

Mutual Funds as Venture Capitalists? Evidence from Unicorns

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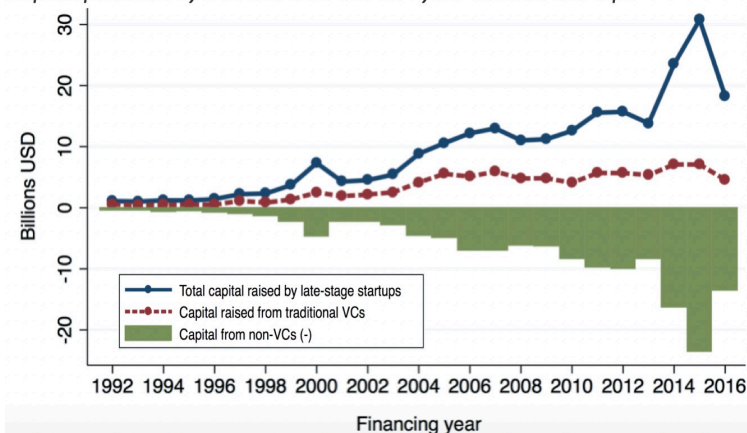
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Motivation

Capital provided by VCs and non-VCs to 4 year or older startups



Source: Michael Ewens and Joan Farre-Mensa, "The Deregulation of the Private Equity Markets and the Decline in IPOs", December 26, 2018: <https://ssrn.com/abstract=3017610>. Note: Data include startups headquartered in the US that have raised at least one equity financing round from a traditional VC investor.

Motivation

- ▶ **VCs** uniquely positioned to **monitor** start-ups
 - ▶ Replacement of management (Lerner 1995)
 - ▶ Staging of financing (Gompers, 1995)
 - ▶ Use of convertible securities and the associated contractual provisions (Kaplan and Stromberg 2003)
 - ▶ Board meetings (Bernstein, Giroud, and Townsend 2016)
- ▶ **Mutual funds** unlikely to have such incentives and resources.
 - ▶ **Open-end structure** and **daily marking-to-market** may be incompatible with illiquid investments (Goldstein, et al 2017, Chernenko and Sunderam 2017, Zeng 2017)
- ▶ Little existing evidence as to whether and how mutual funds provide corporate governance to private firms

Focus of this paper

1. **Which unicorns** are mutual funds more likely to invest in?
2. **Which mutual funds** are more likely to invest in unicorns?
3. How do the **contractual terms** of financing rounds with mutual fund participation compare with those without? What explains these differences?

Data

- ▶ **Sample of firms** = 106 unicorns + 50 “almost-”unicorns
 - ▶ Source: **WSJ Billion Dollar Startup Club** database
 - ▶ Limit to US-based firms
 - ▶ Unicorns: nominal valuation \geq \$1 billion
 - ▶ “Almost-”unicorns: \in [\$500 million, \$1 billion)
- ▶ **Sample of funds** = actively managed domestic equity funds in **CRSP** mutual fund database
 - ▶ **Unicorns portfolio share** based on direct and secondary purchases identified based on security name
 - ▶ **Mutual fund financing rounds**: use SEC forms **N-CSR** and **N-Q** to verify that at least one fund initiates position in the specific series of preferred stock within 60 days of round’s closing date
 - ▶ **Mutual fund share**: share of the round’s funding that is provided by mutual funds

- ▶ **Certificates of Incorporation (COI)**
 - ▶ COIs set forth the rights, preferences, and restrictions of each class and series of common and preferred stock.
 - ▶ Amended and filed after each round
 - ▶ All investors in a round typically share one COI.
- ▶ **Cash-flow rights** (following Kaplan and Stromberg 2003)
 - ▶ **Liquidation preference**: whether senior to previous round
 - ▶ **Liquidation multiple**
 - ▶ **Participation rights**: full vs. capped or no participation
 - ▶ **Cumulative dividends**
- ▶ **Control rights**
 - ▶ **Number of directors**
 - ▶ **Number of protective provisions**: right to veto certain actions by the firm or other investors

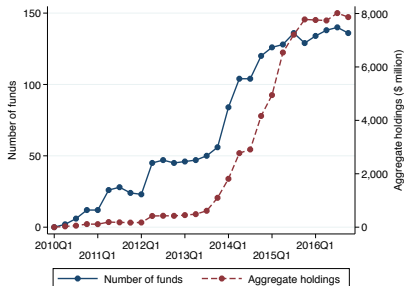
► **Redemption rights**

- **Extensive margin:** yes or no
- **Intensive margin:**
 - **Lock-in period:** months until investors can ask for their shares to be redeemed
 - **Delay after notice:** maximum number of days from the time investors submit redemption notice to the first redemption payment
 - **No vote:** no vote by other investors is necessary
 - **Class vote:** redemption vote at the class level
 - **Annual installments:** number of delayed annual installments allowed for redemption payments

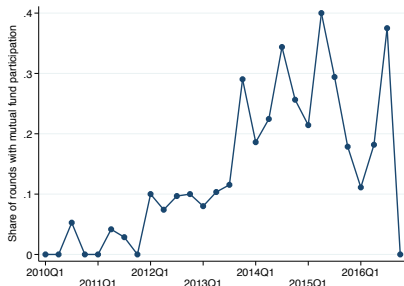
► **IPO-related rights** (following Gornall and Strebulaev 2018)

- **IPO ratchets:** promise investors a certain return
- **Down-IPO veto rights:** exemptions from automatic conversion in down-valuation IPOs

Mutual funds increasingly invest in unicorns

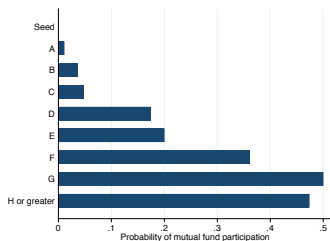


(a) Number of funds and aggregate holdings

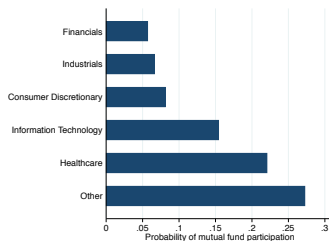


(b) Share of rounds with mutual funds

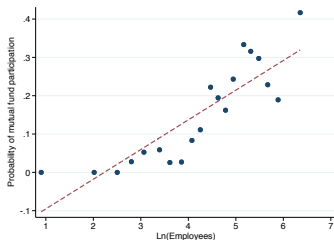
Mutual fund participation by series and sector



(c) by Series



(d) by Sector



(e) by Employment

Which funds invest in unicorns?

- Unconditional probability of investing: 2.60%

	Probability of investing(%)
Fund size	1.685*** (0.357)
Family size	1.081*** (0.260)
Flow volatility	-0.223** (0.106)
Management fee	-0.140 (0.159)
Institutional share	-0.052 (0.273)
<i>N</i>	55,879
Adjusted <i>R</i> ²	0.087

- Linear probability model
- Quarterly panel over 2010–2016 period
- Explanatory variables standardized: effect of 1 SD change
- Lipper objective-year fixed effects

Redemption and IPO-related rights

- ▶ Mutual fund participation **positively** associated with:
 - ▶ Redemption rights
 - ▶ IPO-related rights

	Redemption rights		IPO ratchets		Down-IPO veto	
MFs	0.147*** (0.047)	0.183*** (0.053)	0.030 (0.038)	0.042 (0.045)	0.113** (0.048)	0.190*** (0.055)
Ln(Valuation)		-0.035** (0.015)		-0.007 (0.010)		-0.058*** (0.016)
<i>N</i>	742	525	740	523	739	522
Adjusted R^2	0.017	0.029	0.020	0.011	0.005	0.034

- ▶ Year and round fixed effects

Control and other cash-flow rights

- ▶ Mutual fund participation **negatively** associated with:
 - ▶ Control rights
 - ▶ Other standard cash flow rights

	Class directors		Participation rights		Liquidation multiple > 1	
MFs	-0.401*** (0.059)	-0.383*** (0.075)	-0.122*** (0.037)	-0.075* (0.044)	-0.041* (0.022)	-0.023 (0.026)
Ln(Valuation)		0.027 (0.036)		-0.073*** (0.017)		-0.011 (0.009)
<i>N</i>	736	519	742	525	742	525
Adjusted R^2	0.120	0.119	0.046	0.086	0.002	0.003

- ▶ Year and round fixed effects
- ▶ Consistent though less significant results for other cash-flow rights
- ▶ Caveat: not suggesting causality

Mutual fund share as the explanatory variable

	Redemption rights		IPO ratchets		Down-IPO veto	
MF share	0.309*** (0.112)	0.342*** (0.119)	0.210* (0.109)	0.241** (0.118)	0.144 (0.110)	0.236** (0.116)
Ln(Valuation)		-0.029* (0.015)		-0.010 (0.010)		-0.049*** (0.016)
<i>N</i>	742	525	740	523	739	522
Adjusted R^2	0.014	0.023	0.031	0.026	-0.002	0.016

	Class directors		Participation rights		Liquidation multiple > 1	
MF share	-0.787*** (0.102)	-0.726*** (0.114)	-0.161 (0.098)	-0.081 (0.104)	-0.074* (0.042)	-0.049 (0.045)
Ln(Valuation)		0.014 (0.034)		-0.077*** (0.017)		-0.011 (0.009)
<i>N</i>	736	519	742	525	742	525
Adjusted R^2	0.113	0.114	0.046	0.086	0.001	0.003

- Year and round fixed effects

Controlling for existing directors

	Redemption rights		IPO ratchets		Down-IPO veto	
MFs	0.146*** (0.047)	0.182*** (0.053)	0.028 (0.036)	0.041 (0.044)	0.111** (0.048)	0.189*** (0.053)
Ln(Valuation)		-0.032** (0.015)		0.001 (0.010)		-0.049*** (0.016)
<i>N</i>	742	525	740	523	739	522
Adjusted R^2	0.018	0.030	0.051	0.047	0.014	0.059

	Class directors		Participation rights		Liquidation multiple > 1	
MFs	-0.402*** (0.060)	-0.383*** (0.074)	-0.124*** (0.036)	-0.075* (0.043)	-0.041* (0.022)	-0.023 (0.026)
Ln(Valuation)		0.039 (0.036)		-0.068*** (0.017)		-0.009 (0.009)
<i>N</i>	736	519	742	525	742	525
Adjusted R^2	0.129	0.127	0.070	0.091	0.004	0.007

- Year and round fixed effects

Do the rights that mutual funds care about pay off?

- ▶ No systematic data on ex-post use of redemption or down-IPO veto rights
- ▶ Case study on **triggered IPO ratchets** in our sample:

	Series	Purchase price	IPO ratchet multiple	IPO price	Extra shares
Box	F	\$20.00	1.11	\$14.00	58.7%
Chegg	E	\$9.85	1.50	\$12.50	18.2%
Square	E	\$15.46	1.20	\$9.00	106.1%

- ▶ Having redemption rights may allow mutual funds to better meet SEC regulatory requirements.

More results in the paper

- ▶ **Matching analysis** to help rule out that firms with and without mutual fund investments may be fundamentally different
- ▶ **Pair-wise correlation analysis** among contractual provisions to examine their complementarity, with comparison between rounds with and without mutual fund participation
- ▶ Redemption rights on the **intensive margin**
- ▶ Relationship between **fund characteristics**, in particular, **flow volatility** and contractual provisions
- ▶ Other robustness checks

Conclusion

- ▶ Mutual funds increasingly invest in large, private entrepreneurial firms that are almost public.
- ▶ Funds that are larger and have less volatile flows are more likely to invest.
- ▶ Contractual choices reflect mutual funds' unique preferences
 - ▶ Consistent with mutual funds' **liquidity needs and vulnerability to down-valuation IPOs**.
 - ▶ Prioritize **redemption** and **IPO-related** rights over other **standard cash-flow** rights and **board** representation
 - ▶ Have ex-post governance implications