Council of Institutional Investors®
The voice of corporate governance

Updated 7/18/2018

CII Summaries of Key Academic Literature on Multi-Class Structures and Firm Value

Title	**The Life Cycle of Dual-Class Firms**
Authors	Martijn Cremers, Beni Lauterbach, and Anete Pajuste
Date Published	January 2018 (working paper)
Sample	The **full sample** includes 8,555 single-class firms and 667 multi-class firms. The **matched sample** matches 504 unique multi-class firms with 504 unique single-class firms based on similar features including firm industry, IPO date, firm size, and return on assets. All firms in both samples are listed on NYSE, AMEX, or NASDAQ.
Sample Source	Ritter dataset, Gompers, Ishii, and Metrick dataset, CRSP/Compustat.
Period Covered	The samples include firms that held IPOs with multi-class structures between 1980 and 2015.
Key Variables	The dependent variable is firm value as measured by **Tobin's Q**. The independent dual-class variable is a dummy variable coded 1 for firms with multi-class structures and 0 for single-class firms. **"Wedge"** in this study refers to the difference between the super-voting class's percent of total voting power and their percent of total equity.

Key Hypotheses:	**Methodology:**	**Results:**
1) The stake of controlling shareholders in multi-class firms' equity tends to decrease with firms' age, and the wedge tends to increase.	1) Observed increases and mean equality tests for multi-class firms' wedge in each of the nine years following IPO.	1) The mean wedge in multi-class firms increases from 16.27% one year after IPO to 21.77% five years after IPO. The difference in means is statistically significant at the 1% level of confidence.
2) The valuation of multi-class firms compared to single-class firms decreases with a firm's age.	2) Mean equality tests for differences between multi and single-class firm value in each of the nine years following IPO. Regressions of multi-class firms on firm value, measured by Tobin's Q, using the full and then matched samples, plus controls, to determine the multi-class premium and discount over the life cycle.	2) In the full sample, multi-class firms have a 9% premium in the first 3 years after IPO, a small and insignificant premium 4-5 years after IPO, an 8.5% discount 6-8 years after IPO, and a 9.5% discount 9 years after IPO and beyond. All figures except in years 4-5 are significant at the 1% level. In the matched sample, the figures are 11% premium in years 1-3, 7% premium in years 4-5, and 9% discount in years 6-8 and 9 and beyond. Only years 1-3 and 9 and beyond are significant at the 5% and 10% levels, respectively.

Key Conclusions	On average, at the time of the IPO, multi-class firms tend to have valuation premiums over single-class firms, which dissipate over time and turn into discounts six to nine years after the IPO. The increasing wedge and decreasing probability of voluntarily unification over time point to the potential for increased agency problems at mature multi-class firms that may be mitigated by a mandatory sunset provision for multi-class structures.
CII Notes	These results support a time-based sunset of 6 to 9 years, including the common 7-year sunset, for firms that IPO with multi-class structures. The methodology also underscores how studies that do not take into account the "life cycle," that is, the years since IPO, will generally not yield statistically significant results about multi-class structures' impact on firm value.

For a non-empirical analysis of the life cycle dynamics of multi-class structures and firm value that preceded this paper, see: Bebchuk, Lucian A. and Kastiel, Kobi, The Untenable Case for Perpetual Dual-Class Stock (April 18, 2017). Virginia Law Review, Volume 103, pp. 585-631, June 2017; Harvard Law School John M. Olin Center Discussion Paper No. 905; Harvard Law School Program on Corporate Governance Discussion Paper 2017-6. Available at SSRN: https://ssrn.com/abstract=2954630.

The authors of this paper consider a multi-class structure "an extreme example of anti-takeover provisions." For an empirical analysis of other takeover defenses, see: Johnson, William C. and Karpoff, Jonathan M. and Yi, Sangho, The Lifecycle Effects of Firm Takeover Defenses (April 2, 2018). Available at SSRN: https://ssrn.com/abstract=2808208.

Title	**Dual Class Share Structure and Innovation**
Authors	Lindsay Baran, Arno Forst, and M. Tony Via
Date Published	May 2018
Sample	The matched sample includes 2,218 dual-class and 2,218 single-class firm years adapted from the matching model used by Gompers, Ishii, and Metrick.
Sample Source	Gompers, Ishii, and Metrick dataset, CRSP/Compustat, SEC Filings.
Period Covered	The sample includes firms that had or held IPOs with multi-class structures between 2000 and 2008.
Key Variables	The dependent variables include **innovation output** as measured by patents and citations, as well as firm value measured by **Tobin's Q.** The independent dual-class variable is a dummy variable coded 1 for firms with multi-class structures and 0 for single-class firms. **"Wedge"** in this study refers to the difference between the super-voting class's percent of total voting power and their percent of total equity.

Key Hypotheses:	**Methodology:**	**Results:**
1) Insider control at multi-class firms has a positive impact on innovation that offsets its negative impact on firm value relative to single-class firms.	1) Regressions of multi-class firm wedges on innovation, including patents and citations, as well as on firm value, measured by Tobin's Q.	1) The wedge has a significant positive impact on innovation and negative impact on firm value compared to single-class firms, but the combined impact is positive, supporting the hypothesis that more innovation offsets the costs of insider control on firm value.
2) The positive impact on innovation decreases in the years following IPO.	2) Regressions of multi-class firm wedges split by firm age—0-5, 6-10, and 11 and more years after IPO—on innovation and firm value.	2) The wedge has a significant positive impact on innovation in 0-5 years, but not 6-10 or 11 and more years, after IPO. In 6-10 and 11 and more years after IPO, the wedge exhibits a progressively stronger and more significant negative impact on firm value.

Key Conclusions	Overall, insider control at multi-class firms exhibits a positive association with innovation output that exceeds the costs of the voting misalignment, but this effect changes over time. ""Our finding of diminishing positive effects of disproportionate insider control post-IPO supports the call for 'sunset provisions' to convert dual class shares to single class within a certain period of time post-IPO. Phasing out disproportionate ownership could avoid the predominance of value-destroying agency costs over value enhancing innovativeness as the firm matures."
CII Notes	This analysis potentially provides an explanation for the value premium that Cremers et. al. find in young multi-class structures: stronger innovation output. But like Cremers, this analysis finds that the benefits succumb to increasing costs beginning six years after IPO. Addressing criticisms of Tobin's Q as a measure of firm value, the authors also use an alternative valuation measure which yields a similar and significant result.

Title	**Perpetual Dual-Class Stock: The Case Against Corporate Royalty**		
Authors	Robert Jackson		
Date Published	February 2018 (data prepared for speech, non-peer reviewed)		
Sample	157 multi-class firms, 71 of which have sunset provisions. All firms are incorporated in the United States.		
Sample Source	Ritter dataset, SEC filings, CRSP/Compustat.		
Period Covered	The samples include firms that held IPOs with multi-class structures between 2001 and 2016.		
Key Variables	For the principal analysis, the dependent variable is firm value as measured by **Tobin's Q**.* The independent dual-class variable is a dummy variable called **"Perpetual"** coded 1 for multi-class firms with no sunset provision at IPO and 0 for multi-class firms that provided for a sunset provision at IPO.		
Key Hypothesis: The lack of a sunset provision in multi-class firms decreases firm value compared to other multi-class firms with sunset provisions.	**Methodology:** Regressions of perpetual multi-class firms on firm value, measured by Tobin's Q, in four periods after IPO, plus controls.*	**Result:** In the IPO year and 1-2 years after, perpetual multi-class firms do not have significantly different valuations from multi-class firms with sunset provisions. Beginning 3-6 years and continuing 7 and more years after IPO, perpetual multi-class firms have a 37% discount compared to multi-class firms with sunset provisions, a result significant at the 1% level.	
Key Conclusions	Over the life cycle of multi-class firms, those without sunset provisions tend to underperform those with sunset provisions. By 7 years after IPO, perpetual multi-class firms exhibit valuations that are significantly lower than firms with sunset provisions.		
CII Notes	This analysis is the only one that compares perpetual multi-class firms to those that signal from the time of IPO with a sunset provision that they will collapse the capital structure into one share, one vote. The life cycle results support a time-based sunset in particular, no later than 7 years after IPO.		

*Note: Commissioner Jackson and his staff also ran the analysis using **monthly equal-weighted portfolio returns** for the perpetual sample versus the sunset sample, with what the authors describe as results "very consistent" with the principal analysis using Tobin's Q.

Title	**Sticking Around Too Long? Dynamics of the Benefits of Dual-Class Structures**
Authors	Hyunseob Kim and Roni Michaely
Date Published	March 2018
Sample	An unspecified number of single-class firms and 921 multi-class firms with outstanding super-voting shares totaling 142,576 single-class firm years and 8,445 multi-class firm years.
Sample Source	Ritter dataset, Gompers, Ishii, and Metrick dataset, CRSP/Compustat, Analysis of 10-K and DEF 14A filings.
Period Covered	The sample includes firms with multi-class structures between 1971 and 2015.
Key Variables	The dependent variable is firm value as measured by **Tobin's Q** and **return on assets (ROA)**. The independent dual-class variable is comprised of two dummy variables, one coded 1 all firms with multi-class structures and the other coded 1 for multi-class firms older than 11 years since IPO to isolate **"mature"** multi-class firms. **"Voting Premium"** refers to the difference in market price between superior and inferior-voting shares.

Key Hypotheses:	**Methodology:**	**Results:**
1) Multi-class structures negatively impact firm value as they "mature" (i.e. pass 11 years since IPO) compared to single-class firms.	1) Regression of multi-class firms and maturity (>11 years from IPO) on firm value, measured by Tobin's Q and then ROA, plus controls, to determine the multi-class premium and discount compared to single-class firms.	1) In general, multi-class firms have a 7% premium over single-class firms, a result significant at the 5% level. "Mature" multi-class firms have an 8.8% discount compared to single-class firms, a result significant at the 1% level. Multi-class structures and maturity have small and insignificant impacts on ROA.
2) The premium for super-voting shares in multi-class firms, a measure of the private benefits of control, increases with firm age (i.e. after 11 years compared to before 11 years from IPO).	2) Regression of mature multi-class firms on the premium for super-voting shares, plus controls.	2) After 11 years from IPO, multi-class firms have a 2.99 percentage point premium for super-voting shares over the average premium of 4.32% for all multi-class firms, a result significant at the 5% level.

Key Conclusions	As firms become more mature, adopting a multi-class structure is associated with an increasingly larger valuation discount than offering only single-class shares. Private benefits of control, as measured by the voting premium, are greater for mature multi-class firms, driving the discount in firm value.
CII Notes	The results provide two snapshots in time of multi-class firms and show that those 11 years or less from the IPO have premiums and those 11 years or more from the IPO have discounts compared to single-class firms. Although it does not trace exactly when the premium dissipates and becomes negative, it reinforces the case for

	time-based sunset provisions substantially before 11 years from the IPO.

Title	**Multi-Class Stock and Firm Value**		
Author	Gabriel Morey, CII Research Analyst		
Date Published	May 2017 (non-peer reviewed)		
Sample	1,629 single-class firms and 133 multi-class firms with outstanding super-voting shares. All firms are incorporated in the United States and included in the Russell 3000.		
Sample Source	FactSet SharkRepellent database, CII analysis of 10-K filings.		
Period Covered	The sample includes firms that held IPOs before 2007 and had multi-class structures between 2007 and 2015.		
Key Variables	The dependent variable is firm value as measured by **return on invested capital (ROIC)**. The independent dual-class variable is an element of the wedge called "**Percent Superior Vote,"** which captures the percent of total voting power controlled by the super-voting class, ranging from 0 to 1. Single-class firms take a value of 0.		
Key Hypothesis: In multi-class firms, the percent of the total vote controlled by the super-voting class impacts firm value compared to single-class firms.	**Methodology:** 1) Regression of Percent Superior Vote on firm value, measured by ROIC, plus controls. 2) Regressions using various selection criteria to pick the variables with the strongest explanatory power for ROIC. 3) Two-stage regression of Percent Superior Vote on firm value, measured by ROIC, plus controls.	**Results:** The percentage of the total vote controlled by the super-voting class, Percent Superior Vote, is not a strong or statistically significant predictor of firm value as measured by ROIC in any of the models.	
Key Conclusions	A multi-class structure, measured by the percentage of the company's vote controlled by holders of superior-voting shares, does not affect ROIC, positively or negatively.		
CII Notes	The claim that multi-class equity structures are necessary for managers to deliver long-term performance is dubious.		

Title	**Extreme Governance: An Analysis of Dual-Class Firms in the United States**
Authors	Paul Gompers, Joy Ishii, and Andrew Metrick
Date Published	May 2008
Sample	The **full sample** includes 6345-7609 single-class firms and 362-504 multi-class firms with outstanding super-voting shares. The **separation sample** is a subset of the full sample that includes multi-class firms in which insiders control at least 50% total voting power and own less than 50% equity. All firms are listed on NYSE, NASDAQ, or AMEX.
Sample Source	SEC Filings, Ritter dataset, IRRC dataset, CRSP/Compustat.
Period Covered	The sample includes firms that had or held IPOs with multi-class structures between 1995 and 2002.
Key Variables	The dependent variable is firm value as measured by **industry-adjusted Tobin's Q**. The independent dual-class variable is a dummy variable coded 1 for firms with multi-class structures and 0 for single-class firms. **"Wedge"** in this study refers to the difference between the super-voting class's percent of total voting power and their percent of total equity, both of which are also used as independent variables.

Key Hypothesis:	**Methodology:**	**Result:**
In firms with multi-class structures, greater voting power controlled by the super-voting class and less equity owned by the super-voting class (i.e. a widening wedge) decrease firm value.	1) Regressions of multi-class firms and the wedge on firm value, measured by industry-adjusted Tobin's Q, plus controls, using the full sample. 2) Two-stage regressions of the super-voting class's equity ownership on firm value, plus controls, using the separation sample.	1) In general, multi-class structures have a negative but insignificant impact on firm value compared to single-class firms. But a widening wedge has a stronger negative impact on firm value, a result significant at the 5% level. 2) In multi-class firms where the super-voting class holds minority equity ownership and majority voting power, increased equity ownership has a strong and significantly positive impact on firm value.

Key Conclusions	Firm value is positively associated with the super-voting class's equity ownership, negatively associated with its voting rights, and negatively associated with a widening wedge between the two.
CII Notes	This paper was one of the first to construct a sample of multi-class firms and test the structure's impact on firm value. It finds that while insider control does not itself significantly reduce firm value, a wedge or separation between insiders' equity ownership and voting rights—which the multi-class structure exists to create—does. These results indicate that firm value would be enhanced if insiders' equity ownership increased to match their voting power.