 1991-2005, differentiating between issues at home and abroad.

Figure 1 shows that the aggregate amount of capital raised in public markets by firms from developed and developing economies increased significantly over our sample period. The total amount raised by firms from developed economies increased from 825.5 billion U.S. dollars at 2005 prices in 1991 to more than two trillion U.S. dollars in 2005. The amount of capital raised in public capital markets by firms from developing economies over this period showed significant volatility, with large decreases associated with the 1994-1995 Mexican crisis, the 1997-1998 East Asian and Russian crises, and the 2001 Argentine crisis.[11] Despite these setbacks, the total amount raised in capital markets by firms from developing economies increased more than three-fold over the sample period, from 40.9 billion U.S. dollars at 2005 prices in 1991 to 137.6 billion U.S. dollars in 2005.

[10] Henderson, Jeegadesh, and Weisbach (2004) also analyze the aggregate patterns of global capital raising activity and present descriptive evidence similar to that discussed in this section.

[11] See, among many others, Sachs, Tornell, and Velasco (1996), Chang and Velasco (1998), and Ortiz (2002) for accounts of the causes and lessons learned from these crises.

Figure 1 also shows that security issuances abroad grew faster than issuances in domestic markets over the period 1991-2005. This pattern was particularly marked in the case of developing economies, where the aggregate ratio of the amount of capital raised abroad to total capital raised increased from 25.3 percent in 1991 to 50.8 percent in 2005. In the case of developed economies, the aggregate share of capital raised abroad increased from 25.3 in 1991 to 39.4 percent in 2005. For both groups of countries, issuances in international capital markets represent a significant share of the total amount raised by firms in public markets.

Figure 2 indicates that debt markets are more internationalized than equity markets, and that developing country firms are more intensive users of international markets than firms from developed economies. Figure 2 presents data on the aggregate share of capital raised abroad for developing and developed economies for selected years, differentiating between equity and debt issues. The top panel of Figure 2 shows that equity issues by developing country firms are far more internationalized than those of firms from developed economies. Also, the degree of internationalization of equity issues for developing economies has increased over our sample period. The amount raised through equity issues outside firms' home country represented 15 percent of the total amount raised through equity issues by developing country firms in 1995, and this ratio increased to 59.4 percent in 2005. In the case of developed economies, the share of equity issues abroad has remained relatively stable over this period, standing at 9 percent in 1995 and 8.6 percent in 2005.

The bottom panel of Figure 2 shows that debt issues are highly internationalized in both developed and developing economies. For both groups of countries the amount raised through corporate debt offerings abroad represented almost half of the total amount raised through

corporate debt issues in 2005, reaching 46.1 percent in the case of developed economies and 43.5 percent for developing economies.

Table 1 further stresses the importance of international securities markets for capital raisings and the comparatively high degree of internationalization of debt markets relative to equity markets, while also showing that debt markets are a much larger source of corporate finance than equity markets around the world. Table 1 provides information on the aggregate amounts raised through security issuances in domestic and international markets over the period 1991-2005 for different regions, differentiating between equity and debt issues. Three main features of the aggregate patterns of capital raisings are visible from the data.

First, debt issues in public markets are a more important source of capital for firms than equity issues at the aggregate level during our sample period. Firms raised 19.8 trillion U.S. dollars at 2005 prices between 1991 and 2005 through debt issues in public markets, which represents 80 percent of the total amount raised through security issues over this period.[12]

Second, consistent with the patterns shown in Figure 1, international markets account for a large share of capital raising activity, both for developing and developed economies. Firms from developed economies raised about 7 trillion U.S. dollars at 2005 prices in international capital markets over our sample period, which represents 29.7 percent of the total amount they raised in public markets. In case of developing country firms, capital raised outside their home countries between 1991 and 2005 totaled 459.5 billion U.S. dollars at 2005 prices, representing 37.9 percent of the total amount raised through security issuances during this period.

[12] The value of debt issues is not directly comparable to that of equity issues, since equity issues have no maturity, while debt issues must be repaid. Part of the proceeds from debt issues are typically used to repay maturing debt and therefore only a fraction of debt issues can be considered new capital. Henderson, Jegadeesh, and Weisbach (2006) try to adjust the data on debt issues to take this fact into account and conclude that even with these adjustments debt issues constitute a larger source of new capital than equity issues at the aggregate level.

Finally, as highlighted by Figure 2, debt markets are more internationalized than equity markets. In the case of developed countries, the total amount raised through equity issues abroad represents 7.8 percent of the total amount raised through equity issues over our sample period. This statistic is over four times higher in the case of debt offerings, reaching 34.7 percent. For developing country firms, the share of equity issues abroad over the 1991-2005 period reached 27.8 percent, compared to 47.3 percent in the case of debt issuances. Moreover, the higher degree of debt market internationalization, compared to equity markets, is a consistent pattern across all regions shown in Table 1.[13, 14]

3.2 Firms' Access to International Markets

Although the aggregate patterns documented in Section 3.1 show that equity and debt markets are highly internationalized and that the amount of capital raised in international markets has grown significantly over the last 15 years, these observations do not provide information on developments at the firm level. To address this issue, this section provides information about firms' access to international capital markets.

The results presented in Table 2 show that the proportion of firms that raise capital abroad is relatively low, suggesting that internationalization is restricted to a small set of firms. Table 2 provides information on the total number of firms that issued securities in domestic and international markets over the period 1991-2005 for different regions, differentiating between

[13] Out of 99 economies for which we have data on bond issuances, only in nine (mostly Latin American countries) the internationalization of equity markets is higher than the internationalization of debt markets.

[14] One could argue that we may observe a higher share of international debt issues in the aggregate data not due to underlying differences between equity and debt issuances, but rather because those firms that tend to access international markets are also more likely to issue debt securities, both at home and abroad. However, when analyzing only those firms that raise capital outside their home countries we find that the share of capital raised abroad is on average higher for debt than for equity issues. This suggests that debt issuances abroad may be less costly or more beneficial for firms than equity issues in international markets.

equity and debt issues. Out of a total of 45,969 firms raising capital in public markets between 1991 and 2005, only 6,661 (14.5 percent) issued securities outside their home market.

Differentiating by type of security issuance, Table 2 shows that a small percentage of those firms that issue equity tend to do so in international markets. Only 5.2 percent of the firms from developed economies that raised capital through equity issues did so through offerings outside their home markets. In the case of developing countries, this statistic reaches 6.3 percent. This suggests that only a relatively small set of firms may be able to meet the requirements to access equity markets outside their home country. This is consistent with the results from Claessens and Schmukler (2007), who show that the firms that cross-list and raise equity capital abroad represent a relatively low share of the total number of firms listed in local stock exchanges in most countries. Moreover, the percentage of firms raising equity abroad is lower than the share of equity capital raised in international markets reported in Table 1, suggesting that equity issues in these markets are larger than those in domestic markets.

The percentage of firms raising capital abroad through debt issues is much higher than for equity issues. In the case of developed economies, the percentage of firms that issued debt securities abroad over our sample period stands at 36.3 percent, which is similar to the share of capital raised through debt issues in international markets for these countries presented in Table 1 (34.7). In contrast, in the case of developing countries, the share of firms issuing debt abroad (26.6 percent) is much lower than the share of debt capital raised abroad shown in Table 1 (47.3), suggesting again that bond issues abroad tend to be larger than domestic bond issues.

Although Table 2 shows that the share of firms that raise capital abroad is relatively low, it does not provide information on how capital raising activity in international markets is distributed among those firms that issue securities abroad. To address this issue, Figure 3 shows

the distribution of the total amount raised abroad between 1991 and 2005 among those firms that access international capital markets at some point during this period for developed and developing economies.

Figure 3 shows that capital raising activity in international markets is highly concentrated. For developed economies, the top 10 (20) percent of firms in terms of capital raising activity abroad accounted for 69.4 (82.7) percent of the total capital raised abroad by developed country firms over our sample period. A similar pattern is visible in the case of developing economies, with the top 10 (20) percent of firms accounting for 53.9 (69.5) of the total amount raised abroad by developing country firms over the 1991-2005 period.

In sum, the data presented in Table 2 and Figure 3 indicate that (1) few firms access international markets, and (2) of those few firms that raise capital abroad, a very small fraction accounts for most of the cross-border capital raising activity. These results suggest that a better understanding of the characteristics of those firms that issue securities in international capital markets and how they may differ from firms that only raise capital at home may provide useful insights regarding the internationalization process. We now turn to this question.

3.3 Characteristics of Firms That Raise Capital Abroad vs. Those That Do Not

This section analyzes the characteristics of firms that raise capital through security issues in international capital markets, comparing them to firms that only raise capital in domestic markets and to firms that are listed in their domestic stock markets but do not raise capital over our sample period. We analyze a broad set of firm-level characteristics, including measures of size, growth, investment, profitability, capital structure, international sales, and valuation.

Table 3 presents the medians of several firm-level variables for different groups of firms classified according to their capital raising activity. Similar patterns are visible for most firm

characteristics if we compare means across the different groups of firms instead of medians. Appendix Table 4 presents the definition of the different variables used in the analysis.

Two patterns emerge. First, firms that raise capital abroad are very different from those that are listed in local stock markets but do not issue securities in either domestic or foreign markets over the 1991-2005 period.[15] For all of the accounting variables presented in Table 3, the differences in medians among firms that raise capital abroad and non-capital raising firms are significant at the 1 percent level. In particular, firms that raise capital abroad tend to be larger, grow at a faster pace, and have higher capital expenditures and R&D investments, both in absolute terms and as a percentage of sales. In terms of profitability, firms that issue securities in international markets tend to have lower returns on assets, but higher returns on equity. Firms that raise capital abroad also differ from non-capital raising firms in terms of their capital structure. They have higher levels of indebtedness and their debt tends to have longer maturity (a lower ratio of short-term debt to total debt). Also, firms that raise capital abroad tend to conduct a higher percentage of their business activities (sales) abroad and have higher valuations (as measured by Tobin's q).

Second, Table 3 indicates that there are significant differences between firms that raise capital at home and abroad. Firms that raise capital abroad are significantly larger than firms that only raise capital at home, with the difference in median assets between both sets of firms reaching 1.4 billion U.S. dollars. Firms that raise capital abroad also tend to grow slower than firms that only raise capital in domestic markets. In terms of their investment, firms that raise capital in international markets show higher capital expenditures and R&D investments, both in absolute terms and as a percentage of sales. Firms that raise capital abroad also show higher

[15] Similar differences are visible between firms that only raise capital at home and firms that do not raise capital during our sample period. In unreported robustness tests, we found that all the differences between these two groups of firms observable in Table 3 are significant at the one percent level.

levels of indebtedness and exhibit longer debt maturities. In terms of valuation, firms that raise capital outside their home countries have lower Tobin's q than firms that only raise capital at home. Finally, firms that raise capital abroad conduct a larger percentage of their business outside their home country, as measured by the ratio of foreign sales to total sales.[16]

4. What Happens to Firms after Raising Capital Abroad?

This section analyzes the evolution of the characteristics and performance of firms that raise capital through debt and equity issuances. First, we compare the characteristics of firms that raise capital abroad relative to firms that only raise capital in domestic markets, making these comparisons before and after firms first access international markets. Second, we provide a detailed dynamic analysis. We trace the performance of firms over time after capital raisings, differentiating between equity and debt issues and capital raisings at home and abroad. These analyses allow us to better understand how raising capital abroad affects firms and whether these effects differ from those of domestic capital raisings.

These analyses also allow us to enhance the findings in Table 3, which show that there are significant differences between firms that raise capital abroad and firms that only raise capital at home. By tracing firms through time, we are able to test whether firms differ before they raise capital abroad or whether the cross-firm differences we observe in Table 3 materialize after internationalization.

4.1 Changes in Firm-Level Variables after Raising Capital Abroad

Tables 4 and 5 present regressions of the firm-level characteristics analyzed in Table 3 on dummies that identify firms' activity in international capital markets for SEOs and debt issues,

[16] Similar results are obtained if we use the ratio of foreign assets to total assets as a measure of international activity.

respectively. These regressions include both those firms that conduct the specific type of capital raising under analysis in each case and a control group. In the case of SEOs abroad, the control group includes those firms that conducted SEOs in their home markets. Similarly, in the case of debt issues abroad, the control group includes those firms that issued debt securities at home.[17] These regressions include country and year dummies and two dummy variables that identify firm's capital raising activity in international markets. The first one is a dummy variable that captures the period after capital raisings abroad, which equals one on the year of the capital raising abroad and in all subsequent years. This dummy variable equals zero for the comparison group and before firms raise capital in international markets. This variable captures differences between firms that raise capital abroad and the control group after capital raisings outside firms' home country. The second dummy variable included in these regressions captures the period before issuing securities abroad. It equals one before firms raise capital in international markets and zero afterwards. It is zero for those firms in the control group. This dummy captures differences among firms that raise capital abroad and firms in the control group that existed before accessing international markets.

The results in Tables 4 and 5 indicate that most of the differences between firms that raise capital abroad and those that issue securities domestically exist before these firms access international securities markets. In particular, both firms that conduct SEOs and debt issuances abroad are larger and have higher capital expenditures and R&D investments (both in absolute terms and as a percentage of sales) than firms that only raise capital at home before actually going abroad. Also, these international firms have higher profitability and conduct a larger share

[17] Similar results are obtained if we use as a control group firms that conducted any type of capital raising at home or if we use as control group both firms that raised capital at home and firms that were listed in their domestic stock markets but did not raise capital over our sample period.

of their business outside their home country than firms that only raise capital in local markets before accessing international markets.

The results in Tables 4 and 5 also show that capital raisings in international markets are related to significant changes in firm-level characteristics. For example, firms that conduct SEOs abroad tend to have higher growth and higher Tobin's q before (but not after) going abroad than firms that only conduct SEOs at home. Firms that issue debt in international markets tend to have higher growth, a higher share of short-term debt, and higher Tobin's q before (but not after) going abroad than firms that issue debt in local markets. That is, while firms that raise capital abroad tend to grow faster, have greater capital expenditures as a percentage of sales, and have higher profitability and valuations than domestic firms before going abroad, these differences become smaller (or even disappear) following capital raisings in international securities markets.

Moreover, we find no support for the view that the decision to raise capital abroad in the future induces a firm to change before it actually internationalizes and that this behavior drives the patterns we observe. For instance, the perspective of issuing securities abroad may allow firms to raise more capital domestically and expand. Therefore, the finding that international firms are larger than domestic firms before going abroad could be explained by the decision to internationalize, and not be a pre-existing difference across firms. To address this concern, in unreported robustness tests we estimated the regressions in Tables 4 and 5 using different dummies for each year before and after capital raisings in international markets. These robustness tests indicate that the observed differences between firms that raise capital abroad and at home generally existed three or more years before these firms actually issued securities in international markets, suggesting that the results in Tables 4 and 5 are largely capturing pre-existing differences across firms.

4.2 Time Patterns of Firm-Level Variables Following Capital Raising Activity

An important and yet incompletely answered question regarding the process of internationalization is why firms decide to issue securities in international capital markets instead of raising capital in their domestic markets. In particular, do capital raisings abroad have different effects than domestic capital raisings? In this section, we present some descriptive evidence in this regard, by comparing the evolution of firm characteristics following capital raisings at home and abroad. Note, however, that we do not attempt to deal formally with identifying the exogenous effects of international capital raisings on firm performance. Therefore, the patterns presented in this section are a first step towards addressing this question.

Tables 6 and 7 analyze the time-series patterns of firm-level variables following SEOs and debts issuances, respectively. Specifically, these tables present regressions of firm characteristics on a series of dummy variables that trace out annual patterns after capital raisings. The variable "SEO at home year dummy," for instance, equals one on the year that a firm conducts a SEO in its domestic market, and zero otherwise. Similarly the "More than three years after SEO at home dummy" equals one more than three years after a firm conducts a SEO at home, and zero afterwards. We construct corresponding dummy variables for the years following each type of capital raising. The sample in these regressions includes only the firms that conduct the specific capital raising under analysis in each case. These regressions include year dummies and firm-level fixed effects. By using firm-level fixed effects, we compare each firm to itself before raising capital.

The regression results in Tables 6 and 7 indicate that the time-series patterns of firm-level variables are broadly similar for issues at home and abroad. In the case of SEOs, Table 6 shows that firms expand following both SEOs at home and abroad. Also, firms tend to experience a long-term decrease in growth and profitability following SEOs. Loughran and Ritter (1997) also

find evidence of a decrease in profitability following domestic SEOs by U.S. firms. They interpret this evidence as consistent with market timing arguments that emphasize that firms raise capital after periods of high performance, which may make their securities more attractive to investors. The observed decrease in profitability could also be the result of earnings management, as insiders may have incentives to window-dress company accounts before raising capital (Teoh, Welch, and Wong, 1998 and Rangan, 1998).[18] In terms of investment, although the absolute size of capital expenditures and R&D investments increases, when scaling expenditures by sales and assets the results show that investment does not increase permanently (and even tends to decrease) following SEOs both at home and abroad. The results also indicate that firm valuation, as measured by Tobin's q, decreases permanently following SEOs.

In the case of debt issuances, Table 7 shows that the time patterns of firm-level variables are broadly similar for issues at home and abroad. Firms tend to expand following debt issues and experience a long-term decrease in profitability and growth. Debt issues, both at home and abroad, are associated with temporary increases in investments. Also, debt issues are associated with increases in indebtedness levels, improvements in debt maturity profiles, and decreases in Tobin's q. As mentioned above, the finding that the changes in firm performance that follow equity and debt issuances in international markets are broadly similar to those that follow equity and debt issuances at home suggests that issues in international markets are not intrinsically different from issues in the domestic market.

Furthermore, the patterns presented in Tables 6 and 7 are not affected by other capital raisings coinciding with the timing of the specific issuances analyzed in the tables. For instance,

[18] Inflated expectations by investors and earnings management that leads investors to overestimate the earnings potential of issuing firms are not the only possible reason for poor post-issue operating performance. Jensen and Meckling (1976) argue that the interests of managers and other stockholders become less closely aligned as managers' stakes decline and ownership becomes more disperse. These increased agency problems may result in worse post-issue performance.

if following capital raisings abroad firms also issue securities at home, then the observed patterns of firm performance may be partially reflecting the effects of these subsequent domestic capital raisings. To address this concern, we re-estimated all the regressions from Tables 6 and 7 including only capital raisings that took place without other concurrent security issuances. Specifically, we considered only those capital raisings in which firms did not carry out other security issuances in a five-year window around the capital raising under analysis. The results obtained using this reduced sample of capital raisings are qualitatively similar to those reported in Tables 6 and 7: Firms tend to expand and experience a decrease in growth and profitability following capital raisings. Moreover, the time-series patterns of firm-level variables are broadly similar for issues at home and abroad.

5. The Capital Raising Activity of Firms That Raise Capital Abroad

This section addresses three broad questions about internationalization: Are issues in international markets different from domestic issues in terms of their size? How do firms that raise capital abroad distribute their capital raising activity among domestic and international markets? After firms raise capital abroad, does their use of domestic capital markets change and if so, how?

5.1 Size Differences between Issues at Home and Abroad

Although the aggregate evidence presented in Tables 1 and 2 suggests that issues in international markets are larger than domestic issues, we now provide more direct evidence in this regard by analyzing the distribution of the amount raised per issue for issues at home and abroad and comparing median issue sizes across markets. Figure 4 shows the cumulative

distribution of the amount raised per issue by firms from developed and developing economies, differentiating between issues at home and abroad.

Figure 4 illustrates that issues at home tend to be smaller than issues abroad. In the case of developed country firms, for instance, while 63 percent of issues at home during our sample period raised 100 million U.S. dollars at 2005 prices or less, only 39.6 percent of issues abroad were below this size threshold. In the case of firms from developing economies, more than 91 percent of issues at home during our sample period raised 100 million U.S. dollars at 2005 prices or less. In the case of issues abroad, only 49.5 percent of issues by developing country firms were below this size threshold. To analyze the size differences among issues abroad and at home in more detail, Table 8 compares the median proceeds of issues in domestic and international markets for firms from developed and developing economies, differentiating between equity and debt issues. Similar results are obtained when analyzing differences across means instead of medians.

Table 8 shows that when analyzing all issues, issues abroad tend to be significantly larger than issues at home, consistent with the results displayed in Figure 4. In the case of developed economies, the median proceeds from equity issues at home over the 1991-2005 period were 26.9 million U.S. dollars at 2005 prices, compared to 54.3 million for equity issues abroad. In the case of debt, the median amount raised per debt issue at home was 85.1 million U.S. dollars at 2005 prices, while the same statistic reached 138 million in the case of debt issues abroad. In both cases, the differences among issues at home and abroad are statistically significant at the 1 percent level, according to the Mann-Whitney U-test.

Even larger differences between issues at home and abroad are visible in the case of developing economies. The median amount raised per equity issue abroad by developing country

firms over our sample period was more than 16 times higher than the median amount raised per equity issue at home (62 and 3.8 million U.S. dollars at 2005 prices, respectively).[19] Similar differences across markets are visible in the case of debt issues by developing country firms. In both cases, the differences among issues at home and abroad are statistically significant at the 1 percent level.

The bigger size of capital raisings in international markets could be explained by the fact that firms that raise capital abroad are much larger than firms that only raise capital at home, as shown in Table 3. Therefore, the size difference between issues at home and abroad may be just capturing differences in firm size and not any relevant difference among cross-border and domestic issues.

To address this issue, Table 8 shows the median amount raised per issue in domestic and international markets, restricting the sample only to issues by firms that raise capital both at home and abroad at some point during our sample period.[20] The results from Table 8 show that in the case of developed economies, the median amount raised per equity issue at home over the 1991-2005 period by firms that raise capital both at home and abroad was 126.5 million U.S. dollars at 2005 prices, compared to 116.2 million for equity issues abroad, although the difference is not statistically significant. In the case of debt issues, the median amount raised per issue at home by these firms was 105.9 million U.S. dollars at 2005 prices, while the same

[19] Although part of the size difference between equity issues abroad and at home can be explained by the fact that the latter include a larger share of IPOs (which tend to be smaller than SEOs), there are large differences in issue sizes across markets even if we compare SEOs and IPOs separately. For developing country firms, IPOs at home over our sample period have a median size of 1.8 million U.S. dollars at 2005 prices, compared to 61.5 million for IPOs abroad. In the case of SEOs differences are smaller but still quite large and statistically significant at the one percent level, with the median size of SEOs in domestic securities markets by developing country firms reaching 16.3 million U.S. dollars at 2005 prices, compared to 62.6 million for SEOs in international markets.

[20] In the results reported in Table 8, issues at home by firms that raise capital both at home and abroad include issues carried out by these firms before their first capital raising abroad. There could be some concerns that these issues may not be directly comparable to issues abroad by these firms, as firms may expand and experience other relevant changes after accessing international markets that might affect the size of their security issues, both at home and abroad. As a robustness test, we restricted the sample of domestic issues by these firms only to issues carried out after their first capital raising in international markets and obtained similar results to those reported in Table 8.

statistic reached 155.8 million in the case of debt issues abroad, with the difference being statistically significant at the 1 percent level. In the case of developing economies, Table 8 shows that both equity and debt issues abroad are larger than issues at home when analyzing only issues by firms that raise capital both at home and abroad.

In sum, the results indicate that even if we restrict the sample to issues by firms that raise capital both at home and abroad, issues abroad tend to be larger than domestic issues in most cases. This is consistent with the idea that firms tend to raise larger amounts when issuing securities in international markets. The differences are smaller, however, when disaggregating the data and examining firms that issue securities in both markets.[21]

5.2 Where Do Firms Raise Capital after Internationalizing?

This section analyzes how firms divide their capital raisings between domestic and international markets after their first capital raising abroad. Table 9 shows the average across firms of the ratio of capital raised at home to total capital raised in public markets for each year following firms' first capital raising abroad, differentiating between equity and debt issues.

The Table 9 results indicate that while firms raise most of their capital abroad in the year when they first access international markets, the share of capital raised at home subsequently increases, remaining quite high in the long run. In the case of firms from developed economies, the results show that in the year when they first raise capital abroad, on average firms raise only

[21] We also conducted other robustness tests to analyze whether issues abroad are larger than issues at home when comparing issues by the same firm. In particular, for each firm that raised capital both at home and abroad at some point during our sample period we computed the average size of issues at home and abroad and then calculated the difference in average sizes across markets for each firm. We also calculated for each firm that raised capital both at home and abroad the difference in proceeds between issues in domestic and international markets conducted in the same year and averaged these differences at the firm level. We then tested whether the median and mean across firms of these two measures of differences in issue size between markets are different from zero and, in most cases (with the exception of equity issues by developed country firms), concluded that issues abroad tend to be larger than domestic issues, consistent with the idea that firms raise larger amounts when issuing securities in international markets.

18 and 8 percent of their equity and debt capital in domestic markets, respectively. However, the share of capital raised at home increases significantly in subsequent years. In the case of equity issues, firms conduct most of their subsequent capital raisings at home, with domestic issues accounting on average for 87 percent of total amount raised through equity issuances more than three years after firms first access international markets. In the case of debt issues, firms that internationalize tend to conduct most of their issuances in international markets, but domestic markets remain significant, accounting on average for 40 percent of the total amount raised by these firms through debt issues more than three years after internationalizing. Similar patterns are visible in the case of developing economies. Firms from developing economies that access international markets tend to raise most of their capital at home in the long run, with average ratio of capital raised at home to total capital raised in public markets reaching 60 (63) percent for equity (debt) issues more than three years after firms first raise capital abroad.

The results from Table 9 indicate that firms that access international capital markets remain active in domestic markets, conducting a significant share of their capital raisings in domestic markets. This suggests that these firms are not just opting out of domestic markets, but rather that they are choosing to use both domestic and international markets. This is consistent with the idea that these markets may provide different services and firms will access one or the other depending on their particular financing needs.

5.3 Changes in Capital Raising Activity in Domestic Markets after Raising Capital Abroad

Having shown that firms continue using domestic capital markets quite actively after they access international markets, we now test whether firms change their use of domestic markets after raising capital abroad. Table 10 compares the average amount raised per year by firms that

raise capital abroad before and after these firms first access international markets, differentiating between equity and debt issues.

Table 10 shows that there is an increase in the amount of capital raised in domestic markets per year after a firm first raises capital abroad. In the case of developed economies, the amount raised at home per year through equity issues by these firms averages 7.7 million U.S. dollars at 2005 prices before raising capital abroad and increases to 20.5 million afterwards. A similar pattern is visible for debt issues, with the average amount raised per year by firms that issue securities abroad increasing from 36.8 million U.S. dollars at 2005 prices to 129.8 million following internationalization. In both cases the differences are significant at the 1 percent level.

Similar results are obtained in the case of firms from developing economies. For equity issues, the average amount raised per year by firms that raise capital abroad increases from 3.2 million U.S. dollars at 2005 prices to 5.6 million following internationalization. Similarly, the average amount raised at home per year through debt issuances by these firms increases more than four-fold after firms' first capital raising abroad, from 1.6 million U.S. dollars at 2005 prices to 6.9 million.

While these results indicate that firms tend to raise more capital in their domestic markets after accessing international markets, this does not necessarily imply that firms increase their relative participation in domestic capital raising activity after they internationalize. In other words, do firms capture a larger share of total domestic market activity following security issuances in international markets?

The results from Table 10 show that firms are indeed capturing a larger percentage of total domestic market capital raising activity following their first capital raising abroad. In the case of developed economies, firms that raise capital abroad raise on average 0.1 percent of the total

capital raised in their domestic markets per year before internationalization and this share increases to 0.3 percent afterwards. A similar pattern is visible in the case of developing economies, with the average share of domestic market activity accounted by each firm that raises capital in international markets increasing from 0.3 percent to 0.5 percent following the first capital raising abroad.

The observed increases in the absolute and relative participation of international firms in domestic markets following their first capital raising abroad coincide with an increase in firm size. As discussed above, firms tend to expand following capital raisings in international markets. The results in Table 10 suggest that the corresponding expansion in financing needs is at least partially satisfied by domestic markets. Once we scale the amount raised at home by the firm's assets, we do not find evidence of a significant change in firms' capital raisings at home.

6. Conclusions

In this paper, we characterize patterns of equity and debt issuance activities in domestic and international capital markets, and also document the dynamics of firm performance following these distinct corporate financing activities. To do so, we compile a new database on worldwide capital raisings that allows us to compare firms that issue securities abroad with firms that issue securities domestically. We also compare these capital raising firms with corporations that are listed in the local stock markets but do not issue new securities over our sample period. This provides new firm-level information about the patterns of international capital raisings.

Several findings relate to existing theories of international finance and motive future research. First, debt markets dwarf equity markets both in terms of how corporations raise capital and in terms of the internationalization of securities markets. Over the period 1991-2005,

corporations raised almost five times more money through bond sales relative to equity issues. Moreover, bonds markets are more internationalized. About 35 percent of all debt issues occur in markets other than the firm's home market, while the corresponding figure for equity issues is 10 percent. Since most empirical studies of financial globalization ignore debt markets and since major theories, such as market segmentation, bonding, and market timing, focus on the cross-listing of equities and the integration of equity markets, our findings (1) suggest that financial markets are more internationalized than suggested by only considering equity markets and (2) advertise the need for additional work on the internationalization of debt markets.

Second, while firms grow and invest more after raising debt or equity abroad, (1) they do not become more profitable or experience an increase in Tobin's q, and (2) these changes in firm performance are qualitatively similar to the changes that firms experience when they issue debt or equity domestically. These findings first suggest firms get bigger, but not necessarily "better" following internationalization. Moreover, capital raisings abroad are not intrinsically different from capital raisings at home. While capital raisings abroad are bigger, the changes in firm performance following debt and equity issuance in international markets are broadly similar to those in domestic markets. These findings are difficult to reconcile with arguments that firms access international markets to bond themselves to a better corporate governance system, because internationalization does not spark enduring improvements in corporate performance that differ from the dynamic patterns ignited by domestic issuances. This is consistent with the findings in Gozzi, Levine, and Schmukler (2008).

Third, firms continue to use domestic debt and equity markets after they raise capital abroad and indeed significantly expand their use of domestic securities markets. Thus, after firms internationalize, they issue debt and equity securities in both the domestic and foreign markets,

using foreign markets for relatively large issuances. These observations are difficult to reconcile with the view that international markets provide less expensive capital, but there are high fixed costs associated with initially accessing these markets. Furthermore, these patterns complicate the study of corporate finance since firms participate in multiple debt and equity markets simultaneously, which is not the focus of research on the determinants of corporate financing choices. Along these lines, future research may assess differences in the costs of raising capital through different instruments in different markets as Ljungqvist, Jenkinson, and Wilhem (2003) and Torstila (2001, 2003) have done for IPOs around the world.

Finally, very few firms use international markets, and of the few that access international debt or equity markets, a very small number raises most of the capital garnered through the sale of securities in international markets. As emphasized by Levine and Schmukler (2006, 2007), this suggests that financial internationalization could have cross-firm distributional effects that affect the firms that rely solely on local markets. Firms that access international markets both grow relative to other corporations in the local market and raise a higher percentage of the total capital raised in domestic markets. Future research could assess whether these changes affect the ability of smaller firms to obtain financing for growth.

References

Alexander, G. J., C. S. Eun, and S. Janakiramanan, 1987. Asset Pricing and Dual Listing on Foreign Capital Markets: A Note. *Journal of Finance* 42, pp. 151–158.

Aggarwal, R., L. Klapper, and P. D. Wysocki, 2005. Portfolio Preferences of Foreign Institutional Investors. *Journal of Banking and Finance* 29, pp. 2919-2946.

Baker, M., and J. Wurgler, 2000. The Equity Share in New Issues and Aggregate Stock Returns. *Journal of Finance* 55, pp. 2219-2257.

Baker, M., and J. Wurgler, 2002. Market Timing and Capital Structure. *Journal of Finance* 57, pp. 1-32.

Bernard, A., J. B. Jensen, S. Redding, and P. Schott, 2007. Firms in International Trade. *Journal of Economic Perspectives* 21, pp. 105-130.

Black, F., 1974. International Capital Market Equilibrium with Investment Barriers. *Journal of Financial Economics* 1, pp. 337–352.

Chang, R., and A. Velasco, 1998. Financial Crises in Emerging Markets. NBER Working Paper No. 6606.

Chari, A. and P. B. Henry, 2004a. Is the Invisible Hand Discerning or Indiscriminate? Investment and Stock Prices in the Aftermath of Capital Account Liberalizations. NBER Working Paper No. 10318.

Chari, A. and P. B. Henry, 2004b. Risk Sharing and Asset Prices: Evidence from a Natural Experiment. *The Journal of Finance* 59, pp. 1295–1324.

Claessens, S. and S. L. Schmukler, 2007. International Financial Integration through Equity Markets: Which Firms from Which Countries Go Global? *Journal of International Money and Finance* 26, pp. 788-813.

Coffee, J. C. Jr, 2002. Racing Towards the Top? The Impact of Cross-Listings and Stock Market Competition on International Corporate Governance. *Columbia Law Review* 102, pp. 1757-1831.

DeAngelo, H., L. DeAngelo, and R. M. Stulz, 2007. Fundamentals, Market Timing, and Seasoned Equity Offerings. NBER Working Paper No. 13285.

Didier, T., R. Rigobon, and S. Schmukler, 2008. Unexploited Gains from International Diversification? Mimeo MIT.

Doidge, C., G. A. Karolyi, and R. M. Stulz, 2004. Why Are Firms That List in the U.S. Worth More? *Journal of Financial Economics* 71, pp. 205–238.

Domowitz, I., J. Glen, and A. Madhavan, 1998. International Cross-Listing and Order Flow Migration: Evidence from an Emerging Market. *Journal of Finance* 53, pp. 2001-2027.

Edison, H., and F. Warnock, 2004. U.S. Investors' Emerging Market Equity Portfolios: A Security-Level Analysis. *Review of Economics and Statistics* 86, pp. 691-708.

Errunza, V. and E. Losq, 1985. International Asset Pricing under Mild Segmentation: Theory and Test. *Journal of Finance* 40, pp. 105–124.

Errunza, V. and D. P. Miller, 2000. Market Segmentation and the Cost of Capital in International Equity Markets. *Journal of Financial and Quantitative Analysis* 35, pp. 577–600.

Ferreira, M. A., and P. Matos, 2007. The Colors of Investors' Money: The Role of Institutional Investors Around the World. *Journal of Financial Economics*, forthcoming.

Foerster, S. R. and G. A. Karolyi, 1999. The Effects of Market Segmentation and Investor Recognition on Asset Prices: Evidence from Foreign Stocks Listing in the United States. *Journal of Finance* 54, pp. 981–1013.

Forbes, K., 2006. The Microeconomic Evidence on Capital Controls: No Free Lunch in Capital Controls and Capital Flows. In Emerging Economies: Policies, Practices, and Consequences, Sebastian Edwards (ed.), University of Chicago Press.

Gozzi, J.C., R. Levine, and S. L. Schmukler, 2008. Internationalization and the Evolution of Corporate Valuation. *Journal of Financial Economics*, forthcoming.

Henderson, B. J., N. Jegadeesh, and M. S. Weisbach, 2006. World Markets for Raising New Capital. *Journal of Financial Economics* 82, pp. 63–101.

Henry, P. B., 2007. Capital Account Liberalization: Theory, Evidence, and Speculation. *Journal of Economic Literature 45*, pp. 887-935.

Jensen, M. C., and W. H. Meckling, 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics* 3, pp. 305-360

Kim, W. and M.S. Weisbach, 2006. Motivations for Public Equity Offers: An International Perspective. *Journal of Financial Economics*, forthcoming.

Kose, M. A., E. Prasad, K. Rogoff, and S. J. Wei, 2006. Financial Globalization: A Reappraisal. NBER Working Paper No. 12484

Lang, M., V. Lins, and D. Miller, 2003. ADRs, Analysts, and Accuracy. Does Cross Listing in the United States Improve a Firm's Information Environment and Increase Market Value? *Journal of Accounting Research* 41, pp. 317-345.

Lang, M., J. S. Raedy, and M. H. Yetman, 2003. How Representative Are Firms That Are Cross-Listed in the United States? An Analysis of Accounting Quality. *Journal of Accounting Research* 41, pp. 363-386.

Levine, R. and S. Schmukler, 2006. Internationalization and Stock Market Liquidity. *Review of Finance-Journal of the European Finance Association* 10:1, pp. 153-187, March.

Levine, R. and S. Schmukler, 2007. Migration, Liquidity Spillovers, and Trade Diversion: The Effects of Internationalization on Stock Market Activity. *Journal of Banking and Finance* 31:6, pp. 1595-1612.

Ljungqvist, A. P., T. Jenkinson, and W. J. Wilhelm, Jr., 2003. Global Integration in Primary Equity Markets: The Role of U.S. Banks and U.S. Investors. *Review of Financial Studies* 16, pp. 63-99.

Loughran, T. and J.R. Ritter, 1995. The New Issues Puzzle. *Journal of Finance* 50, pp. 23-51.

Loughran, T. and J.R. Ritter, 1997. The Operating Performance of Firms Conducting Seasoned Equity Offerings, *The Journal of Finance* 52, pp. 1823-1850.

Miller, D., 1999. The Market Reaction to International Cross-Listings: Evidence from Depository Receipts. *Journal of Financial Economics* 51, pp. 103-123.

Obstfeld, M., and A. M. Taylor, 2004. Global Capital Markets: Integration, Crises, and Growth. Cambridge University Press.

Ortiz, G. 2002. Recent Emerging Market Crises: What Have We Learned? Per Jacobson Lecture, Basle, Switzerland.

Pagano, M., F. Panetta, and L. Zingales, 1998. Why Do Companies Go Abroad? An Empirical Analysis. *Journal of Finance* 53, pp. 27-64.

Pagano, M., A. Roëll, and J. Zechner, 2002. The Geography of Equity Listing: Why Do Companies List Abroad? *Journal of Finance* 57, pp. 2651–2694.

Patro, D., and J. Wald, 2005. Firm Characteristics and the Impact of Emerging Market Liberalizations. *Journal of Banking and Finance* 29, pp. 1671-1695.

Rangan, S., 1998. Earnings Management and the Performance of Seasoned Equity Offerings. *Journal of Financial Economics* 50, pp. 101-122.

Reese, W. A. Jr. and M. S. Weisbach, 2002. Protection of Minority Shareholder Interests, Cross-listings in the United States, and Subsequent Equity Offerings. *Journal of Financial Economics* 66, pp. 65–104.

Sachs, J. D., A. Tornell, and A. Velasco. 1996. Financial Crises in Emerging Markets: The Lessons from 1995. *Brookings Papers on Economic Activity*, No. 1, pp. 147–198.

Schmukler, S. L., and E. Vesperoni, 2006. Financial Globalization and Debt Maturity in Emerging Economies. *Journal of Development Economics* 79, pp. 183-207.

Solnik, B. H., 1974. Why Not Diversify Internationally Rather than Domestically? *Financial Analysts Journal* 30, pp. 48-54.

Stapleton, R., and M. Subrahmanyam, 1977. Market Imperfections, Capital Market Equilibrium, and Corporate Finance. *Journal of Finance* 32, pp. 307-319

Stulz, R., 1999. Globalization, Corporate Finance, and the Cost of Capital. *Journal of Applied Corporate Finance* 12, pp. 8–25.

Teoh, S. H., I. Welch, and T. J. Wong, 1998. Earnings Management and the Long-Run Market Performance of Initial Public Offerings. *Journal of Finance* 53, pp. 1935-1974.

Torstila, S., 2001. What Determines IPO Gross Spreads in Europe? *European Financial Management* 7, pp. 523-541.

Torstila, S., 2003. The Clustering of IPO Gross Spreads: International Evidence. *Journal of Financial and Quantitative Analysis* 38, pp. 673-694.

Table 1

Amount of Capital Raised in Public Markets by Issuer Country/Region and Type of Issue

(Million U.S. dollars at 2005 Prices)

This table shows the aggregate amount of capital raised by firms from each country/region through different types of security issues in public markets over the 1991-2005 period. Issues at home are those carried out in a public market in the firm's home country. Issues abroad are those carried out in a public market outside of the firm's home country. Equity issues include initial public offerings (IPOs) and seasoned equity offerings (SEOs). Debt issues include convertible and non-convertible debt issues and preferred shares issues. Data are in constant 2005 U.S. dollars. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each region and income group.

	Equity issues				**Debt issues**				**Total**			
	Home	**Abroad**	**Total**	***% abroad***	**Home**	**Abroad**	**Total**	***% abroad***	**Home**	**Abroad**	**Total**	***% abroad***
Germany	268,908	18,261	287,170	*6.4%*	1,607,551	866,841	2,474,392	*35.0%*	1,876,460	885,102	2,761,562	*32.1%*
Japan	465,464	2,433	467,897	*0.5%*	862,201	407,570	1,269,771	*32.1%*	1,327,665	410,003	1,737,668	*23.6%*
United States	1,539,283	3,923	1,543,205	*0.3%*	7,561,312	1,246,166	8,807,478	*14.1%*	9,100,595	1,250,089	10,350,683	*12.1%*
Africa	14,466	6,724	21,189	*31.7%*	457	13,312	13,769	*96.7%*	14,923	20,035	34,958	*57.3%*
Asia	442,918	150,021	592,939	*25.3%*	111,892	190,380	302,272	*63.0%*	554,810	340,400	895,211	*38.0%*
Australia & New Zealand	124,665	11,840	136,505	*8.7%*	33,531	252,064	285,595	*88.3%*	158,195	263,905	422,100	*62.5%*
Eastern Europe & Central Asia	30,027	18,036	48,063	*37.5%*	270	52,245	52,515	*99.5%*	30,297	70,282	100,578	*69.9%*
Latin America & Caribbean	105,778	41,873	147,651	*28.4%*	267,925	151,364	419,289	*36.1%*	373,704	193,237	566,941	*34.1%*
Middle East	11,011	15,321	26,332	*58.2%*	0	20,972	20,972	*100.0%*	11,011	36,293	47,304	*76.7%*
Western Europe	1,449,282	170,395	1,619,678	*10.5%*	2,398,492	3,303,331	5,701,823	*57.9%*	3,847,774	3,473,726	7,321,501	*47.4%*
Other	0	65,199	65,199	*100.0%*	52	428,016	428,067	*100.0%*	52	493,214	493,266	*100.0%*
Total	**4,451,802**	**504,026**	**4,955,828**	***10.2%***	**12,843,684**	**6,932,260**	**19,775,944**	***35.1%***	**17,295,486**	**7,436,287**	**24,731,772**	***30.1%***
Developed economies	**4,030,500**	**341,953**	**4,372,453**	***7.8%***	**12,512,004**	**6,634,818**	**19,146,822**	***34.7%***	**16,542,505**	**6,976,771**	**23,519,275**	***29.7%***
Developing economies	**421,302**	**162,074**	**583,375**	***27.8%***	**331,679**	**297,442**	**629,122**	***47.3%***	**752,981.0**	**459,516**	**1,212,497**	***37.9%***

Table 2

Number of Firms Raising Capital in Public Markets by Issuer Country/Region and Type of Issue

This table shows the number of firms from each country/region conducting different types of security issues in public markets over the 1991-2005 period. Issues at home are those carried out in a public market in the firm's home country. Issues abroad are those carried out in a public market outside of the firm's home country. Equity issues include initial public offerings (IPOs) and seasoned equity offerings (SEOs). Debt issues include convertible and non-convertible debt issues and preferred shares issues. Note that since firms may conduct several different types of issues in different markets totals may differ from the sum of the different columns. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each region and income group.

	Equity issues				**Debt issues**				**Total**			
	Home	**Abroad**	**Total**	***% abroad***	**Home**	**Abroad**	**Total**	***% abroad***	**Home**	**Abroad**	**Total**	***% abroad***
Germany	823	29	843	*3.4%*	456	225	569	*39.5%*	1,198	247	1,306	*18.9%*
Japan	3,227	24	3,236	*0.7%*	867	703	1,193	*58.9%*	3,779	722	4,026	*17.9%*
United States	8,391	90	8,460	*1.1%*	4,339	534	4,613	*11.6%*	11,546	623	11,852	*5.3%*
Africa	215	43	249	*17.3%*	3	26	29	*89.7%*	218	67	274	*24.5%*
Asia	11,324	594	11,780	*5.0%*	661	644	1,188	*54.2%*	11,736	1,148	12,482	*9.2%*
Australia & New Zealand	2,116	57	2,150	*2.7%*	129	152	264	*57.6%*	2,178	206	2,330	*8.8%*
Eastern Europe & Central Asia	190	56	236	*23.7%*	9	130	138	*94.2%*	199	178	360	*49.4%*
Latin America & Caribbean	960	155	1,005	*15.4%*	2,097	381	2,322	*16.4%*	2,691	491	2,917	*16.8%*
Middle East	37	176	210	*83.8%*	0	44	44	*100.0%*	37	217	248	*87.5%*
Western Europe	6,105	524	6,466	*8.1%*	2,680	1,783	3,917	*45.5%*	8,228	2,223	9,634	*23.1%*
Other	0	175	175	*100.0%*	1	391	392	*99.7%*	1	539	540	*99.8%*
Total	**33,388**	**1,923**	**34,810**	***5.5%***	**11,242**	**5,013**	**14,669**	***34.2%***	**41,811**	**6,661**	**45,969**	***14.5%***
Developed economies	**23,362**	**1,257**	**24,313**	***5.2%***	**8,713**	**4,171**	**11,504**	***36.3%***	**29,770**	**5,245**	**32,989**	***15.9%***
Developing economies	**10,026**	**666**	**10,497**	***6.3%***	**2,529**	**842**	**3,165**	***26.6%***	**12,041**	**1,416**	**12,980**	***10.9%***

Table 3
Firm Characteristics by Capital Raising Activity

This table reports the median of different firm-level characteristics for different groups of firms classified according to their capital raising activity over the 1991-2005 period. Firms with no capital raising activity are those identified as not having raised capital through security issues in public markets neither at home nor abroad over the sample period. Firms that only raise capital at home are those identified as having raised capital through security issues in public markets in their home country at some point during the sample period but that did not raise capital through security issues outside of their home country during the sample period. Firms that raise capital abroad are those identified as having raised capital through security issues in public markets outside of their home country at some point during the sample period. These include firms that raised capital both at home and abroad. The number of observations used to calculate the medians in each case is in parentheses. The reported tests are Mann-Whitney U-test of equality of medians for the different firm characteristics across the different groups of firms. See Appendix Table 4 for the definition of the variables. *, **, *** mean significance at ten, five, and one percent, respectively.

	Firms with no capital raising activity	**Firms that only raise capital at home**	**Firms thtat raise capital abroad**				
				Difference with firms with no capital raising activity		Difference with firms that only raise capital at home	
Firms characteristics	Median	Median	Median	Difference in medians	Test p-value	Difference in medians	Test p-value
Size							
Total assets in million U.S. dollars	129.0	139.4	1,548.4	1,419.4	0.000 ***	1,409.0	0.000 ***
	(79,719)	(94,828)	(21,021)				
Sales in million U.S. dollars	80.3	96.1	835.9	755.6	0.000 ***	739.8	0.000 ***
	(80,676)	(95,818)	(21,040)				
Growth							
Log of (1+annual percentage change in assets	0.047	0.072	0.068	0.021	0.000 ***	-0.004	0.000 ***
in U.S. dollars)	(69,350)	(80,549)	(19,957)				
Log of (1+annual percentage change in sales	0.054	0.086	0.071	0.017	0.000 ***	-0.015	0.000 ***
in U.S. dollars)	(67,477)	(79,077)	(19,789)				
Investment							
Capital expenditures in million U.S. dollars	3.2	3.9	46.7	43.5	0.000 ***	42.8	0.000 ***
	(67,006)	(83,276)	(18,581)				
R&D expenditures in million U.S. dollars	1.3	2.1	15.8	14.4	0.000 ***	13.6	0.000 ***
	(16,586)	(21,185)	(8,285)				
Capital expenditures/sales	0.039	0.039	0.059	0.020	0.000 ***	0.020	0.000 ***
	(53,851)	(72,833)	(16,104)				
R&D expenditures/sales	0.008	0.014	0.016	0.008	0.000 ***	0.002	0.000 ***
	(16,662)	(21,008)	(8,682)				
Profitability							
Return on assets	0.036	0.036	0.027	-0.009	0.000 ***	-0.009	0.000 ***
	(71,507)	(82,231)	(20,811)				
Return on equity	0.063	0.068	0.071	0.008	0.000 ***	0.002	0.000 ***
	(69,988)	(79,879)	(20,604)				
Capital structure							
Total debt/total assets	0.176	0.198	0.295	0.119	0.000 ***	0.097	0.000 ***
	(79,807)	(94,507)	(22,231)				
Short term debt/total debt	0.575	0.549	0.424	-0.151	0.000 ***	-0.125	0.000 ***
	(67,869)	(83,276)	(21,292)				
Other							
Foreign sales/total sales	0.000	0.089	0.147	0.147	0.000 ***	0.058	0.000 ***
	(39,410)	(44,238)	(13,638)				
Tobin's q	1.087	1.151	1.119	0.032	0.000 ***	-0.032	0.000 ***
	(71,879)	(81,788)	(20,339)				

Table 4

Before and After Comparisons between Firms Conducting Seasoned Equity Offerings at Home and Abroad

This table reports ordinary least square regressions with standard errors adjusted for clustering at the firm level of different firm-level characteristics on dummies that identify the capital raising activity of firms in international markets over the 1991-2005 period. The before SEO abroad dummy equals one before a firm raises capital through a seasoned equity offering (SEO) in a public market outside of its home country and zero otherwise. The after SEO abroad dummy equals one on and after the year when a firm raises capital through a seasoned equity offering in a public market outside of its home country and zero otherwise. Both dummies equal zero for firms that only conduct SEOs at home. The sample includes both firms that conduct seasoned equity offerings abroad at some point during our sample period and firms that conduct seasoned equity offerings at home during our sample period. The first seasoned equity offering in a public market outside of firms' home country during our sample period is used to identify firms' capital raising activitiy abroad. The test reported tests the null hypothesis that the after SEO abroad dummy equals the before SEO abroad dummy. A constant is estimated but not reported. Absolute values of t-statistics are in brackets. See Appendix Table 4 for the definition of the variables. *, **, *** mean significance at ten, five, and one percent, respectively.

Dependent Variable	Before SEO abroad dummy (a)	After SEO abroad dummy (b)	Year dummies	Country dummies	Industry dummies	No. of obs.	No. of firms	No. of firms raising capital abroad	R-squared	After dummy - Before dummy (b)-(a)	Test (b)=(a) p-value
Size											
Log of total assets in million U.S. dollars	0.686 ***	1.279 ***	Yes	Yes	Yes	60,473	6,532	500	0.260	0.593	0.000
	[5.66]	[11.91]									
Log of sales in million U.S. dollars	0.547 ***	1.196 ***	Yes	Yes	Yes	59,322	6,383	486	0.220	0.649	0.000
	[4.23]	[11.26]									
Growth											
Log of (1+annual percentage change in assets in U.S. dollars)	0.063 ***	0.011	Yes	Yes	Yes	53,846	6,348	488	0.050	-0.052	0.000
	[5.76]	[1.62]									
Log of (1+annual percentage change in sales in U.S. dollars)	0.064 ***	0.004	Yes	Yes	Yes	52,359	6,105	473	0.050	-0.060	0.000
	[5.72]	[0.57]									
Investment											
Log of capital expenditures in million U.S. dollars	0.859 ***	1.400 ***	Yes	Yes	Yes	51,448	6,131	463	0.190	0.541	0.000
	[6.22]	[12.70]									
Log of R&D expenditures in million U.S. dollars	0.807 ***	1.199 ***	Yes	Yes	Yes	13,537	1,890	220	0.290	0.392	0.040
	[3.87]	[6.91]									
Capital expenditures/sales	0.046 ***	0.022 ***	Yes	Yes	Yes	45,043	5,300	420	0.090	-0.024	0.010
	[4.60]	[3.19]									
R&D expenditures/sales	0.039 **	0.012	Yes	Yes	Yes	15,354	2,158	245	0.130	-0.027	0.070
	[2.22]	[1.57]									
Profitability											
Return on assets	0.013 **	0.011 **	Yes	Yes	Yes	55,537	6,305	483	0.080	-0.002	0.700
	[2.12]	[2.48]									
Return on equity	0.049 ***	0.027 ***	Yes	Yes	Yes	53,825	6,217	477	0.050	-0.022	0.110
	[3.76]	[2.81]									
Capital structure											
Total debt/total assets	-0.003	0.013	Yes	Yes	Yes	61,200	6,610	512	0.070	0.016	0.110
	[0.27]	[1.51]									
Short term debt/total debt	-0.06 ***	-0.065 ***	Yes	Yes	Yes	55,199	6,086	469	0.100	-0.005	0.730
	[3.97]	[5.17]									
Other											
Foreign sales/total sales	0.092 ***	0.125 ***	Yes	Yes	Yes	33,763	4,138	373	0.390	0.033	0.090
	[4.32]	[7.44]									
Tobin's q	0.231 ***	0.021	Yes	Yes	Yes	56,931	6,338	479	0.090	-0.210	0.000
	[3.98]	[0.53]									

Table 5

Before and After Comparisons between Firms Conducting Debt Issues at Home and Abroad

This table reports ordinary least square regressions with standard errors adjusted for clustering at the firm level of different firm-level characteristics on dummies that identify the capital raising activity of firms in international markets over the 1991-2005 period. The before debt issue abroad dummy equals one before a firm raises capital through a debt issue in a public market outside of its home country and zero otherwise. The after debt issue abroad dummy equals one on and after the year when a firm raises capital through a debt issue in a public market outside of its home country and zero otherwise. Both dummies equal zero for firms that only issue debt at home. The sample includes both firms that raise capital through debt issues abroad at some point during our sample period and firms that raise capital through debt issues at home at some point during our sample period. The first debt issue in a public market outside of firms' home country during our sample period is used to identify firms' capital raising activity abroad. The test reported tests the null hypothesis that the after debt issue abroad dummy equals the before debt issue abroad dummy. Debt issues include convertible and non-convertible debt issues and preferred shares issues. A constant is estimated but not reported. Absolute values of t-statistics are in brackets. See Appendix Table 4 for the definition of the variables. *, **, *** mean significance at ten, five, and one percent, respectively.

Dependent Variable	Before debt issue abroad dummy (a)	After debt issue abroad dummy (b)	Year dummies	Country dummies	Industry dummies	No. of obs.	No. of firms	No. of firms raising capital abroad	R-squared	After dummy - Before dummy (b)-(a)	Test (b)=(a) p-value
Size											
Log of total assets in million U.S. dollars	1.173 ***	1.246 ***	Yes	Yes	Yes	32,900	2,915	1,356	0.290	0.073	0.260
	[15.92]	[20.35]									
Log of sales in million U.S. dollars	1.008 ***	1.09 ***	Yes	Yes	Yes	32,724	2,913	1,366	0.250	0.082	0.190
	[13.46]	[17.92]									
Growth											
Log of (1+annual percentage change in assets in U.S. dollars)	0.029 ***	-0.015 ***	Yes	Yes	Yes	31,233	2,945	1,411	0.140	-0.044	0.000
	[6.49]	[4.72]									
Log of (1+annual percentage change in sales in U.S. dollars)	0.024 ***	-0.012 ***	Yes	Yes	Yes	31,059	2,927	1,404	0.110	-0.036	0.000
	[4.90]	[3.53]									
Investment											
Log of capital expenditures in million U.S. dollars	1.083 ***	1.13 ***	Yes	Yes	Yes	27,587	2,830	1,339	0.210	0.047	0.510
	[13.09]	[15.77]									
Log of R&D expenditures in million U.S. dollars	0.772 ***	0.801 ***	Yes	Yes	Yes	10,069	1,071	613	0.300	0.029	0.830
	[5.06]	[6.57]									
Capital expenditures/sales	0.023 ***	0.007 *	Yes	Yes	Yes	23,480	2,278	1,059	0.180	-0.016	0.000
	[3.69]	[1.65]									
R&D expenditures/sales	-0.008 *	-0.003	Yes	Yes	Yes	11,363	1,203	676	0.090	0.005	0.110
	[1.91]	[1.20]									
Profitability											
Return on assets	0.005 **	-0.008 ***	Yes	Yes	Yes	32,704	2,922	1,400	0.100	-0.013	0.000
	[2.35]	[4.71]									
Return on equity	0.028 ***	-0.007	Yes	Yes	Yes	32,319	2,907	1,398	0.060	-0.035	0.000
	[5.22]	[1.45]									
Capital structure											
Total debt/total assets	0.025 ***	0.087 ***	Yes	Yes	Yes	34,105	2,981	1,425	0.100	0.062	0.000
	[2.76]	[12.27]									
Short term debt/total debt	0.029 ***	-0.012	Yes	Yes	Yes	33,392	2,957	1,419	0.110	-0.041	0.000
	[2.89]	[1.51]									
Other											
Foreign sales/total sales	0.032 ***	0.045 ***	Yes	Yes	Yes	21,225	2,183	1,089	0.430	0.013	0.220
	[2.71]	[4.70]									
Tobin's q	0.085 ***	-0.021	Yes	Yes	Yes	32,273	2,874	1,374	0.110	-0.106	0.000
	[3.30]	[1.16]									

Table 6

Evolution of Firm Characteristics Following Seasoned Equity Offerings

This table reports regressions of firm-level characteristics on dummies that identify the capital raising activity of firms. The single year seasoned equity offering (SEO) dummies equal one in the referred year and zero otherwise. The more than three years after SEO dummy equals one after the third year following a seasoned equity offering and zero before. The sample in the top panel includes only those firms that conduct seasoned equity offerings in a public market in their home country at some point during our sample period. The first seasoned equity offering in a public market in firms' home country during our sample period is used to identify firms' capital raising activity at home. The sample in the bottom panel includes only those firms that conduct seasoned equity offerings in a public market outside of their home country at some point during our sample period. The first seasoned equity offering in a public market outside of firms' home country during our sample period is used to identify firms' capital raising activity abroad. The regressions are estimated with fixed effects at the firm level. A constant is estimated but not reported. Absolute values of t-statistics are in brackets. See Appendix Table 4 for the definition of the variables. *, **, *** mean significance at ten, five, and one percent, respectively.

Only firms that conduct SEOs at home

	Log of total assets in million U.S. dollars	Log of sales in million U.S. dollars	Log of (1+annual percentage change in assets in U.S. dollars)	Log of (1+annual percentage change in sales in U.S. dollars)	Log of capital expenditures in million U.S. dollars	Log of R&D expenditures in million U.S. dollars	Capital expenditures/ sales	R&D expenditures/ sales	Return on assets	Return on equity	Total debt/total assets	Short term debt/total debt	Foreign sales/total sales	Tobin's q
SEO at home year dummy	0.236 ***	0.182 ***	0.071 ***	0.026 ***	0.292 ***	0.058 **	0.009 ***	0.001	0.000	-0.014 ***	-0.010 ***	-0.010 **	0.003	0.035 ***
	[25.56]	[15.15]	[14.59]	[4.49]	[13.68]	[2.24]	[3.76]	[0.18]	[0.27]	[2.86]	[4.98]	[2.36]	[1.02]	[2.74]
One year after SEO at home dummy	0.319 ***	0.296 ***	0.002	0.006	0.386 ***	0.139 ***	0.007 ***	-0.003	-0.004 **	-0.018 ***	-0.013 ***	-0.015 ***	0.012 ***	-0.095 ***
	[31.72]	[22.61]	[0.46]	[1.03]	[16.57]	[4.89]	[2.61]	[1.02]	[2.22]	[3.39]	[6.30]	[3.33]	[3.62]	[6.96]
Two years after SEO at home dummy	0.337 ***	0.317 ***	-0.045 ***	-0.045 ***	0.357 ***	0.187 ***	-0.003	-0.006 *	-0.012 ***	-0.031 ***	-0.007 ***	-0.022 ***	0.013 ***	-0.182 ***
	[30.48]	[21.98]	[7.89]	[6.59]	[13.80]	[5.88]	[1.01]	[1.68]	[5.46]	[5.51]	[2.91]	[4.44]	[3.56]	[12.11]
Three years after SEO at home dummy	0.350 ***	0.341 ***	-0.060 ***	-0.058 ***	0.274 ***	0.259 ***	-0.011 ***	-0.005	-0.012 ***	-0.037 ***	-0.007 ***	-0.019 ***	0.013 ***	-0.238 ***
	[28.62]	[21.38]	[9.44]	[7.85]	[9.54]	[7.31]	[3.31]	[1.33]	[5.23]	[5.92]	[2.79]	[3.49]	[3.20]	[14.31]
More than three years after SEO	0.306 ***	0.293 ***	-0.062 ***	-0.065 ***	0.185 ***	0.218 ***	-0.020 ***	-0.010 **	-0.010 ***	-0.035 ***	-0.008 ***	-0.007	0.008 *	-0.271 ***
at home dummy	[23.47]	[17.30]	[8.97]	[7.99]	[5.94]	[5.66]	[5.37]	[2.24]	[4.19]	[5.21]	[3.03]	[1.14]	[1.79]	[15.20]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	57,898	56,826	51,624	50,212	49,167	12,531	42,901	14,270	53,278	51,616	58,574	52,878	32,199	54,634
No. of firms	6,211	6,073	6,048	5,817	5,839	1,750	5,036	2,006	6,009	5,925	6,285	5,801	3,917	6,041

Only firms that conduct SEOs abroad

	Log of total assets in million U.S. dollars	Log of sales in million U.S. dollars	Log of (1+annual percentage change in assets in U.S. dollars)	Log of (1+annual percentage change in sales in U.S. dollars)	Log of capital expenditures in million U.S. dollars	Log of R&D expenditures in million U.S. dollars	Capital expenditures/ sales	R&D expenditures/ sales	Return on assets	Return on equity	Total debt/total assets	Short term debt/total debt	Foreign sales/total sales	Tobin's q
SEO abroad year dummy	0.448 ***	0.366 ***	0.074 ***	0.020	0.487 ***	0.259 ***	0.020 **	-0.013 **	0.004	-0.008	-0.018 ***	-0.002	0.027 **	-0.045
	[13.01]	[8.46]	[4.31]	[0.99]	[7.37]	[3.65]	[2.08]	[2.50]	[0.57]	[0.50]	[2.85]	[0.14]	[2.23]	[0.91]
One year after SEO abroad dummy	0.521 ***	0.420 ***	-0.039 **	-0.055 **	0.479 ***	0.357 ***	0.011	-0.017 ***	0.000	-0.037 **	-0.022 ***	-0.019	0.050 ***	-0.260 ***
	[13.94]	[8.89]	[2.09]	[2.57]	[6.72]	[4.63]	[1.10]	[2.98]	[0.04]	[2.20]	[3.15]	[1.27]	[3.86]	[4.89]
Two years after SEO abroad dummy	0.532 ***	0.408 ***	-0.079 ***	-0.108 ***	0.433 ***	0.437 ***	-0.009	-0.017 ***	-0.017 **	-0.066 ***	-0.013 *	0.007	0.046 ***	-0.505 ***
	[13.01]	[7.89]	[3.90]	[4.66]	[5.54]	[5.22]	[0.78]	[2.87]	[2.13]	[3.59]	[1.71]	[0.42]	[3.30]	[8.71]
Three years after SEO abroad dummy	0.507 ***	0.388 ***	-0.112 ***	-0.091 ***	0.400 ***	0.443 ***	0.002	-0.011	-0.010	-0.072 ***	-0.023 ***	-0.001	0.042 ***	-0.548 ***
	[11.25]	[6.80]	[5.12]	[3.59]	[4.62]	[4.71]	[0.17]	[1.60]	[1.17]	[3.55]	[2.74]	[0.05]	[2.75]	[8.56]
More than three years after SEO	0.409 ***	0.225 ***	-0.126 ***	-0.119 ***	0.222 **	0.320 ***	-0.008	-0.015 **	-0.014	-0.080 ***	-0.026 ***	0.041 **	0.029 *	-0.673 ***
abroad dummy	[8.22]	[3.58]	[5.09]	[4.20]	[2.33]	[2.99]	[0.59]	[1.98]	[1.48]	[3.57]	[2.75]	[2.04]	[1.71]	[9.49]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	4,470	4,323	4,065	3,971	3,992	1,664	3,840	1,853	4,175	4,071	4,666	4,297	2,857	4,178
No. of firms	500	486	488	473	463	220	420	245	483	477	512	469	373	479

Table 7

Evolution of Firm Characteristics Following Debt Issues

This table reports regressions of firm-level characteristics on dummies that identify the capital raising activity of firms. The single year debt issue dummies equal one in the referred year and zero otherwise. The more than three years after debt issue dummy equals one after the third year following a debt issue and zero before. The sample in the top panel includes only those firms that raise capital through debt issues in a public market in their home country at some point during our sample period. The first debt issue in a public market in firms' home country during our sample period is used to identify firms' capital raising activity at home. The sample in the bottom panel includes only those firms that raise capital through debt issues in a public market outside of their home country at some point during our sample period. The first debt issue in a public market abroad during our sample period is used to identify firms' capital raising activity abroad. The regressions are estimated with fixed effects at the firm level. A constant is estimated but not reported. Absolute values of t-statistics are in brackets. See Appendix Table 4 for the definition of the variables. *, **, *** mean significance at ten, five, and one percent, respectively.

Only firms that raise capital trough debt issues at home

	Log of total assets in million U.S. dollars	Log of sales in million U.S. dollars	Log of (1+annual percentage change in assets in U.S. dollars)	Log of (1+annual percentage change in sales in U.S. dollars)	Log of capital expenditures in million U.S. dollars	Log of R&D expenditures in million U.S. dollars	Capital expenditures/ sales	R&D expenditures/ sales	Return on assets	Return on equity	Total debt/total assets	Short term debt/total debt	Foreign sales/total sales	Tobin's q
Debt issue at home year dummy	0.213 ***	0.180 ***	0.031 ***	0.008	0.262 ***	0.103 ***	0.000	-0.001	-0.004 **	-0.013 **	0.041 ***	-0.082 ***	0.006	-0.053 ***
	[18.65]	[12.84]	[5.33]	[1.12]	[8.78]	[3.22]	[0.02]	[0.69]	[2.12]	[2.41]	[15.42]	[14.02]	[1.63]	[4.18]
One year after debt issue at home dummy	0.229 ***	0.203 ***	-0.018 ***	-0.015 **	0.299 ***	0.141 ***	0.000	0.000	-0.008 ***	-0.022 ***	0.053 ***	-0.119 ***	0.010 ***	-0.089 ***
	[19.39]	[14.04]	[3.08]	[2.12]	[9.73]	[4.30]	[0.05]	[0.34]	[4.37]	[3.91]	[19.00]	[19.76]	[2.63]	[6.76]
Two years after debt issue at home dummy	0.217 ***	0.185 ***	-0.045 ***	-0.042 ***	0.216 ***	0.160 ***	-0.007 *	-0.001	-0.010 ***	-0.033 ***	0.050 ***	-0.109 ***	0.006	-0.115 ***
	[17.51]	[12.11]	[7.16]	[5.71]	[6.69]	[4.69]	[1.88]	[0.55]	[5.23]	[5.50]	[17.29]	[17.31]	[1.40]	[8.33]
Three years after debt issue at home dummy	0.203 ***	0.165 ***	-0.055 ***	-0.048 ***	0.163 ***	0.152 ***	-0.011 ***	0.001	-0.010 ***	-0.035 ***	0.047 ***	-0.103 ***	-0.001	-0.122 ***
	[15.39]	[10.17]	[8.32]	[6.24]	[4.75]	[4.25]	[2.78]	[0.73]	[4.91]	[5.55]	[15.23]	[15.25]	[0.33]	[8.31]
More than three years after debt issue	0.070 ***	0.034 *	-0.063 ***	-0.056 ***	-0.035	0.157 ***	-0.015 ***	0.002	-0.010 ***	-0.046 ***	0.035 ***	-0.051 ***	-0.010 **	-0.122 ***
at home dummy	[5.01]	[1.95]	[8.89]	[6.66]	[0.97]	[4.10]	[3.67]	[1.63]	[4.82]	[6.81]	[10.67]	[7.07]	[2.03]	[7.77]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	25,103	24,851	23,738	23,617	20,922	7,529	18,069	8,527	24,933	24,632	25,911	25,361	16,329	24,708
No. of firms	2,190	2,176	2,206	2,194	2,119	779	1,733	881	2,190	2,180	2,228	2,214	1,630	2,160

Only firms that raise capital trough debt issues abroad

	Log of total assets in million U.S. dollars	Log of sales in million U.S. dollars	Log of (1+annual percentage change in assets in U.S. dollars)	Log of (1+annual percentage change in sales in U.S. dollars)	Log of capital expenditures in million U.S. dollars	Log of R&D expenditures in million U.S. dollars	Capital expenditures/ sales	R&D expenditures/ sales	Return on assets	Return on equity	Total debt/total assets	Short term debt/total debt	Foreign sales/total sales	Tobin's q
Debt issue abroad year dummy	0.387 ***	0.281 ***	0.025 ***	0.007	0.326 ***	0.164 ***	0.007	-0.001	-0.008 ***	-0.016 **	0.055 ***	-0.106 ***	0.016 ***	-0.035 ***
	[25.41]	[15.24]	[3.33]	[0.82]	[8.93]	[4.33]	[1.53]	[0.62]	[3.49]	[2.40]	[16.09]	[15.15]	[3.17]	[2.11]
One year after debt issue abroad dummy	0.472 ***	0.339 ***	-0.036 ***	-0.039 ***	0.382 ***	0.199 ***	-0.007	-0.002 *	-0.018 ***	-0.039 ***	0.069 ***	-0.129 ***	0.023 ***	-0.126 ***
	[29.55]	[17.55]	[4.65]	[4.31]	[9.88]	[5.07]	[1.33]	[1.82]	[8.04]	[5.43]	[19.33]	[17.79]	[4.42]	[7.36]
Two years after debt issue abroad dummy	0.531 ***	0.372 ***	-0.076 ***	-0.068 ***	0.345 ***	0.292 ***	-0.021 ***	-0.001	-0.024 ***	-0.057 ***	0.078 ***	-0.113 ***	0.025 ***	-0.177 ***
	[31.17]	[18.01]	[9.28]	[6.96]	[8.23]	[6.98]	[3.80]	[1.44]	[10.20]	[7.46]	[20.50]	[14.60]	[4.35]	[9.71]
Three years after debt issue abroad dummy	0.531 ***	0.368 ***	-0.102 ***	-0.090 ***	0.205 ***	0.308 ***	-0.039 ***	-0.002	-0.028 ***	-0.079 ***	0.080 ***	-0.096 ***	0.021 ***	-0.211 ***
	[28.97]	[16.58]	[11.77]	[8.76]	[4.55]	[6.71]	[6.71]	[1.34]	[10.72]	[9.52]	[19.40]	[11.34]	[3.38]	[10.72]
More than three years after debt issue	0.373 ***	0.252 ***	-0.144 ***	-0.124 ***	-0.042	0.225 ***	-0.054 ***	-0.001	-0.033 ***	-0.080 ***	0.074 ***	-0.045 ***	0.019 ***	-0.251 ***
abroad dummy	[20.34]	[11.31]	[16.18]	[11.71]	[0.93]	[4.79]	[9.15]	[1.22]	[12.88]	[9.68]	[17.89]	[5.28]	[3.00]	[12.62]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	15,635	15,625	15,447	15,385	13,436	5,811	11,492	6,547	16,215	16,128	16,802	16,665	10,699	15,886
No. of firms	1,356	1,366	1,411	1,404	1,339	613	1,059	676	1,400	1,398	1,425	1,419	1,089	1,374

Table 8
Size of Capital Raisings in Public Markets by Type of Issue

This table shows the median amount raised per security issue for different types of security issues in public markets over the 1991-2005 period. The number of observations used to calculate the medians in each case is in parentheses. The reported test is the Mann-Whitney U-test of equality of medians between issues at home and abroad. Firms that raise capital both at home and abroad are those that issue securities both outside of their home country and in their home country at some point during the sample period. Issues at home are those carried out in a public market in the firm's home country. Issues abroad are those carried out in a public market outside of the firm's home country. Equity issues include initial public offerings (IPOs) and seasoned equity offerings (SEOs). Debt issues include convertible and non-convertible debt issues and preferred shares issues. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each income group. *, **, *** mean significance at ten, five, and one percent, respectively.

	Equity issues			**Debt issues**			**All issues**		
	Issues at home	**Issues abroad**	**Mann-Whitney U-Test p-value**	**Issues at home**	**Issues abroad**	**Mann-Whitney U-Test p-value**	**Issues at home**	**Issues abroad**	**Mann-Whitney U-Test p-value**
Median amount raised per security issue (million U.S. dollars at 2005 prices)									
All issues									
Developed economies	26.9	54.3	0.000 ***	85.1	138.0	0.000 ***	57.3	131.2	0.000 ***
	(40,697)	(2,182)		(71,986)	(26,671)		(112,683)	(28,853)	
Developing economies	3.8	62.0	0.000 ***	7.2	122.4	0.000 ***	5.6	101.5	0.000 ***
	(11,577)	(1,092)		(9,260)	(1,778)		(20,837)	(2,870)	
Issues by firms that raise capital both at home and abroad									
Developed economies	126.5	116.2	0.123	105.9	155.8	0.000 ***	106.2	154.5	0.000 ***
	(2,882)	(600)		(32,067)	(16,681)		(34,949)	(17,281)	
Developing economies	57.3	82.8	0.000 ***	32.0	132.8	0.000 ***	42.2	124.0	0.000 ***
	(650)	(389)		(1,243)	(695)		(1,893)	(1,084)	

Table 9
Capital Raising Activity in Domestic Markets Following Capital Raisings Abroad

This table analyzes the capital raising activity in domestic markets of firms that raise capital through security issues in public markets abroad at some point during the 1991-2005 period. The displayed variable is the average across these firms of the ratio of capital raised at home to total capital raised in public markets in each year following their first capital raising abroad. The number of observations used to calculate the averages in each case is in parentheses. Issues at home are those carried out in a public market in the firm's home country. Issues abroad are those carried out in a public market outside of the firm's home country. Equity issues include initial public offerings (IPOs) and seasoned equity offerings (SEOs). Debt issues include convertible and non-convertible debt issues and preferred shares issues. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each income group.

	Equity issues	Debt issues	All capital raisings
Average capital raised at home/total capital raised in public markets per firm			
Developed economies			
Year of first capital raising abroad	0.18	0.08	0.09
	(1,362)	(4,097)	(5,238)
One year after first capital raising abroad	0.60	0.30	0.34
	(512)	(2,498)	(2,872)
Two years after first capital raising abroad	0.72	0.38	0.42
	(263)	(1,503)	(1,695)
Three years after first capital raising abroad	0.74	0.44	0.47
	(166)	(1,075)	(1,187)
More than three years after first capital raising abroad	0.87	0.40	0.46
	(246)	(1,504)	(1,693)
Developing economies			
Year of first capital raising abroad	0.12	0.05	0.06
	(670)	(800)	(1,400)
One year after first capital raising abroad	0.51	0.23	0.28
	(130)	(339)	(439)
Two years after first capital raising abroad	0.56	0.33	0.38
	(82)	(199)	(264)
Three years after first capital raising abroad	0.68	0.48	0.52
	(44)	(129)	(164)
More than three years after first capital raising abroad	0.60	0.63	0.62
	(55)	(179)	(223)

Table 10

Capital Raising Activity in Domestic Markets of Firms that Raise Capital Abroad

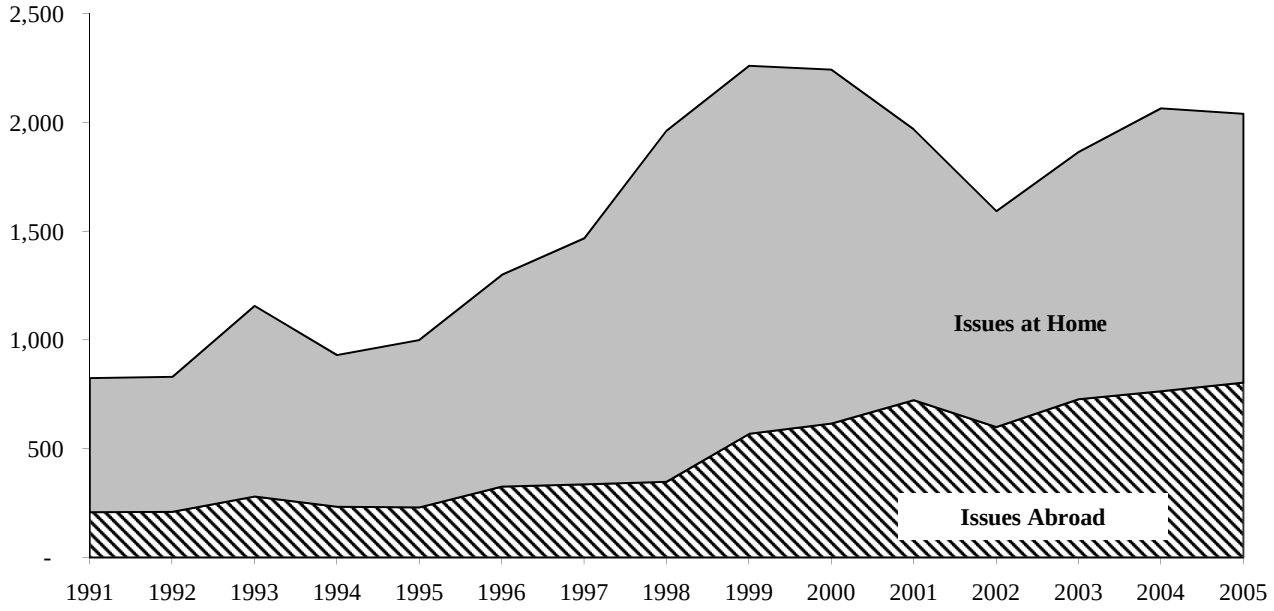
This table analyzes the capital raising activity in domestic markets of firms that raise capital through security issues in public markets abroad at some point during the 1991-2005 period. The first variable displayed is the average across these firms of the amount raised in domestic capital markets per year before and after their first capital raising abroad. The second variable displayed is the average across these firms of the ratio of the amount raised in domestic capital markets per firm to the total amount raised in these markets per year before and after their first capital raising abroad. The third variable displayed is the average across these firms of the amount raised in domestic capital markets divided by total assets before raising capital per year before and after their first capital raising abroad. For firms with multiple security issues in the same year the amount raised divided by assets before raising capital is calculated as the weighted average of the ratio of amount raised to total assets for each issue in the year, weighted by the amount raised per issue. For the three variables years without capital raising activity are assigned a zero. The test reported tests the null hypothesis that the mean of the variables is the same before and after the first capital raising abroad. Issues abroad are those carried out in a public market outside of the firm's home country. Equity issues include initial public offerings (IPOs) and seasoned equity offerings (SEOs). Debt issues include convertible and non-convertible debt issues and preferred shares issues. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each income group. *, **, *** mean significance at ten, five, and one percent, respectively.

	Equity issues			Debt issues			All capital raisings		
	Before first capital raising abroad (a)	**After first capital raising abroad (b)**	**Test (a)=(b) p-value**	**Before first capital raising abroad (a)**	**After first capital raising abroad (b)**	**Test (a)=(b) p-value**	**Before first capital raising abroad (a)**	**After first capital raising abroad (b)**	**Test (a)=(b) p-value**
Average annual amount raised in domestic markets per firm (million U.S. dollars at 2005 prices)									
Developed economies	7.70	20.50	0.000 ***	36.83	129.76	0.000 ***	44.53	150.26	0.000 ***
	(35,919)	(42,751)		(35,919)	(42,750)		(35,916)	(42,749)	
Developing economies	3.21	5.59	0.022 **	1.62	6.95	0.000 ***	4.83	12.54	0.000 ***
	(9,791)	(11,438)		(9,782)	(11,435)		(9,779)	(11,432)	
Average annual amount raised in domestic markets per firm/total amount raised in domestic markets									
Developed economies	0.001	0.003	0.000 ***	0.001	0.004	0.000 ***	0.001	0.003	0.000 ***
	(30,428)	(37,627)		(27,649)	(34,566)		(31,126)	(37,933)	
Developing economies	0.003	0.004	0.003 ***	0.003	0.004	0.051 *	0.003	0.005	0.000 ***
	(7,912)	(9,534)		(3,600)	(8,024)		(8,034)	(10,124)	
Average annual amount raised in domestic markets/total assets before raising capital per firm									
Developed economies	0.112	0.040	0.062 *	0.012	0.013	0.947	0.126	0.048	0.057 *
	(35,677)	(42,481)		(35,009)	(41,055)		(34,796)	(40,847)	
Developing economies	0.001	0.022	0.112	0.011	0.007	0.648	0.013	0.028	0.343
	(9,656)	(11,245)		(9,681)	(11,184)		(9,559)	(11,026)	

Figure 1
Evolution of Capital Raising Activity in Public Markets Around the World

This figure shows the evolution of the aggregate amount of capital raised by firms from developed and developing economies through security issues in public markets in each year over the 1991-2005 period. Issues at home are those carried out in a public market in the firm's home country. Issues abroad are those carried out in a public market outside of the firm's home country. Data are in constant 2005 U.S. dollars. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each income group.

Amount Raised by Firms from Developed Economies
(Billion U.S. dollars at 2005 prices)



Amount Raised by Firms from Developing Economies
(Billion U.S. dollars at 2005 prices)

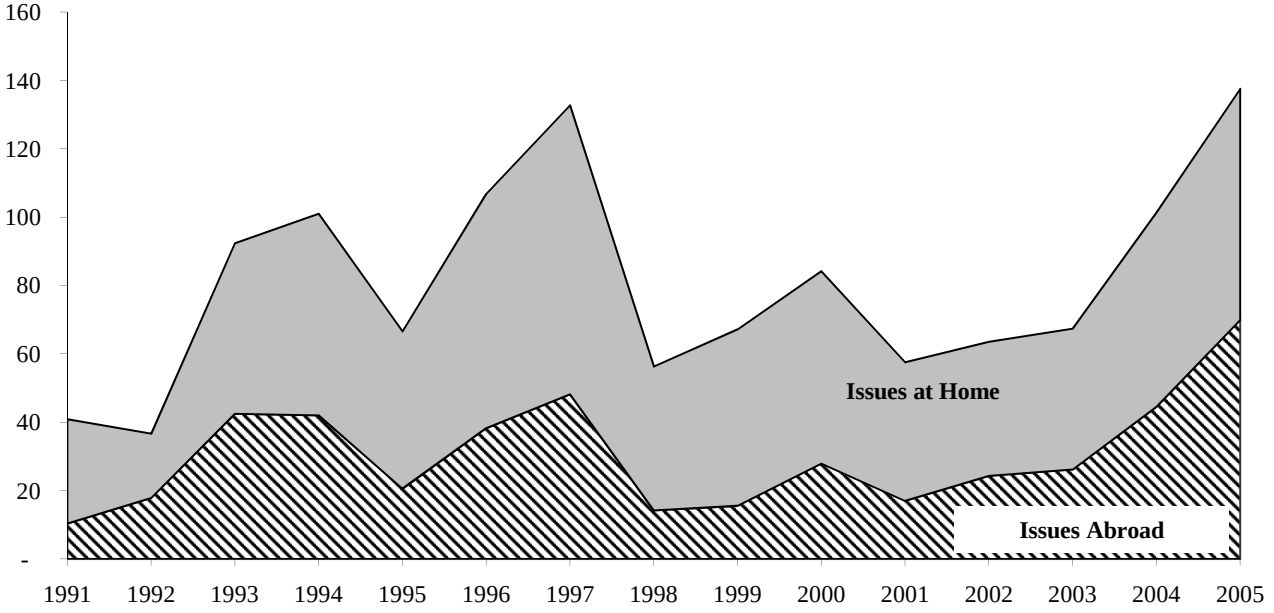
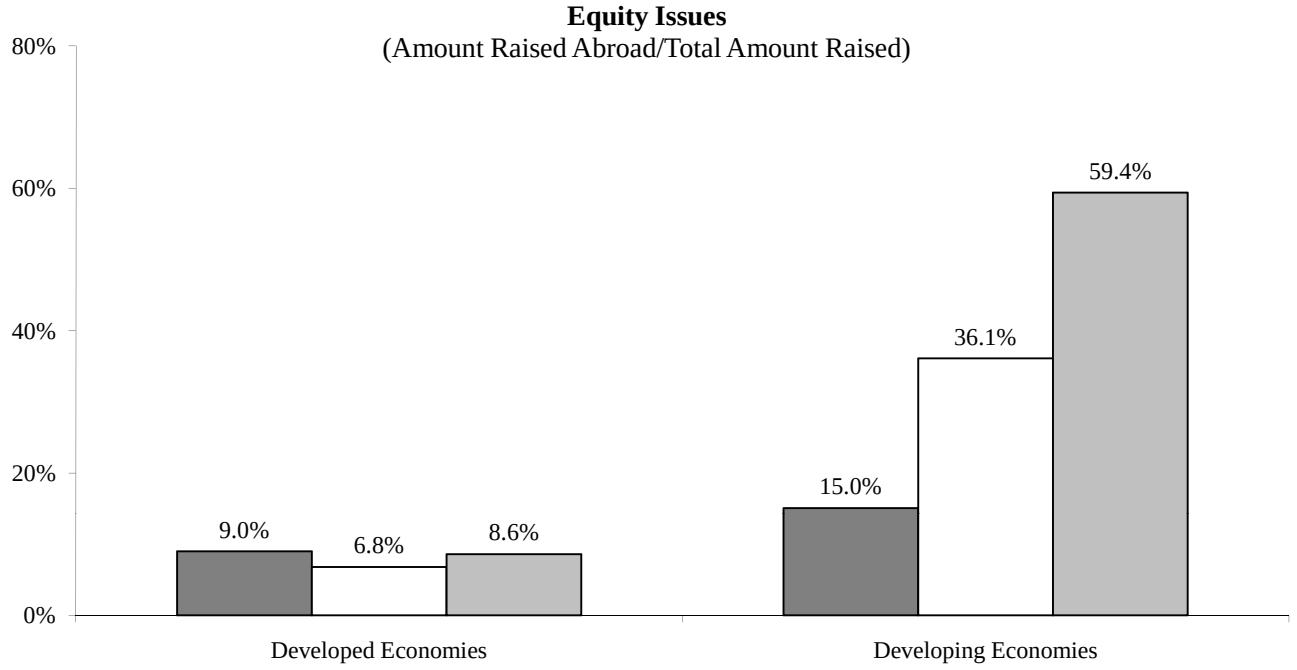


Figure 2
Degree of Internationalization of Capital Markets

This figure shows the aggregate amount of capital raised abroad as a percentage of the total amount of capital raised by firms from developed and developing economies through security issues in public markets for different types of issues. Issues abroad are those carried out in a public market outside of the firm's home country. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each income group.



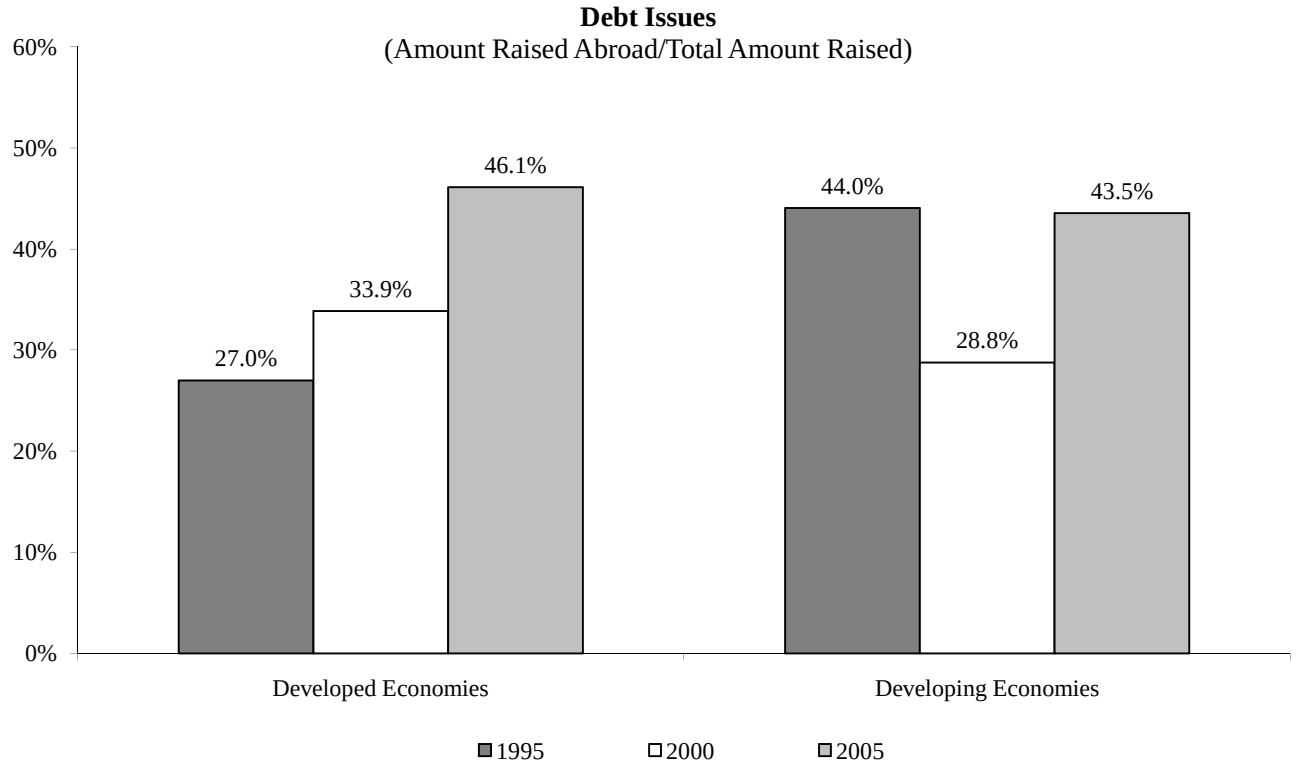
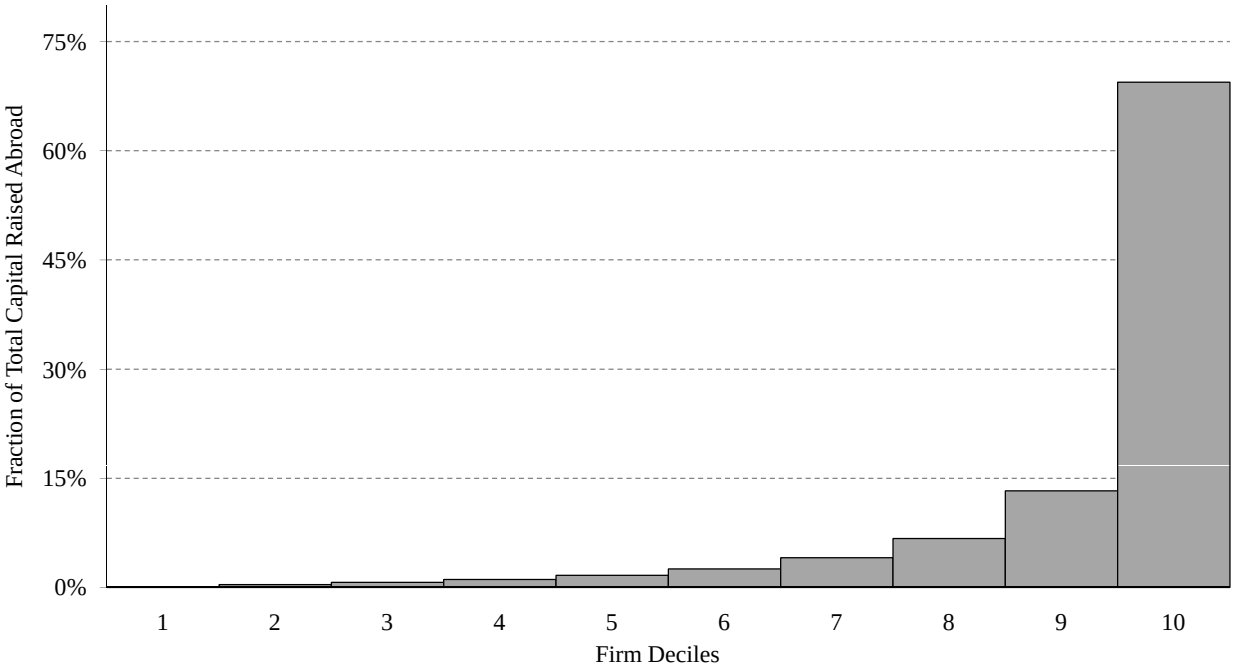


Figure 3
Concentration of Capital Raising Activity in International Markets

This figure shows the distribution of the amount raised abroad over the 1991-2005 period among those firms that raise capital abroad at some point during this period. Firms are divided in deciles according to the amount raised abroad over the sample period. Issues abroad are those carried out in a public market outside of the firm's home country. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each income group.

Distribution of Capital Raised Abroad by Firms from Developed Economies



Distribution of Capital Raised Abroad by Firms from Developing Economies

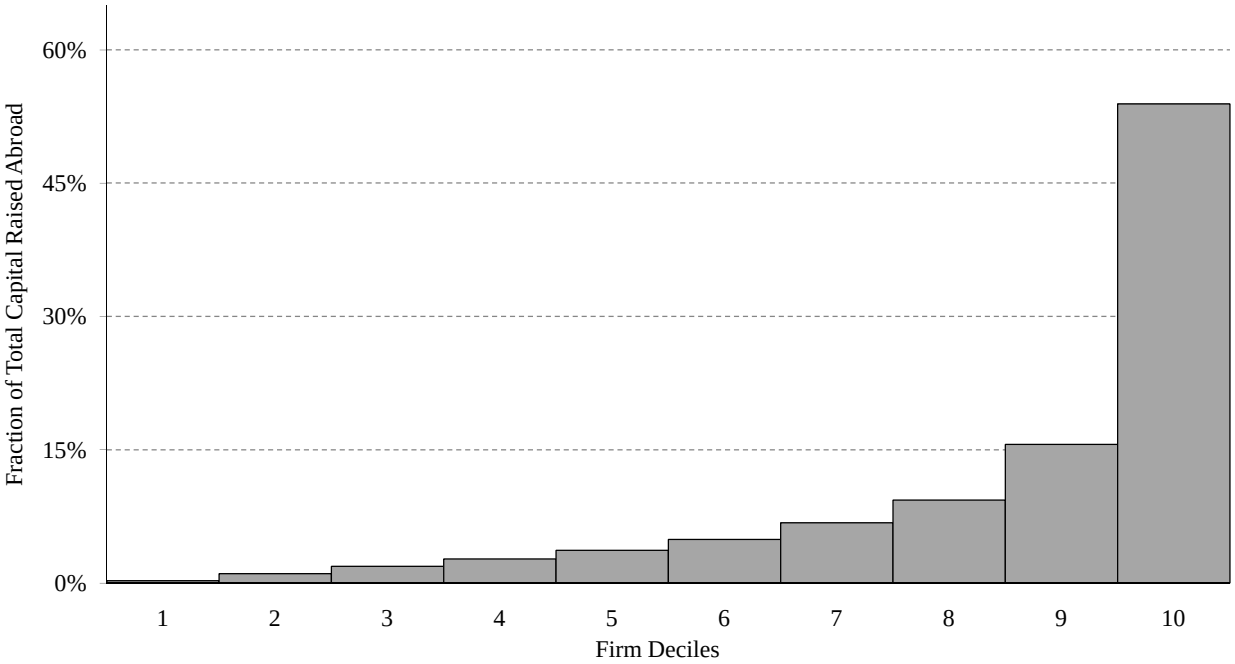
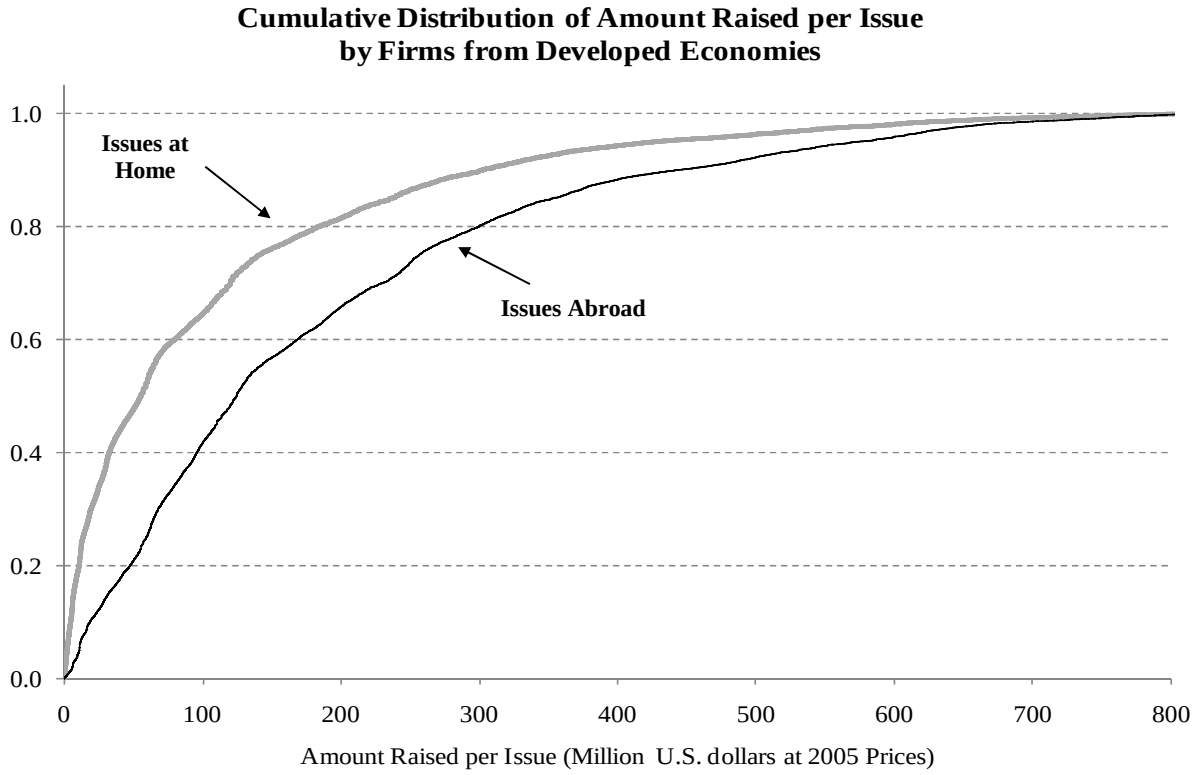
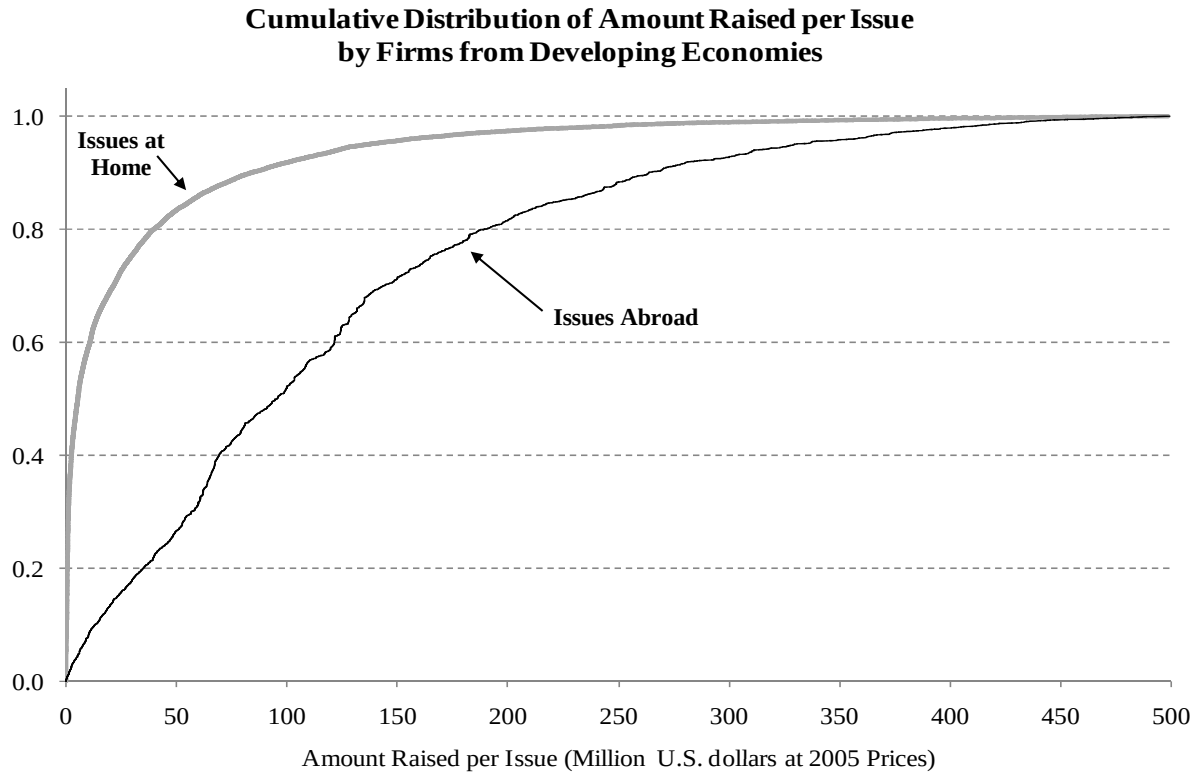


Figure 4

Size Differences Among Issues at Home and Abroad

This figure shows the cumulative distribution of the amount raised per security issue in public markets by firms from developed and developing economies over the 1991-2005 period. Issues with size above the 95th percentile are excluded. Issues at home are those carried out in a public market in the firm's home country. Issues abroad are those carried out in a public market outside of the firm's home country. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each income group.





Appendix Table 1
Country Classification

This table presents the list of economies that constitute the different regions and their classification by income level. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification which are economies with a GNI per capita of 10,725 U.S. dollars or higher in 2005. Developing economies correspond to low- and middle-income ecoonomies according to the World Bank classification which are economies with a GNI per capita below 10,725 U.S. dollars in 2005. * means the economy is classified as developed.

	Africa	Asia	Eastern Europe & Central Asia	Latin America & Caribbean	Middle East	Western Europe	Other
Australia *	Algeria	Bangladesh	Bulgaria	Argentina	Bahrain *	Austria *	Antigua *
Germany *	Central African Rep.	China	Croatia	Barbados	Iran	Belgium *	Aruba *
Japan *	Egypt	Hong Kong, China *	Czech Republic	Belize	Israel *	Cyprus *	Bahamas *
New Zealand *	Ghana	India	Estonia	Bolivia	Jordan	Denmark *	Bermuda *
United States *	Kenya	Indonesia	Hungary	Brazil	Kuwait *	Finland *	British Virgin Islands *
	Liberia	Macao, China *	Kazakhstan	Chile	Lebanon	France *	Cayman Islands *
	Malawi	Malaysia	Latvia	Colombia	Oman	Greece *	Falkland Islands *
	Mauritius	Myanmar	Lithuania	Costa Rica	Qatar *	Iceland *	Faroe Islands *
	Morocco	Pakistan	Poland	Dominican Republic	Saudi Arabia *	Ireland *	Gibraltar *
	Nigeria	Philippines	Romania	Ecuador	United Arab Emirates *	Italy *	Guernsey *
	Senegal	Singapore *	Russia	El Salvador		Liechtenstein *	Isle of Man *
	South Africa	Sri Lanka	Slovakia	Guatemala		Luxembourg *	Jersey *
	Sudan	Taiwan *	Turkey	Mexico		Malta *	Netherlands Antilles *
	Tanzania	Thailand	Ukraine	Panama		Monaco *	Papua New Guinea
	Tunisia	Vietnam	Uzbekistan	Peru		Netherlands *	Puerto Rico *
	Zambia			Uruguay		Norway *	
	Zimbabwe			Venezuela		Portugal *	
						Slovenia *	
						Spain *	
						Sweden *	
						Switzerland *	
						United Kingdom *	

Appendix Table 2
Data on Capital Raisings - Data Coverage

This table shows the number of observations and firms from each country/region included in our dataset on capital raising activity. The dataset includes only security issues by firms in public markets. Each observation corresponds to a security issue. Data cover the period 1991-2005. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each region and income group.

	Observations		**Firms**	
	Number	***% of total***	**Number**	***% of total***
Germany	10,906	*6.5%*	1,306	*2.8%*
Japan	10,871	*6.5%*	4,026	*8.8%*
United States	68,121	*40.4%*	11,852	*25.8%*
Africa	431	*0.3%*	274	*0.6%*
Asia	18,668	*11.1%*	12,482	*27.2%*
Australia & New Zealand	4,981	*3.0%*	2,330	*5.1%*
Eastern Europe & Central Asia	649	*0.4%*	360	*0.8%*
Latin America & Caribbean	13,591	*8.1%*	2,917	*6.3%*
Middle East	666	*0.4%*	248	*0.5%*
Western Europe	36,917	*21.9%*	9,634	*21.0%*
Other	2,713	*1.6%*	540	*1.2%*
Total	**168,514**		**45,969**	
Developed economies	**141,833**	***84.2%***	**32,989**	***71.8%***
Developing economies	**26,681**	***15.8%***	**12,980**	***28.2%***

Appendix Table 3

Data on Firm-Level Characteristics - Data Coverage

This table shows the number of observations and firms from each country/region included in our analyses of firm-level characteristics. Data cover the period 1991-2005. Firms with capital raising activity are those identified as having raised capital through security issues in public markets at some point during the sample period. Firms with capital raisings at home are those identified as having raised capital through security issues in public markets in their home country over the sample period. Firms with capital raisings abroad are those identified as having raised capital through security issues in public markets outside of their home country over the sample period. Note that the sum of the number of firms with capital raising activity at home and abroad differs from the total number of firms with capital raising activity, as firms may raise capital both at home and abroad. Economies are classified as developed or developing based on income level in 2005. Developed economies correspond to high-income economies according to the World Bank classification. Developing economies correspond to low- and middle-income economies according to the World Bank classification. See Appendix Table 1 for a list of the economies included in each region and income group.

	Number of Observations					Number of Firms				
	Firms with no capital raising activity	**Firms with capital raising activity**	**Firms with capital raising activity at home**	**Firms with capital raising activity abroad**	**Total**	**Firms with no capital raising activity**	**Firms with capital raising activity**	**Firms with capital raising activity at home**	**Firms with capital raising activity abroad**	**Total**
Germany	4,853	6,221	6,028	774	11,074	471	678	660	68	1,149
Japan	14,945	29,360	27,499	7,757	44,305	1,206	2,901	2,762	574	4,107
Africa	3,900	530	403	199	4,430	548	61	46	22	609
Asia	19,236	34,483	32,360	5,142	53,719	2,429	4,743	4,458	589	7,172
Australia & New Zealand	4,449	6,237	6,099	515	10,686	646	979	960	55	1,625
Eastern Europe & Central Asia	2,633	957	762	286	3,590	367	113	91	33	480
Latin America & Caribbean	3,671	5,217	4,979	1,612	8,888	479	576	550	150	1,055
Middle East	568	538	135	451	1,106	79	83	17	72	162
Western Europe	27,377	36,018	34,011	5,788	63,395	2,895	4,048	3,813	560	6,943
Other	92	258	82	190	350	18	46	14	33	64
Total	**81,724**	**119,819**	**112,358**	**22,714**	**201,543**	**9,138**	**14,228**	**13,371**	**2,156**	**23,366**
Developed economies	**58,412**	**92,338**	**86,854**	**17,704**	**150,750**	**6,236**	**10,752**	**10,147**	**1,621**	**16,988**
Developing economies	**23,312**	**27,481**	**25,504**	**5,010**	**50,793**	**2,902**	**3,476**	**3,224**	**535**	**6,378**

Appendix Table 4
Series Description and Data Sources

This table shows the description of the data used and their sources.

Series Name	Description	Source
Amount of capital raised in public markets	Gross proceeds from security issues in public markets by firms in constant 2005 U.S. dollars. Data include only capital raisings by firms. Debt issues include only issues with an original maturity greater than one year. Data exclude debt issued by the public sector (including national, local and regional governments, government agencies, regional agencies, and non-government agencies), and capital raisings by investment funds, investment companies, and REITs. Data also exclude issues of mortgage-backed securities and other asset-backed securities. Amounts are converted to constant 2005 U.S. dollars from data in current U.S. dollars using the U.S. CPI.	SDC Global New Issues Database.
Total assets before raising capital	Total assets at the end of the fiscal quarter prior to issuing securities in public markets in current U.S. dollars.	SDC Global New Issues Database.
Total assets (million U.S. dollars)	Total assets at the end of the most recent fiscal year, converted to U.S. dollars using the fiscal year end exchange rate.	Worldscope
Sales (million U.S. dollars)	Net sales or revenues, converted to U.S. dollars using the fiscal year end exchange rate.	Worldscope
Capital expenditures (million U.S. dollars)	Funds used to acquire fixed assets other than those associated with acquisitions. It includes, but is not restricted to, additions to property, plant and equipment and investments in machinery and equipment. Data are converted to U.S. dollars using the fiscal year end exchange rate.	Worldscope
R&D expenditures (million U.S. dollars)	All direct and indirect costs related to the creation and development of new processes, techniques, applications and products with commercial possibilities. Data are converted to U.S. dollars using the fiscal year end exchange rate.	Worldscope
Return on assets	Sum of net income (before preferred dividends) and interest expenses on capitalized debt (after tax), over previous year's total assets.	Worldscope
Return on equity	Net income before preferred dividends minus preferred dividend requirement, over previous year's common equity.	Worldscope
Total debt	Interest bearing and capitalized lease obligations. It is the sum of long and short term debt.	Worldscope
Short term debt	Portion of debt payable within one year including current portion of long term debt and sinking fund requirements of preferred stock or debentures.	Worldscope
Foreign sales	Sales generated from operations in foreign countries.	Worldscope
Tobin's q	Ratio of market value of a firm's assets to their replacement cost, at the end of the most recent fiscal year. Market value of assets is calculated as the book value of debt, computed as book value of assets minus book value of equity, plus market capitalization of equity. The replacement value of assets is proxied by the book value of assets.	Worldscope