Share Issuance and Cross-Sectional Returns: The Importance of Controllers' Stakes

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Previous evidence shows that share issuance predicts low returns in the cross-section of stocks in several markets. The implicit assumption is that issuance generally implies ownership dilution for insiders. This is not the case if insiders maintain or increase their stake by buying a fraction of the new shares. Using a hand-collected dataset with the ownership stakes of controllers of all Chilean companies over the last 20 years we find that share issuance predicts low future returns only when the controller's stake is significantly diluted. Our results are consistent with the market timing hypothesis where the negative impact of share issuance on future returns is driven by mispricing.

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Abstract

Previous evidence shows that share issuance predicts low returns in the cross-section of stocks in several markets. The implicit assumption is that issuance generally implies ownership dilution for insiders. This is not the case if insiders maintain or increase their stake by buying a fraction of the new shares. Using a hand-collected dataset with the ownership stakes of controllers of all Chilean companies over the last 20 years we find that share issuance predicts low future returns only when the controller's stake is significantly diluted. Our results are consistent with the market timing hypothesis where the negative impact of share issuance on future returns is driven by mispricing.

Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995) document the existence of long-run negative returns associated with seasoned equity offerings (SEOs). More recent literature shows that share issuance broadly speaking, and not only SEOs, predicts low returns in the cross section of stocks. Pontiff and Woodgate (2008) document this effect among U.S. stocks. Fama and French (2008) confirm their finding and conclude that share issuance is one of the most robust cross-sectional "anomalies". McLean, Pontiff, and Watanabe (2009) study more than 41 different countries and find evidence similar to the U.S. Despite this robust empirical finding there is still little agreement with respect to the underlying mechanism that explains the issuance-returns nexus. In this paper we add to this literature by explicitly taking into account the ownership stake of the main insider and how this is affected by the equity issue. This requires data on the ownership structure of the firm, which is not available in standard datasets and even less so over long periods of time. We take advantage of the data quality of the Chilean market, incidentally one of the countries covered by McLean, Pontiff, and Watanabe (2009), where we can determine the ownership stake of the controlling shareholder for all listed firms over a period of 20 years (1990-2009).

The evolution of the ownership stake of the controlling shareholder allows us to disentangle potential explanations for the relationship between issuance and future returns. There are two strands of the literature in this respect. First, some argue that the issuance-returns nexus is evidence of market timing by smart insiders who take advantage of irrational investors (Baker and Wurgler (2000), Frazzini and Lamont (2008), Greenwood and Hanson (2011), Jenter (2005), Jenter, Lewellen, and Warner (2009), and Loughran and Ritter (1995)). This assumes that insiders dilute their stake by selling shares when they are overpriced. However, the opportunistic motive is less credible as a reason for issuing when insiders buy a fraction of the new shares and retain or even increase their participation in the company. Under the market timing hypothesis issues that are not subscribed by the controlling shareholder are significantly more likely to predict low future returns. A second strand of the literature argues that issuance coincides with changes in risk (e.g., the firm's beta) and therefore in expected returns (Carlson, Fisher, and Giammarino (2006), Li, Livdan, and Zhang (2009), Pástor and Veronesi (2005)). For example, issuance can allow the firm to transform an investment option into a real project, which is inherently less risky than the pure option (Carlson, Fisher, and Giammarino (2006)).

However, there is no indication in these theories, at least in their current form, that the issuance-return nexus should be related to changes in the insider's stake. Hence, we can use the ownership data as a way to discriminate between these possible explanations. If we find empirically that return predictability is equally strong after equity issues where the controlling shareholder retains or increases her stake, then the market timing hypothesis would lose ground compared to the risk hypothesis. At the least it would imply that the controller does not know when the stock is overpriced, and that issues simply coincide with high market valuations for reasons unrelated to insider opportunism.

In our data we first replicate the results of McLean, Pontiff, and Watanabe (2009) for the case of Chile. Share issuance predicts low future returns and the magnitude of the effect is almost identical to the one documented by McLean, Pontiff, and Watanabe (2009). We then document that all of the predictive power comes from equity issues that cause substantial dilution of the controlling stake. Monthly returns are 1.72% lower after events of substantial dilution (the average dollar return in our sample is 2.45%). Other types of share issuance have a much weaker impact on future returns, and these are not statistically significant either. For instance, monthly returns are only 0.78% lower after equity issues that lead to large increases in the controlling stake. This evidence is in line with the market timing hypothesis. Approximately 1 in 8 of the equity issues in our data is associated with substantial dilution of the controller's stake. In the rest of the issues the stake of the controller stays approximately constant or even increases. The decision of the controller to subscribe the issue or not is public information, which makes it even more surprising that we find return predictability conditional on this information (assuming that it does not reflect risk, of course).

We find that issuance proceeds are mostly used for increasing investment, in line with the results of Kim and Weisbach (2008) on the use of issuance proceeds around the world. Firms where the controller's stake is diluted tend to have stronger investment and debt growth in the years following the issue. This seems to accord with the theory of Carlson, Fisher, and Giammarino (2006)) where issuance predicts low returns because risky investment options are transformed into real assets. The fall in risk, and consequently in future returns, is higher if more options are transformed into real assets. Despite the fact that the level of investment is higher in comparison to other cases of issuance, we do not find that the change in risk for

these firms is captured by the standard risk factors in the literature (beta, book-to-market ratio, size, and momentum), which calls into question the risk story.

We also find that ROE tends to decrease after those issues that imply large dilution when compared to other issues, which is a suggestion of over-investment. Models of asymmetric information, following Leland and Pyle (1977), also predict lower ROE when the controller is more strongly diluted, but they do not predict lower stock returns in the future (in fact, in the asymmetric information model the market price should fully adjust at the same time of the issuance). The difference in ROE is only marginally significant, but it raises another source of suspicion about the controller's motive for not subscribing the issue. Also, from an ex-ante point of view, issues where the controller does not subscribe are preceded by more pronounced market-timing features such as higher returns and liquidity.

Chilean law gives shareholders of all publicly listed companies the right to purchase a fraction of the issuance that is equal to their ownership stake in the company prior to the offering (i.e., shareholders are entitled with preemptive rights). Rights offerings were common in the U.S. before the 1970s, and a significant fraction of shareholders exercised their rights (Smith (1977)). However, since the 1970s SEOs replaced rights offerings as the preferred method for raising equity capital (Eckbo (2008)). Nowadays in the U.S. most publicly-traded companies (unlike private firms) do not have preemptive rights on their charter. In this respect the Chilean experience may offer a peek into the U.S. situation before 1970 when rights offerings were common practice (in other dimensions both countries are obviously quite different). The comparison is potentially interesting because Pontiff and Woodgate (2008) find that the relation between share issuance and returns is absent in the pre-1970 sample. From our results we can conjecture that this relation is missing in the pre-1970 sample because many equity issues did not imply dilution of old shareholders since they simultaneously exercised their rights. Similarly, the mechanism that we highlight can potentially reconcile the negative impact of issuance on returns documented by the recent literature with contradicting results in country studies. For example, Marsh (1979) finds positive –instead of negative– abnormal returns following rights offerings in the U.K. Overall, our evidence suggests that understanding the dynamics of ownership around equity issues can be an important dimension to consider when reconciling these different results. At the same time, our analysis highlights that the data needed to test these ideas are quite demanding and

probably unavailable in many markets (including the U.S. pre-1970). For instance, in order to determine ownership changes it is not enough to know the fraction of rights that is subscribed in each offering because shares can be subsequently sold. We need to know the ultimate owner(s) and her (their) stake in the company in order to see whether ownership is diluted through the share issuance or not.

The papers that are closest to ours examine insider trading around SEOs in the U.S. (Clarke, Dunbar, and Kahle (2001, 2004), Intintoli and Kahle (2010), Kahle (2000), and Lee (1997)). These papers share with our paper the idea that if insiders act opportunistically when leading their firms to issue equity, then they will also act opportunistically when managing their personal holdings of the company stock. For example, Clarke, Dunbar, and Kahle (2001) find that SEOs with more insider sales in the previous quarter produce poorer long-run returns than other SEOs. Our paper differs from this literature in several respects. First, we focus on the controlling shareholder who has full discretion and ultimate control over the timing of the issuance. Other insiders studied in this literature, such as executives or board members, may not have the final word with respect to equity issues. Second, we have a better measure of the insider's position since we compute the ownership stake and not only sales and purchases of company stock as previous literature. For example, an insider may purchase some stock close to an SEO to hide her opportunistic motive (John and Narayanan (1997)), but her stake can ultimately decrease as a result of the share issuance. Third, and in line with Pontiff and Woodgate (2008), we include all forms of share issuance in our tests and not only specific events such as SEOs. Finally, our results are based on a non-U.S. sample that resembles the typical environment among the 41 countries of McLean, Pontiff, and Watanabe (2009) in a better way than the previous literature, which is purely based on U.S. data.

The rest of the paper is organized as follows. In Section 1 we review the main theories about the issuance-return nexus. Section 2 describes our data in detail. In Section 3 we present the main return regressions. In Section 4 we study the before and after of share issuances in terms of firm-characteristics (such as ROE, leverage, and others) that can predict issuance or that are affected by issuance. In Section 5 we present our conclusions.

1. Equity Issues and Long-Run Returns: Motivating Theories

Models of asymmetric information predict a decline in stock prices when a firm announces an equity issue (Myers and Majluf (1984)). In this model, the market realizes with the announcement of the issue that the firm's cash flows are lower than previously expected. Therefore, the market updates valuations down in a rational way. However, as emphasized by Loughran and Ritter (1995), the asymmetric information theory does *not* imply long-run return predictability. Long-run predictability suggests that the market initially under-reacts to information and fails to be fully rational.

Stocks are always fairly priced in the asymmetric information model, and therefore the expected return on a stock is explained by its exposure to fundamental risk (e.g., its covariance with the market return). It could be the case that the equity issue conveys information about the firm's risk or expected return and not only about the firm's cash flows. However, in order to match the findings of Pontiff and Woodgate (2008) and others, it would have to be the case that the market interprets an equity issue as revealing a decline in risk and expected return. This would go against the negative price response associated with the announcement of equity issues that has been extensively documented (Ritter (2003)).

The real options model of Carlson, Fisher, and Giammarino (2006) is a potential explanation for the issuance-returns nexus in a rational world. In their model issuance implies a decline in risk because with the proceeds the firm translates an investment option into a real asset. Real assets are inherently less risky than the options they replace, therefore issuance is correlated with a decline in risk and expected returns. In a similar vein, Li, Livdan, and Zhang (2009) also relate higher investment allowed by the issuance proceeds with lower expected returns. The intuition behind their results is that a firm's marginal q (the present value of profits produced by the marginal investment) is higher when discount rates are lower, therefore high investment, which follows a high q, is naturally related with low expected returns. Investment has to accompany issuance for any of these two explanations to have empirical bite. These explanations are less relevant if issuance proceeds are used in other ways (e.g., debt reduction).

Apart from these models, the market timing hypothesis has gain a lot of attention in recent literature. Under this hypothesis, rational managers exploit temporary mispricing in the market by issuing equity when stocks are overpriced (see, for example, Baker and Wurgler (2000), Frazzini and Lamont (2008), Greenwood and Hanson (2011), Jenter (2005), Jenter, Lewellen, and Warner (2009), and Loughran and Ritter (1995)). The issuance-returns nexus is the smoking gun in favor of this hypothesis. If managers take advantage of "windows of opportunity" when issuing equity, then it is reasonable to expect that they would do the same when trading stock of their own company. This is the main insight of the literature on insider trading and SEOs. Broadly speaking, this literature finds support for the market timing hypothesis (see Clarke, Dunbar, and Kahle (2001, 2004), Intintoli and Kahle (2010), Kahle (2000), and Lee (1997)). Insider trading should be uncorrelated with issuance if issuance is motivated by factors such as marginal q or real options. Hence, studying the behavior of insiders around equity issues is a useful way to uncover the true motive behind issuance, and therefore for the issuance-returns nexus.

2. Data

a. Stock Prices and Financial Statements

Our sample contains almost all non-financial Chilean companies listed in the Santiago Stock Exchange between 1990 and 2009. We only exclude highly illiquid and small listed companies such as country clubs and schools. The sample covers 85% of the Chilean stock market capitalization on an average year, with financial companies accounting for most of the remaining 15%. The data on stock prices and financial statements used in this study were obtained from *Economatica*.

Most large firms in Chile are listed, in contrast to other emerging markets or some developed markets such as Germany, France or Italy, where many large firms are privately-held (Franks, Mayer, Volpin, and Wagner (2009)). The reason behind the ample representation of Chilean companies in the stock market is the aggressive privatization program that was implemented in the 1980s and early 1990s. In spite of this, Chile is still similar to other emerging and developed economies in terms of legal protection given to investors, the number of IPOs relative to GDP, the level of

control premium, and the overall level of ownership concentration (see Djankov, La Porta, López-de-Silanes, and Shleifer (2008)).

Table 1 provides summary statistics for the main variables used in return regressions. Following McLean, Pontiff, and Watanabe (2009) we trim returns at the top and bottom 1%, and we winsorize the rest of the variables at the top and bottom 1% to eliminate the effects of outliers. Our sample consists of approximately 21,000 firm-month observations. The mean (median) monthly return in dollar terms is 2.45% (1%) with a standard deviation of 11%.

The market beta is defined as the regression coefficient of stock returns on the market return over the previous 24 months (from month *t-24* to monh *t-1*). Following Fama and French (1992, 2008) and Pontiff and Woodgate (2008) we define the following variables. Size (ME) is the natural logarithm of total market equity (in dollars) at the end of June of each year. The book-to-market ratio (BM) is the natural logarithm of the book value of equity divided by the market value of equity in December of the previous year. Momentum (MOM) is the buy-and-hold return over the previous six months, from month *t-7* to month *t-1*. We have slightly fewer observations for this variable because it requires continuous data over the previous 6 months and for some of the smaller firms there are holes in the price series.

Issuance (ISSUE) is defined as the log-change in the number of shares outstanding in the previous year (between the end of December of year *t-2* and the end of December of year *t-1*). Shares outstanding are adjusted for splits. Similarly to McLean, Pontiff, and Watanabe (2009) we find that issuance is highly skewed to the right. The mean value of 4% is above the 75th percentile which is 0. McLean, Pontiff, and Watanabe (2009) report a mean value of 5.3% and a 75th percentile of 0.8% in their sample of 41 countries. In our sample, 0.8% corresponds approximately to the 83th percentile. These numbers suggest that issuance in our sample is similar to issuance in the sample of McLean, Pontiff, and Watanabe (2009).

Panel A Table 2 provides summary statistics for other variables derived from the annual balance sheet and income statement. Some of these variables include ROE, total assets, dividends over book equity, capital expenditures over assets, and others.

b. Ownership Data

The real challenge for this paper is obtaining the data on ownership structures. Listed companies in Chile are required by law to disclose in their annual reports their twelve largest shareholders, indicating the number of shares each one holds. Annual reports from 2004 onwards are publicly available on the website of the Superintendencia de Valores y Seguros (the Chilean stock market regulator, hereafter SVS) and a few companies also post older reports online. From 1990 to 2003 we obtain the twelve largest shareholders from two private databases: Fecus Plus and Economatica.

Since the twelve largest shareholders are almost always other companies –some of them listed, others private– this information is in itself little help in identifying a company's ultimate controller. Approximately one-third of the firms in our sample are controlled through pyramids, which is a standard mechanism to achieve control in many emerging and developed countries (La Porta, López-de-Silanes, and Shleifer (1999)). In order to understand the web of companies connected through pyramids we need to check firms' annual reports by hand. Annual reports explain whether control is exercised through one holding company that owns all of the controller's shares or alternatively through several firms related to the controlling shareholder. Through the annual report we can also identify the presence of multiple classes of shares with different voting rights. These are, however, not common in Chile (less than ten firms in our sample). Finally, annual reports provide additional information such as board composition, which helps us to identify the controlling shareholder behind a company. With the information contained in the annual reports we compute the fraction of shares held by the controlling shareholder for each firm between 1990 and 2009. To the best of our knowledge such a long database of controllers' stakes can be hardly assembled in other countries, even considering the U.S. For instance, Helwege, Pirinsky, and Stulz (2007) use a 16 year sample (1986-2001) in their study of ownership dynamics in U.S. firms. We are also able to identify the controller by name and her stake in the company in a precise way, which allows us to determine when the controlling shareholder dilutes her stake. In other work on ownership structures, for instance Helwege, Pirinsky, and Stulz (2007) or Foley and Greenwood (2010), blockholdings are measured for insiders (officers and directors) as an anonymous group.

An example can illustrate our methodology. Viña Santa Rita, one of Chile's largest wine makers, is controlled by the Claro family through a pyramid containing

two listed companies (Elecmetal and Cristalerías) and several intertwined privately-held companies. The Claro family directly controls 50% of Elecmetal, which holds 34% of Cristalerías, which in turn holds 55% of Santa Rita. Therefore, the Claro family controls Santa Rita with a stake of 55% of the shares (votes) if considering only the links through listed companies. This assumes, as is standard in the literature on control (see Adams and Ferreira (2008)), that control is achieved with a stake larger than 20%. Once the holdings through privately-held companies are added, the stake of the Claro family increases from 55% to 78%.

As the Santa Rita example makes clear, separation of control and cash-flow rights is common in our sample. This is also standard in East Asia (Claessens, Djankov, and Lang (2000)), Europe (Faccio and Lang (2002)), and the U.S. (Villalonga and Amit (2009)). Cash-flow rights, i.e. the fraction of dividends received by the controller, can be determined either by multiplying all ownership stakes in the pyramidal chain or by determining the control and cash-flow rights of each share class and then adding them according to the stake the controller holds in each class. Considering only the links through listed companies, the claim of the Claro family on Santa Rita's dividends would be 9.3% (=50%Ł34%Ł55%). Adding the stakes held through private companies their cash-flow rights increase to 20%.

Panel B in Table 2 shows summary statistics for ownership variables. The mean and median controller's stake is about two-thirds. Following the 20% rule for assigning control to a single blockholder, almost 99% of companies in our sample are controlled by a large shareholder. Cash-flow rights are slightly below control rights, 59% on average, which implies a wedge between cash flow and control rights of 8% on average. Notice, however, than the median wedge is 0.[2] In the last row of Table 2

[2] Control and cash-flow rights are higher in Chile than in Europe, but not so much so as to make a significant difference (Barca and Becht (2001), Faccio and Lang (2002)). The median controller's stake is 57% in Germany and 50% in Italy. The wedge between control and cash-flow rights in Chile is comparable to the 10% observed in Italy and 6% in Germany. The Chilean wedge is, however, much lower than the average wedge found by Almeida, Park, Subrahmanyam, and Wolfenzon (2009) in Korea, which is more than 40%. Chile also resembles continental Europe and Asia in terms of the major types of controlling shareholders (see Franks, Mayer, Volpin, and Wagner (2009), La Porta, López-de-Silanes, and Shleifer (1999)). Around half of the firms in our sample are controlled by families. Foreign firms, whose importance has increased over the last two decades, now also control more than 10% of all companies. Multiple blockholders account for 30% of controllers while other

we report summary statistics for the frequency of observing large changes (above 5% or below -5%) in the controller's stake. The controller's stake can change because new shares are issued or because a block of shares is sold or purchased. Approximately 12% of the observations in our sample are large changes, almost evenly split between positive and negative changes. Nevertheless, we can imply that controllers' stakes are relatively stable from one year to the next since 88% of the firm-year observations show no significant change in controllers' stakes.

Table 3 shows the characteristics and frequency of equity issues according to changes in the controller's stake. Equity issues represent approximately 18% of the observations in our sample. In 6.9% of the observations the controller's stake does not change since she subscribed the new issue proportionally. In 6.3% (=2.9% + 3.4%) of the observations, the controller's stake increases or decreases by a small margin (smaller than 5% in absolute value). In 2.77% of the observations, the equity issue results in substantial dilution, which we define as a decrease in the controller's stake that is equal to or larger than 5%. Finally, in 2.40% of the observations the controller increases her stake by 5% or more. Our evidence on the persistence of control throughout big share issuances fits well with the results in Hauser, Kraizberg, and Dahan (2003) who show in a sample of Israeli firms between 1989 and 1997 that controlling shareholders also tend to preserve their stakes after SEOs.

The average size of the equity issue does not correlate with what happens with the controller's stake. For instance, in those equity issues that imply substantial dilution the average size of the issue is 6%, while in those equity issues that imply further concentration the average size is 6.2%.

Table 3 also reports average future returns for equity issues. We see that issues that result in substantial dilution predict lower returns than other equity issues. The average monthly return in this category is 0.54%, while other issues all predict an average return of about 2%-2.5% in line with the full-sample average. A similar pattern can be seen in annual returns. This suggests that share issuance per se does not predict low returns, but share issuance that implies the transference of a large controlling block.

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companies are controlled either by the state or individual investors. Further details can be found in the appendix.

Notice that the effect is not monotonic across groups in Table 3 in the sense that issues where the controller is increasing her stake do *not* imply higher than normal future returns. This would be the case if the controller is able to increase her stake by buying undervalued shares. However, given that the controller has to share these potential gains with outside investors that are also subscribing the issuance, it is more likely that issues in this case are fairly priced instead of underpriced. If the issue is severely underpriced there is always the option of not doing it or simply to increase the firm's capital privately. The case of a repurchase from minority shareholders would be different, because in that case the controller is the sole winner of the undervaluation. The market timing hypothesis for repurchases predicts future return over-performance as observed empirically in several markets (see Peyer and Vermaelen (2009))

We can illustrate the main result with the case of Santa Rita in Figure 1. There are three different equity issues in this company in the last 20 years. In 1992 there was a share issuance which implied that the stake of the Claro family fell from 95% to 73%. The average monthly return of Santa Rita in the 12 months that followed (July 1993 through June 1994) was a paltry -5%. In 1996 there was a second issuance of 23% of shares outstanding without diluting the controller's stake. The average return in the following 12 months (July 1997 through June 1998) was basically 0%. Finally, in 2000 there was an equity issue of 6.7% of shares outstanding, again, without diluting the controller's stake. The average return in the following 12 months (July 2001 through June 2002) was 3.5%. The comparison of these events for Santa Rita certainly suggests that control is related with variation in stock market performance after equity issues.

3. Return Regressions

The basic panel regression follows McLean, Pontiff, and Watanabe (2009):

$$R_{i,t} = a_t + b\,\beta_{i,t-1} + c\,ME_{i,t-1} + d\,BM_{i,t-1} + e\,MOM_{i,t-1} + f\,ISSUE_{i,t-1} + \epsilon_{i,t}, \qquad (1)$$

where $R_{i,t}$ is the dollar return of stock *i* in month *t*. The coefficient a_t is a time fixed effect. Beta, size (ME), book-to-market (BM), momentum (MOM), and share issuance (ISSUE) are as defined previously and with the timing conventions that follow Fama and French (1992, 2008) and Pontiff and Woodgate (2008). Residuals in this regression are allowed to be heteroskedastic and clustered by month (or by year for annual returns). Fama-Macbeth regressions give very similar results to the panel regressions reported here.

Results are reported in Table 4. The regression with only the four controls (beta, ME, BM, and MOM) gives very similar results to the baseline results in McLean, Pontiff, and Watanabe (2009). As expected from Fama and French (1992), beta is positive but not significant. The other coefficients have the same signs and similar magnitudes as previous findings, in particular the coefficient on BM. The value effect has also been documented in international stock markets by Fama and French (1998). Adding share issuance does not affect the magnitude of the three controls in a significant way. ISSUE has a coefficient of -1.10 (t-stat -1.45), which implies that a one standard deviation (0.13) increase in issuance leads to a decline of 0.14% in future average returns. This number is precisely the same estimate of return decline that McLean, Pontiff, and Watanabe (2009) find in their sample of 41 international markets. In the U.S., Pontiff and Woodgate (2008) find a return decline of 0.33%.

In the third column of Table 4 we interact ISSUE with a dummy for those equity issues where the controller's stake decreases by 5% or more. The coefficient of ISSUE alone falls (in magnitude) to -0.27. The interaction of ISSUE with the dummy for dilution has a coefficient of -4.47 (t-stat -3.23), which implies that the total effect of ISSUE on cases with a large decrease in the controller's stake is -4.74 (=-0.27-4.47). A one standard deviation increase in issuance leads to a decline of 0.62% in future average returns in the subgroup of issues with strong dilution of the controller's stake. These results imply that the predictive power of ISSUE comes almost exclusively from the observations with dilution.

In the fourth column of Table 4 we use dummy variables, instead of the continuous variable ISSUE, to indicate the five groups of issuance from decreases to increases of the controller's stake. Since these are dummy variables, the coefficient attached to them is the average effect of each type of issuance on future returns. Results imply that an equity issue with substantial dilution predicts a decline in

future returns of 1.72% (t-stat -3.44). Although some of the other types of issuance also have negative coefficients, none of them is statistically significant or comparable in magnitude.

The regressions with annual returns, despite the fact that they use fewer observations to avoid overlap, paint a similar picture both in terms of magnitude and statistical significance of the coefficients.

In Table 5 we examine the effect of other instances of dilution: block sales. In this case the number of shares remains constant, but the stake of the controller is reduced. By the same token block purchases allow the controller to increase her stake without issuing new shares. As seen in panel A, neither block sales nor block purchases seem to be associated with abnormal returns. In panel B we run our basic regression including a dummy for those observations with substantial dilution through block sales, and, as can be expected from the first panel, this new dummy is not significant and does not affect the coefficients of the other variables. Overall, Table 5 implies that it is not dilution by itself, but the combination of dilution and share issuance that causes future underperformance.

Mclean, Pontiff, and Watanabe (2009) study how the effect of issuance varies with different legal and macro characteristics of the market. We do something similar in Table 6 by splitting the sample in sub-groups according to several market characteristics. One important difference is that we rely on within-country variation in these characteristics, while Mclean, Pontiff, and Watanabe (2009) rely mostly on cross-country variation.

We first split the sample according to the fraction of firms with non-zero ISSUE in a given month (median=16%). The regressions show that the interaction of ISSUE and the dummy for large decreases in the controller's stake is larger in magnitude and more statistically significant in the sample with a high fraction of issues. This implies that issuance with dilution has a negative effect on future returns particularly if it happens in a hot issuance market. This result is in line with the result in Mclean, Pontiff, and Watanabe (2009).

One potential critique to the market timing hypothesis is that the opportunistic behavior is only plausible in small, opaque firms, without a sophisticated investor base. Domestic pension funds are the largest and most influential institutional investors in the Chilean market since the privatization of social security in the early 1980s. Therefore, one could expect that firms that have

pension funds among their shareholders, who potentially play a monitoring role over the controlling shareholder, are less likely to engage in opportunistic market timing. We find the opposite. Our results are in fact stronger for the subset of firms that do not have pension funds in their shareholder base, which supports this hypothesis.

Mclean, Pontiff, and Watanabe (2009) also study a series of legal variables that are time-invariant country characteristics. Since we have only one country in our sample, these variables are not helpful. However, Chilean law experienced a significant change in 2000 (effective in 2001) under a reform designed mainly to regulate tender offers. As a result, control transfers have to be made public and controlling shareholders have to offer an appropriate exit to minority shareholders. In addition, related-party transactions require the approval of the board, which must include independent directors. While issuance is only indirectly affected by this law, these factors certainly improve the position of minority shareholders and arguably increase their demand for new shares. Contrary to Mclean, Pontiff, and Watanabe (2009), we find that the effect of issuance is relatively weaker in the period with better protection to minority shareholders. The total effect of ISSUE is -5.29 in the period before the change in law, with the interaction between ISSUE and the dummy for large decreases in the controller's stake accounting for the lion's share of the effect (coefficient=-6.05, t-statistic=-3.21). The total effect of ISSUE is only -3.48 after the change in law, and it is not significant. The interaction of ISSUE and the dummy is also smaller in the period after the law changed (coefficient=-2.28, t-statistic=-0.96).

Overall, the results in Table 6 suggest that the issuance effect is stronger in hot markets. Also, the issuance-returns nexus is attenuated by the presence of institutional –arguably more sophisticated– investors. At least in the case of this market, the issuance-returns nexus does not seem to become noticeable stronger (on the contrary) with better investor protection as could be suggested by the results in Mclean, Pontiff, and Watanabe (2009). It is important, however, to remember that the within-country variation in these variables is smaller than the cross-country variation used for the tests in Mclean, Pontiff, and Watanabe (2009).

4. Firm Characteristics Before and After Equity Issues

a. Before Issuance

We first study what characteristics predict issuance in general and also different types of issuance depending on what happens with the controller's stake. Then we study whether issuance predicts changes in real performance in the near future.

For the first question we conduct a multivariate probit analysis where p_{it} is the probability that firm i issues equity in year t. This probability is modeled as a function of the three sets of variables:

$$p_{it} = \Phi\left(\alpha' \text{Firm Characteristics}_{i,t-1} + \beta' \text{Stock Market}_{i,t-1} + \gamma' \text{Ownership}_{i,t-1}\right), \qquad (2)$$

where Φ is the cumulative standard normal distribution. All variables are measured one year prior to the equity issue. Firm characteristics include variables taken from the balance sheet or the income statement such as ROE, book value of assets (in logs), and leverage. Stock market variables include the book-to-market ratio, stock return, turnover (a proxy for liquidity), and idiosyncratic return volatility at the firm level, plus the market return, and the market turnover. Ownership variables include the controller's stake, the wedge between vote and cash flow rights, and a dummy to indicate if there was a change in the controller's stake in the previous year.

Table 7 shows results for the probit regressions. In the first column we explore the determinants of equity issues in general, irrespective of what happened with the controller's stake. Only leverage is marginally significant among firm characteristics and stock market variables. Naturally, higher leverage predicts higher frequency of equity issues since it is more likely that debt capacity is exhausted. From the ownership variables, a higher controller's stake predicts lower frequency of equity issues. Also, a change in the controller's stake in the previous year increases the chance of an equity issue this year.

The second column shows results for equity issues with large decreases in the controller's stake. The results are quite different. Good stock market conditions (high returns, high turnover) are a strong predictor of this type of issuance. For example, a one standard deviation (0.72) increase in past returns implies that the likelihood of

an equity issue with dilution increases by 0.68 percentage points (the unconditional probability of issuance with large decreases in the controller's stake is 3.4%).

In contrast, stock market variables lose their predictive power, or it is even reversed, for equity issues without large decreases in the controller's stake. In column 3 we study all issues except for those with large *decreases* in the controller's stake, and in column 4 we study only issues with large *increases* in the controller's stake. High past returns predict lower –not higher– frequency of issuance without a large decrease in the controller's stake. High market turnover also predicts lower frequency of issues with large increases in the controller's stake. These two effects are, however, relatively weak.

The results in Table 7 suggest that, from an ex-ante perspective, equity issues with substantial dilution are more likely to be accompanied by typical market timing features such as high returns and high liquidity. Many issues do not share these market timing features, as also noted by DeAngelo, DeAngelo and Stulz (2010) for the U.S.

b. After Issuance

In this section we study whether equity issues can predict changes in firm performance, investment, and financing patterns. Our main regression is as follows:

$$\begin{aligned} y_{i,t+j} = {} & \alpha \text{ Issue with Large Decrease in } CS_{i,t+1} \\ & + \beta \text{ Issue without Large Decrease in } CS_{i,t+1} \\ & + \gamma' \text{Controls}_{it} + \text{Fixed Effects} + \varepsilon_{i,t+j}, \end{aligned} \qquad (3)$$

where $y_{i,t+j}$ is the outcome of interest for firm *i* measured with information up the end of year *t+j*, *j*=1,3,5. Issue with Large Decrease in $CS_{i,t+1}$ is a dummy variable equal to one if there is an equity issue with a decrease in the controller's stake (CS) larger than 5% during the year *t+1*. Issue without Large Decrease in $CS_{i,t+1}$ is a dummy variable equal to one for the rest of equity issues. The regression for *j=1* represents the short-run impact of the issuance on the balance sheet of the company. We explore a horizon of up to five years after the issue, which is slightly longer than the similar study of post-IPO performance in Pagano, Panetta, and Zingales (1998).

The regression also includes firm-level controls measured at the end of the year previous to the issuance, year fixed effects, and firm-level fixed effects.

Following Kim and Weisbach (2008), we define stock and flow outcome variables as:

$$y_{i,t+j}^{stock} = ln\left[\frac{v_{i,t+j} - v_{i,t}}{assets_{i,t}} + 1\right] \quad (4)$$

$$y_{i,t+j}^{flow} = ln\left[\frac{\sum_{k=1}^{k=j} v_{i,t+k}}{assets_{i,t}} + 1\right] \quad (5)$$

The stock variables that we study are total assets and debt. For simplicity, we refer to asset growth and debt growth in each case. Flow variables are capital expenditures and dividends. We also examine the effect of issuance on future ROE averaged over the corresponding horizon (j=1,3,5), and future leverage.

Table 8 reports results for these regressions. Many theories about issuance and returns relate these two through investment (see Section 1). In the first few columns of Table 8 we test this channel directly. Both in terms of capital expenditures and total asset growth the results show that investment increases after issuance. This fits well with the results of Kim and Weisbach (2008) who conclude that financing investment is an important motive behind many equity issues in their sample of 38 countries. In the short-run the increase in investment is more pronounced following issues with a large decrease in the controller's stake. For example, in the year of the issue, capital expenditures (as fraction of pre-issuance assets) are 10.3% higher in firms where the controller's stake is diluted while they are only 3.3% higher in other firms issuing. The p-value of this difference is 1.2%. However, the difference is barely significant after three years and it vanishes after five years. The short-run increase in investment is consistent with the explanation of Carlson, Fisher, and Giammarino (2006) for the return-issuance nexus. Along the lines of their model, higher investment leads to a larger decrease in risk and consequently lower future returns. The main problem with their hypothesis is that the standard risk factors used in the literature (beta, book-to-market, size, etc.) do not seem to be enough to capture this fall in risk in our data. For instance, Carlson, Fisher, and Giammarino (2010) show that betas decline after SEOs in the U.S., while beta has no predictive power in our sample.

However, beyond the level of investment, there is still the question of profitability. In Table 8 we see that ROE falls more strongly after issuance that is accompanied with large decreases in the controller's stake. The effect is not noticeable in the first year, but after three or five years the fall in ROE is 2.7% and 2.9% respectively (from an average ROE of 10% in the full sample). At the 5-year horizon the difference between the effects on ROE of the two types of issuance has a p-value of 5.2%. This suggests that the profitability of investment after issuance with dilution is lower than the profitability of investment after other issues. We can conjecture that incentives for monitoring the firm's performance are weaker after the controller reduces her stake. The fall in profitability would then be a symptom of agency problems inside the firm.

The drop in profitability after issuance has been documented before (e.g., Loughran and Ritter (1997), Pagano, Panetta, and Zingales (1998)), but without reference to the controller's stake. The model of Pástor, Taylor, and Veronesi (2009) is a rational model that predicts a drop in ROE after issuance, and which could be applied to the case of a large shareholder trading off private benefits of control against the benefits of diversification. However, as Pástor, Taylor, and Veronesi (2009) note in their paper, their model makes no predictions with respect to investment, because the proceeds are saved by the large shareholder in stocks and bonds, and also their model makes no predictions regarding stock returns after issuance.

Equity issuance can increase debt capacity as new capital is infused to the firm and financial constraints are alleviated. This hypothesis predicts higher debt growth after issuance. We find that debt growth is particularly high after issues with a large decrease in the controller's stake. The mirror image of this effect is that leverage falls more after issuance that does not imply a decrease in the controller's stake. In both cases the effects are, however, relatively short-lived since we do not find a significant difference after 5 years. The fact that issuers that dilute the controller's stake retain their relatively high leverage makes it even more surprising that their stocks underperform (see Eckbo, Masulis, and Norli (2000) for the relationship between issuers, leverage, and returns).

Some could argue that those firms that issue equity without a proportional subscription of the controller were more financially constrained before the issuance. This is consistent with the fact that they increase investment and debt by more than

other firms in the following years. Perhaps the controller's own financial constraints are also an obstacle for subscribing the issuance. While this is a plausible explanation for investment and the financing patterns, it does not fit the previous evidence on financial constraints and stock returns. As shown by Livdan, Sapriza, and Zhang (2009), financially constrained firms experience higher future returns since they are riskier. On the contrary, we find that firms that issue and at the same time the controller is diluted, which would be allegedly financially constrained firms, have lower future returns.

Two other results are worth noting. First, similar to Lin, Ma, Malatesta, and Xuan (2010), in Table 8 we find that the difference between the controller's stake and cash flow rights is an obstacle for debt growth. Our sample is similar to the set of emerging markets that they examine, both in terms of ownership concentration and pyramidal structures. Secondly, we do not find any effect of issuance on dividends, so if there is tunneling as incentives are reduced for the controller, it does not seem to occur through dividends.

Overall, our results suggest that firms that experience dilution invest more by levering up on the new capital infused by the issuance. However, the profitability of these companies decreases more strongly in these cases. This can be the result of less powerful monitoring incentives for the controlling shareholder or simply of over-investment. The stock market does not seem to anticipate these effects since we find return predictability. On the contrary, these results suggest that the low subsequent ROE is a "surprise" that leads investors to adjust prices downwards from the high valuations observed at the moment of the issuance. Broadly speaking, these patterns are consistent with the market timing hypothesis.

The models that relate issuance and returns through investment are right in that investment seems to be the immediate reason for many equity issues. Some of these models explain the post-issuance drop in profitability (e.g., Li, Livdan, and Zhang (2009)), while others are not explicit about it (e.g., Carlson, Fisher, and Giammarino (2006)). However, these models do not explain why there should be a difference between issues with and without a decreasing stake of the controlling shareholder. Overall, it is yet to be seen if these models can give a full explanation for the empirical patterns that we uncover.

5. Conclusions

Previous evidence shows that share issuance predicts low returns in the cross-section of stocks for a wide variety of markets (McLean, Pontiff, and Watanabe (2009), Pontiff, and Woodgate (2008)). The implicit assumption in most studies is that issuance implies ownership dilution for insiders. This is not the case if insiders maintain or increase their stake by buying a fraction of the new shares. Using a hand-collected dataset with the ownership stakes of controllers of all Chilean companies over the last 20 years we find that share issuance predicts low future returns only when the controller's stake is reduced as a consequence of the issuance. Share issuance does not predict returns when the controller's stake stays constant or increases.

We also find that investment increases significantly after issuance, in line with the results in Kim and Weisbach (2008). However, we find that ROE falls only after those issues where the controller's stake was reduced substantially. This suggests that some of these firms over-invested or did not monitor the efficiency of new investments. From an ex-ante point of view, issuers where controllers did not subscribe also have more pronounced market-timing features than other issuers (e.g., higher previous returns and turnover). Overall, our results are in line with the market timing hypothesis, where opportunistic insiders take advantage of mispricing in the market by issuing overvalued equity.

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Table 1

Summary Statistics for Variables in Return Regressions

This table reports aggregate summary statistics for one-month and one-year holding period returns, the regression coefficient of stock returns on the market return over the previous 24 months (Beta), the natural logarithm of June-end market value (ME), the natural logarithm of the previous year-end book-to-market ratio (BM), the past six-month stock return (MOM), and the log change in the number of shares outstanding adjusted for stock splits in the previous calendar year (ISSUE). Returns are trimmed at the 1% level. All other variables are winsorized at the 1% level. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

Variable	Number of Observations	Mean	Standard Deviation	25th percentile	Median	75th percentile
Monthly Returns	21228	0.02	0.11	-0.04	0.01	0.07
Annual Returns	1246	0.39	0.71	-0.06	0.26	0.65
Beta	21137	0.82	0.65	0.40	0.81	1.21
ME	20357	11.53	2.12	10.35	11.63	12.94
BM	20098	-0.19	0.80	-0.77	-0.22	0.32
MOM	19950	0.10	0.35	-0.11	0.05	0.25
ISSUE	21228	0.04	0.13	0.00	0.00	0.00

Table 2

Summary Statistics for Firm-Level Characteristics and Ownership Variables

Panel A shows annual summary statistics for return on equity (ROE), the natural logarithm of book assets, leverage, debt growth, asset growth, capital expenditure as fraction of total assets, and dividends as fraction of book equity. All variables are winsorized at the 1% level. Panel B shows summary statistics for the controller's stake, cash flow rights, the difference between the controller's stake and cash flow rights, and a dummy variable that identifies firm-year observations with a change in the controller's stake. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

Variable	Number of Observations	Mean	Standard Deviation	25th percentile	Median	75th percentile
Panel A						
ROE	2838	0.10	0.17	0.04	0.10	0.17
Log Book Assets	2878	11.99	2.05	10.95	12.11	13.28
Leverage	2850	0.37	0.20	0.23	0.38	0.51
Debt Growth	2819	0.32	1.50	-0.10	0.04	0.25
Asset Growth	2673	0.09	0.27	-0.02	0.05	0.13
CAPEX/Assets	1417	0.06	0.07	0.01	0.04	0.08
Dividends/Book Equity	2002	0.07	0.11	0.00	0.03	0.07
Panel B						
Controller's Stake (CS)	3078	0.68	0.20	0.54	0.68	0.83
Cash Flow Rights	3072	0.59	0.24	0.42	0.61	0.79
Controller's Stake - Cash Flow Rights	3071	0.09	0.16	0.00	0.00	0.11
Dummy for Change in Controller's Stake	2889	0.12	0.33	0.00	0.00	0.00

Table 3

Summary Statistics for Firms Issuing Equity according to Changes in the Controller's Stake

This table shows the mean and standard deviation of monthly and annual returns, the log change in split-adjusted shares outstanding (or ISSUE), the number of monthly observations, and the percentage of the full sample represenetd by firms issuing equity. These firms are split in five groups according to changes in the controller's stakes caused by the equity issue. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

Controller's Stake (CS)	Average Monthly Returns	Std. Dev. of Monthly Returns	Average Annual Returns	Std. Dev. of Annual Returns	Average ISSUE	Std. Dev. of ISSUE	Number of Monthly Observations	Percentage of Full Sample
Decreases by more than 5%	0.54%	11.37%	-3.58%	38.13%	6.05%	15.61%	589	2.77%
Decreases between 0% and 5%	1.91%	11.31%	12.10%	38.57%	9.37%	15.78%	615	2.90%
Does not change	2.63%	12.06%	24.04%	60.92%	9.78%	21.02%	1468	6.92%
Increases between 0% and 5%	2.54%	11.10%	32.64%	98.75%	4.70%	10.90%	713	3.36%
Increases by more than 5%	2.43%	12.16%	21.17%	64.71%	6.21%	15.96%	510	2.40%

Table 4

Return Regressions: The Effect of Share Issuance and the Controller's Stake

Panel regressions of monthly and annual returns (both multiplied by 100) on the regression coefficient of stock returns on the market return over the previous 24 months (Beta), the natural logarithm of June-end market value (ME), the natural logarithm of the previous year-end book-to-market ratio (BM), the past six-month stock return (MOM), the log change in the number of shares outstanding adjusted for stock splits in the previous calendar year (ISSUE), the interaction between ISSUE and a dummy variable that identifies observations of ISSUE with a decrease in the controller's stake (CS) larger than 5%, and a set of dummy variables that identifies observations of ISSUE with other changes in the controller's stake. All regressions include month or year fixed effects. Standard errors are clustered by time period. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

	Dependent Variable							
	Monthly Returns				Annual Returns			
Beta	0.200	0.225	0.234	0.229	2.371	2.468	2.523	2.581
	(0.202)	(0.205)	(0.204)	(0.204)	(2.599)	(2.988)	(2.908)	(2.859)
BM	0.326***	0.335***	0.322***	0.328***	6.691	7.054	6.898	6.954
	(0.122)	(0.124)	(0.124)	(0.125)	(3.968)	(4.149)	(4.108)	(4.114)
MOM	0.018***	0.017***	0.017***	0.017***	0.245***	0.239**	0.238**	0.239**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.082)	(0.086)	(0.087)	(0.087)
ME	-0.183***	-0.196***	-0.202***	-0.205***	-3.103***	-3.176***	-3.279***	-3.311***
	(0.055)	(0.056)	(0.056)	(0.057)	(0.826)	(0.689)	(0.710)	(0.708)
ISSUE		-1.109	-0.273			-9.029	3.405	
		(0.768)	(0.812)			(16.549)	(19.949)	
ISSUE x Dummy Decrease CS larger 5%			-4.473***				-64.614**	
			(1.385)				(24.348)	
Dummy Decrease CS larger 5%				-1.723***				-24.015***
				(0.500)				(5.404)
Dummy Decrease CS between 0%-5%				-0.207				-0.586
				(0.393)				(3.849)
Dummy No Change in CS				0.048				-4.053
				(0.308)				(5.623)
Dummy Increase in CS between 0%-5%				-0.321				0.514
				(0.399)				(10.321)
Dummy Increase in CS larger 5%				-0.788				-10.911
				(0.507)				(8.603)
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,456	18,522	18,522	18,522	1,608	1,552	1,552	1,552
R-squared	0.272	0.269	0.270	0.270	0.309	0.309	0.312	0.314

Standard errors were calculated using cluster by time period

*** p<0.01, ** p<0.05, * p<0.1

Table 5

Block Sales or Purchases and Changes in the Controller's Stake

The panel A shows the mean and standard deviation of monthly and annual returns, the number of monthly observations, and the percentage of the full sample represenetd by firms in each of five groups split according to changes in the controller's stakes caused by block sales or purchase. Equity issuance is zero in all of these groups. The panel B shows the panel regressions of monthly and annual returns (both multiplied by 100) on the regression coefficient of stock returns on the market return over the previous 24 months (Beta), the natural logarithm of June-end market value (ME), the natural logarithm of the previous year-end book-to-market ratio (BM), the past six-month stock return (MOM), the log change in the number of shares outstanding adjusted for stock splits in the previous calendar year (ISSUE), the interaction between ISSUE and a dummy variable that identifies observations of ISSUE with a decrease in the controller's stake (CS) larger than 5%, and a set of dummy variables that identifies observations of Block Sale or Purchase with other changes in the controller's stake. All regressions include month or year fixed effects. Standard errors are clustered by time period. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

Controller's Stake (CS)	Average Monthly Returns	Std. Dev. of Monthly Returns	Average Annual Returns	Std. Dev. of Annual Returns	Number of Monthly Observations	Percentage of Full Sample
Panel A						
Block Sale of more than 5%	2.63%	12.28%	27.18%	74.24%	770	3.63%
Block Sale between 0% and 5%	2.20%	11.44%	25.60%	79.93%	1199	5.65%
No Block Sale and No Issuance	2.73%	11.17%	25.06%	60.91%	11240	52.95%
Block Purchase between 0% and 5%	1.89%	10.92%	12.52%	46.82%	2780	13.10%
Block Purchase more than 5%	2.29%	11.52%	6.97%	41.22%	976	4.60%

Table 5
(Cont.)

Panel B

	Dependent Variable			
	Monthly Returns		Annual Returns	
Beta	0.213	0.233	2.301	2.509
	(0.204)	(0.204)	(2.957)	(2.895)
BM	0.326***	0.323***	7.013	6.921
	(0.125)	(0.124)	(4.218)	(4.140)
MOM	0.017***	0.017***	0.236**	0.237**
	(0.004)	(0.004)	(0.085)	(0.087)
ME	-0.193***	-0.202***	-3.161***	-3.271***
	(0.056)	(0.056)	(0.726)	(0.719)
ISSUE		-0.266		3.557
		(0.810)		(19.709)
ISSUE x Dummy Decrease CS larger 5%		-4.473***		-64.602**
		(1.385)		(24.366)
Block Sale of more than 5%	0.291	0.089	3.652	1.752
	(0.435)	(0.386)	(9.295)	(7.427)
Block Sale between 0% and 5%	0.084		1.385	
	(0.334)		(5.102)	
No Block Sale and No Issuance	0.252		3.096	
	(0.233)		(4.356)	
Block Purchase between 0% and 5%	0.098		0.067	
	(0.308)		(3.760)	
Block Purchase more than 5%	0.058		-5.041	
	(0.444)		(5.628)	
Time Fixed Effects	Yes	Yes	Yes	Yes
Observations	18,522	18,522	1,552	1,552
R-squared	0.269	0.270	0.309	0.312

Standard errors were calculated using cluster by time period
*** p<0.01, ** p<0.05, * p<0.1

Table 6

Return Regressions: The Effect of Share Issuance and the Controller's Stake by Sub-Samples

Panel regressions of monthly returns (multiplied by 100) on the regression coefficient of stock returns on the market return over the previous 24 months (Beta), the natural logarithm of June-end market value (ME), the natural logarithm of the previous year-end book-to-market ratio (BM), the past six-month stock return (MOM), the log change in the number of shares outstanding adjusted for stock splits in the previous calendar year (ISSUE), the interaction between ISSUE and a dummy variable that identifies observations of ISSUE with a decrease in the controller's stake (CS) larger than 5%. Observations are split in two groups according to several characteristics. Non-zero issuance is the frequency of observations with non-zero ISSUE in a given month. Institutional ownership refers to the ownership stake of private domestic pension funds in a company. The law regulating tender offers, among other corporate actions, changed in the year 2001. All regressions include month fixed effects. Standard errors are clustered by time period. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

	Dependent Variable: Monthly Returns					
	Sub-Sample of Observations with:					
	Low Non-Zero Issuance	High Non-Zero Issuance	Zero Institutional Ownership	Positive Institutional Ownership	Before Change in Securities Law	After Change in Securities Law
Beta	-0.018	0.498	0.259	0.172	0.079	0.303
	(0.261)	(0.321)	(0.247)	(0.249)	(0.345)	(0.257)
BM	0.528***	0.054	0.308*	0.398***	0.064	0.530***
	(0.185)	(0.159)	(0.180)	(0.152)	(0.157)	(0.182)
MOM	0.025***	0.007	0.019***	0.015***	0.011*	0.020***
	(0.006)	(0.006)	(0.007)	(0.005)	(0.006)	(0.006)
ME	-0.191**	-0.186**	-0.137	-0.294***	-0.222***	-0.167**
	(0.081)	(0.079)	(0.092)	(0.080)	(0.084)	(0.075)
Issue	-1.617**	1.032	0.200	-0.573	0.763	-1.203
	(0.774)	(1.353)	(1.142)	(0.955)	(1.374)	(0.923)
ISSUE x Dummy Decrease CS larger 5%	-2.766	-6.047***	-4.473***	-3.660	-6.054***	-2.283
	(2.032)	(1.685)	(1.618)	(3.161)	(1.886)	(2.367)
Observations	9,309	9,213	6,299	12,067	8,082	10,440
R-squared	0.246	0.290	0.215	0.325	0.267	0.263

Standard errors were calculated using cluster by time period

*** p<0.01, ** p<0.05, * p<0.1

Table 7

The Decision to Issue Equity and Changes in the Controller's Stake

This table shows probit regressions for general equity issuance and equity issuance with different changes in the controller's stake. The independent variables are all lagged by one year. Independent variables include (1) firm characteristics: return over equity (ROE), the natural logarithm of book assets, and leverage; (2) stock market variables: the natural logarithm of the previous year-end book-to-market ratio (BM), annual stock returns, annual stock turnover, stock's idiosyncratic volatility, annual market return and annual market turnover; (3) ownership variables: controller's stake (CS), the difference between the controller's stake and cash flow rights, and a dummy variable that identifies if there was a change in the controller's stake. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

	Dependent Variables			
	(1)	(2)	(3)	(4)
	Issuance	Issuance with *Decrease* in the CS larger than 5%	Issuance without *Decrease* in the CS larger than 5%	Issuance with *Increase* in the CS larger than 5%
Firm Characteristics t-1:				
ROE	-0.237	-0.211	-0.170	-0.925*
	(0.269)	(0.276)	-0.265	(0.538)
Log Book Assets	0.011	-0.090*	0.018	-0.019
	(0.039)	(0.054)	(0.041)	(0.042)
Leverage	0.678*	0.367	0.623	1.031**
	(0.374)	(0.381)	(0.389)	(0.520)
Stock Market Variables t-1:				
BM	-0.023	0.181*	-0.033	0.170*
	(0.079)	(0.101)	(0.083)	(0.090)
Stock Return	-0.042	0.312**	-0.143*	-0.044
	(0.096)	(0.139)	(0.086)	(0.187)
Turnover	0.569	0.964***	0.397	0.429
	(0.360)	(0.339)	(0.398)	(0.543)
Idiosyncratic Volatility	0.270	0.455*	0.175	-0.378
	(0.179)	(0.272)	(0.209)	(0.338)
Market Return	0.091	0.435	0.096	0.330
	(0.166)	(0.374)	(0.178)	(0.353)
Market Turnover	0.113	3.552**	-0.159	-2.129*
	(0.617)	(1.502)	(0.598)	(1.234)
Ownership Variables t-1:				
Controller's Stake (CS)	-0.716**	0.355	-0.908**	-1.010**
	(0.341)	(0.520)	(0.358)	(0.495)
CS - Cash Flow Rights	0.459	-0.674	0.569	0.178
	(0.420)	(0.689)	(0.426)	(0.472)
Dummy Change in CS	0.326***	0.494**	0.321***	0.278
	(0.106)	(0.233)	(0.117)	(0.184)
Constant	-1.202**	-2.526***	-1.128**	-1.246*
	(0.492)	(0.851)	(0.511)	(0.648)
Observations	1569	1569	1569	1569
Number of firms	148	148	148	148

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 8

Post-Issuance Firm Performance, Financing Patterns, and Investment

Panel regressions with the following dependent variables: capital expenditures, asset growth, return on equity (ROE), debt growth, leverage, and dividends. We follow the definitions of Kim and Weisbach (2008) as specified in the main text. All dependent variables are measured over an interval between 1 and 5 years following the measurement of independent variables. The independent variables are: a dummy that identifies share issuances that imply a large decrease (bigger than 5% in absolute value) in the controller's stake, a dummy for the rest of the equity issues, the natural logarithm of book assets, leverage, the log book-to-market ratio (BM), the controller's stake (CS), and the difference between the controller's stake and cash flow rights. All regressions include year and firm fixed effects. Standard errors are clustered by firm. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

	Dependent Variable								
	Capital Expenditures			Asset Growth			ROE		
	t+1	t + 3	t + 5	t+1	t + 3	t + 5	t+1	t + 3	t + 5
Issuance Variables in t+1:									
Issuance with Large Decrease in CS (1)	0.103***	0.177***	0.212**	0.289***	0.225***	0.046	0.003	-0.027**	-0.029*
	(0.027)	(0.063)	(0.104)	(0.037)	(0.082)	(0.058)	(0.020)	(0.011)	(0.015)
Issuance without Large Decrease in CS (2)	0.033***	0.063***	0.040	0.099***	0.093***	0.044	-0.015	-0.003	0.002
	(0.009)	(0.019)	(0.029)	(0.016)	(0.028)	(0.034)	(0.011)	(0.010)	(0.009)
Firm Characteristics in t:									
Log Book Assets	0.007	-0.043	-0.110*	-0.064***	-0.355***	-0.626***	-0.031	-0.052**	-0.051***
	(0.009)	(0.033)	(0.065)	(0.015)	(0.048)	(0.074)	(0.023)	(0.020)	(0.018)
Leverage	-0.109***	-0.247**	-0.469***	-0.258***	-0.373***	-0.568***	0.000	0.071	0.081**
	(0.035)	(0.107)	(0.171)	(0.044)	(0.123)	(0.167)	(0.056)	(0.053)	(0.040)
BM	-0.024***	-0.041***	-0.020	-0.042***	-0.055	-0.037	-0.065***	-0.045***	-0.027*
	(0.006)	(0.015)	(0.022)	(0.015)	(0.042)	(0.045)	(0.013)	(0.017)	(0.015)
Ownership Variables in t:									
Controller's Stake (CS)	0.043	0.063	0.056	-0.006	-0.049	-0.161	-0.002	-0.013	-0.008
	(0.048)	(0.130)	(0.197)	(0.056)	(0.143)	(0.176)	(0.035)	(0.033)	(0.034)
Controller's Stake - Cash Flow Rights	-0.093	-0.147	-0.162	-0.043	-0.170	-0.521***	0.039	0.023	-0.005
	(0.070)	(0.224)	(0.290)	(0.117)	(0.223)	(0.183)	(0.057)	(0.049)	(0.043)
p-value test (1)=(2)	1.2%	9.4%	11.8%	0.0%	10.1%	98.3%	35.1%	6.9%	5.2%
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,185	959	742	2,364	2,036	1,718	2,222	1,893	1,581
R-squared	0.155	0.200	0.243	0.214	0.349	0.513	0.128	0.206	0.206
Number of firms	123	116	104	175	168	156	174	164	148

Standard errors were calculated using cluster by firm

*** p<0.01, ** p<0.05, * p<0.1

Table 8

(cont.)

	Dependent Variable								
	Debt Growth			Leverage			Dividends		
	t+1	t + 3	t + 5	t+1	t + 3	t + 5	t+1	t + 3	t + 5
Issuance Variables in t+1:									
Issuance with Large Decrease in CS (1)	0.078**	0.136***	0.023	-0.052***	0.019	0.001	-0.005	0.002	0.031
	(0.033)	(0.051)	(0.057)	(0.019)	(0.021)	(0.026)	(0.007)	(0.017)	(0.024)
Issuance without Large Decrease in CS (2)	0.019	0.014	0.000	-0.018**	-0.018*	-0.024**	0.004	-0.000	-0.006
	(0.013)	(0.022)	(0.026)	(0.008)	(0.010)	(0.010)	(0.004)	(0.007)	(0.011)
Firm Characteristics in t:									
Log Book Assets	-0.033*	-0.179***	-0.335***	0.021***	0.033**	0.021	0.007*	-0.002	-0.016
	(0.017)	(0.029)	(0.041)	(0.008)	(0.015)	(0.014)	(0.004)	(0.012)	(0.017)
Leverage	-0.377***	-0.699***	-1.175***	0.626***	0.210***	-0.034	-0.068***	-0.144**	-0.154
	(0.046)	(0.084)	(0.139)	(0.042)	(0.042)	(0.046)	(0.020)	(0.066)	(0.099)
BM	-0.022**	-0.050***	-0.064***	-0.006	-0.012	-0.019**	-0.017***	-0.024***	-0.010
	(0.010)	(0.019)	(0.023)	(0.004)	(0.008)	(0.008)	(0.004)	(0.007)	(0.008)
Ownership Variables in t:									
Controller's Stake (CS)	0.014	-0.071	-0.208	0.029	0.025	-0.013	-0.009	-0.067	-0.092
	(0.040)	(0.102)	(0.140)	(0.023)	(0.045)	(0.051)	(0.018)	(0.047)	(0.058)
Controller's Stake - Cash Flow Rights	-0.057	-0.238*	-0.508***	-0.027	-0.094	-0.125**	0.056**	0.092	0.082
	(0.071)	(0.131)	(0.156)	(0.037)	(0.069)	(0.061)	(0.022)	(0.057)	(0.096)
p-value test (1)=(2)	9.3%	1.9%	71.2%	9.6%	8.9%	31.3%	17.7%	88.4%	13.6%
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,361	2,037	1,719	2,224	1,899	1,590	1,732	1,404	1,091
R-squared	0.168	0.323	0.483	0.461	0.121	0.048	0.093	0.097	0.081
Number of firms	175	169	157	174	164	148	174	165	148

Standard errors were calculated using cluster by firm

*** p<0.01, ** p<0.05, * p<0.1

Appendix

Number of Firms by Type of Controller

The Table shows the number of firms according to the type of controller. The controller may be a family, the state, a foreign firm, an individual or a coalition of two or more large shareholders without direct family ties, which we refer to as multiple blocks. The sample covers non-financial Chilean firms from 1990 to 2009. Data are taken from Economatica, Fecus Plus, and Superintendencia de Valores y Seguros (SVS).

Year	Families	Multiple Blocks	State	Individuals	Foreign Firms	All firms
1990	50	33	7	4	12	106
1991	54	35	7	4	13	113
1992	59	39	7	8	16	129
1993	62	42	6	12	17	139
1994	64	43	6	12	17	142
1995	67	46	6	13	17	149
1996	75	47	6	13	18	159
1997	73	48	5	13	22	161
1998	75	50	5	13	22	165
1999	74	48	3	13	29	167
2000	74	44	3	13	32	166
2001	74	45	3	13	32	167
2002	74	44	3	13	32	166
2003	76	45	3	13	30	167
2004	74	43	3	14	27	161
2005	77	45	3	14	27	166
2006	76	42	3	14	30	165
2007	76	48	3	14	24	165
2008	76	50	3	14	22	165
2009	77	49	3	14	20	163
All	1407	886	88	241	459	3081

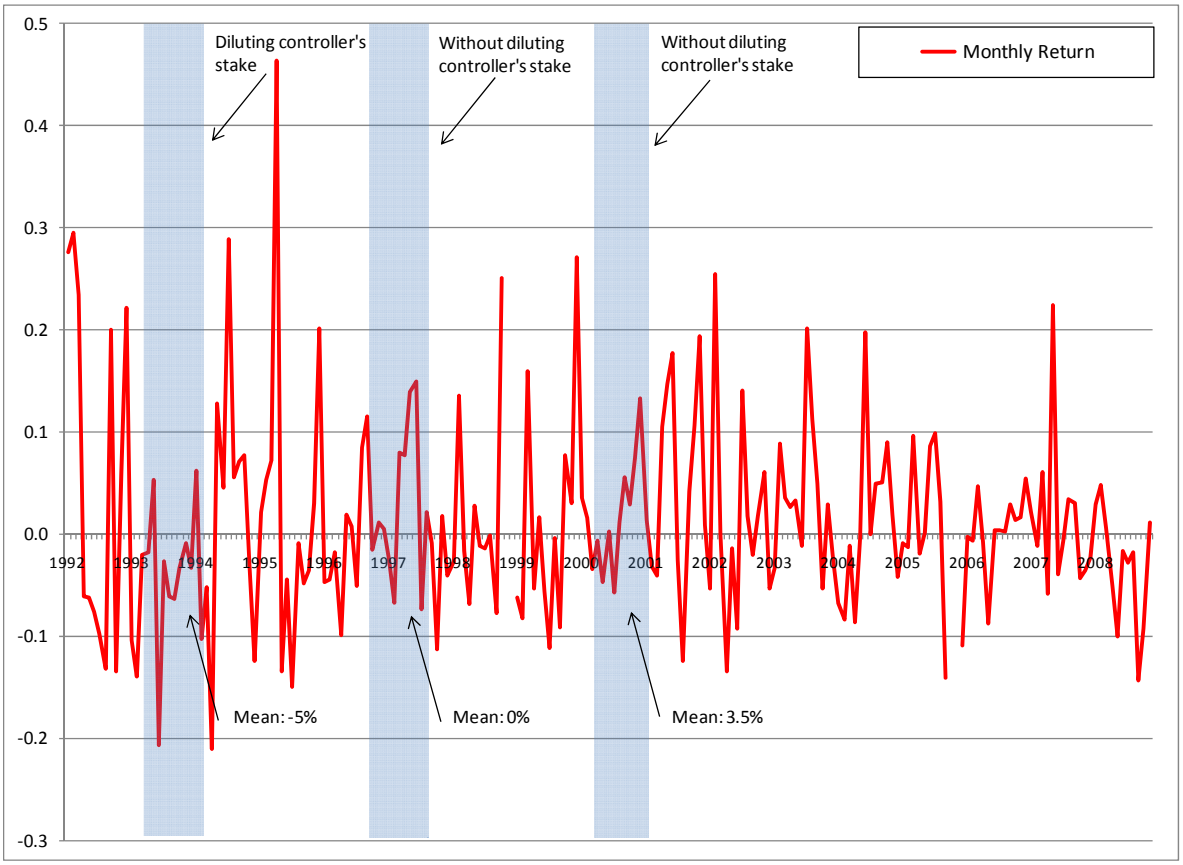

Figure 1

This figure shows Santa Rita's monthly stock return between 1992 and 2009. The blue windows represent a period of 12 months (from July of year t+1 through June of year t+2) after a share issuance in year t. The first window corresponds to the period following a share issuance where the controller's stake was diluted. The controller's stake did not decrease in the other two share issuances. The mean is the average return over the 12-month window.