

# How do Firms Issue Shares? Evidence from Around the World<sup>Ψ</sup>

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## Abstract

We study how seasoned shares are issued in 41 countries during the period 1990-2008. We obtain issues data from SDC Thomson and manual Factiva searches, which increase the SDC sample by 43%. Public offerings are the most frequent type of share issue, while mergers are on average the largest. All types of issues increase in frequency during our sample period. Strong investor protection laws are associated with more frequent public offerings and mergers, and fewer rights offerings. The relation between investor protection and private placements is positive, but less robust as compared to other types of issues. We relate these findings to several theories of issuance choice. Stock market development has no effect on seasoned issuance frequency or type. The findings are robust to excluding U.S. firms.

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## **Abstract**

We study how seasoned shares are issued in 41 countries during the period 1990-2008. We obtain issues data from SDC Thomson and manual Factiva searches, which increase the SDC sample by 43%. Public offerings are the most frequent type of share issue, while mergers are on average the largest. All types of issues increase in frequency during our sample period. Strong investor protection laws are associated with more frequent public offerings and mergers, and fewer rights offerings. The relation between investor protection and private placements is positive, but less robust as compared to other types of issues. We relate these findings to several theories of issuance choice. Stock market development has no effect on seasoned issuance frequency or type. The findings are robust to excluding U.S. firms.

We study how seasoned shares are issued in 41 countries during the period 1990-2008. Our paper consists of two parts. In the first part we describe the frequencies and magnitudes of stock-financed mergers, rights offerings, private placements, and public offerings, which we define as all seasoned share issues that do not fall into one of the other three categories.<sup>1</sup> This section of the paper complements the analyses in Fama and French (2005), who describe how shares are issued in the U.S. We extend their analysis by studying share issues in 40 additional countries, and by creating a new share issues database. Like Fama and French and many other studies, we use share issues data from SDC Thomson. In addition, we conduct Factiva searches for news of share issues. Our Factiva searches increase the SDC sample by 43%.

In the second part of the paper we investigate how investor protection affects seasoned issues. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV) (1997, 1998, and 2002) and La Porta, Lopez-de-Silanes, and Shleifer (LLS) (2006) posit that investor protection laws promote external finance by limiting expropriation and other activities that harm minority investors. These papers link investor protection to country-level measures of financial development, such as the size and liquidity of the stock market. In contrast, we study how investor protection and financial development affect the method and likelihood of seasoned issuance among existing public firms.<sup>2</sup>

We find that public offerings are the most common type of issue, followed by private placements, stock-financed mergers, and finally rights offerings. Excluding U.S. firms does not change the ordering. These findings are surprising, because there is a belief that outside of the

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<sup>1</sup> Firms can also issue shares indirectly through warrant exercises, stock purchase plans, and the conversions of debt and preferred stock. We do not have international data for these types of issues, so they are not included in our analyses.

<sup>2</sup> Rajan and Zingales (2003) explain that countries with large stock markets need not be the same countries in which public firms actively issue shares. Rajan and Zingales (2003) point out that the presence of a few large companies that have appreciated in market value can give the impression of an important equity market even when the amount of equity issued in the market is very small.

U.S. seasoned shares are issued primarily through rights offerings or private placements.<sup>3</sup> All types of issues increase throughout our 19-year sample period; the percentage of firms making at least one share issue increases from 1.19% to 10.40%, while the average issue size increases from \$91.49M to \$231.92M. These findings are also surprising, because there is a belief that rights offerings have declined internationally, yet we find that the percentage of firms issuing by rights increases during our sample period.<sup>4</sup> Frank and Goyal (2003), Fama and French (2005), and McLean (2010) report increases in total share issues of U.S. firms during this period.

SDC issues data are widely used in the finance literature, so we report on the completeness of SDC coverage relative to our manual Factiva searches. Our Factiva searches increase the SDC samples by 51.1%, 40.1%, 44.2%, and 16.7%, for public offerings, mergers, private placements, and rights offerings respectively. SDC coverage gets worse over time for public offerings and mergers. Our Factiva searches increase the SDC samples by 35% and 29% for public offerings and mergers in 1990, and by 53.4% and 149.5% in 2008. SDC coverage tends to be more complete for wealthier countries and for countries with more developed stock markets, although SDC still misses a large number of issues in these markets.

Investor protection plays an important role in whether and how firms decide to issue shares. Firms in countries with strong investor protection laws issue more shares than firms in countries with weak laws, although this effect differs greatly across the issue types. Public offerings and mergers increase strongly with investor protection; private placements also increase, although the effect is not as robust, and rights offerings decline. Conditional on issuing, firms in weak investor protection countries are more likely to issue shares by rights offerings.

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<sup>3</sup> As an example, Cronqvist and Nilsson (2005) mention that in stock markets outside the U.S. seasoned equity offerings are conducted primarily as rights offerings and private placements.

<sup>4</sup> The international decline in rights offerings is mentioned in Eckbo and Masulis (1995), Armitage (1998), and Eckbo, Masulis, and Norli (2007).

We include real per capita GDP in all of our regressions and find that it generally has the same sign and significance as the investor protection variables, showing that investor protection and economic development have independent effects on seasoned issuance. Financial development measures generally have no effect on seasoned issuance frequency or type. This shows that large stock markets are not the most active with respect to seasoned share issues. This finding is consistent with Demirguc-Kunt and Maksimovic (1998), who show that the percentage of firms in a country that rely on external finance to grow increases with investor protection, but not stock market development.

Our public offerings and stock-financed mergers findings suggest that legal protections are necessary for an active market in public offerings, which is consistent with the arguments in LLSV (1997, 1998, and 2002) and LLS (2006). The cross-listings literature also suggests that investor protection is a prerequisite for selling shares to minority shareholders. Papers by Coffee (1999, 2002), Stulz (1999), Reese and Weisbach (2002), Doidge, Karolyi, and Stulz (2004), and Doidge, Karolyi, Lins, Miller, and Stulz, (2009) posit that firms in weak investor protection countries cross-list in strong investor protection countries so that management can be bonded by the laws of the strong investor protection country. Such bonding is thought to increase the firm's market value and its access to equity financing. Our stock-financed merger results are consistent with Rossi and Volpin (2004), who show that mergers are more common in countries with strong investor protection.

Our finding that private placements are less affected by investor protection is consistent with previous studies, which suggest that the effects of the law on private placements are unclear. On the one hand, the law protects private placement investors from controlling shareholders, so we might expect private placements to increase with the investor protection.

Alternatively, Wruck (1989) contends that private placements are purchased by active investors who monitor the firm in an effort to ensure that it uses its resources efficiently. Hertz and Smith (1993) posit that private placements are issued to certify the firm's value. Barclay, Holderness, and Sheehan (2007) claim that entrenched managers place equity with friendly investors, who will not interfere with management's control. Monitoring, certification, and the benefits of control are all more valuable in low investor protection environments, so these studies therefore suggest that private placements should decrease with investor protection.

Our finding that rights offerings are more common in countries with weak investor protection is also consistent with previous studies. Zingales (1995), Bebchuk (1999), and Foley and Greenwood (2009) point out that investor protection reduces the benefits of control. Hence, controlling shareholders ought to have a stronger preference for rights in weak investor protection environments, in which control is more valuable.<sup>5</sup> Cronqvist and Nilsson (2005) use this framework to explain why family owned firms in Sweden prefer rights offerings to private placements. Eckbo and Masulis (1992) contend that owners prefer public issues over rights due to diversification benefits. Investor protection is necessary for domestic diversification to be beneficial, so for this reason too a controlling shareholder has fewer incentives to sell large parts of the firm in weak investor protection countries. Eckbo and Masulis (1992) further show that if existing shareholders plan to retain most of their new shares, then rights offerings are the lowest cost method of issue.<sup>6</sup> If the retention of rights declines with investor protection for the reasons listed above, then rights offerings should be more common in low investor protection countries.

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<sup>5</sup> Ownership concentration is greater in countries with weaker legal protections, so in these countries rights offerings consist largely of share sales to insiders. See La Porta, Lopez-de-Silanes, and Shleifer (1999) and Foley and Greenwood (2009).

<sup>6</sup> Eckbo and Masulis (1992) contend that if the market expects existing shareholders to sell the rights or new shares acquired through the rights, then the market infers that the shares were overpriced, and you then end up

Our study complements international share issues studies by Henderson, Jegadeesh, and Weisbach (2006) and Kim and Weisbach (2008). Henderson, Jegadeesh, and Weisbach (2006) study the use of equity versus debt, common versus preferred stock, and offerings on foreign exchanges versus depository receipts. Kim and Weisbach (2008) focus on the motivations for share issues by studying the uses of public offerings proceeds. In contrast, we study different issue mechanisms, and the effects that investor protection and financial development have on overall issues and the choice of issue mechanism.

The remainder of this paper is organized as follows. Section 1 discusses the data and sample used in this paper; Section 2 provides detailed descriptions of how shares are issued around the world; Section 3 analyzes the role of law and legal environment in the choice of share issuance method; Section 4 concludes the paper.

## **1. Data Sources and Sample Description**

We begin our sample with all Worldscope firms during the period 1990 to 2008. We begin our sample with Worldscope firms because a good deal of our analyses requires firm-level accounting data. Like Kim and Weisbach (2008), we exclude utility firms with 3-digit SIC codes from 491 to 494, financial firms with 1-digit SIC code 6, and telecommunication firms with 2-digit SIC code 48. We focus a good deal of our analyses on how investor protection affects issuance activities. Our sample countries are therefore limited to countries that have investor protection measures from LLS (2006). We add an additional country-level filter that requires at least 20 share issues in total over the sample period. A focus of the paper is how investor

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with the type of adverse selection problems and underpricing effects that Myers and Majluf (1984) model with public offerings. Consistent with this view, Bohren, Eckbo, and Michaelsen (1997) provide evidence with Norwegian firms that the use of rights decreases with the propensity for shareholders to sell their rights.

protection laws affect issuance activity, so for this reason we only include domestic share issues in our sample. As mentioned in the Introduction, several papers study the importance of investor protection with respect to cross-listings.

We use two different data sources for share issues. Our first source is SDC Thompson Financial. The SDC Global New Issues Database provides data for non-merger share issues, while the SDC Mergers & Acquisitions Database provides data for stock-financed mergers. SDC has very limited coverage for non-U.S. share issues prior to 1990, so our sample period is from January 1990 through December 2008. Thomson representatives told us via phone conversations that they felt their coverage in both databases is robust from 1990 onwards. Kim and Weisbach (2008) also begin their global public offerings sample in 1990.

We begin our non-merger share issues sample with all domestic seasoned (non-IPO) share offerings in the SDC Global New Issues Database. The SDC Global New Issues data provides us with data on how the issue was made – through either public offerings, or private placements, or rights offerings. We eliminate observations that have missing information on either the total number of shares sold, or the breakdown of these shares into primary and secondary shares. We exclude secondary share issues, since secondary issues involve the sale of existing shares that are owned by insiders, and do not increase the number of shares outstanding as primary issues do. We follow Kim and Weisbach (2008), and exclude issues that have values that are different from the product of the offer price and the number of shares sold by more than \$5 million.

We begin our merger-issues sample with all domestic mergers in the SDC Mergers & Acquisition Database. We include all M&A transactions that were completed between the years 1990 to 2008. We measure the value of a stock-financed merger as the portion of the total



transaction value that is paid with the acquiring firm's stock. We exclude observations if either the M&A deal value or the percentage of stock payment for the deal is missing.

Our second source of share issues data is Factiva news searches. We conduct English language news searches for every firm in our Worldscope sample during the years 1990 through 2008. We conduct our search by first specifying the firm and country along with one of the following words: "acquisition", "merger", "offering", or "placement". If the search returns an excessive number of news stories then we do more refined searches using the terms: "merger and acquisition", or "rights offering", or "private placement", or "public offering". To be included in our sample the news story had to include the issue amount and date.

It is likely that our news searches miss some issues, so our searches provide a lower bound on the number of issues that SDC omits. Given that our news searches are conducted in English, it is likely that we miss more issues in countries where English is not the primary language. In such countries we expect to mainly miss smaller issues that are less likely to be mentioned in English by international news sources. Our final sample consists of 59,029 share issues.

World Scope reports accounting information that can be used to estimate total share issues. McLean, Pontiff, and Watanabe (2009) use Data Stream data to estimate real changes in shares outstanding, which also captures total share issues. We chose not to use share issues measures from these sources because the objectives in this paper include studying how differences in investor protection relate to different issue types. Share issues measures from World Scope and Data Stream reflect aggregate issues, and therefore do not show how the shares were issued (e.g. public offering or private placement). In addition to the four types of issues that we study, these aggregate issuance measures also include issues from warrant exercises, stock

purchase plans, and the conversions of debt and preferred stock. We have regressions in the paper in which total share issuance (the sum of public offerings, mergers, rights offerings, and private placements) is regressed on different measures of investor protection and development. For these tests we obtain similar results with a total share issuance measure from World Scope.

## **2. A Description of how Shares are Issued Around the World**

### *2.1. Frequency and Average Amount of each Type of Issue*

Table 1 describes global share issues in each of the nineteen years in our sample. Panel A reports the number of issues, Panel B reports the percentage of firms that issue, while Panel C reports the average issue size. The findings in Panel A show that public offerings are the most common type of share issue. In total, our sample has 21,263 public offerings, 18,145 private placements, 14,961 stock-financed mergers, and 4,660 rights offerings. This ordering does not change if U.S. firms are excluded from the sample. As we mention in the Introduction, these findings are surprising, because there is a belief that outside of the U.S. shares are typically issued by rights offerings or private placements, yet here we find that globally public offerings are the most frequent type of issue.

Panel B shows the percentage of firms issuing shares in each year. Overall, 6.88% percentage of the firm-year observations in our sample issue shares via at least one of the four issue mechanisms. 2.93% of the firm-year observations issue via public offerings followed by mergers (2.09%), private placements (2.01%), and rights offerings (0.65%). Panel A shows that there are more private placement issues than merger issues, yet here we see that the percentage of firm-year observations issuing via mergers is greater. This difference arises because in our sample it is more common for a firm to make several private placements in the same year than it

is for a firm to issue shares in several different mergers in the same year.

Panel A shows that there is a pronounced increase in the number of issues, as our sample has 261 total issues in 1990 and 5,585 in 2008. Panel B shows that the percentage of firms issuing shares also increases during the sample period. In 1990 only 1.19% of the firms in our sample issued shares, while in 2008 10.4% of the firms in our sample issued shares. In both Panels A and B the increases are caused by secular trends, which are observed with all four issue types. It is unlikely that these results are caused by better data coverage in the later years of our sample, because our sample consists of both SDC data and manual news searches, and we use the same search methods for each year. Moreover, the increases documented here are consistent with increases in U.S. share issues documented in Frank and Goyal (2003), Fama and French (2005), and McLean (2010). The patterns of increasing issues observed in Panels A and B persist if U.S. firms are excluded. The results here reveal a worldwide increase in seasoned share issues.

Panels A and B both show that rights offerings increase steadily throughout the sample period. As we mention in the Introduction, this increase in rights offerings is surprising, because previous studies have mentioned that the use of rights offerings has declined during our sample period.

Panel C reports the average size of each type of issue in real (2005) U.S. dollars. On average, mergers are the largest issue (\$340.83M), followed by public offerings (\$118.93M), rights (\$79.33M), and private placements (\$30.57M). The size of the average merger and average public offering increases over the sample period, while the size of the average private placement and average rights offering do not trend in either direction over the sample period. The average merger increases 200%, from \$114.99M to \$345.58M, while the average public offering increases 120%, from \$65.59M to \$144.56M. Both of these increases appear to be the

result of secular trends, with both variables showing steady increases throughout the sample period.

## *2.2. The Completeness of SDC Coverage*

Table 2 reports the increase in our SDC issues sample due to the inclusion of the issues that we found in our Factiva searches. The numbers reported in Table 2 are the number of issues that we found in Factiva scaled by the number of issues reported by SDC. Our Factiva issues do not include issues that are also reported in SDC, so the numbers in Table 2 reflect the percentage increase in our SDC sample due to the inclusion of the issues obtained from Factiva searches. A higher percentage reflects less complete SDC coverage.

In a few countries, for a type of issue SDC reports zero, but our Factiva searches found one or more issues. In these instances, we report “N/A” for not applicable, as we cannot compute a ratio in these instances. Each country has more than one SDC issue in total, so we are able to report a ratio for total issues for each country.

The results reported in Table 2 show that overall our Factiva searches increase our SDC sample by 42.9%. The Factiva searches increase the SDC samples by 51.1%, 40.1%, 44.2%, and 16.7%, for public offerings, mergers, private placements, and rights respectively. It is likely that our Factiva searches miss some issues, so these findings probably overstate the completeness of SDC coverage.

Surprisingly, the results in Table 2 show that SDC coverage gets worse over the sample period for some types of issues. Our Factiva searches increase the SDC merger sample by 29% in 1990 and by 149.5% in 2008. This increase appears to be a secular trend, with SDC coverage getting steadily worse over the sample period. SDC coverage for public offerings also gets worse

over the sample period, although the effect is not as great as with mergers. During the first five years of the sample, the Factiva searches increase the SDC public offerings sample by about 32.6%, whereas the increase averaged 70.3% during the most recent five years.

In 1990 SDC coverage was very poor for private placements and rights offerings; our Factiva searches increase these samples by 2500% and 900% respectively in this year. SDC coverage then improves over the next few years for both types of issues. From the late 1990s through the final year of the sample there is no discernable trend in coverage for either issue. In the final year of the sample, the Factiva searches increase our SDC rights offerings sample by 16.8%, and our SDC private placements sample by 37.7%.

### *2.3. Issue Frequency Summarized by Country*

Table 3 describes issue activity within each of the 41 countries in our sample. Panel A lists the frequency of each issue, while Panel B lists the percentage of firm-year observations that issue shares. Panel A shows that the U.S. is the largest contributor to our sample, accounting for 33.2% of the total. The next largest contributor is Australia, which accounts for 21.6% of the total. Australia's issues consist mainly of 9,213 private placements, which account for almost half of the private placements in our sample. Kim and Weisbach (2008) also note that more than half of all private placements come from Australia.<sup>7</sup> The next two largest contributors to our sample are Canada and Japan, accounting for 8.3% and 7% of the total issues.

Panel B displays the percentage of firm-year observations that issue shares for each of the countries in our sample. The countries with the highest percentage of issuers are Australia (24.44%), Canada (15.39%), and Singapore (10.34%). As we mention above, in Australia the

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<sup>7</sup> Our analyses are robust to the exclusion of Australian and U.S. issues.

high issue frequency in each of these countries is largely due to private placements. In Canada and Singapore public offerings are the most common share issue. The countries with the lowest percentage of issues are Pakistan (1.01%), Turkey (1.16%), and Greece (1.33%). As comparisons, the percentage of issuers is 7.58% in the U.S. and 6.88% in the entire sample.

#### *2.4. SDC Completeness Summarized by Country*

Table 4 reports the Factiva enhancement for each issue type within each country. As in Table 2, the numbers in Table 4 reflect the percentage increases in our SDC samples due to our Factiva searches. Table 4 shows that SDC coverage is weakest in Pakistan, Israel, Mexico, and India, where our Factiva searches increased the SDC issue samples by 2200%, 544%, 418%, and 384% respectively. The total number of issues in Pakistan is only 23, so the increase due to our Factiva searches does not reflect a large number of issues in the case of Pakistan. The total numbers of issues in Israel, Mexico, and India are 219, 311, and 1,917, so our Factiva searches uncover a large number of issues in these countries.

SDC coverage is strongest in Australia (8% increase), Venezuela (16% increase), Chile (18% increase), and Japan (22.7% increase). Yet even in these countries the percentages can reflect a large number of issues missing from the SDC sample. In Japan, the total number of issues is 4,129, so 764 Japanese issues were uncovered by our Factiva searches. In the U.S., our Factiva searches increase the sample by 52.8%, showing that SDC missed more than half of the seasoned issues in the world's largest stock market. In the U.S., SDC coverage is the best for mergers, as the merger sample increases by 33.9%, and worse for private placements, as that sample increases by 98.1%.

In unreported tests we regress our SDC-Factiva country-statistics on per capita GDP and

measures of stock market development (stock market capitalization as a percentage of GDP and dollar trading volume scaled by total stock market capitalization). We find that our Factiva searches increase the SDC issues samples more in low GDP countries, and more in countries with less developed stock markets, showing that SDC coverage is typically less complete in these countries.

### **3. Cross-Country Differences in Seasoned Issues and Choice of Issue Method**

In this Section we study how cross-country differences in investor protection and development affect the seasoned issues. In Section 3.1 we discuss our empirical predictions for each issue type. Section 3.2 describes our investor protection and development measures. Section 3.3 discusses results from country-level regressions, while Section 3.4. discusses the findings from firm-level regressions.

#### *3.1. The Law and Cross-Country Differences in Share issues: Empirical Predictions*

As discussed in the Introduction, the idea that investor protection ought to lower the cost of issuing shares is developed in LLSV (1997, 1998, and 2002) and LLS (2006). The argument is that without proper legal protections managers and controlling shareholders will expropriate the firm's assets at the expense of minority shareholders. Potential shareholders know this, and either avoid buying shares, or are only willing to buy shares at discounted prices that reflect the potential loss from expropriation. Consistent with this framework, LLSV and LLS show that financial development and market values are increasing with investor protection.

This framework also predicts that investor protection promotes seasoned issues, although we posit that the relation ought to be different for different types of issues. As Rajan and

Zingales (2003) explain, measuring seasoned issues is different from measuring financial development. Financial development typically refers to the size of the stock market or credit market relative to GDP. In this paper we study seasoned issues by existing public firms. If it is typically less costly for public firms to issue seasoned shares in larger stock markets, then we ought to see share issues increase with financial development. The findings in Demirguc-Kunt and Maksimovic (1998) suggest that this may not be the case, as they show that the percentage of firms in a country that rely on external finance to grow increases with investor protection, but not stock market size.

*Public Offerings.* In a public offering the new shareholders will most likely only have small levels of ownership. For such investors laws that protect against expropriation are important, and public offerings should therefore increase with investor protection. Moreover, Leuz, Nanda, and Wysocki (2003) show that investor protection laws encourage more accurate financial reporting, while Morck, Yeung, and Yu (2000) contend that investor protection encourages more arbitrage, which results in stock prices that more accurately reflect fundamental values. The findings in both of these papers suggest that the adverse selection risks described in Myers and Majluf (1984) are lower in countries with stronger investor protection. Hence, small, relatively uninformed investors face less risk when buying seasoned shares in countries with strong investor protection, so for this reason too public offerings should increase with investor protection.

Zingales (1995), Bebchuk (1999), and Foley and Greenwood (2009) point out that investor protection reduces the benefits of control. Hence, the incentives to maintain a controlling interest are lower in countries with strong investor protection laws. Owners should therefore be more willing to sell shares to the public in countries with stronger investor



protection, so for this reason too we expect public offerings to increase with investor protection. Consistent with this reasoning, Foley and Greenwood (2009) show that post-IPO ownership concentration reduces faster in countries with strong investor protection.

*Stock-Financed Mergers.* Investor protection laws should also promote stock-financed mergers and acquisitions. The arguments here are similar to those with public offerings. In a stock-financed merger, a portion of the target firm is sold to the acquirer in exchange for the acquirer's shares. If laws reduce expropriation, improve financial reporting, and encourage arbitrage, then the typical acquirer should have more valuable shares from the perspective of the target's shareholders. Hence, stock-financed mergers ought to be a more financially viable alternative from the acquirer's perspective in countries with strong investor protection. Investor protection also reduces the benefits of control, making owners more willing to issue shares to outsiders.

Consistent with these views, Rossi and Volpin (2004) show that a firm is more likely to be acquired if it is located in a country with strong investor protection, and that all-cash mergers are less common if the acquirer is from a country with strong investor protection. Rossi and Volpin's unit of observation is a transaction in which ex-ante the acquirer owned less than 50% of the firm, and ex-post the acquirer owned more than 50%. Our interest is measuring how firms issue shares, so our unit of observation is shares issued in any merger. This difference in measurement leads to our having a much different sample from Rossi and Volpin's. In total, our merger-share issuance sample (1990-2008) consists of 14,961 merger-related share issues, while Rossi and Volpin's sample (1990-2002) consists of 4,007 change-of-ownership merger transactions.

*Private Placements.* As we mention in the Introduction, the expected effects of the law on private placements are ambiguous. The law protects private placements investors from controlling shareholders, so we might expect private placements to increase with the law. However, private placement investors tend to be larger and more sophisticated as compared to the typical minority investors, so for this type of investor legal protections may be less important. Moreover, there are at least three theories regarding why firms chose to issue via private placements that suggest that private placements should decrease with investor protection. Wruck (1989) contends that private placements are purchased by active investors who are willing and able to monitor the firm and ensure that it uses its resources efficiently. Hertz and Smith (1993) posit that private placements are used to certify the firm's value. Barclay, Holderness, and Sheehan (2007) claim that entrenched managers place shares with friendly investors who will not affect management's control. Monitoring, certification, and the benefits of control are all more valuable in low investor protection environments, so these three theories predict that private placements should decrease with the law.

Jang, Kim, and Koo (2010) show that private placements are the most common type of issue in Korea, where private placements are typically used to reshape ownership structure in business groups. If business groups are more common in countries with weaker investor protection, then Jang et al.'s findings also suggest that private placements ought to be more common in countries with fewer investor protections.

*Rights Offerings.* Rights offerings give existing shareholders the right to buy additional shares from the firm. In contrast to other share issues, we expect the use of rights to decline with investor protection. We outline this reasoning in the Introduction. In weak investor protection environments rights offerings may be the choice of issue by default, because the public is simply

unwilling to buy shares due to the low levels of legal protections. By the same logic, weak investor protection encourages entrenched owners to issue via rights offerings, so that their ownership and the benefits that it provides them are not diluted (Zingales (1995), Bebchuk (1999), and Foley and Greenwood (2009)). Eckbo and Masulis (1992) contend that owners typically prefer public issues over rights, due to diversification benefits. However, if legal protections are low, then domestic diversification is less beneficial, making rights more attractive relative to other types of share issues. Eckbo and Masulis (1992) and Eckbo (2004) also show analytically that if existing shareholders plan to retain most of their new shares, then rights offerings are the lowest cost method of issuing shares. If the retention of rights declines with investor protection, then rights offerings should decline with investor protection according to the Eckbo and Masulis (1992) framework.

### *3.2.2. Measures of Investor Protection and Development*

To test for a link between investor protection and seasoned share issues we use five different measures of investor protection. Our objective is not to run “horse races” between the different measures of investor protection, but rather test for a robust relation between share issues and investor protection using several different investor protection measures, which have been shown to be important for finance in previous studies. The investor protection variables are summarized in Table 5.

*Common.* Johnson, La Porta, Lopez-de-Silanes, and Shliefer (2000) explain that civil law courts are poorly suited for disciplining controlling shareholders accused of self-dealing transactions such as tunnelling, whereas the common law system, which allows greater judicial discretion in determining the appropriateness of self-dealing transactions, yields courts that

afford better protection to minority shareholders. LLSV (1998), LLS (2006), and Djankov et al (2008) show that common law countries tend to have stronger investor protection laws and greater enforcement of these laws than civil law countries. We therefore create a dummy variable *Common* that is equal to 1 if a country is of common law origin and zero if the country is of civil law origin.

*Disclosure, Liability, and Protect.* LLS (2006) show that disclosure requirements and liability standards are more strongly associated with financial development than other legal factors. We therefore use their disclosure and liability indices as measures of investor protection. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. LLS (2006) also develop a composite investor protection index, which we refer to as *Protect*. *Protect* is the first principal component of *Liability*, *Disclosure*, and an index of anti-director rights.

*Efficiency of the Judiciary* measures the “efficiency and integrity of the legal environment as it affects business, particularly foreign firms.” *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. The measure is created by International Country Risk, an agency that rates country risk. LLS (2006) show that higher

values of *Efficiency of the Judiciary* are associated with larger stock markets, more publicly traded firms, and greater access to equity for small and medium-sized firms.

*Stock Market and Turnover.* Share issues could also be less costly in countries with more developed stock markets. We therefore test whether proxies for equity market development are related to share issues. Our equity market development measures were obtained from Andrei Shleifer's Web site. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000.

*GDP.* Wealthier countries should have more citizens with the means to invest, so for this reason we expect that higher real per capita gross domestic product (*GDP*) ought to be associated with more frequent share issues. *GDP* is correlated with investor protection and financial development, so we use *GDP* both by itself and as a control variable in our regressions. We use the average of the yearly values of real (2005 USD) per capita *GDP* for each of the countries in our sample, although we obtain similar results if *GDP* is measured only at the beginning of our sample period.

### 3.3. Country-Level Regression Tests

Table 6 reports the results from our country-level regressions. The dependent variable is the percentage of firm-year observations in each country that made at least one issue. In unreported tests we estimated regressions in which the dependent variable is the firm's issue amount scaled by lagged assets, averaged at the country-level, and obtained similar findings. T-statistics are computed with White (1980) heteroscedasticity-consistent standard errors.

In the first regression *GDP* is the only independent variable, and its coefficient is positive

and statistically significant, showing that firms located in wealthier countries are more likely to issue seasoned shares. To get an idea of the economic significance, *GDP* has a standard deviation of 0.859. In the first regressions the *GDP* coefficient is 0.013 ( $t$ -statistic = 1.94), so a one standard deviation increase in *GDP* yields a 1.1% increase (e.g. 2% to 3.1%) in the percentage of firms that issue shares.

The next five regressions include each of the investor protection measures along with *GDP*. The coefficients for all five of the investor protection measures are positive and statistically significant, suggesting a causal relation between investor protection and share issues. The effects are economically significant as well. As an example, the *Common* coefficient is 0.044 ( $t$ -statistic = 2.98), so the percentage of firms issuing shares in common law countries is on average 4.4% greater than in civil law countries. *GDP* remains positive and significant in most of these regressions, suggesting that a country's wealth and the level of its investor protection have distinct effects on the cost of issuing shares.

The final two regressions include the stock market development measures along with *GDP*. The *Stock Market* variable is not statistically significant, while the *Turnover* variable is negative and significant. These results show that larger stock and even more liquid stock markets are not necessarily more active in terms of seasoned issuing shares.

### 3.4. Firm-Level Regressions

In this Section of the paper we discuss results from firm-level Probit regressions. An advantage of firm-level regressions relative to country-level regressions is that we control for firm-level characteristics that are likely to affect whether and how firms issue shares. The dependent variable in these regressions is equal to 1 if the firm issued shares during the year, and

zero otherwise. We make this variable for total issues and each of the four different issue types separately. The regressions include both industry (1-digit SIC code) and year fixed-effects. Per the recommendations in Petersen (2009) the standard errors are clustered on the country.

In unreported tests we estimate Tobit regressions and have similar findings. The effects that we describe below therefore apply to both the probability of issuing, and issue amount conditional on issuing. The Tobit results are available from the authors upon request.

Our choice of firm-level control variables follows Rajan and Zingales (1995) and Baker and Wurgler (2002), who regress changes in leverage on firm characteristics. We believe that these control variables might also matter for issue type. Moreover, in some cases these firm-level variables are correlated with the investor protection measures, so controlling for these firm-characteristics may be important with respect to measuring the influence that investor protection has on share issues.

Our firm-level control variables are as follows. Firm size (*Assets*) is measured as the log of total assets. Smaller firms tend to grow faster, and therefore should need more capital. Market-to-book ratio (*MB*) is estimated as the market value of equity, minus the book value equity, plus the book value of assets divided by the book value of assets. *MB* reflects the firm's growth opportunities. Market value of equity is measured as year-end stock price multiplied by year-end shares outstanding, while book value of equity comes from the firm's financial statements. All else equal firms with larger growth opportunities ought to issue more shares. Loughran and Ritter (1995) and Baker and Wurgler (2002) contend that *MB* may also reflect mispricing. Hence, *MB* may also predict share issues because firms issue shares in response to mispricing. *Leverage* is total debt scaled by total assets. *PPE* is property, plant and equipment total scaled by assets. *PPE* measures the portion of the firm's assets that cannot be easily converted to cash. *CF*

is net cash flows from operations scaled by assets measured at the beginning of the year. All else equal, firms with lower cash flow ought to need more capital, and should therefore issue more shares.

### *3.4.1. Aggregate Issues*

Our firm-level regression results are reported in Tables 7-11. In Table 7 the dependent variable is equal to 1 if the firm made at least one share issue of any type and zero otherwise. The results in Table 7 show that in firm-level regressions *GDP* does not consistently predict more frequent share issues; however each of the five investor protection coefficients is positive and statistically significant, showing that greater levels of investor protection are associated with more frequent share issues. These effects are economically significant as well. As an example, the *Disclosure* coefficient is 0.074 ( $t$ -statistic = 2.71). The coefficient reflects a marginal probability, and *Disclosure* has a standard deviation of 0.216. Hence, a one standard deviation increase in *Disclosure* yields an increase of 1.6% in the likelihood that a firm will issue at least one type of share during the year. Panel B of Table 1 shows that 6.88% of the firms in our sample make at least one issue per year, so investor protection has a relatively large effect.

As with the country level tests, neither of the financial development measures are significant, showing that countries with large financial markets do not necessarily have more seasoned offerings. As we mention in the Introduction, these findings are consistent with Demirguc-Kunt and Maksimovic (1998), who show that the percentage of firms in a country that use external finance to grow increases with investor protection, but not financial development. Levine and Zervos (1998) document similar effects at the macroeconomic-level, as they find no link between stock market size and economic growth.



With respect to the firm-level controls, the coefficients reported in Table 7 show that the relations between share issues and market-to-book, leverage, and *PPE* are all positive. This means that firms with stronger growth opportunities, high leverage, and fewer assets that can be easily converted to cash issue more shares. The relation between share issues and cash flow is negative, showing that less profitable firms issue more shares. McLean (2010) reports similar relations in a sample of U.S. firms.

#### 3.4.2. Public Offerings

Table 8 reports the results from the public offerings regressions. The results show that *GDP* is associated greater public offerings. The *GDP* coefficient is positive and significant in the regression without any of the other measures, and in six out of the seven regressions that include either a protection or development measure. Hence, firms issue more shares via public offerings in wealthier countries, and this effect is observed after controlling for the effects of investor protection and financial development. All five of the investor protection coefficients are positive and statistically significant, showing that firms issue more shares via public offerings in countries with strong investor protection laws. As for economic significance, the *Common* coefficient is 0.008 (t-statistic = 2.00), showing that a firm in a common law country is 0.8% more likely to issue via a public offering than is a firm in a civil law country. Panel B of Table 1 shows that in our sample 2.93% of the firms issue by public offerings in a given year, so an increase of 0.8% in the likelihood of issuing is a sizeable effect.

The findings here are broadly consistent with the notions that laws reduce information asymmetries, expropriation, and adverse selection problems, thereby making public issues more feasible. The results are therefore consistent with the LLSV framework, which posits that

investor protection is necessary to facilitate the sale of securities to minority investors. Neither of the stock market development measures is associated with greater public offerings, as both of the coefficients are insignificant. Hence, large and even liquid stock markets are not associated with more public offerings.

### 3.4.3. Stock-Financed Mergers

The results in Table 9 show that firms in countries with higher *GDP* and higher levels of investor protection are more likely to issue shares in mergers. As with public offerings, the investor protection results are very robust, as all five of the investor protection coefficients are positive and statistically significant. As an example, the *Liability* coefficient is 0.027 ( $t$ -statistic = 6.67), showing that a one standard deviation increase in *Liability* yields a 0.70% increase in the likelihood that a firm issues shares in a merger. Panel B of Table 1 shows the percentage of firm-year observations with merger share issues is 2.09%, so investor protection has a large effect on the use of shares in mergers. The findings are consistent with the notions that laws reduce information asymmetries, expropriation, and adverse selection problems, thereby making equity a more feasible currency in mergers and acquisitions.

As with public offerings, neither the *Stock Market* nor the *Turnover* coefficient is significant, showing that stock market size and liquidity are not associated with the amount of shares that are issued in mergers.

### 3.4.4. Private Placements

Table 10 reports the results for private placements. *GDP* is significant in only one of the regressions, so it does not have a robust effect on private placements. The *Common* and *Protect*

coefficients are both positive and significant, however the three other investor protection indices are insignificant. The results suggest that investor protection has some impact on the frequency of private placements, but not to the same extent as with public offerings and stock-financed mergers. These findings are sensible, for as we discuss in the Introduction and in Section 3.1 of this paper, private placements are typically made to large, well-informed investors, who face fewer information asymmetries, so legal protections may be less important to these investors relative to smaller, individual investors. Moreover, papers by Wruck (1989), Hertznel and Smith (1993), and Barclay, Holderness, and Sheehan (2007) stress the roles of monitoring, certification, and the benefits of control respectively in motivations for private placements. Each of these effects is probably more valuable in low investor protection countries, so these papers suggest that private placements should decrease with the law.

With respect to the firm-level characteristics, the size coefficient is negative in all of the private placement regressions, showing that private placements are more likely to be done by smaller firms. This is in contrast to the results in Table 8, which shows that size has no effect on public offerings, and Table 9, which shows that merger-related issues are more likely to be done by larger firms. Hertznel and Smith (1993), Chemmanur and Fulghieri (1999), Cronqvist and Nilsson (2004), and Wu (2004) contend that firms with high levels of asymmetric information will be more likely to issue via private placements as opposed to public offerings, so our findings with respect to size are consistent with these papers.

#### *3.4.5. Rights Offerings*

Table 11 reports the results for rights offerings. The results are very different with rights as compared to the other types of issues. *GDP* is not associated with greater rights offerings.

With respect to the investor protection, only the disclosure and liability indices are significant, and both of the coefficients are negative, showing that rights are more common in countries with lower levels of investor protection. The findings therefore suggest that investor protection laws do not promote the use of rights, and may even discourage the use of rights.

As we discuss in the Introduction and in Section 3.1 of the paper, there are several reasons to suspect that rights offerings decline with investor protection. First, firms may choose rights in low investor protection countries because this is the only way that they can issue shares. Consistent with this view, the size coefficient is negative and significant in most of the rights offerings regressions. If information asymmetries are greater for smaller firms, then this effect again suggests that rights are used by firms that have difficulty raising capital from small investors. Second, entrenched owners may prefer to issue via rights offerings, so that their ownership and the benefits that it provides them are not diluted. Such control benefits are most likely higher in countries with low levels of investor protection. Third, Eckbo and Masulis (1992) contend that owners would prefer public issues over rights, due to diversification benefits. However, if legal protections are low, then the benefits of domestic diversification are also lower. Finally, Eckbo and Masulis (1992) show analytically that if existing shareholders plan to retain most of their new shares, then rights offerings are the lowest cost method of issuing shares. If the retention of rights declines with investor protection for the reasons listed above, then rights offerings should also decline with investor protection in the Eckbo and Masulis (1992) framework.

#### *3.4.6. Rights vs. Other Types Equity Issues*

A clear empirical prediction of the preceding discussion in the last Section is that

conditional on issuing, firms in low investor protection countries should be more likely to issue via rights relative to other share issuance methods. This hypothesis is tested in this part of the paper. The dependent variable in these regressions is the amount of capital raised in rights offerings scaled by the sum of capital raised in public offerings, rights offerings, and private placements (mergers are excluded, although we get similar results if mergers are included). The hypothesis tested is that conditional on issuing, a firm in a low investor protection country is more likely to choose a rights offering.

The results in Table 12 are consistent with the hypothesis that investor protection laws discourage rights and encourage other types of issues. Although the common law dummy variable is insignificant, the four other investor protection indices are negative and significant, showing that the propensity for issuers to choose rights offerings over other equity issuance methods declines with investor protection. The effects are economically significant as well. As an example, the *Disclosure* coefficient is -0.395 ( $t$ -statistic = -4.43), showing that a one standard deviation increase (0.220) in *Disclosure* yields an increase of 0.087 in the percentage of equity issued by rights.

The *GDP* coefficient is negative in all of the regressions and significant in five of the eight regressions, showing that firms in poorer countries do tend to favour rights over other equity sale methods. This may be because the potential investor base is much smaller in poor countries, and existing shareholders therefore represent a relatively large fraction of the investor base. As in the previous tables, neither of the financial development measures is significant, showing that the choice of rights versus other types of share issues is not a function of how large or active a stock market is.

## 4. Conclusion

This paper studies how shares are issued around the world. We conduct our study with a sample of firms drawn from 41 countries over a 19-year period. Our sample consists of share issues from SDC and a manual Factiva search. Our Factiva search increases the SDC issues sample by 43%. We provide a detailed description of the completeness of SDC coverage for each type of issue. We provide these descriptions over time and for each of the countries in our sample. We find that SDC coverage is typically more complete in developed countries and in countries with larger stock markets, although even in these countries SDC still misses a large number of issues.

We find that public offerings are the most common type of share issue, whereas stock-financed mergers are on average the largest. Over time, seasoned share issues increase in frequency and in size; during our 19-year sample period the percentage of firms issuing shares increases ten-fold, while the average issue size more than doubles. Across countries, aggregate issues increase with investor protection and *GDP*, but not with measures of stock market development. The findings are consistent with the law and finance framework, which posits that investor protections are necessary in order for firms to sell large quantities of shares to minority investors. The findings are also consistent with Demirguc-Kunt and Maksimovic (1996), who show that the percentage of firms in a country that rely on external finance to grow increases with investor protection, but not stock market size.

The effects of investor protection are strongest on mergers and public offerings. Both types of issues typically involve share sales to a large number of small investors, so this finding is consistent with the notion that investor protection is a prerequisite for broad investor participation. The effect of the law on private placements is weaker, suggesting that monitoring,

certification, and maintaining control may be motivations for issuing via private placements. In contrast to other issues, rights offerings are more common in countries with fewer investor protections. This is consistent with rights being preferable when the cost of selling shares to the public is high, the benefits of control are high, and the likelihood that the rights are sold to the public is low.

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**Table 1: Share Issues over Time**

This table displays the frequencies (Panel A), frequencies as a percentage of firm-year observations (Panel B), and average amount in millions of real 2005 \$US (Panel C) of share issues around the world during the period 1990 through 2008. “Public” are seasoned equity offerings in the public market; “Mergers” are shares issued in mergers and acquisitions; “Private” are shares issued through private placements; “Rights” are shares issued through rights offerings to existing shareholders. “Total Issues” is the sum of the four issues. The dollar amount of a merger issue is calculated as the transaction value multiplied by the percentage of the transaction that is paid with equity. Proceeds from other share issues are measured as the product of the offer price and total number of shares issued.

<b>Panel A: Frequencies of Share Issues over Time</b>					
Year	Public	Mergers	Private	Rights	Total Issues
1990	135	80	26	20	261
1991	404	129	34	49	616
1992	417	223	67	50	757
1993	724	249	89	98	1,160
1994	627	348	381	148	1,504
1995	650	443	415	139	1,647
1996	903	676	525	227	2,331
1997	892	821	561	217	2,491
1998	776	939	543	259	2,517
1999	1,288	1,041	859	280	3,468
2000	1,597	1,401	977	279	4,254
2001	1,063	991	879	281	3,214
2002	1,145	884	1,245	368	3,642
2003	1,172	730	1,683	314	3,899
2004	1,582	921	1,752	299	4,554
2005	1,618	1,084	1,881	319	4,902
2006	1,959	1,173	2,144	310	5,586
2007	2,531	1,376	2,252	482	6,641
2008	1,780	1,452	1,832	521	5,585
Total	21,263	14,961	18,145	4,660	59,029

**Table 1 (Continued)**

**Panel B: Issue Frequency as a Percentage of Firm Observations over Time**

Year	Public	Mergers	Private	Rights	Total Issues
1990	0.63%	0.44%	0.06%	0.09%	1.19%
1991	1.36%	0.59%	0.10%	0.17%	2.12%
1992	1.29%	0.84%	0.17%	0.17%	2.39%
1993	2.11%	0.92%	0.25%	0.25%	3.35%
1994	1.87%	0.93%	0.38%	0.28%	3.23%
1995	2.08%	1.44%	0.48%	0.26%	3.99%
1996	2.32%	1.84%	0.50%	0.48%	4.84%
1997	2.21%	1.94%	0.68%	0.47%	4.89%
1998	1.68%	2.01%	0.61%	0.42%	4.38%
1999	2.65%	2.33%	0.86%	0.45%	5.78%
2000	3.28%	2.89%	1.18%	0.53%	7.08%
2001	2.04%	2.14%	1.43%	0.64%	5.73%
2002	2.60%	2.06%	2.25%	0.99%	7.23%
2003	2.64%	1.77%	3.09%	0.85%	7.51%
2004	3.76%	2.01%	3.39%	0.74%	9.00%
2005	3.86%	2.40%	3.60%	0.78%	9.48%
2006	4.41%	2.56%	3.96%	0.69%	10.31%
2007	5.55%	3.04%	4.32%	1.21%	12.15%
2008	3.89%	3.45%	3.78%	1.31%	10.40%
Total	2.93%	2.09%	2.01%	0.65%	6.88%

**Table 1 (Continued)**

**Panel C: Mean Values of Share Issues (in millions of \$USD) over Time**

Year	Public	Mergers	Private	Rights	Total Issues
1990	65.59	114.99	39.55	149.22	91.49
1991	72.76	110.93	83.80	165.56	103.75
1992	80.46	125.14	42.86	75.06	101.95
1993	166.19	137.60	111.15	42.47	171.21
1994	107.53	179.84	38.46	49.39	126.97
1995	138.04	199.03	33.86	77.37	156.58
1996	86.00	219.39	15.93	54.59	135.58
1997	111.42	266.52	30.85	84.00	183.79
1998	137.63	259.76	23.59	57.16	195.38
1999	133.39	504.03	38.52	56.50	294.05
2000	137.51	485.91	32.38	55.93	315.22
2001	104.10	310.65	19.06	92.27	189.91
2002	95.83	235.00	23.38	103.55	127.61
2003	78.32	286.09	33.95	72.42	134.80
2004	110.06	180.42	27.25	93.88	121.90
2005	101.88	288.44	24.10	49.16	147.76
2006	134.81	226.98	28.14	108.24	149.09
2007	131.07	781.22	36.04	65.87	413.24
2008	144.56	345.58	37.51	115.50	231.92
Total	118.93	340.83	30.57	79.33	203.79

**Table 2: Increase in SDC Issues Sample due to Factiva Search over Time**

This table reports the percentage increase in our SDC sample due to our manual Factiva searches. The values reported in the cells are ratios; the numerator is the number of issues found in our Factiva searches, while the denominator is the number of issues from SDC. A higher value is associated with less complete SDC coverage. “Public” are seasoned equity offerings in the public market; “Mergers” are shares issued in mergers and acquisitions; “Private” are shares issued through private placements; “Rights” are shares issued through rights offerings to existing shareholders. “Total Issues” is the sum of the four issues.

Year	Public	Mergers	Private	Rights	Total Issues
1990	0.350	0.290	25.000	9.000	0.582
1991	0.307	0.206	2.400	0.441	0.339
1992	0.418	0.149	1.792	0.282	0.374
1993	0.281	0.097	2.296	0.324	0.299
1994	0.274	0.119	0.191	0.104	0.196
1995	0.204	0.124	0.189	0.198	0.177
1996	0.229	0.094	0.256	0.118	0.181
1997	0.368	0.151	0.524	0.167	0.298
1998	0.461	0.201	0.841	0.233	0.384
1999	0.505	0.241	0.515	0.191	0.389
2000	0.543	0.230	0.561	0.177	0.401
2001	0.370	0.354	0.348	0.120	0.333
2002	0.533	0.476	0.336	0.132	0.399
2003	0.414	0.396	0.314	0.113	0.338
2004	0.653	0.312	0.422	0.107	0.441
2005	0.853	0.417	0.528	0.152	0.558
2006	0.860	0.659	0.517	0.202	0.628
2007	0.617	1.018	0.498	0.164	0.595
2008	0.534	1.495	0.377	0.168	0.588
Total	0.511	0.401	0.442	0.167	0.429

### **Table 3: Share Issues Frequencies Summarized by Country**

This table reports share issues frequencies (Panel A) and frequencies as percentages of firm-year observations (Panel B) for 41 countries during the period 1990 to 2008. “Public” are seasoned equity offerings in the public market; “Mergers” are shares issued in mergers and acquisitions; “Private” are shares issued through private placements; “Rights” are shares issued through rights offerings to existing shareholders. “Total Issues” is the sum of the four issues.



**Table 3 (Continued)****Panel A: Issue Frequency**

Country	Public	Mergers	Private	Rights	Total Issues	% of Total
Argentina	16	7	0	53	76	0.13%
Australia	948	1,153	9,123	1,544	12,768	21.63%
Germany	319	75	35	89	518	0.88%
Belgium	49	20	25	18	112	0.19%
Brazil	112	45	8	35	200	0.34%
Colombia	10	18	3	19	50	0.08%
Chile	40	11	1	124	176	0.30%
Canada	2,683	916	1,221	65	4,885	8.28%
Denmark	93	45	14	34	186	0.32%
Spain	37	41	3	26	107	0.18%
Finland	71	106	12	18	207	0.35%
France	226	165	29	121	541	0.92%
Greece	37	18	5	14	74	0.13%
Hong Kong	786	166	292	322	1,566	2.65%
Indonesia	37	23	6	87	153	0.26%
India	612	338	779	188	1,917	3.25%
Ireland	97	29	47	11	184	0.31%
Israel	103	29	85	2	219	0.37%
Italy	146	48	29	48	271	0.46%
Japan	2,737	1,317	32	43	4,129	6.99%
Korea	436	239	474	239	1,388	2.35%
Mexico	160	43	67	41	311	0.53%
Malaysia	268	137	366	207	978	1.66%
Netherlands	208	121	65	13	407	0.69%
Norway	226	129	103	27	485	0.82%
New Zealand	82	79	109	51	321	0.54%
Austria	44	35	11	20	110	0.19%
Peru	10	12	5	3	30	0.05%
Philippines	66	63	75	61	265	0.45%
Pakistan	9	9	4	1	23	0.04%
Portugal	62	14	17	22	115	0.19%
South Africa	114	283	154	34	585	0.99%
Sweden	161	130	127	191	609	1.03%
Singapore	587	106	391	133	1,217	2.06%
Switzerland	95	14	26	38	173	0.29%
Taiwan	189	39	230	185	643	1.09%
Thailand	224	16	192	127	559	0.95%
Turkey	40	3	5	5	53	0.09%
U.K.	1,327	800	451	189	2,767	4.69%
U.S.	7,783	8,115	3,519	162	19,579	33.17%
Venezuela	13	4	5	50	72	0.12%
Total	21,263	14,961	18,145	4,660	59,029	100%

**Table 3 (Continued)**

<b>Panel B: Issue Frequency as a Percentage of Firm Observations</b>					
	Public	Mergers	Private	Rights	Total Issues
Argentina	0.84%	0.50%	0.00%	1.51%	2.77%
Australia	3.34%	4.01%	18.88%	4.86%	24.44%
Germany	1.49%	0.44%	0.18%	0.47%	2.41%
Belgium	1.03%	0.55%	0.76%	0.45%	2.55%
Brazil	1.90%	0.80%	0.17%	0.43%	3.14%
Colombia	0.51%	1.53%	0.51%	1.87%	4.25%
Chile	0.96%	0.32%	0.04%	1.82%	2.86%
Canada	8.57%	3.08%	4.82%	0.27%	15.39%
Denmark	1.73%	1.07%	0.29%	0.81%	3.53%
Spain	0.81%	1.02%	0.06%	0.66%	2.46%
Finland	2.26%	2.83%	0.54%	0.54%	5.74%
France	1.11%	0.98%	0.16%	0.58%	2.70%
Greece	0.57%	0.38%	0.07%	0.31%	1.33%
Hong Kong	3.60%	0.99%	1.77%	1.65%	7.33%
Indonesia	0.42%	0.44%	0.07%	1.73%	2.64%
India	2.57%	1.56%	3.18%	0.76%	7.44%
Ireland	3.72%	1.82%	2.11%	0.70%	7.30%
Israel	2.44%	0.86%	2.74%	0.05%	6.00%
Italy	1.96%	0.72%	0.41%	0.70%	3.52%
Japan	3.57%	1.63%	0.05%	0.06%	5.10%
Korea	2.31%	1.75%	2.25%	1.52%	6.84%
Mexico	3.80%	1.49%	1.94%	1.45%	7.69%
Malaysia	1.46%	0.86%	2.38%	1.37%	5.83%
Netherlands	3.59%	2.41%	1.09%	0.21%	6.38%
Norway	4.31%	2.86%	2.41%	0.59%	9.04%
New Zealand	2.82%	2.99%	3.34%	1.78%	9.10%
Austria	1.63%	1.23%	0.46%	0.92%	3.52%
Peru	0.72%	0.89%	0.27%	0.18%	1.88%
Philippines	1.54%	1.68%	1.09%	1.33%	5.05%
Pakistan	0.39%	0.45%	0.17%	0.06%	1.01%
Portugal	1.89%	0.51%	0.66%	1.31%	3.93%
South Africa	0.83%	1.92%	1.37%	0.32%	4.22%
Sweden	1.79%	1.89%	1.62%	2.52%	7.08%
Singapore	4.75%	1.25%	3.56%	1.54%	10.34%
Switzerland	1.35%	0.47%	0.51%	0.59%	2.58%
Taiwan	1.12%	0.25%	1.33%	0.99%	3.48%
Thailand	2.52%	0.20%	2.15%	1.57%	5.99%
Turkey	0.85%	0.12%	0.12%	0.12%	1.16%
U.K	2.07%	1.44%	0.78%	0.39%	4.05%
U. S.	3.32%	3.41%	1.54%	0.06%	7.58%
Venezuela	0.77%	0.58%	0.77%	3.09%	5.03%
Total	2.93%	2.09%	2.01%	0.65%	6.88%

#### **Table 4: Increase in SDC Issue Sample due to Factiva Search by Country**

This table reports the percentage increase in each country's SDC sample due to our manual Factiva searches. The values reported in the cells are ratios; the numerator is the number of issues found in our Factiva search, while the denominator is the number of issues from SDC. A higher value is associated with less complete SDC coverage. "Public" are seasoned equity offerings in the public market; "Mergers" are shares issued in mergers and acquisitions; "Private" are shares issued through private placements; "Rights" are shares issued through rights offerings to existing shareholders. "Total Issues" is the sum of the four issues. The sample period is 1990 through 2008. In some countries SDC has zero issues for a particular type of issue, but Factiva found one or more issue. In these instances we report "N/A" for not applicable, as we cannot report a ratio in these instances. Each country has more than one SDC issue in total, so we are able to report total issues statistics for each country.

**Table 4 (Continued)**

Country	Public	Mergers	Private	Rights	Total Issues
Argentina	0.333	6.000	0.000	0.039	0.188
Australia	0.392	0.333	0.044	0.007	0.080
Germany	0.753	1.027	0.346	0.085	0.584
Belgium	0.324	0.538	0.667	0.000	0.349
Brazil	1.286	1.368	0.000	0.029	0.818
Colombia	1.500	0.500	0.500	0.118	0.429
Chile	0.818	4.500	0.000	0.000	0.181
Canada	0.142	0.221	5.938	2.421	0.483
Denmark	0.177	1.500	0.556	0.172	0.378
Spain	0.542	0.640	2.000	0.182	0.486
Finland	0.164	0.377	0.091	0.200	0.262
France	0.387	0.701	0.706	0.071	0.387
Greece	3.111	0.800	N/A	0.167	1.387
Hong Kong	0.351	0.509	0.884	0.283	0.426
Indonesia	2.364	N/A	0.500	0.176	0.719
India	3.192	7.450	7.954	0.528	3.841
Ireland	0.347	0.318	4.222	0.000	0.614
Israel	5.438	0.933	84.000	0.000	5.441
Italy	2.476	0.263	2.625	0.043	1.022
Japan	0.292	0.093	1.909	0.483	0.227
Korea	0.242	2.621	0.046	0.026	0.258
Mexico	2.478	5.143	15.750	12.667	4.183
Malaysia	4.057	0.181	0.887	0.035	0.737
Netherlands	0.763	4.500	1.241	0.182	1.261
Norway	0.263	1.481	1.512	0.080	0.633
New Zealand	1.485	1.548	0.730	0.041	0.824
Austria	0.630	34.000	1.200	0.000	1.075
Peru	2.333	5.000	4.000	2.000	3.286
Philippines	3.400	2.316	0.471	0.968	1.284
Pakistan	N/A	N/A	3.000	N/A	22.000
Portugal	4.636	13.000	4.667	0.100	2.286
South Africa	1.192	0.675	14.400	1.429	1.388
Sweden	0.695	0.368	8.071	0.240	0.701
Singapore	1.877	0.128	1.399	0.108	1.095
Switzerland	1.317	0.400	3.333	0.267	0.989
Taiwan	0.817	0.560	0.369	0.069	0.368
Thailand	6.467	0.333	0.864	0.270	1.282
Turkey	3.000	2.000	4.000	0.667	2.533
U.K.	0.166	0.493	1.148	2.048	0.422
U.S.	0.592	0.339	0.981	0.820	0.528
Venezuela	0.300	3.000	4.000	0.000	0.161
Total	0.511	0.401	0.442	0.167	0.429

### **Table 5: Investor Protection, Financial Development, and GDP Measures**

This table summarizes our investor protection, financial development, and GDP measures. Panel A lists the value of each measure for each country. Panel B reports the correlations between these measures and country-level measures of issuance frequency and amount. *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the first principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. *Issue Frequency* is the percentage of observations in a country that make at least one type of share issue. *Issue Amount* is the country-average of each firm-year observation's total issues scaled by lagged assets.

**Table 5 (Continued)****Panel A**

Country	GDP	Common	Disclose	Liability	Protect	Eff_jud	StockMkt	Turnover
Argentina	9.21	0	0.50	0.22	0.48	6.00	58.08	20.74
Australia	10.30	1	0.75	0.66	0.78	10.00	101.97	66.02
Germany	10.29	0	0.42	0.00	0.00	9.00	54.69	143.54
Belgium	10.27	0	0.42	0.44	0.07	9.50	67.16	47.25
Brazil	8.98	0	0.25	0.33	0.44	5.75	38.35	48.12
Colombia	8.81	0	0.42	0.11	0.35	7.25	14.27	9.59
Chile	9.21	0	0.58	0.33	0.61	7.25	89.70	11.98
Canada	10.33	1	0.92	1.00	0.96	9.25	106.18	67.79
Denmark	10.31	0	0.58	0.55	0.36	10.00	58.60	69.75
Spain	10.08	0	0.50	0.66	0.55	6.25	79.91	164.08
Finland	10.17	0	0.50	0.66	0.47	10.00	177.11	95.72
France	10.21	0	0.75	0.22	0.47	8.00	89.49	92.28
Greece	9.94	0	0.33	0.50	0.32	7.00	91.38	49.52
Hong Kong	10.31	1	0.92	0.66	0.85	10.00	360.98	58.37
Indonesia	7.95	0	0.50	0.66	0.51	2.50	24.70	52.48
India	7.43	1	0.92	0.66	0.77	8.00	33.80	84.22
Ireland	10.23	1	0.67	0.44	0.48	8.75	67.65	59.28
Israel	9.97	1	0.67	0.66	0.59	10.00	53.04	47.89
Italy	10.19	0	0.67	0.22	0.20	6.75	52.77	113.35
Japan	10.26	0	0.75	0.66	0.42	10.00	69.17	79.85
Korea	9.79	0	0.75	0.66	0.36	6.00	54.14	190.97
Mexico	9.35	0	0.58	0.11	0.10	6.00	21.87	34.51
Malaysia	9.19	1	0.92	0.66	0.73	9.00	148.42	40.90
Netherlands	10.36	0	0.50	0.89	0.54	10.00	131.74	117.82
Norway	10.63	0	0.58	0.39	0.44	10.00	39.69	94.74
New Zealand	9.98	1	0.67	0.44	0.46	10.00	40.10	40.15
Austria	10.31	0	0.25	0.11	0.10	9.50	16.39	50.98
Peru	8.62	0	0.33	0.66	0.66	6.75	22.85	18.07
Philippines	7.86	0	0.83	1.00	0.81	4.75	48.00	25.10
Pakistan	7.58	1	0.58	0.39	0.63	5.00	14.32	177.73
Portugal	9.84	0	0.42	0.66	0.57	5.5	46.24	61.47
South Africa	8.97	1	0.83	0.66	0.60	6.00	155.77	38.64
Sweden	10.23	0	0.58	0.28	0.39	10.00	112.27	98.33
Singapore	10.45	1	1.00	0.66	0.77	10.00	164.75	60.53
Switzerland	10.44	0	0.67	0.44	0.30	10.00	248.96	98.58
Taiwan	9.88	0	0.75	0.66	0.55	6.75	101.89	314.74
Thailand	8.64	1	0.92	0.22	0.37	3.25	44.79	83.65
Turkey	9.14	0	0.50	0.22	0.34	4.00	35.30	134.57
U.K.	10.25	1	0.83	0.66	0.78	10.00	157.70	105.41
U.S.	10.52	1	1.00	1.00	1.00	10.00	142.14	145.30
Venezuela	9.21	0	0.17	0.22	0.22	6.5	5.51	16.77
Mean	9.65	0.34	0.63	0.50	0.50	7.81	83.95	75.40
Std. Dev.	0.86	0.48	0.22	0.26	0.24	2.19	69.65	45.98

**Table 5 (Continued)**

**Panel B**

	Issue Freq	Issue/ Assets	GDP	Common	Disclose	Liability	Protect	Eff_jud	StockMkt	Turnover
Issue Freq	1									
Issue/Assets	0.918	1								
GDP	0.279	0.285	1							
Common	0.486	0.456	-0.053	1						
Disclose	0.443	0.291	0.047	0.698	1					
Liability	0.339	0.373	0.032	0.366	0.498	1				
Protect	0.422	0.437	-0.137	0.626	0.643	0.773	1			
Eff_jud	0.393	0.344	0.730	0.229	0.217	0.199	0.132	1		
StockMkt	0.174	0.124	0.426	0.318	0.479	0.370	0.399	0.476	1	
Turnover	-0.064	-0.067	0.199	0.023	0.186	0.090	-0.017	0.024	0.086	1

**Table 6: Total Issues Country-Level Regressions**

This table reports results from country-level regressions. The dependent variable is the percentage of observations in a country that make at least one type of share issue. The independent variables include: *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the first principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. White (1980) heteroskedasticity-consistent t-statistics are reported in the parentheses. \* Significant at 10%; \*\* Significant at 5%; \*\*\* Significant at 1%.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GDP	0.013*	0.015**	0.012**	0.013**	0.016**	-0.001	0.012	0.015*
	(1.94)	(2.24)	(2.31)	(2.07)	(2.52)	(0.23)	(1.62)	(1.99)
Common		0.044***						
		(2.98)						
Disclose			0.081***					
			(3.76)					
Liability				0.052**				
				(2.53)				
Protect					0.082**			
					(2.61)			
Eff_jud						0.008**		
						(2.68)		
StockMkt							0.004	
							(0.69)	
Turnover								-0.011
								(1.76)
Constant	-0.074	-0.103	-0.115**	-0.095	-0.144*	0.005	-0.064	-0.078
	(1.17)	(1.61)	(2.06)	(1.54)	(2.00)	(0.11)	(0.97)	(1.20)
Observations	41	41	41	41	41	41	41	41
R-squared	0.08	0.33	0.25	0.18	0.29	0.16	0.08	0.10



### Table 7: Aggregate Issues Firm-level Regressions

This table reports the results from firm-level Probit regressions. The dependent variable is equal to 1 if the firm issues shares in a seasoned offering, and zero otherwise. The control variables include: *Assets* is the log of book value of total assets at the beginning of the issuing year; *MB* is the log of market-to-book ratio of assets at the beginning of the issuing year; *CF* is operating cash flow scaled by book value of total assets at the beginning of the issuing year; *Leverage* is the ratio of total debt to assets at the beginning of the issuing year; *PPE* is property plant and equipment scaled by total assets. *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. All regressions include industry and year fixed effects. The coefficients reflect marginal probabilities. Robust t-statistics are computed by clustering on the country and are reported in parentheses. \* Significant at 10%; \*\* Significant at 5%; \*\*\* Significant at 1%.

**Table 7 (Continued)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GDP	0.011 (1.32)	0.008* (1.65)	0.006 (1.08)	0.004 (0.62)	0.004 (0.89)	-0.002 (0.32)	0.009 (0.97)	0.012 (1.36)
Common		0.034*** (4.97)						
Disclose			0.074*** (2.71)					
Liability				0.048*** (3.13)				
Investor_pr					0.055*** (5.75)			
Eff_Jud						0.008* (1.91)		
StockMkt							0.007 (1.00)	
Turnover								-0.007 (0.77)
Assets	0.001 (0.39)	0.002 (1.02)	0.001 (0.50)	0.001 (0.37)	0.001 (0.63)	0.001 (0.48)	0.001 (0.44)	0.001 (0.42)
MB	0.023*** (3.01)	0.022*** (3.70)	0.024*** (4.50)	0.022*** (3.39)	0.021*** (3.18)	0.023*** (3.40)	0.023*** (3.09)	0.023*** (2.95)
Leverage	0.032*** (5.32)	0.034*** (5.44)	0.033*** (5.12)	0.032*** (5.18)	0.033*** (5.07)	0.033*** (5.62)	0.033*** (5.10)	0.033*** (5.86)
PPE	0.014** (2.06)	0.010* (1.76)	0.013** (2.09)	0.012** (1.96)	0.011* (1.87)	0.014** (2.13)	0.013* (1.93)	0.014** (2.07)
CF	-0.073*** (5.15)	-0.068*** (5.35)	-0.069*** (4.98)	-0.069*** (5.04)	-0.068*** (5.24)	-0.071*** (5.24)	-0.073*** (5.16)	-0.073*** (5.21)
Observations	292,685	292,685	292,685	292,685	292,685	292,685	292,685	292,685
Pseudo R <sup>2</sup>	0.14	0.15	0.14	0.14	0.14	0.14	0.14	0.14

### Table 8: Public Offerings Firm-Level Regressions

This table reports the results from firm-level Probit regressions. The dependent variable is equal to 1 if the firm issues shares in a public offering, and zero otherwise. The control variables include: *Assets* is the log of book value of total assets at the beginning of the issuing year; *MB* is the log of market-to-book ratio of assets at the beginning of the issuing year; *CF* is operating cash flow scaled by book value of total assets at the beginning of the issuing year; *Leverage* is the ratio of total debt to assets at the beginning of the issuing year; *PPE* is property plant and equipment scaled by total assets. *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. The coefficients reflect marginal probabilities. All regressions include industry and year fixed effects. Robust t-statistics are computed by clustering on the country and are reported in parentheses. \* Significant at 10%; \*\* Significant at 5%; \*\*\* Significant at 1%.

**Table 8 (Continued)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GDP	0.010** (2.25)	0.008*** (2.59)	0.007*** (2.62)	0.006** (2.05)	0.007** (2.28)	0.004 (1.08)	0.009** (2.04)	0.010** (2.28)
Common		0.008** (2.00)						
Disclose			0.029*** (3.63)					
Liability				0.022*** (3.55)				
Investor_pr					0.015** (2.48)			
Eff_Jud						0.003* (1.92)		
StockMkt							0.002 (0.85)	
Turnover								-0.003 (1.46)
Assets	0.001* (1.91)	0.001** (2.29)	0.001** (2.29)	0.001* (1.96)	0.001** (2.26)	0.001* (1.96)	0.001** (1.99)	0.001* (1.88)
MB	0.010*** (3.93)	0.010*** (4.37)	0.011*** (6.65)	0.010*** (4.53)	0.010*** (3.98)	0.011*** (4.45)	0.010*** (4.01)	0.010*** (3.82)
Leverage	0.019*** (5.15)	0.020*** (5.73)	0.020*** (5.54)	0.019*** (5.48)	0.020*** (5.47)	0.019*** (5.25)	0.020*** (5.24)	0.020*** (5.35)
PPE	0.005 (1.43)	0.004 (1.29)	0.005 (1.42)	0.004 (1.35)	0.004 (1.31)	0.005 (1.51)	0.005 (1.38)	0.005 (1.47)
CF	-0.013** (1.96)	-0.012* (1.95)	-0.012* (1.91)	-0.012* (1.94)	-0.012** (1.96)	-0.013* (1.93)	-0.013** (1.96)	-0.013** (1.96)
Observations	292,646	292,646	292,646	292,646	292,646	292,646	292,646	292,646
Pseudo R <sup>2</sup>	0.10	0.10	0.10	0.11	0.10	0.10	0.10	0.10

### Table 9: Stock-Financed Mergers Firm-Level Regressions

This table reports the results from firm-level Probit regressions. The dependent variable is equal to 1 if the firm issues shares in a merger, and zero otherwise. The control variables include: *Assets* is the log of book value of total assets at the beginning of the issuing year; *MB* is the log of market-to-book ratio of assets at the beginning of the issuing year; *CF* is operating cash flow scaled by book value of total assets at the beginning of the issuing year; *Leverage* is the ratio of total debt to assets at the beginning of the issuing year; *PPE* is property plant and equipment scaled by total assets. *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the first principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. The coefficients reflect marginal probabilities. All regressions include industry and year fixed effects. Robust t-statistics are computed by clustering on the country and are reported in parentheses. \* Significant at 10%; \*\* Significant at 5%; \*\*\* Significant at 1%.

**Table 9 (Continued)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GDP	0.009*	0.006**	0.005**	0.003	0.004**	0.002	0.008	0.009*
	(1.74)	(2.46)	(2.10)	(1.43)	(2.06)	(0.59)	(1.63)	(1.74)
Common		0.012***						
		(4.99)						
Disclose			0.034***					
			(4.85)					
Liability				0.027***				
				(6.67)				
Investor_pr					0.024***			
					(9.10)			
Eff_Jud						0.004**		
						(2.27)		
StockMkt							0.001	
							(0.40)	
Turnover								-0.000
								(0.03)
Assets	0.003***	0.003***	0.003***	0.003***	0.003***	0.003***	0.003***	0.003***
	(5.09)	(4.84)	(4.46)	(4.31)	(4.39)	(5.73)	(4.81)	(5.11)
MB	0.008***	0.007***	0.008***	0.007***	0.007***	0.008***	0.008***	0.008***
	(3.91)	(4.64)	(7.56)	(4.95)	(4.01)	(4.57)	(3.97)	(3.93)
Leverage	0.004*	0.005**	0.004***	0.004***	0.004**	0.004**	0.004**	0.004*
	(1.93)	(2.54)	(2.64)	(2.62)	(2.51)	(2.15)	(2.06)	(1.96)
PPE	-0.000	-0.001	-0.000	-0.001	-0.001	0.000	-0.000	-0.000
	(0.06)	(0.64)	(0.24)	(0.62)	(0.58)	(0.04)	(0.11)	(0.06)
CF	-0.007***	-0.006***	-0.006***	-0.005***	-0.006***	-0.007***	-0.007***	-0.007***
	(3.37)	(3.15)	(2.95)	(2.70)	(2.88)	(3.30)	(3.34)	(3.37)
Observations	279,137	279,137	279,137	279,137	279,137	279,137	279,137	279,137
Pseudo R <sup>2</sup>	0.09	0.10	0.10	0.11	0.11	0.10	0.09	0.09

### Table 10: Private Placements Firm-Level Regressions

This table reports the results from firm-level Probit regressions. The dependent variable is equal to 1 if the firm issues shares in a private placement, and zero otherwise. The control variables include: *Assets* is the log of book value of total assets at the beginning of the issuing year; *MB* is the log of market-to-book ratio of assets at the beginning of the issuing year; *CF* is operating cash flow scaled by book value of total assets at the beginning of the issuing year; *Leverage* is the ratio of total debt to assets at the beginning of the issuing year; *PPE* is property plant and equipment scaled by total assets. *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the first principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. All regressions include industry and year fixed effects. The coefficients reflect marginal probabilities. Robust t-statistics are computed by clustering on the country and are reported in parentheses. \* Significant at 10%; \*\* Significant at 5%; \*\*\* Significant at 1%.

**Table 10 (Continued)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GDP	-0.001 (0.44)	-0.001 (0.70)	-0.001 (0.54)	-0.001 (0.49)	-0.002 (1.04)	-0.003*** (3.56)	-0.001 (0.46)	-0.001 (0.29)
Common		0.010*** (3.13)						
Disclose			0.007 (0.61)					
Liability				0.003 (0.43)				
Investor_pr					0.012** (1.99)			
Eff_Jud						0.002 (1.34)		
StockMkt							0.001 (0.38)	
Turnover								-0.002 (0.62)
Assets	-0.002* (1.68)	-0.001 (1.58)	-0.002 (1.63)	-0.002* (1.71)	-0.001* (1.66)	-0.002* (1.71)	-0.002 (1.62)	-0.002* (1.71)
MB	0.001 (1.29)	0.001 (1.30)	0.002 (1.33)	0.001 (1.34)	0.001 (1.16)	0.001 (1.46)	0.001 (1.30)	0.001 (1.30)
Leverage	0.003* (1.85)	0.003* (1.86)	0.003* (1.77)	0.003* (1.80)	0.003* (1.70)	0.003* (1.87)	0.003* (1.81)	0.003** (2.15)
PPE	0.005*** (3.73)	0.003*** (3.37)	0.004*** (3.38)	0.004*** (3.26)	0.004*** (3.28)	0.005*** (3.86)	0.005*** (3.68)	0.005*** (3.73)
CF	-0.020*** (10.13)	-0.016*** (11.17)	-0.019*** (10.70)	-0.019*** (10.91)	-0.018*** (10.75)	-0.019*** (10.32)	-0.020*** (10.24)	-0.020*** (10.40)
Observations	292,105	292,105	292,105	292,105	292,105	292,105	292,105	292,105
Pseudo R <sup>2</sup>	0.23	0.24	0.23	0.23	0.23	0.23	0.23	0.23



### Table 11: Rights Offerings Firm-Level Regressions

This table reports the results from firm-level Probit regressions. The dependent variable is equal to 1 if the firm issues shares in a rights offering, and zero otherwise. The control variables include: *Assets* is the log of book value of total assets at the beginning of the issuing year; *MB* is the log of market-to-book ratio of assets at the beginning of the issuing year; *CF* is operating cash flow scaled by book value of total assets at the beginning of the issuing year; *Leverage* is the ratio of total debt to assets at the beginning of the issuing year; *PPE* is property plant and equipment scaled by total assets. *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the first principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. The coefficients reflect marginal probabilities. All regressions include industry and year fixed effects. Robust t-statistics are computed by clustering on the country and are reported in parentheses. \* Significant at 10%; \*\* Significant at 5%; \*\*\* Significant at 1%.

**Table 11 (Continued)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GDP	-0.002 (1.50)	-0.002 (1.50)	-0.002 (1.58)	-0.001 (1.10)	-0.002 (1.53)	-0.001 (1.17)	-0.002 (1.52)	-0.002 (1.36)
Common		-0.000 (0.13)						
Disclose			-0.010** (2.08)					
Liability				-0.009*** (3.28)				
Investor_pr					-0.005 (1.42)			
Eff_Jud						-0.000 (0.88)		
StockMkt							0.001 (0.66)	
Turnover								-0.002 (0.87)
Assets	-0.001 (1.32)	-0.001 (1.56)	-0.001 (1.51)	-0.001 (1.46)	-0.001 (1.59)	-0.001 (1.37)	-0.001 (1.21)	-0.001 (1.34)
MB	-0.001 (1.13)	-0.001 (1.15)	-0.001 (1.53)	-0.001 (1.27)	-0.001 (1.03)	-0.001 (1.18)	-0.001 (1.06)	-0.001 (1.17)
Leverage	0.004*** (2.62)	0.004*** (2.63)	0.003*** (2.87)	0.003*** (2.89)	0.003*** (2.72)	0.004*** (2.69)	0.004** (2.54)	0.004*** (3.29)
PPE	0.002 (1.55)	0.002* (1.70)	0.002 (1.61)	0.002** (2.15)	0.002* (1.92)	0.002 (1.53)	0.002 (1.46)	0.002 (1.56)
CF	-0.008*** (5.96)	-0.008*** (6.49)	-0.008*** (7.09)	-0.008*** (7.52)	-0.008*** (7.21)	-0.008*** (6.06)	-0.008*** (5.96)	-0.008*** (5.93)
Observations	291,795	291,795	291,795	291,795	291,795	291,795	291,795	291,795
Pseudo R <sup>2</sup>	0.09	0.09	0.11	0.12	0.10	0.09	0.09	0.10

## Table 12: Rights Offerings vs. Other Types of Issues Firm-Level Regressions

This table reports OLS regression tests that measure the use of rights offerings vs. other issue types. The dependent variable is the amount of capital raised in rights offerings scaled by the sum of capital raised in public offerings, rights, and private placements. The control variables include: *Assets* is the log of book value of total assets at the beginning of the issuing year; *MB* is the log of market-to-book ratio of assets at the beginning of the issuing year; *CF* is operating cash flow scaled by book value of total assets at the beginning of the issuing year; *Leverage* is the ratio of total debt to assets at the beginning of the issuing year; *PPE* is property plant and equipment scaled by total assets. *Common* is equal to 1 if a country is of common law origin and zero if the country is of civil law origin. *Disclosure* is the arithmetic mean of six sub-indices. One of these sub-indices indicates whether or not new issues need to be accompanied by a prospectus. The five other sub-indices measure disclosure requirements within the prospectus regarding directors' and officers' compensations, controlling shareholders, insider ownership, irregular contracts, and any transactions between the issuer and its officers and directors. *Liability* is the arithmetic mean of three sub-indices. The sub-indices measure the ease with which an investor can pursue an issuer and its directors, the distributors, and the accountants in civil court if the investor suffers losses due to misleading statements in a prospectus. *Protect* is the first principal component of *Liability*, *Disclosure*, and an index of anti-director rights. *Efficiency of the Judiciary* measures the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms." *Efficiency of the Judiciary* ranges in value from 0 to 10, with 10 meaning the best legal environment. *Stock Market* is the aggregate market capitalization of all publicly traded firms scaled by total GDP. *Turnover* is the total dollar value of stocks traded, scaled by total stock market capitalization, for the period 1996-2000. *GDP* is the average yearly value of per capita gross domestic product. All regressions include industry and year fixed effects. Robust t-statistics are computed by clustering on the country and are reported in parentheses. \* Significant at 10%; \*\* Significant at 5%; \*\*\* Significant at 1%.

**Table 12 (Continued)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GDP	-0.072*	-0.067*	-0.058*	-0.030	-0.048	-0.018	-0.080*	-0.070
	(1.68)	(1.91)	(1.98)	(1.07)	(1.54)	(0.53)	(1.79)	(1.66)
Common		-0.089						
		(1.36)						
Disclose			-0.395***					
			(4.43)					
Liability				-0.348***				
				(7.44)				
Investor_pr					-0.231**			
					(2.43)			
Eff_Jud						-0.038***		
						(3.10)		
StockMkt							0.022	
							(0.84)	
Turnover								-0.014
								(0.37)
Assets	-0.008**	-0.011***	-0.008**	-0.005*	-0.010**	-0.010***	-0.008**	-0.008**
	(2.53)	(3.05)	(2.16)	(1.84)	(2.66)	(3.12)	(2.32)	(2.11)
MB	-0.045***	-0.043***	-0.041***	-0.031***	-0.036***	-0.045***	-0.044***	-0.044***
	(4.57)	(4.18)	(3.73)	(3.50)	(3.63)	(5.07)	(4.67)	(4.58)
Leverage	0.003	-0.005	-0.000	-0.004	-0.007	0.000	0.006	0.005
	(0.18)	(0.28)	(0.03)	(0.26)	(0.45)	(0.01)	(0.30)	(0.26)
PPE	0.004	0.011	0.010	0.019	0.015	0.001	0.003	0.004
	(0.23)	(0.79)	(0.77)	(1.57)	(1.14)	(0.04)	(0.21)	(0.24)
CF	-0.023	-0.024*	-0.025*	-0.031**	-0.027**	-0.020	-0.024	-0.023*
	(1.66)	(1.78)	(1.88)	(2.42)	(2.15)	(1.52)	(1.63)	(1.71)
Constant	0.777*	0.812**	0.874***	0.695**	0.702**	0.658**	0.835**	0.772*
	(1.99)	(2.65)	(3.31)	(2.55)	(2.55)	(2.21)	(2.05)	(1.99)
Observations	18,167	18,167	18,167	18,167	18,167	18,167	18,167	18,167
Pseudo R <sup>2</sup>	0.06	0.07	0.10	0.12	0.09	0.08	0.06	0.06