

Time Enough for Counting: A Unicorn Retrospective

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Legal scholars worry that existing laws cannot adequately regulate large private companies (“unicorns”). At the same time, unicorns seem to be a key part of flourishing markets. Are unicorns a problem that requires solving or a sign that entrepreneurial finance is working? This essay addresses that question by tracking outcomes for the 32 startups that qualified as unicorns when the moniker first emerged. It introduces a new typology of unicorn outcomes to guide policy makers and offers a preliminary hypothesis that private ordering by founders, employees, and investors is proving an effective alternative to ambitious regulatory reform.

Introduction.....	23
I. Defining Success: The Case of a Middling Unicorn	26
II. The Inaugural Unicorns.....	29
A. Basic Demographics.....	29
B. Outcomes	30
1. Ascending IPOs	30
2. Descending IPOs	33
3. Ascending Sales	35
4. Descending Sales	37
5. Insolvency Proceedings.....	40
III. A Temporary Hypothesis.....	41
Conclusion	43

Introduction

In Kenny Rogers’s song *The Gambler*, the narrator trades his last swig of whiskey and a cigarette for gaming advice. The narrator’s travel-weary companion admonishes: “[N]ever count your money while you’re sittin’ at the table” because “there’ll be time enough for countin’ when the dealing’s done.”¹ For a critical mass of billion-dollar startups, known by the catchy

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1. *The Gambler*, CLASSIC COUNTRY SONG LYRICS, <https://www.classic-country-song-lyrics.com/thegamblerlyricschords.html> [<https://perma.cc/4SSR-4YJX>].

moniker “unicorn” since 2013,² the dealing is done. A growing number of these companies have, in the jargon of Silicon Valley, “exited” through initial public offerings (“IPOs”), mergers, or insolvency proceedings. This essay tracks how these exits affect key participants in the entrepreneurial economy.

A startup company achieves unicorn status by completing a privately negotiated financing with a “post-money valuation” of at least \$1 billion.³ By some reports, there are now as many as 500 unicorns world-wide.⁴ At first glance, that is an astonishing number. Historically, startups sold or became public through an IPO long before achieving a billion-dollar valuation.⁵

For legal scholars, however, it is not self-evident that an increase in private company valuations above an arbitrary number marks a meaningful change in regulatory considerations. In fact, one can understand the increasing scale of private companies as a predictable consequence of explicit regulatory choices made in recent decades. In the first decade of the 2000s, companies delayed their IPOs, in part due to an increasingly demanding regulatory environment for publicly traded companies.⁶ But having accumulated large numbers of shareholders through years of financing activities and granting stock options, companies ran up against rules that mandated public company status due to shareholder count.⁷ In response to the experiences of these companies, Congress then increased the threshold for mandatory public company status through the Jumpstart Our Business Startups Act of 2012 (the

2. The unicorn terminology has been traced to a *TechCrunch* article by Aileen Lee in 2013. See Aileen Lee, *Welcome to the Unicorn Club: Learning From Billion-Dollar Startups*, TECHCRUNCH (Nov. 2, 2013, 2:00 PM), <https://techcrunch.com/2013/11/02/welcome-to-the-unicorn-club/?guccounter=1> [<https://perma.cc/EBZ4-6YC2>].

3. A “post-money” valuation is a measure of company value immediately after a financing transaction is complete. It differs from a “pre-money” valuation, which excludes the investment proceeds from the financing in question. See Robert P. Bartlett III, *A Founder’s Guide to Unicorn Creation: How Liquidation Preferences in M&A Transactions Affect Start-up Valuation*, appearing in CLAIR A. HILL & STEVEN DAVIDOFF SOLOMON EDS., *RESEARCH HANDBOOK FOR MERGERS & ACQUISITIONS* 7, 11 (2016). For a discussion of why post-money valuations are not reliable measures of company value, see Part II.B.1 *infra*.

4. See *Unicorn Companies*, CB INSIGHTS, <https://www.cbinsights.com/research-unicorn-companies> [<https://perma.cc/XYT7-797D>]. There are many unicorn lists. This essay draws heavily from Billion Dollar Startup Club, Wall St. J., <https://www.wsj.com/graphics/billion-dollar-club> [<https://perma.cc/C2BX-E6CN>] [hereinafter WSJ/VS BDSC].

5. See Abraham J.B. Cable, *Fool’s Gold?: Equity Compensation & the Mature Startup*, 11 VA. L. & BUS. REV. 613 (2017) (comparing the scale of dot-com era startups to Google and Facebook).

6. See Donald C. Langevoort & Robert B. Thompson, “Publicness” in *Contemporary Securities Regulation After the JOBS Act*, 101 GEO. L. J. 337, 338–39 (2013) (discussing Facebook’s desire to remain private and avoid public company regulation). *But see* Elisabeth de Fontenay, *The Deregulation of Private Capital and the Decline of the Public Company*, 68 HASTINGS L.J. 445, 447 (2017) (expressing doubt about the “regulatory cost hypothesis” regarding declining IPOs).

7. See Langevoort & Thompson, *supra* note 6, at 339 (discussing Facebook’s efforts to remain below thresholds for public company status); Usha Rodriguez, *The Once and Future Irrelevancy of Section 12(g)*, 2015 ILL. L. REV. 1529, 1537–38 (2015).

“JOBS Act”) to allow startups a longer incubation period as private companies.⁸

Viewed against this history, unicorns are not an exogenous shock to the regulatory equilibrium. They are a foreseeable product of a regulatory policy that seemed to assume participants in the entrepreneurial economy – founders, employees, and investors – could adequately protect their interests through private ordering rather than the strict regulatory environment and price information that accompanies public company status. Framed this way, the key question is whether that assumption is bearing out.⁹

To date, corporate scholars have identified yellow flags in the current environment of entrepreneurial finance: troubling instances of fraud,¹⁰ suspect valuations,¹¹ lack of management oversight,¹² and conflicts among corporate constituencies.¹³ In response to these concerns, some scholars have even advocated for a new regulatory category that would revisit the law’s recent trajectory by effectively treating unicorns as quasi-public companies.¹⁴ But we need more than unicorn lists and anecdotes to justify another reform effort. We need to begin tracking and categorizing unicorn *outcomes* in ways that reveal whether the perceived problems are in fact materializing in meaningful patterns that exceed the capabilities of private ordering.

To begin that work, I describe outcomes for a test case – 32 U.S.-based unicorn companies listed on the 2014 version of the *Wall Street Journal’s*

8. See Langevoort & Thompson, *supra* note 6, at 339.

9. In addition to effects on founders, employees, and investors, some scholars have noted potential third-party effects of unicorns. See, e.g., Jennifer S. Fan, *Regulating Unicorns: Disclosure and the New Private Economy*, 57 B.C. L. REV. 583, 599–605 (2016) (discussing potential harms to local economies caused by Uber and Airbnb). This essay is narrower in scope and does not speak to those third-party effects unless they affect founders, investors, or employees.

10. See, e.g., Elizabeth Pollman, *Private Company Lies*, 109 GEO. L.J. 353, 354–56 (2020) (recounting fraud at Theranos); Verity Winship, *Private Company Fraud*, 54 U.C. DAVIS L. REV. 663, 685–95 (2020) (citing examples of SEC enforcement actions against unicorn companies).

11. See Bartlett III, *supra* note 3, at 22–23 (cautioning that preferred stock valuations are not a methodologically sound basis for determining company-wide value); Yifat Aran, *Making Disclosure Work for Start-Up Employees*, 2019 COLUM. BUS. L. REV. 867, 908–914 (2019) (considering how inflated valuations affect employees in startups); see also Will Gornall & Ilya A. Strebulaev, *Squaring Venture Capital Valuation with Reality*, 135 J. FIN. ECON. (Jan. 2020) (using financial modeling to illustrate how post-money valuations from preferred stock financings inflate company-wide values).

12. Renee M. Jones, *The Unicorn Governance Trap*, 166 U. PA. L. REV. ONLINE 165, 169 (2017) (discussing “recent scandals at prominent Unicorns”).

13. Elizabeth Pollman, *Startup Governance*, 168 U. PA. L. REV. 155, 159 (2019) (describing tensions among founders, investors, and employees).

14. See Fan, *supra* note 9, at 583 (“This Article argues that once a private company reaches unicorn status, it should be subject to some of the same reporting obligations as public companies to provide greater transparency and protect minority stockholders (i.e., employees).”); Anat Alon-Beck, *Unicorn Stock Options—Golden Goose or Trojan Horse*, 2019 COLUM. BUS. L. REV. 107, 183–85 (2019) (proposing that unicorns offering equity compensation be subject to state level fairness hearings and mandatory disclosure obligations); Matthew Wansley, *Taming Unicorns*, 97 IND. L. J. (forthcoming 2021) (proposing liberalized trading rules combined with scaled disclosure mandates).

Billion Dollar Startup Club (the “inaugural unicorns”).¹⁵ These were the companies that met the criteria for unicorn status when the category first entered our lexicon.¹⁶ Of that original group, 26 have already exited through merger, IPO, or liquidation. In other words, early returns are coming in.

The purpose of this essay is not to present definitive empirical data on unicorn outcomes. The number of companies is small, and the inaugural unicorns may not be representative of later cohorts for reasons described below. Instead, I aim for an exploratory exercise to frame future analysis. The project’s primary contribution is a typology of outcomes to lay the groundwork for future research.

While the analysis is necessarily preliminary, I offer a temporary hypothesis based on the inaugural unicorns. On an aggregate basis, this group of companies produced substantial and broadly shared economic benefit to participants in the entrepreneurial economy. This is so even for some companies the media cast as disappointments by commonly reported, but not especially insightful, metrics. That is not to say that complacency is in order. There are a meaningful number of failures: companies ending in insolvency proceedings or sales at prices that likely wiped out returns for some employees and founders. But startups have always been a volatile proposition.¹⁷ If there is an emerging pattern, it does not yet support another wide swing of the regulatory pendulum.

This essay proceeds in three parts. Part I discusses existing research and the need for a new categorization scheme to guide policy makers. Part II describes the outcomes for the inaugural unicorns that have exited, focusing on the distribution of gains and losses among founders, employees, and investors. Part III offers preliminary insights.

I. Defining Success: The Case of a Middling Unicorn

Does the world really need another tally of startup company successes and failures? The Silicon Valley trade press, after all, is dotted with startup lists and studies.¹⁸ There is also an existing body of research by corporate

15. See *infra* Part II.A (identifying the source of the 2014 unicorn list).

16. The WSJ/VS BDSC list included unicorn companies that, as of the date of the list, were privately held, had raised money in the previous four years, and had at least one venture-capital investor. The list excluded companies that were majority-controlled by an institutional investment firm. See WSJ/VS BDSC, *supra* note 4.

17. See *infra* notes 18 & 19 (discussing studies of startup outcomes).

18. See, e.g., Venture Capital Funnel Shows Odds of Becoming a Unicorn Are About 1%, CBInsights Research (Sept. 6, 2018), <https://www.cbinsights.com/research/venture-capital-funnel-2> [<https://perma.cc/DZ4A-L7DF>] (tracking whether a set of 1,100 tech companies continued to raise funds or exit); Sebastian Quitero, Dissecting Startup Failure Rates by Stage, Medium (Nov. 7, 2017), <https://medium.com/journal-of-empirical-entrepreneurship/dissecting-startup-failure-by-stage-34bb70354a36> [<https://perma.cc/3RL7-RKUW>] (finding that 80% of startups never exited).

finance scholars using advanced econometrics to analyze investment returns to venture capital.¹⁹

Upon close examination, however, existing analyses do not provide policy makers the dashboard they need to assess the functioning of entrepreneurial finance in the aggregate. The corporate finance literature, for all of its important insights, focuses specifically on returns to venture capital investors rather than the broader set of startup constituents. While the trade press sometimes takes a broader view, it tends to adopt relatively crude measures of success or failure – for example, by treating all exits as successes.²⁰ The goal of this project is to develop a categorization scheme that is at once broader in perspective than the corporate finance literature and more granular than the trade press.

To illustrate the challenge, consider Pure Storage.²¹ By some measures, it looks like a clear winner. It received early financial backing from traditional venture capital funds.²² Within four years, it achieved its first billion-dollar valuation when investors purchased approximately \$150 million of Series E preferred stock at a pre-money valuation of \$850 million, resulting in a post-money valuation of an even \$1 billion.²³ In 2015, it filed for an IPO at \$17 per share, resulting in a market capitalization of \$3.2 billion (the \$17 per share IPO price * outstanding shares after the IPO).²⁴

Pure Storage created substantial wealth for the founders, early investors, and early employees. Founder John Cosgrove held 13,553,926 shares at the time of the IPO, resulting in an aggregate value of over \$230 million at the IPO price of \$17.²⁵ Cosgrove likely paid little or no cash for

19. See, e.g., John Cochrane, *The Risk and Return of Venture Capital*, 75 J. FIN. ECON. 3, 30 (2005) (finding that investments by VC funds exhibit volatility similar to very small publicly traded stocks and “have a small chance of a huge payoff”); Min Hwang, John M. Quigly & Susan Woodward, *An Index for Venture Capital 1987-2003*, CONTRIBUTIONS TO ECONOMIC ANALYSIS & POLICY VOL. 4, 1 (2005) (constructing a performance index for venture capital portfolio investments).

20. E.g., Quitero, *supra* note 18 (considering failure to exit a company failure). Where analyses in the business press use more refined measures, they tend to share the financial economists’ sole focus on venture capital investors. See Eric Feng, *A Stats-Based Look Behind the Venture Capital Curtain*, Medium (Sept. 23, 2018), <https://efeng.medium.com/a-stats-based-look-behind-the-venture-capital-curtain-91630b3239ae> [<https://perma.cc/8U6U-S39G>] (analyzing how the value of exits relates to the total capital invested).

21. Pure Storage develops data storage technologies.

22. See *Series A - Pure Storage*, CRUNCHBASE (identifying Sutter Hill Ventures as an investor); *Series B - Pure Storage*, CRUNCHBASE (identifying Greylock Partners as an investor).

23. See *Series E - Pure Storage*, CRUNCHBASE; see also Pure Storage, Inc., Prospectus (Form 424B4) 100 (Oct. 7, 2015) (describing the purchase price for the company’s Series E preferred stock).

24. See Pure Storage, Inc., Prospectus, *supra* note 23, at Cover Page & 6 (identifying the IPO price and outstanding shares after the IPO).

25. See *id.* at 103.

this lucrative stake in the company.²⁶ Sutter Hill purchased Series A preferred stock for approximately \$5 million.²⁷ At the IPO price, those shares had grown to a value of over \$400 million.²⁸ By the time of the IPO, Pure Storage reported having over 1,000 employees to whom the company had granted stock options for the purchase of nearly 70 million shares of stock.²⁹ These options had exercise prices equal to the estimated value of the company's stock at the time of the grant.³⁰ Excluding grants made in the months leading up to the IPO, the options had a weighted-average exercise price of \$4.53 per share.³¹ With a "spread" of \$12.47 per share (the \$17 IPO price minus the \$4.53 exercise price), these earlier options had an aggregate value of nearly \$750 million.

But one can also view Pure Storage as something of a disappointment. The stock closed below the IPO price in the first day of trading.³² At that point, the business press characterized the IPO as a flop because the market capitalization of the company fell below the \$3 billion post-money valuation from the last private financing.³³ In the company's first year of trading, its stock fluctuated from \$9.77 to \$19.74 per share.³⁴ By the time customary sale restrictions on investors and employees likely expired 181 days after the IPO (the end of the "lock-up period"),³⁵ the per share trading price was 8% below the price paid by investors in the company's last round of private financing.³⁶ Options for approximately 10 million shares granted to employees in the months leading up to the IPO were out-of-the-money, with exercise prices in excess of the stock's value.³⁷

26. It is typical for founders of a startup to pay for their shares primarily by contributing their personal rights in the nascent business to the corporation. See Gregg D. Polsky & Brant J. Hellwig, *Examining the Tax Advantage of Founder's Stock*, 97 IOWA L. REV. 1085, 1090 (2012).

27. See *Series A – Pure Storage*, CRUNCHBASE.

28. See Pure Storage, Inc., Prospectus, *supra* note 23, at F-18 (reporting 24,360,000 shares of Series A preferred stock outstanding).

29. See *id.* at 79 and 7.

30. See THERESE H. MAYNARD & DANA M. WARREN, BUSINESS PLANNING: FINANCING THE START-UP BUSINESS AND VENTURE CAPITAL FINANCING 321–345 (2010) (describing customary terms of stock options and key tax and regulatory requirements).

31. See Pure Storage, Inc., Prospectus, *supra* note 23, at 79.

32. See Eugene Kim, A Big Tech IPO Flopped and Now the Company is Worth Less Than When It Was Private, Insider (Oct. 7, 2015, 4:43 PM), <https://www.businessinsider.com/pure-storage-ipo-close-below-3-billion-2015-10> [<https://perma.cc/D8Z3-AELF>].

33. See *id.*

34. The low of \$9.77 was the closing price on June 17, 2016, and the high of \$19.74 was the closing price on October 15, 2015.

35. *Model Legal Documents*, NVCA, <https://nvca.org/model-legal-documents> [<https://perma.cc/5K42-RP8V>] (providing form of term sheet for venture capital investment featuring a 180-day "Lock-up" on sales of company stock following an IPO); Startup Forms: Equity Compensation, Orrick, <https://www.orrick.com/en/Total-Access/Tool-Kit/Start-Up-Forms/Equity-Compensation> [<https://perma.cc/3TE6-NFXQ>] (providing form of employee option agreement with 180-day "Lock-up Agreement").

36. See table entitled "Descending IPOs" below.

37. The exercise price of these options was equal to the IPO price. See Pure Storage, Inc., Prospectus, *supra* note 23, at 7.

What should we make of this middling example? Was Pure Storage a success because it generated substantial wealth for founders, early investors, and early employees, or a disappointment because it plateaued in later stages and its share price dipped after the IPO? This essay seeks to establish a categorization scheme that speaks to these questions as unicorns start to exit in substantial numbers.

II. The Inaugural Unicorns

A. Basic Demographics

Because startups take time to exit, this project focuses on some of the earliest-identified unicorns. I start with the 2014 version of the “Billion-Dollar Startup Club” compiled and published by the *Wall Street Journal*. The list included all private (pre-IPO) companies that had achieved unicorn status by January 2014.³⁸ Exhibit A to this essay identifies the companies. I refer to them as the “inaugural unicorns.”

One advantage of this source is that it was continuously maintained with updated company status through September 2019. It also has the advantage of drawing from Dow Jones Venture Source, an extensive commercial data base commonly used in venture capital research.³⁹ Where necessary, I supplement this information with data from a company’s IPO prospectus and from Crunchbase, a commercial data base.⁴⁰

To an extent, the inaugural unicorns are an arbitrary grouping. The companies were not founded in the same year and they did not achieve unicorn status or exit in the same year. The list contains some young firms that reached billion-dollar valuations rapidly and some holdovers that predated the 2008 market downturn. The companies also vary widely in industry focus, ranging from sports memorabilia (Fanatics) to space exploration (SpaceX). As more information becomes available, it may be more instructive to use a different grouping for analyzing unicorn outcomes. For now, the inaugural unicorns offer a viable but imperfect starting point.

Even this early collection of unicorns is an unfinished story. Of the 32 companies, 26 have exited through merger, IPO, or liquidation. The fact that 6 of 32 companies have not yet exited is itself notable. The average time to

38. For additional explanation of the criteria, see *supra* note 16.

39. See Steven N. Kaplan & Josh Lerner, *Venture Capital Data: Opportunities and Challenges*, NBER WORKING PAPER NO. 22500 1, 6 (2016) (describing Venture Source as a typical source of information in academic research).

40. See *id.* (describing Crunchbase as a potentially promising source of information). Where possible, I verify Crunchbase data with press accounts.

exit for a VC-backed company is approximately 6 years for mergers and 7 years for IPOs.⁴¹ The 6 remaining companies all exceed these averages.

B. Outcomes

I divide unicorn outcomes into five categories: Ascending IPO, Descending IPO, Ascending Sale, Descending Sale, and Insolvency Proceeding.

1. Ascending IPOs

We start with the category that hews most closely to the juggernaut trajectory animating Silicon Valley. The IPOs listed below are categorized as Ascending IPOs because the per-share trading price 180 days after the IPO exceeded the per-share price for the last reported private financing, as shown in the far-right column. In other words, it appears that even late-arriving investors and employees of these companies gained.

41. See NAT'L VENTURE CAPITAL ASS'N, 2020 NAT'L VENTURE CAPITAL ASS'N YEARBOOK 35-36 (2020) [hereinafter 2020 NVCA YEARBOOK].

Time Enough for Counting

Ascending IPOs

As of December 31, 2020

(in billions, except per share amounts)

Company	Total Equity Funding ⁴²	Last Private Valuation (Post-\$) ⁴³	Exit Value (IPO Market Cap) ⁴⁴	% Above (Below)	Private Per-Share Price ⁴⁵	IPO Per-Share Price ⁴⁶	% Above (Below) Private Price	181-Day Trading Price Per Share ⁴⁷	% Above (Below) Private Price
Palantir	\$2.450	\$20	\$15.9	(21%)	\$4.65	\$10	(115%)	\$24.22	421%
GoPro	\$0.220	\$2.3	\$3.0	28%	\$17.08	\$24	41%	\$58.00	240%
Airbnb	\$3.300	\$31	\$41.0	32%	\$52.50	\$68	30%	\$162.33	209%
CloudFlare	\$0.332	\$3.2	\$4.5	40%	\$10.99	\$15	36%	\$21.11	92%

42. Based on WSJ/VS BDSC, *supra* note 4. For companies exiting after September 2019, supplemented with Crunchbase data. See *Corporate – Palantir*, CRUNCHBASE (indicating a \$550 million corporate round in 2020); *Series D – Cloudflare*, CRUNCHBASE (indicating \$110 million financing in 2015 not included in WSJ/VS BDSC); *Series E – Cloudflare*, CRUNCHBASE (indicating \$150 million financing in 2019). The amount shown for Airbnb does not reflect a debt and warrant transaction in 2020 because the transaction is not equity funding. See *Private Equity – Airbnb*, CRUNCHBASE; Joshua Franklin, *Airbnb’s New \$1 Billion Investment Comes at Lower Valuation*, Reuters (Apr. 7, 2020, 8:26 PM), <https://www.reuters.com/article/uk-airbnb-debt-idUKKBN21Q01S> [<https://perma.cc/6A7E-7AZW>].

43. Based on WSJ/VS BDSC, *supra* note 4. For companies exiting after September 2019, supplemented with Crunchbase data. For Cloudflare, amount shown is based on most recent financing reported in Crunchbase. See *Series E – Cloudflare*, CRUNCHBASE (indicating \$150 million financing in 2019). For Airbnb, amount shown does not reflect a reported valuation of \$18 billion established in connection with a debt and warrant transaction because the transaction may not be comparable to valuations established in connection with equity financings. See Franklin, *supra* note 42 (describing the terms of the transaction). For Palantir, amount shown does not reflect a recent corporate investment in common stock because no post-money valuation was announced in connection with the transaction. See *Private Equity Round – Palantir*, CRUNCHBASE (describing the transaction without including a post-money transaction).

44. IPO market cap is calculated by multiplying the IPO price by outstanding shares, including any overallotment option. The IPO price is generally derived from the cover page of the IPO prospectus. See *infra* note 46. Outstanding shares is derived from the summary portion of the IPO prospectus.

45. Amounts shown generally reflect the most recent preferred stock financing described in the IPO prospectus. The amounts shown for GoPro and Palantir, however, reflect common stock financings described in the relevant prospectus. See *GoPro, Inc., Prospectus (Form 424B4) 142 (June 25, 2014)* (describing shares held by a strategic investor, Foxteq Holdings); *Private Equity Round – GoPro*, CRUNCHBASE (describing the aggregate purchase price for such shares); *Palantir Technologies Inc., Prospectus (Form 424B) F-42* (describing a sale of stock to a strategic investor). In general, the amounts shown in this column and the column entitled Last Private Valuation (Post-\$) appear to be derived from the same transaction. However, this cannot be confirmed for Palantir and Uber. For Palantir, the most recent per-share amount derives from a transaction without an announced post-money valuation. For Uber, the most recent post-money valuation shown on WSJ/VS BDSC derives from a transaction for which per share amounts cannot be discerned from the IPO prospectus.

46. Based on the cover page of the IPO prospectus. For Palantir, which conducted a direct listing, the amount shown is the opening trading price on September 30, 2020.

47. Closing price reported on Yahoo Financial on the 181st day following the date of the prospectus.

Nutanix	\$0.312	\$2	\$2.2	12%	\$13.40	\$16	19%	\$19.92	49%
Pinterest	\$1.500	\$12.3	\$10.3	(16%)	\$21.54	\$19	(12%)	\$25.92	20%
Coupons.com	\$0.202	\$1	\$1.2	20%	\$13.73	\$16	17%	\$16.28	19%
MongoDB	\$0.311	\$1.6	\$1.2	(25%)	\$33.44	\$24	(28%)	\$39.46	18%

In categorizing these exits, there is a methodological choice between sorting on per-share amounts (as the table above does) or the company-wide measures of value also reported in the table and often cited by the media. Consider Pinterest for illustration purposes. Its last private financing was based on a \$12.3 billion post-money valuation of the company. But its market cap at its IPO, determined by multiplying the IPO share price by total outstanding shares, was only \$10.3 billion. Based on these company-wide metrics, the business press described the IPO price as “tough” news for the company.⁴⁸

But academic researchers note problems with this approach. A post-money valuation from a preferred stock financing is a mechanism for determining the per-share purchase price of *preferred* stock. Though it is customary in Silicon Valley to apply this preferred stock value to the company’s entire share base (preferred and common) to produce a company-wide valuation, such a practice implies that preferred and common shares are of equal value. That seems doubtful based on the enhanced economic and governance features of preferred stock.⁴⁹ One study suggests that post-money valuations therefore overstate company values by 50% on average.⁵⁰ Moreover, post-money valuations and market capitalizations often differ in treatment of stock options, further calling into question any comparison of these metrics.⁵¹

Even after settling on the per-share approach, methodological choices remain. Founders, investors, and employees do not generally cash out all at once at the IPO price. Because shareholders are often contractually prohibited from selling shares (“locked up”) for 180-days after the IPO,⁵²

48. See Ingrid Lunden, *Pinterest Sets IPO Range at \$15-17, Valuing It at \$10.6 vs. Previous Valuation of \$12.3B*, TechCrunch (Apr. 8, 2019, 6:52 AM), <https://techcrunch.com/2019/04/08/pinterest-ipo-range> [https://perma.cc/JQ32-5H34].

49. See Bartlett III, *supra* note 3, at 3.

50. See Gornall & Strebulaev, *supra* note 11, at 20.

51. More specifically, post-money valuations typically use a fully diluted share count that counts the entire option plan regardless of the status of the options as granted or vested. Market capitalizations would not ordinarily be so expansive in the share count. See Dash Victor, *Valuation vs. Market Cap and the Square IPO*, MEDIUM (Nov. 24, 2015), <https://dashvictor.medium.com/valuation-vs-market-cap-and-the-square-ipo-4643c98867c3> [https://perma.cc/CDH4-FKAF].

52. See *supra* note 35. Sales do sometimes occur before the lock-up period expires. Some shareholders are allowed to sell after the IPO and before the expiration of the lock-up period. See Susan Pulliam, *Insiders Get Post-IPO Pass*, Wall St. J. (Sept. 12, 2012, 7:22 PM), <https://www.wsj.com/articles/SB10000872396390443696604577647922960428402>

Time Enough for Counting

I use the closing price 181 days after the IPO as the primary comparator. One could, of course, extend the analysis even further to trading prices at later milestones. But the analysis must be cabined in some way, and the end of the customary lock-up period is an intuitive choice.

2. Descending IPOs

An IPO is categorized as Descending if the per-share trading price 181 days after the IPO is *below* the per-share price for the last-reported private financing. Of the 15 IPOs in the cohort, seven are categorized as Descending IPOs. In the jargon of entrepreneurial finance, these IPOs were actually “down rounds,” suggesting some amount of investor disappointment.

Descending IPOs

As of December 31, 2020

(in billions, except per share amounts)

Company	Total Equity Funding	Last Private Valuation (Post-\$)	Exit Value (IPO Market Cap)	% Above (Below)	Private Per-Share Price	IPO Per-Share Price	% Above (Below) Private Price	181-Day Trading Price Per-Share	% Above (Below) Private Price
Snap	\$2.400	\$17.8	\$19.9	12%	\$15.30	\$17	11%	\$15.19	(1%)
Dropbox	\$0.607	\$10	\$8.3	(17%)	\$28.65	\$21	(27%)	\$26.36	(8%)
Pure Storage	\$0.530	\$3	\$3.2	7%	\$15.73	\$17	8%	\$14.39	(9%)
Box	\$0.533	\$2.4	\$1.7	(31%)	\$20.00	\$14	(30%)	\$17.06	(15%)
Square	\$0.495	\$6	\$3.0	(50%)	\$15.46	\$9	(42%)	\$9.16	(41%)
Uber	\$14.900	\$76	\$75.7	0%	\$48.77	\$45	(8%)	\$28.02	(43%)
Bloom Energy	\$1.200	\$2.9	\$1.6	(44%)	\$38.64	\$15	(61%)	\$12.02	(69%)

It is important, however, not to overstate the effects of a Descending IPO. Most basically, the stock might rebound in later trading. Square, for example, fell to \$9.16 by 181 days after its November 2015 IPO, but the stock subsequently rallied and recently traded at well over \$250 per share.⁵³

[<https://perma.cc/CT75-TZ6V>]. Some shareholders may even be allowed to sell in private secondary markets before the IPO. See Elizabeth Pollman, *Information Issues on Wall Street 2.0*, 161 U. PENN. L. REV. 179, 193–202 (2012) (describing the emergence of private secondary markets).

53. The stock closed at \$276.57 on February 19, 2021.

In addition, a Descending IPO may still constitute a good outcome for most founders, employees, and investors. Consider Square again. Founders retained large stakes of common stock, totaling nearly 100 million shares.⁵⁴ The company established an equity compensation plan and granted options for the purchase of approximately 100 million shares with an average exercise price of \$6.95 per share.⁵⁵ Early investors, such as Khosla Ventures, paid \$0.21 per share for Series A preferred stock.⁵⁶ For the founders, employees with exercise prices on the lower end of the range, and early venture capital investors, the IPO and subsequent run-up to \$9.16 per share were positive outcomes.

The picture is more complicated for later-arriving employees and investors. On a basic level, the 181-day closing price of \$9.16 appears underwhelming for later-arriving employees and especially concerning for an investor paying \$15.46 per share in later rounds of investment. A closer look at the IPO prospectus, however, reveals mitigating factors.

As Square matured, the company shifted its employee compensation practices towards restricted stock units (“RSUs”). These RSUs entitled the recipients to outright grants of stock or equivalent cash payouts, with no exercise price, upon meeting certain milestones.⁵⁷ This shift in compensation practice reflects a broader market trend towards using RSUs, in lieu of stock options, as a startup matures.⁵⁸

Square’s Series E investors benefitted from an emerging contractual innovation: the IPO ratchet. Initially, each share of Series E stock was convertible into a single share of common stock. Pursuant to the IPO ratchet, that conversion rate was adjusted if the company’s IPO price fell below a 20% premium on the original Series E price—in other words, below \$18.56.⁵⁹ With an IPO price of just \$9, each share of Series E stock became convertible into roughly *two* shares of common stock. Instead of being convertible into approximately 10 million common shares, the Series E shares could convert into approximately 20 million common shares. The IPO ratchet effectively guaranteed a positive return on the Series E stock

54. See Square, Inc., Prospectus (Form 424B4) 174 (Nov. 19, 2015).

55. See *id.* at 15–16. This number does not include option grants for an additional 2.8 million shares made in the weeks leading up to the IPO with exercise prices equal to the IPO price. See *id.*

56. See *id.* at F-33 (stating per share prices for the company’s preferred stock); *Series A – Square*, CRUNCHBASE (identifying investors in Square’s Series A financing).

57. See Square Inc., Prospectus, *supra* note 54, at 15–16 (reporting approximately 1.25 million in RSUs, with the majority of awards made in the weeks leading up to the IPO).

58. See Emily Chasan, *Last Gasp for Stock Options?*, WALL ST. J. (Aug. 26, 2013), <https://www.wsj.com/articles/BL-CFOB-4242> [<https://perma.cc/P72N-ZTTN>] (discussing a shift to RSUs); Jared Thomas, *Switching From Options to RSUs*, CARTA (May 27, 2020), <https://carta.com/blog/options-vs-rsus> [<https://perma.cc/SY7U-TWBP>] (reporting that on average startups switch from options to RSU 5.5 years after founding and after a post-money valuation of \$1.05 billion). Because RSUs trigger tax and withholding obligations at vesting, they are uncommon in early stages when cash is scarce. See *id.*

59. See Square, Inc., Prospectus, *supra* note 54, at F-34 (describing the IPO ratchet).

if the company reached an IPO. IPO ratchets are not standard among the inaugural unicorns,⁶⁰ but other researchers note the increasing prevalence of IPO ratchets in recent years.⁶¹

Finally, a single investor might invest in several rounds of financing for a particular company. For example, GGV Capital invested in Square's Series C and Series E financing.⁶² Gains on early rounds of investment sometimes make up for losses on later rounds.

In sum, a Descending IPO is a yellow flag. It suggests some level of disappointment by late-comers, but it does not necessarily signal widely distributed losses.

3. Ascending Sales

Legal scholars have long recognized two primary forms of exits for startups: (1) an IPO or (2) the sale of a startup to an established company, typically through a merger.⁶³ Sales can be either positive or negative outcomes. A company might sell for billions with very little outside capital invested,⁶⁴ or a sale might simply be a vehicle for acquiring lingering assets

60. Based on a review of certificates of incorporation, the following companies featured IPO ratchets: Nutanix, Box, and Square. *See* Certificate of Incorporation of Nutanix, Exhibit 3.1 to Registration Statement (Form S-1/A) 6 (Aug. 16, 2016); Certificate of Incorporation of Box, Exhibit 3.1 to Registration Statement (Form S-1/A) 8-10 (July 7, 2015); Certificate of Incorporation of Square, Exhibit 3.1 to Registration Statement (Form S-1/A) 20-21 (Oct. 26, 2015). For the purpose of this analysis, I defined IPO ratchets somewhat narrowly to include "full ratchet" provisions that provide the most substantial adjustments to conversion ratios in connection with IPOs. It is also possible that an IPO triggers a more traditional, and milder, "weighted-average" adjustment. *See* WeWork's Anti-Dilution Provisions Could Grant \$400 Million to SoftBank and Others, Renaissance Cap. (Sept. 12, 2019), [https://www.renaissancecapital.com/IPO-Center/News/64947/WeWork%E2%80%99s-anti-dilution-provisions-could-grant-\\$400-million-to-SoftBank-](https://www.renaissancecapital.com/IPO-Center/News/64947/WeWork%E2%80%99s-anti-dilution-provisions-could-grant-$400-million-to-SoftBank-) [<https://perma.cc/W4VZ-AMAX>] (discussing an uncommon example of a large adjustment based on a weighted-average provision).

61. *See* Barry Kramer & Khang Tran, *The Effect of Companies Late Stage Venture Financing on Their IPOs*, FENWICK & WEST (2016), at 1, <https://assets.fenwick.com/legacy/FenwickDocuments/The-Effect-of-Companies-Late-Stage-Venture-Financings-on-their-IPOs.pdf> [<https://perma.cc/AV2J-N6L5>] (reporting that 20% of IPOs for venture-backed tech companies in 2014-2015 triggered IPO ratchets); John C. Coffee, *Unicorns and Ratchets: How IPO Overvaluation is Encouraged*, LAW.COM (Nov. 20, 2019), <https://www.law.com/newyorklawjournal/2019/11/20/unicorns-and-ratchets-how-ipo-overvaluation-is-encouraged> [<https://perma.cc/4KNF-PKX8>] (discussing Sergey Chernenko, Josh Lerner & Yao Zeng, *Mutual Funds as Venture Capitalists? Evidence From Unicorns*, European Corporate Governance Institute – Finance Working Paper No. 67512020 (2017)); John C. Coffee, *Toxic Unicorns: What Has Been Missed About WeWork's Fiasco*, CLS BLUE SKY BLOG (Nov. 6, 2019), <https://clsbluesky.law.columbia.edu/2019/11/06/toxic-unicorns-what-has-been-missed-about-weworks-fiasco> [<https://perma.cc/R9KL-L4MR>].

62. *See* *Series C – Square*, CRUNCHBASE; *Series E – Square*, CRUNCHBASE.

63. D. Gordon Smith, *The Exit Structure of Venture Capital*, 53 UCLA L. REV. 315, 317 (2005).

64. *See, e.g.*, Reed Albergotti, et al., *Facebook to Pay \$19 Billion for WhatsApp*, WALL ST. J. (Feb. 19, 2014), <https://www.wsj.com/articles/SB10001424052702304914204579393452029288302> [<https://perma.cc/V8FJ-HEKV>] (describing a \$19 billion exit after five years).

and engineering talent at salvage value.⁶⁵ Accordingly, the next two categories—Ascending Sales and Descending Sales—seek to differentiate between these two very different outcomes that are achieved by the same legal mechanism.

The most notable feature of these categories, however, is the sparse number of companies listed overall. For venture-backed startups in general, sales are significantly more common than IPOs.⁶⁶ Yet the inaugural unicorns feature considerably more IPOs (15) than sales (7). This disparity between IPOs and other forms of exit is itself a sign of a strong set of companies.

Ascending Sales

As of December 31, 2020

(in billions)

Company	Total Equity Funding	Last Private Valuation (Post-\$)	Exit Value (Total Merger Consideration) ⁶⁷	% Above (Below) Private Valuation)
Beats Electronics	\$0.560	\$1.1	\$3	173%
Nest Labs	\$0.230	\$2	\$3.2	60%
Legendary Entertainment	\$0.900	\$3	\$3.5	17%

About half of the cohort that exited through sales displayed a clear upward trajectory.⁶⁸ These companies sold for proceeds (Exit Value (Total Merger Consideration)) that exceeded late-stage valuations (Last Private Valuation (Post-\$)) and substantially exceeded total amounts invested in these companies (Total Equity Funding). For this category, companies are sorted by company-wide metrics because per-share amounts are not available.

It is also notable that two of the three companies do not conform to preconceived notions of Silicon Valley startups. Beats Electronics was

65. Academic literature includes very little description of what happens to the assets of failed companies. The legal process for liquidating assets of failed companies is discussed in Part II.B.5 below. For a description of acquisitions aimed at acquiring a startup's workforce, see generally John F. Coyle & Gregg D. Polsky, *Acqui-Hiring*, 63 DUKE L. J. 281 (2013).

66. In the years 2010-2019, the number of IPOs of venture-backed companies ranged from 40-124 per year. During that same period, the number of sales of venture-backed companies ranged from 667-950 per year. See NAT'L VENTURE CAPITAL ASS'N, *supra* note 41, at 34-36.

67. Based on WSJ/VS BDSC, *supra* note 4.

68. One of the companies, Deem, was acquired in a private transaction for which no exit value has been publicly announced. It is therefore not categorized as an Ascending Sale or Descending Sale.

founded not by technical founders, but by veterans of the music industry, Jimmy Lovine and Dr. Dre.⁶⁹ Legendary Entertainment, a film production company, was founded by movie executive Thomas Tull.⁷⁰ This outsider status is also reflected in the companies' legal structure. Beats Electronics and Legendary Entertainment were organized as limited liability companies, despite the fact that Silicon Valley startups are almost universally organized as corporations.⁷¹

In short, Ascending Sales is a small and quirky group of companies.

4. Descending Sales

A sale is considered to be Descending if the reported sale price is *below* the last reported private company valuation. As with Ascending Sales, information is sparse for these exits compared to the IPO categories.

Despite these limitations, it seems clear that there are real losses within this particular group of companies. For three of the four Descending Sales, the sale price is well below not only the last private company value, but also the total amount investors paid for their stock (Total Equity Funding). Press accounts confirm substantial losses.⁷² The remaining Descending Sale, Good Technology, achieved a sale price above Total Equity Funding, which could in theory mean at least modest returns for founders, employees, and investors. As described in more detail below, however, we have an unusual amount of information about this company due to shareholder litigation and to a failed attempt at an IPO. These sources make clear that Good Technology did not end well.

69. See WSJ/VS BDSC, *supra* note 4.

70. See *id.*

71. Victor Fleischer, *The Rational Exuberance of Structuring Venture Capital Startups*, 57 TAX L. REV. 137, 137-38 (2003).

72. See Sarah Buhr & Ingrid Lunden, *PCH Buys Design Portal Fab in Stock and Cash Firesale*, TECHCRUNCH (Mar. 3, 2015), <https://techcrunch.com/2015/03/03/pch-fab/> [<https://perma.cc/Q3B6-NWTW>] (describing the merger consideration as “a fire-sale price”); Teresa Novellino, *Gilt Groupe Sale Leaves Winners, Losers, and a Cautionary Tale*, N.Y. BUS. J. (Jan. 20, 2016), <https://www.bizjournals.com/newyork/news/2016/01/20/gilt-groupe-sale-leaves-winners-losers-and-a.html> [<https://perma.cc/6J5D-6CYT>] (reporting investor losses).

Descending Sales
As of December 31, 2020
(in billions)

Company	Total Equity Funding	Last Private Valuation (Post-\$)	Exit Value (Total Merger Consideration)	% Above (Below)
Good Technology	\$0.388	\$1	\$0.425	-58%
Gilt Groupe	\$0.278	\$0.6	\$0.25	-58%
Fab	\$0.355	\$1.2	\$0.15	-88%

To understand the likely distributional effects of a Descending Sale, it is crucial to understand customary preferred stock terms. Generally, venture capital investors receive a liquidation preference that directs sale proceeds to preferred shareholders before holders of common stock (e.g., founders and stock option recipients) can receive any return.⁷³ For an IPO or a sale at a high price, preferred shares convert and participate in the company's success as common shares rather than receiving the liquidation preference.⁷⁴ But in a more disappointing company sale, the liquidation preference may direct all or most consideration to venture capital investors.⁷⁵

Because liquidation preferences are generally equal to the initial investment amount, the total equity funding column should be roughly equal to aggregate liquidation preferences.⁷⁶ In other words, the amount listed in that column is likely a hurdle that must be cleared before common shareholders receive any return.⁷⁷ The concept is best illustrated through an example.

Good Technology, a mobile security software company, got off to a convoluted start. It began under the name RoamPage in 1996, changed its name to Visto in 1997, acquired its primary business from Motorola in 2009, and settled on the name Good Technology Corporation later that year.⁷⁸ After a failed IPO in 2015, the company sold to Blackberry for a

73. For a detailed explanation of liquidation preferences, see Abraham J.B. Cable, *Opportunity-Cost Conflicts in Corporate Law*, 66 CASE WEST. RESERVE L. REV. 51 (2015).

74. *See id.*

75. *See id.*

76. Aggregate liquidation preferences for a distressed company can be below total equity funding if, as a condition to continued financing, existing investors agree to a recapitalization.

77. It is also possible that the company has debt, the amount of which must also be cleared before common shareholders receive a return. *See* Darian M. Ibrahim, *Debt as Venture Capital*, 2010 U. ILL. REV. 1169, 1177–1180 (describing the prevalence of debt in financing high-growth startups).

78. *See* Good Technology Corporation, Prospectus (Form 424B4) 8 (Mar. 5, 2015).

reported purchase price of \$425 million.⁷⁹ According to media accounts and a class-action complaint alleging breach of fiduciary duty by the Good Technology board, this purchase price left only about \$0.50 per share for common shareholders, after satisfying liquidation preferences to preferred holders, establishing new compensation arrangements for continuing executives, and paying off substantial debt.⁸⁰ That amount rendered stock options for the purchase of 56,522,914 shares at an average exercise price of \$2.23 per share, mostly out of the money.⁸¹ According to press accounts, this financial reality prompted strong emotional responses by employees.⁸² A story in the *New York Times* reported that the sale to Blackberry cost employees more than dashed hopes. Some paid taxes on exercised options when the stock was valued for tax purposes near its high watermark.⁸³

Even within the ranks of investors, incentives diverged. If the allegations in the resulting litigation are true, the company's board splintered under the weight of conflicting motives by the time of crucial exit decisions. According to the complaint, board representatives of late-stage investors, who had negotiated for an IPO ratchet, were relatively insensitive to the proposed IPO price while representatives of some earlier investors felt pressure for outsized returns.⁸⁴

These conflicts among founders, employees, and investors are not new to corporate law scholars or courts. For decades, corporate law scholars have been discussing the diverging interests that result from exit decisions, and company sales near aggregate liquidation preferences in particular.⁸⁵ In recent years, the Delaware Chancery Court has handed down multiple decisions considering the board's obligations in these circumstances,⁸⁶ prompting a new wave of scholarship on the issue.⁸⁷ As with Ascending Sales, the most surprising aspect of the Descending Sale category is its small size, given the prominence of this potential outcome in caselaw and legal scholarship.

79. See Katie Benner, *When A Unicorn Startup Stumbles, Its Employees Get Hurt*, N.Y. TIMES (Dec. 23, 2015), <https://www.nytimes.com/2015/12/27/technology/when-a-unicorn-start-up-stumbles-its-employees-get-hurt.html> [<https://perma.cc/3WDK-YB2S>].

80. *In re Good Technology Corp. S'holder Litig.*, No. 11580-VCL, 2016 WL 6493395, at ¶ 29 (Del. Ch. Oct. 28, 2016).

81. See Good Technology Corporation, Prospectus, *supra* note 78, at 52. Total outstanding shares were approximately 220 million. *See id.* at 9.

82. See Benner, *supra* note 79.

83. *See id.*

84. *In re Good Technology Corp. S'holder Litig.*, *supra* note 80, at ¶¶ 52, 62, & 69.

85. E.g., Robert P. Bartlett, III, *Venture Capital, Agency Costs, and the False Dichotomy of the Corporation*, 54 U.C.L.A. L. REV. 37, 48–60 (2006); Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups*, 81 N.Y.U. L. REV. 967 (2006); Smith, *supra* note 85, at 316, 345.

86. E.g., *Frederick Hsu Living Trust v. ODN Holding Corp.*, No. 12108-VCL, 2017 WL 1437308 at *5, *28 (Del. Ch. Apr. 14, 2017); *In re Trados Inc. S'holder Litig.*, 73 A.3d 17 (Del. Ch. 2013).

87. E.g., William W. Bratton & Michael L. Wachter, *A Theory of Preferred Stock*, 161 U. PA. L. REV. 1815, 1874–1900 (2013).

5. Insolvency Proceedings

The remaining exited companies wound down through insolvency proceedings. This category includes infamous examples, such as Theranos, and lesser-known companies.

Insolvency Proceedings
As of December 31, 2020
(in billions)

Company	Total Equity Funding	Last Private Valuation (Post-\$)	Exit Value (Total Merger Consideration)	% Above (Below)
Fisker Automotive	\$1.2	\$1.5	\$0.149	-90%
Jawbone	\$0.681	\$1.5	?	?
Theranos	\$0.75	\$9	?	?
Mode Media	\$0.23	\$1	?	?

Relatively little information about this category of company is available. Fisker Automotive completed a sale at \$149 million, well below the \$1.2 billion invested in the company, through a bankruptcy proceeding. Bankruptcy court filings reveal mass layoffs, over \$200 million in debt, and securities fraud claims by investors.⁸⁸

The other companies used a more obscure state insolvency proceeding – an assignment for benefit of creditors (“ABC”). Typically, a failed startup resolves through an ABC. In an ABC, a company assigns its assets to a fiduciary, who then sells off the assets for a fee and remits proceeds to creditors. The process does not require court involvement and is viewed as an efficient vehicle for moving on quickly and cheaply from failed ventures.⁸⁹

Because the process is somewhat opaque, it is difficult to gather detailed information on the outcome of this category. News accounts suggest abrupt closures, lay-offs, and wide-spread losses.⁹⁰

88. Disclosure Statement for the Debtors’ Second Amended Joint Plan of Liquidation, *In re* FAH Liquidating Corp., et al., (f/k/a Fisker Automotive, Inc.), Debtors, 2014 WL 3889619 (Bkrcty. D. Del.) at 8–17, 23.

89. Robert L. Eisenbach, *Assignments for the Benefit of Creditors, Simple as ABC?*, COOLEY (Mar. 16, 2008), <https://bankruptcy.cooley.com/2008/03/articles/business-bankruptcy-issues/assignments-for-the-benefit-of-creditors-simple-as-abc> [<https://perma.cc/WQ7J-HYQB>].

90. See Pollman, *supra* note 10, at 353–56 (describing scandals at Theranos); Reed Albergotti, *Jawbone to Be Liquidated as Rahman Moves to Health Startup*, INFORMATION (July 6, 2017), <https://www.theinformation.com/articles/jawbone-to-be-liquidated-as-rahman-moves-to-health-startup> [<https://perma.cc/2J9E-K6KV>] (suggesting that the liquidation “likely wipes out

III. A Temporary Hypothesis

This essay was motivated by a central question: can founders, investors, and employees adequately protect their interests through private ordering, or do unicorns require a new regulatory intervention? While the analysis above is necessarily preliminary, it is still useful to offer a provisional answer based on the outcomes observed so far. In short, it is hard to see the case for fundamental reform, such as quasi-public status for unicorn companies, based on the inaugural unicorns.⁹¹

Founders are the clear winners in this set of companies. In terms of economic outcomes, they benefit greatly from early timing. A Descending IPO, which is an ambiguous outcome for some constituents, is still a success for a founder with a big slug of inexpensive stock. Even in a Descending Sale, which can wipe out value for most common shareholders, founders may have enough leverage to at least land on their feet with bonus payments or post-merger employment arrangements.⁹² Beyond this economic success, founders of the inaugural unicorns maintained a high degree of management control compared to historical standards.⁹³ Of those companies exiting by IPO, 14 of 15 feature dual-class voting structures designed to maintain founder voting control.⁹⁴ Additionally, 12 of 15 retain a founder as CEO after the IPO.⁹⁵ This power shift towards founders appears to reflect a broader market trend.⁹⁶

Consistent with industry-wide data, traditional venture capital investors in these companies also appear to be navigating the unicorn era with aplomb.⁹⁷ Like founders, these investors often enjoy the benefits of

the equity held by investors”); John Koetsier, *The Sad Long Story of Fisker Automotive*, “*The Largest VC-backed Debacle in U.S. History*,” VENTUREBEAT (Apr. 17, 2013), <https://venturebeat.com/2013/04/17/the-sad-long-story-of-fisker-automotive-the-most-tragic-vc-backed-debacle-in-recent-history> [<https://perma.cc/C4HT-SHQ4>] (describing the aftermath of the Fisker bankruptcy); Blaise Zerega, *Mode Media: An IPO That Never Happened and a Company that Won't Die*, VENTUREBEAT (Mar. 29, 2017), <https://venturebeat.com/2017/03/29/mode-media-an-ipo-that-never-happened-and-a-company-that-wont-die> [<https://perma.cc/H7S3-TAAS>] (describing a meeting at which Mode Media employees “were told the company was shutting down immediately and that they were being fired”).

91. See Fan, *supra* note 9 (identifying proposals for regulation of unicorn companies).

92. For an overview of how founders are induced to support mergers, see generally Brian J. Broughman & Jesse M. Fried, *Carrots & Sticks: How VCs Induce Entrepreneurial Teams to Sell Startups*, 98 CORNELL L. REV. 1319 (2013).

93. See Noam Wasserman, *The Founder's Dilemma*, HARV. BUS. REV. (Feb. 2008), <https://hbr.org/2008/02/the-founders-dilemma> [<https://perma.cc/4PGR-32Y8>] (finding that founders normally surrender control).

94. The exception is Coupons.com. Whether a company has a dual-class voting structure can be determined by reviewing the summary portion of the company's IPO prospectus.

95. The exceptions are MongoDB, Pure Storage, and Uber. Founders are identified in Crunchbase and the CEO at IPO can be determined by the management portion of the IPO prospectus.

96. See Jones, *supra* note 12, at 174 (discussing the emergence of dual-class voting).

97. See VENTURE CAPITAL ASS'N, NVCA YEARBOOK (2019) 7 <https://nvca.org/wp-content/uploads/2019/08/NVCA-2019-Yearbook.pdf> (describing 2019 as “a record year for exit value” of venture-backed companies).

early timing and associated favorable valuations. Some of their late-stage investments might underwhelm, but returns to these repeat players of the startup game have always been driven by a few “homeruns” that cover up other losses.⁹⁸

There is an emerging group of late-stage investors about which we *might* worry more. New entrants—mutual funds, corporate investors, and governmental entities—are a growing presence in late-stage financing of unicorns.⁹⁹ There is evidence of this trend among the inaugural unicorns, with investments from traditional mutual fund managers, such as Fidelity,¹⁰⁰ from investment arms of established corporations, such as Google’s Capital G,¹⁰¹ and from governmental entities, such as the CIA’s In-Q-Tell.¹⁰²

In this set of companies, however, there are indications that investors are adapting to the new environment and bargaining for relevant protections. Traditionally, Silicon Valley participants have emphasized standardization in financing terms.¹⁰³ This is an understandable impulse early in a company’s lifecycle, when investments are relatively small, professional fees from negotiations might be disproportionate, and investors spread their bets on a relatively large number of companies. But the cost-benefit analysis of standardization likely changes when investors “add zeros” to the transactions. Indeed, we see the tracks of high-stakes negotiations in later rounds of investment in the inaugural unicorns. The clearest example are the IPO ratchets discussed in detail above. We also see a variety of other investor-friendly rights that have fallen out of favor in earlier financing rounds, such as redemption rights and enhanced liquidation preferences payable in merger transactions.¹⁰⁴

The constituency we should be most concerned about in this set of observations is employees. The Silicon Valley labor force has long been considered a vital component of the region’s economic success.¹⁰⁵ By nature of their ownership interests—typically stock options with an exercise price tied to hire date—employees are the first to get squeezed when a company is temporarily overvalued. Quirks of the tax code

98. See Cochrane, *supra* note 19, at 30 (finding high volatility in venture capital investments).

99. See Anat Alon-Beck, *Alternative Venture Capital: The New Unicorn Investors*, Case Legal Studies Research Paper No. 2020-26 (Nov. 30, 2020) at 32–69.

100. See *Investors - CloudFlare*, CRUNCHBASE.

101. See *id.*

102. See *Investors - Palantir*, CRUNCHBASE.

103. See Abraham J.B. Cable, *Does Trados Matter?*, 45 J. CORP. L. 311, 323–24 (2020) (describing standardization of financing transactions).

104. E.g., Certificate of Incorporation of Pinterest, Inc., Exhibit 3.1 to Registration Statement (Form S-1/A) 23–24 (Mar. 29, 2019) (describing redemption rights to preferred holders); Nutanix, Inc., Prospectus (Form 424B4) 143, F-23 (Sept. 29, 2016) (providing a 1.5x liquidation preference for the company’s Series D preferred stock).

105. See ALAN HYDE, *WORKING IN SILICON VALLEY: ECONOMIC AND LEGAL ANALYSIS OF A HIGH-VELOCITY LABOR MARKET* (2003).

sometimes compound the problem.¹⁰⁶ There are collective action problems that might impede negotiated solutions. These vulnerabilities are, and should be, concerning to legal scholars.¹⁰⁷

But even here, there may be signs that the market is adjusting. Mature startups are making increased use of RSUs, which at least mitigate the effects of inflated valuations.¹⁰⁸ There are also prospects for a better-informed labor force as companies' compensation practices become more professionalized through emerging third-party platforms.¹⁰⁹ Finally, this sought-after segment of the labor force should benefit from reputational markets and even the attention of the plaintiffs' bar as startups scale up.¹¹⁰

Of course, a different pattern could emerge as more unicorn results come in. The IPO market is cyclical.¹¹¹ A higher incidence of Descending Sales, for example, would indicate substantial strain on privately negotiated governance arrangements. As the example of Good Technology illustrates, sales on the "moderate downside" create tensions among founders, employees, and investors.¹¹² A higher incidence of Insolvency Proceedings—especially those involving allegations of fraud—could expose blind spots in our regulatory and litigation systems.¹¹³

Conclusion

This essay began by asking whether a surge in billion-dollar startups warrants rethinking our regulatory assumptions. Specifically, can participants in the entrepreneurial economy adequately protect their interests in the age of unicorns or do we need new regulatory approaches? Based on the experiences of these inaugural unicorns, legal scholars should

106. See Benner, *supra* note 83 (discussing adverse tax effects for Good Technology option holders).

107. See Aran, *supra* note 10, 914–30 (discussing equity compensation regulation); Alon-Beck, *supra* note 14, at 144–60 (discussing equity compensation in startups); Cable, *supra* note 5 (discussing equity compensation in mature startups).

108. See Square Prospectus, *supra* note 57.

109. For example, vendors like Carta administer option plans and provide resources to employees. See *Employee Resource Center*, CARTA, <https://carta.com/blog/category/employee-resource-center> [<https://perma.cc/4TJ9-2YLH>].

110. See Cable, *supra* note 5, at 632 (discussing the role of reputational markets); Erin Griffith, *Inside Airbnb, Employees Eager for Big Payout Pushed It to Go Public*, N.Y. TIMES (Sept. 20, 2019), <https://www.nytimes.com/2019/09/20/technology/airbnb-employees-ipo-payouts.html> [<https://perma.cc/4DDK-6QP4>] (providing a well-publicized example of discontent by recipients of equity compensation over a lack of liquidity); Dave Lee, *Uber Employees Sue Over Stock Price Decline*, FIN. TIMES (Aug. 27, 2020), <https://www.ft.com/content/234fb83c-f3fb-4ecd-b0a1-2e4d838d660e> [<https://perma.cc/Y8V6-9J2N>] (reporting on a lawsuit over administration of RSUs filed on behalf of Uber employees).

111. See 2020 NVCA YEARBOOK, *supra* note 41, at 34 (reporting that the number of IPOs per year for VC-backed companies ranged from 11 to 124 from 2007 to 2019).

112. See *supra* text accompanying notes 85–87 (discussing conflicts of interests).

113. See Pollman, *supra* note 10, at 386–90 (discussing impediments to fraud claims).

continue to be vigilant, but the case for fundamental reform has not yet been made.

Time Enough for Counting

Exhibit A

Company	Founded Date	Exit Date	Exit Type
Palantir	2004	2020	IPO
GoPro	2004	2014	IPO
Airbnb	2008	2020	IPO
CloudFlare	2009	2019	IPO
Nutanix	2009	2016	IPO
Pinterest	2008	2019	IPO
Couponscom	1998	2014	IPO
MongoDB	2007	2017	IPO
Snap	2012	2017	IPO
Dropbox	2007	2018	IPO
Pure Storage	2009	2015	IPO
Box	2005	2015	IPO
Square	2009	2015	IPO
Uber	2009	2019	IPO
Bloom Energy	2001	2018	IPO
Beats Electronics	2005	2014	Sale
Nest Labs	2010	2014	Sale
Legendary Entertainment	2005	2016	Sale
Good Technology	1996	2015	Sale
Gilt Groupe	2007	2015	Sale
Fab	2009	2015	Sale
Deem	1999	2019	Sale
Fisker Automotive	2007	2014	Insolvency
Jawbone	1999	2017	Insolvency
Theranos	2003	2018	Insolvency
Mode Media	2004	2016	Insolvency
Stripe	2009	N/A	N/A
SpaceX	2002	N/A	N/A
Fanatics	1995	N/A	N/A
Mu Sigma	2004	N/A	N/A
Evernote	2005	N/A	N/A
Lookout	2007	N/A	N/A