Corporate Control and Security Design at Initial Public Offerings: A Law and Finance Analysis

Martin Holmén
Department of Economics
Uppsala University
Box 513
SE-751 20 Uppsala
Tel: +46 18 471 76 34
Martin.Holmen@nek.uu.se

Peter Högfeldt
Department of Finance
Stockholm School of Economics
Box 6501
SE-113 83 Stockholm
Tel: +46 8 73 69 151
Peter.Hogfeldt@hhs.se

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Abstract

Law and finance interact when family owned Swedish IPO firms form control blocks and maximize the value of attached control rights by exploiting deviations from one share-one vote that the legislator intentionally provides. This creates a positive relation between actual use of such deviations and frequency of family controlled firms that also holds more generally for a large sample of countries. It is not caused by differences in legal regimes or weak minority protection per se but by control considerations at the IPO. Since control blocks are *never* sold piecemeal to preserve control value, ownership remains highly concentrated. Even if controlling owners *rationally anticipate* dilution due to frequent stock financed acquisitions. Large discounts on family controlled IPO firms gauges *dynamic lock-in costs* due to misallocation of control rights to heirs that make inefficient decisions that hurt growth; not costs from extraction of pecuniary benefits due to weak formal minority protection. Informal rules and long-term incentives are substitutes for weak minority protection in equilibrium with concentrated ownership.

JEL classification: G32

Keywords: *Law and Finance, Initial Public Offerings, Security design, Dual-Class shares, Private control, Valuation, Seasoned Equity Offerings, Ownership dynamics*

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Law and finance interact when family owned Swedish IPO firms form control blocks and maximize the value of attached control rights by exploiting deviations from one share-one vote that the legislator intentionally provides. This creates a positive relation between actual use of such deviations and frequency of family controlled firms that also holds more generally for a large sample of countries. It is not caused by differences in legal regimes or weak minority protection per se but by control considerations at the IPO. Since control blocks are *never* sold piecemeal to preserve control value, ownership remains highly concentrated. Even if controlling owners *rationally anticipate* dilution due to frequent stock financed acquisitions. Large discounts on family controlled IPO firms gauges *dynamic lock-in costs* due to misallocation of control rights to heirs that make inefficient decisions that hurt growth; not costs from extraction of pecuniary benefits due to weak formal minority protection. Informal rules and long-term incentives are substitutes for weak minority protection in equilibrium with concentrated ownership.

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This paper explores the intersection between the two literatures on IPOs and on law and finance. The effects of legal institutions and rules are most pointed at the IPO since they shape and affect not only the endogenous decision whether to go public but also the design of corporate charters and the initial ownership structure. The effects of laws on financial decisions are however not limited to the IPO since, by setting the stage, the initial conditions to a large extent also determine future developments through path dependence. Analysis of the interaction between law and finance is thus particularly interesting at the IPO. The literature on law and finance has however ignored the analysis of how legal rules affect IPOs, and concentrated on the relationship between legal regimes and ownership structures of large listed firms, see La Porta et al (1997-99), while the IPO literature has largely overlooked the effect of laws and legal regimes on IPOs.

Most theories about the IPO process assume that owners in control use the IPO as an exit option, and start of a process to quickly relinquish shares either piecemeal or as a whole in a block transfer or takeover.[1] Eventually, the firm's ownership structure is likely to be dominated by minority blockholders or become widely held and controlled by management. But these theories are unable to explain why public firms outside the Anglo-Saxon countries frequently are closely held, and often privately controlled for decades by the founding family; see La Porta et al (1999).

A key decision for controlling owners when designing the corporate charter and security structure at the IPO is how to protect and maximize the value of their control rights. This value stems from social prestige and status of running a listed firm, access to information that could be used in projects outside the firm, the power of making pivotal decisions about how to allocate financial and non-financial resources and people within the firm, and opportunity to extract pecuniary benefits. Such rights are easier to protect, and thus, ceteris paribus, particularly valuable in legal systems where corporate and securities laws are designed to benefit control-oriented private owners by allowing, and even encouraging the use of devices that separate of votes from capital contribution like cross-shareholdings, dual-class shares and pyramids. We therefore apply a law and finance perspective on IPOs to derive testable hypotheses of how private owners systematically use provisions in the corporate law to maximize the value of their control rights. Since control rights are not easily transferable between managers and shareholders, we postulate that they are more valuable to private managerial owners (founder (CEO), founder family, employees, or other individual in control) than for institutional owners (another public firm, a venture capital fund, an

association or state or community in control). We distinguish between the two in order to test whether the assumed disparate private benefits of control result in different economic behavior.

Our first hypothesis is that private owners who particularly value control will take advantage of opportunities to deviate from one share-one vote, and design the corporate charter and securities to create control blocks that incorporate the value of control rights. We postulate they maximize the value of control rights by extensively using dual-class shares, and design a very concentrated initial ownership structure by only selling a small fraction of their own shares at the IPO. Dual-class shares facilitate the formation and maintenance of such blocks since a majority of votes is controlled by a minority contribution of capital.

The second hypothesis is that control blocks will not be sold piecemeal to protect the incorporated value of control rights. The initial ownership structure will thus remain concentrated also over time. This creates an endogenous dynamic link between a particular legal regime, and a stable, concentrated ownership structure for family controlled firms. The final hypothesis is that the controlling owner of a firm with dual-class shares has stronger incentive to invest and acquire other firms in stock financed takeovers since he contributes a smaller fraction of the capital but exclusively enjoys all control rights of the larger firm. Such firms will invest more and more often return for a Seasoned Equity Offering (SEO), specifically for a directed issue of low voting shares to finance acquisitions. Access to financial markets thus helps private owners to overcome their private financial constraints while they still remain in control.

Using international ownership data from La Porta et al (1999), we first show that differences in frequency of family controlled firms around the world stem from actual use of security designs that deviate from one share-one vote, not from legal regimes or levels of minority protection per se. Data from Dyck and Zingales (2001) allows us to also document a positive relation between deviations from one share-one vote and size of private benefits of control as gauged by the premium paid in control (block) transactions. We find no relation between size of private benefits and legal regime (civil vs common law) per se.

The core of the paper then performs a detailed analysis of how deviations form one share-one vote are used in Swedish IPOs to protect the value of control rights. And how this in turn systematically affects the firm's investment, takeover and financing decisions, and ownership dynamics after the IPO. Our contribution to the law and finance literature is that we in an integrated framework derive and test how the size of the private benefits of control affects economic behavior given certain provisions in the corporate

[1] See Black and Gilson (1998), Booth and Chua (1996), Gomes (2000), Maug (1997), Mello and Parsons (1998), Zingales (1995).

law. The results provide an alternative interpretation of the interaction of law and finance, and suggest additional relevant tradeoffs for policy makers, especially in civil law countries.

Our approach is generally applicable to Civil Law countries where devices to separate votes and capital contributions are more frequent than in Common Law countries. But it is particularly interesting to test its three implications in a Swedish setting where separation of cash flow rights from voting rights is most prevalent; see Agnblad et al (2001) and La Porta et al (1999).[2] And the explicit intention of the corporate law, as stated in the lawmakers´ preamble, is to facilitate the creation of control blocks, e.g. by encouraging the use of dual-class shares. Well-defined private owners with significant, long-term interests are believed to internalize the costs of expropriation and have stronger incentives to invest, and thereby generating faster economic growth than if management or institutional owners control the firm. The disadvantages of dual class shares are that it results in a structural conflict between controlling owners and minority shareholders, and causes inefficiencies like dynamic lock-in costs.

Despite apparent opportunities to extract value, the average size of private benefits as percentage of a firm's market capitalization is only 1% in Sweden, compared to an average of 4.5% for Common Law countries; see Nenova (2000). Based on premiums in block transactions, Dyck and Zingales (2001) construct a gauge of private benefits of control. Besides measures of tax compliance and newspaper circulation, the only legal origin dummy that affects the value of control is the Scandinavian one. It lowers the private value of control significantly. The Swedish case thus seems to represent an equilibrium with highly concentrated ownership where control benefits are primarily non-pecuniary, i.e. related to status, prestige, and information, not due to extraction of pecuniary rents.[3] This is also consistent with the fact that advanced financial markets developed in Sweden both before WW1 and during the last 15 years (see Rajan and Zingales (2001)). This seems to contradict the interpretation that strong, *formal* minority protection to limit extraction of private benefits is a necessary condition for development of advanced financial markets.

We use a sample of 229 Swedish IPOs (no equity-carve-outs and spin-offs) from 1979 to mid 1997, and follow the firms from 3 years before the IPO to 5 years after.[4] Close to 90% of all privately controlled

[2] In Sweden, it on average requires least capital (12.6%) to control 20% of the votes of a large listed firm. It ranks #2 after Belgium in frequency of pyramids, and #3 after Germany and Austria in frequency of cross-shareholdings; see La Porta et al (1999).

[3] Nenova measures the value of private benefits as a function of the price difference between voting and non-(low-) voting shares. But La Porta et al (1999) report that in 45% (60%) of large (medium) listed firms in Sweden a family owns a controlling block (>20%). This is consistent with large non-pecuniary benefits of control, especially for families; see Zingales (1994).

[4] Rydqvist and Högholm (1995) analyze a smaller and older sample of Swedish IPOs, do not differentiate between private and institutionally controlled firms, and do not analyze ownership dynamics, takeover activity, and investment behavior after the IPO.

IPOs use dual-class shares and issue only low-voting B-shares. Most often does the controlling owner keep all high voting A-shares, does not sell any of his shares at the IPO, and controls on average (median) 68.5% (77%) of the votes after the IPO. Institutionally controlled firms use the IPO as an exit option. But heavy entrenchment comes at a price since investors value non-founder controlled private firms at a significant discount already at the IPO. The Book-to-Market ratio for such firms (founder family or other private person in control) is on average 0.5 but 0.25 for founder and institutionally controlled. Even if the founder/CEO is also entrenched, the market views his entrepreneurial knowledge as pivotal for the firm. The differences in valuation are consistent with the claim that control oriented IPO strategies are driven by private benefits arising from status, prestige, and social recognition rather than from expropriation of minority shareholders. In particular since possibilities to expropriate should be the same for founders and other private owners, and level of minority protection does not differ within the same legislation. Instead, the discount most likely captures *dynamic lock-in costs* reflecting misallocation of control rights over time if the founder's family maintains control without contributing pivotal managerial and ownership capital. It therefore gauges the cost of intentionally providing too strong legal protection of majority owner's rights.

Since the incorporated value of control rents is particularly valuable when dual-class shares are used, we find *no* single case where a control block is sold piecemeal but only as a whole in a block transfer or in a non-partial bid. Within five years 27% of the firms have a new controlling owner. Control was either acquired in a non-partial takeover (21%) or in a negotiated block transfer (6%). This explains why the initial ownership structure remains very concentrated also after the IPO even if control is transferred. Five years after the IPO, original private owners still control 2/3 of the votes and 44% of the capital. This establishes a direct, dynamic link between IPOs and concentrated ownership of listed firms in countries that allow separation of voting and dividend rights, and have weak minority protection, and where families related to the founder often control large firms for decades; see La Porta et al (1999).[5]

Half of the privately controlled firms return for a SEO, either a rights issue or a directed issue of low voting B-shares in a stock financed acquisition, and invest more after the IPO. Sixty percent of family controlled firms undertake such a stock financed acquisition, a motive often stated in the prospectuses. A

Even if controlling owners do not sell any shares but their position is diluted because of stock financed acquisitions, they report this as liquidation and evidence of desire to relinquish control. We use a different approach and analyze a different set of issues.

[5] Only within the last two or three decades, the ownership structures of listed firms in the UK have become more dispersed because of introduction of a 30% mandatory bid rule. Earlier the ownership concentration resembled Continental Europe's.

new and important result is that private owners in control of firms that later undertake SEOs retain a significantly higher proportion of votes and capital. They seem to *rationally anticipate* dilution because of acquisitions financed by issuance of B-shares, or because they may not fully participate in rights issues. The objective for private owners who value control but are financially constrained is thus to maintain control, and use the IPO to later raise the capital in SEOs. Our empirical results are consistent with Bebchuk's (1999) rent protection theory and Zingales (1995) but inconsistent with Gomes' (2000) reputation theory.

Even if stronger protection of minority shareholders in the Anglo-Saxon countries lowers the value of control rights by restricting controlling owners' actions, preference for maintained control is also present there, though much weaker than in Continental Europe. Analyzing UK IPOs, Brennan and Franks (1997) find that controlling owners use underpricing to ensure an oversubscribed offer, which enables them to discriminate between applicants for shares and to reduce the block size of new shareholdings. Of the original owners, firm directors sell only a small fraction of their shares at and after the IPO, while non-directors rather quickly relinquish their position over a few years, and a dispersed ownership structure develops. For US IPOs, Field (1999) finds that half of them include anti-takeover provisions in their corporate charters but only 5% use dual-class shares. While evidence of preference for maintained control by the original owners, the ownership structure quickly becomes dispersed.

An implication of this paper is that differences in ownership concentration, investment behavior and takeover frequency, and thereby also in corporate governance, between Sweden and the Anglo-Saxon countries are mainly determined by endogenously established differences in security design and initial ownership structure at the IPO that in turn reflect different legal and political cultures. But the pivotal element driving our results is not weak, *formal* legal protection of minority shareholders' rights. Our international comparison shows that actual deviations from one share-one vote are related to ownership concentration. But there is no relation between legal regime or minority protection and ownership concentration. This implies that the concentrated ownership structure in Civil Law countries is not a result of poor minority protection per se. For example, in Scandinavia *informal* protection based on economic incentives, extra-legal institutions, and social norms tend to be a substitute for weak legal rights, which is consistent with the relatively small size of private (pecuniary) benefits in Scandinavia (Nenova (2000), Dyck and Zingales (2001) and Coffee (2001)). Since other Civil Law countries seem to use similar designs

to enhance the value of control rights, the pivotal equilibrium difference between Civil and Common Law countries is *not* in protection of minority rights, but in protection of majority shareholders' rights.

The major economic costs in Civil Law systems are thus not solely costs from extraction of pecuniary benefits due to weak formal minority protection but primarily costs from inefficient allocation over time of strongly protected control rights that are locked-in by a specific owner who makes inefficient decisions. The large discounts on heir controlled IPO firms but not for founder controlled show that such *dynamic lock-in costs* are substantial. The pertinent economic question in the law and finance literature is thus not only why minority rights are weakly protected but also why majority rights are so strongly protected, and how this affects economic behavior *in equilibrium*.

The next section outlines our hypotheses, tests their relevance using international data, and describes the Swedish IPO data. In section II we analyze choice of security design and initial ownership structure. We then follow firms for five years after the IPO and present results about ownership dynamics, investment behavior, frequency of seasoned equity offerings, and takeover behavior. Section IV discusses our results in relation to the existing literature and puts them in perspective. Section V concludes and summarizes.

1. Hypotheses and data

We first outline our hypotheses and do some preliminary tests on an international data set. Part C and D present the Swedish IPO data.

A. Hypotheses

Inspired by Bebchuk (1999), Bebchuk et al (1999), La Porta et al (1998) and (1999), and Zingales (1995), we develop a control-oriented approach to IPOs based on the relative size of the private benefits of control. If capital or liquidity constrained, the original owners face a trade-off when going public between exiting their position and relinquishing control, and maintaining control after the IPO and using access to the capital markets to finance investments. When the private value of control is high, owners are more likely to prefer maintained control of the publicly listed firm. The value of control rights is primarily non-pecuniary and comes from the power of being in control, e.g. social prestige and status of running a listed firm, access to information that could be used in projects outside the firm, and the private value of making pivotal

decisions about how to allocate financial and non-financial resources and people within a firm.[6] In Sweden it appears as if only a minor part emanates from pecuniary extraction (see Nenova 2000) and Dyck and Zingales (2001)). Since part of the value of control is person specific and rests with ownership, it is not easily transferable to outsiders and to management. Control rights are thus more valuable for private owners than for institutional ones. Owners who derive substantial private benefits of control may thus exploit opportunities within the legal regime when designing the corporate charter and the initial ownership structure to maximize the value of their control rights, and to ensure them continued control.

Whether the corporate law allows dual-class shares, pyramids or cross shareholdings, is a crucial determinant of the possibility to protect and maximize the private value of control.[7] The decision to allow devices to separate votes from capital involves at least three major trade-offs. The first is how to strike a balance between protection of the rights of controlling owners and of minority shareholders. This is the pivotal trade-off since a dual-class structure is the most efficient way for a single firm to *simultaneously* limit the power of minority shareholders' and reinforce the value of control rights for the majority owner. Allocation of control rights in favor of the *controlling minority shareholder* (controls a majority of the votes with a minority contribution of the capital) is particularly valuable if it provides him/her with stronger incentives to invest more in firm specific managerial capital over a longer time horizon. Specifically when such investments are crucial for the success and the growth of the firm; see Taylor and Whittred (1998).[8]

By promoting owners who control a large majority of votes, a dual-class share system also makes them more entrenched. The second main trade-off is thus how to balance their level of entrenchment. Besides eliminating hostile takeovers before the entrepreneur has had time to fully develop the firm, controlling owners are more likely to resist value-improving takeovers if they are not sufficiently compensated for their control rights by a higher premium. Dual-class shares are the single most effective anti-takeover measure; firms with such systems do not use any other anti-takeover devices while firms using one share/one vote systems often use an arsenal of such measures; see Field (1999).

[6] Running a listed firm with good reputation and a family name legacy is very prestigious socially. And controlling owners may have it their way by e.g. promoting relatives and offspring. Since power is about allocation of rights within the firm to exclude some persons and elevate others, its value can be substantial. Being the family in control of The New York Times is an example where the non-pecuniary value of control substantially surpasses the pecuniary value from extraction of private benefits.

[7] *Individual* firms may use dual-class shares but other means to separate votes from capital involve *multiple* firms where ownership is hierarchical like a pyramid or mutual cross ownership between several firms. Bebchuk et al (1999) appropriately named them *Controlling Minority Structures*. Sweden allows all three; see La Porta et al (1998).

As a consequence of the previous trade-offs, the final one is how to strike a balance between stronger incentives to invest more, particularly over the long run, and not to provide biased investment incentives. With dual-class shares an entrepreneur being a controlling minority shareholder with limited wealth can keep control of the firm even after large external equity infusions (of low voting stock). However, he also has stronger incentives to invest and undertake acquisitions since he only contributes a minority fraction of the capital but exclusively enjoys the value of control rights of a successful investment as well as his fraction of the dividends; see Bebchuk et al (1999).

Swedish legislators have taken a firm stand on the three implicit trade-offs by systematically protecting and reinforcing the rights of controlling owners, and by strongly encouraging use of dual-class shares. The preamble to the new Swedish corporate law, where the legislator explicitly motivates his/her intention to encourage formation of control blocks using dual-class shares, does not mention any potential negative effects e.g. on minority rights or any other costs (Proposition 1997/98: 99 p 120— our translation):

> *The use of shares with different voting rights has a long tradition in Swedish law. Dual-class shares are very common among listed companies in Sweden. The dual-class share system has significant advantages. It makes it possible (facilitates) to have a strong and stable ownership function even in very large companies. Thereby creating the necessary conditions for an efficient management as well as for the long-term planning of the firm's activities. Shares with different voting rights also facilitate for growing companies to raise new capital without the original owners losing control. There is no evidence that the dual-class share system has caused any noticeable negative effects…Dual-class shares can significantly promote the efficiency and development of individual firms as well as of the business sector in general.*

The legislator strongly believes that it is in the interests of all shareholders if control rests with a well-defined, in particular private, controlling owner who has a large and long-term interest in the firm since he is expected to internalize some of the most important potential costs like extraction of large private benefits.[9] Three (descriptive) hypotheses, each linked to one of the previous trade-offs, summarize our predictions of the *equilibrium* behavior of owners who derive large private benefits of control, given that the legislator encourage separation of votes from capital infusions. Since value of control rights is likely to be higher for privately controlled firms than for institutionally controlled, we differentiate between the two.

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[8] Venture capitalists (VCs) often design contracts that separate votes from capital to provide stronger incentives but without explicitly using dual-class shares; Kaplan and Strömberg (1999). Elaborately specified control rights rest initially with the VC, and only if the project succeeds does the entrepreneur regain control, which is appropriate if the VCs knowledge is pivotal initially.

[9] Basic principles of Swedish corporate law are profit maximization as the firm's objective; simple majority rule for decision making, except for changes of the charter that requires a 2/3 majority, both of votes and of number of shareholders present at the general meeting, and the principle of equal treatment. Minority protection is generally weak. Two general clauses (8 kap. 34§ and 9. kap. 37§) protect minority shareholders against formally correct decisions by the board (general meeting) that give or is intended to give some shareholders unwarranted economic benefits or advantages or is generally detrimental to firm value or the firm as such. In particular against directed issues and other SEOs that change the relation between different classes of shares or between shareholders. The clauses are explicitly subordinated to the profit maximization objective; unless minorities are at least 10%, they don't have right to influence the firm's majority decisions on e.g. takeovers, dividends, extra audits, redemptions and liquidation.

H1. (Security Design and Choice of Initial Ownership Structure) *To maximize the value of control rights, privately controlled firms are more likely to use dual-class shares and only issue low voting B-shares.*

The initial ownership structure will be highly concentrated since the controlling owner keeps all high voting A-shares, and does not sell any of his/her other shares.

H2. (***Takeover Frequency and Ownership Dynamics***) *Since dual-class shares simultaneously provide an efficient anti-takeover measure and stronger incentives for stock financed acquisitions, privately controlled firms are less likely to be taken over but more likely to acquire other firms.*

Since the value of control rights is incorporated into the value of a controlling block, the owner never sells it piecemeal but only as one block in a block transfer or a takeover to protect control rents. Ownership after the IPO is thus likely to remain concentrated. These two hypotheses roughly correspond to the predictions of Zingales (1995) and Bebchuk (2000). The final one is an implication of the fact that dual-class shares provide stronger incentives to invest without diluting control.

H3. (***Investment behavior***) *Privately controlled firms are more likely to expand (i) by stock financed acquisitions issuing only low voting B-shares, and finance investments by (ii) rights issues-- no dilution.*

Would not the future costs associated with the conflict between the controlling owners and other shareholders in a firm with dual-class shares be rationally anticipated at the IPO and fully borne by the original owners as a discount in the offer price? Then there would be no net gain for control-oriented owners to go public. But this is not likely. If only B-shares are issued, the discount only reflects how the existence of control rights affect the value of cash flow rights, not the value of extra voting rights imbedded in A-shares; assuming that A- and B-shares have equal dividend rights but an A-share carries more votes. The controlling owner maximizes the value of his exclusive control rights plus the value of his share of the cash flow rights. If the non-pecuniary private value of control is large, it surpasses the discount for agency costs in the value of his cash flow rights. Since he has the option to sell his entire position to a new controlling party at a premium, the current value of his voting rights increases. If the value of control rights is significant, it is likely to surpass the discount borne by him at the IPO.

B. International Evidence

Because of the historical path dependency with heavy use of devices to separate votes from capital, a Swedish IPO firm's decision whether to use dual-class share or not is structurally different from say a corresponding U.S. firm where such shares by tradition are used very infrequently even after the NYSE

lifted its ban on such shares. To once again allow dual-class shares in a particular historical, institutional equilibrium with very limited use of such shares outside the NYSE has a very different equilibrium impact than a decision to allow and encourage continued use in an institutional environment like Sweden with long-term heavy use of such shares. Table 1 Panel A also documents that there is no difference between civil and common law countries in terms of bans on dual class shares (based on La Porta et al (1999)). But if we measure *actual* use of security designs that deviate from one share-one vote as La Porta et al (dummy equals 1 if it on average requires proportionally less capital to control 20% of the votes of the 20 largest firms in the country), they are much more frequently used in civil law countries. Since dual-class shares are not banned but in effect not used in equilibrium in Common Law countries, it demonstrates that the link between formal legal rules and actual behavior in equilibrium is not as direct as sometimes argued.[10]

Table 1 also tests the relation between actual deviations from one share-one vote and ownership concentration. Panels B, C, and D report cross-country regressions with fraction of privately (labeled family by La Porta et al (1999)) controlled firms, proportion of market capitalization that is privately controlled, and fraction of widely held firms, respectively, as dependent variables. The 27 countries are the same as in La Porta et al (1999). After controlling for GNP per capita and average firm market capitalization in each country (from La Porta et al (1998)), we find no relation between ownership concentration measures and legal regime or antidirector rights per se. However, actual deviations from one share-one vote are positively and significantly related to the ownership concentration measures. As our detailed analysis of the Swedish case will show, the decision to use other security designs than one share-one vote most likely stems from corporate control considerations and security design at the IPO that determine the ownership concentration also among large listed firms within a country. By setting the stage, the initial conditions to a large extent also determine the future development. This in turn has implications for the market for corporate control and private benefits of control since dual-class shares facilitate the maintenance of control blocks.

Table 2 reports cross-country regressions with the private benefits of control, measured by the premium paid in control transactions (collected from Dyck and Zingales (2001)), as dependent variable. We control for GNP per capita and the average firm market capitalization in each country (collected from La Porta et al (1998)). Private benefits of control are indeed positively related to the actual deviations from one

[10] Australian corporate law does not ban dual-class shares but relatively few firms use them. When Rupert Murdoch announced that one of his firms was going be listed on the ASE with dual-class shares, listing requirements were quickly changed to include a ban.

share-one vote but not related to legal regime (civil vs common law) per se.[11] The international evidence thus corroborates the generality of our hypotheses: (i) privately (family) controlled firms will deviate from one share-one vote at the IPO, and (ii) therefore remain privately controlled over time since the value of control is incorporated into the controlling block.

C. Data sources on Swedish IPOs

We test the three hypotheses on a sample of Swedish IPOs. Using the official records of the Stockholm Stock Exchange (SSE), we collected information about 233 initial public offerings (4 excluded due to incomplete information) and 119 equity carve-outs and spin-offs on the A (official), O (unofficial), and OTC lists from 1979 until mid 1997. Data on offer size and firm age before the IPO were collected form the prospectuses. Stated motives for going public, ownership type, and if the majority owner is the founder or related to the founder are also collected from the prospectuses.

All post-IPO price data are collected from the *Dextel Findata* TRUST database, and pre- and post-IPO accounting data come from the FINLIS database. We collected information about Seasoned Equity Offerings (SEOs) (date, size, and type of issue: private placement or rights issue) from TRUST and FINLIS. Ownership data before and when going public is collected from the prospectuses. Privately held is classified as firms controlled by founder (CEO), founder's family, employees or other individuals. Fraction of primary and secondary shares, and type of shares distributed (A or B) are also obtained from the prospectuses. We collected ownership data of the initial owners' at year 1 to 5 from Sundqvist (1985-1993) and from Sundin and Sundqvist (1994-1999), and for the time period before 1985 from annual reports.

Information about listing and delistings within five years comes from *Dagens Industri*. Actual delisting dates are collected from TRUST. Reason for delisting comes from *The Stockholm Stock Exchange Quarterly Report*, Sundqvist (1985-1993), Sundin and Sundqvist (1994-1998), and from *AffärsData*.

D. Descriptives

Panel A in Table 3 reports that 352 new firms were listed on the SSE from 1979 until mid-1997. The total number of listed firms increased from 134 in 1979 to 245 in 1997. The IPO activity has been considerable; more than half of the currently listed firms are introduced after 1979. The majority (233 or 66.2%) are pure IPOs, i.e. did not involve previously listed firms or firms earlier fully owned by another listed firm, while

[11] Following Dyck and Zingales (2001) we test whether the result is robust to newspaper circulation and tax compliance (not reported). The deviation from one share-one vote result is robust to newspaper circulation but not to tax compliance.

119 (34.8%) are (primarily) equity carve-outs and spin-offs. 75% of the IPO firms were still listed after 5 years. Of the 233 IPOs, 49 (21%) were acquired (control sold in block transaction) within 5 years after the IPO while only 1.7% went private again, and 2.1% filed for bankruptcy in the 5-year post-IPO period. For a sample of US IPOs, Field (1999) reports that 16.0 % were acquired, and 10.5% delisted within 5 years.

From now on we split the IPO sample into two groups depending on the identity of the controlling owner: *privately* and *institutionally controlled*. Panel B shows that most privately controlled firms went public during 1983 and 1984 when deregulation of the financial markets was initiated and the OTC market opened up. There was a backlog of private firms ready to go public when the stock market started to boom at an unprecedented rate. The institutionally controlled firms go public more often during the 90s, both in absolute and in relative numbers. A more detailed analysis (unreported) shows that firms in industrial manufacturing, in commercial services (information technology consulting), and in the real estate sector are most frequently going public, in particular if they are privately controlled.

Panel A in Table 4 reports that the typical IPO firm is *privately* controlled (69%). Within the privately controlled group, the three subgroups of owners are of equal size: *founder* (founder is controlling owner and also CEO), *founder family* (founder no longer CEO but founder's family controls and manages) and *other private owner* (privately controlled but not by the founder or his family). The most common *institutional* owner is *another public firm* (19.4% of all IPOs) while only 5.3% have a *venture capital firm* as majority owner.[12] The typical IPO firm is a founder or founder family controlled firm. Compared to Field's sample of US IPOs, our Swedish sample differs since privately controlled firms dominate while the fraction of firms backed by venture capitalists and buy-out funds (LBOs), that primarily use the IPO as an exit option, is small. Motives for going public therefore differ between the two samples.

Panel B shows that there is substantial variation in characteristics of IPO firms; averages are very different from medians. The median privately controlled firm is significantly older and smaller, both in terms of sales and market value of equity at the IPO, and its median offer size is only 23% of the median value for institutionally controlled firms. The average age is 33, which equals the average age reported for Italian IPOs by Pagano et al (1998), but is lower than the average of 40 (38) years for European (Swedish) IPOs during the 1980s; see Rydqvist and Högholm (1995). But the median age is 18 years in our sample.

[12] Differences in venture capital backing do not explain (unreported) the disparity between privately and institutionally controlled firms. The VC industry was relatively underdeveloped before 1997 (our sample period) when the current boom in Sweden started.

More interestingly, the median age of the institutionally (privately) controlled firm is only 11 (23) years, which is closer to the median (average) age of U.S. IPOs of 8 (18) years reported by Field (1999).

2. Security design and choice of initial ownership structure

We follow the firms from 3 years before the IPO until the first day of trading but focus our reporting on how owners endogenously determine security design, initial ownership structure and how firms are valued in the offering price and at the first day of trading.[13]

A. Security design and initial ownership structure

Panel A in Table 5 reports that differences in security design, corporate charter and governance, and structure of the initial public offering between privately and institutionally controlled firms are striking and highly significant. The extreme control-oriented nature of privately controlled firms is evident from the fact that 88.6% of them have dual-class shares while 47.9% of the institutionally controlled separate voting rights from dividend rights. Furthermore, 88% (43.7%) of the private (institutional) owners in control *only* issue B-shares, and all privately controlled firms with dual-class shares (99.3%) issue only B-shares. 58% (22.5%) of the private (institutional) owners in control keep all the A-shares. In 65% of privately controlled firms with dual-class shares, the pivotal owner controls all A-shares. More than 90% of the founder or founder family controlled firms use dual-class shares.

The Swedish corporate law requires that A- and B-shares have the same dividend rights but a voting differential of utmost 10 to 1 for A-shares over B-shares. More interestingly, there is no limit on the fraction of A-shares being issued but the focal point seems to be 20% A-shares. An investor owning all A-shares contributes 20% of the capital but controls 71.4% (200/280) of the votes; the vote/capital ratio (V/C) is 3.57. Firms incorporated under a previous corporate law are allowed to use a voting differential of 1000/1. Ericsson is the only listed firm with such a voting leverage.[14]

[13] Pre-IPO activity is high as 44% of the firms acquire another one, and 19.6% divest. 52.1% (37.3%) of institutionally (privately) controlled firms do private placements, and 18.3% (7%) a stock financed acquisition. Some private owners prefer to sell part of their block to an institutional owner (private placement) before rather than after with explicit promise to go public within a year. In a regression analysis (unreported), underpricing is significantly lower for such firms. Analysis of Spearman's rank coefficients identifies two sets of motives in the prospectuses. A primary around *access to capital markets* and *stock financed acquisitions for future growth* for privately controlled firms; 38.4% stated the latter. A second around *publicity*, *incentives* and *exit* for institutionally controlled. The most common is access to capital markets (85%), followed by publicity (58.3%). The ranking of motives in Sweden also differs, see Roell (1996), Pagano et al (1996) and (1998), and Subrahmanyam and Titman (1999).

[14] In Ericsson, the SHB (Svenska Handelsbanken) controls 42.8% of the votes but only 3.9% of capital, and the Wallenbergs own 38.8% of the votes but only 4.7% of capital; their V/C ratio is 9,48. An old shareholder agreement regulates control between them. Since March 10, 2000, share repurchases of at most 10% of the outstanding equity are allowed; previously only share redemptions were allowed. Since repurchases of both A- and B-shares are allowed, it can be used as an anti-takeover device.

To further enhance control, 20.9% (12.7%) of the private (institutional) owners in control have preemption clauses; if any of them sell A-shares he/she must first offer them to the other members of the controlling group. This is most prevalent when the founder's family controls the firm. 15% of the IPO firms have owners that regulate their actions as a controlling coalition in secret shareholder agreements. Only 4% have adopted a non-mandatory rule in Swedish corporate law that says that no single owner can vote for more than 20% of the equity represented at the shareholder meeting.[15] The typical corporate charter for a privately controlled firm has clauses that allow for dual-class shares, does not ban preemption clauses and shareholder agreements, does not force such agreements to be made public and contains a paragraph that opts out of voting restrictions suggested by the corporate law. No firm imposed a mandatory bid rule.

This design is very typical for listed firms in Sweden. Reviewing all corporate charters for firms listed on the SSE and on the new exchange for small firms (SBI), Agnblad et al (2001) reports that 63% have dual-class shares, 13% preemption clauses, 5% shareholder agreements, 4% voting restrictions and 1% have voluntarily imposed a mandatory bid rule.[16] No other anti-takeover devices were adopted. A dual-class share system seems to be the most efficient anti-takeover measure. Analyzing many different protective measures to ensure control, Field (1999) reports that the 5% of US IPO firms that have dual-class shares have few if any of the other means to ensure control like poison pills and supermajority rules.

Does the firm issue new shares (primary offering) or do incumbent shareholders sell their own shares (secondary offering) at the IPO? How large is the offering? Panel B in Table 5 shows that the average initial public offering equals 36.3% (28.32%) of the outstanding shares after the IPO for the institutionally (privately) controlled firms.[17] Of the shares issued, institutionally (privately) controlled firms issue 21.1% (21.7%) of the shares (newly issued), while 15.6% (6.5%) are old shares supplied by original shareholders.[18] Institutionally controlled firms thus sell a larger fraction of the firm than privately controlled firms, and original institutional owners sell significantly more of their own shares than private owners.

Since private owners in control seldom sell any of their own shares, which is further evidence that they are very control-oriented, the initial ownership structure is very concentrated. Private owners in control

[15] This rule in the old corporate law at first looks like minority protection. But it is not mandatory, and it is not 20% of votes but of dividend rights-- one fifth of the shares represented at the general meeting (ABL 9 Kap, 3 §). It is now abolished in the new law.
[16] For firms listed on the SSE, 77% have dual-class shares, 14.6% preemption clauses, 10.7% shareholder agreements between the owners in control, and only 9.9% have imposed voting restrictions on the majority owners; 1.5% have a mandatory bid rule.
[17] 69% (52%) of privately (institutionally) controlled firms make a pure primary offering: only the firm issues new shares. 13.4% (23.9%) of privately (institutionally) controlled firms do a pure secondary offering: only the original owners supply shares.

cast on average (median) 72.4% (81.4%) of the votes, and control on average 54.5% of the capital after the IPO while the institutional owners on average (median) control 49.3% (47.9%) of the votes and on average only 40.8% of the capital. A more detailed analysis shows that the median founder (CEO) retains 83% of the votes and 60% of the capital. The median private owner in control seems overinvested in voting rights and, in particular, in dividend rights, since the fractions of both are significantly larger than needed for control. Field (1999) reports for US firms that all officers and directors jointly control on average 50% of the voting rights after the IPO, which is almost identical to the average for institutionally controlled firms but significantly less than the overall Swedish median of 74%.

The private owners' behavior is consistent with private benefits of control and our first control oriented hypothesis. Private owners ascertain control using security design and choice of initial ownership structure. Privately controlled firms almost unanimously adopt dual-class shares systems, issue only low voting B-shares in a primary offering, and the pivotal owner controls all high voting A-shares.

B. Book-to-market valuations

Since we observe systematic discrepancies in corporate charters, security design and in structure of initial offers between privately and institutionally controlled firms that reflect how they endogenously have used provisions in the corporate law disparately, it is interesting to test if they are also valued differently. Panel A in Table 6 shows that there are no significant differences between privately and institutionally controlled firms in the book-to-market ratio neither before (offer prices) nor after (first day closing price) the IPO. The median book-to-market before (after) the IPO is 0.503 (0.427). Endogenous differences in design of charters, securities and offers do not appear to affect valuation at this level of comparison.

However, since we find no corresponding discrepancies in design between firms with different types of private owners, we test if market valuation at the IPO varies systematically with type of controlling private owner, i.e. interacting design with type of controlling owner. Splitting the privately controlled firms into our three subgroups (Panel B), a founder-controlled firm has a significantly lower book-to-market ratio than other privately controlled firms. Family controlled ones have a significantly higher average ratio than institutionally controlled (unreported). The median book-to-market for a founder controlled firm before (after) the IPO is 0.390 (0.253), which is roughly half of the ratio for a median family controlled IPO firm.

[18] Brennan and Franks (1997) report that UK firms offer new shares that on average corresponds to 52.3% of the pre-IPO share value while Field (1998) reports that US firms on average offer 32.5% of all outstanding shares after the IPO.

To check if the market really values founder controlled and institutionally controlled firm significantly higher than other privately controlled firms, we run regressions to control for industry composition, firm and IPO size, age, "hot" (1982, 1983, 1984) and "cold" (1990, 1991, 1992) market dummies, if the firm did a pre-IPO private placement, and a dummy (Privatenonfounder) that equals one if the firm is privately controlled but not by the founder (CEO).[19] Using either the offer price or the first day closing price for all firms, Panel C shows that the book-to-market is significantly higher for privately controlled firms where the founder is not CEO.[20] The regression coefficient of 0.16 for the owner type dummy indicates that most of the median difference (0.216) between founder- and family-controlled firms comes from higher valuation if the founder runs the firm. The significantly lower market valuation of private non-founder (family of other) controlled firms implies that there are higher agency costs associated with very entrenched private owners since they do not contribute pivotal managerial capital like a founder (CEO). Unlike a founder (CEO), family controlled firms seem to prefer future growth by stock financed acquisitions to organic growth— see the next section. The lower valuation reflects the additional risk of such a strategy. Even if the founder is also a very entrenched private owner, the market views him/her as pivotal for the success of a firm with high future potential, and the value of the up-side potential of a founder controlled firm surpasses the downside of agency costs.

Consistent with expectations, the results also show that firms in the IT sector and firms that did a pre-IPO private placement have a significantly lower book-to-market. Larger IPO firms tend to be in more mature industries with a significantly lower valuation. The negative coefficients for offer size and firm age suggests that mature firms take advantage of a high market valuation and issue more shares to raise capital for growth. To sum up, firms in the high tech industry are more highly valued, non-founder-controlled private firms are significantly lower valued due to agency costs, and founder-controlled high tech firms are likely to use this window of opportunity to finance growth when going public and issue more shares.

Since we found no significant differences in the valuation of privately and institutionally controlled IPO firms, but that family controlled firms have a significantly lower valuation than other firms, we infer that the effect of legal rules on valuation is not direct but *indirect*. First, there are no differences in the *formal* level of minority protection between firms within the same legislation. Second, since founders are

[19] We also controlled for leverage in the regressions but found no significant effect.

just as entrenched, the possibility to expropriate minorities should be the same for founders and other private owners. However, because family control de facto presupposes that the founder has systematically used provisions in the corporate law to create a control block that incorporates the value of control rights, the lower valuation measures the expected cost of using a certain legal design to create too heavily entrenched private owners. These dynamic *lock-in costs* thus gauge misallocation of control rights over time. We argue that they also measure the costs of intentionally providing too strong protection of majority owners' rights. This is the specific sense in which corporate law and finance interacts negatively in Sweden.

3. Investment behavior and ownership dynamics

We now analyze the behavior of the newly listed firms over a five year period to find out how frequently they return to the market for new capital and how the ownership structure and control develops over time.

A. Seasoned equity offerings and investment behavior

Panel A in Table 7 reports frequency of seasoned equity offerings (rights issues, private placements or directed issues in a stock financed acquisition) for all IPO firms as well as for privately and institutionally controlled firms. Almost half (49.4%) of privately controlled firms return to the capital market but only 23.9% of institutionally controlled firms; 63.4% of the firms that did a pre-IPO private placement returned for a seasoned equity offering. Directed issues to pay for an acquisition are most common. 31.6% (14.1%) of the privately (institutionally) controlled firms acquire another listed or non-listed firm and pay by issuing new stock. Almost all privately controlled firms with dual-class shares (94%) paid by issuing only low voting B-shares. The appetite for growth by acquisition is even higher since 7 of 19 rights issues raised capital for cash financed takeovers. Splitting the privately controlled firms into three subgroups in Panel B, 60% of founder and family controlled firms return for a SEO. Of the family controlled firms, 43.6% return for a directed issue while half of the founder controlled ones undertake a rights issue or a private placement.

How much do firms raise in seasoned equity offerings? Panel C shows that rights issues are significantly larger than other SEOs: more than 30% (median) of the market value of equity. Large differences between averages and medians for size of private placements and directed issues in relation to market value show that the importance of equity financing varies substantially. The option is very valuable for some firms with large investment programs. Panel D reports how much inflation adjusted capital is

[20] The higher valuation does not occur because of better market timing since the Book-to-Market regressions include dummies for

raised in total in the primary issue at the IPO and in rights issues and other SEOs, respectively, after the IPO in relation to the book value of all assets before going public. IPO firms undertaking SEOs on average (median) raise new capital that equals 84.6% (27.3%) of the book value of all assets before going public. Firms undertaking one or more rights issues raise more capital; on average equal to the pre-IPO book value of their assets. Access to new capital is thus particularly pivotal for founder and family controlled firms, which most frequently return for rights issues and directed issues, respectively.[21]

We also find (unreported) that rate of investment, measured as median of the three years average investment to sales ratio before and after the IPO, respectively, increases for both groups of firms after the IPO but only significantly for privately controlled firms. Interestingly, the rate more than doubles for privately controlled firms undertaking post-IPO SEOs. Founder-controlled firms doing rights issues have the highest investment ratio. Firms not undertaking any SEO did not change their investment behavior.[22]

The fact that 60% of the founder- and family-controlled firms return for seasoned equity offerings, in particular for directed issues, is consistent with our hypothesis that privately controlled firms, having formed control blocks at the IPO, will more frequently use the capital markets. Using access to financial markets to raise new capital to finance investments and acquisitions is thus a major reason for going public.

B. Ownership dynamics

How important is maintained control after the IPO? Panel A in Table 8 provides a first answer by reporting how average and median ownership share of votes and capital controlled by the original owners develop over the five years following the IPO. We observe the ownership fraction in January of each year after the IPO. Notice that original owners of *all* 229 firms are followed for five years. By including all firms our estimates of ownership concentration are very conservative, and averages and medians differ since retained fractions are zero for firms where the original owners have sold out. Medians are higher than averages for privately controlled firms since a minority of original owners sells all their shares while the reverse is true for institutionally controlled firms since most original owners relinquish their positions.

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the only two years (1982 and 1990) when the frequency of IPOs for founder controlled firms was significantly different.

[21] Most SEOs, in particular rights issues, are done within 18 months after the IPO, and timed at the lowest book-to-market ratio. Baker and Wurgler (2000) found a similar pattern for U.S. firms.

[22] The median investment ratio for privately controlled firms returning for SEOs increases from an average of 6.9% 3 years before to 14.3% 3 years after. In a fixed effect regression (unreported), the coefficient for a dummy differentiating between investment before and after the IPO was significant for firms doing rights issues. Both owner groups lower their average debt/equity ratio significantly, in particular privately controlled firms. It is primarily firms that did not undertake any post IPO SEO that lower leverage. Despite raising new equity, privately controlled firms have a higher debt ratio than other firms, and the worst post-IPO equity price development; new equity often issued when stock prices at a relative high.

In January of the calendar year after going public, the median private owners in control retain 77% of the votes and 51.8% of the capital, while the original institutional owners only control about 42% of the votes and 39.5% of the capital. Compared to the initial ownership structure at the IPO, original owners of institutionally controlled firms start right after the IPO to relinquish shares and the process accelerates until the median original owner has sold all shares after 4 years. The ownership dynamics for the privately controlled firms is radically different. Looking at medians, the original private owners still control 50.7% of the votes and 24.6% of the capital after five years. Even if conservatively estimated, the original private owners retain very strong control of the median firm even after five years.

To better understand the ownership dynamics after the IPO, we first study in Panel B the 46 privately controlled firms where the owners divest all their shares. By far the most common method to divest a controlling position for a private owner is in a non-partial takeover (60.9%) followed by a negotiated block trade (19.1%).[23] Typically, a takeover bid is a negotiated deal for transfer of the control block with the same conditions extended to all shareholders conditional on 90% accepting. Due to a compulsory acquisition rule, remaining shares can be compulsorily acquired at the price offered to shareholders who accepted the bid. In the other firms, the original owners sold or lost their whole control block in a buy-out, restructuring deal or in a bankruptcy proceeding. The most striking result is that we find *no* single instance where the original private owners relinquished their control position piecemeal.

We also analyzed if the new owners of the control block kept it intact or sold it. We found no case where the new owners split the block. Panel C reports that 93% (94.1%) of the original private owners in control, who did not divest 100% of their positions, are still in control after 3 (5) years. In the remaining cases, they sold control in a block deal but still retained a minority position, primarily consisting of B-shares. The empirical evidence is highly consistent with the conjecture that controlling owners never sell a control block piecemeal in order to get compensation for the value of control rents attached to the block.

How large is the control premium? Since parties in block transfers don't have to make conditions public, we only look at takeovers that differentiate prices between A- and B-shares.[24] Almost all acquired firms (unreported) had dual-class shares (26 of 28). The original owner controlled all A-shares in 18 takeovers (69%) that were price differentiated, while in 7 out of 8 takeover bids that could be differentiated,

[23] Owners who later sold their controlling block less frequently controlled all A-shares, and relatively more often sold A-shares at the IPO (unreported). If block owners don't control all A-shares, a block transfer is the only way to get a premium on control rights.

but were not, the private owner did not control all A-shares. Measured relative the market price of B-shares at the takeover announcement day, the median bid premium for B-shares is 15.6% and 40.3% for A-shares. The extra 25% is one simple but cautious measure of the control premium.[25] When the original owners sold their controlling position, the median holding period *excess* return (control premium + value appreciation after IPO measured from offer price) over 24 months (median holding period) is 100%.

A more detailed look at ownership dynamics of privately controlled firms that did not fully divest 3 and 5 years after the IPO is provided in Panels D and E. Since we only follow privately controlled firms for which we have 3 (5) years of ownership data, the number of firms is 115 (85).[26] We split the privately controlled firms into one group where the original ownership position is likely to be diluted because the firm raised capital in private placements or financed acquisitions by directing an issue to target shareholders, and a residual group where no dilution effect is present. Firms raising new capital in rights issues are included in the latter group since such issues do not necessarily dilute ownership. Since the results for the two time horizons are qualitatively similar, we focus on the longer period. Several results are striking. For the whole sample, the median fraction of votes controlled decreases from 84% to 73.9% after five years while the median fraction of capital decreases more from 63% to 45%. Control remains solidly in the hands of the original owners. We only detected 5 firms where the original owners were no longer in control after five years but still owned shares. In three of these, the private owners sold the controlling position of all A-shares in a block transfer. The other two firms were in financial distress when the controlling owners participated in restructuring deals involving several other firms and as a result they surrendered control but did not sell their block. Once again, the control position was never sold piecemeal.

Controlling owners in the dilution group retain a significantly higher fraction of votes initially, but after five years averages for votes retained converge while fraction of capital controlled is significantly smaller. The decline in fraction of votes controlled comes *exclusively* from more B-shares being issued; the proportional decline in retained fraction of capital is larger than in votes, and no A-shares in a controlling block were sold piecemeal. The same is true for the non-dilution group since controlling owners sell some

[24] All takeover bids are non-partial and conditional on 90% accepting due to the Compulsory Acquisition Limit.
[25] Since controlling block contains both A- and B-shares, our measure does not capture the value of control rights in A-shares.
[26] 158 firms are privately controlled but in 46 firms original owners divested fully. Of 112 remaining firms, we have not five years of ownership data for 27 since they were introduced during the last five years. This leaves us with a sample of 85.

of their B-shares, but not high voting A-shares, and they may not fully participate in rights issues. The dilution effect is also evident from the increasing votes to capital ratio for the controlling owner.

This could occur because controlling owners of firms that later dilute the incumbent shareholders' positions by issuing B-shares *rationally anticipate* this by initially retaining a significantly larger share of the votes. Or causality could be reversed since control is so valuable that only private owners that control a very high fraction of the votes have the *actual* option to dilute. Dilution is most likely rationally anticipated since a significant fraction of firms that later dilute stated stock financed acquisitions as a motive for going public already in the prospectuses. These firms also use dual-class shares more frequently, issue only B-shares in a primary offering at the IPO, and the controlling owner more often keep all A-shares. This is particularly true for family controlled firms, which are also significantly lower valued at the IPO. The discount on firms that later dilute may gauge costs for a control-oriented private owner to later exercise his option to relatively cheaply acquire another firm by paying with low-voting B-shares; see Cronqvist et al (2001).[27] Specifically, it may be a valuation of the risk that family controlled firms make bad future stock financed acquisitions since they are less likely to grow organically when the founder is no longer active.

Panel A in Table 9 shows that the largest outside block at the IPO averages 10% of the votes for the whole sample but its median size is only 5%. The outside blocks are very small in privately controlled firms but somewhat larger for institutionally controlled firms, in particular, the second and third largest blocks are very small. The significant differences in Herfindahl indices for votes and capital bring out how much more concentrated the ownership structure is for privately controlled firms. Panel B reports the ownership characteristics after five years. The major changes are that the size of the largest blockholder has almost doubled to around 20% of the votes for the institutionally controlled firms, and that the overall ownership concentration as measured by the Herfindahl indices has decreased only very marginally. The largest outside owner has a significant blocking position that is enough to veto takeovers.

Finally, we test the hypotheses that privately controlled firms are more (less) frequently the acquirer (acquired) than institutionally controlled firms, and that they primarily use stock financed acquisitions. Comparing firm characteristics, Panel A in Table 10 reports that it is significantly more likely that a privately controlled firm, in particular a founder family controlled, acquires another firm in a directed issue.

[27] Stock financed acquisitions are much more common than cash financed. But median underpricing cost is 27.4% for firms that later do directed issues, and 13.2% for cash-paying firms, where original owners also more often sold part of their shares at the IPO.

It is also more likely that another public firm controls the acquired firms. Panel B shows that firms doing stock financed acquisitions are more control-oriented since original owners retain a larger fraction of votes at the IPO but also bear a significantly larger share of underpricing costs. The opportunity to acquire another firm in a directed issue does have a price; see Brennan and Franks (1997). This reinforces our causality interpretation that dilution is *rationally anticipated* both by controlling owners and by the market.

In general, the empirical results are consistent with implications from our basic premise that private owners enjoy substantial private benefits of control. For example, how the formation of valuable control blocks at the IPO determines the ownership dynamics. Original private owners remain in firm control also after five years. Control blocks are never sold piecemeal, only as a whole in block transactions or non-partial takeovers to protect control rents. Dilution of a controlling owner's position does not occur because he sells high voting A-shares, but since privately controlled firms frequently issue low voting B-shares in private placements or in directed issues as payment for acquisitions.

4. Discussion

The quest to maintain private benefits of control after the IPO, the cornerstone of our approach, has not been stressed enough in the theoretical literature that has almost exclusively focused on the exit option, and ignored the effect of legal rules on design of securities and of ownership structures. [28] The preference for control is so strong that without the legislator encouraging separation of cash flow rights from voting rights there would have been fewer IPOs in Sweden, at least by privately controlled firms.[29] Pagano et al (1996) and (1998), and Goergen (1995) show that private owners of Italian and German IPO firms go public with intention to maintain control; both are Civil Law countries.[30] They divest a small fraction of their shares at the IPO, and maintain strong control afterwards.

Brennan and Franks (1997) and Field (1999) show that original owners in Anglo-Saxon countries are also motivated by control considerations when designing corporate charters and initial ownership. But as Mikkelson et al (1997) reports for a sample of U.S. IPO firms, ownership soon becomes dispersed. The median ownership stake of officers and directors decreases from 43.7% at the IPO to 28.6% after five years. But original private owners of Swedish IPO firms who have not sold their control blocks on average still

[28] The trade-off between benefits of control and cost of lower liquidity is relevant only if one share/one vote shares are allowed; see Bolton et al (1998). But dual class shares can separate control (high-voting A-shares) and liquidity (low-voting B-shares).
[29] IKEA (Kamprad) and Tetra Laval (Rausing), the two most successful firms founded after WW2, both decided to remain private even if it took Tetra Laval 30 years to be profitable. Both founding families are among the wealthiest persons globally (Fortune).
[30] According to Jay Ritter, Brazilian IPO firms are also primarily privately controlled and extensively using dual-class shares.

control 2/3 of the votes after five years. Like U.S. IPO firms, Swedish ones invest more afterwards. 60% of founder and founder family controlled firms return for a SEO, most often a directed issues of B-shares to finance acquisitions and rights issues to raise capital for investments. Controlling owners maintain their original shares but their position gets diluted since the firm issues low voting B-shares at the IPO, and in directed issues -- not from selling of any A-shares. This explains two puzzles.

First, it does not seem rational for owners with large part of their wealth invested to hold more voting and cash flow rights than is actually needed; see Pagano et al (1998). While questionable in the short run, it may be rational to "overinvest" anticipating future dilution of its original voting strength due to stock financed acquisitions and rights issues. The current "overinvestment" is the price that owners pay for maintained future control. Second, the high average level of underpricing in Europe compared to the U.S. is biased. If a controlling owner does not sell any of his own shares at the IPO, his only underpricing costs stem from dilution due to the discount on newly issued shares, a cost shared by all incumbent shareholders. His median underpricing costs as percentage of the value of his block is just 3.4% but the average overall underpricing in Sweden is 28.7% (Table 10). Relevant international comparisons of *actual* underpricing costs must thus adjust both for pre-IPO ownership structure and for dilution if only new shares are issued.[31]

Our results have two other general implications. First, the pivotal element driving our results is that the value of control rents gets incorporated into control blocks when private owners maximize this value by exploiting that legislators intentionally encourage use of dual-class shares as a focal point and provide a weak minority protection. That private owners use dual-class shares to protect large private benefits of control seems to hold more generally since estimated benefits for firms with this security design are higher also in international comparisons (Nenova (2000) and Dyck and Zingales (2001).[32] The high private value of control rights is as well evident from the fact that control blocks are never sold piecemeal - we observe *no* single case of a gradual sell-off. This is consistent with Bebchuk's (1999) rent protection theory and Zingales (1995), but inconsistent with Gomes (2000) who models how large owners build reputation for respecting minority rights to obtain a better price when relinquishing their position piecemeal.

[31] The unadjusted underpricing costs will be upward biased in Civil Law countries where firms are closely held and don't use secondary issues, but for reverse reasons downward biased in Anglo-Saxon countries; see Brennan and Franks (1997).
[32] In countries with relatively infrequent use of dual-class shares, private benefits estimated by voting premiums on A-shares by Nenova (only firms with dual-class shares) are larger than estimated by Dyck and Zingales using block premiums of all firms. The actual use of dual-class shares explains 75% of the difference in estimated premium between the two methods.

Since new owners keep their blocks intact to protect control rents, the initial ownership structure is propagated over time even if private owners rationally anticipate marginal dilution. This explains why a Civil Law regime that reinforces majority owner's rights by allowing and encouraging use of designs to separate votes from capital has very concentrated ownership with founder families often in control also of large, listed firms; see La Porta et al (1999). More generally, *equilibrium* differences between Sweden (Continental Europe) and Anglo-Saxon countries in ownership dynamics, and therefore in investment, financing and takeover behavior, are primarily determined by endogenously established differences in security design and ownership structure already at the IPO that reflect disparities in legal and political regimes with strong historical and institutional path dependency (see Rajan and Zingales (2001)).

The second general implication is that these differences, especially in ownership, are not the result of poor minority protection per se. We find a positive cross-country relation between actual deviations from one share-one vote and ownership concentration but no relation between minority protection and ownership concentration once we control for GNP per capita and average market capitalization. This questions if it is weak formal minority protection that causes original owners to design concentrated ownership e.g. as protection against exploitation by management. But results are consistent with the argument that legislators in Civil Law countries encourage formation of control blocks in order for private owners to protect their control benefits thereby giving them sufficient incentives to e.g. handle the shareholders' free rider problem. The view that formal protection of the minority from extraction of pecuniary benefits by controlling owners is *the* problem for lawmakers around the globe may thus be too restrictive.

Even if controlling owners may take unwarranted advantage of the weakly protected minority, it does not mean that they actually do so *in equilibrium* since e.g. long-term incentives, risk of public exposure, and social norms also check and balance behavior (Dyck and Zingales (2001) and Coffee (2001)). Such substitutes are crucial in Civil Law countries since relation-based financing is more common. If controlling owners e.g. violate implicit minority rights by conspicuously extracting pecuniary benefits, the value of the firm, and of their own shares, will depreciate, which may make it too costly for them to later raise new capital. Exposed violations will depreciate sales as well as the controlling family's social capital since both are tied to the firm's public reputation, specifically if it tries to build a legacy. This is consistent with Dyck and Zingales (2001) finding of significantly smaller private benefits in Scandinavia than in Common Law

countries after controlling for newspaper circulation (measure of risk of exposure). If abuses were frequent, the public debate would be fierce, and the social recognition from controlling a listed firm would be lost.

Our results suggest that the major trade-off for lawmakers in Sweden (Civil Law countries) is how to trade off promotion of the founder's incentives against *dynamic lock-in costs* due to misallocation of control rights to heavily entrenched heirs over time. The upside is that private owners in control have incentives to provide managerial skills and long-term stability. This has a positive effect on investments and growth since their personal wealth is tied to the firm's value. The downside is that entrenched owners have a biased investment behavior since financing is limited to retained earnings and offerings that do not dilute control. Potentially profitable growth options may not be realized since they require outside financing and/or transfer of control. Such firms may also overinvest in prestigious projects with private rents; hang on to loss-making investments too long; resist value-increasing takeovers that dilute control, more often do diversifying investments by stock financed acquisitions; and likely to react slowly to changes; see Cronqvist et al (2001). The negative effects translate into lower industry-adjusted financial performance, labor ratios and R&D spending than comparable firms, and thus into lower growth; see Morck et al (2000).

The lawmakers' implicit view is that the perceived positive effects dominate. All shareholders' interests are thus best promoted by a controlling owner with significant pecuniary and non-pecuniary values (social standing) attached to his large, long-term ownership that provides him with sufficient incentives to forgo myopic pecuniary benefits.[33] But our finding of large discounts on family controlled firms shows that dynamic lock-in costs due to misallocation of control rights to heirs who make inefficient economic decisions are significant.[34] They do not gauge expected costs of pecuniary benefits since formal minority protection does not differ between firms with disparate types of owners in control. The discounts are consistent with Morck et al's (2000) finding for Canadian firms that concentrated, inherited corporate control impedes firm growth. Using international data from Morck et al (2000), we also report (Table 11) a positive relation between deviations from one share-one vote and amount of inherited wealth. Since countries in which billionaire heirs' wealth is large relative to GDP grow more slowly, this highlights the real economic costs of separation of cash flow rights from voting rights (Morck et al (2000).

[33] This is consistent with the fact that the largest listed firms on the SSE produce investment and manufacturing goods, mainly in capital-intensive industries like telecommunications, pharmaceuticals, electric transmission and equipment, and paper and pulp.
[34] Firms with very entrenched private owners have a 33% discount over firms where the largest owner controls 35%; see Cronqvist and Nilsson (1999). The average discount on privately controlled closed-end funds is 24%; see Holmén and Högfeldt (2000).

Unlike Common Law regimes, the most significant weakness in the design of corporate law in Civil Law countries is thus not costs due to direct exploitation of minority shareholders but significant costs from dynamic inefficiencies emanating from a too strong legal protection of control rights. The pivotal question in comparative law and finance is not only why formal minority protection is weakly protected but also why majority rights are so strongly protected, particular in Civil Law countries where the legal, and political institutions seem to support an equilibrium with strong separation of ownership and control.

5. Conclusions

This paper present an alternative to the leading interpretation how law and finance interact that argues that the pivotal factor is how well legal rules protect minority rights. Good protection encourages both outsiders to invest and founding families to sell out a larger fraction in an IPO since formal rules limit extraction of pecuniary benefits by management when the firm becomes widely held; both factors stimulate development of advanced financial markets (Burkart et al (2003)). Lower protection thus causes founders to maintain a larger fraction of shares to avoid being exploited, which predicts a negative relation between formal minority protection on the one hand, and ownership concentration and size of private benefits of controlling owners, respectively, on the other. We find no such relations in our cross-country analysis but a different significant relationship: actual use of security designs like dual-class shares to separate votes from capital leads to more concentrated ownership. This suggests that concentrated ownership is not the response by original owners to weak minority protection per se but because they frequently use e.g. dual-class shares to form control blocks at the IPO to secure and protect valuable private benefits of control as such.

Particularly in Civil Law countries, founding families are, moreover, often encouraged by legislators that regard the attached control benefits as an important mechanism to provide them with a significant long-term private interest also in the public firm. This alignment of control rights may benefit other shareholders by stimulating investments and growth in value, particularly in a fledgling firm, since it solves their free rider problem. But they also benefit them since it limits the family's incentives to myopically extract private benefits. Informal rules and social standing are import checks and balances in a relation-based financial environment like Scandinavia, where estimated private benefits are low despite high ownership concentration and relatively weak formal minority protection. The large discounts on heir

controlled IPO firms, however, suggest that these gains are traded-off against *dynamic lock-in costs* since heavily entrenched owners make inefficient economic decisions; not costs from extraction of pecuniary benefits. Control rights may thus be misallocated over time when they are attached to the family fortune.

More generally, interaction of law and finance is particularly important at the IPO since once control blocks are formed, they systematically affect the privately controlled firm's investment, takeover and financing behavior, and ownership dynamics in equilibrium. This generates a strong path dependency that explains why more frequent use of mechanisms to separate votes from capital is associated an equilibrium with more concentrated private ownership. But a dummy indicating that dual-class shares are not legally banned in Sweden and in the U.S., does not explain the significant difference in *equilibrium* frequency in which they are used in the two countries. It is thus not enough to look at formal legal rules as such and partial correlations between legal regimes and ownership concentration but to analyze how legal rules and regimes interactively with economic and institutional factors determine behavior in equilibrium.

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Table 1
Deviations from One Share-One Vote and Ownership Concentration

Using data for 27 countries from La Porta et al (1998) and La Porta et al (1999), Panel A tests if there are differences between Civil Law and Common Law countries in frequency of bans on dual-class shares and in actual use of devices to separate votes from capital. One Share-One Vote dummy is one if the country's corporate law or commercial code requires that ordinary shares carry one vote per share, and zero otherwise (La Porta et al (1998)). Cap = 20% V is the average capital (minimum percent of book value of common equity) required to control 20 percent of the votes in the 20 largest firms in a country (La Porta et al (1999)). [Cap = 20% V] < 20 equals one if Cap = 20 V is less than 20, and zero otherwise; it measures actual deviation form one share-one vote. Using different measures, we regress (OLS) ownership concentration and frequency of family control of large listed firms for 27 countries on actual separation of votes from capital and control variables. Private Control (Panel B) is the fraction of the 20 largest firms in a country that are controlled by an individual (called family in La Porta et al (1999)). %Mkt Private (Panel C) is equals the aggregate market value of common equity of firms controlled by individuals divided by the aggregate market value of common equity of the largest 20 firms in a given country (% Mkr Fam in La Porta et al (1999)). Widely held (Panel D) measures the fraction of the 20 largest firms in a country where there is no shareholder holding 20% of the votes. The Civil Law dummy is one if the country has a civil law regime, and zero otherwise. The antidirector rights dummy equals one if the country has high antidirector rights (above the median), and zero otherwise. Pyramid is the fraction of the 20 largest firms that is controlled via a pyramid structure. Cross-Shhs is equal to the fraction of the 20 largest firms that is controlled by means of cross-shareholdings. LGNPCapita is the natural logarithm of GNP per capita in constant 1994 dollars (La Porta et al (1998)). Lmarketcap equals the natural logarithm of the average market capitalization for a firm in a country (La Porta et al (1998)). Coefficients are reported with heteroscedasticity robust t-values in parenthesis (White (1980)). ***, **, and * are significance at the 1%, 5%, and 10% level, respectively

Panel A: Test if there differences between Civil Law and Common Law countries in bans on dual-class shares and in actual use of devices to separate votes from capital.

	Civil Law Countries, N=18	Common Law countries, N=9	Difference test
One Share-One Vote	N=3 Prop = 0.167	N=1 Prop = 0.111	Prop-test = -0.383
Cap = 20% V	Mean = 0.179 Median = 0.195	Mean = 0.193 Median = 20.0	t-test = 2.19** Ranksum test = 1.80*

Panel B: Cross-country regressions with fraction of privately controlled firms among the 20 largest firms as dependent variable.

	M1	M2	M3	M4	M5
[Cap = 20% V]<20	0.1672			0.1627	0.1617
	(2.28)**			(1.88)*	(1.99)*
Civil law		0.0504		-0.0499	-0.0499
		(0.56)		(-0.60)	(-0.61)
Antidirector rights			-0.0879	-0.0771	-0.0783
			(-1.09)	(-1.06)	(-1.14)
LGNPCapita	-0.2801	-0.2568	-0.2611	-0.2829	-0.2848
	(-3.66)***	(-2.47)**	(-2.60)**	(-3.70)***	(-4.36)***
Lmarketcap	-0.0073	0.0049	0.0113	-0.0017	
	(-0.34)	(0.19)	(0.45)	(-0.07)	
Adj R^2 (%)	38.23	25.22	27.90	34.35	37.32
Mean Vif	1.23	1.20	1.24	1.49	1.41
N	27	27	27	27	27

Panel C: Cross-country regressions with the fraction of market capitalization that is privately controlled as dependent variable.

	M1	M2	M3	M4	M5
[Cap = 20% V]<20	0.1468			0.1342	0.1459
	(2.16)**			(1.71)*	(1.88)*
Civil law		0.0682		-0.0245	-0.0252
		(0.85)		(-0.39)	(-0.42)
Antidirector rights			-0.0982	-0.0792	-0.0631
			(-1.34)	(-1.48)	(-1.32)
LGNPCapita	-0.3046	-0.2850	-0.2893	-0.3072	-0.2827
	(-3.84)***	(-2.87)***	(-3.09)***	(-4.11)***	(-3.841)***
Lmarketcap	0.0145	0.0265	0.0330	0.0221	
	(0.68)	(1.11)	(1.38)	(0.96)	
Adj R^2 (%)	42.29	32.64	35.55	39.43	40.49
Mean Vif	1.23	1.20	1.24	1.49	1.41
N	27	27	27	27	27

Panel D: Cross-country regressions with the fraction of widely controlled firms among the 20 largest firms as dependent variable.

	M1	M2	M3	M4	M5
[Cap = 20% V]<20	-0.2151			-0.1936	-0.1299
	(-2.59)**			(-1.99)*	(-1.19)
Civil law		-0.1204		-0.0189	-0.0228
		(-1.20)		(0.844)	(-0.16)
Antidirector rights			0.1241	0.0638	0.1515
			(1.37)	(0.78)	(1.25)
LGNPCapita	0.1107	0.0827	0.0869	0.1125	0.2463
	(1.63)	(0.86)	(0.86)	(1.58)	(2.94)***
Lmarketcap	0.1293	0.1107	0.1043	0.1205	
	(6.16)***	(3.78)***	(3.72)***	(5.03)***	
Adj R^2 (%)	51.68	40.92	41.46	49.01	21.76
Mean Vif	1.23	1.20	1.24	1.49	1.41
N	27	27	27	27	27

Table 2

Private Benefits of Control and Deviations from One Share-One Vote

Regressions of country averages of private benefits of control (data from Dyck and Zingales (2001) based on premiums paid in control transactions) on deviations from use of one share-one vote for the 20 largest firms in a country at the end of 1995 (data from La Porta et al (1998) and (1999)) and control variables. Cap = 20% V is the average capital (minimum percent of book value of common equity) required to control 20 percent of the votes in the 20 largest firms (La Porta et al (1999)). [Cap = 20% V] < 20 equals one if Cap = 20 V is less than 20, and zero otherwise; it measures actual deviation form one share-one vote. Civil law is one if the country has a civil law regime, and zero otherwise. LGNPCapita is the natural logarithm of GNP per capita in constant dollars of 1994 (La Porta et al (1998)). Lmarketcap equals the natural logarithm of the average market capitalization for a firm in a country (La Porta et al (1998)). Coefficients are reported with heteroscedasticity robust t-values in parenthesis (White (1980)). ***, **, and * are significance at the 1%, 5%, and 10% level, respectively.

	M1	M2	M3
[Cap = 20% V] < 20	0.0841		0.0719
	(2.21)**		(2.01)*
Civil Law		0.0629	0.0384
		(1.61)	(0.989)
LGNPCapita	-0.1035	-0.0928	-0.1026
	(-3.30)***	(-2.22)**	(-3.28)***
Lmarketcap	-0.0353	-0.0291	-0.0327
	(-1.94)*	(-1.41)	(-1.675)
Adj R^2 (%)	38.76	33.01	37.73
Mean Vif	1.14	1.13	1.19
N	24	24	24

Table 3
IPOs on the Stockholm Stock Exchange Between 1979 and 1997:6

Panel A: Newly listed firms and delistings of IPO firms on the Stockholm Stock Exchange (SSE) (A-list, OTC, or unofficial list) between 1979 and mid-1997. In 1979 there were 134 firms listed on the SSE and 245 firms in 1997. In January 1998, 111 of the 233 IPOs in the sample were still listed on the Stockholm Stock Exchange. There were 90 new listings on the SSE between 1997:6 and 1999:12.

	N	%
Newly listed firms 1979-1997:6	352	100
Clean Initial Public Offerings (IPOs)	233	66.2
Equity carve-outs and spin-offs ("unclean" IPOs)	119	34.8
Remaining IPO firms after 5 years or still traded in February 1998[1]	175	75.1
Delistings within five years after IPO	58	24.8
IPOs acquired within 5 years of IPO	49	21.0
IPOs which went back private within 5 years of IPO	4	1.7
IPOs which went bankrupt within 5 years of IPO	5	2.1

[1] 63 firms which went public between 1993 and 1997 are followed until February 1998.

Panel B: Frequency of IPOs on the SSE between 1979 and 1997:6. Firms are defined as privately controlled if the largest shareholder is the founder/CEO, founder's family, entrepreneurs or employees. Firms controlled either by public corporations, venture capitalists, associations, the state or a community are defined as being institutionally controlled.

Year	Privately Controlled	Institutionally Controlled	Total
1979	2	0	2
1980	0	0	0
1981	1	0	1
1982	7	3	10
1983	28	5	33
1984	36	7	43
1985	12	1	13
1986	9	1	10
1987	10	8	18
1988	9	4	13
1989	8	2	10
1990	5	5	10
1991	2	0	2
1992	2	0	2
1993	2	3	5
1994	8	15	23
1995	5	6	11
1996	6	1	7
1997:6	6	10	16
Sum (%)	158 (69%)	71 (31%)	229

Table 4

Ownership Type and Firm Characteristics

The sample consists of 229 Swedish IPOs on the Stockholm Stock Exchange (A-list, OTC, or unofficial list) between 1979 and mid 1997. Only clean IPOs are included, i.e. equity carve outs and spin-offs are deleted. Firms are defined as privately controlled if the largest shareholder is the founder/CEO, founder family, entrepreneurs or employees. An individual or a group of individuals, which are not employees and do not have any family relation to the founder, is defined as an entrepreneur. Firms controlled either by public corporations, venture capitalists, associations, the state or a community are defined as being institutionally controlled. A venture capital firm or a buy-out fund is defined as a venture capital majority owner. Non-profit organizations are defined as associations. If the majority owner is another corporation, it is defined as ownership by a public corporation.

Panel A: Identity of largest (controlling) shareholder at IPO.

	N	**%**
Privately controlled firms	158	69.0
Founder/CEO owns and manages the firm	51	22.3
Founder's family (without founder) owns and manages the firm	55	24.0
Founder's family no longer active in the firm	52	22.7
(firm controlled by employees or an entrepreneur)		
Institutionally controlled firms	71	31.0
Public Corporation	44	19.4
Venture Capital	12	5.3
State or Community	9	4.0
Association	6	2.6

Panel B: Firm characteristics at the IPO: Sales (M SEK), book value of total assets (M SEK), debt ratios, IPO offer size (M SEK), return on assets, and investment/sales prior to going public. Market value of equity (M SEK) is estimated from the first day after going public. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively. Data are primarily obtained from the prospectuses.

	Total sample		**Privately Controlled**		**Institutionally controlled**		**Mean diff**	**Median diff**
	Mean	Median	Mean	Median	Mean	Median	t-test	Wilcoxon Rank-sum test
Firm age	31	18	33	23	27	11	1.26	2.18**
Sales	1097	139	171	64	2838	192	-2.26**	-2.30**
Book value of total assets	6728	163	369	140	21275	246	-6.59***	-3.84***
Debt Ratio	0.71	0.74	0.72	0.73	0.68	0.73	3.14***	0.79
IPO offer size	294	33	36	11	307	48	-2.39**	-6.70***
Market value of equity day 1	869	175	329	128	2068	326	-7.96***	-4.78***
Return on Assets (ROA)	0.09	0.09	0.10	0.10	0.08	0.07	0.19	1.70*
Investment/Sales	0.53	0.07	0.36	0.06	1.00	0.07	-2.04**	0.47

Table 5
Security Design, Corporate Charter, and Initial Ownership

The sample consists of 229 Swedish IPOs on the Stockholm Stock Exchange (A-list, OTC, or unofficial list) between 1979 and mid 1997. Only clean IPOs are included, i.e. equity carve outs and spin-offs are deleted. Firms controlled by the founder, families, entrepreneurs or employees are defined as being privately controlled (N=158) and as institutionally controlled (N=71) if the controlling owners are public corporations, venture capitalists, associations, the state or a community. Privately controlled firms where the founder is CEO are defined as founder controlled (N=51). Privately controlled firms where the founder's family is the majority owner but the founder is no longer CEO are defined as founder family controlled (N=55). If the founder or the founder's family are no longer active the firm is defined as other (N=52). ***, **. And * denote significance at the 1%, 5%, and 10% level, respectively.

Panel A: Security design and corporate charter at IPO. Data comes from corporate charters and prospectuses.

	Total Sample		**Privately Controlled**		**Institutionally Controlled**		**Prop Diff**
	N	Prop	N	Prop	N	Prop	Test
Dual Class Shares	174	0.76	140	0.89	34[4]	0.48	6.67***
Preemption clauses[1]	42	0.18	33	0.21	9	0.13	1.48
Shareholder Agreements[2]	34	0.15	24	0.15	10	0.14	0.22
Opted out of Voting Restrictions[3]	220	0.96	151	0.95	69	0.97	0.58
Only B shares sold at IPO	170	0.74	139	0.88	31	0.44	7.09***
Of dual class firms		*0.98*		*0.99*		*0.91*	*2.83***
Owners keep all A shares	107	0.47	91	0.58	16	0.22	4.96***
Of dual class firms		*0.62*		*0.65*		*0.47*	*1.93**

[1] Preemption clauses state that shareholders should be able to redeem non-listed A-shares if they have been passed on to a new shareholder.
[2] Shareholders can establish agreements between each other, which do not have to be public, e.g. rights of first refusal, which are not allowed in the company charter by the Swedish Corporate Law.
[3] The Companies Act states that no shareholder can represent more than on fifth of the shares at the general meeting. However, this rule can be opted out of (or made stronger) through the incorporation of a provision in the company charter.
[4] Of the 34 institutionally controlled firms with dual class shares, 3 were controlled by Venture Capitals (25% of Venture Capital controlled), 5 by Associations (71% of Association controlled), 4 by the State or a Community (44% of the State or Community Controlled), and 22 were controlled by a Public Corporation (51% of the IPOs controlled by a public corporation).

Panel B: Choice of initial ownership structure for total sample as well as for the privately and institutionally controlled firms. Vote and capital retention is by the largest private and institutional owner. Primary (secondary) shares are defined as the fraction of the firm after the IPO, which was distributed as new (old) shares at IPO.

	Total sample		**Privately controlled**		**Institutionally controlled**		**Mean diff**	**Median diff**
	Mean	Median	Mean	Median	Mean	Median	t-test	Wilcoxon Rank-sum test
Primary shares	21.5	20.0	21.7	20.0	21.1	20.0	0.21	0.67
Secondary shares	9.4	0	6.5	0	15.6	0	-3.14***	-2.95***
Fraction of firm offered	30.8	25.8	28.3	25.0	36.3	28.2	-2.81***	-2.60***
Vote retention	65.2	74.0	72.4	81.4	49.3	47.9	6.59***	6.36***
Capital retention	50.3	51.8	54.5	58.0	40.8	38.1	4.34***	4.20***
Vote/Capital ratio	1.380	1.249	1.421	1.304	1.286	1.000	1.88*	4.50***

Table 6
Book-to-Market Ratios Before and After IPO

The sample consists of 229 Swedish IPOs on the Stockholm Stock Exchange (A-list, OTC, or unofficial list) between 1979 and mid 1997. Only clean IPOs are included. Firms controlled by the founder, families, entrepreneurs or employees are defined as being privately controlled (N=158) while as institutionally controlled (N=71) if the controlling owners are public corporations, venture capitalists, associations, the state or a community. Privately controlled firms where the founder is CEO are defined as founder controlled (N=51). Privately controlled firms where the founder's family is the majority owner but the founder is no longer CEO are defined as founder family controlled (N=55). If the founder or the founder's family are no longer active the firm is defined as other (N=52). The market value pre IPO is calculated at the offer price. The book value pre IPO is the book value of old shares plus the offer price of the new shares. The post IPO market value is calculated at the closing price of the first day of trade. Book value is the same as for pre IPO. ***, **, and * are significance at the 1%, 5%, and 10% level, respectively.

Panel A: Book-to-Market ratios before and after going public for all firms and for the subgroups of privately controlled (N=158) and institutionally controlled firms (N=71).

	Total sample		**Privately controlled**		**Institutionally controlled**		**Mean diff**	**Median diff**
	Mean	Median	Mean	Median	Mean	Median	t-test	Wilcoxon Rank-sum test
Book-to-Market Pre IPO	0.61	0.50	0.59	0.51	0.65	0.49	-0.60	0.33
Book-to-Market Post IPO	0.49	0.43	0.47	0.42	0.56	0.45	-1.27	-0.39

Panel B: Book-to-Market ratios before and after going public for privately controlled firms sorted by whether founder owns and manages firm (N=51), founder's family without founder owns and manages the firm (N=55), or other private control group (N=52).

	(1) Founder		**(2) Founder's Family**		**(3) Other control**		**Mean difference: t-test[1]**		
	Mean	Median	Mean	Median	Mean	Median	1-2	2-3	1-3
Book-to-Market Pre IPO	0.45	0.39	0.74	0.61	0.66	0.54	-3.21***	0.68	-2.36**
Book-to-Market Post IPO	0.36	0.25	0.60	0.51	0.51	0.43	-3.29***	1.06	-2.16**

[1]The median difference tests based on Wilcoxon rank-sum test show qualitatively the same results as the t-test for mean differences

Panel C: Cross-sectional OLS regressions of the pre and post IPO Book-to-Market ratios. Pre IPO market value is calculated at offer price. Pre IPO book value is book value of old shares plus offer price of new shares. Post IPO market value is calculated at closing price of first day of trade. Book value is the same as for pre IPO. Privnonfounder equals one if it is a privately controlled firm where founder is no longer active, and zero otherwise. PreIPOPP equals one if the firm made a Private Placement before going public, and zero otherwise. LIPOsize is the natural logarithm of the size of the issue in SEK. Lfirmsize is the natural logarithm of the size of the firm's book value of total assets. B-Shares is a dummy that equals one if only B shares were distributed at the IPO, and zero otherwise. Lage is the natural logarithm of one plus the age of the firm in years. State/Community equals one if the controlling shareholder before going public is the state or a community, and zero otherwise. Commercial Services equals one if the firm is active in commercial services industry (information technology), and zero otherwise. Sample consists of 215 firm observations. Year dummies are included. t-statistics are reported in parenthesis. ***, **, and * are significance at the 1%, 5%, and 10% level, respectively. Standard errors are adjusted for heteroskedasticity according to White (1980).

	Pre IPO Book-to-Market Ratio	**Post IPO Book-to-Market Ratio**
Intercept	0.553 (3.69***)	0.430 (3.54***)
Privatenonfounder (Dummy)	0.164 (2.94**)	0.116 (2.46**)
PreIPOPP (Dummy)	-0.106 (-2.12**)	-0.067 (-1.50)
Lfirmsize	0.335 (4.74***)	0.258 (4.66***)
LIPOsize	-0.328 (-3.99***)	-0.221 (-4.07***)
B-Shares (Dummy)	-0.058 (-0.55)	-0.035 (-0.53)
Lage	-0.131 (2.22**)	-0.120 (-2.51**)
State/Community (Dummy)	0.652 (1.44)	0.372 (1.51)
Commercial services (Dummy)	-0.245 (-5.04***)	-0.246 (-5.85***)
Adj R^2	0.29	0.31

Table 7

Post-IPO Investment Strategies

The sample consists of 229 Swedish IPOs on the Stockholm Stock Exchange (A-list, OTC, or unofficial list) between 1979 and mid 1997. Only clean IPOs are included, i.e. equity carve outs and spin-offs are deleted. 61 firms made one Seasoned Equity Offering (SEO), 16 firms did two, 8 firms undertook three, 2 firms did 4, 2 firms made 5, 1 firm did 6, and 1 firm made 7 SEOs during the three years after going public. The median time between the IPO and the first subsequent Private Placement (PP), Directed Issue at acquisition (DI) and Rights Issue (RI) is 26 months, 19 months, and 18 months, respectively. The number of SEOs are therefore not equal to the number of firms which made SEOs. Firms controlled by the founder, families, entrepreneurs or employees are defined as being privately controlled (N=158) while as institutionally controlled (N=71) if the controlling owners are public corporations, venture capitalists, associations, the state or a community. Privately controlled firms where the founder is CEO are defined as founder controlled (N=51). Privately controlled firms where the founder's family is the majority owner but the founder is no longer CEO are defined as founder family controlled (N=55). If the founder or the founder's family are no longer active the firm is defined as other (N=52). ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Panel A: Frequency of post IPO Seasoned Equity Offers (SEOs) for privately and institutionally controlled firms during the three years after going public.

	Total Sample		**Privately Controlled**		**Institutionally Controlled**		**Prop Diff**
	SEOs	Firms Prop	SEOs	Firms Prop	SEOs	Firms Prop	Test
Post IPO SEO	151	95 (0.46)	129	78 (0.49)	22	17 (0.24)	3.61***
PP	36	27 (0.128)	29	21 (0.13)	7	6 (0.08)	1.04
DI	89	60 (0.26)	77[1]	50 (0.32)	12[2]	10 (0.14)	2.79***
RI[3]	26	23 (0.10)	23	20 (0.13)	3	3 (0.04)	1.98**

[1] We have identified the details of the Directed Issues in 42 of the 77 observations. 35 of the firms had dual class shares and 33 out of these 35 (94%) made a pure B-share distribution at the Directed Issue.
[2] We have identified the details of the Directed Issues in 10 of the 12 observations. 4 of the firms had dual class shares and 3 out of these 4 (75%) made a pure B-share distribution at the Directed Issue.
[3]7 of the Rights Issues were motivated by cash financed acquisitions

Panel B: Frequency of post IPO Seasoned Equity Offers (SEOs) for privately controlled firms during the first three post-IPO years.

	1. Founder		**2. Founder Family**		**3. Other**		**Prop Diff. Test**		
	SEOs	Firms Prop	SEOs	Firms Prop	SEOS	Firms Prop	1-2	2-3	1-3
Post IPO SEO	50	30 (0.59)	50	33 (0.60)	29	14 (0.27)	-0.061	3.15***	3.63***
PP	15	13 (0.26)	6	4 (0.07)	8	4 (0.08)	2.48**	-0.05	2.43**
DI	23	16 (0.31)	37	24 (0.44)	17	10 (0.18)	-1.26	2.75***	1.53
RI	14	13 (0.27)	6	4 (0.07)	3	3 (0.06)	2.55**	0.22	2.77***

Panel C: Size (in SEK) of Rights Issues (RI), Private Placements (PP), Directed Issues (DI) relative to the market value of equity at the RI, PP, or DI, respectively. Median differences tested by Wilcoxon rank-sum test.

	1. RI[1] (N=26)	**2. PP. (N=35)**	**3. DI (N=82)**	**Test of mean and median differences**		
				1-2	2-3	1-3
Mean	0.41	0.19	0.17	2.67***	0.45	4.89***
Median	0.32	0.08	0.07	3.58***	0.63	3.24***

[1]The mean and median size of the 7 Rights Issues which were motivated by cash financed acquisitions were 0.275 and 0.241, respectively.

Panel D: Size of primary issue at IPO (Prim. IPO) plus inflation adjusted size of subsequent Seasoned Equity Offerings (SEOs) relative to the book value of total assets before going public (Pre IPO BV). Statistics are reported for all firms which made a SEO during the three years after going public and sorted by whether at least one of the SEOs was a Rights Issues (RI) or not. Median differences tested by Wilcoxon rank-sum test.

	All SEO firms (Prim IPO+SEOs)/ Pre IPO BV (N=95)	**1. At least one RI** (Prim IPO+SEOs)/ Pre IPO BV (N=23)	**2. No RI** (Prim IPO+SEOs)/ Pre IPO BV (N=72)	Difference test 1-2
Mean	0.85	0.97	0.81	0.29
Median	0.27	0.61	0.23	3.08***

Table 8
Ownership Retention by Original Owners in Control

The sample consists of 229 Swedish IPOs on the Stockholm Stock Exchange (A-list, OTC, or unofficial list) between 1979 and mid 1997. Only clean IPOs are included, i.e. equity carve outs and spin-offs are deleted. Ownership retention is defined as the percentage of total votes and capital held by the original owners, i.e. majority owners at the IPO, in January one, two, three, four, and five years after going public, respectively. If the original owners have relinquished control and sold 100% of their ownership this is included as zero retention. Firms controlled by the founder, families, entrepreneurs or employees are defined as being privately controlled (N=158) while as institutionally controlled (N=71) if the controlling owners are public corporations, venture capitalists, associations, the state or a community. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Panel A: Ownership retention (votes, capital and vote/capital ratio) by original owners for each of the first five post-IPO years.

	Total sample		Privately controlled		Institutionally controlled		Mean diff[2]
	Mean	Median	Mean	Median	Mean	Median	Test
Vote retention year 1	62.4	68.4	68.5	77.05	46.1	41.95	5.95***
Capital retention year 1	45.8	46.3	48.2	51.8	39.2	39.55	2.76***
Vote/Capital ratio	1.46	1.31	1.53	1.40	1.25	1.09	2.16**
Vote retention year 2	57.1	65.7	63.6	72.3	41.1	33.7	5.29***
Capital retention year 2	41.3	43.9	44.1	47.8	33.2	30.2	3.01***
Vote/Capital ratio	1.47	1.34	1.54	1.43	1.25	1.05	3.55***
Vote retention year 3	47.8	54.4	53.7	67.0	31.7	28.1	4.62***
Capital retention year 3	33.3	33.0	35.8	37.0	25.5	22.4	2.70***
Vote/Capital ratio	1.53	1.41	1.58	1.47	1.38	1.18	1.61
Vote retention year 4	41.3	45.5	47.6	60.4	23.3	0	4.89***
Capital retention year 4	28.6	28.7	31.6	32.8	19.6	0	2.92***
Vote/Capital ratio	1.614	1.448	1.720	1.530	1.22	1.15	5.13***
Vote retention year 5	35.9	31.2	42.7	50.7	17.8	0	5.21***
Capital retention year 5	24.4	20.6	28.4	24.6	14.2	0	3.79***
Vote/Capital ratio	1.618	1.502	1.667	1.533	1.42	1.16	1.39

[1]The different subsamples of the privately controlled group (Founder, Founder family, and Other) show no significant differenences in vote and capital retention.
[2]The median difference tests based on Wilcoxon rank-sum test show qualitatively the same results as the t-test for mean differences.

Panel B: Reasons for 100% divestment by private owners (N=46).

	N	%
Acquired	28	60.9
Block trade	9	19.6
Bankruptcy	4	8.7
Buy-Outs	3	6.5
Restructuring due to financial distress	2	4.3

Panel C: Proportion of privately controlled firms where the original owner has not divested 100% and still is in control after 3 years and 5 years, respectively.

	N	%
Three years after IPO, N=115	107[1]	0.93
Five years after IPO, N=85	80[2]	0.94

[1] In 4 cases control was sold in a block transfer. In 1 case control was shifted as a result of a restructuring (financial distress) and in 1 case control was shifted as a result of a Directed Issue. In 2 cases control was sold already at the IPO.
[2] In 3 cases the control was sold in a block transfer. In 1 case the control was shifted as a result of a Private Placement and in 1 case control was shifted as a result of a Directed Issue.

Panel D: Ownership retention (votes, capital and vote/capital ratio) in privately controlled firms where control is not relinquished and ownership 3 years after IPO is available, N=115. Firms are split into one subgroup of IPO firms where ownership is diluted because the firms undertake a Directed Issue (DI) or Private Placement (PP) (N=44), and one subgroup of firms that do to make such SEOs (N=71).

	Total sample		**Dilution through PP/DI**		**No Dilution**		**Mean diff**[1]
	Mean	Median	Mean	Median	Mean	Median	t-test
Vote retention at IPO	75.4	57.5	79.7	84.5	72.8	80.3	2.02**
Capital retention at IPO	82.0	60.0	60.9	60.0	55.5	59.1	1.55
Vote/Capital ratio at IPO	1.38	1.30	1.36	1.30	1.39	1.30	0.32
Vote retention year 3[2]	66.3	73.1	65.1	72.2	67.1	73.1	0.58
Capital retention year 3	44.4	48.0	43.0	46.8	45.3	48.8	0.45
Vote/Capital ratio year 3	1.59	1.47	1.60	1.51	1.59	1.44	0.09

[1]Median difference tests using Wilcoxon rank-sum test qualitatively the same results as the t-test for mean differences.
[2] In three cases the control was sold in a block transfer. In one case the control was shifted as a result of a Private Placement and in one case control was shifted as a result of a Directed Issue.

Panel E: Ownership retention (votes, capital and vote/capital ratio) in privately controlled firms where control is not relinquished and ownership 5 years after IPO is available, N=85. Firms are split into one subgroup of IPO firms where ownership is diluted because the firms undertake a Directed Issue (DI) or Private Placement (PP) (N=34), and one subgroup of firms that do to make such SEOs (N=51).

	Total sample		**Dilution through PP/DI**		**No Dilution**		**Mean diff**[1]
	Mean	Median	Mean	Median	Mean	Median	t-test
Vote retention at IPO	77.5	84.0	80.8	86.0	75.3	83.0	2.63***
Capital retention at IPO	59.6	63.0	60.5	60.0	59.1	64.0	0.74
Vote/Capital ratio at IPO	1.36	1.29	1.43	1.34	1.32	1.27	3.04***
Vote retention year 5[2]	66.3	73.9	66.4	69.3	66.2	73.9	0.06
Capital retention year 5	44.0	45.0	40.8	42.8	46.1	48.3	-2.42**
Vote/Capital ratio year 5	1.66	1.52	1.75	1.59	1.52	1.37	2.36**

[1]Median difference tests using Wilcoxon rank-sum test qualitatively the same results as the t-test for mean differences.
[2]In 5 of the 85 firms, the original owner is no longer the majority owner after 5 years. In three cases, the control was sold in a block transfer. In one case the control was shifted as a result of a Private Placement and in one case control was shifted as a result of a Directed Issue.

Table 9

Outside Block Ownership In First And Fifth Post-IPO Year

The sample consists of 229 Swedish IPOs on the Stockholm Stock Exchange (A-list, OTC, or unofficial list) between 1979 and mid 1997. Only clean IPOs are included, i.e. equity carve outs and spin-offs are deleted. Firms controlled by the founder, families, entrepreneurs or employees are defined as being privately controlled (N=158) while as institutionally controlled (N=71) if the controlling owners are public corporations, venture capitalists, associations, the state or a community. Ownership is measured in January of the first and fifth years after the IPO. The Herfindahl index is defined as the sum of the squared ownership fractions by the original owners and the three largest outside blockholders. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Panel A: Ownership by outside blockholders post-IPO in January of the first year after IPO, and sorted by whether the firm is privately or institutionally controlled.

	Total sample N=196		**Privately controlled** N=139		**Institutionally controlled** N=57		**Mean diff**	**Median diff**
	Mean	Median	Mean	Median	Mean	Median	t-test	Wilcoxon Rank-Sum test
Largest outside block, vote	10.4	5.3	9.3	5.0	13.2	9.1	-4.30***	-2.90***
Largest outside block, capital	12.0	8.9	11.9	9.0	12.3	8.6	-0.39	0.19
2nd Largest outside block, vote	3.9	2.3	3.9	2.3	3.3	1.9	-6.67***	-2.70***
2nd Largest outside block, capital	5.1	3.6	5.2	3.6	4.8	3.8	1.08	-0.18
3rd Largest outside block, vote	2.2	1.3	1.9	1.0	2.9	2.5	-5.27***	-3.28***
3rd Largest outside block, capital	3.2	2.5	2.9	2.1	3.9	3.0	-4.05***	-1.59
Herfindahl Index, vote	0.49	0.51	0.55	0.61	0.34	0.26	11.78***	5.23***
Herfindahl Index, capital	0.29	0.28	0.31	0.31	0.23	0.18	5.75***	3.00***

Panel B: Ownership by outside blockholders post-IPO in January of the fifth year after IPO, and sorted by whether the firm is privately or institutionally controlled.

	Total sample N=138		**Privately controlled** N=102		**Institutionally controlled** N=36		**Mean diff**	**Median diff**
	Mean	Median	Mean	Median	Mean	Median	t-test	Wilcoxon Rank-Sum test
Largest outside block, vote	18.3	9.2	16.2	6.4	24.3	19.7	-4.61***	-3.43***
Largest outside block, capital	17.7	12.1	16.3	10.2	21.5	16.5	-4.01***	-2.42***
2nd Largest outside block, vote	3.9	2.3	4.2	2.9	7.9	5.8	-8.81***	-3.22***
2nd Largest outside block, capital	5.1	3.6	7.3	5.5	8.2	6.3	-1.67	-0.61
3rd Largest outside block, vote	2.2	1.3	2.4	1.6	3.8	3.3	-6.18***	-3.15***
3rd Largest outside block, capital	3.3	2.5	4.6	3.2	4.4	3.5	0.33	-0.46
Herfindahl Index, vote	0.43	0.44	0.48	0.53	0.27	0.25	10.38***	4.67***
Herfindahl Index, capital	0.32	0.33	0.35	0.36	0.26	0.25	6.66***	2.87***

Table 10

Characteristics of Acquired and Acquiring IPO Firms

The sample consists of 229 Swedish IPOs on the Stockholm Stock Exchange (A-list, OTC, or unofficial list) between 1979 and mid 1997. Only clean IPOs are included, i.e. equity carve outs and spin-offs are deleted. 48 firms were acquired within five year after going public while 56 made stock financed acquisitions (directed issue) at their first Seasoned Equity Offer (SEO) after going public. 10 firms made a stock financed acquisition before being acquired themselves. These firms are included in the acquired sample. The sample of IPOs making stock financed acquisitions, therefore, consists of 46 firms. Firms controlled by the founder, founder's family, entrepreneurs or employees are defined as being privately controlled (N=158) while as institutionally controlled (N=71) if the controlling owners are public corporations, venture capitalists, associations, the state or a community. Privately controlled firms where the founder is CEO are defined as founder controlled (N=51). Privately controlled firms where the founder's family is the majority owner but the founder is no longer CEO are defined as founder family controlled (N=55). If the founder or the founder's family are no longer active the firm is defined as other (N=52). ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Panel A: Ownership identity and pre IPO strategies: private placements (PP), rights issues (RI), and acquisition.

	Acquired N=48		**Stock Financed Acquirer** N=46		**Prop Diff**
	N	Prop	N	Prop	Test
Private Owner	28	0.58	36	0.78	-1.83*
Founder Family	11	0.23	25	0.45	-2.26**
Institutional Owner	20	0.42	10	0.22	1.83*
Public Corporation	13	0.27	4	0.09	2.47**
Pre IPO RI	1	0.02	3	0.06	-1.02
Pre IPO PP	17	0.35	10	0.22	1.61*
Pre IPO Acquisitions	8	0.17	16	0.358	-1.92*

Panel B: Retention (votes and capital) by original owners, and level and allocation of underpricing costs.

	Acquired N=48		**Stock Financed Acquirer** N=46		**Mean Diff**
	Mean	Median	Mean	Median	t-test
Vote Retention at IPO	0.62	0.69	0.72	0.84	-1.77*
Capital Retention at IPO	0.47	0.46	0.54	0.57	-1.47
Underpricing	0.24	0.18	0.43	0.23	-2.40**
Costs borne by controlling shareholders as % of pre-issue holdings	0.04	0.03	0.09	0.05	-2.77**

Table 11

Deviations from One Share-One Vote and Amount of Inherited Wealth

Using data from Marck et al (2000) and La Porta et al (1999) we test if the amount of inherited wealth within a country (Morck et al (2000)) is related to the use of dual class shares (La Porta et al (1998)). We use t-test (Wilcoxom ranksum test) on mean (median) differences in inherited wealth between countries. Morck et al (2000) collected inherited wealth from Fortune's list of the 1000 wealthiest individuals globally. It gauged as wealth of billionaires known positively to be heirs as well as fortunes jointly controlled by a founder and his heirs (in the process of being transferred across generations) divided by GDP. This is roughly equivalent to our definition of founder family control. Cap = 20% V is the average capital (minimum percent of book value of common equity) required to control 20 percent of the votes in the 20 largest firms (La Porta et al (1999)). [Cap = 20% V] < 20 equals one if Cap = 20 V is less than 20, and zero otherwise; it measures actual deviation form one share-one vote. ***, **, and * are significance at the 1%, 5%, and 10% level, respectively.

	[Cap = 20% V] = 20 N=12	[Cap = 20% V] < 20 N=14	Difference test
Mean Inherited Wealth/ GDP	12.01	32.55	-1.61
Median Inherited Wealth/ GDP	6.78	23.72	-1.85*