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PATTERNS OF INTERNATIONAL CAPITAL RAISINGS

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ABSTRACT

This paper documents several new patterns associated with firms issuing stocks and bonds in foreign markets that motivate the need for and help guide the direction of future research. Three major patterns stand out. (1) 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 cross-firm heterogeneity in financial globalization. (2) 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 those in domestic markets. (3) Firms continue to issue securities both abroad and at home after accessing international markets, suggesting that international and domestic markets are complements, not substitutes. Existing theories do not fully account for these patterns.

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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 stock and bond issues 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 has grown almost four-fold since 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 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, 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 how firms

¹ 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 (2007), Henry (2007), and Kose, Prasad, Rogoff, and Wei (2009). Moreover, a separate, though complementary, literature studies firm-level patterns in international trade. For a survey, see Bernard, Jensen, Redding, and Schott (2007).

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.

To analyze the firm-level patterns associated with international capital raisings, we construct a new database. The dataset includes 168,513 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 38,801 firms.

Three broad categories of findings emerge from our analysis. We first summarize the findings and then relate them to existing theoretical and empirical work on capital raisings and international financial integration.

First, a large and growing fraction of capital raisings, especially debt issuances, is conducted in international markets, but only a small proportion of firms actually uses international markets, and of this small fraction, a very small sub-sample accounts for the bulk of international capital raisings. Of the total capital raised through security issuances in capital markets in 2005, firms from developing and developed countries raised, respectively, 51 and 39 percent outside their home countries. This share is higher for debt than for equity issues. Debt issuances abroad accounted for 35 percent of the total amount raised through debt issuances in capital markets over the period 1991-2005, while equity issues abroad represented ten percent of total amount raised through equity issues over the same period. 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 firms (less than 700 firms) collected

about two-thirds of all the funds raised internationally. Finally, firms raising capital abroad are larger, slower growing, and more leveraged than firms that only raise capital domestically.

Second, changes in firm performance following equity and debt issues 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 larger and 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) increase the amount of money raised in domestic markets after internationalizing. In particular, for firms from developing (developed) countries, the median issuance in international markets is about 18 (two) times larger than the median issuance in domestic markets. Furthermore, firms do not opt out of domestic markets once they internationalize. To the contrary, while continuing to use international markets, firms significantly *increase* their capital raisings at home. For example, following internationalization, the typical developed country firm more than triples the average annual amount raised in domestic markets, increases the amount raised domestically relative to assets, and also captures a larger fraction of the total capital raising activity in its 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 Janakiraman, 1987; and Domowitz, Glen, and Madhavan, 1998). Thus, firms internationalize to gain access to less expensive capital (Foerster and Karolyi, 1999, and Miller, 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 changes in 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, does not fit the predictions of simple segmentation arguments that international markets offer unambiguously better services and/or less expensive capital than local markets (once firms meet the conditions required for going abroad). 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 very few firms actually raise capital abroad.²

Furthermore, theories of internationalization and corporate finance need to account for three 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. Third, firms raise capital in both international and domestic markets after accessing international markets. In sum, our findings indicate that current theories have substantive limitations in accounting for firm-level experiences and highlight directions for developing more precise theories of the internationalization process and its implications.

In addition, our paper extends several strands of empirical literature related to capital market internationalization. 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 expand their work by analyzing the extent of internationalization at the firm level. Several other papers analyze the characteristics of firms that list their shares abroad, through either direct cross-listings or depositary receipts (see, for example, Pagano, Roell, and Zechner, 2002; Lang, Lins, and Miller, 2003; Lang, Raedy, and Yetman, 2003; Claessens and Schmukler, 2007; and Gozzi, Levine, and Schmukler, 2008). 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

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

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. Our paper also relates to research on the firm-level effects of lowering barriers to international capital flows (see, for example, Chari and Henry, 2004, 2008; Patro and Wald, 2005; and Schmukler and Vesperoni, 2006). However, we do not directly study the effects of relaxing those barriers. Instead, we analyze the changes in firm performance and capital raising activity associated with security issuances in international capital markets.

This paper also identifies patterns relevant for the large corporate finance literature on the motivations for issuing debt and equity (see, for example, Loughran and Ritter, 1995, 1997; Pagano, Panetta, and Zingales, 1998; Baker and Wurgler, 2000, 2002; DeAngelo, DeAngelo, and Stulz, 2007; and Kim and Weisbach, 2008). We contribute to this literature by tracing the evolution of firm characteristics, including 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 motivations for security issuances. Furthermore, the finding that firms issue debt and equity securities in both domestic and foreign markets following internationalization suggests that future research needs to account for these corporate financing patterns.

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.

We focus our analysis of international capital raisings on security issuances in public capital markets. Firms may also access foreign financing by, among other things, borrowing directly from foreign banks and issuing syndicated loans abroad. These financing alternatives constitute a significant source of cross-border capital for firms and have been the focus of substantial previous research (see Carey and Nini, 2007 for a general overview of international syndicated loan markets; Claessens, 2006 reviews the literature on cross-border banking). In this paper, we analyze security issuances in public capital markets, rather than relationship lending associated with syndicated bank loans, because basic questions and theories of the causes and consequences of these capital raisings remain incompletely addressed.

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.

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.³ After these exclusions, we are left with a database covering 168,513 security issuances by 45,969 firms from 116 economies over the period 1991-2005. Appendix Table 1 lists the economies included in our dataset and their regional and income level classification. Appendix Table 2 presents data on the number of observations by region and income level.

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.⁴ 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. 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

³ 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.

⁴ 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.

classification of security issuances. But if financing decisions are relatively decentralized, considering subsidiaries' own nationality may be a better criterion. Actual decision-making policies may lie somewhere in-between these two extremes, with multinational firms possibly coordinating financing decisions with their subsidiaries across several markets. All the results reported in the paper are obtained classifying issues as foreign or domestic based on subsidiaries' 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 during our sample period, we match the data on security issuances from SDC with firm-level accounting and income statement data. These data come from Compustat North America for U.S. firms and Worldscope for firms from the rest of the world. We combine both datasets because Worldscope's coverage of U.S. firms is very limited. To ameliorate possible concerns about data comparability and to control for any differences across datasets, we include country- or firm-level fixed effects in our analyses. We also conducted all our analyses using only data from Worldscope and excluding U.S. firms, obtaining results similar to those reported throughout the paper. In addition, we conducted these analyses including the small sample of U.S. firms with firm-level data available from Worldscope and also obtained similar results.

After eliminating firms with missing data, outliers, and firms with less than three annual observations for our variables of interest, we are left with a sample of 38,801 firms from 60 economies covering the period 1991-2005, totaling 335,539 firm-year observations.⁵ ⁶ Of these

⁵ Appendix Table 3 shows the number of observations and firms classified by their capital raising activity by region and income level.

firms, 21,634 issued securities in public markets over the sample period according to SDC, while the remaining 17,167 did not raise capital in public capital markets over this period.⁷

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 relative to domestic markets in providing firm financing and has this changed over time? Second, what fraction of 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?

⁶ Firms from the U.S. and Japan represent about 39 and 13 percent of the observations in our dataset of firm-level characteristics, respectively. Excluding firms from both countries does not affect our conclusions.

⁷ 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 many firms that raise capital through security issuances according to SDC do not have accounting data available from Worldscope or Compustat North America.

3.1 Patterns of Global Capital Raising Activity

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 826 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. 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 42 billion U.S. dollars at 2005 prices in 1991 to 138 billion U.S. dollars in 2005.

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 nine 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.⁸

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 the 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.

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.^{9,10}

⁸ 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.

⁹ Out of 99 economies for which we have data on bond issuances, the internationalization of equity markets is higher than the internationalization of debt markets in only nine countries.

¹⁰ 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

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 describes firms' access to international capital markets.

The results presented in Table 2 show that, among those firms that issue securities in capital markets, the proportion that do so outside their home countries 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 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 very small percentage of those firms that issue equity tend to do so in international markets, while a larger proportion of firms that issue debt conduct these operations 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. The percentage of firms raising capital abroad through debt issues is much higher. For developed countries, 36.3 percent

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 and/or more beneficial for firms than equity issues in international markets.

of the firms that issued debt securities during our sample period conducted these operations abroad. In the case of developing countries, the share of firms issuing debt abroad during our sample period stands at 26.6 percent.

Figure 3 shows that capital raising activity in international markets is highly concentrated among the small proportion of firms that access international markets. 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. For developed economies, the top ten (20) percent of firms 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 ten (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 issue.

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, 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. A possible concern when comparing different groups of firms is that differences in firm-level characteristics may reflect differences in the nationality and industry of firms. To account for this, Table 3 reports median regressions of the different firm characteristics on country and industry dummies and a dummy variable that equals one for those firms that raise capital abroad and zero otherwise.¹¹ This variable captures differences between firms that raise capital abroad and other groups of firms classified according to their capital raising activity (firms that are listed in their domestic stock markets but do not raise capital over our sample period in column (a) and firms that only raise capital in domestic markets during our sample period in column (b)). 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.¹² In particular, firms that raise capital abroad tend to be larger, grow at a faster pace, have higher capital expenditures and R&D investments, and are more profitable. 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

¹¹ These regressions are estimated adjusting the standard errors for clustering at the firm level. Since there is no analytical solution for estimating clustered standard errors in quantile regressions, we estimate the standard errors through bootstrapping with clustering at the firm level. Similar results are obtained if we use standard errors that are robust to heteroskedasticity of unknown form.

¹² 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 most of the differences between these two groups of firms observable in Table 3 are statistically significant, after controlling for country and industry dummies.

have a longer maturity (a lower ratio of short-term debt to total debt). Also, firms that raise capital abroad tend to 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 1.6 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. Firms that raise capital abroad also show higher levels of indebtedness and exhibit longer debt maturities. Finally, as shown in the last column of Table 3, when we condition on industry and country fixed effects, firms that raise capital outside their home countries have significantly higher median Tobin's q than firms that only raise capital at home.

The differences between firms that raise capital abroad and the other groups of firms reported in Table 3 do not simply reflect differences between larger and smaller firms. In unreported robustness tests, we found that our conclusions hold when we analyze only those firms in the top quartile according to firm size (as measured by total assets in U.S. dollars).

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. By tracing firms through time, we are able to test whether firms that raise capital abroad differ from firms that only raise

capital at home before they actually access international capital markets or whether the cross-firm differences we observe in Table 3 materialize after internationalization. Second, we provide a detailed dynamic analysis by tracing the performance of firms over time after capital raisings, differentiating between equity and debt issues and capital raisings at home and abroad. This analysis allows us to better understand how raising capital abroad affects firms and whether these effects differ from those of domestic capital raisings.

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, 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 conduct SEOs in their home markets. Similarly, in the case of debt issues abroad, the control group includes those firms that issue debt securities at home.¹³ These regressions include country-year dummies to control for cross-country differences, industry dummies to account for cross-industry differences, and two dummy variables that identify firm's capital raising activity in international markets.¹⁴ The first one is a dummy variable that captures the period after capital raisings abroad, which equals one on the year of the first capital raising abroad of each type and in all subsequent years. This dummy variable equals zero before firms raise capital in international markets and for firms that do not raise capital abroad. 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 equals one

¹³ Similar results are obtained if we use as a control group firms that conduct any type of capital raising at home or if we use as control group both firms that raise capital at home and firms that are listed in their domestic stock markets but do not raise capital over our sample period.

¹⁴ These regressions are estimated with standard errors adjusted for clustering at the firm level. Similar results are obtained if we adjust the standard errors for clustering at the country level.

before firms raise capital in international markets and zero afterwards. It is zero for those firms in the control group. This dummy captures differences between 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 than firms that only raise capital at home before actually going abroad. Also, firms that raise capital abroad have higher valuations 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 going abroad than firms that only conduct SEOs at home, but not afterwards. Firms that issue debt in international markets tend to have faster growth rates, greater profits, and larger Tobin's q ratios before going abroad than firms that issue debt in local market. But these differences become smaller (or even disappear) following debt issuances in international 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 prospect of issuing securities abroad may allow firms to raise more capital domestically and expand. Therefore, the finding that firms that raise capital abroad are larger than domestic firms before actually 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 whether capital raisings abroad have different effects than domestic capital raisings. In this section, we compare 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 only a first step towards addressing this question.

Tables 6 and 7 analyze the time-series patterns of firm-level variables following SEOs at home and abroad, respectively. Tables 8 and 9 show similar data for debt issuances in domestic and international markets. Specifically, these tables present regressions of firm characteristics on a series of dummy variables that trace out annual patterns after capital raisings. The variable “Year of SEO at home 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

type of capital raising under analysis in each case. Since we want to focus on the within-firm changes that follow the different types of capital raisings, these regressions include firm-level fixed effects. Therefore, we are comparing each firm to itself before raising capital. The regressions also include year dummies to control for global time effects.

The regression results in Tables 6 to 9 indicate that the time-series patterns of firm-level variables are broadly similar for issues at home and abroad. In the case of SEOs, Tables 6 and 7 show that firms expand following both SEOs at home and abroad. Also, firms tend to experience a long-term decrease in growth and profitability (measured by return on equity) 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 worsening of firm performance could also be the result of earnings management, as insiders may have incentives to window-dress company accounts before raising capital (Rangan, 1998 and Teoh, Welch, and Wong, 1998).¹⁵ In terms of investment, although the absolute size of capital expenditures and R&D investments increases, when scaling expenditures by sales 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 in the long run following SEOs.

In the case of debt issuances, Tables 8 and 9 show that the time patterns of firm-level variables are broadly similar for issues at home and abroad. Firms tend to expand following debt

¹⁵ 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.

issues and experience a long-term decrease in profitability and growth. Debt issues, both at home and abroad, 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.¹⁶

A possible concern regarding the patterns presented in Tables 6 to 9 is whether they are affected by other capital raisings coinciding with the timing of the specific issuances analyzed in these tables. For instance, 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 to 9 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 to 9. Firms tend to expand and experience a decrease in their growth rate and profitability following capital raisings. Moreover, the time-series patterns of firm-level variables are broadly similar for issues at home and abroad.

¹⁶ As a robustness test, we estimated the regressions of the evolution of firm performance following SEOs and debt issues abroad reported in Tables 7 and 9 restricting the sample to issuances by foreign firms in U.S. capital markets. If U.S. markets have a particularly effective investor protection environment, then focusing on the U.S. would provide a more powerful test of whether firms that internationalize into stronger investor protection regimes experience an enduring improvement in firm performance, as bonding arguments predict. When restricting the sample to foreign issues in U.S. markets, we find results similar to those reported in Tables 7 and 9, that is, firms tend to expand following capital raisings and experience a long-term decrease in profitability and growth.

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 between domestic and international markets? After firms raise capital abroad, does their use of domestic capital markets change? 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 shows 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 between issues abroad and at home in more detail, Table 10 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 using means instead of medians. A possible concern regarding these comparisons is that they may reflect differences in the nationality and industry of those firms that raise capital in the different markets and not actual differences between cross-border and domestic issues. For instance, firms that raise capital abroad may come mostly from industries that tend to make larger issuances. To address this concern, Table 10 reports median regressions of the amount raised per issue on country and industry dummies and a dummy variable that equals one if the issue was conducted abroad and zero otherwise.¹⁷ This variable captures differences between issues abroad and at home.

Table 10 shows that when analyzing all issues, those conducted abroad tend to be significantly larger than those conducted 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 between issues at home and abroad are statistically significant at the one percent level, after controlling for country and industry dummies. 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

¹⁷ These regressions are estimated adjusting the standard errors for clustering at the firm level. Since there is no analytical solution for estimating clustered standard errors in quantile regressions, we estimate the standard errors through bootstrapping with clustering at the firm level. Similar results are obtained if we use standard errors that are robust to heteroskedasticity of unknown form.

equity issue at home (62 and 3.8 million U.S. dollars at 2005 prices, respectively).¹⁸ Similar differences across markets are visible in the case of debt issues by developing country firms. All these differences are robust to controlling for country and industry dummies and are statistically significant at the one percent level.

The larger size of issues abroad does not simply reflect the fact that firms that raise capital abroad are different, and in particular larger, than firms that raise capital at home. In particular, Table 10 shows the median amount raised per issue in domestic and international markets, restricting the sample to issues by firms that raise capital both at home and abroad at some point during our sample period.¹⁹ The results show that in the case of developed economies, the median amount raised per equity issue at home over the 1991-2005 period by these firms was 126.5 million U.S. dollars at 2005 prices, compared to 116.2 million for equity issues abroad. However, once we control for country and industry dummies we find that equity issues abroad tend to be larger than issues at home and this difference is statically significant at the one percent level. 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 statistic reached 155.8 million in the case of debt issues abroad, with the difference being statistically significant at the one percent level. In the case of developing economies, Table 10 shows that both equity and debt issues abroad are larger than issues at home when analyzing only issues by firms that raise capital both

¹⁸ 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, the 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.

¹⁹ In the results reported in Table 10, 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. These issues may not be directly comparable to issues abroad by these firms, as firms may change after accessing international markets, which might affect the size of their domestic and international security issues. 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 results similar to those reported in Table 10.

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 ones.²⁰

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 11 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 11 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, firms raise on average only 18 and eight 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 the 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

²⁰ We also conducted other robustness tests to analyze whether issues abroad are larger than issues at home when comparing issues by the same firm. First, we estimated ordinary least squares regressions of the amount raised per issue on firm-level dummies, year dummies, and a dummy identifying whether issues were conducted at home or abroad, including only firms that raise capital both at home and abroad at some point during our sample period. Second, for each firm that raised capital both at home and abroad at some point during our sample period we calculated 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 this variable are different from zero. Both types of analysis indicate that, in most cases, issues abroad tend to be larger than domestic issues, consistent with the idea that firms raise larger amounts when issuing securities in international markets.

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 the 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 11 indicate that firms that access international capital markets remain active in domestic markets, conducting a significant share of their capital raisings in these 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 and market conditions.

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 12 compares the amount raised domestically per year by firms that raise capital abroad before and after they first access international markets, differentiating between equity and debt issues. Since the amount raised per year is censored at zero, Table 3 displays Tobit regressions of this variable on a dummy variable that equals one on the year of the

first capital raising abroad and in all subsequent years, and zero before.²¹ This variable captures changes in capital raising activity in domestic markets following internationalization.²²

Table 12 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 jumps 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 Tobit regressions show that these differences are positive and significant at the one 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.

The increase in the domestic capital raisings of firms that access international markets does not simply reflect the fact that firms grow after raising capital abroad. In particular, Table 12 reports data on the amount raised per year in domestic markets divided by the firms' assets at the moment of the capital raising. The Tobit regressions show that, even when scaling the amount

²¹ These regressions are estimated with standard errors adjusted for clustering at the firm level.

²² The displayed coefficients in Table 12 are the effects of discrete changes in the dummy variable on the expected value of the observed dependent variable. Similar conclusions are obtained if we analyze the effects of these changes on the expected value of the observed dependent variable conditional on being uncensored.

raised at home by the firms' assets, we still find evidence of a significant increase in firms' capital raisings at home.²³

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

The results from Table 12 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, each firm that raises capital abroad accounts on average for 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. In all cases, the Tobit regressions show that there is a statistically significant increase in the relative participation of firms in domestic capital markets following internationalization.²⁴

²³ The results reported in Table 12 show that for the amount raised at home through equity issues scaled by assets for developing country firms and the amount raised at home through debt issues over asset for firms from developing economies the mean for the period before the first capital raising abroad is larger than the mean for the period following internationalization. However, the tobit regression results, which account for the censored nature of the data, show a significant increase in both of these variables following internationalization.

²⁴ A possible concern regarding the results reported in Table 12 is that we are pooling all the firms that raise capital abroad at some point during our sample period. As a robustness check, we analyzed the within-firm change in capital raising activity in domestic markets following internationalization. To do this, we estimated for each firm that raises capital abroad the difference between the average amount raised at home before and after going abroad and then tested whether the mean across firms of this variable is different from zero. The results are broadly similar

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 motivate 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 four times more money through bond sales relative to equity issues. Moreover, bonds markets are more internationalized. About 35 percent of all capital raised through debt issues was raised in markets other than the firm's home market, while the corresponding figure for equity issues is ten 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) indicate that financial markets are more internationalized than suggested by only considering equity markets and (2) advertise the need for additional work that accounts for the internationalization of debt markets.

to those reported in Table 12, that is, firms increase the amount raised at home and tend to capture a larger share of domestic market activity following internationalization.

Second, while firms expand and invest more after raising debt or equity abroad, they (1) do not become more profitable or experience an increase in valuation 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 suggest that firms get bigger, but not necessarily “better” following internationalization. Furthermore, they suggest that 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 seem to spark enduring improvements in corporate performance that differ from the dynamics that follow domestic issuances

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 larger 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.

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 those firms that rely solely on local markets. Firms that access international markets both grow relative to other corporations in the local market and account for a higher percentage of the total capital raised in domestic markets following internationalization. Future research could assess whether these changes affect the ability of smaller firms to obtain financing for growth.

References

- Alexander, G.J., Eun, C.S., Janakiramanan, S., 1987. Asset pricing and dual listing on foreign capital markets: A note. *Journal of Finance* 42, 151-158.
- Baker, M., Wurgler, J., 2000. The equity share in new issues and aggregate stock returns. *Journal of Finance* 55, 2219-2257.
- Baker, M., Wurgler, J., 2002. Market timing and capital structure. *Journal of Finance* 57, 1-32.
- Bernard, A., Jensen, J.B., Redding, S., Schott, P., 2007. Firms in international trade. *Journal of Economic Perspectives* 21, 105-130.
- Black, F., 1974. International capital market equilibrium with investment barriers. *Journal of Financial Economics* 1, 337-352.
- Carey, M., Nini, G., 2007. Is the corporate loan market globally integrated? A pricing puzzle. *Journal of Finance* 62, 2969-3007.
- Chari, A., Henry, P.B., 2004. Risk sharing and asset prices: Evidence from a natural experiment. *Journal of Finance* 59, 1295-1324.
- Chari, A., Henry, P.B., 2008. Firm-specific information and the efficiency of investment. *Journal of Financial Economics* 87, 636-655.
- Claessens, S., 2006. Competitive implications of cross-border banking, in: Caprio, G., Evanof, D., Kaufman, G., (Eds.), *Cross-Border Banking: Regulatory Challenges*. World Scientific Publishing Co., New Jersey, pp. 151-182.
- Claessens, S., Schmukler, S., 2007. International financial integration through equity markets: Which firms from which countries go global? *Journal of International Money and Finance* 26, 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, 1757-1831.
- DeAngelo, H., DeAngelo, L., Stulz, R.M., 2007. Fundamentals, market timing, and seasoned equity offerings. NBER Working Paper No. 13285.
- Doidge, C., Karolyi, G.A., Stulz, R.M., 2004. Why are firms that list in the U.S. worth more? *Journal of Financial Economics* 71, 205-238.
- Domowitz, I., Glen, J., Madhavan, A., 1998. International cross-listing and order flow migration: Evidence from an emerging market. *Journal of Finance* 53, 2001-2027.
- Errunza, V., Losq, E., 1985. International asset pricing under mild segmentation: Theory and test. *Journal of Finance* 40, 105-124.

- Errunza, V., Miller, D.P., 2000. Market segmentation and the cost of capital in international equity markets. *Journal of Financial and Quantitative Analysis* 35, 577-600.
- Foerster, S.R., Karolyi, G.A., 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, 981-1013.
- Forbes, K., 2007. The microeconomic evidence on capital controls: No free lunch, in: Edwards, S. (Ed.), *Capital Controls and Capital Flows in Emerging Economies: Policies, Practices, and Consequences*. University of Chicago Press, Chicago, pp. 171-199.
- Gozzi, J.C., Levine, R., Schmukler, S., 2008. Internationalization and the evolution of corporate valuation. *Journal of Financial Economics* 88, 607-632.
- Henderson, B.J., Jegadeesh, N., Weisbach, M.S., 2006. World markets for raising new capital. *Journal of Financial Economics* 82, 63-101.
- Henry, P.B., 2007. Capital account liberalization: Theory, evidence, and speculation. *Journal of Economic Literature* 45, 887-935.
- Jensen, M.C., Meckling, W.H., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3, 305-360.
- Kim, W., Weisbach, M.S., 2008. Motivations for public equity offers: An international perspective. *Journal of Financial Economics* 87, 287-307.
- Kose, M.A., Prasad, E., Rogoff, K., Wei, S.J., 2009. Financial globalization: A reappraisal. *IMF Staff Papers* 56, 8-62.
- Lang, M., Lins, V., Miller, D.P., 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, 317-345.
- Lang, M., Raedy, J.S., Yetman, M.H., 2003. How representative are firms that are cross-listed in the United States? An analysis of accounting quality. *Journal of Accounting Research* 41, 363-386.
- Levine, R., Schmukler, S., 2006. Internationalization and stock market liquidity. *Review of Finance* 10, 153-187.
- Levine, R., Schmukler, S., 2007. Migration, liquidity spillovers, and trade diversion: The effects of internationalization on stock market activity. *Journal of Banking and Finance* 31, 1595-1612.
- Loughran, T., Ritter, J.T., 1995. The new issues puzzle. *Journal of Finance* 50, 23-51.
- Loughran, T., Ritter, J.T., 1997. The operating performance of firms conducting seasoned equity offerings. *Journal of Finance* 52, 1823-1850.

- Miller, D.P., 1999. The market reaction to international cross-listings: Evidence from depository receipts. *Journal of Financial Economics* 51, 103-123.
- Obstfeld, M., Taylor, A.M., 2004. *Global Capital Markets: Integration, Crises, and Growth*. Cambridge University Press, New York.
- Pagano, M., Panetta, F., Zingales, L., 1998. Why do companies go public? An empirical analysis. *Journal of Finance* 53, 27-64.
- Pagano, M., Roëll, A., Zechner, J., 2002. The geography of equity listing: Why do companies list abroad? *Journal of Finance* 57, 2651-2694.
- Patro, D., Wald, J., 2005. Firm characteristics and the impact of emerging market liberalizations. *Journal of Banking and Finance* 29, 1671-1695.
- Rangan, S., 1998. Earnings management and the performance of seasoned equity offerings. *Journal of Financial Economics* 50, 101-122.
- Reese, W.A. Jr., Weisbach, M.S., 2002. Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings. *Journal of Financial Economics* 66, 65-104.
- Schmukler, S., Vesperoni, E., 2006. Financial globalization and debt maturity in emerging economies. *Journal of Development Economics* 79, 183-207.
- Solnik, B.H., 1974. Why not diversify internationally rather than domestically? *Financial Analysts Journal* 30, 48-54.
- Stapleton, R., Subrahmanyam, M., 1977. Market imperfections, capital market equilibrium, and corporate finance. *Journal of Finance* 32, 307-319.
- Stulz, R., 1999. Globalization, corporate finance, and the cost of capital. *Journal of Applied Corporate Finance* 12, 8-25.
- Teoh, S.H., Welch, I., Wong, T.J., 1998. Earnings management and the long-run market performance of initial public offerings. *Journal of Finance* 53, 1935-1974.

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 the firm's home country. Data are in constant 2005 U.S. dollars. See Appendix Table 1 for a list of the economies included in each region and income group.

	Equity issues				Debt issues				Total			
	Home (a)	Abroad (b)	Total (c)=(a)+(b)	% abroad	Home (d)	Abroad (e)	Total (f)=(d)+(e)	% abroad	Home (g)=(a)+(d)	Abroad (h)=(b)+(e)	Total (i)=(g)+(h)	% 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	1,449,157	170,395	1,619,552	10.5%	2,398,492	3,303,331	5,701,823	57.9%	3,847,649	3,473,726	7,321,375	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	4,451,676	504,026	4,955,703	10.2%	12,843,684	6,932,260	19,775,944	35.1%	17,295,360	7,436,287	24,731,647	30.1%
Developed economies	4,030,375	341,953	4,372,328	7.8%	12,512,004	6,634,818	19,146,822	34.7%	16,542,379	6,976,771	23,519,150	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 the firm's home country. Since firms may conduct several different types of issues in different markets, the number of firms in the total columns may differ from the sum of the different columns. 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%	12,041.0	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 that do not raise 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 that raise capital through security issues in public markets in their home country at some point during the sample period but that do not raise capital through security issues outside their home country during the sample period. Firms that raise capital abroad are those that raise capital through security issues in public markets outside their home country at some point during the sample period. These include firms that raise capital both at home and abroad. The number of observations used to calculate the medians in each case is in parentheses. Columns (a) and (b) report the results of median regressions of the different firm characteristics on a dummy identifying firms that raise capital abroad, country dummies, and industry dummies. Only the coefficient on the abroad dummy is reported. Standard errors are estimated through bootstrapping with clustering at the firm level. z-statistics are in brackets. 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 that raise capital abroad		
	Median	Median	Median	Median regression	
				Coefficient on difference with firms with no capital raising activity (a)	Coefficient on difference with firms that only raise capital at home (b)
Firm characteristics					
<i>Size</i>					
Total assets in million U.S. dollars	99.3 (146,133)	153.0 (157,419)	1,745.4 (24,173)	1,519.0 *** [16.969]	1,504.0 *** [17.466]
Sales in million U.S. dollars	53.5 (149,100)	110.1 (157,608)	921.2 (24,241)	769.2 *** [18.328]	749.8 *** [16.787]
<i>Growth</i>					
Log of (1+annual percentage change in assets in U.S. dollars)	4.6% (124,412)	7.7% (133,103)	7.0% (23,444)	2.7% *** [14.11]	-0.4% ** [-2.14]
Log of (1+annual percentage change in sales in U.S. dollars)	5.9% (119,148)	9.6% (130,148)	7.5% (23,215)	2.3% *** [11.149]	-1.0% *** [-4.589]
<i>Investment</i>					
Capital expenditures in million U.S. dollars	1.6 (131,004)	4.4 (143,742)	48.6 (21,769)	42.8 *** [17.781]	41.4 *** [17.026]
R&D expenditures in million U.S. dollars	0.0 (78,065)	0.1 (82,258)	9.1 (11,000)	5.9 *** [5.307]	5.6 *** [4.976]
Capital expenditures/sales	2.8% (129,111)	3.8% (141,525)	5.0% (20,908)	1.6% *** [19.255]	1.3% *** [12.47]
R&D expenditures/sales	0.0% (77,181)	0.0% (80,578)	1.1% (10,283)	0.0% [0.000]	0.0% [-0.263]
<i>Profitability</i>					
Return on assets	1.9% (122,912)	2.5% (132,887)	2.0% (21,561)	0.2% ** [2.488]	-0.2% *** [-3.031]
Return on equity	6.6% (122,683)	7.8% (132,370)	7.6% (21,517)	2.2% *** [12.606]	0.4% ** [1.995]
<i>Capital structure</i>					
Total debt/total assets	18.5% (140,475)	20.4% (152,971)	29.6% (23,682)	8.2% *** [16.363]	7.3% *** [13.484]
Short-term debt/total debt	46.1% (122,238)	40.5% (135,554)	38.4% (22,764)	-13.9% *** [-24.648]	-9.6% *** [-15.348]
<i>Valuation</i>					
Tobin's q	1.120 (98,094)	1.208 (106,682)	1.154 (20,588)	0.094 *** [10.714]	0.048 *** [5.838]

Table 4

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

This table reports ordinary least square regressions of different firm-level characteristics on dummies that identify the capital raising activity of firms in international markets over the 1991-2005 period. The sample includes both firms that conduct seasoned equity offerings (SEOs) abroad at some point during the sample period and firms that conduct SEOs at home at some point during the sample period. The before SEO abroad dummy equals one before a firm raises capital through an SEO in a public market outside its home country and zero otherwise. The after SEO abroad dummy equals one on and after the year when a firm raises capital through an SEO in a public market outside its home country and zero otherwise. Both dummies equal zero for firms that only conduct SEOs at home. The first seasoned equity offering in a public market outside firms' home country during the sample period is used to identify firms' capital raising activity abroad. Column (c) reports the difference between the coefficients on the after SEO abroad dummy and the before SEO abroad dummy and the result of a Wald test of equality of these coefficients. F-statistics from these tests are in parentheses. All regressions include country-year dummies and industry dummies. Standard errors are adjusted for clustering at the firm level. 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)	Country- year dummies	Industry dummies	No. of obs.	No. of firms	No. of firms raising capital abroad	After SEO dummy - Before SEO dummy (c)=(b)-(a)
<i>Size</i>								
Log of total assets in million U.S. dollars	0.488 *** [4.064]	1.212 *** [11.80]	Yes	Yes	100,090	10,465	550	0.724 *** (44.21)
Log of sales in million U.S. dollars	0.455 *** [3.538]	1.102 *** [10.65]	Yes	Yes	97,776	10,252	536	0.647 *** (32.51)
<i>Growth</i>								
Log of (1+annual percentage change in assets in U.S. dollars)	0.068 *** [5.779]	0.003 [0.488]	Yes	Yes	88,773	10,064	538	-0.065 *** (25.4)
Log of (1+annual percentage change in sales in U.S. dollars)	0.070 *** [5.944]	-0.001 [-0.201]	Yes	Yes	86,280	9,758	522	-0.071 *** (32.33)
<i>Investment</i>								
Log of capital expenditures in million U.S. dollars	0.744 *** [5.552]	1.309 *** [12.18]	Yes	Yes	86,383	9,707	512	0.565 *** (20.49)
Log of R&D expenditures in million U.S. dollars	0.651 *** [3.037]	1.164 *** [7.218]	Yes	Yes	28,040	3,448	241	0.513 *** (7.26)
Capital expenditures/sales	0.032 *** [3.120]	0.018 ** [2.354]	Yes	Yes	89,492	10,030	515	-0.014 (1.84)
R&D expenditures/sales	0.083 ** [2.092]	0.024 [1.079]	Yes	Yes	51,162	5,779	271	-0.059 ** (4.99)
<i>Profitability</i>								
Return on assets	-0.007 [-0.507]	0.016 ** [2.485]	Yes	Yes	87,616	9,990	521	0.022 * (3.62)
Return on equity	0.032 [1.499]	0.014 [1.178]	Yes	Yes	87,237	9,991	521	-0.017 (0.64)
<i>Capital structure</i>								
Total debt/total assets	-0.007 [-0.672]	0.003 [0.391]	Yes	Yes	97,762	10,359	543	0.011 (0.98)
Short-term debt/total debt	-0.058 *** [-3.754]	-0.068 *** [-5.439]	Yes	Yes	87,940	9,634	498	-0.010 (0.43)
<i>Valuation</i>								
Tobin's q	0.450 *** [3.914]	0.026 [0.465]	Yes	Yes	74,366	8,966	505	-0.424 *** (16.1)

Table 5
Before and After Comparisons between Firms Conducting Debt Issues at Home and Abroad

This table reports ordinary least square regressions of different firm-level characteristics on dummies that identify the capital raising activity of firms in international markets over the 1991-2005 period. The sample includes both firms that raise capital through debt issues abroad at some point during the sample period and firms that raise capital through debt issues at home at some point during the sample period. The before debt issue abroad dummy equals one before a firm raises capital through a debt issue in a public market outside 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 its home country and zero otherwise. Both dummies equal zero for firms that only issue debt at home. The first debt issue in a public market outside firms' home country during the sample period is used to identify firms' capital raising activity abroad. Column (c) reports the difference between the coefficients on the after debt issue abroad dummy and the before debt issue abroad dummy and the result of a Wald test of equality of these coefficients. F-statistics from these tests are in parentheses. All regressions include country-year dummies and industry dummies. Standard errors are adjusted for clustering at the firm level. 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)	Country- year dummies	Industry dummies	No. of obs.	No. of firms	No. of firms raising capital abroad	After debt issue dummy - Before debt issue dummy (c)=(b)-(a)
<i>Size</i>								
Log of total assets in million U.S. dollars	1.182 *** [18.87]	1.241 *** [21.80]	Yes	Yes	55,010	4,916	1,599	0.059 (1.03)
Log of sales in million U.S. dollars	1.049 *** [16.73]	1.105 *** [19.13]	Yes	Yes	54,615	4,925	1,622	0.056 (0.94)
<i>Growth</i>								
Log of (1+annual percentage change in assets in U.S. dollars)	0.034 *** [7.534]	-0.014 *** [-4.492]	Yes	Yes	52,027	4,920	1,690	-0.048 *** (120.6)
Log of (1+annual percentage change in sales in U.S. dollars)	0.030 *** [6.576]	-0.012 *** [-3.695]	Yes	Yes	51,715	4,903	1,686	-0.042 *** (86.67)
<i>Investment</i>								
Log of capital expenditures in million U.S. dollars	1.075 *** [14.83]	1.055 *** [15.63]	Yes	Yes	45,930	4,518	1,552	-0.020 (0.09)
Log of R&D expenditures in million U.S. dollars	0.761 *** [6.207]	0.759 *** [6.997]	Yes	Yes	14,609	1,517	675	-0.002 (0)
Capital expenditures/sales	0.006 [0.984]	-0.005 [-1.124]	Yes	Yes	48,724	4,796	1,551	-0.012 ** (4.26)
R&D expenditures/sales	-0.007 [-1.546]	0.003 [0.440]	Yes	Yes	31,233	3,066	816	0.010 ** (4.62)
<i>Profitability</i>								
Return on assets	0.009 *** [3.547]	-0.006 *** [-2.726]	Yes	Yes	49,749	4,767	1,560	-0.015 *** (47.77)
Return on equity	0.040 *** [5.609]	0.000 [0.0321]	Yes	Yes	49,478	4,759	1,558	-0.039 *** (29.58)
<i>Capital structure</i>								
Total debt/total assets	0.027 *** [3.166]	0.085 *** [11.79]	Yes	Yes	54,165	4,884	1,589	0.058 *** (48.22)
Short-term debt/total debt	0.016 * [1.850]	-0.010 [-1.416]	Yes	Yes	53,121	4,847	1,581	-0.027 *** (9.58)
<i>Valuation</i>								
Tobin's q	0.163 *** [4.643]	0.048 * [1.793]	Yes	Yes	38,882	3,928	1,464	-0.116 *** (15.1)

Table 6
Evolution of Firm Characteristics Following Seasoned Equity Offerings at Home

This table reports regressions of firm-level characteristics on dummies that identify the capital raising activity of firms. The first four dummy variables equal one in the designated year and zero otherwise. The more than three years after SEO at home dummy equals one after the third year following a seasoned equity offering (SEO) at home and zero before. The sample includes only firms that conduct SEOs in a public market in their home country at some point during the sample period. The first SEO at home during the sample period is used to identify firms' capital raising activity. The regressions are estimated with fixed effects at the firm level. All regressions include year dummies. 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	Year of SEO at home dummy	One year after SEO at home dummy	Two years after SEO at home dummy	Three years after SEO at home dummy	More than three years after SEO at home dummy	Firm dummies	Year dummies	No. of obs.	No. of firms
<i>Size</i>									
Log of total assets in million U.S. dollars	0.425 *** [52.12]	0.472 *** [53.06]	0.488 *** [49.70]	0.496 *** [45.89]	0.485 *** [42.80]	Yes	Yes	97,475	10,131
Log of sales in million U.S. dollars	0.298 *** [31.32]	0.405 *** [39.14]	0.441 *** [38.58]	0.468 *** [37.22]	0.471 *** [35.74]	Yes	Yes	95,237	9,928
<i>Growth</i>									
Log of (1+annual percentage change in assets in U.S. dollars)	0.140 *** [31.94]	-0.058 *** [-12.38]	-0.095 *** [-18.20]	-0.106 *** [-18.59]	-0.120 *** [-19.50]	Yes	Yes	86,528	9,751
Log of (1+annual percentage change in sales in U.S. dollars)	0.055 *** [12.17]	-0.018 *** [-3.740]	-0.073 *** [-13.68]	-0.091 *** [-15.46]	-0.110 *** [-17.45]	Yes	Yes	84,109	9,456
<i>Investment</i>									
Log of capital expenditures in million U.S. dollars	0.448 *** [29.84]	0.561 *** [34.18]	0.483 *** [26.54]	0.401 *** [19.97]	0.351 *** [16.45]	Yes	Yes	84,056	9,401
Log of R&D expenditures in million U.S. dollars	0.264 *** [15.34]	0.415 *** [21.94]	0.454 *** [21.68]	0.491 *** [21.29]	0.525 *** [21.46]	Yes	Yes	27,024	3,302
Capital expenditures/sales	0.013 *** [5.193]	0.011 *** [3.888]	-0.009 *** [-2.847]	-0.019 *** [-5.668]	-0.025 *** [-6.973]	Yes	Yes	87,109	9,717
R&D expenditures/sales	-0.006 [-1.046]	-0.006 [-0.969]	-0.002 [-0.351]	-0.007 [-0.945]	-0.014 * [-1.698]	Yes	Yes	50,053	5,616
<i>Profitability</i>									
Return on assets	0.011 *** [4.230]	0.020 *** [7.512]	0.012 *** [4.146]	0.014 *** [4.222]	0.011 *** [3.125]	Yes	Yes	85,420	9,682
Return on equity	-0.020 *** [-2.725]	-0.048 *** [-6.183]	-0.059 *** [-6.814]	-0.062 *** [-6.562]	-0.068 *** [-6.682]	Yes	Yes	85,036	9,684
<i>Capital structure</i>									
Total debt/total assets	-0.043 *** [-23.37]	-0.030 *** [-14.90]	-0.021 *** [-9.538]	-0.017 *** [-6.950]	-0.016 *** [-6.185]	Yes	Yes	95,225	10,032
Short-term debt/total debt	-0.013 *** [-3.957]	-0.009 *** [-2.646]	-0.012 *** [-2.987]	-0.013 *** [-2.939]	-0.003 [-0.606]	Yes	Yes	85,677	9,346
<i>Valuation</i>									
Tobin's q	-0.044 ** [-2.358]	-0.304 *** [-15.08]	-0.403 *** [-18.13]	-0.483 *** [-19.77]	-0.536 *** [-20.34]	Yes	Yes	72,126	8,667

Table 7

Evolution of Firm Characteristics Following Seasoned Equity Offerings Abroad

This table reports regressions of firm-level characteristics on dummies that identify the capital raising activity of firms. The first four dummy variables equal one in the designated year and zero otherwise. The more than three years after SEO abroad dummy equals one after the third year following a seasoned equity offering (SEO) abroad and zero before. The sample includes only firms that conduct SEOs in a public market outside their home country at some point during the sample period. The first SEO abroad during the sample period is used to identify firms' capital raising activity. The regressions are estimated with fixed effects at the firm level. All regressions include year dummies. 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	Year of SEO abroad dummy	One year after SEO abroad dummy	Two years after SEO abroad dummy	Three years after SEO abroad dummy	More than three years after SEO abroad dummy	Firm dummies	Year dummies	No. of obs.	No. of firms
<i>Size</i>									
Log of total assets in million U.S. dollars	0.503 *** [15.27]	0.540 *** [15.04]	0.537 *** [13.57]	0.519 *** [11.95]	0.406 *** [8.541]	Yes	Yes	4,926	550
Log of sales in million U.S. dollars	0.381 *** [9.799]	0.415 *** [9.787]	0.421 *** [9.005]	0.375 *** [7.319]	0.212 *** [3.778]	Yes	Yes	4,779	536
<i>Growth</i>									
Log of (1+annual percentage change in assets in U.S. dollars)	0.097 *** [5.256]	-0.092 *** [-4.663]	-0.118 *** [-5.469]	-0.146 *** [-6.225]	-0.166 *** [-6.342]	Yes	Yes	4,490	538
Log of (1+annual percentage change in sales in U.S. dollars)	0.012 [0.585]	-0.094 *** [-4.412]	-0.141 *** [-6.059]	-0.148 *** [-5.813]	-0.170 *** [-5.967]	Yes	Yes	4,371	522
<i>Investment</i>									
Log of capital expenditures in million U.S. dollars	0.510 *** [8.477]	0.474 *** [7.273]	0.435 *** [6.022]	0.357 *** [4.513]	0.126 [1.460]	Yes	Yes	4,418	512
Log of R&D expenditures in million U.S. dollars	0.290 *** [4.370]	0.372 *** [5.161]	0.484 *** [6.110]	0.449 *** [5.102]	0.325 *** [3.288]	Yes	Yes	1,832	241
Capital expenditures/sales	0.025 ** [2.386]	0.008 [0.685]	-0.007 [-0.596]	-0.002 [-0.136]	-0.013 [-0.860]	Yes	Yes	4,432	515
R&D expenditures/sales	-0.006 [-0.295]	0.009 [0.439]	-0.014 [-0.583]	-0.018 [-0.673]	-0.017 [-0.574]	Yes	Yes	1,984	271
<i>Profitability</i>									
Return on assets	0.017 * [1.755]	0.002 [0.192]	-0.008 [-0.736]	-0.005 [-0.429]	-0.023 [-1.645]	Yes	Yes	4,273	521
Return on equity	-0.013 [-0.474]	-0.078 *** [-2.641]	-0.070 ** [-2.139]	-0.115 *** [-3.228]	-0.113 *** [-2.841]	Yes	Yes	4,269	521
<i>Capital structure</i>									
Total debt/total assets	-0.033 *** [-4.786]	-0.022 *** [-2.903]	-0.014 * [-1.681]	-0.018 ** [-1.996]	-0.019 * [-1.913]	Yes	Yes	4,824	543
Short-term debt/total debt	-0.003 [-0.229]	-0.018 [-1.201]	0.004 [0.259]	0.010 [0.540]	0.042 ** [2.156]	Yes	Yes	4,460	498
<i>Valuation</i>									
Tobin's q	-0.073 [-0.960]	-0.490 *** [-5.988]	-0.656 *** [-7.302]	-0.836 *** [-8.448]	-0.949 *** [-8.643]	Yes	Yes	4,346	505

Table 8
Evolution of Firm Characteristics Following Debt Issues at Home

This table reports regressions of firm-level characteristics on dummies that identify the capital raising activity of firms. The first four dummy variables equal one in the designated year and zero otherwise. The more than three years after debt issue at home dummy equals one after the third year after a firm raises capital through a debt issue at home and zero before. The sample includes only firms that raise capital through a debt issue in a public market in their home country at some point during the sample period. The first debt issue at home during the sample period is used to identify firms' capital raising activity. The regressions are estimated with fixed effects at the firm level. All regressions include year dummies. 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	Year of debt issue at home dummy	One year after debt issue at home dummy	Two years after debt issue at home dummy	Three years after debt issue at home dummy	More than three years after debt issue at home dummy	Firm dummies	Year dummies	No. of obs.	No. of firms
<i>Size</i>									
Log of total assets in million U.S. dollars	0.239 *** [24.89]	0.243 *** [23.86]	0.226 *** [20.78]	0.202 *** [17.22]	0.068 *** [5.450]	Yes	Yes	46,788	4,139
Log of sales in million U.S. dollars	0.181 *** [17.08]	0.208 *** [18.61]	0.192 *** [16.00]	0.181 *** [14.00]	0.062 *** [4.493]	Yes	Yes	46,300	4,134
<i>Growth</i>									
Log of (1+annual percentage change in assets in U.S. dollars)	0.052 *** [11.07]	-0.047 *** [-9.664]	-0.058 *** [-11.25]	-0.075 *** [-13.56]	-0.080 *** [-13.40]	Yes	Yes	44,245	4,136
Log of (1+annual percentage change in sales in U.S. dollars)	0.013 ** [2.524]	-0.029 *** [-5.677]	-0.053 *** [-9.664]	-0.058 *** [-9.768]	-0.070 *** [-10.92]	Yes	Yes	43,991	4,121
<i>Investment</i>									
Log of capital expenditures in million U.S. dollars	0.291 *** [15.26]	0.297 *** [14.71]	0.206 *** [9.545]	0.141 *** [6.103]	-0.025 [-1.023]	Yes	Yes	38,879	3,759
Log of R&D expenditures in million U.S. dollars	0.151 *** [6.352]	0.186 *** [7.394]	0.159 *** [5.930]	0.143 *** [4.968]	0.113 *** [3.694]	Yes	Yes	12,065	1,218
Capital expenditures/sales	0.006 ** [2.018]	-0.002 [-0.544]	-0.013 *** [-3.706]	-0.017 *** [-4.470]	-0.023 *** [-5.841]	Yes	Yes	41,710	4,039
R&D expenditures/sales	0.000 [0.00811]	0.001 [0.519]	-0.002 [-0.697]	-0.003 [-1.107]	-0.006 * [-1.767]	Yes	Yes	28,295	2,722
<i>Profitability</i>									
Return on assets	-0.005 *** [-2.776]	-0.006 *** [-3.047]	-0.010 *** [-4.686]	-0.010 *** [-4.689]	-0.006 *** [-2.715]	Yes	Yes	42,373	4,018
Return on equity	-0.014 * [-1.660]	-0.036 *** [-4.037]	-0.037 *** [-3.949]	-0.038 *** [-3.769]	-0.032 *** [-2.888]	Yes	Yes	42,126	4,011
<i>Capital structure</i>									
Total debt/total assets	0.048 *** [20.53]	0.047 *** [19.32]	0.047 *** [18.03]	0.045 *** [15.94]	0.030 *** [10.05]	Yes	Yes	46,148	4,116
Short-term debt/total debt	-0.096 *** [-24.18]	-0.096 *** [-22.76]	-0.087 *** [-19.34]	-0.077 *** [-15.77]	-0.041 *** [-7.857]	Yes	Yes	45,242	4,085
<i>Valuation</i>									
Tobin's q	-0.081 *** [-5.149]	-0.124 *** [-7.606]	-0.151 *** [-8.726]	-0.166 *** [-9.018]	-0.173 *** [-8.774]	Yes	Yes	31,623	3,214

Table 9
Evolution of Firm Characteristics Following Debt Issues Abroad

This table reports regressions of firm-level characteristics on dummies that identify the capital raising activity of firms. The first four dummy variables equal one in the designated year and zero otherwise. The more than three years after debt issue abroad dummy equals one after the third year after a firm raises capital through a debt issue abroad and zero before. The sample includes only firms that raise capital through a debt issue in a public market outside their home country at some point during the sample period. The first debt issue abroad during the sample period is used to identify firms' capital raising activity. The regressions are estimated with fixed effects at the firm level. All regressions include year dummies. 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	Year of debt issue abroad dummy	One year after debt issue abroad dummy	Two years after debt issue abroad dummy	Three years after debt issue abroad dummy	More than three years after debt issue abroad dummy	Firm dummies	Year dummies	No. of obs.	No. of firms
<i>Size</i>									
Log of total assets in million U.S. dollars	0.417 *** [28.07]	0.475 *** [30.36]	0.508 *** [30.26]	0.508 *** [28.26]	0.286 *** [15.90]	Yes	Yes	18,354	1,599
Log of sales in million U.S. dollars	0.316 *** [18.35]	0.372 *** [20.53]	0.389 *** [19.98]	0.378 *** [18.10]	0.208 *** [9.992]	Yes	Yes	18,381	1,622
<i>Growth</i>									
Log of (1+annual percentage change in assets in U.S. dollars)	0.034 *** [4.792]	-0.068 *** [-9.081]	-0.093 *** [-11.87]	-0.110 *** [-13.22]	-0.164 *** [-18.90]	Yes	Yes	18,586	1,690
Log of (1+annual percentage change in sales in U.S. dollars)	-0.003 [-0.381]	-0.053 *** [-6.327]	-0.087 *** [-9.833]	-0.102 *** [-10.84]	-0.143 *** [-14.72]	Yes	Yes	18,496	1,686
<i>Investment</i>									
Log of capital expenditures in million U.S. dollars	0.356 *** [10.86]	0.408 *** [11.71]	0.317 *** [8.433]	0.192 *** [4.762]	-0.102 ** [-2.490]	Yes	Yes	15,703	1,552
Log of R&D expenditures in million U.S. dollars	0.209 *** [5.967]	0.222 *** [6.019]	0.280 *** [7.000]	0.252 *** [5.831]	0.175 *** [4.003]	Yes	Yes	6,465	675
Capital expenditures/sales	-0.003 [-0.550]	-0.010 * [-1.879]	-0.027 *** [-4.496]	-0.041 *** [-6.516]	-0.063 *** [-9.762]	Yes	Yes	15,595	1,551
R&D expenditures/sales	0.005 [1.447]	0.006 [1.450]	0.008 * [1.795]	0.010 ** [2.271]	0.007 [1.467]	Yes	Yes	7,852	816
<i>Profitability</i>									
Return on assets	-0.010 *** [-3.959]	-0.021 *** [-7.669]	-0.030 *** [-10.48]	-0.037 *** [-11.86]	-0.043 *** [-13.62]	Yes	Yes	16,724	1,560
Return on equity	-0.024 * [-1.876]	-0.058 *** [-4.308]	-0.085 *** [-5.976]	-0.102 *** [-6.661]	-0.089 *** [-5.645]	Yes	Yes	16,673	1,558
<i>Capital structure</i>									
Total debt/total assets	0.070 *** [18.96]	0.082 *** [21.13]	0.093 *** [22.42]	0.098 *** [21.90]	0.088 *** [19.75]	Yes	Yes	18,057	1,589
Short-term debt/total debt	-0.133 *** [-20.11]	-0.130 *** [-18.62]	-0.124 *** [-16.57]	-0.054 *** [-6.737]	-0.046 *** [-5.709]	Yes	Yes	17,862	1,581
<i>Valuation</i>									
Tobin's q	-0.081 *** [-3.723]	-0.200 *** [-8.783]	-0.233 *** [-9.534]	-0.253 *** [-9.651]	-0.320 *** [-12.08]	Yes	Yes	15,909	1,464

Table 10
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 issues in public markets over the 1991-2005 period. The number of observations used to calculate the medians 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 the firm's home country. Firms that raise capital both at home and abroad are those that issue securities both outside their home country and in their home country at some point during the sample period. Columns (a), (b), and (c) report the results of median regressions of the amount raised per security issue on a dummy identifying issues abroad, country dummies, and industry dummies. Only the coefficient on the issue abroad dummy is reported. Standard errors are estimated through bootstrapping with clustering at the firm level. z-statistics are in brackets. 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		
	Median		Median regression	Median		Median regression	Median		Median regression
	Issues at home	Issues abroad	Coefficient on difference between issues abroad and at home (a)	Issues at home	Issues abroad	Coefficient on difference between issues abroad and at home (b)	Issues at home	Issues abroad	Coefficient on difference between issues abroad and at home (c)
Amount raised per security issue (million U.S. dollars at 2005 prices)									
<i>All issues</i>									
Developed economies	26.9 (40,696)	54.3 (2,182)	25.66 *** [6.836]	85.1 (71,986)	138.0 (26,671)	52.02 *** [7.394]	57.3 (112,682)	131.2 (28,853)	77.94 *** [21.06]
Developing economies	3.8 (11,577)	62.0 (1,092)	31.45 *** [7.151]	7.2 (9,260)	122.4 (1,778)	90.42 *** [20.396]	5.6 (20,837)	101.5 (2,870)	71.80 *** [15.693]
<i>Issues by firms that raise capital both at home and abroad</i>									
Developed economies	126.5 (2,882)	116.2 (600)	27.41 ** [2.483]	105.9 (32,067)	155.8 (16,681)	42.16 *** [4.53]	106.2 (34,949)	154.5 (17,281)	40.11 *** [4.807]
Developing economies	57.3 (650)	82.8 (389)	27.89 *** [4.113]	32.0 (1,243)	132.8 (695)	71.62 *** [9.437]	42.2 (1,893)	124.0 (1,084)	58.21 *** [10.597]

Table 11**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 the firm's home country. See Appendix Table 1 for a list of the economies included in each income group.

Capital raised at home/total capital raised in public markets in each year (average across firms)	Equity issues	Debt issues	All capital raisings
<i>Developed economies</i>			
Year of first capital raising abroad	17.5% (1,362)	8.0% (4,097)	8.6% (5,238)
One year after first capital raising abroad	59.6% (512)	30.5% (2,498)	34.2% (2,872)
Two years after first capital raising abroad	71.9% (263)	37.5% (1,503)	41.9% (1,695)
Three years after first capital raising abroad	74.1% (166)	43.5% (1,075)	46.6% (1,187)
More than three years after first capital raising abroad	86.6% (246)	40.4% (1,504)	46.2% (1,693)
<i>Developing economies</i>			
Year of first capital raising abroad	11.7% (670)	5.0% (800)	6.0% (1,400)
One year after first capital raising abroad	51.3% (130)	22.7% (339)	27.9% (439)
Two years after first capital raising abroad	55.9% (82)	32.9% (199)	38.0% (264)
Three years after first capital raising abroad	68.2% (44)	48.2% (129)	51.7% (164)
More than three years after first capital raising abroad	59.8% (55)	63.5% (179)	61.9% (223)

Table 12
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 analyzed is the amount raised in domestic capital markets per year by these firms before and after their first capital raising abroad. The second variable analyzed is the amount raised in domestic capital markets divided by total assets before raising capital per year before and after their first capital raising abroad. The third variable analyzed is 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. 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. Issues abroad are those carried out in a public market outside the firm's home country. Columns (a), (b), and (c) report the results of tobit regressions of the different variables on a dummy identifying the period after the first capital raising abroad and a constant. The effect of a discrete change in the dummy variable on the expected value of the observed dependent variable is reported. Standard errors are adjusted for clustering at the firm level. t-statistics are in brackets. See Appendix Table 1 for a list of the economies included in each income group. *, **, *** mean significance at ten, five, and one percent, respectively.

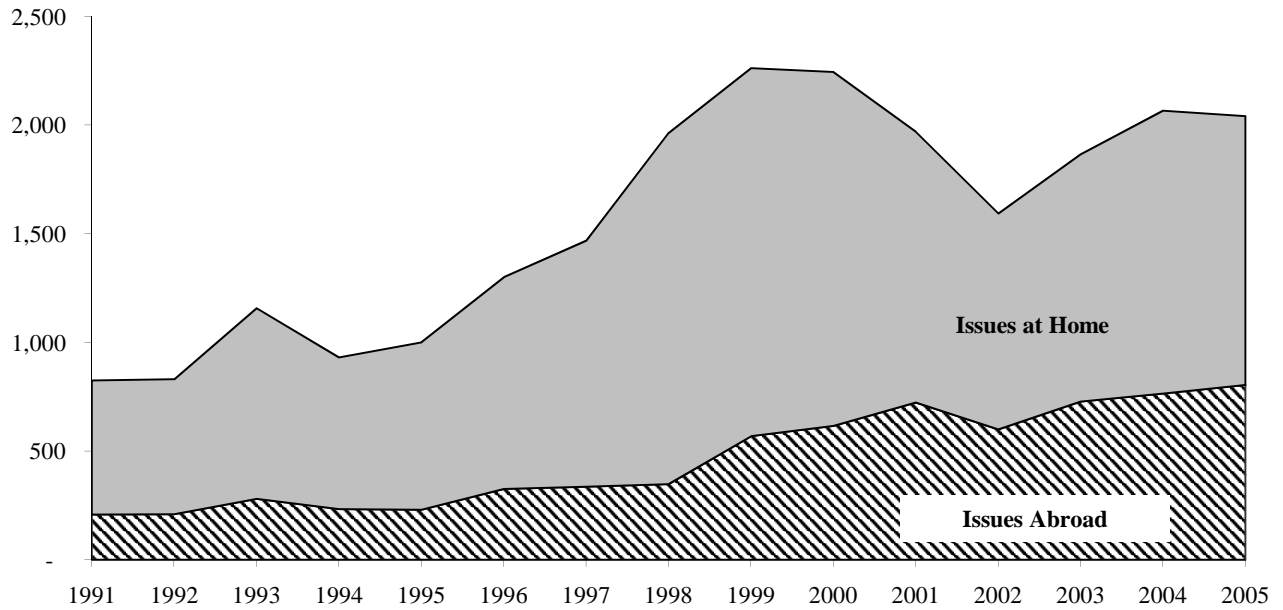
	Equity issues			Debt issues			All capital raisings		
	Mean		Tobit regression	Mean		Tobit regression	Mean		Tobit regression
	Before first capital raising abroad	After first capital raising abroad	Change following first capital raising abroad (a)	Before first capital raising abroad	After first capital raising abroad	Change following first capital raising abroad (b)	Before first capital raising abroad	After first capital raising abroad	Change following first capital raising abroad (c)
Annual amount raised in domestic markets per firm (million U.S. dollars at 2005 prices)									
Developed economies	7.70 (35,919)	20.50 (42,751)	8.93 *** [5.626]	36.83 (35,919)	129.76 (42,750)	81.75 *** [8.231]	44.53 (35,916)	150.26 (42,749)	92.03 *** [9.032]
Developing economies	3.21 (9,791)	5.59 (11,438)	3.58 *** [4.686]	1.62 (9,782)	6.95 (11,435)	5.23 *** [5.181]	4.83 (9,779)	12.54 (11,432)	9.14 *** [7.005]
Annual amount raised in domestic markets/total assets per firm									
Developed economies	0.112 (35,677)	0.039 (42,481)	0.128 *** [3.231]	0.012 (35,009)	0.013 (41,055)	0.066 *** [2.587]	0.126 (34,796)	0.048 (40,847)	0.314 *** [3.483]
Developing economies	0.001 (9,656)	0.021 (11,245)	0.040 ** [2.555]	0.011 (9,681)	0.007 (11,184)	0.031 *** [2.612]	0.013 (9,559)	0.028 (11,026)	0.073 *** [3.481]
Annual amount raised in domestic markets per firm/total amount raised in domestic markets									
Developed economies	0.001 (30,428)	0.003 (37,627)	0.001 *** [5.969]	0.001 (27,649)	0.003 (34,566)	0.003 *** [9.542]	0.001 (31,126)	0.003 (37,933)	0.002 *** [10.638]
Developing economies	0.002 (7,912)	0.004 (9,534)	0.002 *** [4.725]	0.003 (3,600)	0.004 (8,024)	0.001 ** [2.396]	0.003 (8,034)	0.004 (10,124)	0.003 *** [6.547]

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 the firm's home country. Data are in constant 2005 U.S. dollars. 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)

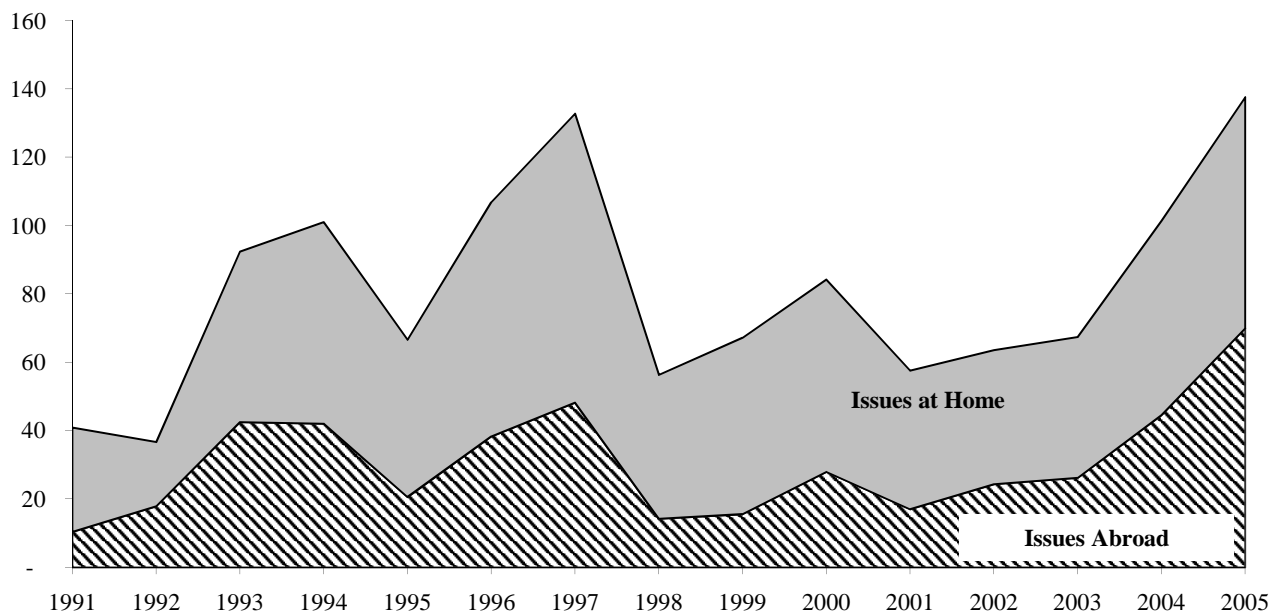


Figure 2

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 the firm's home country. See Appendix Table 1 for a list of the economies included in each income group.

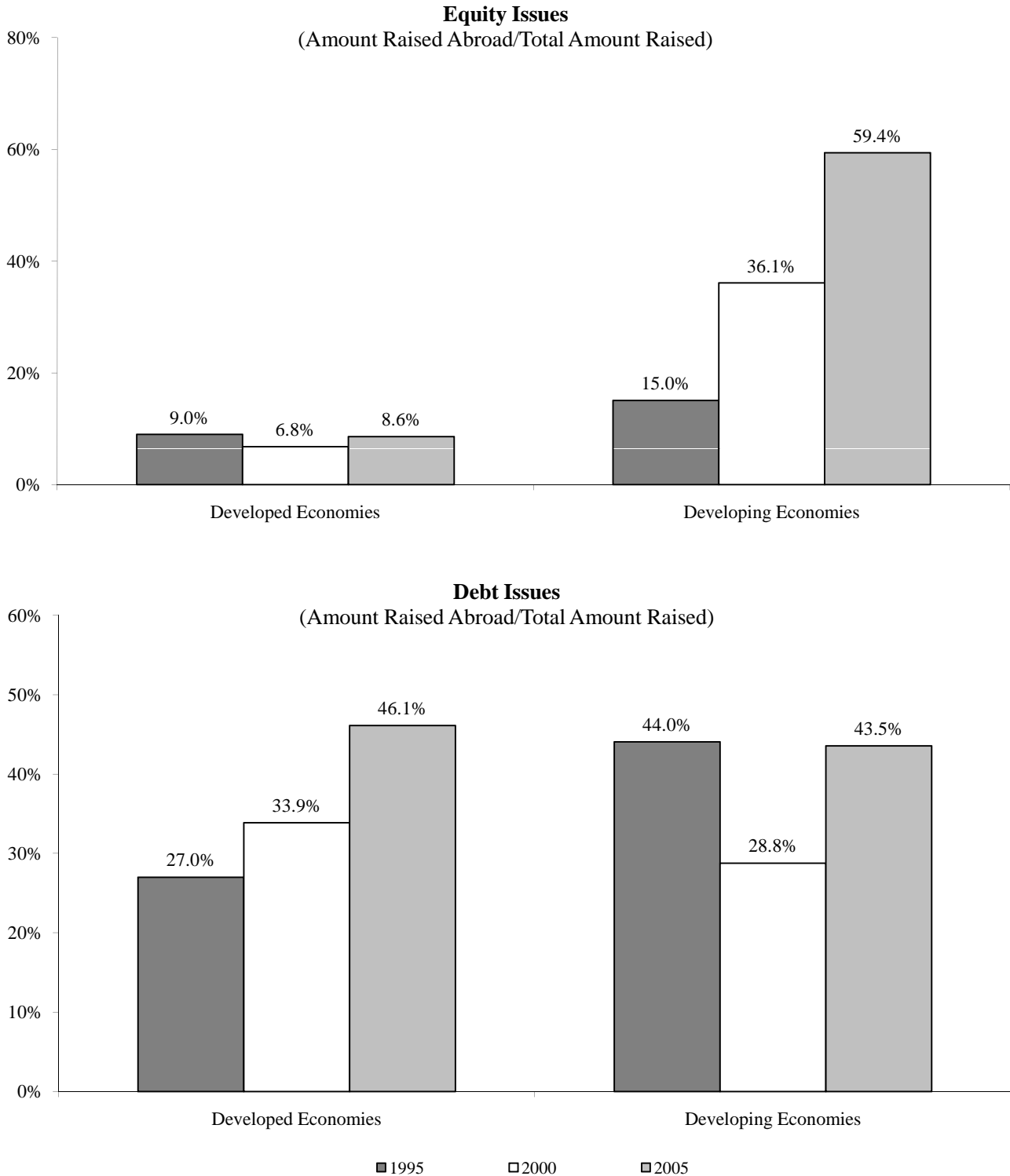
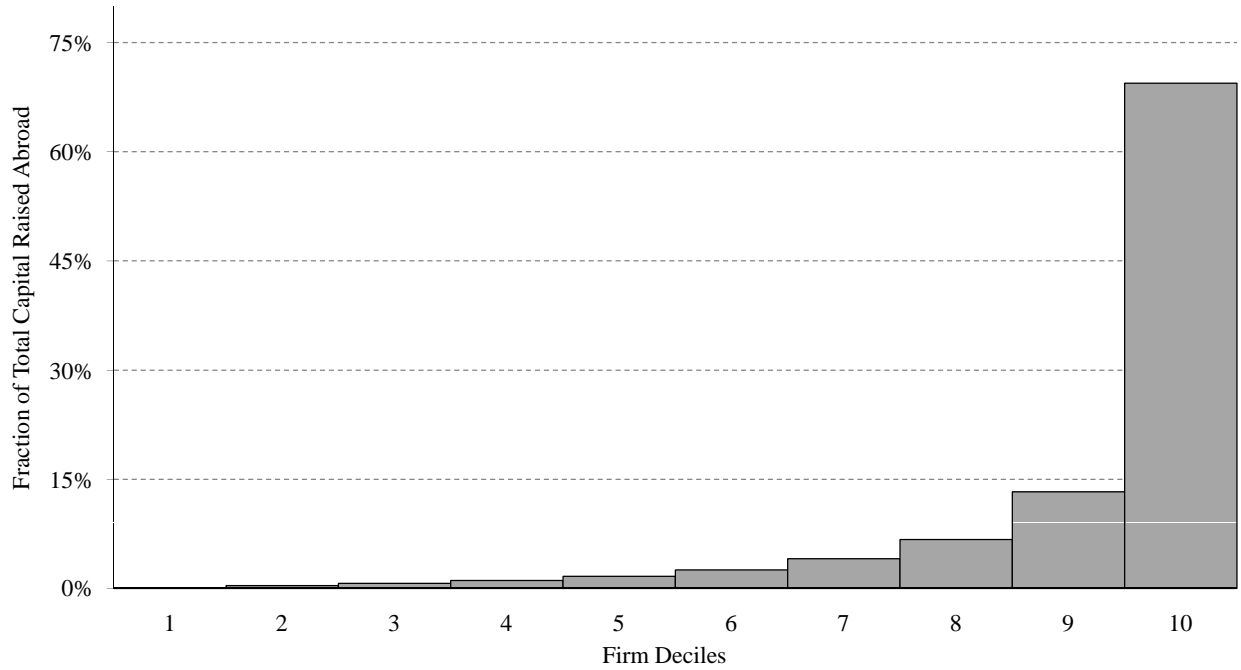


Figure 3
Concentration of Capital Raising Activity in International Markets

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 the firm's home country. 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

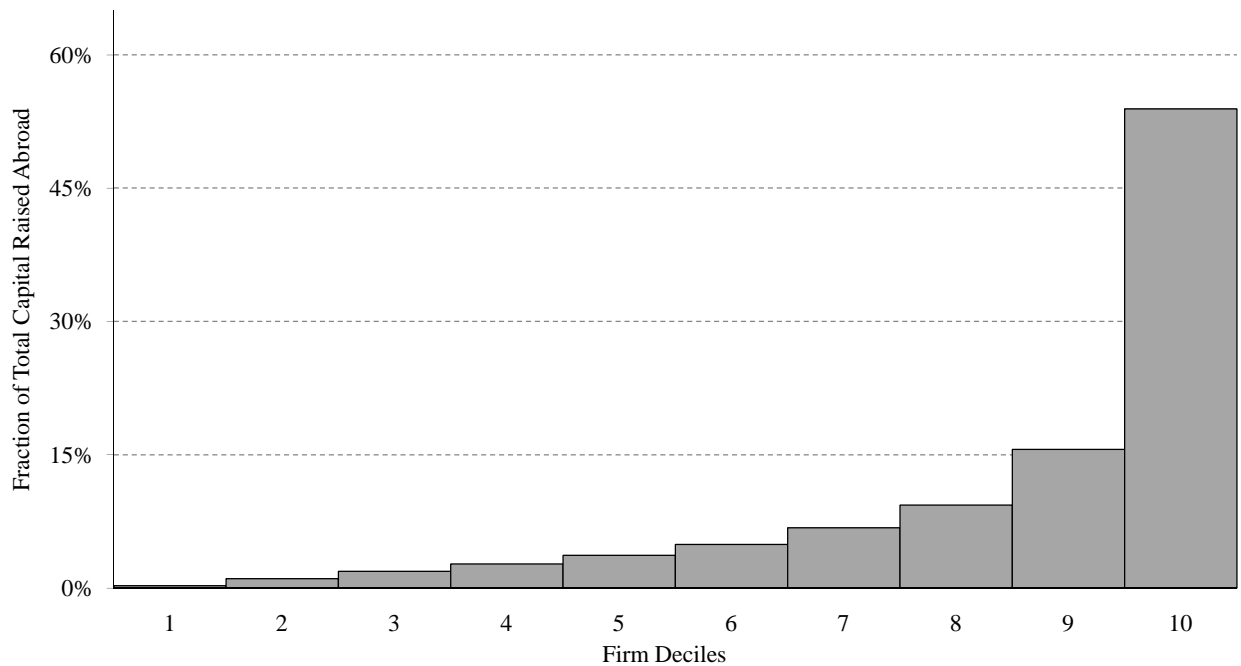
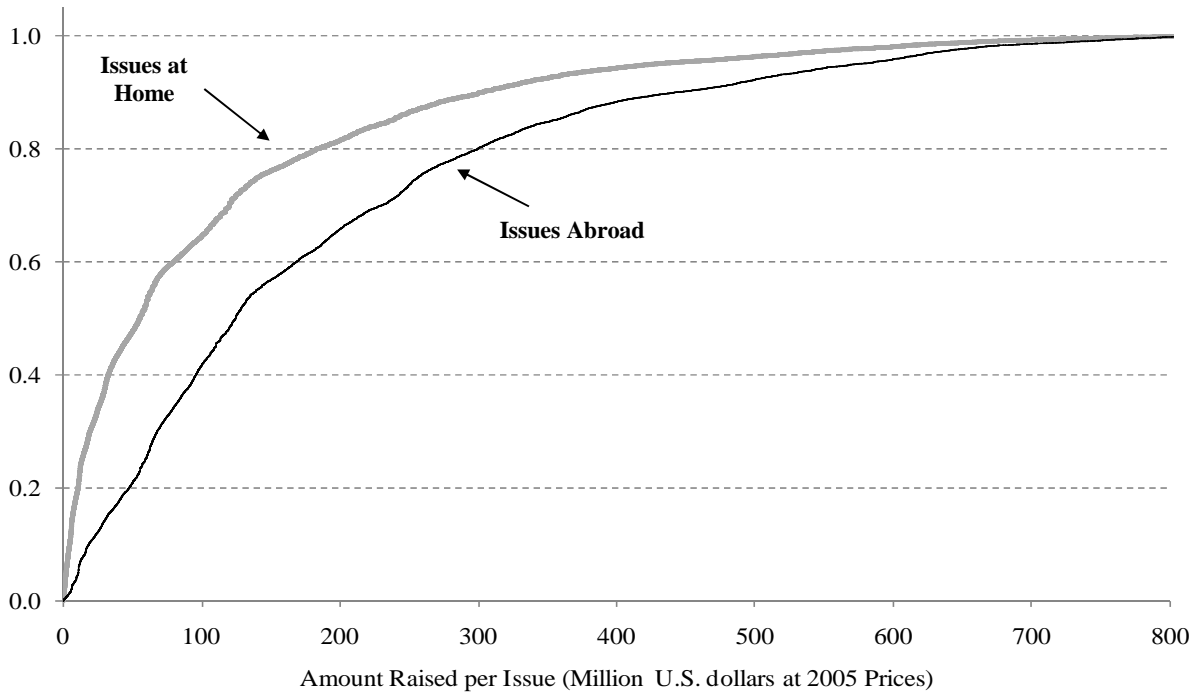


Figure 4

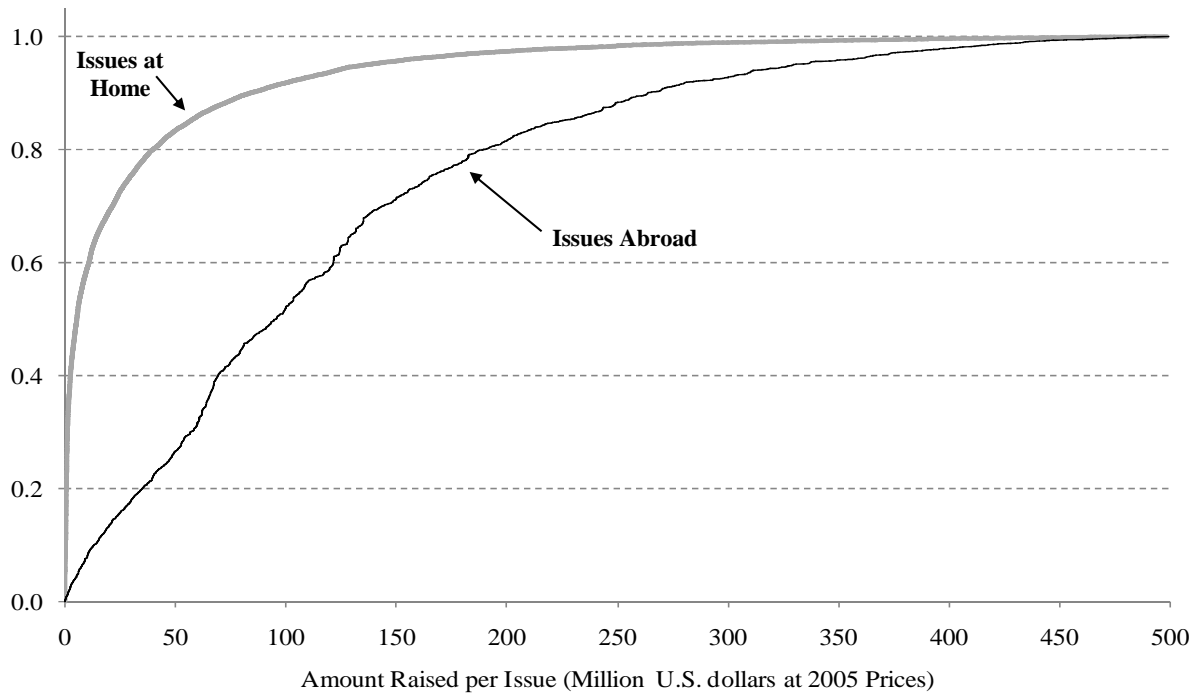
Size Differences Among Issues at Home and Abroad

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 the firm's home country. See Appendix Table 1 for a list of the economies included in each income group.

**Cumulative Distribution of Amount Raised per Issue
by Firms from Developed Economies**



**Cumulative Distribution of Amount Raised per Issue
by Firms from Developing Economies**



Appendix Table 1
Country Classification

This table presents the list of economies included in 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 economies 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

This table shows the number of observations from each country/region included in our dataset on capital raising activity. The data cover the period 1991-2005. The dataset includes only security issues by firms in public markets. Each observation corresponds to a security issue. 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 the firm's home country. See Appendix Table 1 for a list of the economies included in each region and income group.

	Number of observations		
	Issues at home (a)	Issues abroad (b)	Total (c)=(a)+(b)
Germany	6,940	3,966	10,906
Japan	8,932	1,939	10,871
United States	64,795	3,326	68,121
Africa	304	127	431
Asia	16,048	2,620	18,668
Australia & New Zealand	3,563	1,418	4,981
Eastern Europe & Central Asia	346	303	649
Latin America & Caribbean	12,328	1,263	13,591
Middle East	72	594	666
Western Europe	23,387	13,529	36,916
Other	1	2,712	2,713
Total	136,716	31,797	168,513
Developed economies	112,931	28,901	141,832
Developing economies	23,785	2,896	26,681

Appendix Table 3
Data on Firm-Level Characteristics

This table shows the number of observations and firms from each country/region included in our analyses of firm-level characteristics. The data cover the period 1991-2005. Firms with capital raising activity are those that raise capital through security issues in public markets at some point during the sample period. Firms with capital raisings at home are those that raise capital through security issues in public markets in their home country at some point during the sample period. Firms with capital raisings abroad are those that raise capital through security issues in public markets outside their home country at some point during the sample period. Since firms may raise capital both at home and abroad, the number of observations and firms in columns (b) and (e) may differ from the sum of the capital raising activity at home and capital raising activity abroad columns. 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 capital raising activity					Firms with capital raising activity				
	Firms with no capital raising activity (a)	Total (b)	Firms with capital raising activity at home	Firms with capital raising activity abroad	Total (c)=(a) + (b)	Firms with no capital raising activity (d)	Total (e)	Firms with capital raising activity at home	Firms with capital raising activity abroad	Total (f)=(d) + (e)
Germany	4,943	6,144	5,983	868	11,087	480	668	654	75	1,148
Japan	14,913	29,370	27,761	7,687	44,283	1,221	3,032	2,909	587	4,253
United States	65,382	66,173	65,957	3,187	131,555	7,492	7,163	7,144	250	14,655
Africa	3,893	520	386	205	4,413	554	61	45	23	615
Asia	20,725	34,257	32,293	5,152	54,982	2,717	4,816	4,542	602	7,533
Australia & New Zealand	4,392	6,440	6,322	529	10,832	640	1,016	999	56	1,656
Eastern Europe & Central Asia	2,673	983	801	304	3,656	384	115	95	34	499
Latin America & Caribbean	3,907	5,150	4,960	1,719	9,057	518	572	550	161	1,090
Middle East	594	538	128	458	1,132	86	84	16	74	170
Western Europe	28,449	35,687	33,772	6,051	64,136	3,046	4,059	3,831	591	7,105
Other	144	262	69	207	406	29	48	12	37	77
Total	150,015	185,524	178,432	26,367	335,539	17,167	21,634	20,797	2,490	38,801
Developed economies	125,524	158,354	153,068	21,242	283,878	14,041	18,123	17,525	1,934	32,164
Developing economies	24,491	27,170	25,364	5,125	51,661	3,126	3,511	3,272	556	6,637

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.	Compustat North America and Worldscope
Sales (million U.S. dollars)	Net sales or revenues, converted to U.S. dollars using the fiscal year end exchange rate.	Compustat North America and 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.	Compustat North America and 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.	Compustat North America and Worldscope
Return on assets	Net income over previous year's total assets.	Compustat North America and Worldscope
Return on equity	Net income over previous year's common equity.	Compustat North America and Worldscope
Total debt	Interest bearing and capitalized lease obligations. It is the sum of long- and short-term debt.	Compustat North America and 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.	Compustat North America and 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.	Compustat North America and Worldscope