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ABSTRACT

This paper investigates how a foreign firm's decision to cross-list its shares in the U.S. is related to the concentration of the ownership of its cash flow rights and of its control rights. Theory has proposed that when private benefits are high, controlling shareholders are less likely to choose to list their firm's shares in the U.S. because the higher standards for transparency and disclosure, as well as the increased monitoring associated with such listings, limit their ability to extract private benefits. We offer evidence that confirms this hypothesis using data on more than 4,000 firms from 31 countries. Using logistic regression analysis, we show that the control rights held by controlling shareholders, as well as the difference between their control rights and their cash flow rights are significantly and negatively related to the existence of a U.S. listing. In addition, we employ duration analysis using a Cox proportional-hazard model to show that the probability of listing in a given year from 1995 to 2001, conditional on not yet having listed, is significantly lower for firms whose managers have high levels of control and for firms whose controlling shareholder owns more control rights than cash flow rights.

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1. Introduction.

Academics and practitioners have developed extensive lists of reasons why foreign firms choose to list in the U.S. Benefits of access to U.S. markets that have been discussed include the increased ability to raise equity, growth of the firm's shareholder base, increased liquidity, lower cost of capital, and greater visibility and prestige.[1] Recently, however, much attention has been paid to the corporate governance implications of U.S. cross-listings.

Controlling shareholders of foreign firms listed in the U.S. face more constraints and have more obligations than controlling shareholders of firms not listed in the U.S.[2] For instance, a U.S. cross-listing typically improves transparency by imposing disclosure requirements on firms that are stronger than the disclosure requirements they face in their home country. Additionally, by choosing to list in the U.S., controlling shareholders accept the consequence of being subject to an additional layer of monitoring by a variety of U.S. market intermediaries. For example, the cross-listing subjects them to enforcement actions initiated by the U.S. Securities and Exchange Commission (SEC) and to scrutiny from U.S. analysts and journalists. Further, if they raise funds in the U.S., these firms are subjected to monitoring by underwriters. This commitment to improve governance through greater transparency and monitoring is consistent with the existing evidence that firms experience positive abnormal returns when they announce their intention to list in the U.S. (Foerster and Karolyi, 1999; Miller, 1999), that they subsequently raise more capital after listing (Reese and Weisbach, 2002; Lins, Strickland, and Zenner, 2005), that their cost of capital is lower (Hail and Leuz, 2004), that estimates of private benefits of control are lower (Doidge, 2004a),

[1] Surveys by Karolyi (1998, 2004), Claessens, Klingebiel, and Schmukler (2002), and Benos and Weisbach (2004) evaluate over 150 different published studies that examine the decision to cross-list shares on foreign markets. Some new studies focus on the importance of geographic proximity (Sarkissian and Schill, 2004) and product market linkages (Pagano, Roell, and Zechner, 2002) as factors in firms' decisions about where and when to cross-list shares.

[2] Non-U.S. firms are typically controlled by large shareholders (see La Porta, Lopez-de-Silanes, and Shleifer, 1999). We therefore use the term controlling shareholders to denote the group which controls the firm (which can include managers and/or large blockholders).

and that foreign firms listed in the U.S. are valued more highly than firms that do not list in the U.S. (Doidge, Karolyi, and Stulz, 2004).

To the extent that control of a firm is valuable because it enables those who have it to extract private benefits from the firm, we would expect firms in which controlling shareholders have greater ownership of voting rights, and, therefore, tighter control of the firm, to be less likely to choose to list in the U.S. (see Coffee, 2002, for related arguments). We investigate this proposition using comprehensive ownership and control data on more than 4,000 firms from 31 countries in Asia, Europe, Latin America, and elsewhere. The data include the control rights for controlling shareholders, such as top managers and their family members, governments, other corporations, and financial institutions. Using logistic regression analysis, we find strong evidence that when controlling shareholders have high levels of control, their firms are less likely to be listed in the U.S. Similarly, we find that firms controlled by their top managers and their families are less likely to be listed in the U.S. We also employ duration analysis using a Cox proportional-hazard model to show that the probability of listing in a given year over the 1995 to 2001 period, conditional on not yet having listed, is significantly lower when controlling shareholders have high levels of control and when firms are controlled by their top managers.

The corporate governance literature makes an important distinction between ownership of voting rights and ownership of cash flow rights. If controlling shareholders have a majority of voting rights but own negligible cash flow rights, they have little incentive to take steps to increase the value of the firm's equity. However, as controlling shareholders' ownership of cash flow rights increases, any action they take to benefit themselves at the expense of other equity holders has a cost in that it decreases the value of the shares controlling shareholders own. If controlling shareholders own almost all of the cash flow rights, it makes little sense for them to expend resources to extract private benefits at the expense of minority shareholders. This reasoning suggests that, for a given level of cash flow rights, controlling shareholders are less likely to seek a

listing for their firm as their holdings of control rights exceed their holdings of cash flow rights. In both our logistic regression and Cox proportional hazard analysis, we find that this is the case.

The relation between the listing decision and cash flow rights ownership is complex. If controlling shareholders own shares to control the firm and want to keep control, they have little to gain through a cross-listing. In such a situation, the cross-listing makes control less valuable and controlling shareholders cannot realize the share-price benefit from the reduced value of control by selling shares since by doing so they would lose control. At the same time, if controlling shareholders own shares for the purpose of aligning incentives with shareholders, incentives are well-aligned when controlling shareholders own a large stake so the benefit of cross-listing is smaller as long as controlling shareholders keep their current stake. If, however, the large stake controlling shareholders hold is costly to them – for instance, by forcing them to bear firm risk – and they want to reduce it, they can do so on better terms by cross-listing since controlling shareholders of a cross-listed firm are more constrained in their consumption of private benefits. With this view, it is possible that high cash flow ownership when the firm does not yet have a cross-listing makes a future cross listing more likely. We investigate this hypothesis explicitly with our Cox proportional-hazard model, but find no evidence that greater holdings of cash flow rights make it more likely for controlling shareholders to choose a cross-listing. Thus, the large equity stakes of controlling shareholders we observe in our sample firms are consistent with the view that control is an important motivation for holding these shares.

To the extent that listing enables firms to raise funds at lower cost, we would expect, everything else equal, to see firms with better investment opportunities pursue listings and firms that have not yet listed to become more likely to do so following an improvement in their expected investment opportunities. We find strong support for these predictions. Also, controlling shareholders receive fewer private benefits in countries with better protection of investor rights (Nenova, 2003; Dyck

and Zingales, 2004). This suggests that, everything else equal, firms in countries with better investor protection would be more willing to cross-list. We find that this is the case.

Our evidence contributes to both the literature on corporate ownership and the literature on cross-listings. The fact that controlling shareholders with more control rights are more reluctant to list provides further support for the view that a cross-listing reduces their discretion to take actions that reduce the wealth of minority shareholders. It does not, however, resolve the on-going debate about the exact nature of the constraints imposed on controlling shareholders. The predictions investigated in this model hold whenever such constraints exist and do not depend on whether the discretion of controlling shareholders is limited by the disclosure requirements and enforcement of U.S. securities laws (see Coffee, 1999 and 2002, and Stulz 1999, for arguments in favor of this hypothesis and Siegel, 2004, for arguments against), by monitoring of "gatekeepers" (see, in addition, Lang, Lins, and Miller, 2003; King and Segal, 2004), or in other ways.

The paper proceeds as follows. In Section 2, we present our data. In Section 3, we investigate whether the controlling shareholders' control (i.e., voting) rights as well as the difference between their control rights and cash flow rights help further our understanding of which firms are cross-listed among the population of firms. In Section 4, we estimate a Cox proportional-hazard model that allows us to relate the listing decision to changing firm attributes and to ownership. Conclusions follow in Section 5.

2. Data.

2.1. Sample description

To examine whether firms' decisions to cross-list on a U.S. exchange are related to firm-level corporate governance, we construct two separate datasets, each of which contains a different measure of the depth of ownership and control structure for a broad sample of firms from a large number of countries around the world. Our datasets are compiled from the raw ownership and

control data available for Western European firms from Faccio and Lang (2002); for emerging market firms from Lins (2003); and for East Asian firms from Claessens, Djankov, and Lang (2000).[3] Ownership and control data for East Asian and emerging market firms are from the 1995 and 1996 period and those from Western Europe range from 1996 to 1999, with the majority of sample observations occurring in 1996. We confine our analysis to non-financial firms to maintain consistency across the three ownership and control-structure datasets. Because we need a variety of firm-level financial data, we use only firms covered by the Worldscope database. Also, to make firms across countries more comparable, we limit our sample to firms with total assets of at least $10 million.

Claessens et al. (2000), Faccio and Lang (2002), and Lins (2003) report ownership and control statistics that could proxy for a firm's internal corporate governance environment. For instance, they compute the percentage of total ultimate control rights held by the following types of blockholders: Family/Management, Government, Widely-Held Corporations, Widely-Held Financials, and Miscellaneous (which includes ownership by Trusts, Cooperatives, Foundations, Employees, etc.). From these data it is possible to identify the largest blockholder of a firm's control rights. Unfortunately, the cash flow ownership data presented in Faccio and Lang (2002), Lins (2003), and Claessens et al. (2000) are categorized using different algorithms. Faccio and Lang and Claessens et al. report the separation of ownership and control only for the largest blockholder of their sample firms (which may not be the family/management group), while Lins reports this

[3] Claessens, Djankov, Fan, and Lang (2002) examine the impact of ownership structure on firm value in East Asia. Fan and Wong (2002) examine the effect of ownership structure on earnings informativeness. Both studies exclude Japan from their tests based on the argument that Japan has a unique *keiretsu* governance system that features very little individual ownership or control and instead is dominated by widely held financial institutions who control a web of group-linked companies. Our empirical tests comprise a broader range of countries. While some countries arguably have unique characteristics, it is difficult for us to apply a consistent screening principle indicating uniqueness in country-level governance. Thus, we are reluctant to exclude any one country. However, later in the paper, we discuss results where we exclude Japan to follow Claessens et al. (2002). None of our inferences are weakened by removing Japan and some are strengthened. Two countries in our sample have many more firms than the other countries: the U.K. and Japan. Our inferences about the role of control rights and cash flow rights are robust to omitting these two countries.

measure for all holdings of the family/management group (which may not be the largest blockholder). Given these difficulties, we conduct our tests on two firm-level governance datasets.

The first dataset is called the "Controlling Blockholder" dataset and it uses data for the ultimate control rights and cash flow rights held by the largest blockholder as detailed in Claessens et al. (2000) and Faccio and Lang (2002). Our classification of the largest blockholder as the controlling shareholder follows much of the literature on international corporate governance (see, e.g., La Porta, Lopez-de-Silanes, and Shleifer, 1999 and Claessens et al., 2002). To make it clear that the largest blockholder is assumed to be the controlling shareholder in this dataset, we will call the controlling shareholder the controlling blockholder when this dataset is used. The primary benefit of this dataset is that we can conduct tests using the control rights held by the controlling blockholder as well as the difference between this entity's control and cash flow rights. This allows us to focus on both the controlling blockholder's capability to pursue its own agenda as well as the incentives to refrain from consumption of private benefits. One drawback of this dataset is that we have relatively few firms from emerging market countries. In particular, this dataset has no countries from Latin America. At the end of 1997, this dataset contains 4,062 firms across 22 countries with complete firm-level data.

Our second dataset is called the "Family/Management Control" dataset. In this dataset, we compile the ultimate control rights held by a firm's officers, directors, top-level managers, and their family members. Since it is the management group that actually administers a firm, the private benefits of control may be especially pronounced when we observe high levels of control held by top managers and their families. Ultimate family/management control rights can consistently be identified across the datasets of Faccio and Lang (2002), Lins (2003), and Claessens et al. (2000). An advantage of this dataset is that we can include more firms from emerging market countries; the disadvantage is that we cannot consistently identify family/management cash flow rights. At the end of 1997, there are 4,272 firms from 31 countries in the Family/Management Control dataset.

In compiling the Family/Management Control dataset, we seek to construct measures that indicate that a firm's managers are, in effect, in full control of a firm because, all else equal, the capability to expropriate minority shareholders will be highest when managers' control of a firm cannot be challenged internally. Because effective managerial control depends on the control rights held by management, as well as the control rights held by outside blockholders, we use both a nominal and a relative measure of effective managerial control in our analysis. The nominal measure is the percentage of control rights held by the management group and its family. We expect that higher levels of managerial control rights correspond to more effective control of a firm. Our relative measure is an indicator variable set equal to one if the control rights held by a firm's family/management group exceed those held by any other blockholding entity. The relative measure corresponds to the idea that high raw levels of control may not always be necessary to establish effective managerial control; rather, managers need only to obtain sufficient control rights so that they can avoid being influenced by other blockholders.[4]

We acknowledge that the Family/Management Control dataset allows us to focus only on the capability for expropriation and not on the incentives to avoid expropriation. To measure such incentives, we would need data for the ultimate cash flow ownership stakes held by the management group and its family for all of our firms, which we do not have.[5] However, it is possible that this limitation will not materially affect our inferences. To the extent that effective managerial control can be established at some level below 100 percent, control and cash flow rights will inherently be separated. Generally, managerial control of 51 percent of the shares will confer unequivocal control rights. In such a case, controlling managers that divert one dollar from the firm

[4] Results using the nominal and relative measures are similar. We focus our presentation of results on the nominal family/management control rights measure because it corresponds more closely to the control rights variable used in the Controlling Blockholder dataset.

[5] While we do not have data to separate the effect of managerial cash flow rights from control rights, the analysis in Faccio and Lang (2002) and Lins (2003) suggests that, for our sample, ultimate managerial control rights often exceed cash flow rights because of pyramid ownership structures and superior voting shares.

for personal gain will bear at most 51 cents of the cost. Any further separation of control from cash flow rights via pyramids and superior voting shares may be a second-order effect.

2.2. Variable definitions

In each dataset, we compile a complete list of firms with Level 2 or Level 3 ADRs at the end of each year from 1995 to 2001. Firms with Level 2 or 3 ADRs are firms listed either on the Nasdaq, American Stock Exchange (Amex), or New York Stock Exchange (NYSE). Level 3 ADR firms have also raised equity in the U.S. To determine whether a firm is listed on a U.S. exchange, we use information obtained from the Bank of New York, Citibank, the NYSE, and Nasdaq. Listing dates are verified using Lexis-Nexis searches and by examining firm's annual reports as well as 20-Fs filed with the SEC. Firms that issue private placements via Rule 144a or firms that list via Level 1 ADR programs are not included, as the SEC imposes few requirements on these firms and previous research shows that both the costs and the benefits are largest for exchange listings (see, e.g., Miller, 1999, Reese and Weisbach, 2002, Doidge et al., 2004, Hail and Leuz, 2004, and Lins, Strickland, and Zenner, 2005).

In our analysis, we include a number of firm- and country-level control variables. At the firm level, we include an indicator variable that denotes the presence of an additional blockholder with at least 10 percent of the voting rights ("2nd blockholder"). An additional large blockholder may serve to mitigate the actions of the controlling blockholder that are not in the interests of minority shareholders. However, it is also possible that the second blockholder's non-trivial control stake could allow it to share some private benefits of control with the controlling blockholder. We control for growth opportunities using two proxies: sales growth over the last two years ("Sales growth") and the median q of the global industry that a firm belongs to ("Global industry q"). We expect that controlling shareholders will be more likely to forgo private benefits of control if the need for external financing to fund growth opportunities is greater. Our sales growth proxy is a two-year

geometric average of annual inflation-adjusted growth in sales. Because Worldscope data for many countries is relatively sparse prior to 1994, this reduces our sample size by about 250 firms compared to using a one-year sales growth measure. For robustness, we re-estimate all of our models using a one-year sales growth measure and find results that are virtually identical in magnitude and significance.

In addition to proxies for growth opportunities, we include "Leverage", which is total debt divided by the total assets of the firm. Firms that have higher leverage (prior to listing) might be more likely to pursue a U.S. listing to raise new equity capital. Firm size, as proxied by the natural logarithm of total assets in U.S. dollars ("Log assets"), is included to control for the economies of scale in cross-listing. These economies of scale reflect the lower proportional fixed costs and potential benefits that increase with firm size. Firm profitability, as proxied by the return on assets ("ROA"), is included to control for the possibility that higher quality firms may be more likely to cross-list in order to signal their quality. We would expect firms with international activities to be more subject to the discipline resulting from cross-listing their shares in the U.S. For instance, it would be easier for minority shareholders to recover damages from a firm with U.S. assets than from one that has only domestic assets.[6] Further, firms with a larger presence in foreign product markets may be expected to pursue cross-listings as a complement to an overall strategy of internationalization (Pagano et al., 2002). As an indicator for the degree of international orientation, we include the ratio of foreign sales to total sales ("Foreign sales").[7] Finally, we include an indicator variable that equals one if the state is a firm's largest shareholder ("Government owned") under the premise that governments might take into account different tradeoffs than private controlling shareholders. For instance, the government might be privatizing to raise funds, in which

[6] See Siegel (2004).

[7] Similar to Pagano et al. (2002), we find that foreign sales data is missing for a significant fraction of the sample firms. Therefore, we follow the procedure they outline to impute missing values via regressions that generate predicted values of foreign sales – see footnote 22 on page 2678 in Pagano et al. for further details. For robustness, we repeat all of our regressions using the actual foreign sales data on a necessarily smaller sample. None of the results reported in the paper are affected.

case it might choose to cross-list in more liquid markets in order to increase the proceeds from the sale of shares.[8]

We also employ a number of country-level control variables. As noted earlier, controlling shareholders receive fewer private benefits in countries with better protection of investor rights. Therefore, we include proxies for investor protection in a firm's home country. From La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) (hereafter, LLSV), we use legal origin, the index of anti-director rights, and the index of judicial efficiency. LLSV (1998) assign each country to one of two legal traditions, Civil law or Common law. The anti-director rights index includes six different shareholder rights. The index is constructed by giving one point for each right so that it takes a value from 0 to 6, where a higher score indicates better shareholder protection. We also include the index of judicial efficiency which produces a rating of the "efficiency and integrity of the legal environment as it affects business, particular foreign firms." It takes a value from 0 to 10 and judicial efficiency is increasing in the score. We also create a variable "Anti-director * Judicial Efficiency" which is intended to capture both protection and enforcement. A similar variable has been used earlier in the literature, for instance by Johnson, Boone, Breach, and Friedman (2000).

Finally, we also control for financial development and overall economic development. As a proxy for the level of financial development, we use the ratio of the total capitalization of domestic listed firms to GDP ("Stock market cap / GDP"). To control for the level of economic development, we use the log of GNP per capita. We use the historical three-year stock market correlation (weekly dollar-denominated returns) with the U.S. market index as a proxy for familiarity.

[8] We do not consider separately privatized firms. Our dataset has 28 privatized firms. Eight firms privatize and list from 1995 to 2001. The Government owned dummy variable is equal to one for these firms.

2.3. Summary statistics

We summarize basic firm-level governance statistics for each dataset in Table 1 and break these out based on whether or not the firm has an exchange listing in the U.S. as of year-end 1997.[9] Panel A shows that in the Controlling Blockholder dataset, 130 firms are listed on a U.S. exchange, while 3,932 firms are not. Overall, we find that firms listed in the U.S. are significantly larger, as measured by total assets (in $ billions), than firms that are not listed (*p*-value of the t-test of equality of means across the two subsamples is less than 0.01). Panel A also shows that mean control rights held by the controlling blockholder are higher for firms that are not listed on a U.S. exchange (*p*-value equals 0.04), consistent with the idea that higher private benefits of control are associated with a lower likelihood to list on an exchange that requires more disclosure and subjects firms to greater potential monitoring. At the same time, mean cash flow rights held by the controlling blockholder are not significantly higher for the firms that are not listed (*p*-value equals 0.11). Tests on differences between the medians of these variables for listed and non-listed subsamples show virtually identical significance levels.

Another primary variable of interest in the Controlling Blockholder dataset is the separation of control and cash flow rights held by the largest blockholder. Theoretically, Bebchuk, Kraakman, and Triantis (2000) show that agency costs of controlling shareholders are higher when there is a separation of control rights and cash flow rights. Empirically, Claessens et al. (2002) find that separation of control rights and cash flow rights is associated with higher expected minority shareholder expropriation. To measure the "wedge" between control rights and cash flow rights, we use the percentage point difference in the control rights and cash flow rights held by the largest

[9] In terms of coverage, the ownership datasets that we use are very comprehensive when compared to datasets used in other studies. However, we recognize that we do not have complete coverage for all firms that have financial data available in Worldscope, which leads to two potential concerns. First, in terms of firm characteristics, the firms for which we have ownership data may be different from firms for which we do not have ownership data. Lins (2003) addresses this issue and finds no significant differences between the two groups of firms. Second, requiring ownership data may have an impact on the fraction of firms that have a U.S. exchange listing in our study. To address this concern, we compare the dataset that is constrained to include ownership data to one that is not constrained. The mean (median) fraction of firms listed in the U.S. is similar in both samples and the differences across countries are not significant.

blockholder, which is also used by Claessens et al. (2002). Such a measure directly assesses the percentage of control rights held for which there are no corresponding cash flow consequences of exercising the control.

In Panel A, we report the frequency with which the controlling blockholder's control rights exceed its cash flow rights (for the sake of brevity, we do not report mean and median percentage point values for this separation, conditional upon such a separation being present). We find that a separation between control and cash flow rights occurs with greater frequency in firms that are not listed in the U.S. (*p*-value equals 0.05). To the extent that this separation proxies for an enhanced potential to consume private benefits of control, it is consistent with the idea that a significant number of controlling shareholders do not want to reduce their ability to extract private benefits of control by listing. Finally, the last column for each type of firm listed in Panel A also reports the percentage of firms with a secondary blockholder that holds at least 10 percent of a firm's total control rights. There is no statistically significant difference in the frequency of the presence of a secondary blockholder between cross-listed and non-cross-listed firms (*p*-value equals 0.46).

In Panel B of Table 1, we report summary statistics for the Family/Management Control dataset. Similar to the Controlling Blockholder dataset, relatively few firms have a U.S. exchange listing (154 firms have a listing compared to 4,118 firms that do not), and those that are listed are much larger in size than those that are not (*p*-value less than 0.01). The panel also shows that mean and median levels of family/management control rights are significantly higher for firms that are not listed in the U.S. (30 percent versus 12 percent, p-value of difference is 0.00). Similarly, the frequency with which the family/management group holds the most control rights is significantly higher for firms that are not listed in the U.S. (*p*-value less than 0.01).

Taken together, the summary statistics reported in Table 1 are consistent with our hypotheses that when controlling shareholders have more control rights and when there is a separation between control rights and cash flow rights, they are reluctant to subject themselves to the higher levels of

disclosure and monitoring associated with a U.S. listing. In the next section, we examine these hypotheses in more detail.

3. The effect of ownership and control on the cross-listing decision.

In this section, we examine whether ownership of cash flow rights and control rights are related to firms' decisions to list in the U.S., after controlling for other firm-level variables as well as country-level variables. We first analyze the role of control rights held by the controlling blockholder or the top managers and their families in Tables 2 and 3. In Table 4, we examine whether firms in which the controlling blockholder has more control rights than cash flow rights are less likely to be listed on a U.S. exchange.

To determine the relation between the control rights of blockholders and the probability of having a U.S. listing, we estimate a series of cross-sectional logistic regressions where the dependent variable, "Exchange", is an indicator variable that equals one if a firm is cross-listed on the Amex, Nasdaq, or the NYSE. The firm and country characteristics are measured as of the end of 1997. As a robustness check, we repeat all of the regressions using data for 1996, and find similar results. In all models, we report marginal effects evaluated at the means of the independent variables (marginal effects for the intercept are not computed or reported). Marginal effects for dummy variables are calculated as the discrete change in the expected value of the dependent variable as the dummy variable changes from a value of zero to one. The standard errors are computed assuming that observations are independent across countries, but not within countries.

Our prediction is that the probability that a firm is listed in the U.S. is negatively related to the control rights held by the controlling blockholder. Since we estimate a cross-sectional regression, we do not consider the listing decision directly. The control rights held by the controlling blockholder we observe for listed firms are measured when the firm is already listed. Consequently, it is possible that holdings of control rights of controlling blockholders decreased after the listing.

The benefit of estimating cross-sectional regressions is that we can use all listed firms to estimate the relation between control rights of controlling blockholders and the listing status of a firm. In contrast, in regressions that examine the listing decision directly, we can use only firms that list after we observe ownership of control rights, which restricts the number of listed firms that we can include.

In Table 2, we use the Controlling Blockholder dataset. In model (1), we regress the dummy variable, Exchange, on the percentage of voting rights held by the controlling blockholder ("Control rights"). The marginal effect for control rights is -0.0621 with a *t*-statistic of -2.03. Therefore, a one percentage point increase in the control rights held by the controlling blockholder decreases the probability of listing in the U.S. by 6.21 percent. Model (1) does not, however, control for other known determinants of a firm's listing status.

In model (2), we add a dummy variable for whether the firm has a second blockholder who holds at least 10 percent of control rights and control for firm characteristics. The marginal effect for the control rights of the largest blockholder continues to be negative and statistically significant (-0.0104, *t*-statistic = -2.99). The marginal effect on the dummy variable for the second blockholder is positive, but not significant. In addition, we find that many of the firm-level characteristics are important in explaining whether a firm has a listing in the U.S. For example, both Sales growth and Global industry q are positive and Global industry q is statistically significant. Sales growth is significant in all other models when we control for various country characteristics, though its economic importance is smaller than that of the control rights variable: a one percent increase in sales growth is associated with a 0.47 percent increase in the likelihood of listing.[10] The marginal effect on firm size (Log assets) is also positive and statistically significant, which is consistent with the hypothesis that larger firms are more likely to find the costs lower and the benefits larger for

[10] It is difficult to compare the economic significance directly from the marginal effects without some sense of the unconditional distributional properties of the control variable. The median sales growth for the firms in our sample is 4.09 percent with an interquartile range of -1.7 percent to 12.5 percent. A one-percent change in sales growth is an economically large change spanning a difference of over 250 firms of our sample of 4,062.

cross-listing. Finally, firms with a more international orientation, as proxied by Foreign sales, are more likely to have a cross-listing; the economic importance of this relationship is strong with a one percent increase in foreign sales associated with approximately a one percent increase in listing likelihood.[11] Leverage, ROA, and the dummy variable for Government ownership are not significant. With all of these additional variables, the pseudo-R-squared of the logistic regressions increases sharply to 39 percent.

In models (3) through (6) of Table 2, we add country-level variables as additional control variables. Model (7) replaces the country-level variables with individual country dummy variables. In every specification, the marginal effect on control rights remains negative and significant. Firm-level characteristics that were significant in model (2) remain statistically significant in models (3) through (7). Further, the marginal effect for sales growth is always positive and significant, though it is modest in magnitude. In some specifications, the dummy variable for the existence of a second large blockholder is positive and significant. Although the results show that country-level characteristics do not subsume the effect of control rights in explaining the cross-listing status of a firm, there is some attenuation in the magnitude of the effect on control rights. Moreover, a number of the country-level control variables are significant. Consistent with our predictions, firms from Civil law countries and firms from countries that have lower shareholder protections (a lower Anti-director rights index) are less likely to list in the U.S. (Doidge et al., 2004). Further, while the efficiency of the judicial system alone is not significantly related to the incidence of cross-listing, the interaction of anti-director and efficiency of the judicial system is positive and statistically significant. Therefore, cross-listings are more prevalent in countries where there exist both laws on the books and an efficient judicial system, which is consistent with the hypothesis that controlling

[11] The median level of foreign sales is 10.7 percent with an interquartile range of 0 percent to 40.8 percent, so a one-percent change in foreign sales is a smaller economic event that is much more likely to occur than a similar change in sales growth.

blockholders are more likely to choose a U.S. listing if the value of private benefits is lower in their home country, keeping other firm characteristics the same.

While Stock market capitalization to GDP is not significant, we find that the Log of GNP has a significantly negative effect. This suggests that firms from countries with lower economic development are more likely to have a cross-listing. We also include the correlation of the country's market with the U.S. market as an explanatory variable. Stocks from countries that have a low correlation with the U.S. would offer greater diversification benefits to U.S. investors, so that a firm might benefit more from listing such a stock. We find that the coefficient on Correlation is positive and significant, which is inconsistent with this view. This is not surprising in light of the findings of Sarkissian and Schill (2004). They find that proximity is an important determinant of listing, but diversification benefits, as measured by market return correlations, are not. Highly correlated markets are often closer to each other geographically.

Finally, model (7) indicates that the coefficient on Control rights remains negative and significant when the country characteristics are controlled for using country dummy variables. Overall, the evidence in Table 2 is consistent with our hypothesis that firms in which controlling blockholders have more control rights are less likely to list in the U.S.

As mentioned previously, one drawback of the Controlling Blockholder dataset is that the largest blockholder is not always directly associated with the firm's top management group or its controlling family. In Table 3, we use the Family/Management Control dataset to examine the effect of the management group and its family on the incidence of cross-listing. This dataset also allows us to examine a broader set of firms from both emerging and developed markets. The tests reported in Table 3 follow closely those reported in Table 2, but the variable of interest is the percentage of voting rights held by the management group or controlling family ("Family/Mgmt Control Rights").

Overall, the results in Table 3 show that the higher the control rights held by the management group and its family, the less likely it is that the firm is listed. For example, model (1) shows that the marginal effect for Family/Mgmt Control rights is negative and significant (-0.066, *t*-statistic = -2.41), which implies that a one percentage point increase in the control rights held by the family/management group decreases the probability of listing in the U.S. by 6.60 percent. When firm-level characteristics such as growth opportunities, firm size, international orientation, and profitability are added in model (2), we continue to find that the percent of control rights held by the management group and its family is negatively related to the incidence of cross-listing in the U.S. When country-level characteristics are added in models (3) through (7), we again see that the coefficient on Family/Mgmt Control rights is negative, and, in four of the five specifications, statistically significant. Again, we find that firms from countries with weak investor protection are less likely to list. Finally, when we replace country-level characteristics with individual country indicator variables, the marginal effect for Family/Mgmt Control rights is negative and significant (-0.0035, *t*-statistic = -1.68).

The results contained in Tables 2 and 3 are supportive of our hypothesis that when the control rights held by blockholders are higher, firms are less likely to list in the U.S. We next turn to tests that use the Controlling Blockholder dataset to capture both the capability for expropriation as well as the incentives to avoid expropriation.

Table 4 reports tests in which we examine the incidence of cross-listing as a function of the cash flow rights and of the difference between the control rights and cash flow rights ("Control – Cash") of the controlling blockholder. Model (1) reports that the marginal effects for both Cash flow rights and Control – Cash are negative and significant. In terms of economic significance, a one percentage point increase in Control – Cash decreases the probability of listing in the U.S. by 14.82 percent. Therefore, when the controlling blockholder bears less of the cash flow consequences of his actions, the firm is even less likely to be listed. Note that when there is no

separation between control rights and cash flow rights, the controlling blockholder must own substantial cash flow rights to exercise control. It is therefore possible that the negative coefficient on Cash flow rights is explained by the fact that, in many firms, there is no difference between cash flow rights and control rights, so that Cash flow rights proxies for the control exerted by the controlling blockholder. Hence, as the controlling blockholder has more control rights, he is more reluctant to give up some control by listing abroad. In the other models in Table 4, we follow our previous analysis in Table 2 and perform a battery of tests that control for both firm-specific and country-level characteristics. In every specification, the marginal effect for Control – Cash is negative and significant. The impact of firm and country-level variables in models (2) – (7) is similar to the results reported in Table 2 and we do not discuss it further here.

To summarize the results from Tables 2 through 4, we find that when the control rights held by controlling shareholders are higher, firms are less likely to have a cross-listing in the U.S. This finding is robust to alternative definitions of the controlling shareholders and to firm and country-level controls. In addition to the results with control rights, we find that when there is a larger separation of control rights and cash flow rights, firms are less likely to be listed. Further, we consistently find that firms with better growth opportunities, larger firms, firms with more international activity, and firms from countries with better investor protection are more likely to be listed in the U.S. Overall, the results are consistent with the hypothesis that firms in which controlling shareholders have the capability and the incentives to expropriate minority shareholders are less likely to subject themselves to the increased transparency and monitoring of a U.S. listing. We should also note that the economic magnitudes of the marginal effects are sizeable. In the next section, we estimate Cox models to investigate which characteristics help to predict firms' listing decisions.

4. Predicting firms' listing decisions using Cox proportional hazard models.

In this section, we employ duration analysis using Cox (1972) proportional-hazard models to investigate the factors that affect firms' listing decisions. Specifically, we model the probability of listing in year t, given that the firm has not yet listed, as a function of firm-level and country-level variables. The logistic regressions in Section 3 are estimated for 1997. These previous models allow us to study differences in the characteristics of firms that are listed in the U.S. and those that are not listed in the U.S., at a particular point in time. The Cox models that we employ in this section allow us to predict firms' listing decisions in a panel setting, while allowing the independent variables to change over time. Similar approaches are used in Pagano et al. (2002) and Claessens, Klingebiel, and Schmukler (2003). As discussed earlier, the cost of this approach is a reduction in power since the number of firms that list over the relevant period in our sample is 58 in the Controlling Blockholder dataset and 67 in the Family/Management Control dataset.

The Cox proportional-hazard model estimates the probability that a firm that has not yet listed in the U.S. will list in a given year. The hazard rate in the model is the instantaneous rate of listing for firms that have not yet listed. The model assumes that the hazard rate for firm *j*, $h(t|\mathbf{x}_j)$, is a function of the independent variables, $\mathbf{x}_j$ and is written as,

$$h\left(t \left| \mathbf{x}_j \right.\right) = h_0(t)\exp\left(\mathbf{x}_j \boldsymbol{\beta}_x\right),$$

where $\boldsymbol{\beta}_x$, is a vector of coefficients to be estimated. The hazard function is composed of two separate parts. The first part, $h_0(t)$, is called the baseline hazard. It is obtained by setting $\mathbf{x}$ equal to zero so that the baseline hazard for firm *j* corresponds to the hazard rate with $\mathbf{x}_j$ set to zero. The Cox model is a semi-parametric model in that $\boldsymbol{\beta}_x$ is estimated without specifying the baseline hazard; that is, the model makes no assumptions about the nature or shape of the hazard function.[12] The

[12] The baseline hazard cancels out of the partial likelihood function. Note also that the intercept is subsumed into the baseline hazard. Because the baseline hazard drops out, the Cox model has no intercept. If one knows, or is willing to make assumptions about, the form of the baseline hazard, parametric hazard models can be estimated. As a robustness check, we re-estimate all hazard models assuming an exponential distribution, i.e., the baseline hazard is constant. None of the results we report are affected.

second part, $exp(\mathbf{x}_j \boldsymbol{\beta}_x)$ is called the relative hazard, and is a function of explanatory variables. The model is proportional in that the hazard is obtained by shifting the baseline hazard as the explanatory variables change. For example, firm *j*'s hazard is a multiplicative transformation of firm *i*'s hazard. Therefore, the model assumes that, whatever the shape of the baseline hazard, it is the same for all firms.

In this "event time" experiment, we consider firms over the period from 1995 to 2001. In the Controlling Blockholder dataset, there are 4,589 firms with complete data. Of these firms, 58 listed on a U.S. exchange during this period. In the Family/Management Control dataset, there are 4,731 firms, of which 67 list during this period. Once a firm lists in the U.S., it is no longer used in the model estimation. For example, if a firm lists in 1998, then it is included in the sample from 1995 through 1998 and is excluded in subsequent years. Although our ownership data is observed at only one point in time, usually in 1995 or 1996, all other firm level variables are allowed to change each year. As such, we are assuming that firms' ownership structures are constant, at least until they list in the U.S. The assumption that ownership structures are constant prior to listing is not overly restrictive given the general discussion in Shleifer and Vishny (1997) that, in many countries, firms' controlling shareholders change little over time and the specific quote in La Porta et al. (1999) that "ownership patterns tend to be relatively stable" (p. 475). Doidge (2004b) does show, however, that some controlling shareholders significantly decrease their ownership stakes and/or sell their control stakes after listing in the U.S. Because we exclude firms in the years after they have listed in the U.S., our analysis is not affected by possible changes in ownership after firms list in the U.S.

We use the same set of firm-level and country-level variables that we used in Section 3. The difference in this section is that all firm-level variables are lagged by one year since we are trying to explain why a firm with specific characteristics at the end of one year chooses to list in the next year. For example, in 1996 we use 1995 values for sales growth, global industry q, total assets,

foreign sales, leverage, and ROA. The Cox model is estimated by maximizing the 'partial' likelihood function. We report the coefficients in exponentiated form. The advantage of exponentiated coefficients is that they can be interpreted as the effect of a unit change in the explanatory variable on the hazard. For example, an exponentiated coefficient of 1.2 (0.8) implies that a one unit increase (decrease) in the explanatory variable increases (decreases) the hazard by 20 percent. The standard errors are adjusted for clustering across firms, so that we assume errors are independent across firms, but not across time.

We begin by investigating the role of control rights on the listing decision. In Table 5, we report results using the control rights of the controlling blockholder as an explanatory variable in our model of the probability that a firm will list in the U.S. in a given year (the Controlling Blockholder dataset). We report results using the control rights of the family/management group as an explanatory variable in Table 6 (the Family/Management Control dataset).

In model (1) of Table 5, the only explanatory variable in the estimated Cox model of the listing decision is the controlling blockholder's control rights. The hazard ratio is 0.20 and is statistically significant different from one (*t*-statistic = -2.19).[13] A one unit increase in Control rights decreases the relative hazard by 80 percent. When we add firm-level variables in model (2), the hazard ratio increases to 0.28 and this coefficient is significant at the 10 percent level. The hazard ratio for the second large blockholder dummy variable is greater than one and is significant. This is consistent with the idea that the value of control is lower when there is a second large shareholder to monitor the actions of the controlling blockholder. When control is less valuable, the cost to the controlling shareholders of listing is lower and firms are more likely to list.

Our first proxy for growth opportunities, Sales growth, has a hazard ratio greater than one (1.64), but is not significant. This weak finding may stem from its close correlation with other growth proxies. If we exclude Global industry q and ROA – both of which are significant in all

[13] The null hypothesis can be written as H_0**:** $exp(\boldsymbol{\beta}_x) = 1$ since hazard ratios equal one when the coefficients equal zero.

models – then Sales growth becomes statistically significant, and this is true for all models in this table. The hazard ratio for our second proxy for growth opportunities, Global industry q, is greater than one (3.65) and is significant. Therefore, the evidence is consistent with the argument that higher growth opportunities increase the probability of listing. Large firms, those with more international activity in terms of foreign sales, and more profitable firms are also more likely to list: the hazard ratios for total assets (2.23), foreign sales (12.18), and ROA (1.02) are all greater than one and are statistically significant. Contrary to what we might expect, but consistent with our logit regression analysis in Tables 2 through 4, firms with higher leverage are not more likely to list. Finally, whether or not a firm is controlled by the state does not have a material impact on the listing decision.

In models (3) – (6) we add country-level variables to model (2).[14] When we add country-level variables, the hazard ratio on Control rights is still less than one, but becomes statistically insignificant. At the same time, the hazard ratio on the dummy for a second blockholder remains both greater than one and significant. The only country-level variable that is significant is the correlation with the U.S. market. The investor protection variables, stock market capitalization to GDP, and log of GNP per capita are not significant. This is a surprising contrast from our results in the logistic regressions of Tables 3 and 4 in which correlation with the U.S. market was a weaker factor compared to the investor protection variables and log of GNP per capita.

Why do country controls reduce the significance on control rights? Further investigation reveals that it is the investor protection proxies (the civil law dummy and the anti-director rights variable) that reduce the significance of Control rights. Given the findings of La Porta et al. (1999) that

[14] We cannot control for country effects using country dummies in these models. Suppose that from 1995 to 1997, there are no cross-listed firms from a given country. The dummy variable for that country then perfectly predicts the exchange listed dummy variable for those years. In 1998, if one firm lists, then the dummy variable no longer perfectly predicts the exchange listed dummy and we could use the country dummy. However, it does not make sense to estimate the model with no country dummy from 1995 to 1997 and then add one for 1998 to 2001. The other possibility is to estimate the model excluding the country dummy for the entire sample period. The problem with such an approach is that we do not control for country effects for that country.

investor protection and ownership concentration are related, this is not surprising. Finally, we note that if we exclude Japan (see footnote 3 in Section 2), Control rights is always significant. Further, the hazard ratio for the Civil law dummy is less than one and is significant, while the hazard ratio for Anti-director is greater than one and is significant – firms from countries with weaker investor protection are less likely to list in the U.S. Because Japan accounts for a large fraction of the sample and very few firms from Japan are listed in the U.S., including or excluding Japan has an impact on some of our conclusions.[15]

We next turn to the results using the control rights of the family/management group in Table 6. As noted earlier, a potential advantage of this analysis is that the effect of control rights on cross-listing may be sharpest in firms for which we can be certain the controlling shareholder is part of the management group or its family. Model (1) begins by including just the family/management group's control rights. The hazard ratio is 0.17 and is significant (*t*-statistic = -3.13). As we would expect, an increase in control rights decreases the probability of listing. In model (2) we add firm-level control variables. The hazard ratio for the Family/Management Control rights remains significant and only increases slightly in magnitude to around 0.20. In addition, the hazard ratios for sales growth, global industry q, assets, foreign sales, and ROA are all greater than one, as expected, and are statistically significant. The only firm-level variable that is not significant is leverage, as before in Table 5.

When we add country-level variables in models (3)-(6), none of the results in model (2) are affected. The Civil law dummy and Anti-director variables have the expected signs, but are not significant. As in Table 5, if we exclude Japan, the investor protection variables become significant so that firms from countries with weaker investor protection are less likely to list. Stock market capitalization to GDP is not significant. However, the hazard ratio for the log of GNP per capita is less than one and is significant while that for the correlation with the U.S. market is greater than

[15] When Japan is included, there are a total 4,589 firms of which 58 list over the sample period. When we exclude Japan, there are a total of 3,713 firms, of which 54 list over the sample period.

one and is significant. Firms from less developed countries and firms from countries that are more correlated with the U.S. markets are more likely to list in the U.S.

If the controlling blockholder has control of the firm, but owns very little of the cash flow rights, it has few incentives to take any action to reduce expropriation from minority shareholders and to increase the value of the firm's equity. If the controlling blockholder holds a large cash-flow stake in the firm, it bears a large fraction of the cost of expropriating minority shareholders. Therefore, for a given cash flow stake, we expect that controlling blockholders who hold more control rights relative to their cash flow rights are less likely to list in the U.S. We investigate this hypothesis in Table 7 using the Controlling Blockholder dataset.

Model (1) includes the controlling blockholder's cash flow rights and the difference between the controlling blockholder's control rights and its cash flow rights ("Control – Cash"). The hazard ratio for Cash flow rights is less than one and is significant. The hazard ratio for Control – Cash is less than one but is not significant. However, this specification does not control for other firm characteristics. When we control for firm characteristics in model (2), we see that while the hazard ratio for Cash flow rights is still less than one, it is no longer significant; however, the hazard ratio for Control – Cash is 0.01 and becomes statistically significant (*t*-statistic = -2.43). A one unit increase in Control – Cash decreases the hazard by 99 percent. In addition, the hazard for second blockholder is greater than one and is statistically significant. This evidence is consistent with the argument that controlling blockholders are less likely to list in the U.S. when their private benefits are higher. The hazard ratio for Sales growth is greater than one, but is not significant (it is significant if Global industry q and ROA are excluded). Our other proxy for growth opportunities, Global industry q, is significant so that, once again, we see that firms with better growth opportunities are more likely to list. In addition, larger firms, firms with more international activity, and more profitable firms are more likely to list. The other firm-level variables, Leverage, and the government ownership dummy do not have a significant impact on the listing decision.

In models (3) – (6) we again add country-level controls. The first thing to note is that none of the firm-level variables are affected. Control – Cash and the second blockholder dummy remain statistically significant in all specifications. As in Table 5, the investor protection proxies have the correct sign, but are not statistically significant. However, if we exclude Japan (which, as mentioned, accounts for a large fraction of the sample, but has very few listing firms) the investor protection variables become significant. Stock market capitalization to GDP and log of GNP per capita are not significant. As before, the correlation with the U.S. has a positive impact on the probability of listing.

Finally, we investigate, but do not report, the possibility of a nonlinear impact on the difference between control rights and cash flow rights on the listing decision. For example, small differences may not have a major impact on incentives to cross-list in the U.S., but a larger difference might. One simple nonlinear specification that we considered is the squared difference between control rights and cash flow rights. However, for many firms the difference is zero, so that the squared term is highly correlated with the linear term. Therefore, we estimate a model that is piecewise linear in the difference between control rights and cash flow rights, allowing for one change in the slope. Because choosing a point at which the slopes change is fairly arbitrary, we try a number of different cutoff points. For example, when we use a cutoff at 5 percent with the full set of control variables, the hazard ratio for Cash flow rights is 0.44, but is not significant.[16] The hazard ratio for Control – Cash from 0 to 5 percent is 0.42 and is not significant. The hazard ratio for Control – Cash greater than 5 percent declines to 0.007 and is significant at the 10 percent level. When we use a 10 percent cutoff, the hazard ratio for Control – Cash from zero to 10 percent is 0.31 and is not significant. The hazard ratio for Control – Cash greater than 10 percent is 0.001 and is significant at the 10 percent level. Overall, the evidence suggests that the difference between

[16] Recall from Table 1 that the Control – Cash difference is zero for the majority of the firms and that a 5 percent cutoff is almost associated with the 75th quantile of our sample of firms and it rises to a maximum value of 34 percent.

control rights and cash flow rights has a nonlinear impact on firm's listing decisions, but the exact form of this nonlinear relationship is somewhat unclear.

5. Conclusions.

Recent research has shown that the private benefits of control are especially valuable in countries with weak investor protection. A related stream of research finds that the decision to cross-list in the U.S. is value enhancing and concludes that the cross-listing premium arises from firms' commitments to improved disclosure and corporate governance, as well as additional scrutiny by various reputational intermediaries. However, despite the benefits of cross-listing, it is well-known that many non-U.S. firms do not cross-list their shares in the U.S. One explanation is that the controlling shareholders of firms that choose not to list have valuable private benefits that they do not want to give up. We investigate and find evidence in support of this hypothesis in this paper.

Using two separate databases of ownership structure for over 4,000 firms from 31 countries around the world, we construct proxy measures of private benefits of control and find that, when controlling shareholders have high levels of control and when their control rights exceed their cash flow rights, their firms are less likely to list their shares in the U.S. Similarly, we find that firms controlled by their top managers and their families are less likely to have a U.S listing. We also find an important role for other firm-level variables, such as growth opportunities and size, as well country-level variables, such as home country investor protections, in modeling the costs and benefits of listing. We employ duration analysis using a Cox proportional-hazard model to show that the probability of listing in a given year over the 1995 to 2001 period, conditional on not yet having listed, is significantly lower when controlling shareholders have higher levels of control, when their control rights exceed their cash flow rights, and when firms are controlled by their top managers. Taken together, our results indicate that a desire to either consume private benefits of

control, or to retain the option to consume such benefits, deters the controlling shareholders of many non-U.S. firms from listing in the U.S.

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Table 1. Summary statistics for 1997.

Summary statistics are computed as of December 31, 1997 for firms that are not cross-listed on a U.S. exchange and for firms that are cross-listed on a U.S. exchange. Data sources for information on U.S. listings and ownership is described in Section 2. Firms that list via Rule 144a and Level 1 ADRs are excluded and firms with assets < $10 million are excluded. N denotes the number of firms. Total assets ($ billions) is the average for firm assets from Worldscope. Panel A presents results using the Controlling Blockholder dataset. Control rights (CF rights) is equal to the voting rights (cash flow rights) held by the controlling blockholder. 2nd BH equals one if there is another blockholder with at least 10% of the voting rights. Panel B presents results for the Family/Management Control dataset. Family/Mgmt control rights are the voting rights held by the management group or controlling family.

Panel A. Controlling Blockholder Dataset

	Not cross-listed								Cross-listed							
			Mean		Median		Frequency of				Mean		Median		Frequency of	
Country	N	Total assets	Control rights	CF rights	Control rights	CF rights	CR>CF	2nd BH	N	Total assets	Control rights	CF rights	Control rights	CF rights	CR>CF	2nd BH
Austria	43	0.45	0.56	0.48	0.64	0.50	0.47	0.21	0	.	.	.	.	.	.	.
Belgium	62	1.78	0.38	0.35	0.38	0.35	0.24	0.29	1	10.87	0.31	0.15	0.31	0.15	1.00	1.00
Finland	55	0.71	0.31	0.26	0.28	0.22	0.47	0.49	2	4.08	0.00	0.00	0.00	0.00	0.00	0.00
France	334	1.07	0.50	0.49	0.50	0.50	0.10	0.34	15	16.03	0.24	0.21	0.15	0.10	0.33	0.27
Germany	398	1.10	0.55	0.49	0.53	0.50	0.33	0.36	6	40.70	0.24	0.22	0.24	0.17	0.17	0.50
Hong Kong	98	0.56	0.35	0.30	0.33	0.28	0.24	0.26	1	6.15	0.18	0.18	0.18	0.18	0.00	0.00
Indonesia	89	0.44	0.37	0.30	0.34	0.28	0.53	0.49	2	2.53	0.56	0.56	0.56	0.56	0.00	0.00
Ireland	28	0.22	0.21	0.17	0.15	0.14	0.43	0.32	4	2.90	0.10	0.09	0.10	0.07	0.25	0.25
Italy	90	2.39	0.48	0.38	0.49	0.40	0.62	0.42	5	27.72	0.43	0.33	0.31	0.18	0.60	0.40
Japan	848	1.92	0.10	0.07	0.10	0.03	0.42	0.08	13	33.70	0.08	0.06	0.00	0.00	0.23	0.08
Malaysia	107	0.45	0.34	0.27	0.32	0.25	0.44	0.61	0	.	.	.	.	.	.	.
Norway	65	0.34	0.31	0.25	0.28	0.21	0.35	0.51	5	4.69	0.25	0.23	0.20	0.20	0.40	0.40
Philippines	41	0.19	0.29	0.26	0.27	0.24	0.34	0.66	1	4.86	0.33	0.33	0.33	0.33	0.00	1.00
Portugal	39	0.38	0.41	0.40	0.47	0.41	0.13	0.41	2	9.11	0.41	0.41	0.41	0.41	0.00	0.00
Singapore	119	0.34	0.31	0.24	0.31	0.22	0.66	0.62	1	0.63	0.41	0.41	0.41	0.41	0.00	1.00
South Korea	183	0.91	0.20	0.17	0.22	0.16	0.25	0.20	3	13.65	0.32	0.32	0.33	0.33	0.00	0.33
Spain	82	1.16	0.35	0.32	0.33	0.25	0.23	0.40	3	28.38	0.14	0.14	0.00	0.00	0.00	0.00
Sweden	97	0.77	0.26	0.20	0.23	0.15	0.32	0.48	8	8.13	0.12	0.05	0.12	0.03	0.38	0.13
Switzerland	103	0.83	0.42	0.30	0.45	0.23	0.54	0.33	3	2.95	0.20	0.20	0.28	0.28	0.33	0.67
Taiwan	86	0.53	0.23	0.18	0.23	0.17	0.56	0.50	0	.	.	.	.	.	.	.
Thailand	76	0.37	0.39	0.37	0.42	0.36	0.13	0.88	0	.	.	.	.	.	.	.
UK	889	0.32	0.20	0.18	0.16	0.14	0.28	0.36	55	8.94	0.16	0.15	0.13	0.11	0.24	0.27
Total	3932								130							
Mean		0.78	0.34	0.29	0.34	0.27	0.37	0.42		12.56	0.25	0.22	0.23	0.20	0.22	0.35
Median		0.55	0.35	0.29	0.33	0.25	0.35	0.41		8.54	0.24	0.21	0.22	0.18	0.20	0.27

Table 1, continued.

Panel B.	Family/Management Control Dataset									
	Not cross-listed					Cross-listed				
			Family/Mgmt control rights					Family/Mgmt control rights		
Country	N	Total assets	Mean	Median	Family/Mgmt largest BH	N	Total assets	Mean	Median	Family/Mgmt largest BH
Argentina	2	1.21	0.00	0.00	0.00	4	6.69	0.00	0.00	0.00
Austria	43	0.45	0.44	0.60	0.65	.	.	.	.	.
Belgium	62	1.78	0.37	0.39	0.74	1	10.87	0.00	0.00	0.00
Brazil	17	1.43	0.14	0.00	0.29	1	7.82	0.00	0.00	0.00
Chile	9	1.17	0.50	0.56	0.89	5	6.17	0.20	0.20	0.60
Czech	7	0.14	0.28	0.20	0.71	.	.	.	.	.
Finland	55	0.71	0.33	0.30	0.65	2	4.08	0.00	0.00	0.00
France	335	1.07	0.50	0.52	0.82	15	16.03	0.18	0.10	0.53
Germany	402	1.10	0.54	0.59	0.82	6	40.70	0.03	0.00	0.17
Hong Kong	114	0.53	0.41	0.47	0.81	2	3.21	0.20	0.20	0.50
Indonesia	46	0.28	0.38	0.46	0.65	2	2.53	0.00	0.00	0.00
Ireland	28	0.22	0.12	0.00	0.25	4	2.90	0.05	0.00	0.25
Israel	4	1.65	0.26	0.25	0.50	6	1.05	0.35	0.47	0.67
Italy	90	2.39	0.46	0.52	0.80	5	27.72	0.28	0.28	0.60
Japan	848	1.92	0.03	0.00	0.15	13	33.70	0.02	0.00	0.15
Malaysia	199	0.39	0.30	0.31	0.70	.	.	.	.	.
Norway	68	0.33	0.25	0.23	0.59	5	4.69	0.22	0.20	0.60
Peru	2	0.32	0.25	0.25	0.50	2	1.82	0.00	0.00	0.00
Philippines	22	0.17	0.48	0.52	0.82	1	4.86	0.23	0.23	0.00
Portugal	40	0.38	0.39	0.48	0.80	2	9.11	0.00	0.00	0.00
Singapore	111	0.31	0.34	0.35	0.67	1	0.63	0.58	0.58	1.00
South Africa	55	0.59	0.45	0.54	0.73	4	1.65	0.00	0.00	0.00
South Korea	141	1.01	0.17	0.16	0.76	3	13.65	0.06	0.00	0.33
Spain	82	1.16	0.32	0.19	0.57	2	22.47	0.00	0.00	0.00
Sri Lanka	5	0.07	0.18	0.14	0.80	.	.	.	.	.
Sweden	97	0.77	0.25	0.23	0.59	8	8.13	0.03	0.00	0.13
Switzerland	103	0.83	0.40	0.45	0.70	3	2.95	0.36	0.51	0.67
Taiwan	101	0.42	0.18	0.14	0.83	2	2.26	0.08	0.08	0.50
Thailand	125	0.25	0.21	0.18	0.54	.	.	.	.	.
Turkey	16	0.23	0.20	0.00	0.31	.	.	.	.	.
UK	889	0.32	0.16	0.11	0.47	55	8.94	0.14	0.00	0.35
Total	4118					154				
Mean		0.76	0.30	0.29	0.62		9.79	0.12	0.11	0.28
Median		0.53	0.30	0.25	0.67		6.17	0.05	0.00	0.17

Table 2. Cross-sectional logits: controlling blockholder's control rights.
The logit regressions estimate the probability that a firm has a level 2 or level 3 ADR on December 31, 1997. The table reports marginal effects evaluated at the means of the independent variables and *t*-statistics are in parentheses. Marginal effects for dummy variables are calculated as the discrete change in the expected value of the dependent variable as the dummy variable changes from zero to one. Data sources for information on U.S. listings and ownership are described in Section 2. Firms that list via Rule 144a and Level 1 ADRs are excluded and firms with assets < $10 million are excluded. Control rights is equal to the voting rights held by the controlling shareholder. Second blockholder equals one if there is another blockholder with at least 10% of the voting rights. Government owned equals one if the state is the controlling shareholder. All accounting data is from Worldscope. Sales growth is inflation adjusted two-year sales growth. Global industry q is the firm's median global industry q. Total assets are in $ thousands. Foreign sales is the percentage of foreign sales to total sales. Leverage is total debt divided by total assets. Civil law, anti-director, and efficiency of judicial are from LLSV (1998). Log of GNP per capita ($) is from the World Bank WDI Database. Stock market capitalization to GDP is from Beck et al. (2001). Correlation with U.S. market is calculated using weekly data over the previous three years: it is the correlation of the Datastream local stock market index returns (in $) with the U.S. stock market index returns. Pseudo-R^2 is a goodness-of-fit measure for binary choice models based on the difference between unrestricted and restricted likelihood functions. The standard errors are computed assuming observations are independent across countries, but not within countries. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Control rights	-0.0621	-0.0104	-0.0070	-0.0059	-0.0090	-0.0053	-0.0040
	-(2.03)**	-(2.99)***	-(2.46)**	-(2.34)**	-(3.26)***	-(2.05)**	-(2.21)**
2nd blockholder		0.0022	0.0010	0.0018	0.0011	0.0018	0.0013
		(1.32)	(0.76)	(1.95)*	(0.72)	(1.88)*	(2.33)**
Sales growth		0.0047	0.0035	0.0039	0.0038	0.0038	0.0021
		(1.19)	(2.34)**	(2.99)***	(2.07)**	(2.81)***	(1.92)*
Global industry q		0.0117	0.0092	0.0078	0.0104	0.0077	0.0063
		(3.65)***	(3.89)***	(2.74)***	(3.07)***	(2.67)***	(3.97)***
Log assets		0.0053	0.0043	0.0040	0.0047	0.0040	0.0032
		(5.60)***	(5.84)***	(4.09)***	(4.30)***	(3.98)***	(6.93)***
Foreign sales		0.0127	0.0089	0.0092	0.0097	0.0091	0.0054
		(4.12)***	(4.72)***	(4.20)***	(4.02)***	(3.99)***	(4.09)***
Leverage		-0.0050	-0.0025	-0.0036	-0.0029	-0.0038	-0.0025
		-(1.30)	-(0.51)	-(0.83)	-(0.53)	-(0.89)	-(0.58)
ROA		0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
		(1.18)	(0.21)	(0.14)	(0.16)	(0.14)	(0.14)
Government owned		0.0018	0.0018	0.0021	0.0014	0.0021	0.0020
		(0.88)	(0.85)	(1.09)	(0.58)	(1.07)	(1.22)
Civil law			-0.0110				
			-(2.35)**				
Anti-director				0.0021			
				(2.58)***			
Efficiency of judicial					0.0008		
					(0.61)		
Anti-director*Eff. of judicial						0.0002	
						(2.80)***	
Stock market cap / GDP			-0.0023	-0.0013	0.0011	-0.0021	
			-(1.24)	(0.74)	(0.53)	-(1.05)	
Log of GNP per capita			-0.002	-0.0033	-0.0048	-0.0041	
			-(2.01)**	-(5.07)***	-(1.99)**	-(5.70)***	
Correlation with U.S. market			0.0122	0.0153	0.0194	0.0152	
			(1.66)*	(1.95)*	(1.53)	(2.08)**	
Country dummies	no	no	no	no	no	no	yes
Number of observations	4062	4062	4062	4062	4062	4062	4062
Pseudo R^2	0.02	0.39	0.45	0.45	0.43	0.45	0.48

Table 3. Cross-sectional logits: family/management control rights.
The logit regressions estimate the probability that a firm has a level 2 or level 3 ADR on December 31, 1997. The table reports marginal effects evaluated at the means of the independent variables and *t*-statistics are in parentheses. Data sources for information on U.S. listings and ownership are described in Section 2. Firms that list via Rule 144a and Level 1 ADRs are excluded and firms with assets < $10 million are excluded. Family/Mgmt control rights is the fraction of voting rights held by the management group or controlling family. All accounting data is from Worldscope. Sales growth is inflation adjusted two-year sales growth. Global industry q is the firm's median global industry q. Total assets are in $ thousands. Foreign sales is the percentage of foreign sales to total sales. Leverage is total debt divided by total assets. Civil law, anti-director, and efficiency of judicial are from LLSV (1998). Log of GNP per capita ($) is from the World Bank WDI Database. Stock market capitalization to GDP is from Beck et al. (2001). Correlation with the U.S. market is calculated using weekly data over the previous three years: it is the correlation of the Datastream local stock market index returns (in $) with the U.S. stock market index returns. Pseudo-R^2 is a goodness-of-fit measure for binary choice models based on the difference between unrestricted and restricted likelihood functions. The standard errors are computed assuming observations are independent across countries, but not within countries. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Family/Mgmt control rights	-0.0660	-0.0099	-0.0071	-0.0061	-0.0083	-0.0050	-0.0035
	-(2.41)**	-(2.73)***	-(2.01)**	-(1.83)*	-(2.47)**	-(1.49)	-(1.68)*
Sales growth		0.0057	0.0043	0.0051	0.0042	0.0048	0.0030
		(1.11)	(1.66)*	(2.39)**	(1.48)	(2.30)**	(2.39)**
Global industry q		0.0168	0.0134	0.0115	0.0146	0.0113	0.0069
		(4.14)***	(4.07)***	(2.91)***	(3.44)***	(2.84)***	(3.92)***
Log assets		0.0073	0.0058	0.0053	0.0060	0.0052	0.0035
		(6.79)***	(4.86)***	(3.78)***	(4.28)***	(3.75)***	(7.38)***
Foreign sales		0.0159	0.0120	0.0132	0.0126	0.0126	0.0065
		(4.30)***	(3.80)***	(3.22)***	(3.45)***	(3.20)***	(3.86)***
Leverage		-0.0076	-0.0044	-0.0048	-0.0041	-0.0057	-0.0033
		-(1.50)	-(0.74)	-(0.88)	-(0.64)	-(1.07)	-(0.73)
ROA		0.0003	0.0001	0.0000	0.0001	0.0000	0.0000
		(1.63)	(0.54)	(0.27)	(0.37)	(0.30)	(0.07)
Civil law			-0.0124				
			-(1.82)*				
Anti-director				0.0029			
				(2.51)**			
Efficiency of judicial					0.0021		
					(1.19)		
Anti-director*Eff. of judicial						0.0003	
						(2.61)***	
Stock market cap / GDP			-0.0039	-0.0030	-0.0011	-0.0044	
			-(1.20)	-(1.17)	-(0.38)	-(1.43)	
Log of GNP per capita			-0.0045	-0.0056	-0.0095	-0.0072	
			-(3.40)***	-(3.85)***	-(2.33)**	-(3.98)***	
Correlation with U.S. market			0.0180	0.0207	0.0269	0.0204	
			(1.89)*	(2.15)**	(1.81)*	(2.41)**	
Country dummies	no	no	no	no	no	no	yes
Number of observations	4272	4272	4272	4272	4272	4272	4272
Pseudo R^2	0.03	0.35	0.42	0.42	0.40	0.42	0.48

Table 4. Cross-sectional logits: difference between controlling blockholder's control and cash flow rights.
The logit regressions estimate the probability that a firm has a level 2 or level 3 ADR on December 31, 1997. The table reports marginal effects evaluated at the means of the independent variables and *t*-statistics are in parentheses. Marginal effects for dummy variables are calculated as the discrete change in the expected value of the dependent variable as the dummy variable changes from zero to one. Data sources for information on U.S. listings and ownership are described in Section 2. Firms that list via Rule 144a and Level 1 ADRs are excluded and firms with assets < $10 million are excluded. Cash flow (control) rights is equal to the fraction of cash flow (voting) rights held by the controlling shareholder. Control – Cash is control rights minus cash flow rights. Second blockholder equals one if there is another blockholder with at least 10% of the voting rights. Government owned equals one if the state is the controlling shareholder. All accounting data is from Worldscope. Sales growth is inflation adjusted two-year sales growth. Global industry q is the firm's median global industry q. Total assets are in $ thousands. Foreign sales is the percentage of foreign sales to total sales. Leverage is total debt divided by total assets. Civil law, anti-director, and efficiency of judicial are from LLSV (1998). Log of GNP per capita ($) is from the World Bank WDI Database. Stock market capitalization to GDP is from Beck et al. (2001). Correlation with the U.S. market is calculated using weekly data over the previous three years: it is the correlation of the Datastream local stock market index returns (in $) with the U.S. stock market index returns. Pseudo-R^2 is a goodness-of-fit measure for binary choice models based on the difference between unrestricted and restricted likelihood functions. The standard errors are computed assuming observations are independent across countries, but not within countries. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash flow rights	-0.0554	-0.0082	-0.0060	-0.0055	-0.0071	-0.0048	-0.0034
	-(1.83)*	-(2.58)**	-(1.98)**	-(2.01)**	-(2.28)**	-(1.78)*	-(1.71)*
Control – Cash	-0.1482	-0.0327	-0.0198	-0.0145	-0.0262	-0.0147	-0.0132
	-(2.64)***	-(2.96)***	-(2.49)**	-(1.71)*	-(2.89)***	-(1.67)*	-(2.39)**
2nd blockholder		0.0022	0.0011	0.0017	0.0012	0.0017	0.0012
		(1.63)	(0.94)	(2.09)**	(0.91)	(2.06)**	(2.68)***
Sales growth		0.0045	0.0035	0.0039	0.0038	0.0038	0.0020
		(1.19)	(2.48)**	(3.14)***	(2.31)**	(3.00)***	(1.76)*
Global industry q		0.0109	0.0087	0.0076	0.0096	0.0076	0.0061
		(3.43)***	(3.48)***	(2.73)***	(2.94)***	(2.66)***	(3.80)***
Log assets		0.0051	0.0042	0.0040	0.0046	0.0040	0.0032
		(5.45)***	(5.55)***	(4.11)***	(4.28)***	(4.02)***	(6.74)***
Foreign sales		0.0125	0.0089	0.0093	0.0096	0.0092	0.0054
		(4.11)***	(4.73)***	(4.26)***	(4.21)***	(4.08)***	(4.04)***
Leverage		-0.0051	-0.0028	-0.0036	-0.0032	-0.0039	-0.0025
		-(1.38)	-(0.59)	-(0.84)	-(0.63)	-(0.91)	-(0.59)
ROA		0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
		(1.24)	(0.26)	(0.16)	(0.18)	(0.17)	(0.12)
Government owned		0.0011	0.0012	0.0015	0.0008	0.0014	0.0012
		(0.72)	(0.76)	(1.09)	(0.41)	(1.04)	(1.15)
Civil law			-0.0065				
			-(3.36)***				
Anti-director				0.0019			
				(2.33)**			
Efficiency of judicial					0.0008		
					(0.66)		
Anti-director*Eff. of judicial						0.0002	
						(2.48)**	
Stock market cap / GDP			-0.0021	-0.0011	0.0009	-0.0018	
			-(1.15)	-(0.60)	(0.49)	-(0.90)	
Log of GNP per capita			-0.0021	-0.0033	-0.0048	-0.004	
			-(2.21)**	-(5.10)***	-(2.12)**	-(5.57)***	
Correlation with U.S. market			0.0108	0.0145	0.0170	0.0143	
			(1.41)	(1.81)*	(1.47)	(1.88)*	
Country dummies	no	no	no	no	no	no	yes
Number of observations	4062	4062	4062	4062	4062	4062	4062
Pseudo R^2	0.03	0.40	0.45	0.45	0.43	0.45	0.48

Table 5. Cox models: controlling blockholder's control rights.

The Cox models estimate the probability of listing in year t, given that the firm has not listed yet. The sample includes observations on the dependent variable from 1995 to 2001. Data sources for information on U.S. listings and ownership are described in Section 2. Firms that list via Rule 144a and Level 1 ADRs are excluded and firms with assets < $10 million are excluded. The table presents results using the Controlling Blockholder dataset. Control rights is equal to the fraction of voting rights held by the controlling shareholder. Second blockholder equals one if there is another blockholder with at least 10% of the voting rights. Government owned equals one if the state is the controlling shareholder. All accounting data is from Worldscope. Sales growth is inflation adjusted two-year sales growth. Global industry q is the firm's median global industry q. Total assets are in $ millions. Foreign sales is the percentage of sales that are foreign. Leverage is total debt divided by total assets. Civil law, anti-director, and efficiency of judicial are from LLSV (1998). Log of GNP per capita ($) is from the World Bank WDI Database. Stock market capitalization to GDP is from Beck et al. (2001). Correlation with the U.S. market is calculated using weekly data over the previous three years: it is the correlation of the Datastream local stock market index returns (in $) with the U.S. stock market index returns. The table reports hazard ratios (i.e., $exp(\beta_x)$, not β_x). The model does not estimate a constant. The standard errors are adjusted for clustering on firms – they are computed assuming observations are independent across firms, but not across time. The *t*-statistics reported in parentheses are for the null hypothesis that the coefficient is equal to one. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

# of subjects: 4,589 # of failures: 58 Time at risk: 22,276	(1)	(2)	(3)	(4)	(5)	(6)
Control rights	0.20 -(2.19)**	0.28 -(1.68)*	0.32 -(1.45)	0.32 -(1.44)	0.28 -(1.55)	0.31 -(1.42)
2nd blockholder		1.82 (1.91)*	1.81 (1.85)*	1.85 (1.95)*	1.76 (1.78)*	1.82 (1.89)*
Sales growth		1.64 (0.77)	1.49 (0.59)	1.49 (0.58)	1.46 (0.53)	1.48 (0.57)
Global industry q		3.65 (2.96)***	4.37 (3.22)***	4.32 (3.17)***	4.54 (3.35)***	4.37 (3.19)***
Log assets		2.23 (10.60)***	2.38 (10.43)***	2.37 (10.67)***	2.33 (10.51)***	2.36 (10.56)***
Foreign sales		12.18 (5.21)***	9.11 (4.49)***	9.02 (4.24)***	8.19 (4.22)***	8.83 (4.22)***
Leverage		0.30 -(1.16)	0.52 -(0.56)	0.49 -(0.59)	0.55 -(0.50)	0.50 -(0.58)
ROA		1.02 (3.51)***	1.02 (2.99)***	1.02 (2.96)***	1.02 (2.85)***	1.02 (2.93)***
Government owned		1.03 (0.07)	1.02 (0.04)	0.97 -(0.07)	0.97 -(0.08)	0.97 -(0.07)
Civil law			0.60 -(1.08)			
Anti-director				1.09 (0.67)		
Efficiency of judicial					1.03 (0.15)	
Anti-director*Eff. of judicial						1.01 (0.52)
Stock market cap / GDP			1.12 (0.46)	1.25 (1.00)	1.35 (1.48)	1.26 (0.99)
Log of GNP per capita			0.87 -(0.56)	0.75 -(1.35)	0.72 -(1.11)	0.73 -(1.45)
Correlation with U.S. market			13.62 (2.16)**	22.13 (2.45)**	24.08 (2.43)**	22.55 (2.48)**
Log likelihood	-473.17	-383.87	-378.20	-378.53	-378.78	-378.62
χ^2	4.80	221.53	209.06	220.28	225.51	218.18
Prob > χ^2	0.03	0.00	0.00	0.00	0.00	0.00

Table 6. Cox models: family/management control rights.

The Cox models estimate the probability of listing in year t, given that the firm has not listed yet. The sample includes observations on the dependent variable from 1995 to 2001. Data sources for information on U.S. listings and ownership are described in Section 2. Firms that list via Rule 144a and Level 1 ADRs are excluded and firms with assets < $10 million are excluded. The table presents results for the Family/Managment Control dataset. Family/Mgmt control rights is the voting rights held by the management group or controlling family. All accounting data is from Worldscope. Sales growth is inflation adjusted two-year sales growth. Global industry q is the firm's median global industry q. Total assets are in $ thousands. Foreign sales is the percentage of foreign sales to total sales. Leverage is total debt divided by total assets. Civil law, anti-director, and efficiency of judicial are from LLSV (1998). Log of GNP per capita ($) is from the World Bank WDI Database. Stock market capitalization to GDP is from Beck et al. (2001). Correlation with the U.S. market is calculated using weekly data over the previous three years: it is the correlation of the Datastream local stock market index returns (in $) with the U.S. stock market index returns. The table reports hazard ratios (i.e., $exp(\beta_x)$, not β_x). The model does not estimate a constant. The standard errors are adjusted for clustering on firms – they are computed assuming observations are independent across firms, but not across time. The *t*-statistics reported in parentheses are for the null hypothesis that the coefficient is equal to one. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

# of subjects: 4,731 # of failures: 67 Time at risk: 23,164	(1)	(2)	(3)	(4)	(5)	(6)
Family/Mgmt control rights	0.17 -(3.13)***	0.24 -(2.41)**	0.20 -(2.45)**	0.20 -(2.41)**	0.21 -(2.42)**	0.20 -(2.37)**
Sales growth		2.90 (2.56)**	2.18 (1.80)*	2.19 (1.81)*	2.23 (1.83)*	2.19 (1.80)*
Global industry q		2.66 (2.51)**	3.80 (3.32)***	3.74 (3.25)***	3.83 (3.38)***	3.77 (3.26)***
Log assets		2.11 (11.15)***	2.27 (11.40)***	2.27 (11.70)***	2.28 (11.69)***	2.27 (11.60)***
Foreign sales		8.60 (4.91)***	7.32 (4.64)***	7.45 (4.64)***	7.27 (4.66)***	7.37 (4.57)***
Leverage		0.25 -(1.49)	0.49 -(0.70)	0.48 -(0.72)	0.51 -(0.65)	0.48 -(0.72)
ROA		1.02 (3.41)***	1.02 (2.96)***	1.02 (2.88)***	1.02 (2.86)***	1.02 (2.89)***
Civil law			0.86 -(0.32)			
Anti-director				1.05 (0.46)		
Efficiency of judicial					1.10 (0.57)	
Anti-director*Eff. of judicial						1.00 (0.26)
Stock market cap / GDP			1.14 (0.49)	1.14 (0.58)	1.10 (0.38)	1.17 (0.59)
Log of GNP per capita			0.47 -(3.93)***	0.46 -(4.89)***	0.40 -(3.09)***	0.45 -(4.64)***
Correlation with U.S. market			19.77 (2.74)***	22.00 (2.83)***	24.18 (2.73)***	22.19 (2.84)***
Log likelihood	-546.87	-459.09	-447.31	-447.26	-447.17	-447.33
χ^2	9.79	205.52	229.44	231.04	227.63	229.1
Prob > χ^2	0.01	0.00	0.00	0.00	0.00	0.00

Table 7. Cox models: difference between controlling blockholder's control and cash flow rights.
The Cox models estimate the probability of listing in year t, given that the firm has not listed yet. The sample includes observations on the dependent variable from 1995 to 2001. Data sources for information on U.S. listings and ownership are described in Section 2. Firms that list via Rule 144a and Level 1 ADRs are excluded and firms with assets < $10 million are excluded. The table presents results using the Controlling Blockholder dataset. Cash flow (control) rights is equal to the cash flow (voting rights) held by the controlling shareholder. Control – Cash is control rights minus cash flow rights. Second blockholder equals one if there is another blockholder with at least 10% of the voting rights. Government owned equals one if the state is the controlling shareholder. All accounting data is from Worldscope. Sales growth is inflation adjusted two-year sales growth. Global industry q is the firm's median global industry q. Total assets are in $ thousands. Foreign sales is the percentage of sales that are foreign. Leverage is total debt divided by total assets. Civil law, anti-director, and efficiency of judicial are from LLSV (1998). Log of GNP per capita ($) is from the World Bank WDI Database. Stock market capitalization to GDP is from Beck et al. (2001). Correlation with the U.S. market is calculated using weekly data over the previous three years: it is the correlation of the Datastream local stock market index returns (in $) with the U.S. stock market index returns. The table reports hazard ratios (i.e., $exp(\beta_x)$, not β_x). The model does not estimate a constant. The standard errors are adjusted for clustering on firms – they are computed assuming observations are independent across firms, but not across time. The *t*-statistics reported in parentheses are for the null hypothesis that the coefficient is equal to one. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

# of subjects: 4,589 # of failures: 58 Time at risk: 22,276	(1)	(2)	(3)	(4)	(5)	(6)
Cash flow rights	0.21 -(2.04)**	0.39 -(1.23)	0.42 -(1.09)	0.39 -(1.21)	0.37 -(1.21)	0.39 -(1.17)
Control – Cash	0.11 -(1.12)	0.01 -(2.43)**	0.02 -(2.19)**	0.02 -(2.17)**	0.02 -(2.25)**	0.02 -(2.19)**
2nd blockholder		2.01 (2.27)**	1.96 (2.14)**	1.96 (2.15)**	1.91 (2.07)**	1.95 (2.13)**
Sales growth		1.90 (0.99)	1.70 (0.78)	1.66 (0.74)	1.66 (0.71)	1.66 (0.73)
Global industry q		3.46 (2.77)***	4.13 (3.04)***	4.17 (3.04)***	4.29 (3.17)***	4.19 (3.04)***
Log assets		2.27 (11.10)***	2.42 (10.58)***	2.39 (10.85)***	2.37 (10.69)***	2.38 (10.72)***
Foreign sales		12.72 (5.40)***	9.72 (4.70)***	9.25 (4.34)***	8.74 (4.44)***	9.16 (4.34)***
Leverage		0.30 -(1.19)	0.48 -(0.63)	0.49 -(0.61)	0.52 -(0.56)	0.49 -(0.61)
ROA		1.02 (3.27)***	1.02 (2.96)***	1.02 (2.94)***	1.02 (2.84)***	1.02 (2.92)***
Government owned		0.97 -(0.07)	0.97 -(0.07)	0.94 -(0.16)	0.93 -(0.18)	0.94 -(0.17)
Civil law			0.60 -(1.07)			
Anti-director				1.06 (0.45)		
Efficiency of judicial					1.03 (0.14)	
Anti-director*Eff. of judicial						1.00 (0.35)
Stock market cap / GDP			1.12 (0.43)	1.29 (1.16)	1.34 (1.45)	1.30 (1.12)
Log of GNP per capita			0.87 -(0.58)	0.75 -(1.36)	0.72 -(1.09)	0.74 -(1.41)
Correlation with U.S. market			11.15 (2.01)**	18.85 (2.36)**	19.73 (2.33)**	18.97 (2.38)**
Log likelihood	-473.13	-382.22	-377.05	-377.53	-377.62	-377.56
χ^2	5.33	260.20	241.16	248.65	261.25	248.89
Prob > χ^2	0.07	0.00	0.00	0.00	0.00	0.00