Sticking around Too Long?
Dynamics of the Benefits of Dual-Class Voting

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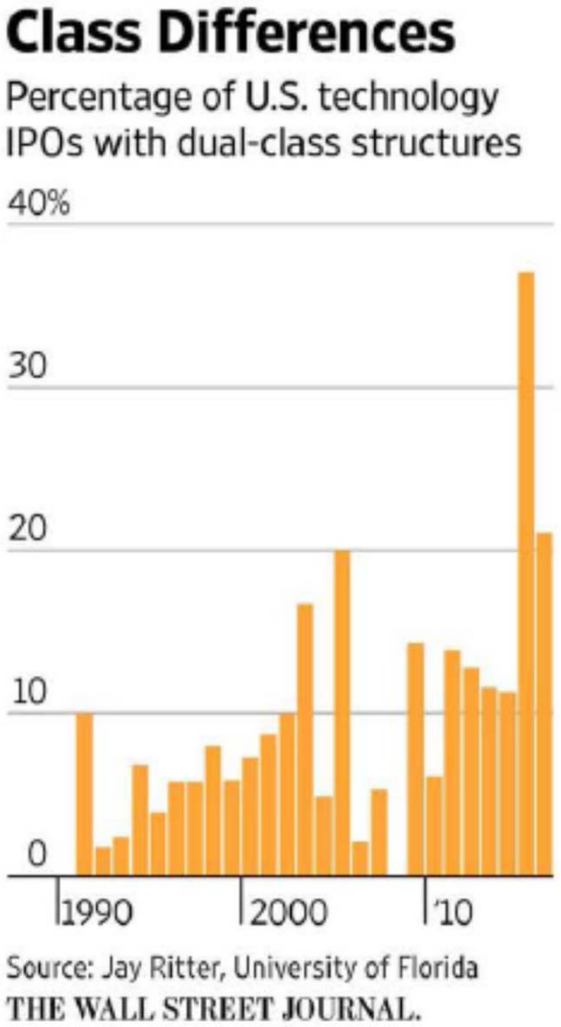
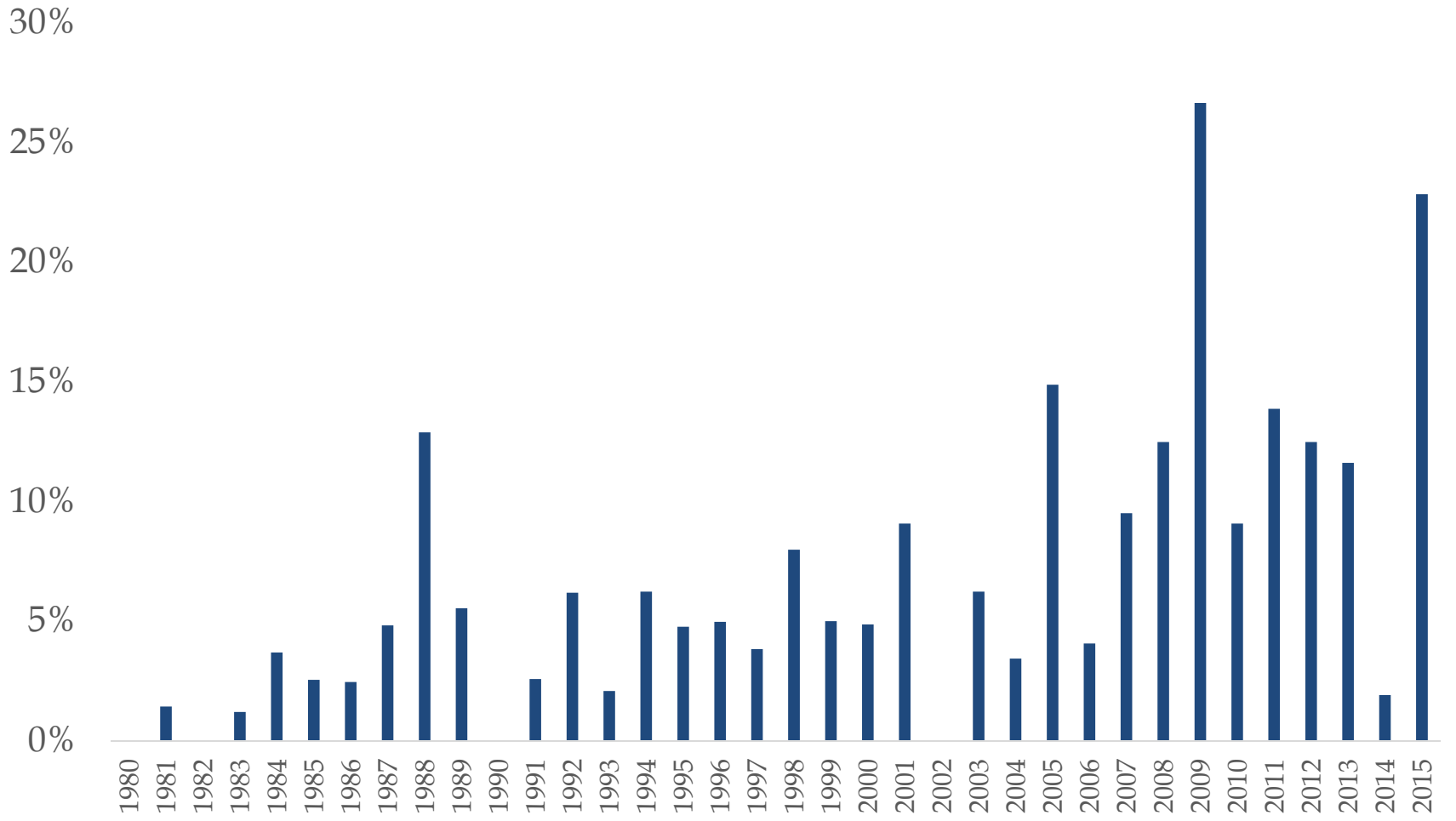
SC Johnson College of Business

Motivation: Recent waves of (tech) dual-class IPOs

Google:	August 2004
LinkedIn:	March 2011
Yelp:	March 2012
Facebook:	May 2012
Twitter:	November 2013
Alibaba:	September 2014
Square:	November 2015
Snap:	March 2017
Spotify:	April 2018



% of dual-class IPOs among IPOs in technology sectors



Case study: Snap's dual-class IPO in March 2017

Snap's nonvoting stock — everything sold in the IPO — is junk, investor says

Brian "Wieser", an analyst with Pivotal Research Group in New York, gave "the Snap stock" a "sell" rating. (March 3, 2017)

Snap's offer of voteless shares angers big investors

Top US pension funds send public letter of objection to group ahead of IPO

Snap is expected to list on the New York Stock Exchange in coming weeks © Reuters

Case study: Snap's dual-class IPO in March 2017

- Snap issued common shares with no voting right ('Class A') in its IPO in March 2017.
- After IPO, co-founders retained 70+% of voting power while owning 45% of equity.
- CEO Evan Spiegel: *It will be five years before markets will see what I can do.*
  - *so far, stock price went from $29/share right after the IPO to $13/share…..(IPO price of $17)*
- Meanwhile, large institutional investors scolded Snap's then-proposed dual-class structure:
  - The Council of Institutional Investors sent a letter urging Snap's co-founders to reconsider the structure, signed by members who control more than $3tn of assets. (FT, Feb. 3, 2017)
  - Anne Simpson, an investment director at CalPERS, called Snap's Class A shares "junk equity."
  - *For every Google or Facebook there is a Zynga or a GoPro*, Anne Sheehan, director of corporate governance at Calstrs.

And the Facebook debacles

FACEBOOK

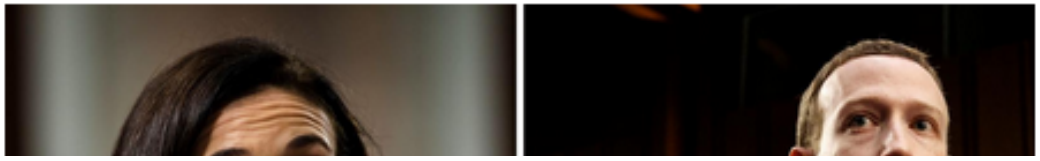
Delay, Deny and Deflect: How Facebook's Leaders Fought Through Crisis

- A Times investigation revealed how social network responded as it faced scandal after another — Russian meddling, data sharing, hate speech
- The executives Mark Zuckerberg and Sheryl Sandberg stumbled. Bent on growth, the pair ignored warning signs and then sought to conceal them.

2h ago

Here are six key takeaways from the investigation.

3h ago



144.22 USD 0.00 (0.00%)
Closed: Nov 15, 8:51 AM EST · Disclaimer
Pre-market 141.94 −2.28 (1.58%)

Economists' view: One Share – One Vote is desirable

- Grossman and Hart (1988); Harris and Raviv (1988): under plausible conditions, a simple proportional voting right of 'one share-one vote' is optimal

- Dual-class and other forms of deviations from proportional voting, such as pyramids and cross-ownerships, are found to have negative impacts on firm value and performance
  - e.g., Claessens et al. (2002); Lemmon and Lins (2003); Cronqvist and Nilsson (2003); Masulis, Xie, and Wang (2009); Gompers, Ishii, and Metrick (2010)

- Adams and Ferreira (2008): *The idea that one share-one vote principle is desirable is what might be considered the dominant view in the literature.*

Dual-class shares - the bad boys?

- Institutions claim to dislike them
- Exchanges don't like them
  - Alibaba and HKSE
  - Were banned from the NYSE until 1984
- Recently excluded from many market indices

- Yet, firms adopt them at increasing pace

This paper: Dynamic effects of dual-class structure

- Research questions:
  - What are economic effects of dual-class structure on firms?
    - Does dual-class structure always represent a "bad governance?"
  - How do costs-benefits of dual-class structure evolve over firm maturity?
  - What are the policy implications of our finding?
    - **Usage of dual-class structure with sunset provisions**

- General prediction: Theory suggests effects of dual-class (relative to single-class) structures on firm performance and value will be more favorable for young vs. mature firms.

Benefits of dual-class voting greater for young, high-growth firms

- Avoid myopic focus on short-term profits (say, by analysts) at expense of long-term value ('short-termism' e.g., Knoeber, 1986; Stein, 1988; 1989)
  - Stein (1988): this benefit is more pronounced when outside investors are less informed about the quality of investments than the insiders.
  - Young firms have more growth options with uncertain outcomes.
  - Young firms' investment tends to be more firm-specific and take longer-time to recoup

Benefits of dual-class voting pronounced for young firms

- Example #1: Google's IPO documents in 2004: "This [dual class] structure will also make it easier for our management team to follow the long term, innovative approach emphasized earlier…"

- Example #2: Facebook's announcement of the creation of new non-voting shares in 2016: "Facebook's board of directors is proposing the creation of a new class of publicly listed, non-voting Class C capital stock to ensure that the company maintains this long-term focus."

Costs of dual-class voting smaller for young, high-growth firms

- The benefits from expected control contests are likely lower (Grossman and Hart, 1988; Harris and Raviv, 1988)
  - Investments are often founder-specific, thus founder-insiders are more likely best manager of corporate assets.

- Extracting private benefits by controlling shareholders is less likely
  - Founder-insiders of young, fast-growing firms have stronger economic (e.g., equity stake) and non-economic (e.g., reputation) incentives maximize firm value today.
    - Much of her payoffs depends on future value than current consumption of private benefits (e.g., DeMarzo and Fishman, 2007)
  - Young firms have more need for external financing - stronger incentives to rein on private benefits and minimize cost of capital (Easterbrook, 1984).

Highlights: As dual-class firms mature

1) Voting premium increases
2) Tobin's *q* decline faster than single-class firms
3) Robust to control for firm FE, selection models
4) Performance (e.g., profit margins) decline faster than single-class firms
5) Announcement returns for dual-class recapitalization decrease with age
6) Investment and employment become less sensitive to opportunities, increasing systematic risk.
7) Innovative output decreases faster than single-class firms
8) Similar results when replacing age with growth
9) Announcement returns for dividend increases/initiations increase relative to single-class firms
10) Sunset provisions

The data on dual-class firms

Database of dual-class firms, 1950-2015

- Most comprehensive database of dual-class firms in U.S.:
  - Moody's manuals: 1950-2015
  - SEC EDGAR: 1994-2015
  - Gompers, Ishii, and Metrick (2010): 1994-2002

- Focus on 900+ unique dual-class firms from 1971-2015
  - Merged with CRSP/Compustat
  - Exclude: utilities, financials, unclassified industries
  - ~9,000 dual-class firm-year observations (cf. GIM data ~3,700)

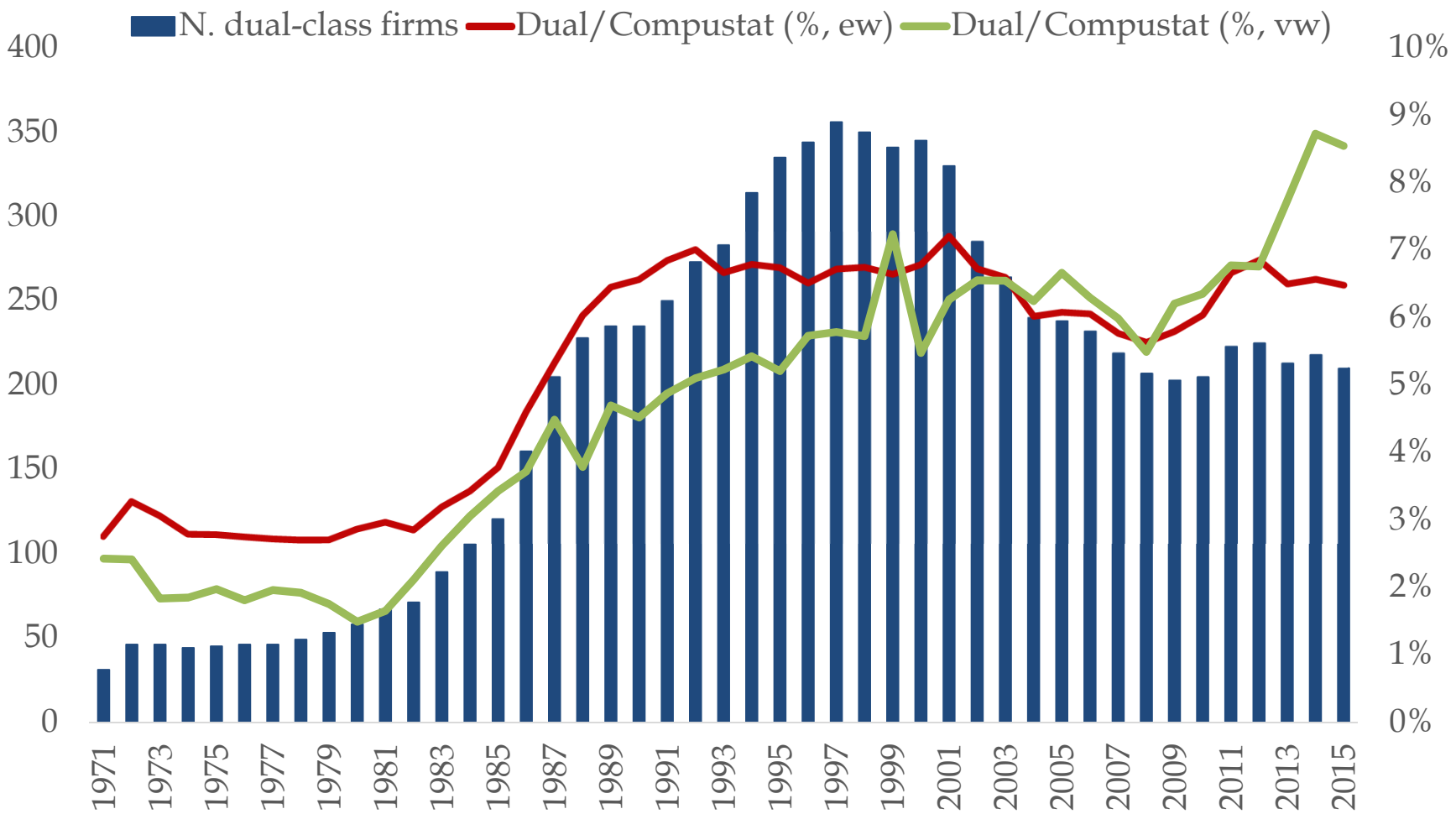
Process to collect information on dual-class firms

1. Identify dual class candidate firms
   - 2%+ difference in # shares outstanding between CRSP (security level) and Compustat (sum of all securities)
   - Dual-class IPOs from Jay Ritter (1980-2015)
   - Firm names from CRSP/Compustat contain 'Cl –A,' 'Cl –B,' etc.

2. Verify that firms have multiple classes of common shares with differing voting right
   - Use SEC EDGAR and Moody's (Capital Stock section)
   - If # votes per share is identical between classes, we determine whether two classes are materially different in voting rights in other ways (e.g., director election)

3. Collect information on whether/when firms switch to dual (or single) class structures
   - And whether these switches are due to sunset provisions

The sample: Dual-class firms, 1971-2015



Economic effects of dual-class voting on firms over maturity

Do costs (private benefits) of dual-class structure increase over firm maturity? - voting premium

- Use voting premium, $(P_A - P_B)/(P_B - rP_A)$, as a proxy for expected private benefits of control to controlling shareholders (e.g., Zingales, 1995). r = # votes for inf. / sup.
- Use a sub-sample of firms for which both superior (A) and inferior classes (B) are traded.

	(1)	(2)
Dependent Variable:	Voting premium (sup. vs. inf. class)	
Mature	3.451**	3.261*
	(2.08)	(1.83)
Log market equity	-0.955***	-0.845**
	(-2.94)	(-2.33)
Log volume (sup. / inf.)	0.376	0.305
	(1.12)	(0.78)
Year fixed effects		Y
R^2	0.036	0.065
Observations	1343	1343

- 'Mature' = 1 if firm age (since IPO) >= 12 (median)

Replacing maturity with growth

	(1)	(2)	(3)
Dependent Variable:	Voting premium (sup. vs. inf. class)		
Sales growth	-2.052**	-2.232**	-2.046*
	(-1.99)	(-1.99)	(-1.85)
Log market equity	-0.867**	-0.781**	-2.513**
	(-2.56)	(-2.08)	(-2.53)
Log volume (sup. / inf.)	0.360	0.299	0.390
	(1.07)	(0.76)	(0.92)
Year fixed effects		Y	Y
Firm fixed effects			Y
R^2	0.029	0.060	0.392
Observations	1340	1340	1340

- Voting premium increase as firm (sales) growth declines.
- Economic magnitude: a one-SD increase in sales growth (64.4%) is associated with 1.3% increase in voting premium.

Effects of dual-class recapitalizations and unifications conditional on maturity

	(1)	(2)	(3)	(4)
Dependent variable:	CAR			
Event:	Dual-class recapitalization		Dual-class unification	
Mature	-3.376*	-4.643*	3.261**	4.973**
	(-1.97)	(-2.03)	(2.20)	(2.52)
Constant	2.616*	3.466**	0.299	-0.613
	(1.86)	(2.26)	(0.19)	(-0.58)
Year fixed effects		Y		Y
R^2	0.035	0.178	0.046	0.355
Observations	88	88	62	62

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Dynamic effects of dual-class structure – Empirical specification

$$Y_{it} = \alpha_{jt} + \beta_1 \text{Dual}_{it} + \beta_2 \text{Mature}_{it} + \beta_3 \text{Dual}_{it} \times \text{Mature}_{it} + \gamma' \text{X}_{it} + \varepsilon_{it}$$

- Y_{it}: firm value or performance (e.g., Tobin's q, ROA)
- α_{jt}: SIC3 industry × year fixed effects
- $Dual_{it}$: dummy for dual-class share structure
- $Mature_{it}$: dummy = 1 if firm age >= 12 (median age)
- X_{it}: firm-level controls (log assets, age, leverage, R&D, ROA, tangibility, sales growth, payout)
- Standard errors clustered at firm level.

Baseline: Average effects on firm value and performance are mixed

	(1)	(2)	(3)	(4)
Dependent Variable:	Tobin's q	Oper. margin	Asset turnover	Log labor prod.
Dual	0.084	0.018	-0.022	-0.015
	(1.32)	(1.37)	(-0.97)	(-0.61)
Log assets	-0.010	0.080***	-0.050***	0.105***
	(-1.51)	(24.32)	(-14.26)	(27.84)
Age	-0.002**	0.000	0.002***	-0.002***
	(-2.51)	(0.30)	(5.32)	(-5.72)
Market leverage	-1.859***	-0.116***	-0.268***	-0.091***
	(-39.79)	(-8.32)	(-12.11)	(-3.98)
R&D	6.555***	-3.807***	-0.432***	-0.714***
	(28.41)	(-24.35)	(-4.89)	(-7.12)
Tangibility	-0.292***	0.277***	-0.407***	-0.440***
	(-4.36)	(8.06)	(-10.39)	(-10.26)
Sales growth	0.195***	0.076***	0.459***	0.497***
	(13.42)	(7.45)	(51.96)	(63.20)
ROA	0.570***	-	-	-
	(6.05)	-	-	-
Payout ratio	-2.449***	0.328***	-0.067	0.401***
	(-16.35)	(6.14)	(-0.81)	(4.80)
SIC3 × year fixed effects	Y	Y	Y	Y
R^2	0.303	0.271	0.524	0.554
Observations	151051	139788	139788	139788

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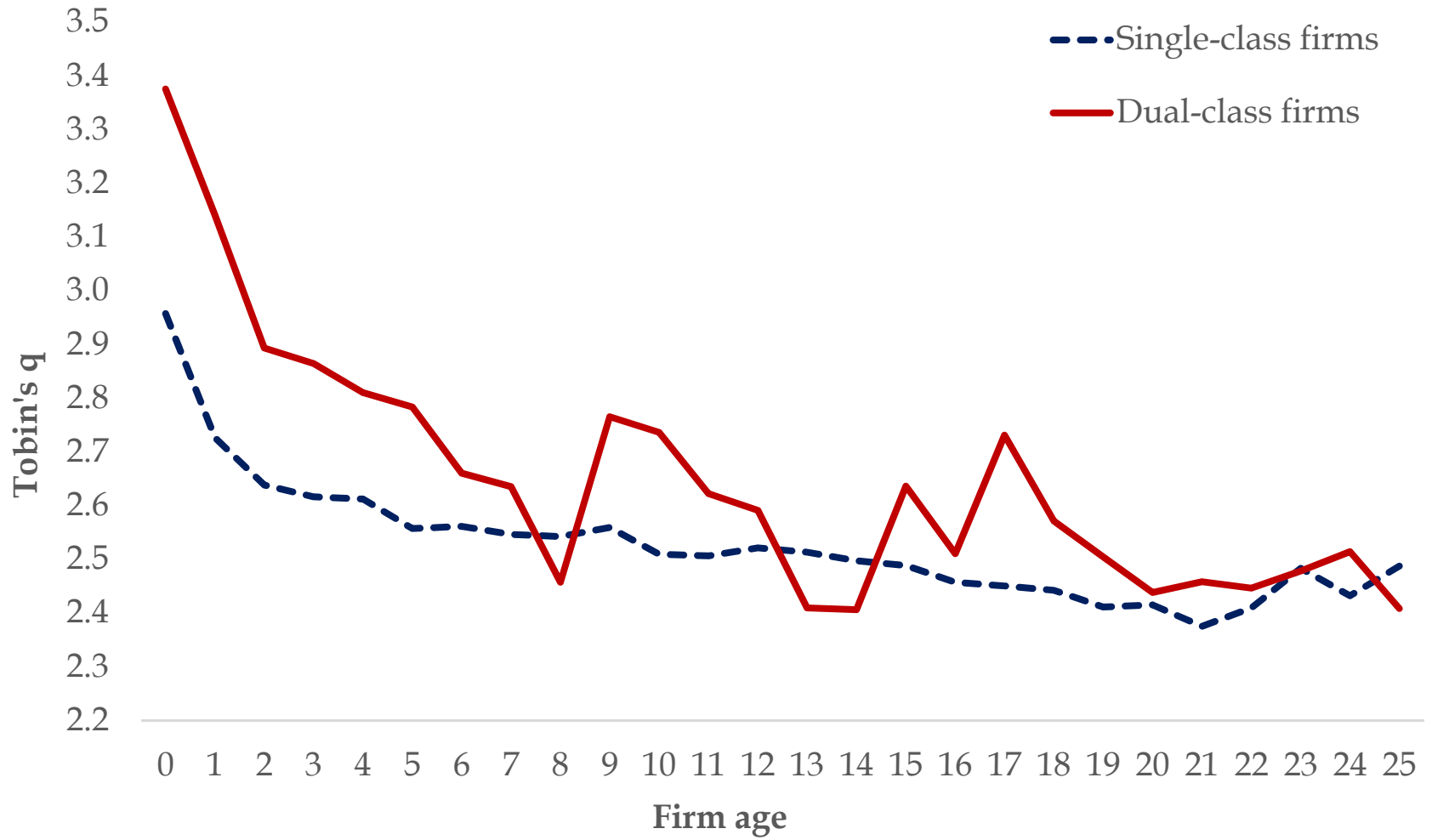
Do effects of dual-class vary over firm maturity?

	(1)	(2)	(3)	(4)
Dependent Variable:			Tobin's q	
Sample:	Full	Matched	Const. DC/SC	Full
Dual	0.200***	0.219*	-	-
	(2.61)	(1.88)	-	-
Mature	-0.131***	-0.123	-0.067*	-0.110***
	(-6.31)	(-1.25)	(-1.65)	(-4.35)
Dual × Mature	-0.216**	-0.283*	-0.258*	-0.182*
	(-2.51)	(-1.92)	(-1.74)	(-1.83)
Firm-level controls	Y	Y	Y	Y
Firm fixed effects			Y	
SIC3 × year fixed effects	Y	Y	Y	Y
Dual × cohorts fixed effects				Y
R^2	0.304	0.379	0.634	0.305
Observations	151051	12558	44196	151,051

- 'Mature' = 1 if firm age (since IPO) >= 12 (median)
- Dual-class firms' valuation declines 2-3x faster than single-class firms as they mature.

Dynamics of Tobin's *q* for dual- and single-class firms over maturity



Does (sample) selection drive the different dynamics?

	(1)	(2)	(3)
Dependent Variable:	Tobin's q	1(remain)	ΔTobin's q
Sample:	IPO Matched sample		IPO Matched 12 ≤ Age ≤ 25
Dual	0.080	0.409***	-0.431**
	(0.63)	(3.61)	(-2.27)
Mature	-0.233	-	-
	(-1.20)	-	-
Dual × Mature	-0.421*	-	-
	(-1.79)	-	-
log(Turnover)	-	0.069***	-
	-	(3.66)	-
Inverse Mills ratio	-	-	-1.908***
	-	-	(-3.00)
Firm-level controls	Y	Y	Y
SIC3 × year fixed effects	Y		
Year fixed effects		Y	Y
R^2	0.460	-	0.159
Observations	3705	81971	24526

Do effects of dual-class voting vary by growth?

	(1)	(2)
Dependent Variable:	Tobin's q	
Sample:	Full	Matched
Dual	0.061	-
	(0.97)	-
Sales growth	0.195***	-0.065
	(13.26)	(-1.49)
Dual × Sales growth	0.138*	0.574**
	(1.71)	(2.04)
Firm-level controls	Y	Y
SIC3 × year fixed effects	Y	Y
Firm fixed effects	-	Y
R^2	0.303	0.634
Observations	151051	44196

- When firms grow slower (proxied by 1-yr sales growth), dual-class firms have particularly lower valuation than single-class firm.

Why is dual-class structure costlier to mature firms?

1. Lower margin and labor productivity
2. Less innovative output
3. Higher agency costs
4. Less responsive to changing investment opportunity (quiet life?)
   – riskier

1. Do effects of dual-class on performance vary over firm life cycle?

	(1)	(2)	(3)
Dependent variable:	Op. margin	Asset turnover	Log labor prod.
Dual	0.039**	-0.035	0.041
	(1.96)	(-1.28)	(1.49)
Mature	0.050***	0.078***	-0.030***
	(5.44)	(7.69)	(-2.87)
Dual × Mature	-0.042*	0.018	-0.102**
	(-1.80)	(0.49)	(-2.51)
SIC3 × year fixed effects	Y	Y	Y
R^2	0.272	0.525	0.553
Observations	139,788	139,788	139,788
Control variables	Y	Y	Y

- Dual-class firms experience faster declines in margins and labor productivity than single-class firms as they mature.

2. Do benefits of dual-class structure decline over firm maturity?

	(1)	(2)	(3)	(4)
Dependent Variable:	Log(patents, t+1)	Log(patents, t+2)	Log(citations /patent, t+1)	Log(citations /patent, t+2)
Dual	-0.028	-0.044	0.002	-0.037
	(-0.34)	(-0.53)	(0.02)	(-0.37)
Mature	0.115***	0.113***	-0.058**	-0.039
	(4.39)	(4.16)	(-2.14)	(-1.42)
Dual × Mature	-0.315**	-0.317**	-0.265**	-0.234*
	(-2.49)	(-2.45)	(-2.01)	(-1.73)
Firm-level controls	Y	Y	Y	Y
SIC3 × year fixed effects	Y	Y	Y	Y
R2	0.522	0.522	0.329	0.331
Observations	59574	56009	59574	56009

- Dual-class firms experience a faster decline in quantity and quality of innovative output than single-class firms as they mature.

3. More evidence for increased agency costs: dividends increases

	(1)	(2)	(3)	(4)
Dependent variable:	CAR		CAR / ΔDiv	
Sample:	Increases and initiations		Increases	
Dual	-2.260**	-2.257**	-3.415***	-9.367***
	(-2.21)	(-2.18)	(-2.82)	(-3.14)
Mature	0.182	0.300	0.170	0.602
	(0.81)	(1.23)	(0.64)	(0.83)
Dual × Mature	3.851***	3.778***	4.837***	12.248***
	(3.14)	(3.07)	(3.11)	(2.84)
Log assets	-	-0.106	-0.045	-0.017
	-	(-1.58)	(-0.57)	(-0.09)
Tobin's *q*	-	-0.042	0.008	-0.037
	-	(-0.54)	(0.09)	(-0.15)
ROA	-	0.557	0.616	2.677
	-	(0.45)	(0.44)	(0.73)
ΔDiv	-	-	0.262	-
	-	-	(1.04)	-
SIC3 × year fixed effects	Y	Y	Y	Y
R^2	0.565	0.566	0.629	0.628
Observations	5,509	5,509	4,469	4,469

4. Do dual-class firms become riskier as they mature?

- Agency costs at mature dual-class firms may also manifest in increased systematic risk.

- For example, mature dual-class firms may have higher adjustment costs of capital and labor (e.g., Bertrand and Mullainathan, 2003).
  - Prediction #1: Investment and employment will be less sensitive to q (Abel and Eberly, 1994)

- This makes mature dual-class firms pay smaller cash flows in bad times, increasing systematic risk
  - Prediction #2: Returns of dual-class firms will load more on the "value factor" as they mature, relative to single-class firms.

- Another potential channel for mature dual-class firms' discount

Prediction #1-b: Investment and employment-*q* sensitivities declines as dual-class firms mature

	(1)	(2)	(3)	(4)
Dependent variable:	Capex/Assets		Employment growth	
Sales growth:	First quartile			
Maturity:	Young	Mature	Young	Mature
q	0.450***	0.503***	1.933***	1.404***
	(6.50)	(7.08)	(5.22)	(3.94)
q × Dual	0.221	-0.483***	0.976	-0.774
	(0.72)	(-2.69)	(0.43)	(-0.81)
Cash flow	-1.846**	2.732***	-7.968*	10.847***
	(-2.29)	(3.55)	(-1.90)	(2.83)
Cash flow × Dual	1.746	-4.975	16.749	14.546
	(0.61)	(-1.09)	(0.71)	(0.75)
Firm fixed effects	Y		Y	
Year fixed effects	Y		Y	
R^2	0.661		0.485	
Observations	38,700		35,457	
Differences and *t*-statistics:				
q × Dual × (Mature - Young)	-0.698*		-1.727	
	(-1.93)		(-0.71)	

Prediction #2: Mature dual-class firms have higher HML loading

Sample: Calendar-time portfolios that long dual-class and short (*q*-matched) single-class stocks

Panel A: Value-Weighted Portfolio				**Panel B: Equal-Weighted Portfolio**			
	(1) Total	(2) Young	(3) Old		(1) Total	(2) Young	(3) Old
Alpha	-0.017	0.120	-0.131	Alpha	0.183	0.162	0.073
	(-0.19)	(0.66)	(-1.22)		(2.76)	(1.41)	(0.91)
BETA	-0.013	0.007	-0.016	BETA	0.002	0.004	-0.004
	(-0.62)	(0.17)	(-0.65)		(0.16)	(0.17)	(-0.24)
SMB	-0.224	-0.287	-0.177	SMB	0.159	0.074	0.201
	(-7.46)	(-4.85)	(-5.06)		(7.38)	(1.99)	(7.77)
HML	0.045	-0.096	0.112	HML	0.072	0.050	0.089
	(1.38)	(-1.48)	(2.92)		(3.05)	(1.22)	(7.77)
UMD	-0.012	0.026	-0.022	UMD	-0.060	-0.057	-0.039
	(-0.58)	(0.29)	(-0.92)		(-4.01)	(-2.21)	(-2.18)
R^2	0.119	0.044	0.086	R^2	0.134	0.021	0.121
N	540	540	540	N	540	540	540

Policy implications – Sunset provisions

Usage of sunset provisions in IPOs: 373 dual-class IPOs from 1994-2015

- Most dual-class IPOs have them! 66% (247/373)
- Provisions conditional on what?

A. Independent of insiders' actions/consent

i. a fixed period of time since IPO, (ONLY 7%; n=17)

B. Require insider intention to relinquish its control (or die)

ii. transfer of ownership of superior shares from insiders to third parties (57%)

iii. a decrease in the collective ownership of an insider group below a threshold level (23%)

iv. others (12%)

Actual conversion to single-class structure

1) All firms with any sunset provisions: 49/247 (20%)
2) Firms with effective sunset conditioning on firm age: 12/17 (70%)
   - Four out of the five firms that have not switched were merged with other firms before the sunset provision became effective
3) Firms without effective sunset conditioning on firm age:
   - 37/224 (16.5%)
   - Only 7!! (3%) were converted due to a sunset provision

- Bottom line: Most of sunset provisions adopted by dual-class firms are ineffective and not triggered often.

Ex post effects of dual-class share unification on firm value

	(1)	(2)
Dependent Variable:	Tobin's q	
Sample:	All switches	Due to sunset
d[Age ≥ 5]	-0.551***	-0.555***
	(-3.86)	(-3.76)
Switcher to Single	-0.161	-0.219
	(-0.43)	(-0.23)
Switcher to Single × d[Age ≥ 5]	0.554*	0.929**
	(1.66)	(2.11)
Firm-level controls	Y	Y
SIC3 × year fixed effects	Y	Y
R^2	0.508	0.516
Observations	7262	6904

- Relative to average dual-class firms, those switching to single-class when age ≥ 5 experience a significant valuation increase, particularly when the switch is due to a sunset provision.

Implications for corporate governance practice

- One share–one vote may not be the one and only Holy Grail.
- Should not have a negative knee-jerk reaction to dual-class share structure
- BUT—should insist on effective sunset provisions, which can condition on
  - Time
  - Periodic approval by minority shareholders
- See also Bebchuck and Kastiel (2017) and Jackson (2018) for legal discussions.

Many institutional investors seem to be on board

Council of Institutional Investors®
The voice of corporate governance

October 24, 2018

Elizabeth King
Chief Regulatory Officer
Intercontinental Exchange Inc.
11 Wall Street
New York, NY 10005

Sent via email

Dear Ms. King:

We are writing on behalf of the Council of Institutional Investors (CII) to petition the New York Stock Exchange to amend its listing standards to require the following on a forward-looking basis for companies going public that seek to list with multi-class common stock structures with differential voting rights:[1]

> **The company's certificate of incorporation or equivalent document must specify provisions requiring the share structure to convert automatically to one-share, one-vote no more than seven years after IPO date, subject to extension by additional terms of no more than seven years each, by vote of a majority of outstanding shares of each share class, voting separately, on a one-share, one-vote basis.**

Conclusions: dual-class structure becomes increasingly costly as firms mature

- We provide comprehensive evidence that
  1) Young dual class are trades at a slight premium to single class counterparts
  2) Mature dual class are trades at a discount to single class counterparts
  3) Net benefits of dual-class share structure decline over corporate lifecycle, consistent with theory

- As dual-class firms mature,
  1) Voting premium increases
  2) Tobin's *q* and performance decline faster than single-class firms (x-s and within-firm)
  3) Announcement returns for dual-class recapitalization decrease
  4) Investment and employment become less sensitive to opportunities, increasing systematic risk.
  5) Innovative output decreases faster than single-class firms
  6) Announcement returns for dividend increases/initiations increase

- Findings suggest a more nuanced view of economic effects of dual-class structure, and deviation from 'one share-one vote' in general.
  - Dynamics: For young firms, benefits of these structures may outweigh costs, but for mature firms these structures may not be optimal.