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The Governance of Dual-Class Firms

Finance Working Paper N° 1152/2026
September 2026

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Abstract

Despite being contentious, dual-class share structures have become increasingly common among U.S. firms going public. In an earlier survey (Adams and Ferreira 2008), we argued that the empirical literature on the costs and benefits of dual-class shares was inconclusive. We ask whether subsequent advances in the literature can help explain the current trend. To set the scene, we compile a new database on U.S. IPOs. We document that the share of firms listing with unequal voting rights rose from about 10% in 2000 to about 35% in 2025, and that the recent wave is concentrated in founder-led, VC-backed technology firms. We present a set of stylized facts about the governance of these firms. Founder-CEOs and founder-directors are more common at dual-class firms, board structures differ little otherwise, and we find no evidence that the CEOs of dual-class firms stay in office longer than those of single-class firms. Consistent with the data, recent theoretical papers show that, when information is asymmetric, separating control from cash flow rights can facilitate rather than impede efficient transfers of control. However, the empirical literature remains inconclusive about the value of dual-class shares. One reason may be its continued focus on dual-class shares as a mechanism of entrenching founders. We suggest that ignoring the role of founders' visions may be shortsighted, and outline our own vision for research that incorporates it.

Keywords: Dual Class Shares, Boards, CEOs, Corporate Governance 2

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Abstract

Despite being contentious, dual-class share structures have become increasingly common among U.S. firms going public. In an earlier survey (Adams and Ferreira 2008), we argued that the empirical literature on the costs and benefits of dual-class shares was inconclusive. We ask whether subsequent advances in the literature can help explain the current trend. To set the scene, we compile a new database on U.S. IPOs. We document that the share of firms listing with unequal voting rights rose from about 10% in 2000 to about 35% in 2025, and that the recent wave is concentrated in founder-led, VC-backed technology firms. We present a set of stylized facts about the governance of these firms. Founder-CEOs and founder-directors are more common at dual-class firms, board structures differ little otherwise, and we find no evidence that the CEOs of dual-class firms stay in office longer than those of single-class firms. Consistent with the data, recent theoretical papers show that, when information is asymmetric, separating control from cash flow rights can facilitate rather than impede efficient transfers of control. However, the empirical literature remains inconclusive about the value of dual-class shares. One reason may be its continued focus on dual-class shares as a mechanism of entrenching founders. We suggest that ignoring the role of founders' visions may be shortsighted, and outline our own vision for research that incorporates it.

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1 Introduction

In June 2026, SpaceX listed on the Nasdaq in the largest initial public offering on record, raising more than $85 billion (including an exercised greenshoe option) at a valuation of $1.77 trillion. The company went public with two classes of common stock. Class A shares, sold to the public, carry one vote each; Class B shares, held by Elon Musk and a small group of insiders, carry ten. Musk owns about 42% of the cash flow rights but controls more than 80% of the votes. Non-controlling investors thus hold a claim on the firm's cash flows but have almost no say over how it is run.

SpaceX is only the most recent and largest of a series of prominent dual-class listings over the past two decades, which included Google and Facebook. These and other dual-class IPOs faced extensive criticism because, as Sonnenfeld and Tian (2026) describe: "For many theorist critics and proxy advisory firms, the principle of "one share, one vote" is treated as a holy grail." Yet, despite opposition, the evidence suggests that dual-class structures are becoming more common among U.S. firms going public (Howell 2017, Aggarwal et al. 2022, Field and Lowry 2022).

The apparent coincidence between the rise of dual-class structures and the erosion of democratic institutions makes them an especially topical subject of research. By construction, dual-class structures concentrate power. This makes it harder for shareholders to exercise voice and for the market for corporate control to operate. As a result, CEOs may be difficult to remove, and controllers could pursue private benefits at the expense of outside investors (Bebchuk et al. 2000, Bebchuk and Kastiel 2019), a risk some warn will grow as legal constraints on controllers are relaxed (Bebchuk and Kastiel 2026).

Libson and Hannes (2025) argue that the surge in dual-class structures results from the weakening of traditional takeover defenses. Under pressure from institutional investors and proxy advisors, seasoned firms have dismantled poison pills and staggered boards, and activist hedge funds contesting board seats have replaced hostile tender offers as the principal threat to incumbents. Because it is written into the charter at the IPO and cannot be undone without the controller's consent, a dual-class structure limits activists' ability to exert influence (Kastiel 2016), which may affect shareholder value (Brav et al. 2008).

These observations suggest a simple conclusion: dual-class shares seem to be a governance failure that markets tolerate and are unwilling to correct. Are they? We asked a version of this question about twenty years ago. In Adams and Ferreira (2008), we surveyed the empirical evidence on mechanisms that separate voting rights from cash flow rights, chiefly dual-class equity but also pyramids, cross-holdings, and related devices. At the time, these structures were uncommon among U.S. firms but widespread elsewhere, and the European Commission was weighing whether to restrict them.

Our interpretation of the evidence was cautious. The literature had asked whether deviations from one share-one vote reduce the value of outside equity, and the answer was less clear than the policy debate presumed. Estimated effects were sensitive to how disproportionality was measured and to the choice of controls; results that held for one proxy often failed for others; and much of the apparent negative association reflected the concentration of cash flow rights rather than the concentration of votes. Few studies convincingly confronted endogeneity. We concluded that the evidence did not establish that separating votes from cash flow rights destroys shareholder value, and we cautioned against regulation premised on the assumption that it does. We also noted a cost of prohibition: Founders denied the ability to separate votes from cash flow rights may respond by raising less public equity (see, more recently Eldar 2023).

The current debate on the costs and benefits of dual-class shares echoes the earlier one, with the focus narrowed from control-enhancing mechanisms in general to dual-class shares in particular, and from continental Europe to the United States. But the stakes seem higher now. Elon Musk, for example, links his control to his ability to build a robot army![1] To help provide a foundation for a research topic that is likely to only grow in importance, we ask: what have we learned in the last 20 years?

As Baker and Gompers (2003) argue, board structures at IPO are likely to reflect optimal governance, whereas board structures in calendar time reflect both the quality of governance and past performance. To better assess the trend in dual-class structures, we first

[1]Defending his demand for greater control at Tesla (a single-class company), Elon Musk explained (Tesla, Inc. (2025)): *"I just don't feel comfortable building a robot army here and then being ousted because of some asinine recommendations from ISS and Glass Lewis who have no freaking clue."*

assemble a database of U.S. IPOs since 2000 with at- and post-IPO board governance information from Boardex and financial data from Compustat and CRSP. Previous literature has examined various slices of data like ours. Still, the breadth of our data allows us to provide an overview of dual-class board governance for a consistent sample. After establishing a set of empirical facts, we describe links between these facts and recent theoretical literature on the separation between ownership and control. We then selectively review some of the empirical literature not (fully) covered by our earlier survey, before describing more recent empirical contributions.

After describing the data in Section 2, in Section 3, we document that the share of U.S. IPOs with unequal voting rights has risen to about 35% in 2025, from roughly 10% in 2000, with the share of dual-class structures becoming more common over the second half of the period. The evidence confirms that the trend towards dual-class IPOs identified in earlier work (Howell 2017, Aggarwal et al. 2022, Field and Lowry 2022) continues to hold in more recent years.

We observe that dual-class firms going public are larger than their single-class counterparts. In later years, dual-class firms concentrate in the technology ("tech") sector. Most of the increase in the number and value of dual-class IPOs over the 2000-2025 period occurred in VC-backed firms. Founder-CEOs and founders on the board are more common at dual-class firms, more so in tech and later in the sample. Observable features of board structure show little correlation with dual-class status. Finally, we find no evidence that chief executives of dual-class firms remain in office longer than those of single-class firms, which is consistent with recent work on CEO turnover in this setting (Aran et al. 2025).

We do not attempt to identify the effect of dual-class structures on value or firm behavior. Thus, the evidence is descriptive. Nevertheless, the evidence sits uneasily with the simplest version of the entrenchment story, in which dual-class shares exist to keep founders in place regardless of performance. Indeed, some of our facts suggest dual-class structures may work *against* entrenchment rather than for it. Although this result seems counterintuitive, it aligns with predictions in recent theoretical work.

Intuitively, separating control from cash flow rights may be one way to give a visionary the room that a good idea sometimes requires (see Chemmanur and Jiao (2012) for a

formalization).[2] The difficulty is that visionary executives can also be mistaken, and any arrangement that protects the right ones will protect the wrong ones as well. Efficiency requires some means of replacing a controller whose judgment proves inferior.

Formally, this is a problem of asymmetric information. An incumbent controller may hold private information about the firm's prospects under her leadership, while outside investors and potential acquirers may hold information, or vision, of their own. Efficiency is achieved when control passes to whoever is best placed to run the firm. Ordinary market mechanisms need not deliver this outcome when information is private, as in Akerlof's (1970) market for lemons example: when one side knows more than the other about the value of what is traded, exchanges that both parties would welcome can fail to take place.

On the face of it, a dual-class structure makes this problem worse. By shielding a controller from the market for corporate control, it appears to protect exactly those controllers whose vision is mistaken. Whether this intuition survives formal analysis is a question that has received little attention. In Section 4, we review some of the recent theoretical work on the separation of control from cash flow rights when information is asymmetric, in particular Ferreira, Ornelas, and Turner (2015), At, Burkart, and Lee (2011), and Burkart and Lee (2015).

Ferreira, Ornelas, and Turner (2015) reach a conclusion that runs against the common intuition. They show that under fairly general conditions, separating control from cash flow rights *facilitates* efficient transfers of control. The mechanism is subtle but can be stated simply. Consider a single-class firm in which control and cash flow rights are bundled. When a more capable bidder appears, the incumbent and the bidder should agree that control should pass to the bidder because, in the absence of private benefits, their interests are aligned. But transferring control requires trading a controlling block of shares, and those shares carry cash flow rights. Because the incumbent has private information about the firm's value under the status quo, she can use that advantage to hold out for a higher price. The result can be too little trade and an inefficient control allocation.

[2] In a recent survey of the field, Fisch and Solomon (2023) argue that the long-running debate, with defenders invoking the founder's vision and critics invoking agency costs, poses the question too starkly. They consider dual-class shares as an instance of the customization of shareholder control, where the hard questions become who counts as a controlling shareholder and what fiduciary duties follow.

Separating control from cash flow rights reduces the number of shares that must change hands to shift control. A dual-class structure limits the controller's ability to extract informational rents, thus making efficient transfers easier to achieve. Under multilateral asymmetric information, separating control from cash flow rights can loosen, rather than tighten, an incumbent's grip on the firm. Working instead with traditional takeover models, in which bidders with private information need to buy shares from dispersed shareholders to acquire control, At, Burkart, and Lee (2011) and Burkart and Lee (2015) reach a similar conclusion: trading control and cash flow rights separately may increase the probability of efficient takeovers. This mechanism is consistent with evidence that reducing insider cash flow rights, holding voting control fixed, is followed by an increase in the likelihood of a change in control (Bauguess et al. 2012).

The theories linking the choice of dual-class structures to information asymmetries fit our empirical facts. In the second half of our sample period, dual-class IPOs cluster among founder-led technology firms, where uncertainty is high, and information asymmetries between insiders and outsiders are large. These are the conditions under which the arguments of Ferreira, Ornelas, and Turner (2015), At, Burkart, and Lee (2011) and Burkart and Lee (2015) have the most appeal. We contend that whether dual-class structures serve, on balance, to entrench founders or to ease their eventual replacement is, to use the familiar phrase, an empirical question.

Despite more nuance, Section 5 suggests the empirical link between dual-class structures and firm value remains tenuous and uncertain. More positively, the empirical literature documents several interesting patterns associated with a "new wave of dual-class IPOs," which are mostly tech-focused, VC-backed, and founder-led. We hope the facts and research gaps we identify here prompt further empirical and theoretical work on the costs and benefits of separating votes from cash flow rights, and highlight some directions for future research in Section 6.

2 Dual-class shares and governance: Data

2.1 Sample and data sources

We use two types of samples in our analysis: samples of firms at the IPO, and firm-year-level panels of all available data on IPO firms between their IPO date and December 2025. To construct these samples, we obtain data from different databases: Compustat (accounting fundamentals, industry codes, shares outstanding, and prices), Center for Research in Security Prices (CRSP) (market prices around the offering, and a time-varying indicator of share-class structure), and BoardEx (individual director data and board characteristics).

We also obtain data on founders. As companies are often founded many years before their IPO, we know from prior experience (Adams et al. 2009) that founder information is difficult to collect. Thus, we used AI to help us with this and other tasks. We implemented all web scraping, matching, merging, and filtering using an LLM (Claude Fable 5 and Opus 4.8). To ensure accuracy, we performed many manual checks and independently replicated the datasets at a different point in time without referring to previous instructions.

We obtained the population of U.S. initial public offerings since 1975 from Jay Ritter's IPO database, which we restrict to 2000-2025. The data contains the offer date, the company's name as of that date, the founding year, and a set of at-issue indicators including whether the firm listed with a dual-class share structure and whether it was backed by venture capital. After merging with Compustat and CRSP, our IPO sample comprises 4,969 distinct offerings, of which we can match 3,755 to BoardEx.

Because a substantial share of offerings do not pertain to conventional operating companies, we use historical industry codes, company-name patterns, and cross-validation against issuer- and security-type flags to classify every firm into one of several mutually exclusive categories: operating company, special-purpose acquisition company (SPAC), closed-end fund, real estate investment trust (REIT), master limited partnership, or other investment vehicle. We classify special-purpose vehicles that entered public markets as SPACs and those that subsequently completed a merger into an operating business — a de-SPAC — as operating companies.

To focus on operating companies with conventional governance structures, we exclude umbrella-partnership C-corporations (UP-C structures). In line with prior literature, e.g., Aggarwal et al. (2022) and Field and Lowry (2022), we also restrict the sample to firms whose price in the first month after IPO was above $5. Our final "core" IPO sample contains 3,290 firms. The corresponding post-IPO panel contains 20,123 firm-years of board data and 165,665 individual-years of director data.

For these firms, we assembled founder names from several sources, including EDGAR registration statements, public reference material, Boardex, and, for firms not otherwise covered, structured web research (carried out by AI agents). To connect the founder roster to individuals in Boardex, we built a name-matching procedure that accommodates name changes for the same person across sources — nicknames (for example, Bob for Robert), common spelling variants, the use of middle names or initials, honorific prefixes, and multi-part surnames — so that a founder is correctly identified whether the underlying records list, say, "F. Scott Moody," "Scott Moody," or "Doctor Scott Moody."

2.2 Variable construction and definitions

2.2.1 Firm characteristics

Firms' dual-class status at IPO comes from Jay Ritter's dataset. In the post-IPO panel, we use CRSP to track changes in dual-class status. But we also define a dual-class-at-IPO variable that is 1 for all years if Jay Ritter's database indicates the firm went public as a dual-class company. We define a similar indicator for venture-capital-backed offerings using Jay Ritter's data. In all firm-years, we measure firm size by market capitalization at the offering, computed from shares outstanding and price in the IPO fiscal year (backfilled to the following year when the initial value is unavailable). For the small number of firms whose offer-period price was missing, we recover a near-IPO price from monthly security data.

We use standard SIC and NAICS classifications to classify firms' industries. As in Loughran and Ritter (2004), we consider technology firms to be firms in computing, communications, electronics, instruments, and software-and-services industries but not biotech-

nology and pharmaceuticals. As a robustness check, we also flag technology firms using the Global Industry Classification Standard (information technology and communication services).

2.2.2 Board structure

The literature describes many possible dimensions of effective board governance in general (Adams et al. 2010, Adams 2025) and at the IPO in particular (Baker and Gompers 2003). For brevity, we analyze a small subset of these. From the director-level records in Boardex, we construct the number of directors, the fraction of non-executive directors (a proxy for board independence as we do not have data to measure true independence), the fraction who are women, the average number of directors' external listed-board seats (a measure of director "busyness"), and the average director age at both the IPO year (in the IPO sample) and the firm-year level (in the post-IPO sample).

2.2.3 Founder-control variables

For each firm in the sample, we identify the chief executive in place at the IPO (or, where the IPO year is unobserved in the board data, in the following year), and record whether that person is a founder. Using the post-IPO data, we track the year in which founder-CEOs first leave the CEO position. We treat firms whose founding CEO has not departed by the end of the observation window as right-censored. We record the reason for censoring — the end of the sample versus the end of data coverage, as well as CEO tenure.

In the post-IPO panel, we define a dummy variable (*founder CEO*) equal to 1 if the firm's current chief executive is a founder. Because the executive title field in Boardex is incomplete, we attribute the CEO title in each firm-year through a hierarchy. If no individual holds the CEO title, we assign it to the president or an equivalent senior officer, and, failing that, carry over roles from an adjacent year, which suffices to identify a CEO for the large majority of firm-years in which the title is missing. We also define a dummy variable equal to 1 if any member of the board in a given year is a founder.

2.2.4 Variable definitions

The principal variables are defined as follows. A firm is a *core firm* if it is an operating company (not a live SPAC shell, closed-end fund, REIT, master limited partnership, or other investment vehicle), is not organized as an UP-C structure, and is priced above the five-dollar penny-stock threshold with a verifiable price within the first month since the IPO.

The SPAC indicator equals one for blank-check shells, and the de-SPAC indicator equals one for operating firms that reached public markets through a completed SPAC merger. *Dual-class* is an indicator equal to one if the firm's common equity comprised more than one class of stock with differential voting rights as of the offering, and zero otherwise. *Venture-backed* equals one if the offering was financed by venture capital. *IPO market capitalization* is the product of total common shares outstanding and share price in the IPO fiscal year, expressed in millions of dollars. *Technology firm* equals one if the firm's primary industry falls within the Loughran– Ritter high-technology list.

Board size is the number of directors; *board independence* is the fraction of directors classified as non-executive; *female representation* is the fraction of directors who are women; *director busyness* is the average number of outside listed-board seats held by the firm's directors; and *director age* is the average age of the board, each measured in the relevant firm-year and, for firm-level analyses, for the board in place at the IPO.

The founder-control and board variables are defined at the firm-year level unless otherwise noted. *Founder-CEO* equals one in a given firm-year if the individual serving as the firm's chief executive (a titled CEO where identifiable, otherwise the president or equivalent most-senior officer) is one of the firm's founders, and zero if a chief executive is present but is not a founder. *Founder on board* equals one if any member of the board of directors in that year is a founder. Both are set to missing when the firm has no board coverage in the year, and both take the value zero in every year for firms for which no founder is expected.

At the firm level, *founder-CEO at IPO* equals one if the chief executive in place at the offering (or in the first subsequent year in which the board is observed) is a founder; *CEO tenure* is the number of years from the IPO until that chief executive is first observed to have

left the top role, and is treated as right-censored (with the value giving observed tenure to date) for firms whose founding chief executive remains in place through the end of the observation window.

3 Dual-class structures: What are the facts?

3.1 Dual-class structures: trends

– Insert Figures 1-3 here –

Figures 1 through 6 describe how the incidence of dual-class shares among firms going public evolved from 2000 to 2025. Figure 1 focuses on core firms. Since different IPO papers use different sample filters (Howell 2017, Aggarwal et al. 2022, Field and Lowry 2022), our results are not strictly comparable to theirs.[3] So, as a robustness check, we also show the same series as in Figure 1 under alternative filters.

Figure 2 replicates Figure 1 for all 4,969 offerings with no filters. These are essentially all IPOs in Jay Ritter's dataset for which Compustat data were available. Figure 3 removes only blank-check SPAC shells, while keeping the firms they later became, i.e., retaining de-SPACs, resulting in 4,425 firms overall.

The three figures share a similar shape. The share of dual-class firms is low and shows no trend through the 2000s, holding near 10% from 2004 to 2009, and then rising steadily from around the middle of the sample. In all three figures, the moving average turns upward around 2010–12 and climbs over the following decade from roughly 10-15% to somewhere between 40% and 60%, depending on the sample. The increase is therefore not an artifact of any particular filter.

The figures differ in the 2020–21 window and after it. In Figure 2, the proportion of dual-class firms rises to a peak near 60% in 2020–21 and then falls sharply, to about a third

[3]Data from Aggarwal et al. (2022) and Field and Lowry (2022) are not publicly available. Thus, we cannot know for sure how our sample compares to theirs.

by 2023–25. Much of both the peak and the fall reflects the influence of SPACs, whose 2020–21 wave brought many multi-class shells to market. Excluding SPACs lowers the peak to just over 40% (Figure 3), and restricting the sample to core firms lowers it a little further and, more to the point, removes the apparent decline (Figure 1). Among core firms, the proportion of dual-class IPOs peaks at or just under 40% in 2020–21 and, after a modest dip in 2022–23, recovers by 2025.

Table 1 summarizes the evidence in Figures 1-3.

– Insert Table 1 here –

– Insert Figure 4 here –

For the remainder of this chapter, we work with our core sample. Figure 4 plots the dual-class share of total IPO market capitalization in each year, computed from each firm's equity market value in the first month of the offering. The series is more volatile than the count in Figure 1 because a handful of the largest offerings dominate the dollar total in any year.[4]

Two features stand out. First, the value share of dual-class IPOs sits well above the count share throughout. Where dual-class firms were about a tenth of core offerings by number in the 2000s, they were closer to a third by value, and at the 2020–21 peak they approached 60% of IPO market capitalization against about 40% of the count. Clearly, dual-class firms going public are larger than their single-class counterparts. Second, the smoothed value series carries the same upward drift and the same 2020–21 peak, and after a dip in 2023–24 returns to near its peak by 2025.

We summarize these patterns as facts:

Fact 1. *The share of dual-class IPOs increased gradually from 2010 through 2025.*

Fact 2. *Dual-class IPO firms are, on average, larger than single-class IPO firms, as measured by market capitalization immediately after going public.*

[4]The peak in 2008 is explained by a single IPO: Visa.

3.2 Are dual-class IPOs dominated by tech firms?

– Insert Figures 5-6 here –

Figure 5 splits the annual percentages in Figure 1 by technology status. Splitting the sample leaves few firms in some cells, so the early years are noisy: through the 2000s the two groups are hard to tell apart, both low and erratic, and in some years, 2008 and 2009 among them, no technology firm in the sample went public with a dual-class structure. Dual-class structures were not, at that point, a distinctively technology arrangement.

The two lines separate from about 2015. The technology share steps up to roughly 45% in 2015 and stays between 30% and 65% thereafter, reaching about two-thirds in 2023, while the non-technology share rises more gradually, to between 20% and 40%. Over the last decade of the sample, dual-class is the majority structure among technology IPOs, and a sizeable minority among the rest. The concentration of dual-class firms in technology that colors the current debate is thus a feature of the second half of the period, not of the sample as a whole.

Figure 6 repeats the split using market capitalization as weights. It is even more volatile because, within each group, the annual total turns on one or two of the largest offerings, and the technology line ranges from zero in 2008 and 2009 to almost 100% in the early 2020s. From 2020 on, dual-class IPOs account for nearly all of technology IPO market capitalization, close to 95% in 2020 through 2022 and again in 2025, so the largest technology firms coming to market are now almost uniformly dual-class. The non-technology series is spikier, lifted in scattered years by a single large listing as in 2008 (Visa), and it shows no comparable run of high values late in the sample. Read together, Figures 5 and 6 suggest that dual-class has become the normal structure for technology firms going public over roughly the last decade, and the dominant one among the largest of them.

To summarize, we have three additional facts:

Fact 3. *From 2000 through 2014, tech firms and non-tech firms had similar propensities to go public with dual-class shares.*

Fact 4. *From 2015 through 2025, tech firms were much more likely than non-tech firms to go public with dual-class shares.*

Fact 5. *From 2020 through 2025, most tech IPOs were dual-class offerings.*

3.3 Do venture capitalists avoid dual-class firms?

– Insert Figures 7-8 here –

Recent empirical studies attribute the rise in dual-class IPOs to powerful founders who use dual-class structures to avoid market discipline and entrench themselves (Aggarwal et al. 2022, Field and Lowry 2022). Here, we ask whether dual-class and single-class IPO firms differ in their governance characteristics.

Since venture capitalists are likely to have a significant impact on the governance of newly public firms (Baker and Gompers 2003, Hochberg 2012, Ewens and Malenko 2025), we begin by interacting dual-class status with VC-backing. Figures 7 and 8 split the sample by whether the offering was backed by venture capital. In the count of IPOs (Figure 7), non-venture-backed firms carry the higher share of dual-class IPOs for most of the sample, generally in the 10% to 25% range, with a spike above 60% in 2020, against a venture-backed share that stays in the single digits or low teens through the 2000s and much of the 2010s. Dual-class was, proportionally, more common among non-venture issuers than among venture-backed startups. The venture-backed share rises later, drawing level with the non-venture share around 2017 and reaching about 53% in 2025, although it clearly exceeds it only at the very end of the sample.

Figure 8 shows that, weighted by market capitalization, venture-backed dual-class firms are far more prominent, because the largest dual-class technology offerings are venture-backed. The venture-backed line is high across most of the second half and reaches roughly 80% in 2021 and again in 2025, so that in those years, dual-class firms make up about four-fifths of venture-backed IPO market capitalization. The non-venture line spikes in isolated years driven by one single listing, such as 2008 (Visa) and 2022 (Mobileye).[5] Taken together,

[5]Mobileye Global's October 2022 IPO accounted for about 56% of the non-VC-backed IPO market cap that

the two figures show that dual-class IPOs are proportionally more common among non-venture issuers, yet far larger in dollar terms among venture-backed ones. When a venture-backed firm lists with dual-class shares, it tends to be among the largest offerings of its year.

We add two more facts:

Fact 6. *Non-VC-backed firms are more likely than VC-backed firms to go public with dual-class shares.*

Fact 7. *Dual-class IPOs are larger in market capitalization among VC-backed ones than among non-VC-backed ones.*

Table 2 interacts VC-backing with tech status. Several interesting patterns emerge. In the first half of the sample (2000-2012), VC-backed dual-class offerings were rare (4.1%). In the second part of the sample, while the proportion of non-tech IPOs issuing dual-class shares increased from 10.6% to 22.9%, dual-class issues remained relatively low among VC-backed non-tech firms (12.6%). Things look different for tech IPOs. If anything, in 2013-2025, VC-backed tech IPOs were more likely to be dual-class (38.8%) than were non-VC-backed tech IPOs (36.4%).

– Insert Table 2 here –

Table 3 replicates the previous table using post-IPO market capitalization as weights. Because dual-class IPOs are larger (Fact 2), all entries are inflated relative to Table 2. Still, some differences are visible. On a dollar basis, the share of dual-class structures has barely changed for non-VC-backed IPOs (30.4% to 30.9%). In contrast, in the second half of the sample, venture capitalists seem content with more than half of their post-IPO valuations coming from dual-class firms (57%). The tech split adds further nuance. In 2000-2012, for tech IPOs, the market cap share of dual-class is larger for VC-backed (50.9%) than for non-VC-backed firms (35.3%). That pattern continues into the second part of the sample (68.6% versus 44.5%). In fact, the largest shares of dual-class IPOs in both tables are found among VC-backed tech IPOs in 2013-2025.

year. Mobileye was carved out and re-listed by Intel. Intel retained the entire Class B super-voting block (10 votes per share) and roughly 99% of the voting power.

– Insert Table 3 here –

To summarize, we have the following facts.

Fact 8. *From 2000 to 2025, large VC-backed tech IPOs tended to issue dual-class shares.*

Fact 9. *Most of the increase in the number and value of dual-class IPOs over the 2000-2025 period occurred in VC-backed firms.*

These facts complicate any simple story linking VCs and dual-class shares. Figure 7 seems to lend support to a simplistic story in which VCs act as a counterforce to power-hungry founders who demand dual-class structures. But the evidence that follows this figure confounds any simple explanation. To some extent, the rise in dual-class shares is not only a tech phenomenon, but also a *VC phenomenon*. Tech IPOs are mostly VC-backed. Tech IPOs—especially large ones—are more likely to be dual-class than are non-tech IPOs. VC-backed tech IPOs have the highest value-weighted share of dual-class listings.

3.4 Do founders use dual-class structures to entrench themselves?

The common perception in the literature is that power-hungry founders prefer dual-class structures. Table 4 provides some support for that view. Across all firm-years, 29% of all single-class (at IPO) observations in our core sample have one of their founders as the current CEO. This value is about 40% for dual-class firm-years. For board members (including the CEO), we find that 43% of single-class and 53% of dual-class firm-years have at least one founder as a current board member. If we consider only the IPO year, the differences remain: 38% of single-class and 47% of dual-class firms went public with a founder as CEO.

– Insert Table 4 here –

Table 4 motivates our next fact:

Fact 10. *From 2000 to 2025, firms that went public with dual-class structures were more likely to retain founders as CEOs or board members, both at the IPO date and beyond.*

It is important to note, however, that since there were more single-class than dual-class IPOs in this period, most founder-controlled firms went public with a single-class structure. Thus, if a founder preference for dual-class shares exists, it is either not universal or tempered by opposing factors. To complicate the narrative further, Table 5 shows that this founder preference for dual-class shares is a recent phenomenon. In the first half of the sample period (2000-2012), the difference in founder-CEO incidence between single-class IPOs and dual-class IPOs was not economically meaningful (at 1.6 percentage points). By contrast, dual-class IPOs became ten percentage points more likely to retain founders as CEOs in the second half of the sample period, while the share of founder-CEOs did not change over time for single-class IPOs.

– Insert Table 5 here –

Table 5 motivates our next fact:

Fact 11. *The positive association between dual-class IPOs and founder-CEOs is driven by the 2013-2025 period.*

Table 6 shows the different founder measures split by tech and non-tech status. We see that in tech firms, founders are more likely to be CEOs and board members than in non-tech firms. At the IPO date, the CEO is more likely to be a founder in a dual-class tech firm than in any of the other three groups. For non-tech firms, the difference between dual- and single-class firms is always smaller than in tech firms, for both founder-CEOs and founder-on-board variables. Read together, the evidence in Tables 5 and 6 strongly suggest that the more recent "founder bias" of dual-class firms is also a "tech bias."

– Insert Table 6 here –

We summarize Table 6 as follows:

Fact 12. *The positive association between founder involvement and dual-class shares is stronger in tech firms than in non-tech firms.*

Fact 12 implies that theories based on founder preferences for dual-class structures need to explain why this preference seems to be more consequential for tech firms.

3.5 Do board structures bolster dual-class power or counter it?

Table 7 shows average board size, the share of non-executive directors, the share of female directors, the average number of other board seats held by board members, and the average director age, for all firm-year observations. We see no economically meaningful difference between single-class and dual-class firms. Table 8 shows the same comparison for board structures at the IPO year. Again, there is no discernible difference between the groups.

– Insert Table 7 here –

– Insert Table 8 here –

Fact 13. *Boards of single-class and dual-class IPO firms are similar in terms of size, formal independence, gender diversity, busyness, and director age.*

To see how governance evolves, Table 9 compares governance characteristics between single- and dual-class firms at the IPO date and seven years later. Because it includes only companies in the sample seven years after their IPOs, this sample is balanced. However, it suffers from a survivorship bias, as it excludes firms that have been acquired (or failed), as well as more recent IPOs. Across all firms, board size and independence increase modestly after seven years, with little difference between dual- and single-class firms. The increase in gender diversity is much more substantial, but again there are no clear differences between the two groups. There is no clear change in the number of external board seats. Director age increases by about five years, which is likely a mechanical effect due to low director turnover.

– Insert Table 9 here –

Interestingly, we find similar percentage-point declines in the share of founder-CEOs in both groups. With this table, we can compute a simple measure of founder-CEO job stability. The probability that a founder-CEO at a dual-class IPO is still CEO after seven years is 0.75, while the corresponding figure for single-class IPOs is 0.67. Thus, dual-class IPOs are associated with a slightly higher probability of founder-CEO retention in a seven-year horizon. Differences between tech and non-tech firms do not explain this result. Table

10 shows that the seven-year retention probabilities for founder-CEOs are 0.84 for dual-class tech IPOs and 0.77 for single-class tech IPOs. Table 11 shows that the seven-year retention probabilities for founder-CEOs are 0.69 for dual-class nontech IPOs and 0.63 for single-class nontech IPOs. We provide a more thorough investigation of the relationship between dual-class shares and CEO employment spells below.

– Insert Table 10 here –

– Insert Table 11 here –

3.6 Dual-class shares and CEO entrenchment

A typical governance concern about dual-class structures is that they can be used to entrench CEOs, founders, or controlling shareholders more generally. Thus, a natural question is: do CEOs stay longer in their jobs in dual-class than in single-class firms? Table 12 sheds some light on this issue. First, for all CEOs at the IPO date who have stepped down, we count the number of years until replacement.[6] We say that a step-down event is "observed" if we can identify the person who replaced the original CEO.

We find that the average time to replacement for CEOs at the IPO is 4.66 years for single-class firms and 3.95 years for dual-class firms. Thus, according to this measure, IPO CEOs leave sooner in dual-class than single-class firms. If we consider only founder-CEOs at the IPO, we find no economically meaningful difference between the two groups, with single-class firms replacing their founder-CEO 5.39 years after the IPO, and dual-class firms doing so 5.16 years after the IPO

There are two main problems with counting only observed step-downs. First, CEOs who step down because of acquisitions (or, more generally, because the firm leaves the sample) are excluded. If acquisitions are more likely under single-class structures, restricting the analysis to observed step-downs creates a bias that makes the CEOs of single-class firms look more entrenched than they are. Second, CEOs who have not been replaced by the firm's last year in the sample are excluded. If CEOs of dual-class firms are really more

[6]We use the terminology "stepping down" for convenience. It does not imply turnover is voluntary.

entrenched, they are more likely to remain in their post at the end of the sample period, again biasing the conclusions against finding evidence of dual-class-enabled entrenchment.

To address these issues, we also consider a variable that "pools" observed step-downs with "censored CEO spells"—the total tenure of an incumbent CEO from the IPO to the last year a firm appears in the sample. With this measure, we still find that CEOs stay longer in single-class firms than in dual-class firms (4.36 years versus 3.64 years). The same is true for the sample of founder-CEOs, who have an average time to replacement or censoring of 5.04 years in single-class firms versus 4.13 years in dual-class firms. Overall, the evidence in Table 12 shows that, if anything, CEOs at the IPO—including founder-CEOs—take longer to be replaced in *single-class* firms than in dual-class firms.

– Insert Table 12 here –

Because recent IPOs may not have had sufficient time to observe a transition, Table 13 compares the averages across the two groups after restricting the sample to IPOs that occurred no later than 2015. We find that dropping the last ten years of IPO activity reverses the results, with CEOs in dual-class IPOs staying longer in their posts than those in single-class IPOs. Note, however, that this sample restriction is arbitrary. Since dual-class IPOs are more common late in the sample period, trimming the sample in this way also introduces selection issues.

– Insert Table 13 here –

To avoid arbitrary cutoffs and censoring issues while still using all available information, we use a simple duration model to estimate the *survival function* $S(t) = P(T > t)$ — the probability of surviving past time t. We use the Kaplan–Meier estimator to non-parametrically construct the survival curve $S(t)$, the share of CEOs still in post t years after the IPO. Our main quantity of interest is the *restricted mean survival time* (RMST), the area under $S(t)$ up to a horizon t. It converts the survival curve back into years, with a direct interpretation: the expected number of years, out of the first t after listing, that the IPO CEO spends in post. Unlike our previous estimates, it correctly incorporates still-serving CEOs rather than dropping or misrecording them.

Table 14 reports the results. Over the decade after listing, CEOs at IPO expect to stay 6.53 years in post in single-class firms and 6.24 in dual-class firms. The difference between the two estimates is neither economically nor statistically significant. For founder-CEOs, the difference is seven weeks, and the confidence interval runs from six months less to nine months more. The third row shows that—if anything—non-founder CEOs in dual-class firms step down earlier than in single-class firms. In Panel B, using the same sample and estimator, we find statistically robust evidence that founder-CEOs serve 1.12 years longer than non-founder CEOs over the decade. This result serves as a sanity check on the power of the test, separating evidence of absence from absence of evidence.

– Insert Table 14 here –

– Insert Figure 9 here –

Figure 9 plots the survival function behind the analysis in Table 14 for all CEOs at IPO. The figure shows the share of CEOs at IPO still in their posts for each post-IPO year. The shaded areas are 95% (bootstrapped) confidence intervals. We see that the survival probabilities differ reliably only in years 2 and 3 after the IPO, with CEOs staying longer at *single-class* companies. Although statistically precise, these differences are small and arguably not economically significant. For all other years, the two survival functions are essentially identical.

– Insert Figure 10 here –

Figure 10 replicates the analysis for founder-CEOs. The conclusions are unchanged: the confidence intervals for the survival probabilities always overlap, and the difference between the point estimates is never more than a few percentage points. While the point estimates suggest that founder-CEOs are more likely to stay in post beyond 11 years than non-founder CEOs, these differences are driven by a few observations, and they are not statistically significant. In our sample, we have only 21 confirmed founder-CEOs in post 11 years after a dual-class IPO; these are reported in Table 15. Of these, only 13 dual-class founder-CEOs remain in post at year 13, and only 8 at year 15. The survival curve is

flat across years 13–14 because no step-downs occur. One conclusion is that the common perception that dual-class structures enable founder-CEOs to remain in power for several years may be driven by a few extreme examples.

– Insert Table 14 here –

– Insert Table 15 here –

Overall, we find no clear evidence that dual-class shares enable CEOs at the IPO—founders or not—to stay longer in their jobs, which gives us our next fact.

Fact 14. *There is no clear pattern relating dual-class shares to how long (founder) CEOs stay in their jobs.*

– Insert Figure 11 here –

Figure 11 shows that founder-CEOs are reliably more likely to remain as CEOs for essentially all years since the IPO, with the difference between the two groups increasing with time. As the evidence here shows, long CEO tenure is not a dual-class phenomenon; it is a founder-CEO phenomenon.

Table 16 summarizes all stylized facts presented in this section.

– Insert Table 16 here –

4 Unbundling ownership and control: Theory

The facts in section 3 seem to fly in the face of foundational arguments and theories regarding the importance of one-share, one-vote (e.g., Jensen and Meckling 1976). However, we believe that they are consistent with predictions in recent theoretical papers that explicitly analyze the unbundling of ownership and control—particularly through dual-class share structures—under asymmetric information.

To highlight the driving forces in these models, we first provide a selective review of their antecedents: the literature on asymmetric information and trade. When then review

the theoretical literature on the separation of control and cash flow rights and the efficiency of control transfers. Burkart and Lee (2008) remains the authoritative reference on the classic theory literature on the costs and benefits of deviations from the one-share-one-vote principle.[7]

4.1 Asymmetric Information and Trade: Theoretical Foundations

Akerlof's (1970) market for lemons paper illustrates how information asymmetries can lead to market failures. In his classic example, sellers of used cars are better informed about the quality of their cars. If the market sets a single price that reflects the average car quality, sellers of high-quality cars may drop out, leaving only low-quality cars ("lemons") on offer.

Myerson and Satterthwaite (1983) push Akerlof's logic further by studying the trade of an indivisible asset between two parties who have different private valuations. They show that efficient trade is not always possible. The intuition is as follows. A buyer and a seller each know their own valuation but not the other's. Efficiency dictates that the person with the highest valuation should own the asset. To find out who that person is, both need to report their valuations (their "types"). Because the optimal selling price typically depends on the private valuations (otherwise the buyer may not buy, or the seller may refuse to sell), each party has an incentive to shade their report to move the price in their favor. To induce truthful reports, any voluntary mechanism must leave each side an information rent. Myerson and Satterthwaite (1983) show that once you sum those rents across all possible types, they exceed the total gains from trade available to distribute. Therefore, some trades that ought to happen (the buyer values the good more than the seller) will always fail to occur.

Since Akerlof (1970) and Myerson and Satterthwaite (1983) consider the trading of indivisible goods or assets, the application of their logic to the market for corporate control is not straightforward. In firms, fractional ownership—the existence of multiple shareholders—is typically the norm. Cramton, Gibbons, and Klemperer (1987) made some progress in this

[7]For a comprehensive review of models of asymmetric information in the market for corporate control, see Eckbo, Malenko, and Thorburn (2026).

direction by modifying Myerson and Satterthwaite's setup to allow for fractional ownership. They consider a *partnership* in which the asset is initially jointly owned by many "partners," each owning some share. In their model, each partner has an independent private valuation of the asset, and the problem is how to assign all shares to the partner with the highest valuation in a "partnership dissolution." They show that whether a partnership can be efficiently dissolved depends on the initial ownership structure. In particular, efficient partnership dissolution is possible only if "no single partner owns too large a share."

Partnership restructuring remains an active area of research in the mechanism design literature. Loertscher and Wasser (2019) drop the restriction of efficient dissolution and characterize optimal second-best mechanisms, together with the initial ownership structures that maximize combinations of surplus and revenue: with symmetric partners, equal shares remain optimal, but with asymmetric partners the optimal structure is typically unequal, and even fully concentrated ownership can be optimal. Fershtman, Szabadi, and Wasser (2023) study the efficient resolution of partnership *disputes*, where dissolution need not be the right outcome. In all of these models, however, no partner *runs* the asset: a partner's type may affect the valuations of others, but not through an assignment of control. Introducing that possibility is the contribution to which we turn next.

4.2 Control transfers under two-sided asymmetric information

While at first glance, Cramton, Gibbons, and Klemperer's partnership resembles a firm, two model assumptions confound this interpretation. First, while firms generate cash flows, which presumably have the same value to all shareholders, in the model, partners have private valuations. These private valuations can perhaps be interpreted as a combination of private benefits and cash flow claims. But it is unclear why private benefits should be more valuable to partners with larger shares. The corporate governance literature typically assumes the opposite: that private benefit consumption increases as alignment through share ownership decreases.

Second, the authors consider only the case of partnership dissolution, which can be described as the sale of the asset to a single bidder who ends up owning all the shares.

But most of the corporate control transactions we observe in practice lead to a less extreme reshuffling of share ownership than full dissolution.

In an important contribution, Ornelas and Turner (2007) address the first problem. They introduce the notion of *control*: the ability to determine the common value of the partnership. Specifically, they assume that the controlling partner's type determines the firm's cash flows, which are then shared among all partners in proportion to their ownership. This assumption allows Ornelas and Turner (2007) to introduce the first meaningful notion of the separation of ownership and control to this literature: in their model, share ownership is independent of the allocation of control. They show that the possibility of efficient partnership dissolution depends on the joint distribution of ownership and control. Efficient control transfers are more likely to occur when the number of shareholders increases, and, in contrast to prior literature, "balanced" shared ownership does not improve the chances of efficient dissolution when control is asymmetrically distributed.

While Ornelas and Turner (2007) open the door for researchers to apply multi-sided asymmetric information models to the market for corporate control, one limitation remains: as in the prior literature, they consider only partnership dissolution. In their model, dissolution amounts to full consolidation of control and cash flow rights in the hands of a single owner. Thus, *ex post* there is no separation of control and cash flow rights.

Ferreira, Ornelas, and Turner (2015) extend Ornelas and Turner (2007) by eliminating the dissolution requirement. They characterize the *ex post* ownership and control structures that are most likely to enable efficient control transfers.

They first show that when control and cash flow rights can be fully separated (*ex ante* and *ex post*), efficient control transfers are always achievable. If there are no private benefits, the result is intuitive. Suppose a firm has two shareholders, both of whom can run the firm: an insider (the current controller) and an outsider, who is a potential "bidder" with a (possibly zero) toehold in the firm. Both parties have private information about their ability to run the firm. Both parties care only about firm value, so they want the most competent party to run the firm. The problem is to determine who should run the firm, i.e., who should be assigned control. If control can be transferred without changes in cash flow rights, the solution is straightforward. First, both parties report their types (i.e., their

private information). Then, based on these reports, control is assigned to the party with the highest reported ability. The ownership structure remains intact, and no monetary transfers are needed between the two parties.

Since there are no monetary transfers based on reports, lying about one's own ability has no benefits. Thus, truthful reporting of types is clearly an equilibrium of this mechanism. By fully unbundling ownership and control, Ferreira, Ornelas, and Turner (2015) show that the inefficient trade results from the previous literature—from Myerson and Satterthwaite (1983) to the partnership dissolution papers—stem from the need to trade *ownership rights*, which leads to information rents. Once only control needs to change hands, no information rents need to be paid, and efficiency can always be achieved.

Applied to dual-class structures, this result suggests that dual-class structures may improve the efficiency of the market for corporate control and *reduce* inefficient CEO entrenchment. With dual-class shares, control can be transferred to a bidder without threatening the incumbent's economic interest in the firm, thereby eliminating the incumbent's incentive to block the transaction. If only single-class shares are allowed, the bidder may have to buy a substantial stake from the incumbent to gain control. This creates incentives for the incumbent to hold out for a better price, which may lead to an inefficient breakdown of trade.

In reality, unbundling control and cash flow rights may come with costs. While dual-class structures may reduce information rents in the market for corporate control, they also protect controllers from market discipline, thus enabling inefficient private benefit consumption. To model this trade-off, Ferreira, Ornelas, and Turner (2015) assume that control and cash flow rights cannot be fully separated: The controlling shareholder must hold a minimum economic stake in the firm, possibly to mitigate post-acquisition moral hazard, (e.g., Burkart et al. 1998).[8]

Because reassigning control now requires the trading of shares, the first result is that efficient restructuring may be impossible if the incumbent's initial ownership stake, and

[8] A similar reduced-form constraint appears in the mechanism-design literature. Ekmekci, Kos, and Vohra (2016) study the sale of a firm to a buyer with two-dimensional private information—post-sale cash flows and private benefits of control—under one share-one vote, so that control passes only with a majority of the shares with an exogenous threshold

hence their required information rents, are too large. Second, to implement control transfers, the optimal mechanism assigns a significant "golden parachute" to the incumbent in case they lose control. Importantly, this golden parachute must be paid in company shares, implying that a new controller cannot hold too many shares in the firm. Together, these results imply that it is optimal to unbundle control and cash flow rights both *ex ante* and *ex post*. While agency costs may limit the extent of this unbundling, an efficient market for corporate control requires some separation of control and ownership rights.

4.3 Takeovers under asymmetric information and dispersed ownership

In the classic literature on takeovers, one share-one vote is optimal. Grossman and Hart (1988) and Harris and Raviv (1988) study how to incentivize welfare-increasing takeover bids and deter welfare-decreasing ones. When bidders compete for control, aligning their willingness to pay with their post-takeover security benefits helps prevent inefficient takeovers in which low value-creating bidders acquire a target to extract private benefits. Dekel and Wolinsky (2012) extend this classical complete-information framework to markets for votes: an incumbent and a rival, with known values and private benefits, compete for control, and votes may be bought separately from shares. Because a contestant who creates less security value can win control by buying votes cheaply—a naked vote, unlike a share, carries no claim on the cash flow consequences of how it is cast—allowing votes to be traded on their own is harmful to efficiency.

In work contemporaneous with Ferreira, Ornelas, and Turner (2015),[9] At, Burkart, and Lee (2011) show that asymmetric information also undermines the optimality of one share-one vote in traditional takeover models. In their model, a single bidder who is privately informed about their ability to create value makes a tender offer to atomistic shareholders. Because of free-riding, a successful bid must at least equal the expected post-takeover share value. Because the bidder enjoys private benefits from control, a takeover can nevertheless succeed.

Suppose that all bidder types are value-increasing. Since all active bidders must offer

[9]Ferreira et al. (2015) and At et al. (2011) were posted on SSRN in 2005 and 2007, respectively.

the same pooling price, those creating the least value would lose money at that price and refrain from bidding, implying that some value-increasing control transfers fail to occur. At, Burkart, and Lee (2011) show that issuing non-voting alongside voting shares, i.e., separating ownership and control, relaxes this problem because a bidder can gain control with fewer voting shares. As the fraction of non-voting shares rises, the loss the low-value types incur from overpaying decreases and more of them bid, which increases the probability of a value-increasing takeover.[10] Their central result, however, concerns bidder screening. If bidders can also decrease value, additional non-voting shares may allow value-destroying bids. The optimal degree of separation is therefore generally interior and decreasing in the quality of incumbent management.

Both Ferreira, Ornelas, and Turner (2015) and At, Burkart, and Lee (2011) show that *ex ante* one-share-one-vote structures may be inefficient, but the source of inefficiency differs. In Ferreira, Ornelas, and Turner (2015), it stems from two-sided asymmetric information, whereas in At, Burkart, and Lee (2011) it stems from asymmetric information on the bidder side and free-riding on the sellers' side. Because Ferreira, Ornelas, and Turner consider bilateral negotiations between two large shareholders, their set-up is best interpreted as describing negotiated transfers of control in closely held corporations, but At, Burkart, and Lee (2011) provide similar results in the context of dispersed ownership.

While Ferreira, Ornelas, and Turner need to assume that a controller must own a minimum equity stake to obtain an interior solution, At, Burkart, and Lee derive an interior solution endogenously, with an optimal amount of *ex ante* unbundling. Together, the two papers show that some separation of ownership and control can improve the efficiency of control transfers and curb CEO entrenchment in different economic settings, with asymmetric information on the buyer's side as the common ingredient.[11]

[10] In related work, Marquez and Yılmaz (2012) analyze the same pooling tender-offer game with a privately informed bidder, focusing instead on how the quality of shareholder information affects the takeover price and the division of gains. For restricted bids, their analysis of supermajority rules is equivalent to raising the fraction of voting shares, hence reducing the separation of ownership and control.

[11] A subsequent paper by Voss and Kulms (2022) delivers the same qualitative result (albeit in a more restrictive setting): unbundling control and cash-flow rights can improve the efficiency of the market for corporate control. They study a setup essentially identical to Ferreira, Ornelas, and Turner's, except that they consider a takeover mechanism in which, to acquire control, the bidder must make a take-it-or-leave-it offer to uninformed outside shareholders. Voss and Kulms's observation that the existence of outside shareholders

Burkart and Lee (2015) study how privately informed outsiders can overcome the free-riding of dispersed target shareholders. One strategy is for the bidder, rather than the target, to separate cash flow from voting rights through the terms of the offer. The most extreme strategy is a dual-class exchange offer: the bidder offers to exchange each of the target's voting shares for a non-voting share. Because they retain their entire claim to cash flow and surrender only their votes, which atomistic holders do not individually value, dispersed shareholders accept the offer. The bidder thus gains control while leaving all cash flow rights with the shareholders. By construction, the bidder pays the post-takeover security benefits and replicates the full-information allocation of control without revealing their type. In contrast to At, Burkart, and Lee (2011) and Marquez and Yılmaz (2012), in which the target's *ex ante* security-voting structure determines the set of active bidder types, here the bidder creates the separation of ownership and control *ex post* through the bid structure.[12]

In Burkart and Lee (2015) and Ferreira, Ornelas, and Turner (2015)'s control-only restructuring mechanism, the efficient allocation of control under asymmetric information can be achieved by separating control and ownership *ex post*. However, both models have a similar limitation: the controller may be left with too little equity, which may create (unmodeled) agency costs. The efficiency of separating ownership from control *ex post* thus depends on the incentives of the party left in charge.[13]

4.4 The choice of share structure at the IPO

The theories we review above ask whether control can be efficiently reallocated with a given or optimally-derived deviation from one share-one vote. Chemmanur and Jiao (2012) model the *ex ante* choice between dual-class and single-class share structures for an incum-

can improve efficiency in control transfers mirrors Ornelas and Turner (2007)'s result that efficient control transfers become more likely as the number of shareholders increases.

[12]If dispersed target shareholders are privately informed, a lemons problem compounds free-riding: at any price, only pessimistic shareholders tender, and value-increasing bids may fail (Marquez and Yılmaz 2008). In this setting, Ekmekci and Kos (2016) show that a combination of a minority blockholder and dispersion in small shareholders' information restores profitable takeovers.

[13]Burkart and Lee (2015) show that combining cash with call options is a less extreme alternative that implements the full-information outcome while leaving the bidder with a nontrivial equity stake.

bent (e.g., a founder) who initially owns all the shares of their firm. Outsiders observe only a measure of the incumbent's past reputation, so they are privately informed about their ability. They can choose between a project whose quality is quickly revealed or a more valuable project that looks less successful in the near term. When taking their firm public, the incumbent chooses either a dual-class or a single-class share structure.

Under a single-class structure, disappointing interim signals of the long-horizon project may trigger a control contest, so market discipline distorts project choice toward the short term. Dual-class shares remove this distortion by insulating the incumbent, but the same insulation lets an untalented incumbent shirk. In equilibrium, high-reputation incumbents choose dual-class structures in industries in which long-horizon projects are worth most.[14] The facts we document in Section 3 are consistent with this prediction: dual-class structures concentrate among founder-run firms operating under information asymmetries (e.g., in tech industries). However, in contrast to Chemmanur and Jiao's assumption that dual-class structures insulate incumbents from market discipline and allow them to stay longer in office, we find no clear evidence that dual-class IPO structures are associated with incumbent entrenchment in subsection 3.6.

4.5 Related contributions: auctions, contingent contracts, and the value of votes

We close this section with three recent contributions that are less directly concerned with dual-class structures, but that illuminate, from different directions, the mechanism at the center of this chapter. The first shows that the rent-reducing role of unbundling control from cash flow rights emerges in optimal auction design, reinforcing its generality. The second shows that contracting on *ex post* outcomes can substitute for and replicate the unbundling of control and cash flow rights. The third steps outside the market for corporate control altogether and shows that bundling votes with cash flow rights also distorts governance through trading. This analysis has implications for how the dual-class voting

[14] Chemmanur and Jiao also anticipate the current policy debate, proposing voting ratios that shrink at persistently underperforming firms — a performance-contingent cousin of the time-based sunsets of Bebchuk and Kastiel (2017).

premium should be interpreted.

Liu and Bernhardt (2025) extend Liu and Bernhardt's (2021) earlier analysis of rent extraction through securities-plus-cash offers by studying a classical auction setting in which a seller offers a single asset to bidders who receive private signals about its future cash flows. Valuations are interdependent, and cash flows are more sensitive to a bidder's signal when they control the asset than when a rival does. The existing auction literature considers only "no-separation" mechanisms, in which the bidder who wins control also receives all cash flows not retained by the seller. But Liu and Bernhardt show that the seller can always increase expected revenue by sometimes allocating control and cash flow rights to *different* bidders.

In their simplest design, a two-stage English auction, the highest bidder receives the cash flow rights while control is assigned to the second-highest bidder; the winner may then pay an additional fee to buy control back. The source of the revenue gain is as in the papers we review above. A bidder's information rent scales with the sensitivity of the value of their awarded cash flows to their own signal, and this sensitivity is greatest when they also run the asset. Assigning cash flows to a bidder who does not control the asset thus reduces their informational advantage, facilitating rent extraction.

As in Ferreira, Ornelas, and Turner (2015) and At, Burkart, and Lee (2011), unbundling ownership and control reduces the information rents that impede control transactions but for a different objective. Rather than increasing the efficiency of control allocations, it increases the seller's revenue—potentially at the expense of efficiency, since the mechanism sometimes deliberately assigns control to the bidder with the lower signal. Similarly, the revenue advantage of separation survives when the controlling bidder must retain a minimum equity stake, for regulatory or moral hazard reasons—the same reduced-form constraint on full unbundling Ferreira, Ornelas, and Turner (2015) adopt.

The settings that motivate their analysis—bankruptcy auctions and venture capital exits—feature a seller with the leverage to dictate how rights are assigned, and private information sits on the buyers' side only; there is no privately informed incumbent. While the authors note that their mechanisms can be implemented by issuing dual-class shares, with only one class carrying control rights, the lessons for dual-class companies are therefore

indirect. Still, the paper shows that the gains from trading control and cash flow rights separately are robust enough to arise in a canonical auction environment, without appealing to entrenchment, private benefits, or founders' preferences.

Biswas, Koufopoulos, and Trigilia (2025) revisit the antecedents of this literature, specifically the implicit assumption in Myerson and Satterthwaite (1983): the buyer's valuation remains his private information even *after* trade. If the buyer's valuation instead becomes observable and verifiable *ex post*—as, they argue, a firm's cash flows must be for external finance to be feasible—a simple bilateral mechanism implements the first best as its unique equilibrium.

The buyer announces their type; if the seller is willing to sell at that value, they transfer the firm for a spot price equal to the announcement, plus a call option on any *ex post* excess of the realized over the announced value. The option, which the authors liken to equity earnouts in acquisitions of hard-to-value private targets, makes under-reporting futile: it claws back exactly the understated portion of the buyer's valuation. Because the seller extracts the entire surplus, they sell if and only if trade is efficient. In their takeover application, the incumbent owns the firm outright, and the allocation of control is first best.

While Biswas, Koufopoulos, and Trigilia achieve efficiency seemingly without any separation of ownership and control, their mechanism is better interpreted as an extreme form of *ex post* unbundling. In equilibrium, the bidder pays exactly the value of the firm's cash flows under their own management: they gain control but relinquish the entire value of the cash flow rights to the incumbent. In value terms, only control changes hands —much as in the control-only mechanism of Ferreira, Ornelas, and Turner (2015), in which only control changes hands, and in the dual-class exchange offer of Burkart and Lee (2015), in which the bidder gains control while paying out exactly the post-takeover security benefits. What the *ex post* verifiability of cash flows allows is the contractual instrument—the earnout—through which separation can be achieved in a bilateral sale. But the conditions are demanding: the contract must be written on the value of the firm under the acquirer's management, which realized cash flows measure only imperfectly. Efficiency also requires the incumbent to extract the full surplus. When these conditions hold approximately, contingent contracts can substitute for the *ex ante* choice of a security-voting structure. When

they do not, information rents persist, and with them the case for choosing an optimal security-voting structure.

Finally, Levit, Malenko, and Maug (2026) develop a theory of the voting premium in a setting with no takeovers, no control contests, no controlling shareholder, and no private information. A minority blockholder trades against a continuum of heterogeneous small shareholders ahead of a shareholder vote. Shareholders differ in their preferences or beliefs. Because shares bundle votes with cash flow claims, accumulating voting power requires buying cash flow rights from the shareholders least aligned with the blockholder.

The blockholder's trades move the pivotal "median voter" both directly, through the votes they acquire, and indirectly, through changes in the composition of the shareholder base. The voting premium that emerges is proportional to the blockholder's *net marginal* payoff from one additional vote, which makes it behave contrary to what is assumed in empirical work. It is zero, i.e., a marginal vote is worthless, once the blockholder has bought enough votes to become the median voter. The voting premium can turn negative when small shareholders free-ride on the blockholder's trades; it typically understates the total value of voting rights; and it is not monotone in the conflict between the blockholder and minority shareholders.

Levit, Malenko, and Maug (2026) is relevant for this chapter for two reasons. First, they highlight that tying votes to cash flow rights may have costs other than the information rents in Ferreira, Ornelas, and Turner (2015) and At, Burkart, and Lee (2011), namely distortions in the accumulation of voting power through trading. Second, their results caution against interpreting the dual-class share premium—a workhorse measure of private benefits since Zingales (1995)—as a gauge of the conflict between insiders and outside investors. In their framework, a conflict that is common to all small shareholders generates no voting premium.[15] We return to the measurement of voting premia when reviewing the empirical

[15]Investors can also engineer control and cash flow rights separation themselves. Brav and Mathews (2011) model "empty voting" by an informed trader who can hold more votes than economic exposure: its informed votes typically improve decisions, but when decoupling is cheap the trader may end up net short and profit from voting to destroy value. Speit, Voss, and Danis (2024) show that hedged activists can use decoupling to commit to blocking value-increasing reforms — by Brav and Mathews's logic, cheap borrowed votes are precisely the worrying case. The broader interplay of trading and voting is studied by Bar-Isaac and Shapiro (2020), Meirowitz and Pi (2022), and Levit, Malenko, and Maug (2024).

evidence in the next section.

5 Dual-class shares and governance: Empirical literature

In Adams and Ferreira (2008) we surveyed the extensive empirical literature on one-share one vote. Systematic evidence on deviations from one-share one vote in U.S. firms was scarce at the time; thus our focus was international. We asked two main questions: what is the size of the voting premium and what is the effect of a wedge between voting and cash flow rights on firm value.

We update our review by first examining papers related to our original themes. In Section 5.1, we begin by discussing published versions of papers that circulated as working papers when we wrote our original survey. We then examine more recent work relating dual-class structures to firm value and governance.

To identify relevant papers, we conducted a Scopus search for papers on dual-class structures. The search indicates that work in the area slowed after 2010. The subject is absent from top economics journals and nearly absent from the leading management and accounting journals. The literature resides almost entirely in finance and law. Within finance, most post-2010 papers appeared in field journals, such as the *Journal of Corporate Finance*, the *Journal of Banking and Finance*, and the *Review of Corporate Finance Studies*, with only a few appearing in the *Journal of Financial Economics*. However, after a period of partial neglect, the increasing popularity of dual-class IPOs among tech firms seems to have revived academic interest in the topic.

Given that the post-2015 IPO wave we describe in Section 3 is founder-led and tech-focused, the themes in the older literature seem less relevant. Section 5.2 reviews papers studying this new wave of dual-class IPOs, with a focus on understanding the determinants of the choice of dual-class structures. In Section 5.3, we use Aran, Broughman, and Pollman's study of CEO turnover in dual-class firms to illustrate the potential of this topic to generate new insights.

5.1 Dual-class shares, governance, and firm value

Gompers, Ishii, and Metrick (2010) built the first comprehensive panel of U.S. dual-class firms from 1995 to 2002. Dual-class firms comprise about 6% of Compustat firms and 8% of the market capitalization of all firms. The modal structure is a traded low-vote class and an untraded ten-vote class held by insiders. On average, insiders hold about 60% of the votes and 40% of the cash flow rights. Insiders hold a majority of votes but a minority of cash flow rights in roughly 40% of dual-class firms, which Gompers et al. label a "separation sample."

Compared to single-class firms, dual-class firms are larger at the median, more levered, and older. A probit for dual-class status, estimated on characteristics at listing, finds that the strongest predictor is an eponymous company name, followed by membership in a media industry, a lower sales percentile at Compustat entry, and measures of the firm's weight in its local economy. Thus, in contrast to the founder-led and tech-driven post-2015 IPO wave we describe in Section 3, the dual-class universe of 1995–2002 was dominated by family and media firms.

The authors use their data to examine the inside ownership-performance relationship. They find no reliable abnormal returns for a portfolio of dual-class companies over the sample period, which the authors interpret as dual-class status having been fully priced by the market. They then conduct unconventional Fama-McBeth-style valuation regressions. They first regress monthly "industry-adjusted" Tobin's q on annual ownership variables and firm characteristics, and then average the coefficients across months.

In the full sample, the coefficient on the dual-class dummy is negative but significant only in a median regression, while the coefficient on the "wedge," defined as insider voting rights minus insider cash flow rights (zero by construction for single-class firms), is negative and generally statistically significant.[16] In a median regression in the dual-class sample, in which cash flow rights (*CF*) and voting rights (*Vote*) can be entered separately, the *CF* coefficient enters positively, while the *Vote* coefficient is negative, and both are statistically precise.

[16]The published results differ from the 2006 working paper version reviewed in Adams and Ferreira (2008) as the wedge was only significant in a median regression.

Gompers, Ishii, and Metrick (2010) attempt to address the endogeneity of dual-class status using listing-time firm characteristics as excluded instruments in Heckman and IV regressions. However, their own diagnostics suggest this approach is flawed. After realizing that the media dummy is correlated with q, the authors demote it from instrument to control. It is not obvious why eponymy should fare better, since a person's name in the firm's name proxies for founder and family presence, which a sizable literature links directly to valuation (Anderson and Reeb 2003, Adams et al. 2009).

This concern was also raised by Bennedsen and Nielsen (2010), which we discussed as a working paper in Adams and Ferreira (2008). Thus, the validity of the exclusion restrictions is questionable. Moreover, as the authors themselves note, they have a possible weak instruments problem. In the instrumented results, the *Vote* coefficients lose significance almost entirely, while the *CF* coefficients generally retain it. The strongest evidence comes from the separation sample, in which insider control is fixed and only cash flow rights vary. There, *CF* enters positively and significantly in three of five IV specifications, but with first-stage *F*-statistics below the conventional threshold of ten.

It is therefore difficult to interpret the results causally. Notably, however, the positive cash-flow result is the only finding that survives all of the paper's estimation approaches. This echoes a conclusion in Adams and Ferreira (2008) that the effects associated with a "wedge" are often driven by cash flow, not vote concentration.

Masulis, Wang, and Xie (2009) use the dual-class list in Gompers, Ishii, and Metrick (2010) to ask how the divergence between insider voting rights and cash flow rights lowers outside shareholders' wealth. That it does so is maintained. They examine samples of varying sizes between 1995 and 2003. The largest sample contains 2,440 firm-years for 503 dual-class firms, in which insiders hold on average 67% of the votes and 39% of the cash flow rights. They measure excess control rights using the ratio of insider voting rights to insider cash flow rights. The paper provides four results. First, the marginal value of a dollar of corporate cash balances to holders of the inferior class declines with the ratio. Second, CEO total compensation rises with the ratio. Third, acquirer announcement returns on the inferior-class stock decline with the ratio, and deals that the market perceives negatively are less likely to be withdrawn when the ratio is high. Fourth, the sensitivity of

shareholder value to large capital expenditures declines with the ratio. In the subsample in which insiders hold more than half of the votes, all four coefficients have the same sign, larger magnitudes, and stronger significance. These patterns also hold when dual-class firms are compared with propensity-matched single-class firms. In a subsample in which both classes of stock trade, a measure of excess CEO pay is positively related to the voting premium, in the tradition of Zingales (1995). In light of recent theoretical work by Levit, Malenko, and Maug (2026), however, it is unclear whether the premium measures private benefits.

In contrast to Gompers, Ishii, and Metrick (2010), Masulis et al. do not attempt to address endogeneity. They argue that credible instruments for ownership structure are unavailable and cite evidence that weak instruments can produce worse estimates than uncorrected least squares. Thus, their evidence remains mostly correlational. The observation in Adams and Ferreira (2008) on composite separation measures also applies here. The ratio rises with insider votes and falls with insider cash flow rights. Because the two components are never entered separately, the estimated effects may be driven by cash-flow concentration rather than votes.

Smart, Thirumalai, and Zutter (2008) take the valuation question to IPO firms. They study 2,622 U.S. IPOs from 1990 to 1998, of which 253 are dual-class, and follow each firm for five years. Relative to earnings and EBITDA, they find dual-class firms trade at lower prices than single-class firms at the IPO, and in every year after it. The discount does not forecast poor performance; subsequent stock returns and accounting returns are not abnormally low. Their interpretation is that the price of the structure is paid once, at the IPO, by the insiders who sell shares at a lower multiple. CEO turnover is slightly less frequent at dual-class firms and less sensitive to accounting performance than at single-class firms. The 37 firms that unify their classes within five years earn abnormal returns of 5 to 6 percent around the unification.

Both headline results have aged in instructive ways. The IPO discount is the opposite of the matched premium in Cremers, Lauterbach, and Pajuste (2024). This reversal may reflect the samples as much as the methods, since the dual-class population of the 1990s was heavy in carve-outs and light in founder-led technology firms. The turnover result is

the opposite of the performance sensitivity that Aran, Broughman, and Pollman (2025) find in venture-backed firms two decades later, a contrast we return to below.

Bauguess, Slovin, and Sushka (2012) study restructurings in the opposite direction: mature single-class firms that recapitalize into dual-class structures. Their sample contains 142 U.S. recapitalizations between 1978 and 1998. The typical firm is closely held before the change, with dominant shareholders (often founding families), holding on average 47% of the shares. Hence, protection from hostile bids is an unlikely motive, and the announcement return is close to zero. Over the three years after the change, insiders' economic ownership falls by five percentage points while their voting control rises by thirteen. At firms where insiders sell at least 2% of the firm's equity, industry-adjusted profitability and capital expenditures rise, the firms refocus on core operations and divest non-core assets, and equity betas and earnings volatility rise from below industry levels to industry norms.

The takeover market remains active after dual-class recapitalizations. About half of the sample firms are acquired by 2004, at the same rate as a matched single-class benchmark. The likelihood of acquisition rises with insider ownership, and takeover premiums are higher than the benchmark premium. In every takeover, both classes receive the same price per share.

The authors' interpretation is that ex post unbundling of voting and cash flow rights lets an undiversified controller sell down cash flow rights without ceding control, which weakens the controller's aversion to risky investment and facilitates negotiated control transfers later on. The authors interpret the takeover results as consistent with Ferreira, Ornelas, and Turner (2015). The paper is important for documenting potential benefits of separation that are unrelated to visionary founders. The caveats are the standard ones. The results are descriptive, as the choice to recapitalize is endogenous. Tobin's q comparisons are insignificant and reported only in a footnote, so the market-value counterpart of the operating results is missing.

In our 2008 survey article, we ended by asking when dual-class shares add value. Some recent papers examine this question. Cremers, Lauterbach, and Pajuste (2024) inject a time dimension into the valuation question. Their sample covers U.S. IPOs from 1980 to 2019 and contains 695 dual-class firms. Each dual-class IPO firm is matched on industry, assets,

and pre-IPO profitability to a single-class IPO firm within 2 years of the IPO date, yielding 563 pairs. In the full sample, dual-class firms trade below single-class firms on average, but this difference is statistically significant only from the fifth year after the IPO. In the matched sample, the difference reverses early in the life cycle. At the IPO year-end, mean Tobin's q is 3.20 for dual-class firms and 2.81 for their matches, a premium of about 14%. In regressions with controls, the premium is significant at the IPO year-end, positive through year 6, and becomes a discount of about 0.2 from year 7 onward.

This premium is a founder phenomenon. At the IPO, a founder holds a top position in 52% of dual-class firms versus 40% of their matches. Only dual-class firms with founder-managers below the sample median age of 49 command an IPO premium, about 0.7 in q relative to single-class firms. The subsequent discount is linked to insiders' control-ownership wedge, which rises on average over the first eight years from 15% to 23% as their mean equity stakes fall (from 44% to 34%). The discount in years 7 and 8 is concentrated in firms whose wedge widened. Unification is rare. About 18% of dual-class firms unify within nine years of the IPO, and the annual unification rate peaks four to six years after the IPO and then falls. The authors conclude that the evidence supports the life-cycle argument of Bebchuk and Kastiel (2017) and time-based sunsets that trigger no earlier than seven years after the IPO.

In earlier samples, dual-class firms were larger, older, and concentrated in different industries. Cremers et al.'s results highlight that sample composition makes it difficult to isolate the effect of dual-class structure. With industry, vintage, size, and profitability held fixed, young dual-class firms trade at a premium. Their founder results fit the facts in Section 3 and the theories we review in Section 4, in which separation is most valuable when the insider's information or vision matters most. The authors acknowledge that their results are descriptive but suggest that an alternative explanation — that firms in high demand at the IPO obtain both high valuations and dual-class terms — is not mutually exclusive.

Anderson et al. (2023) reinforces the idea that sample composition can confound dual-class effects. They show that in Russell 3000 firms from 2001 to 2017, dual-class status is confounded with family control to a similar degree as in Cremers et al.'s sample — 89%

of dual-class firms have a founding family holding the super-voting class. As a result, they argue that comparing dual-class firms to single-class firms without accounting for controller identity may be misleading. They find that low-voting shareholders in dual-class family firms earn a "control risk premium" of roughly 250 basis points per year relative to non-family single-class firms; the premium is absent in the small subset of dual-class firms without family control, and a smaller but positive premium exists even in single-class family firms.

Anderson et al. suggest that having a dominant shareholder in the form of a founder and descendants may better explain the control risk premium than the share structure. Moreover, they suggest that minority investors appear to be compensated for expropriation risk rather than harmed by it, in contrast to the pure valuation-discount interpretation of Gompers et al. (2010). Since family control is not randomly assigned, however, this compensating-premium interpretation is difficult to distinguish from one in which the same founder-specific skill or information driving Cremers et al.'s IPO premium also generates the higher subsequent returns they document.

Kim and Michaely (2019) study the same life-cycle question as Cremers et al. (2024) over a much longer horizon. They assemble a dataset of corporate voting rights for 920 dual-class firms from 1971 to 2015, recording the voting terms of each share class, recapitalizations into and out of dual-class status, and, for the subsample in which both classes trade, the price premium of the superior voting shares. They hypothesize that the net benefits of dual-class voting are positive for young firms and decline with maturity for information-related reasons. In young firms, insiders' payoffs depend more on future value than current private benefits, the founder has important firm-specific knowledge, and outside investors know little about investment quality, so insulation from market pressure is valuable. These are exactly the conditions under which the theories in Section 4 predict that separation is valuable. Although dual-class recapitalizations and unifications are endogenous, market reactions to announcements of these events lend some support to these arguments. Dual-class recapitalizations earn positive abnormal returns of about 3.5% at young firms, but negative abnormal returns at mature firms. Unifications earn 4.4% at mature firms and nothing at young ones.

Theory also helps to explain why Kim and Michaely's voting premia are about 3.8 percentage points higher at mature dual-class firms (past the sample median age of twelve listed years) than at young ones. In Levit, Malenko, and Maug (2026), the value of a vote derives from a trader's ability to affect outcomes. While a premium that rises as dual-class firms mature is consistent with rising private benefits, as Kim and Michaely argue, it is also consistent with voting outcomes becoming more contestable as insiders' stakes erode.

In panel regressions, young dual-class firms trade at roughly a 9% premium to single-class peers and lose about 10 points more of Tobin's q as they mature. Similarly, relative margins, labor productivity, innovation output, and the responsiveness of investment to opportunities all deteriorate as dual-class firms age. Yet only 15% of the dual-class firms that went public between 1994 and 2015 unified by the end of the sample. While two-thirds have sunset provisions, most are transfer- or ownership-based and hence within the controller's discretion. Kim and Michaely suggest that effective sunsets may be those that controllers cannot game, such as age triggers or periodic votes of the inferior class.

Moortgat et al. (2025) examine pre-war Belgium, a time in which dual-class firms were extremely popular—in 1930, they represented 50% of the market capitalization of the Belgian Stock Exchange (BSE)—to try to identify causal effects of dual-class structures. They exploit two events: the BSE's 1930s attempt to name and shame dual-class firms using name markers, one asterisk for firms adopting dual-class structures at incorporation and two asterisks for firms that adopted dual-class structures later (mostly post IPO), and the 1934 abolishment of dual-class structures by the Belgian parliament.

The results are remarkably consistent with previous life-cycle evidence. Shareholders of early adopters experience no asterisk effect and a slight negative reaction to the abolishment, while shareholders of late adopters react extremely negatively to the introduction of asterisks and positively to the abolishment.

It is generally difficult to conduct event studies around the passage of laws. One reason is that they induce cross-sectional correlation in CARs (e.g. Eckbo et al. 2022) that Moortgat et al. do not account for. It is also not clear how early adopters/late adopters compare to young/mature firms in other settings. But the paper provides much-needed evidence on regulatory interventions. At the time we wrote our original survey, the European Commis-

sion was weighing whether to restrict deviations from one-share, one-vote, but ultimately abandoned that attempt. Thus, the events in this paper are useful for helping to assess policy counterfactuals.[17]

Few papers go beyond examining valuation. Baran and Forst (2015) examine whether dual-class firms with a greater separation between insiders' voting rights and cash flow rights have stronger or weaker boards. They examine how board characteristics vary with the wedge between voting and cash flow rights, using a sample of 1,108 firm-years (189 firms), reduced from an initial 3,730 dual-class firm-years (557 firms) from 2000–2012 after matching to RiskMetrics board data. They find that firms with larger voting-control wedges have boards that are less independent, less experienced, and more likely to include employee and family directors, while directors are older and have longer tenure. They interpret this as consistent with entrenchment; i.e., insiders seem able to shape board composition in ways that weaken oversight. A key limitation they acknowledge is endogeneity. Perhaps more importantly, the board characteristics they examine need not relate to entrenchment. As Adams and Ferreira (2007) point out, for example, what may look like "friendlier" boards may be more effective at monitoring.

In Section 3, we did not find that dual-class IPOs had significantly different boards from those of single-class IPOs along the dimensions we examine. Our sample is larger than in Baran and Forst (2015) and encompasses the recent rise of dual-class firms. The fact that our findings differ raises interesting questions about whether board structures have evolved since Baran and Forst (2015)'s sample period in line with the evolution of dual-class structures.

Papers by Dey et al. (2015), Xu (2021), Palas and Solomon (2022), Palas et al. (2023), Dayani (2026), and Ma and Zhao (2026) reinforce the idea that looking beyond valuation yields a more nuanced picture of dual-class firms. Dey et al. (2015) argues that debt can act as a complementary governance mechanism in dual-class firms, helping to mitigate agency conflicts associated with disproportionate control rights. Palas and Solomon (2022) suggest that dual-class firms provide higher-quality financial reporting, and Palas et al. (2023) sug-

[17]Two recent papers (Becht et al. 2020, Bourveau et al. 2022) provide useful analyses of other regulatory interventions in the one share-one vote space, in this case the Florange Act.

gest that reporting quality increases with the wedge, consistent with managerial insulation improving disclosure incentives. Dayani (2026) documents that dual-class firms issue more voluntary earnings guidance, particularly when conveying bad news, while maintaining comparable disclosure quality. Finally, Ma and Zhao (2026) show that dual-class firms are particularly attractive targets for shareholder activists because proposals are more likely to reach a shareholder vote, indicating that these firms' governance environment creates opportunities for activists to build reputation. Taken together, these studies suggest that the separation of ownership and control need not weaken accountability.

5.2 The recent rise in dual-class offerings

Howell (2017) provides a useful corrective to the impression that dual-class structures are a recent phenomenon by examining their history. In the U.S., nonvoting common stock first appeared in 1898, when the International Silver Company authorized the issuance of 20 million shares of which eleven million were nonvoting common shares. A wave of similar issues in the 1920s triggered such vocal criticism by academics, including William Ripley and Adolf Berle, that by 1926 the NYSE refused to list nonvoting common stock. But dual-class structures re-emerged during the takeover wave of the 1980s in the form of midstream recapitalizations. After the courts struck down the SEC's attempt to regulate recapitalizations, the exchanges converged in 1994 on a uniform policy that still governs: a firm may go public with multiple classes of stock, but a listed firm may not reduce the voting rights of its existing shareholders.

Using SDC data and SEC filings, Howell counts dual-class IPOs from 2003 to 2013. Of 1,142 offerings, 140 (12.3%) are dual-class, and they account for 28% of IPO proceeds. The share nearly doubles after the financial crisis, from 9.4% of IPOs in 2003–2008 to 16.5% in 2009–2013. These results are a preview of the trends in Field and Lowry (2022) and Aggarwal et al. (2022) and Figure 1. The gap Howell documents between the proceeds share and the count share also anticipates Fact 2: dual-class issuers are large.

Howell interprets a century of dual-class persistence through Alchian's (1950) survival test: organizational forms that survive do so because they are useful. However, natural

selection operates through competition and exit. Since dual-class structures blunt a main exit mechanism, the market for corporate control, their persistence may signal that they benefit those who choose them rather than maximize the value of outside equity. Their persistence is also consistent with the bargaining explanation in Aggarwal et al. (2022), which we discuss below.

Field and Lowry (2022) ask why controversial governance practices like dual-class structures have become more common among newly public firms even as they have declined among mature firms. In their sample of U.S. IPOs from 1988 to 2017, the fraction of IPO firms with dual-class stock more than doubled, rising from under 10% before 2000 to over 25% by 2017, while the fraction among S&P 1500 firms fell from roughly 12% to 7%. They explore two hypotheses: an *optimal governance hypothesis*, under which dual-class structures efficiently insulate value-creating insiders from short-term market pressures (most plausibly at firms with high information asymmetry), and an *agency hypothesis*, under which founders adopt the structure to entrench themselves and preserve their private benefits of control. They infer firms' motives by examining how mutual funds vote in director elections. They find mutual funds appear less likely to support directors of dual-class IPO firms, especially when firms' voting–cash-flow wedges and "agency indexes" could raise agency concerns.[18] The pattern is more pronounced among funds that do not automatically adopt ISS's voting recommendations.

Field and Lowry also show that the upward trend in dual-class structures is concentrated among high-agency issuers and that venture-backed firms, whose investors have strong incentives to impose value-maximizing governance, are less likely to go public with dual-class structures. Over most of the sample, dual-class IPOs are markedly less likely to be venture-backed than single-class IPOs (21% versus 43% over 1988–2014), although this gap closes sharply in the final years (46% versus 48% over 2015–2017).

Field and Lowry highlight that not all dual-class firms fit the standard portrait of a founder-led technology firm whose insiders hold a lock on votes. Over the full sample

[18]Their agency index is the sum of four indicator variables, each flagging a potential channel through which insiders are entrenched or weakly incentivized: (i) the firm is a founder firm (the CEO or chair is a founder); (ii) the CEO's tenure is above the sample median; (iii) the CEO is also chairman of the board (CEO–Chair duality); and (iv) the firm operates in an industry with below-median incentive pay.

period, only about a third of dual-class IPOs are founder firms, and in nearly 60% of them the CEO controls less than a tenth of the votes. In about 22% of dual-class IPOs, a corporate parent rather than a founder holds the superior voting class through an equity carve-out. These carve-outs behave very differently from founder firms: within five years, 30% unify their shares and 32% are acquired, versus 6% and 15% for matched non-carve-outs; among those still trading at year five, 51% convert to a single class versus only 9% of non-carve-outs.

Founder-controlled structures, in contrast, tend to persist, potentially because newly public firms face weaker external discipline (fewer than 4% receive a shareholder proposal in a given year over their first five years, against roughly 17% for mature firms). Field and Lowry argue their evidence suggests powerful founders use dual-class stock to shield themselves from subsequent market discipline, an option made possible by the growing supply of private capital. While they examine voting on director elections, they do not examine directors' characteristics directly. Our analysis in Section 5 does not suggest that boards of dual-class and single-class IPOs look different, at least superficially, so this raises interesting questions about the individual characteristics mutual funds associate with "weak monitors".

Aggarwal et al. (2022) assemble a dataset of nearly 6,000 U.S. IPOs from 1994 to 2019 and classify their controllers into founder, parent or holding company, private-equity fund, non-founder officer/director, VC firm, or family.[19] They also compute the wedge between votes and cash flows. Aggarwal et al.'s central finding is that the rise in dual-class IPOs (to roughly 30% of offerings in 2017–2019) is driven almost entirely by founder-controlled firms that comprise almost half of all dual-class IPOs: founder-controlled dual-class offerings grew from 3% of all IPOs in 1994–2006 to 19% in 2017–2019, while the frequency of other controller types stayed flat.

In founder firms, public shareholders' voting rights sit about 23 percentage points below their economic rights, against roughly 13 points elsewhere. They attribute this to

[19] Aggarwal et al. (2022) exclude tax- and regulation-driven structures (UP-Cs, FCC-constrained media firms) but include foreign issuers, whereas Field and Lowry (2022) exclude foreign issuers and keep carve-outs and UP-Cs. Their dual-class data are therefore not directly comparable to each other or to our data in Section 3.

founders' bargaining power: control rights are negotiated at the IPO, and founders extract more of them when their outside options are stronger. Consistent with this interpretation, two proxies for the supply of private capital — industry "dry powder" and late-stage VC financing — predict a higher probability of founder control and a larger founder wedge but are unrelated to control by parent companies or PE funds.

A difference-in-differences design around the 2006 diffusion of cloud computing, which lowered the capital needs of software and web-based firms, suggests that these firms became markedly more likely to go public with founder control, especially when VC-backed. The same bargaining logic extends to exit clauses: founder-controlled firms are substantially less likely to adopt the time and ownership sunset provisions advocated by Bebchuk and Kastiel (2017).

Their evidence suggests that sophisticated pre-IPO investors do not discipline dual-class structures. VC backing is unrelated to the probability of dual-class or founder control and the founder wedge. Founder-led dual-class firms, initially less likely to be VC-backed, have become increasingly so, which the authors interpret as a weakening of VCs' governance role over time. Within the VC-backed sample, however, more financing rounds are associated with less founder control and a smaller founder wedge. Field and Lowry (2022) and Aggarwal et al. (2022) agree on the central facts: dual-class structures are concentrated among founder-led firms in the last decade; the population of dual-class issuers is heterogeneous, with Field and Lowry's carve-outs largely coinciding with Aggarwal et al.'s parent-controlled category; and the late-sample convergence in VC-backing signals an erosion of VCs' bargaining positions. But the studies differ in their interpretations. Field and Lowry (2022) conclude that the agency hypothesis best explains dual-class adoption. Aggarwal et al. (2022) highlight bargaining explanations and remain agnostic on efficiency, citing evidence that markets attach relatively high valuations to dual-class IPOs (Cremers et al. 2024).

Our evidence in Section 3 confirms that the concentration of dual-class structures in founder-led and technology IPOs is a recent phenomenon. However, our extension of the venture capital data beyond 2017 yields additional insights. The VC-backed dual-class share continues to climb beyond the sample periods in Field and Lowry (2022) and Aggar-

wal et al. (2022), and VC-backed tech offerings become the group with the highest value-weighted incidence of dual class (Tables 2 and 3). The rarity of venture backing among dual-class IPOs—the pattern that invites the interpretation of VCs as enforcers of one share-one vote—is thus specific to the earlier part of this paper's samples: in the decade after 2015 the gap disappears and, among tech firms, reverses. This is consistent with Field and Lowry's account of weakened VC bargaining power, but equally with venture capitalists having no general objection to dual-class structures when they suit the firm.

As a final point, we note that it is not obvious why founders spend their bargaining power on control rather than on price. Founders could demand control for private benefits or for the information-based reasons that we discuss in Section 4. Thus, on this margin, the evidence does not separate the agency hypothesis from optimal governance.

5.3 Dual-class shares and CEO turnover

Aran, Broughman, and Pollman (2025) provide the first systematic evidence on CEO turnover in the recent generation of dual-class firms—the question we examine in Section 3.6 with our own data. Starting from Jay Ritter's IPO lists between 2002 and 2020, they classify a firm as dual-class if it issued high-vote stock to insiders, which excludes UP-C and other tax- or compensation-driven multi-class structures, and end with 79 dual-class firms. Each firm is matched to two single-class firms on size, employment, IPO year, and industry. From IPO prospectuses, they hand-collect the CEO's voting power, the wedge between voting and cash-flow rights, founder status, and any sunset clauses. They then track every CEO departure through mid-2025, using press coverage to classify their causes as either *standalone* turnover, in which the board replaces the CEO or the CEO resigns, or *transaction-related* turnover, in which the tenure ends because the firm is acquired or delisted.

Their main result appears, at first glance, to vindicate the entrenchment view: the median time from IPO to CEO turnover is 5.6 years at dual-class firms against 4.4 years at matched single-class firms, estimated by Kaplan–Meier methods on completed and ongoing spells. However, decomposing turnover by cause tells a different story. Transactions drive the entire gap: single-class firms are twice as likely to be acquired (32% versus 16%),

and there is no difference between the two groups in the cumulative incidence of standalone replacement (annual standalone turnover probabilities are 7.0% and 7.6%).

They also find that dual-class status does not weaken the link between performance and turnover. Adapting the framework of Jenter and Lewellen (2021), they estimate that 66% of CEO departures at dual-class firms are performance-induced, against 59% at single-class firms, a difference indistinguishable from zero, and in line with estimates from broader public-firm samples. Turnover is unrelated to the CEO's voting power or wedge, though the voting power of the firm's VC investors does predict turnover. Finally, announcements of standalone turnover at dual-class firms are followed by positive abnormal returns, against near-zero or negative returns at single-class firms.

These results align closely with our evidence, which is noteworthy given the differences in data and design. Our sample is broader—all core operating-company IPOs from 2000 to 2025, not only venture-backed ones, with 466 dual-class firms against their 79. More importantly, the two designs treat acquisitions differently. Aran et al. consider a sale of a firm to end its CEO's tenure. In our data, an acquisition typically removes the firm from coverage, so the CEO's spell is censored rather than counted as a separation. Our survival time estimates therefore correspond most closely to Aran et al.'s standalone results.

On that, our analyses agree: we find no economically or statistically meaningful difference in expected years in post over the decade after the IPO (Table 14). Their transaction evidence also confirms, in the data, the selection concern we raised when discussing observed separations: acquisitions are indeed more common at single-class firms, thus tenure comparisons that ignore how firms exit the sample can be biased. However, we note that with our "naive" correction for acquisitions (the "pooled" results in Table 12), we still find lower time to separation among dual-class CEOs. However, our sample is quite different, and we do not know whether CEO replacement due to acquisition is really lower among dual-class companies in our sample.

Since Aran, Broughman, and Pollman's sample has only 79 dual-class firms, their estimates can be imprecise. Their venture-backed sample sits precisely in the founder-led technology corner of the dual-class population, so their findings need not extend to the parent- and family-controlled structures documented by Field and Lowry (2022) and Aggarwal,

Eldar, Hochberg, and Litov (2022). But the convergence of results across independent samples, data sources, and methods is notable. Dual-class structures do not seem to detectably shield CEOs from replacement, nor weaken the sensitivity of replacement to performance.

6 Directions for further research and conclusions

Why do founders often prefer to take their companies public with dual-class shares? The conventional explanation is that founders want to remain in power—especially as CEOs—to extract private benefits at the expense of outside shareholders. As we showed in this chapter, this explanation suffers from theoretical and empirical weaknesses. The theoretical literature shows that unbundling control and cash flow rights may facilitate efficient control transfers. Empirically, to date there is no robust evidence that CEOs at IPO—including founders—are more entrenched at dual-class than single-class firms. If dual-class shares enable founders to consume private benefits, these might come in forms other than long tenure.

Founders and powerful CEOs may prefer to go public with dual-class shares if these structures give them more discretion to implement their vision. Indeed, Adams, Almeida, and Ferreira (2005) show that CEOs have greater impact on firm performance when they are more powerful; the evidence is particularly strong for founder-CEOs. Thus, the question is perhaps not how long a person holds a role, but instead how much impact they can have in that role.

The literature on dual-class entrenchment concedes some potential benefits of empowering visionary CEOs, which are typically conditional (Chemmanur and Jiao 2012) or temporary (Bebchuk and Kastiel 2017, Cremers et al. 2024). But the fact that shareholders seem keen on empowering CEOs even if they are long-tenured is difficult to reconcile with time-limited benefits from visionary CEOs.[20] It may be that shareholders do not know any better. It may also be that we need new governance models (Hart and Zingales 2022).

One potentially fruitful research direction is the development of new theories on the costs and benefits of visionary CEOs, their relation to shareholders, and the role of dual-

[20]Tesla's move from Delaware to Texas is one such example.

class structures in implementing a particular vision. The organizational economics literature on managerial vision offers a promising starting point. Rotemberg and Saloner (2000) show that the employment of managers with a strong vision can be value-increasing. They consider a setup in which employees make non-contractible, strategy-specific investments *ex ante*. In their model, employing a manager with a strong bias towards a particular business strategy serves as a commitment device, thus incentivizing employees to make value-increasing investments. In related work, Van den Steen (2005) models managerial vision as a strong prior belief in a world of multiple priors. He shows that employing a visionary leader leads to sorting: the firm is more likely to attract and retain employees who share the leader's vision. Ferreira and Rezende (2007) study the credibility of managerial vision and show that reputation concerns lend credence to a visionary leader's bold public statements.

In what probably is the first theoretical analysis of governance structures with visionary CEOs, Jiang and Laux (2024) consider the relationship between a board and CEO in a world of multiple priors, as in Van den Steen (2005). They show that a shareholder-aligned board often gives a CEO with a strong vision greater latitude, even when it believes the CEO is wrong. Overruling a CEO with a strong vision backfires because it undermines their incentives.

At a time of significant unease and technological disruption, incorporating these concepts of "vision" into governance research seems urgent. CEO vision is likely to be more relevant for innovation in times like these, as the trends in our data suggest. Shareholders who share a CEO's vision may worry that future checks and balances on the CEO's power could prevent the CEO from implementing it, opening the door for the security-voting structure to play a role.

While competitive pressure can substitute for visionary leadership by pushing firms towards pursuing specialized business strategies (e.g., Ferreira and Kittsteiner 2016), competition may not achieve the same outcomes if shareholders' preferences depend not only on pecuniary benefits but also on the vision itself. For example, an investor with thousands invested in SpaceX told Bloomberg journalists (Bloomberg News 2026): "This feels like the appetizer. You have to believe in Elon, (...) I'm willing to overpay for it just to say I'm part of the thing."

As in theories of sustainable investing (e.g., Heinkel et al. 2001), if investors have nonpecuniary preferences, they will tilt their portfolios towards stocks with attributes they desire and away from those they do not. Dual-class shares may allow CEOs the discretion they need to pursue moonshot projects that some investors crave, at the potential expense of driving away others.[21]

Empirically, much work remains. First, the literature would benefit from incorporating more recent one-share-one-vote theories into empirical design and interpretation. Other promising avenues for empirical research include investigating whether dual-class structures relate to CEOs' ability to implement their visions. Do dual-class shares increase CEO power? Do they make firms more "agile," as Lehn (2021) argues? How do dual-class structures affect long-term investments, especially in intangibles and acquisitions? How do security-voting structures relate to uncertainty, information asymmetry, and volatility?

But, more fundamentally, it is important to ask what vision even is and whose vision is worth ceding power to. Is vision driven by values, as the analysis in Adams and Licht (2025) might suggest, or can it be orthogonal to them, as the behavior of some "visionary" CEOs and their firms' strategies suggest (e.g., Graeber 2026)? Will empowering visionary CEOs solve global problems, such as global warming, as some argue (e.g., Pacces 2023), or will it exacerbate them? Even if founders do not entrench themselves, will their power spill beyond the boundaries of their roles and the firm? Does power always grow to exceed initial mandates? In a time in which (shareholder) democracy is under threat, when is ceding power socially optimal? These are questions we hope future work will address.

[21] In response to growing investor demand for Musk-free market exposure, Subversive introduced ETFs that exclude any shares associated with Elon Musk (Lee 2026).

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A Figures

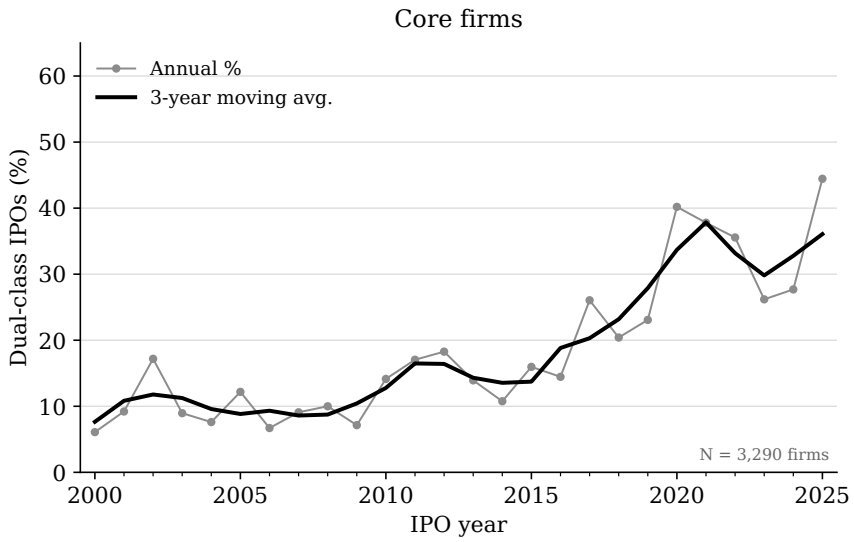


Figure 1: Share of dual-class IPOs: U.S. core firms, 2000–2025

This figure plots, for each year from 2000 to 2025, the percentage of U.S. initial public offerings completed with a dual-class share structure, for the core sample of 3,290 firms. *Dual-class* equals one if the firm's common equity comprised more than one class of stock with differential voting rights as of the offering. Core firms are operating companies, excluding SPAC shells, closed-end funds, REITs, master limited partnerships, and other investment vehicles, not organized as UP-C structures, and with a verifiable share price above five dollars in the first month after the IPO. Firms that reached public markets through a completed SPAC merger are retained as operating companies. The thin line is the annual percentage and the thick line is a three-year centered moving average. The IPO universe and at-issue characteristics, including dual-class status, are from Jay Ritter's IPO database, matched to Compustat and CRSP.

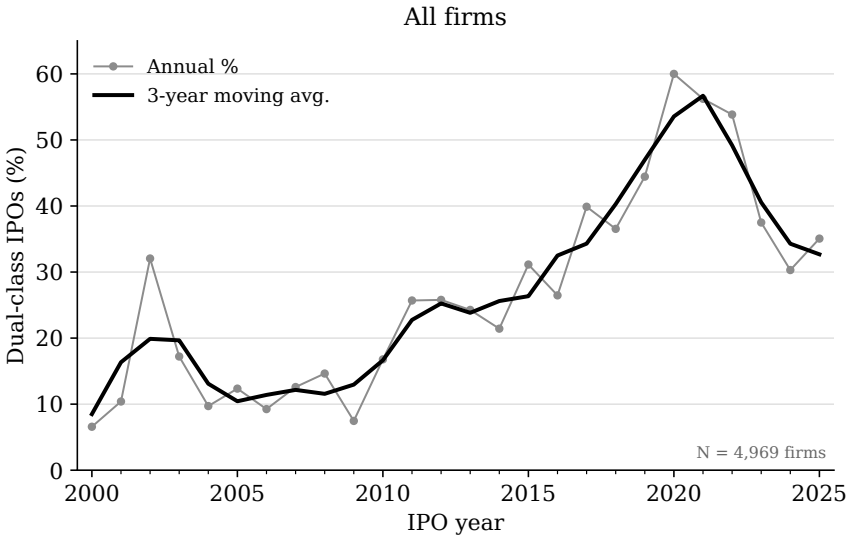


Figure 2: Share of dual-class IPOs: All firms, no filters

This figure plots, for each year from 2000 to 2025, the percentage of U.S. initial public offerings completed with a dual-class share structure, for the full sample of 4,969 offerings with available data and no sample filters. *Dual-class* equals one if the firm's common equity comprised more than one class of stock with differential voting rights as of the offering. The thin line is the annual percentage and the thick line is a three-year centered moving average. The IPO universe and at-issue characteristics are from Jay Ritter's IPO database, matched to Compustat and CRSP.

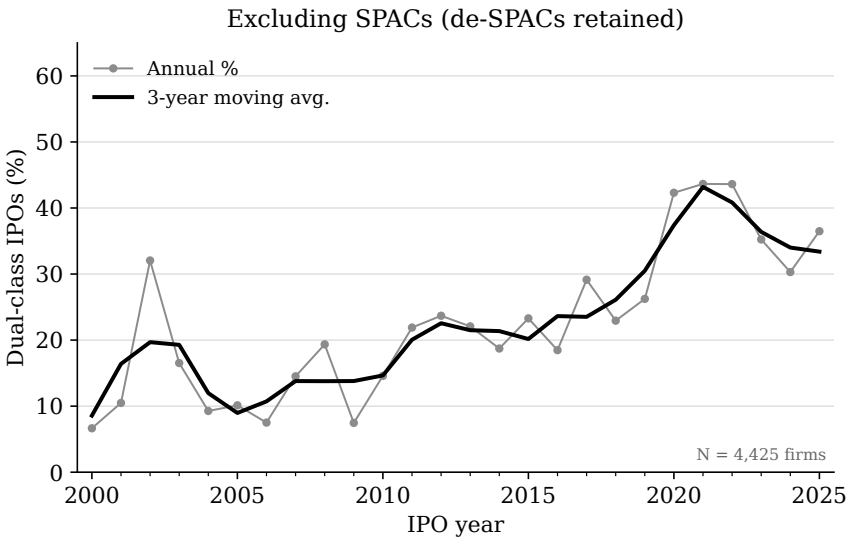


Figure 3: Share of dual-class IPOs: Excluding SPACs

This figure plots, for each year from 2000 to 2025, the percentage of U.S. initial public offerings completed with a dual-class share structure, excluding blank-check SPAC shells (4,425 firms). Firms that reached public markets through a completed SPAC merger are retained and classified as operating companies. *Dual-class* equals one if the firm's common equity comprised more than one class of stock with differential voting rights as of the offering. The thin line is the annual percentage and the thick line is a three-year centered moving average. The IPO universe and at-issue characteristics are from Jay Ritter's IPO database, matched to Compustat and CRSP.

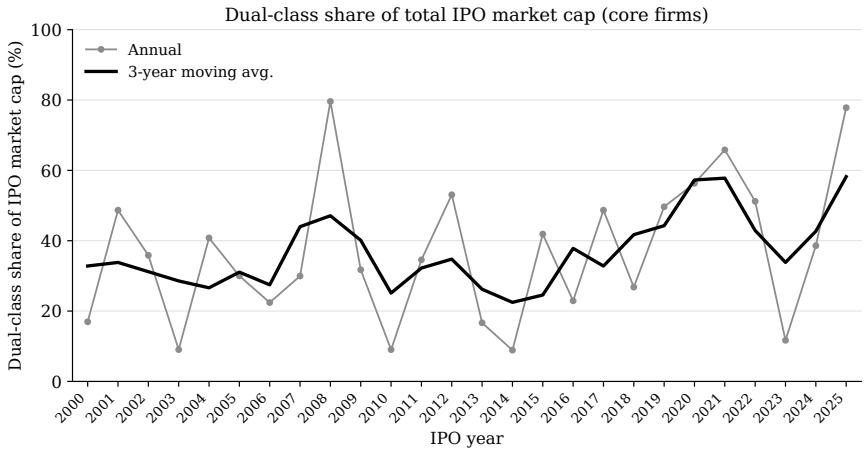


Figure 4: Dual-class share of total IPO market capitalization

This figure plots, for each year from 2000 to 2025, the combined IPO market capitalization of dual-class IPO firms as a percentage of the combined IPO market capitalization of all IPO firms, for the core sample described in Section 3. *IPO market capitalization* is the product of total common shares outstanding across all share classes and the traded-class share price in the IPO fiscal year, from Compustat and CRSP; *dual-class* status is measured at the offering, from Jay Ritter's IPO database. The thin line is the annual percentage and the thick line is a three-year centered moving average. The series is more volatile than the count-based series because a few large offerings dominate the dollar total in any year; the 2008 spike is due to a single offering (Visa).

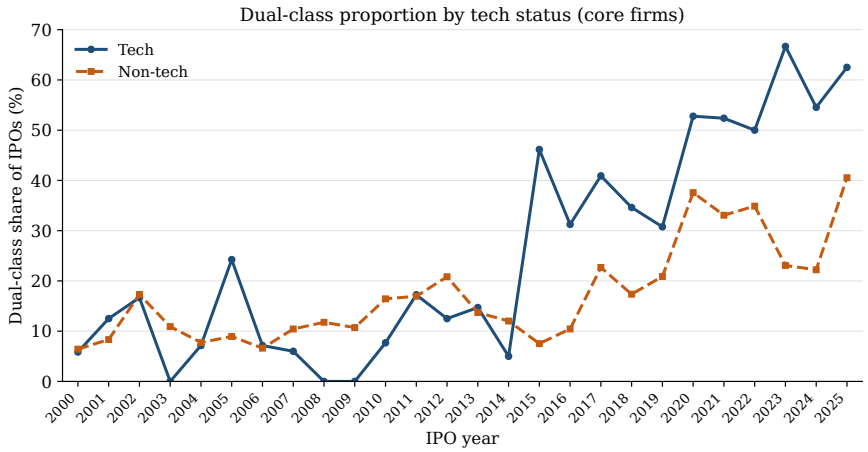


Figure 5: Share of dual-class IPOs: Tech vs. non-tech

This figure plots, separately for technology and non-technology firms in the core sample, the percentage of IPOs in each year from 2000 to 2025 completed with a dual-class share structure. *Technology firm* equals one if the firm's primary industry falls within the Loughran–Ritter high-technology list, which comprises computing, communications, electronics, instruments, and software-and-services industries and excludes biotechnology and pharmaceuticals. *Dual-class* status is measured at the offering. Lines are three-year centered moving averages of the annual percentages. Data are from Jay Ritter's IPO database, matched to Compustat and CRSP.

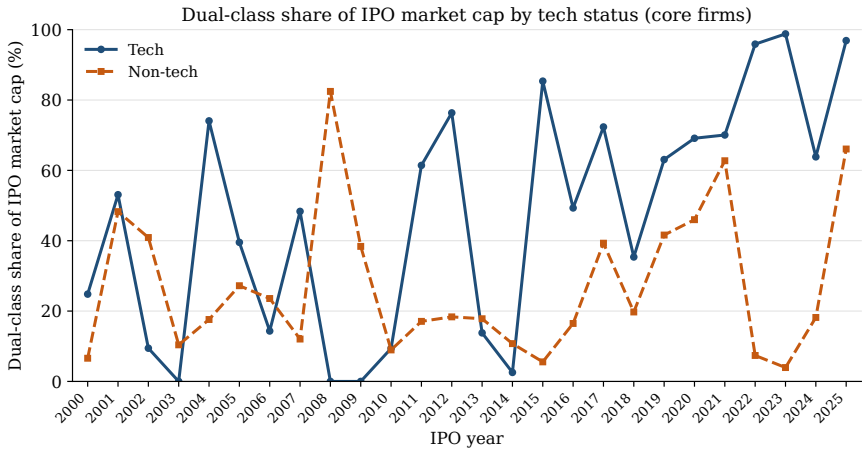


Figure 6: Dual-class share of total IPO market capitalization by tech status

This figure plots, separately for technology and non-technology firms in the core sample, the combined IPO market capitalization of dual-class IPO firms as a percentage of the combined IPO market capitalization of all IPO firms in that group, for each year from 2000 to 2025. *IPO market capitalization* is the product of total common shares outstanding across all share classes and the traded-class share price in the IPO fiscal year. *Technology firm* equals one if the firm's primary industry falls within the Loughran–Ritter high-technology list, which excludes biotechnology and pharmaceuticals. Within each group, the annual total can turn on one or two large offerings; the non-technology spikes in 2008 and 2022 are due to Visa and Mobileye, respectively. Data are from Jay Ritter's IPO database, matched to Compustat and CRSP.

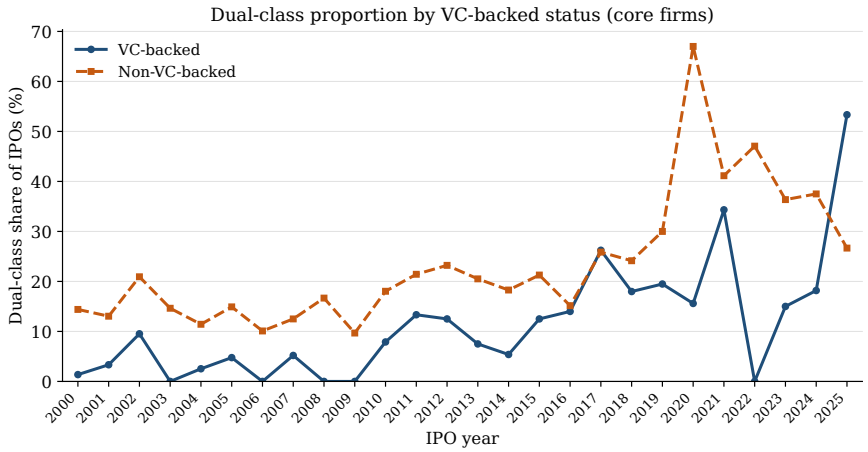


Figure 7: Share of dual-class IPOs by VC-backed status

This figure plots, separately for venture-capital-backed and non-venture-backed firms in the core sample, the percentage of IPOs in each year from 2000 to 2025 completed with a dual-class share structure. *Venture-backed* equals one if the offering was financed by venture capital, and *dual-class* status is measured at the offering; both indicators are from Jay Ritter's IPO database. Lines are three-year centered moving averages of the annual percentages.

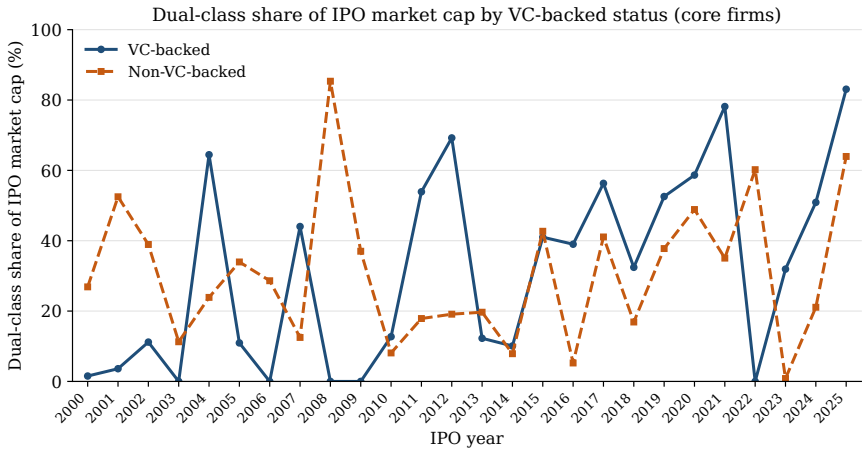


Figure 8: Dual-class share of IPO market capitalization by VC-backed status

This figure plots, separately for venture-capital-backed and non-venture-backed firms in the core sample, the combined IPO market capitalization of dual-class IPO firms as a percentage of the combined IPO market capitalization of all IPO firms in that group, for each year from 2000 to 2025. *IPO market capitalization* is the product of total common shares outstanding across all share classes and the traded-class share price in the IPO fiscal year, from Compustat and CRSP. *Venture-backed* and *dual-class* status are measured at the offering, from Jay Ritter's IPO database. The non-venture series spikes in years dominated by a single large listing, such as 2008 (Visa) and 2022 (Mobileye).

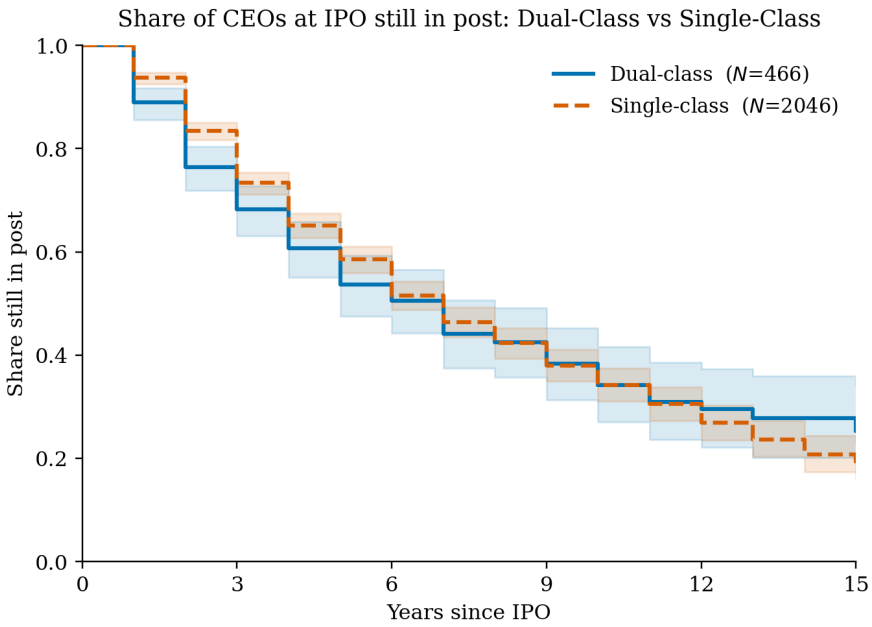


Figure 9: Share of CEOs at IPO still in post: Dual-class vs. single-class

This figure plots Kaplan–Meier estimates of the probability that the chief executive in place at the IPO remains in post t years after listing, separately for dual-class and single-class firms in the core sample with board coverage in BoardEx. The chief executive of each firm-year is identified from BoardEx director records through a title hierarchy: a titled CEO where available, otherwise a president or equivalent most-senior officer. Durations run from the IPO to the year in which the CEO at IPO is first observed to have left the top job; spells without an observed departure are right-censored at the firm's last year of data coverage. Shaded areas are bootstrapped 95% confidence intervals. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database.

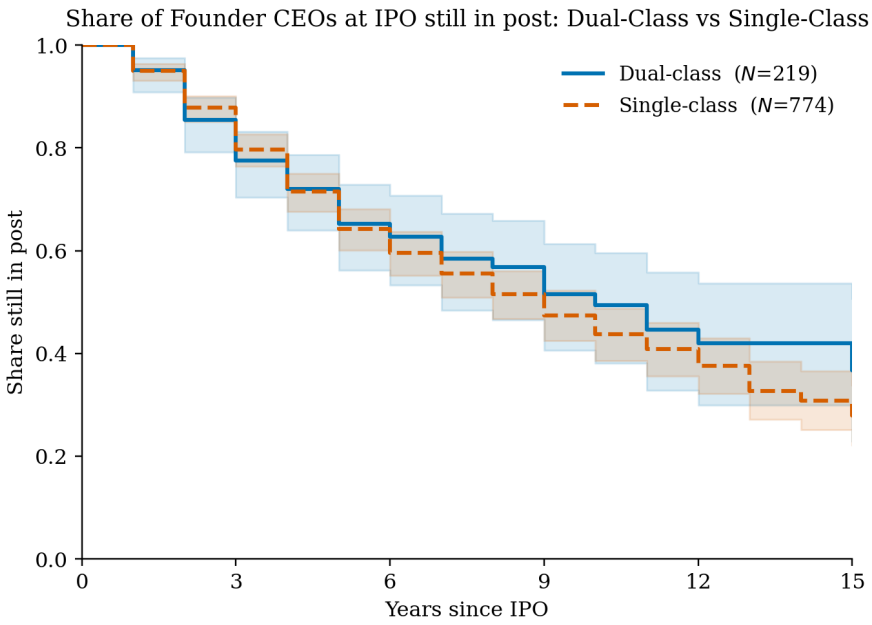


Figure 10: Share of founder-CEOs at IPO still in post: Dual-class vs. single-class

This figure plots Kaplan–Meier estimates of the probability that the founder-CEO in place at the IPO remains in post t years after listing, separately for dual-class and single-class firms in the core sample with board coverage in BoardEx. *Founder-CEO at IPO* equals one if the chief executive in place at the offering is one of the firm's founders. Founders are identified from EDGAR registration statements, public reference material, structured web research, and BoardEx founder designations, and are matched to the board data by a name-matching procedure that accommodates nicknames, spelling variants, initials, and honorifics. Durations run from the IPO to the year in which the CEO at IPO is first observed to have left the top job; spells without an observed departure are right-censored at the firm's last year of data coverage. Shaded areas are bootstrapped 95% confidence intervals.

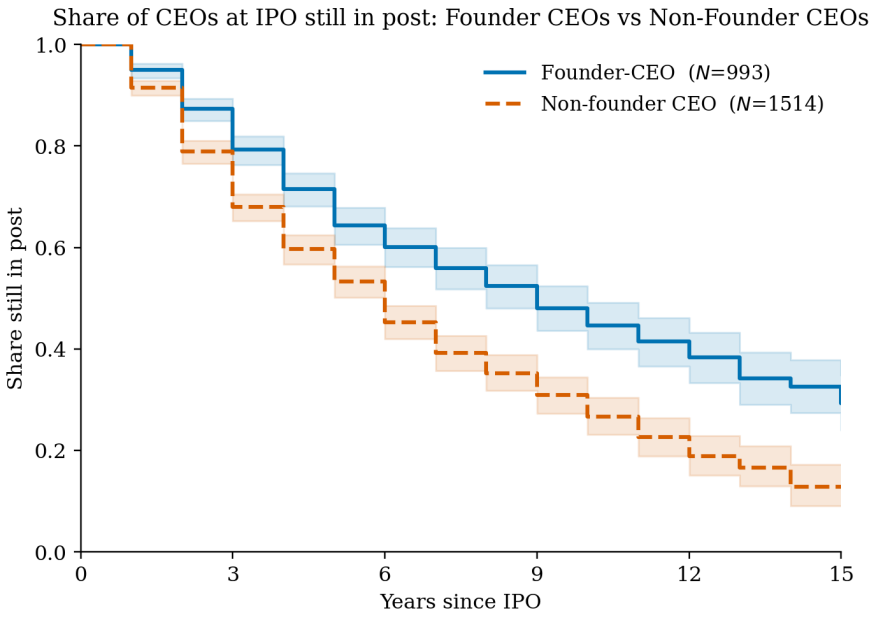


Figure 11: Share of CEOs at IPO still in post: Founder-CEOs vs. non-founder CEOs

This figure plots Kaplan–Meier estimates of the probability that the chief executive in place at the IPO remains in post t years after listing, separately for founder-CEOs and non-founder CEOs, pooling dual-class and single-class firms in the core sample with board coverage in BoardEx. *Founder-CEO at IPO* equals one if the chief executive in place at the offering is one of the firm's founders, identified as described in Section 3. Durations run from the IPO to the year in which the CEO at IPO is first observed to have left the top job; spells without an observed departure are right-censored at the firm's last year of data coverage. Shaded areas are bootstrapped 95% confidence intervals.

B Tables

Table 1: Share of dual-class IPOs by sample and period

This table reports the percentage of U.S. initial public offerings completed with a dual-class share structure (% dual) and the number of offerings (N), by sample definition and by period, for IPOs completed between 2000 and 2025. *Dual-class* equals one if the firm's common equity comprised more than one class of stock with differential voting rights as of the offering. *All firms* is the full sample of offerings with available data. *Excluding live SPAC shells* removes blank-check SPAC shells while retaining, as operating companies, firms that reached public markets through a completed SPAC merger. *Core firms* are operating companies, excluding SPAC shells, closed-end funds, REITs, master limited partnerships, and other investment vehicles, not organized as UP-C structures, and with a verifiable share price above five dollars in the first month after the IPO. The IPO universe and at-issue characteristics are from Jay Ritter's IPO database, matched to Compustat and CRSP.

	2000–2012		2013–2025		2000–2025	
Sample	% dual	N	% dual	N	% dual	N
All firms	14.3	2305	41.6	2664	28.9	4969
Excluding live SPAC shells	13.6	2204	31.0	2221	22.3	4425
Core firms	10.0	1574	25.9	1716	18.3	3290

Table 2: Share of dual-class IPOs by tech status, VC-backing, and period

This table reports the percentage of IPOs completed with a dual-class share structure, by technology status, venture-capital backing, and period, for the core sample described in Section 3. Each cell shows the percentage of dual-class offerings with the number of offerings in parentheses. *Dual-class* equals one if the firm's common equity comprised more than one class of stock with differential voting rights as of the offering. *Tech* firms are those whose primary industry falls within the Loughran–Ritter high-technology list, which excludes biotechnology and pharmaceuticals. *VC-backed* equals one if the offering was financed by venture capital. Dual-class status and VC backing are from Jay Ritter's IPO database. Totals can differ slightly from Table 1 because of missing industry classifications.

Group	Tech	Non-tech	All
2000–2012			
VC-backed	5.3 (337)	3.0 (363)	4.1 (700)
Non-VC-backed	15.2 (165)	14.5 (708)	14.7 (873)
All	8.6 (502)	10.6 (1071)	10.0 (1573)
2013–2025			
VC-backed	38.8 (224)	12.6 (707)	18.9 (931)
Non-VC-backed	36.4 (110)	33.8 (675)	34.1 (785)
All	38.0 (334)	22.9 (1382)	25.9 (1716)

Table 3: Share of dual-class IPO market capitalization by tech status, VC-backing, and period

This table reports the combined IPO market capitalization of dual-class IPO firms as a percentage of the combined IPO market capitalization of all IPO firms in each cell, by technology status, venture-capital backing, and period, for the core sample described in Section 3. The number of offerings in each cell is in parentheses. *IPO market capitalization* is the product of total common shares outstanding across all share classes and the traded-class share price in the IPO fiscal year, from Compustat and CRSP. *Dual-class* status and *VC-backed* status are measured at the offering, from Jay Ritter's IPO database. *Tech* firms are those whose primary industry falls within the Loughran–Ritter high-technology list, which excludes biotechnology and pharmaceuticals. Cell counts differ from Table 2 because of missing price data.

Group	Tech	Non-tech	All
2000–2012			
VC-backed	50.9 (336)	6.4 (362)	36.4 (698)
Non-VC-backed	35.3 (163)	29.3 (704)	30.4 (867)
All	45.6 (499)	25.6 (1066)	32.3 (1565)
2013–2025			
VC-backed	68.6 (224)	48.4 (707)	57.7 (931)
Non-VC-backed	44.5 (106)	26.5 (646)	30.9 (752)
All	63.1 (330)	38.8 (1353)	48.1 (1683)

Table 4: Founder governance: Dual-class vs. single-class

This table compares measures of founder involvement between dual-class and single-class firms in the core sample with board coverage in BoardEx. The first two rows are firm-year means over 2000–2025; the bottom two rows are firm-level means measured at the IPO. *Founder is CEO* equals one in a firm-year if the individual serving as the firm's chief executive (a titled CEO where identifiable, otherwise the president or equivalent most-senior officer) is one of the firm's founders. *Founder on board* equals one if any member of the board of directors in that year is a founder. *Founder-CEO at IPO* and *Founder on board at IPO* are the corresponding indicators measured for the board in place at the offering (or in the first subsequent year with board coverage). Founders are identified from EDGAR registration statements, public reference material, structured web research, and BoardEx founder designations. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database. Board data are from BoardEx.

	Single-class		Dual-class		
Variable	*N*	Mean	*N*	Mean	Diff.
Founder is CEO	16686	0.294	3053	0.396	0.102
Founder on board	16914	0.432	3090	0.532	0.101
Founder-CEO at IPO	2042	0.379	465	0.471	0.092
Founder on board at IPO	2056	0.527	474	0.593	0.066

Table 5: Founder as CEO at IPO: Dual-class vs. single-class, by period

This table reports the percentage of firms whose chief executive at the IPO is a founder, by dual-class status and IPO period, for core firms with an identified chief executive at the offering. *Founder-CEO at IPO* equals one if the chief executive in place at the offering (or in the first subsequent year with board coverage) is one of the firm's founders, identified as described in Section 3. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database. Board data are from BoardEx.

	Single-class		Dual-class		
IPO year	*N*	%	*N*	%	Diff.
2000–2012	962	38.1	116	39.7	1.6
2013–2025	1080	37.7	349	49.6	11.9
All years	2042	37.9	465	47.1	9.2

Table 6: Founder governance: Dual-class vs. single-class, by tech status

This table compares measures of founder involvement between dual-class and single-class firms in the core sample, separately for technology and non-technology firms. The first two variables are measured at the firm-year level over 2000–2025; the bottom two are firm-level indicators measured at the IPO. *Founder-CEO* equals one in a firm-year if the firm's chief executive is one of its founders; *Founder-on-board* equals one if any director in that year is a founder; the *at IPO* versions are measured for the board in place at the offering. Founders are identified from EDGAR registration statements, public reference material, structured web research, and BoardEx founder designations. *Tech* firms are those whose primary industry falls within the Loughran–Ritter high-technology list. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database. Board data are from BoardEx.

		Dual-class		Single-class		
Variable	Sector	*N*	%	*N*	%	Diff.
Founder-CEO	Tech	935	55.2	3728	36.1	19.1
	Non-tech	2118	32.7	12958	27.4	5.2
Founder-on-board	Tech	942	70.2	3778	53.2	17.0
	Non-tech	2148	45.8	13136	40.3	5.5
Founder-CEO at IPO	Tech	140	61.4	417	42.7	18.7
	Non-tech	325	40.9	1625	36.7	4.2
Founder-on-board at IPO	Tech	140	72.9	418	61.5	11.4
	Non-tech	334	53.6	1638	50.4	3.2

Table 7: Board structure: Dual-class vs. single-class, all firm-years

This table reports firm-year means of board-composition measures for dual-class and single-class firms in the core sample with board coverage in BoardEx, pooling all firm-years over 2000–2025. *Board size* is the number of directors. *Non-executive share* is the fraction of directors classified as non-executive. *Female share* is the fraction of directors who are women. *Outside directorships* is the average number of outside listed-board seats held by the firm's directors. *Director age* is the average age of the board. Variables are computed from director-level BoardEx records and are not winsorized. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database.

Variable	Single	Dual	Diff.
Board size	8.1	8.5	0.4
Non-executive share	0.835	0.808	-0.026
Female share	0.151	0.187	0.036
Outside directorships	1.749	1.767	0.018
Director age	59.2	58.6	-0.6

Table 8: Board structure at the IPO: Dual-class vs. single-class

This table reports firm-level means of board-composition measures for dual-class and single-class firms in the core sample, measured for the board in place in the IPO year (backfilled to the following year where the IPO year is not covered). *Board size* is the number of directors. *Non-exec. share* is the fraction of directors classified as non-executive. *Female share* is the fraction of directors who are women. *Outside seats/dir.* is the average number of outside listed-board seats held by the firm's directors. *Director age* is the average age of the board. Variables are computed from director-level BoardEx records. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database.

Variable	Single	Dual	Diff.
Board size	7.6	7.4	-0.2
Non-exec. share	0.812	0.765	-0.047
Female share	0.109	0.166	0.056
Outside seats/dir.	1.769	1.795	0.026
Director age	55.4	55.4	0.0

Table 9: Board and founder structure at the IPO vs. seven years later: All firms

This table compares board-composition and founder-involvement measures between dual-class and single-class firms in the core sample, measured for the board in place at the IPO and again seven years later, for the balanced sample of firms with board coverage in BoardEx at both points ($N = 920$: 786 single-class, 134 dual-class). *Board size* is the number of directors; *Non-exec. share* is the fraction of directors classified as non-executive; *Female share* is the fraction of directors who are women; *Outside seats/dir.* is the average number of outside listed-board seats held by the firm's directors; *Director age* is the average age of the board; *Founder-CEO* equals one if the firm's chief executive is a founder; and *Founder-on-board* equals one if any director is a founder. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database. Board data are from BoardEx; founders are identified as described in Section 3.

	At IPO			At IPO + 7		
Variable	Single	Dual	Diff.	Single	Dual	Diff.
Board size	7.6	8.2	0.6	8.2	9.0	0.8
Non-exec. share	0.811	0.775	-0.037	0.846	0.815	-0.030
Female share	0.074	0.083	0.009	0.164	0.179	0.015
Outside seats/dir.	1.788	1.739	-0.049	1.734	1.740	0.006
Director age	55.2	55.1	-0.1	61.1	60.4	-0.7
Founder-CEO	0.399	0.473	0.073	0.266	0.353	0.087
Founder-on-board	0.545	0.579	0.034	0.397	0.511	0.115

Table 10: Board and founder structure at the IPO vs. seven years later: Tech firms

This table repeats the comparison in Table 9 for technology firms only, defined by the Loughran–Ritter high-technology industry list. The balanced sample requires board coverage in BoardEx at the IPO and seven years later ($N = 196$: 156 single-class, 40 dual-class). Variable definitions are as in Table 9.

	At IPO			At IPO + 7		
Variable	Single	Dual	Diff.	Single	Dual	Diff.
Board size	7.1	7.3	0.2	7.8	8.4	0.7
Non-exec. share	0.798	0.772	-0.025	0.833	0.819	-0.014
Female share	0.063	0.078	0.015	0.157	0.235	0.078
Outside seats/dir.	1.804	1.883	0.079	1.665	1.866	0.200
Director age	53.4	53.5	0.2	59.6	58.8	-0.8
Founder-CEO	0.490	0.625	0.135	0.379	0.525	0.146
Founder-on-board	0.671	0.725	0.054	0.535	0.700	0.165

Table 11: Board and founder structure at the IPO vs. seven years later: Non-tech firms

This table repeats the comparison in Table 9 for non-technology firms only, defined as firms outside the Loughran–Ritter high-technology industry list. The balanced sample requires board coverage in BoardEx at the IPO and seven years later ($N = 724$: 630 single-class, 94 dual-class). Variable definitions are as in Table 9.

	At IPO			At IPO + 7		
Variable	Single	Dual	Diff.	Single	Dual	Diff.
Board size	7.7	8.6	0.9	8.3	9.2	0.9
Non-exec. share	0.815	0.775	-0.039	0.849	0.814	-0.035
Female share	0.077	0.085	0.008	0.166	0.155	-0.011
Outside seats/dir.	1.784	1.678	-0.106	1.751	1.686	-0.065
Director age	55.6	55.7	0.1	61.4	61.1	-0.3
Founder-CEO	0.377	0.404	0.027	0.238	0.280	0.042
Founder-on-board	0.514	0.516	0.003	0.362	0.430	0.068

Table 12: Years to CEO step-down: Dual-class vs. single-class

This table reports the average number of years from the IPO until the chief executive in place at the offering leaves the top job, for dual-class and single-class firms in the core sample with board coverage in BoardEx, for IPOs completed between 2000 and 2025. Panel A includes only observed step-downs, defined as spells in which the person who replaced the original CEO can be identified in the board data. Panel B pools observed step-downs with censored spells, in which the CEO has not been replaced by the firm's last year in the sample; for censored spells the reported duration is the observed tenure to date. *Founder-CEOs at IPO* are chief executives at the offering who are among the firm's founders, identified as described in Section 3. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database.

	Single-class		Dual-class		
Sample	*N*	Mean	*N*	Mean	Diff.
Panel A. Observed step-downs only (realized durations)					
All CEOs at IPO	890	4.66	186	3.95	-0.70
Founder CEOs at IPO	310	5.39	68	5.13	-0.26
Panel B. Pooled (observed + censored-so-far)					
All CEOs at IPO	2046	4.36	466	3.64	-0.73
Founder-CEOs at IPO	774	5.04	219	4.13	-0.91

Table 13: Years to CEO step-down, IPO cohorts 2000–2015: Dual-class vs. single-class

This table repeats the analysis of Table 12 after restricting the sample to IPOs completed no later than 2015, so that every firm is observed for at least ten years after listing. Panel A includes only observed step-downs, defined as spells in which the board data identify the person who replaced the original CEO. Panel B pools observed step-downs with censored spells, for which the reported duration is the observed tenure to date. Variable definitions and data sources are as in Table 12.

	Single-class		Dual-class		
Sample	*N*	Mean	*N*	Mean	Diff.
Panel A. Observed step-downs only (realized durations)					
All CEOs at IPO	683	5.21	97	5.61	0.40
Founder-CEOs at IPO	249	6.00	35	7.54	1.54
Panel B. Pooled (observed + censored-so-far)					
All CEOs at IPO	1328	5.17	165	6.04	0.86
Founder-CEOs at IPO	504	6.14	61	8.28	2.14

Table 14: Expected time to step-down after the IPO: Duration analysis, 2000–2025

This table reports restricted mean survival times for the tenure of the chief executive in place at the IPO, for the core sample with board coverage in BoardEx, for IPOs completed between 2000 and 2025. The restricted mean survival time is the area under the Kaplan–Meier survival curve truncated at year 10, and gives the expected number of years, out of the first ten after listing, that the CEO at IPO spends in post. Durations run from the IPO to the first observed departure of the CEO at IPO; spells without an observed departure are right-censored at the firm's last year of data coverage. Panel A compares dual-class with single-class firms, for all CEOs at IPO and separately for founder and non-founder CEOs. Panel B compares founder CEOs with non-founder CEOs, pooling the two share structures, as a check on the power of the test. Confidence intervals are based on 1,000 bootstrap replications. Founder status is unknown for 5 firms (4 single-class, 1 dual-class) for which the CEO at IPO is known. *Dual-class* status is measured at the offering, from Jay Ritter's IPO database; founders are identified as described in Section 3.

	Single-class		Dual-class			
	N	Years	*N*	Years	Diff.	95% CI
Panel A. Dual-class vs single-class						
All CEOs at IPO	2046	6.53	466	6.24	-0.29	[-0.73, +0.17]
Founder-CEOs at IPO	774	7.12	219	7.25	+0.13	[-0.50, +0.76]
Non-founder CEOs at IPO	1268	6.14	246	5.38	-0.76	[-1.34, -0.18]
Panel B. Founders vs no-founders (sanity check for test power)						
Founder-CEO vs non-founder-CEO	1514	6.02	993	7.14	+1.12	[+0.81, +1.44]

Table 15: Dual-class founder-CEOs still in post 11 or more years after the IPO

This table lists all 21 dual-class firms in the core sample whose founder-CEO at the IPO was still in post at least 11 years after listing. These firms populate the right tail of the dual-class survival curve in Figure 10. *Yrs* is the number of years from the IPO to the step-down or, for right-censored spells, to the last year the firm or its board coverage is observed, and is therefore a lower bound on tenure for the latter. *Outcome* records whether the step-down is observed or the spell is censored, and distinguishes censoring at the end of the sample period (panel end) from censoring at the end of the firm's data coverage. Of the 21 CEOs, 9 are later observed to step down and 12 are right-censored; only 13 remain at risk at year 13 and 8 at year 15. Founder and CEO identities are from BoardEx and the founder roster described in Section 3; *dual-class* status is measured at the offering, from Jay Ritter's IPO database.

Firm	IPO	CEO at IPO	Yrs	Outcome
Entravision Communications	2000	Walter Ulloa	23	Stepped down 2023
Nexstar Media Group	2003	Perry Sook	21	Still CEO when coverage ends
Comstock Holding Companies	2004	Chris Clemente	20	Still CEO when coverage ends
Dick's Sporting Goods	2002	Ed Stack	19	Stepped down 2021
Beasley Broadcast Group	2000	George Beasley	17	Stepped down 2017
ManTech International	2002	George Pedersen	16	Stepped down 2018
SunPower	2005	Tom Werner	16	Stepped down 2021
Under Armour	2005	Kevin Plank	15	Stepped down 2020
Pzena Investment Management	2007	Rich Pzena	14	Still CEO at panel end
MaxLinear	2010	Kishore Seendripu	14	Still CEO when coverage ends
Ameresco	2010	George Sakellaris	14	Still CEO when coverage ends
Nebius Group	2011	Arkady Volozh	13	Still CEO when coverage ends
Meta Platforms	2012	Mark Zuckerberg	13	Still CEO at panel end
RingCentral	2013	Vlad Shmunis	12	Still CEO at panel end
Yelp	2012	Jeremy Stoppelman	12	Still CEO when coverage ends
Chipotle Mexican Grill	2006	Steve Ells	12	Stepped down 2018
Kinder Morgan Management	2001	Rich Kinder	12	Still CEO at panel end
Sculptor Capital Management	2007	Dan Och	11	Stepped down 2018
Marchex	2004	Russ Horowitz	11	Stepped down 2015
Veeva Systems	2013	Peter Gassner	11	Still CEO at panel end
Wayfair	2014	Niraj Shah	11	Still CEO at panel end

Table 16: Summary of stylized facts

This table collects the stylized facts established in Section 3. Fact numbers follow the order in which the facts are stated in the text. The last column lists the figures and tables on which each fact is based. The sample is the core sample of U.S. IPOs completed between 2000 and 2025 described in Section 3, which also defines all variables and data sources.

Fact	Statement	Evidence
1	The share of dual-class IPOs increased gradually from 2010 through 2025.	Figures 1–3; Table 1
2	Dual-class IPO firms are, on average, larger than single-class IPO firms, as measured by market capitalization immediately after going public.	Figure 4
3	From 2000 through 2014, tech firms and non-tech firms had similar propensities to go public with dual-class shares.	Figure 5
4	From 2015 through 2025, tech firms were much more likely than non-tech firms to go public with dual-class shares.	Figure 5
5	From 2020 through 2025, most tech IPOs were dual-class offerings.	Figures 5, 6
6	Non-VC-backed firms are more likely than VC-backed firms to go public with dual-class shares.	Figure 7
7	Dual-class IPOs are larger in market capitalization among VC-backed ones than among non-VC-backed ones.	Figure 8
8	From 2000 to 2025, large VC-backed tech IPOs tended to issue dual-class shares.	Table 3
9	Most of the increase in the number and value of dual-class IPOs over the 2000–2025 period occurred in VC-backed firms.	Tables 2, 3
10	From 2000 to 2025, firms that went public with dual-class structures were more likely to retain founders as CEOs or board members, both at the IPO date and beyond.	Table 4
11	The positive association between dual-class IPOs and founder-CEOs is driven by the 2013–2025 period.	Table 5
12	The positive association between founder involvement and dual-class shares is stronger in tech firms than in non-tech firms.	Table 6
13	Boards of single-class and dual-class IPO firms are similar in terms of size, formal independence, gender diversity, busyness, and director age.	Tables 7–11
14	There is no clear pattern relating dual-class shares to how long (founder) CEOs stay in their jobs.	Figures 9, 10; Tables 12–14

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