



CARDOZO

Benjamin N. Cardozo School of Law

LARC @ Cardozo Law

Articles

Faculty Scholarship

Fall 2022

Taming Unicorns

Matthew Wansley

Benjamin N. Cardozo School of Law, matthew.wansley@yu.edu

Follow this and additional works at: <https://larc.cardozo.yu.edu/faculty-articles>



Part of the [Banking and Finance Law Commons](#), [Business Organizations Law Commons](#), [Marketing Law Commons](#), and the [Securities Law Commons](#)

Recommended Citation

Matthew Wansley, *Taming Unicorns*, 97 Ind. L.J. 1203 (2022).

<https://larc.cardozo.yu.edu/faculty-articles/550>

This Article is brought to you for free and open access by the Faculty Scholarship at LARC @ Cardozo Law. It has been accepted for inclusion in Articles by an authorized administrator of LARC @ Cardozo Law. For more information, please contact larc@yu.edu.

Taming Unicorns

MATTHEW WANSLEY*

Until recently, most startups that grew to become valuable businesses chose to become public companies. In the last decade, the number of unicorns—private, venture-backed startups valued over one billion dollars—has increased more than tenfold. Some of these unicorns committed misconduct that they successfully concealed for years. The difficulty of trading private company securities facilitates the concealment of misconduct. The opportunity to profit from trading a company's securities gives short sellers, analysts, and financial journalists incentives to uncover and reveal information about misconduct the company commits. Securities regulation and standard contract provisions restrict the trading of private company securities, which undermines the deterrence of private company misconduct.

This Article proposes a three-pronged plan to encourage trading in private company securities, without compromising investor protection. First, reform section 12(g) of the Exchange Act so that companies are no longer forced to go public when they acquire 2000 accredited investor shareholders. Second, attach a regulatory most-favored-nation clause to private company securities so that companies may not grant the right to resell selectively. Third, require that private companies with tradable securities make limited public disclosures. These reforms would create a new market for trading unicorn securities and strengthen deterrence of unicorn misconduct.

* Assistant Professor of Law, Cardozo School of Law. General Counsel, nuTonomy Inc., 2016–2019. Climenko Fellow, Harvard Law School, 2013–2016. I thank Anat Alon-Beck, Dan Awrey, Chris Buccafusco, Dan Epps, Liz Goldman, James Kwak, Mark Lemley, Ann Lipton, Ngozi Okidegbe, Frank Partnoy, Alex Platt, Michael Pollack, Elizabeth Pollman, Gabe Rauterberg, Jeanne Schroeder, Holger Spamann, Ed Stein, Stew Sterk, Andrew Tuch, Sam Weinstein, Verity Winship, Chuck Yablon, and audience members at the 2020 National Business Law Scholars Conference and the Cardozo Faculty Workshop for comments and conversations. I thank Sam Driks and Brian Wohlhieter for excellent research assistance. I thank the editors of the *Indiana Law Journal* for outstanding editing.

I. THE UNICORN PROBLEM.....	1210
A. THE RISE OF THE UNICORNS	1212
B. UNICORN MISCONDUCT	1215
1. THERANOS.....	1216
2. UBER	1219
3. JUUL	1221
4. COMMONALITIES	1223
II. TRADING AND DETERRENCE.....	1224
A. SHORT SELLERS	1225
B. ANALYSTS	1229
C. FINANCIAL JOURNALISTS	1231
D. EMPLOYEES.....	1232
E. REGULATORS AND LITIGATORS.....	1234
III. UNDERDETERRENCE OF UNICORN MISCONDUCT	1236
A. VENTURE CAPITALISTS	1236
1. ASYMMETRIC RISK PREFERENCES.....	1237
2. THE WINNER’S CURSE	1239
3. NORM OF SILENCE.....	1240
B. RESTRAINTS ON TRADABILITY	1242
C. SECONDARY MARKETS	1244
IV. A MARKET FOR UNICORN SECURITIES.....	1250
A. SECONDARY MARKET LIBERALIZATION	1250
B. MOST FAVORED NATION CLAUSE.....	1253
C. LIMITED DISCLOSURE MANDATE.....	1256
CONCLUSION	1258

INTRODUCTION

Until the last decade, most startups that grew to become valuable businesses chose to become public companies. The gold standard of success for a startup was an initial public offering (IPO).¹ Late-stage startups with reported valuations over \$1 billion used to be so rare that the venture capitalist (VC) Aileen Lee called them “unicorns.”² When she coined the term in 2013, there were only thirty-nine startups claiming billion-dollar valuations.³ Since then, the trend of companies postponing or forgoing IPOs has accelerated. By January 2022, the number of unicorns had passed 900.⁴

Unicorns have developed a reputation for scandal. Some of the most highly valued unicorns committed misconduct that went undetected for years. Theranos provided customers with nearly one million blood tests that it later had to void or correct.⁵

1. Darian M. Ibrahim, *The New Exit in Venture Capital*, 65 VAND. L. REV. 1, 11 (2012); Mark A. Lemley & Andrew McCreary, *Exit Strategy*, 101 B.U. L. REV. 1, 17–18 (2021).

2. 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/> [<https://perma.cc/C4E2-36VZ>].

3. *See id.*

4. *The Complete List of Unicorn Companies*, CB INSIGHTS, <https://www.cbinsights.com/research-unicorn-companies> [<https://perma.cc/MKZ2-EKWS>].

5. JOHN CARREYROU, *BAD BLOOD: SECRETS AND LIES IN A SILICON VALLEY STARTUP* 293

Uber created software that illegally spied on regulators and allowed its drivers to evade enforcement.⁶ Juul advertised its nicotine vaping devices to minors, creating a market that regulators have struggled to suppress.⁷ In each of these cases, the victims of the misconduct included third parties, not just investors.

Of course, public companies commit misconduct too. Unicorns have not been around long enough for empirical research to determine whether they are systematically more prone to commit misconduct than comparable public companies.⁸ But there is empirical research on how public company misconduct is detected.⁹ That research makes it clear that the opportunity to profit from information about a company by trading its securities is critical to exposing misconduct.¹⁰ Private company securities are not widely traded, so private company misconduct is easier to conceal.

The market for trading public company securities creates a market for information about public companies.¹¹ Traders can profit from information about a public company that is relevant to its stock price but not already reflected in the price, which makes that information valuable.¹² The market for information generates incentives for short sellers to investigate traded companies. Once short sellers uncover negative information about a company, they short its stock and reveal the information to the public so they can profit from the ensuing decline.¹³ The same market for information also subsidizes the work of analysts and financial journalists. They build reputations by scrutinizing public company financial statements and conducting their independent research.

(2018).

6. See MIKE ISAAC, *SUPER PUMPED: THE BATTLE FOR UBER* 241–46 (2019).

7. See Matt Richtel & Sheila Kaplan, *Did Juul Lure Teenagers and Get ‘Customers for Life?’*, N.Y. TIMES (Aug. 27, 2018), <https://www.nytimes.com/2018/08/27/science/juul-vaping-teen-marketing.html> [<https://perma.cc/989J-F33V>].

8. There are some plausible theories for why unicorns might be more prone to misconduct. See Elizabeth Pollman, *Private Company Lies*, 109 GEO. L.J. 353, 383–86 (2020) (arguing that startup culture encourages entrepreneurs to rationalize misconduct).

9. See Alexander Dyck, Adair Morse & Luigi Zingales, *Who Blows the Whistle on Corporate Fraud?*, 65 J. FIN. 2213, 2213 (2010).

10. See *infra* Part II.

11. See Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 592–609 (1984) (describing the market for information about publicly traded companies).

12. According to the semi-strong form of the efficient capital markets hypothesis, the market prices of publicly traded securities fully reflect all publicly available information. See *id.* at 554–56. If the semi-strong form is true, traders would only profit from trading on private information that they uncovered. If the semi-strong form is false, traders can also profit from trading on information that is publicly available but not widely distributed, which Gilson and Kraakman call “semi-public.” *Id.* at 589.

13. See Barbara A. Bliss, Peter Molk & Frank Partnoy, *Negative Activism*, 97 WASH. U. L. REV. 1333, 1345–55 (2020) (providing evidence of “negative informational activism,” which they define as short seller activist “behavior that seeks to uncover and then communicate the truth about companies whose shares the activists believe are overvalued”).

Information indicating that a company has committed misconduct will often affect its stock price.¹⁴ This gives short sellers an incentive to uncover and reveal evidence of corporate misconduct. Likewise, when analysts and financial journalists inspect a company's financial statements, they have an incentive to search for misconduct buried in the data. Together, short sellers, analysts, and financial journalists increase the chance that corporate misconduct will be revealed and the speed with which it is revealed. Once misconduct is revealed, regulators and plaintiffs' lawyers can impose penalties. When managers expect that misconduct will be revealed and penalized ex post, they are less likely to commit misconduct ex ante. In this way, the market for trading public company securities creates the positive social externality of deterrence.

Consider the electric-truck company Nikola, formerly a unicorn. In June 2020, Nikola went public through a reverse merger.¹⁵ Once Nikola was public, short seller Nathan Anderson decided to investigate.¹⁶ He gathered information from a "former Nikola business partner and another person close to the company."¹⁷ Anderson issued a report on Nikola in September, alleging a pattern of corporate misconduct.¹⁸ He showed that a video Nikola had produced with its prototype truck traveling at high speed was staged: "Nikola had towed the truck to the top of a hill and filmed it rolling down the hill in neutral . . ."¹⁹ After Anderson released his report, the Securities and Exchange Commission (SEC) and federal prosecutors launched investigations into whether Nikola misled investors.²⁰ Its stock price lost more than half of its value.²¹ Nikola might never have been exposed if it had stayed private.

The market for information about private companies is broken because the market for trading private company securities is anemic. Securities regulation restricts both the sale and resale of private company stock.²² Private companies usually encumber their shares with a contractual right of first refusal.²³ Private companies can practice *selective liquidity*: allowing directors and managers to cash out, while preventing a robust market from emerging. Therefore, the ability to profit from negative information about private companies—and the incentive to uncover that information—is attenuated. Investors, employees, business partners, and outside experts who have information about private company misconduct have little incentive to publicize it. Consequently, private company managers are more

14. See *id.* at 1349–51 (providing evidence that allegations of “major business fraud,” “accounting fraud,” “ineffective products,” and “fraudulent stock promotion” are “associated with significant negative returns”).

15. Gregory Zuckerman, *How Nikola Stock Got Torched by a Short Seller*, WALL ST. J., <https://www.wsj.com/articles/how-nikola-stock-got-torched-by-a-short-seller-11600867055> [<https://perma.cc/2HUK-PZPQ>] (Sept. 23, 2020, 1:17 PM).

16. See *id.*

17. *Id.*

18. See *id.*

19. *Id.*

20. *Id.*

21. *Id.*

22. See *infra* Section III.B.

23. See Jennifer S. Fan, *Regulating Unicorns: Disclosure and the New Private Economy*, 57 B.C. L. REV. 583, 597 (2016); Ibrahim, *supra* note 1, at 44.

confident that they can successfully conceal misconduct and are less deterred from committing it.

The primary investors in many private companies are VCs, and they lack strong incentives to expose misconduct. VCs have asymmetric risk preferences. They invest their funds in a portfolio of startups and expect that most will generate modest or negative returns, and only a small number will grow exponentially.²⁴ The outsize growth of the few successful startups will offset the losses of the balance of the portfolio. From a VC's perspective, the difference between a startup that implodes in scandal and the many startups that fail to develop a product or find a market is insignificant.

VC investing also has a winner's curse problem. Startup fundraising resembles an auction. Startups pitch to many VC firms in each fundraising round, but they only need to accept funding from one bidder. In public capital markets, if most investors decide that a company is fraudulent or excessively risky, its stock price will decline. In VC markets, if most investors decide that a startup is fraudulent or excessively risky, the startup will raise funds from the contrarian. The VC that wins the auction may be especially credulous or risk-loving. The VCs that pass on a startup have no incentive to share their negative assessment with the public because they cannot trade on it. VCs habitually refuse to sign non-disclosure agreements (NDAs) with startups.²⁵ But they generally choose not to reveal the socially valuable information they learn about fraudulent or reckless businesses in order to maintain a founder-friendly reputation.

Why did we create a system that insulates large private companies from the scrutiny of trading? From the perspective of the securities laws, the restricted tradability of private company securities is as a feature, not a bug. Securities regulation gives companies the choice of two regulatory regimes. Public companies must make periodic disclosures and take on greater liability exposure. In return, they can raise capital from retail investors. Private companies face few disclosure requirements and less liability. But they can only raise capital through private placements with investors who can “fend for themselves”—mostly wealthy individuals and financial institutions.²⁶ The shares that those investors buy cannot be easily resold, to make sure that investors do not create a secondary market of retail investors.²⁷

24. See Chris Dixon, *Performance Data and the 'Babe Ruth' Effect in Venture Capital*, ANDREESSEN HOROWITZ (June 8, 2015), <https://a16z.com/2015/06/08/performance-data-and-the-babe-ruth-effect-in-venture-capital/> [<https://perma.cc/6NM4-92WM>] (reporting that, for one limited partner investing in VC funds since 1985, “about ~6% of investments representing 4.5% of dollars invested generated ~60% of the total returns”).

25. Mike Lincoln, *Should You Require a Signed NDA from a Potential VC Investor?*, COOLEYGO, <https://www.cooleygo.com/should-you-require-a-signed-nda-from-a-potential-investor/> [<https://perma.cc/47L3-F3DV>] (advising entrepreneurs that “professional investors nearly always refuse to sign NDAs”).

26. SEC v. Ralston Purina Co., 346 U.S. 119, 125 (1953); see Usha Rodrigues, *Securities Law's Dirty Little Secret*, 81 FORDHAM L. REV. 3389, 3418–21 (2013) (recounting the history of how wealth replaced access to information as a proxy for whether investors could fend for themselves).

27. See *infra* Section III.B.

Security regulation's narrow focus on investor protection and capital formation—and neglect of the deterrence value of trading—is becoming more costly now that venture-backed startups are staying private longer.²⁸ Startups are increasingly able to raise hundreds of millions or billions of dollars of capital from private markets.²⁹ In 2018, for example, the SEC estimated that companies raised \$1.4 trillion from public capital markets and \$2.9 trillion through private placements.³⁰ This influx of private capital enables startups to build valuable businesses, but also to commit misconduct at scale. Until recently, the only way that a startup could raise that kind of money was through an IPO. Startups that went public would allow their shares to be widely traded. Trading came with the scrutiny of short sellers, analysts, and financial journalists. The increasing availability of private capital has severed the link between funding and tradability and the link between the capacity to harm and deterrence. This Article proposes a solution: Congress and the SEC should create a robust market for trading private company securities. Carefully designed regulatory interventions could push companies to let their shares to be traded, while protecting investors and companies, especially small businesses, that prefer concentrated ownership. The solution has three prongs.

First, the regulations constraining the secondary trading of private company securities should be liberalized.³¹ Congress should reform section 12(g) of the Securities Exchange Act of 1934 (“Exchange Act”), so that it no longer forces companies to go public if they acquire 2000 record shareholders who are accredited investors.³² This change would enable private companies to let accredited

28. The academic literature views the role of securities regulation more broadly than the SEC's mission statement does. *See, e.g.*, Donald C. Langevoort & Robert B. Thompson, “Publicness” in *Contemporary Securities Regulation After the JOBS Act*, 101 *GEO. L.J.* 337, 372–73 (2013) (arguing that even “purely as a descriptive matter” securities regulation serves broader goals than investor protection and capital formation); Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 *DUKE L.J.* 711, 713 (2006) (footnote omitted) (“[T]he ultimate goal of securities regulation is to attain efficient financial markets and thereby improve the allocation of resources in the economy.”).

29. Elisabeth de Fontenay, *The Deregulation of Private Capital and the Decline of the Public Company*, 68 *HASTINGS L.J.* 445, 472 (2017) (“[P]rivate placements of corporate capital (both equity and debt) have rapidly overtaken public offerings, and the gap is only increasing.”).

30. Concept Release on Harmonization of Securities Offering Exemptions, 84 *Fed. Reg.* 30,460, 30,465 (June 26, 2019) (to be codified at 17 C.F.R. pts. 210, 227, 230, 239, 240, 249, 270, 274, 275) [hereinafter Concept Release].

31. Three scholars have called for liberalizing the secondary trading of private company securities. *See* A. C. Pritchard, *Revisiting “Truth in Securities” Revisited: Abolishing IPOs and Harnessing Private Markets in the Public Good*, 36 *SEATTLE U. L. REV.* 999, 1019–21 (2013) (proposing a “private market” for trading private company securities); Jeff Schwartz, *The Twilight of Equity Liquidity*, 34 *CARDOZO L. REV.* 531, 580–92 (2012) (proposing an “emerging firm market” as part of a “lifecycle” model of secondary market trading); William K. Sjostrom, Jr., *Carving a New Path to Equity Capital and Share Liquidity*, 50 *B.C. L. REV.* 639, 661–72 (2009) (proposing a “sophisticated-investors only” market for trading private company securities). These scholars would make companies’ participation in these markets voluntary. *See infra* note 442.

32. *See* 15 U.S.C. § 78l(g).

investors—those investors with the greatest sophistication and ability to bear risk—trade their securities.³³ Traders could take advantage of the recently enacted section 4(a)(7) of the Securities Act, which permits resales of private company securities among accredited investors under certain conditions.³⁴

Second, the SEC should attach a regulatory most-favored-nation (MFN) clause to all securities sold through the safe harbors commonly used for private placements.³⁵ An MFN clause would require that if a company allows any of its securities to be resold it must allow *all* of its securities to be resold, as long as the resale is otherwise legal. A regulatory MFN clause would ban the practice of selective liquidity and nudge companies to allow their shares to be traded. Private company directors and managers could no longer cash out their own shares while allowing their companies to avoid the scrutiny of robust trading.

Third, the SEC should require that all private companies that let their securities be widely traded make limited public disclosures about their operations and finances.³⁶ A limited disclosure mandate would protect investors by ensuring they have basic information about the companies in which they could invest. But it would be less burdensome than the public company disclosure system. In early 2022, it was reported that the SEC is considering a new disclosure mandate for large private companies.³⁷ But it is critical that any new mandate be tied to reforms to the rules governing secondary trading.

33. For the definition of accredited investor, see *infra* Section III.B and accompanying notes.

34. See 15 U.S.C. § 77d(d).

35. For more details on the SEC's safe harbors, see *infra* Section III.B.

36. A growing number of scholars have called for enhanced disclosure requirements for private companies generally or unicorns specifically, but these scholars would not combine the new disclosure requirements with liberalized securities trading. See Fan, *supra* note 23, at 609 (proposing that each unicorn should be required to provide to the public an explanation of key terms in their most recent certificate of incorporation and other basic information about the company and provide to all stockholders and employees the financial information that they provide to major investors); Michael D. Guttentag, *Patching a Hole in the JOBS Act: How and Why to Rewrite the Rules that Require Firms to Make Periodic Disclosures*, 88 IND. L.J. 151, 208–11 (2013) (proposing that companies with over \$35 million in market capitalization and over 100 beneficial owners should be subject to disclosure regulations unless they restrict the tradability of their shares or comply with an alternative disclosure regime); Ann M. Lipton, *Not Everything Is About Investors: The Case for Mandatory Stakeholder Disclosure*, 37 YALE J. ON REG. 499, 563 (2020) (footnote omitted) (calling for companies to “be subject to scaled disclosures depending on size, taking into account gross receipts, number of employees, asset values, or some combination of the three”); see also Anat Alon-Beck, *Unicorn Stock Options—Golden Goose or Trojan Horse?*, 2019 COLUM. BUS. L. REV. 107, 186 (suggesting that “[p]erhaps” unicorns should be required to “adhere to the same financial disclosure requirements as public companies”); Renee M. Jones, *The Unicorn Governance Trap*, 166 U. PA. L. REV. ONLINE 165, 184 (2017) (commending Guttentag's disclosure proposal for distinguishing between unicorns, with potentially dispersed share ownership, and large private companies with concentrated share ownership).

37. Paul Kiernan, *SEC Pushes for More Transparency from Private Companies*, WALL ST. J., <https://www.wsj.com/articles/sec-pushes-for-more-transparency-from-private-companies-11641752489> [<https://perma.cc/22X5-BV45>] (Jan. 10, 2022, 6:00 PM).

The net effect of these reforms—liberalized secondary trading, the MFN clause, and the limited disclosure mandate—would be to create a market for robust trading in unicorn stock among accredited investors. Most large private companies would likely decide to allow their shares to be traded. Short sellers, analysts, and financial journalists would be attracted to the markets. Their investigations would strengthen deterrence of unicorn misconduct. The limited disclosure mandate, combined with the requirement that investors be accredited, would protect investors. Companies that wish to retain concentrated ownership would be unaffected.

Deterrence has traditionally been understood as a salutary byproduct of securities regulation, rather than its objective. When large private companies commit misconduct, the natural response is to increase the penalty for the underlying misconduct, not to interfere with the tradability of the company's securities.³⁸ From this perspective, policymakers should respond to the Theranos scandal by tightening regulation of blood tests. But stiffer penalties for misconduct only work when wrongdoers expect to be caught. Trading creates incentives to expose misconduct faster.

The Article has four Parts. Part I describes the rise of unicorns and examines three case studies of unicorn misconduct. Part II explains how the tradability of public company securities deters public company misconduct. Part III argues that the difficulty of trading private company securities is undermining deterrence of private company misconduct. Part IV proposes and defends a solution—liberalized secondary markets for trading private company securities, a regulatory MFN clause to nudge companies to let their shareholders access those markets, and a limited disclosure mandate.

I. THE UNICORN PROBLEM

Unicorns are defined by their value and securities regulation's private-public line. Under the Exchange Act, a business must comply with public company regulations if it activates any one of three triggers:

- (1) If it lists its securities on a national securities exchange;³⁹
- (2) If it makes a registered public offering of its securities;⁴⁰ or
- (3) If it passes the Exchange Act's section 12(g) threshold (having \$10 million in assets and a class of securities "held of record" by 2000 shareholders or 500 shareholders who are not accredited investors).⁴¹

38. Cf. Usha R. Rodrigues, *The Once and Future Irrelevancy of Section 12(G)*, 2015 U. ILL. L. REV. 1529, 1560–61 (2015) (“[W]hen we have regulated [large private companies], we have done so by way of generally applicable laws having to do with environmental laws, antitrust, labor and employment, duties, and the like. In short, we have regulated these businesses’ business practices. We have not forced them into the public disclosure regime, nor do I think we should do so merely because they are large or powerful.”).

39. 15 U.S.C. § 78l(b).

40. *Id.* § 78o(d).

41. *Id.* § 78l(g). For the definition of accredited investor, see *infra* Section III.B and accompanying notes.

The first two triggers—exchange listings and registered public offerings—are voluntary acts. The third trigger, section 12(g)’s record shareholder rule, can be tripped inadvertently, so companies wishing to stay private take care to avoid it.⁴²

The conventional way to go public is through an IPO. Under the Securities Act of 1933 (“Securities Act”), companies planning an IPO must first file a registration statement with the SEC.⁴³ Once the statement becomes effective, they can raise capital on the public markets. IPOs have come under criticism as an inefficient transfer of wealth to bankers and lawyers.⁴⁴ Companies are increasingly opting for other paths to the public capital markets, like direct listings⁴⁵ or merging with special-purpose acquisition companies.⁴⁶

Companies go public so they can raise capital more cheaply and provide liquidity for their shareholders.⁴⁷ Because the sale and resale of private company securities are restricted, companies that raise capital from private investors must discount the price for the illiquidity.⁴⁸ Private company shareholders are often locked-in to their investment until the company is acquired or has its IPO.⁴⁹ For some private company shareholders, especially founders, that investment can represent a significant fraction of their net worth.⁵⁰ Going public enables shareholders to sell their shares and diversify their investments.⁵¹

Complying with public company regulations is costly. Public companies must periodically disclose, among other things, their financial condition, risk factors, executive compensation, and related-party transactions.⁵² They must file an annual report that includes their audited financial statements, quarterly reports with interim financial statements, and current reports on the occurrence of specified events.⁵³

42. *But see* Rodrigues, *supra* note 38, at 1530 (footnote omitted) (presenting evidence that “only 2.94% of firms (35 out of 1192) went public with over 400 shareholders” between 2000 and 2012 and concluding that “Section 12(g) probably forced very few firms public”).

43. *See* 15 U.S.C. § 77e(c) (banning the offer or sale of any security until a registration statement is effective).

44. *See, e.g.*, Pritchard, *supra* note 31, at 1013–15 (characterizing IPOs as a transfer of wealth to “blood-sucking parasites”).

45. *See* Brent J. Horton, *Spotify’s Direct Listing: Is It a Recipe for Gatekeeper Failure?*, 72 SMU L. REV. 177, 187–96 (2019) (describing the rationale for, and mechanics of, direct listings).

46. Ramey Layne, Brenda Lenahan & Sarah Morgan, *Update on Special Purpose Acquisition Companies*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Aug. 17, 2020), <https://corpgov.law.harvard.edu/2020/08/17/update-on-special-purpose-acquisition-companies/> [<https://perma.cc/89HL-SU4P>] (documenting the rise of special-purpose acquisition companies).

47. *See* William K. Sjostrom, Jr., *The Birth of Rule 144A Equity Offerings*, 56 UCLA L. REV. 409, 432–34 (2008).

48. *See* Ibrahim, *supra* note 1, at 22–23 (explaining that VCs demand an illiquidity premium on investments in startup equity).

49. *See id.* at 6–8 (explaining investor lock-in in startup equity).

50. *See* Sjostrom, *supra* note 47, at 433 (explaining that a startup founder’s “ownership stake likely represents a large percentage of [the founder’s] net worth”).

51. *See id.* (explaining that a sale allows a founder “to have a more diversified portfolio”).

52. *See generally* Regulation S-K, 17 C.F.R. § 229 (2020).

53. *See* 15 U.S.C. § 78m(a); 17 C.F.R. § 249.310 (annual report); *id.* § 249.308a (quarterly report); *id.* § 249.308 (current report).

When a company goes public, the company, its officers, and its directors also become exposed to greater civil and criminal liability.⁵⁴

Until recently, venture-backed startups were built for IPOs.⁵⁵ VC investing used to follow a predictable pattern. VCs would raise funds from limited partners (LPs), usually institutional investors.⁵⁶ Then they would invest the money in a portfolio of startups in exchange for preferred stock.⁵⁷ VCs would expect that many startups in their portfolio would fail, some would be acquired, and a few successful ones would have an IPO.⁵⁸ When startups went public, the VCs would sell their shares to public investors after a lock-up period. The exponential returns from the startups that went public would offset the losses from other startups in the portfolio.⁵⁹ The VCs would then distribute the proceeds to their LPs and keep twenty percent of the profits for themselves.⁶⁰ In this way, the IPO market fueled the market for VC investing. But the pattern has started to change.

A. *The Rise of the Unicorns*

In the past two decades, IPOs have plummeted. In all but one year between 1991 and 2000, there were at least 100 VC-backed startups that had an IPO.⁶¹ By contrast, since 2001, there have only been two years in which more than 100 VC-backed startups had an IPO.⁶² The decline in IPOs is all the more remarkable because the total assets under management by VCs have steadily risen, from \$155 billion in 2004 to \$444 billion in 2019.⁶³ Some of the decline in IPOs can be attributed to more startups exiting by acquisition.⁶⁴ But many successful startups have decided to forgo both kinds of exit and to remain private even as they reported valuations over \$1 billion.

54. See Sjoström, *supra* note 47, at 437–38 (describing the potential civil and criminal liability of public companies, directors, and officers).

55. See Ibrahim, *supra* note 1, at 11; Lemley & McCreary, *supra* note 1, at 17–18.

56. See Ronald J. Gilson, *Engineering a Venture Capital Market: Lessons from the American Experience*, 55 STAN. L. REV. 1067, 1070–71 (2003).

57. See *id.* at 1071–72.

58. See *id.* at 1075 (describing IPOs and acquisitions as successful exits and presenting data indicating that IPOs are rarer).

59. See Dixon, *supra* note 24.

60. See Gilson, *supra* note 56, at 1072.

61. JAY R. RITTER, INITIAL PUBLIC OFFERINGS: VC-BACKED IPO STATISTICS THROUGH 2020 3 (2021), <https://site.warrington.ufl.edu/ritter/files/IPOs-VC-backed.pdf> [<https://perma.cc/J4DH-RS6>].

62. *Id.*

63. NAT'L VENTURE CAP. ASS'N, NVCA 2020 YEARBOOK: PUBLIC DATA PACK 1 (2020), https://nvca.org/recommends/nvca-2020-yearbook_public-data-pack-2/ [<https://perma.cc/9C7P-E8F>].

64. See Lemley & McCreary, *supra* note 1, at 18 (footnote omitted) (“The number of VC-backed firms acquired has jumped from 190 per year in the 1990s to 450 per year recently—a 140% increase.”).

According to the VC research firm CB Insights, there are now over 900 unicorns.⁶⁵ Roughly half are based in the United States.⁶⁶ Among unicorns that are still private, the most valuable unicorn is Bytedance, the owner of the short video app TikTok.⁶⁷ Unicorns have emerged in a broad range of industries, including aerospace (SpaceX), cosmetics (Glossier), fintech (Stripe), and media (Vice).⁶⁸ They include now familiar gig-economy companies like Instacart and more experimental technologies—autonomous vehicles (Nuro), plant-based meat (Impossible Foods), and virtual reality (Magic Leap).⁶⁹

The valuations that these companies report are potentially misleading. Valuing public companies is straightforward because their capital structures are straightforward. Most public companies issue one class of common stock.⁷⁰ If you multiply the price of one share of common stock by the total number of shares outstanding, you get the company's market capitalization. Valuing venture-backed startups is more complex because their capital structures are more complex. Startups generally issue common shares to their founders and employees and different classes of preferred shares to each new round of VCs.⁷¹ Each of these share classes can have different contractual rights.⁷² For example, preferred shares almost always carry a liquidation preference, which entitles the holder to be paid back a certain amount—usually the amount of its investment—before common shareholders receive any money in a sale.⁷³ Not all preferred shares are equal. Investors in later rounds of funding often receive preferred shares that are senior to preferred shares in earlier rounds.⁷⁴

The valuations that startups report ignore the differences between share classes. The standard practice is to multiply the price of one share of the newest class of preferred shares by the total number of shares outstanding.⁷⁵ Because this class of

65. *The Complete List of Unicorn Companies*, *supra* note 4.

66. *See id.*

67. *See id.*

68. *See id.*

69. *See id.*

70. Will Gornall & Ilya A. Strebulaev, *Squaring Venture Capital Valuations with Reality*, 135 J. FIN. ECON. 120, 121 (2020). Some tech companies, like Alphabet and Facebook, have multi-class structures in which shares with the same cash flow rights do not always have the same voting rights. *See* COUNCIL OF INSTITUTIONAL INVS., DUAL CLASS COMPANIES LIST (2019), <https://www.cii.org/files/FINAL%20format%20Dual%20Class%20List%209-27-19.pdf> [<https://perma.cc/SNX9-VC7>].

71. Gornall & Strebulaev, *supra* note 70.

72. *Id.*

73. *Id.* at 126 (reporting that the most common liquidation preference in their dataset was a “1x” preference); *see also* Ronald J. Gilson & David M. Schizer, *Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock*, 116 HARV. L. REV. 874, 889–901 (2003) (arguing that VCs in the United States use convertible preferred stock for its tax advantages).

74. Gornall & Strebulaev, *supra* note 70 (explaining that “preferred shares that were issued early [are] frequently junior to preferred shares issued more recently”).

75. *See id.* (explaining how the venture-backed startup Square arrived at the valuation it reported to the public in 2014 by multiplying the price per share of its most recently added class of preferred shares by its total number of shares).

shares will usually have more valuable cash flow rights than the shares of all other classes, the reported valuation will usually overstate the startup's fair market value.⁷⁶ Calculating a startup's true fair market value would require accounting for the contractual rights of each class of the startup's shares. One recent study attempted this calculation for 135 ostensible unicorns and found that the average company reported a valuation that was 48% higher than its fair market value.⁷⁷ If reported valuations matched fair market value, 65 of the 135 companies would not qualify as unicorns.⁷⁸

There is no consensus on why the number of unicorns is growing so quickly. One early hypothesis was that the enactment of the Sarbanes-Oxley Act of 2002 (SOX) dampened enthusiasm for IPOs.⁷⁹ Certain SOX provisions, including section 404—which requires management to report annually on the company's internal controls—increased the costs of being a public company.⁸⁰ Empirical evidence for the claim that SOX caused the decline in IPOs is mixed.⁸¹ Another hypothesis is that the gradual deregulation of private capital markets lessened the appeal of going public.⁸² Over time, Congress and the SEC have relaxed the rules governing the sale and resale of private securities and allowed the investor wealth thresholds built into these rules to erode through inflation.⁸³ This has allowed private companies to raise more capital at a lower cost without an IPO.

More recently, secondary markets for trading startup shares have emerged.⁸⁴ As Part III explains in more detail, these markets are opaque, illiquid, and low volume.⁸⁵ Companies generally control whether their shareholders can participate. These markets do not generate robust trading. But they do enable a company's directors and managers to sell *their* shares, which reduces the liquidity pressure that pushed earlier startups toward an IPO.⁸⁶

76. *See id.* at 122 (explaining how Square's publicly reported valuation overstated its fair market value).

77. *Id.* at 134–35.

78. *Id.* at 135.

79. *See, e.g.,* Sjostrom, *supra* note 31, at 654–58; Schwartz, *supra* note 31, at 545–46.

80. *See* 15 U.S.C. § 7262.

81. *See* de Fontenay, *supra* note 29, at 464–65.

82. *See id.* at 466–72; Jones, *supra* note 36, at 174–77.

83. *See* de Fontenay, *supra* note 29, at 467–70 (pointing to the promulgation of Regulation D, the expansion of investors eligible for Regulation D, the increasing number of investors who meet the wealth threshold to be an accredited investor, the 1996 amendments to the Investment Company Act, the adoption of Rule 144A, and the reduction of Rule 144's holding period); Jones, *supra* note 36, at 174–76 (pointing to the reduction of Rule 144's holding period and the JOBS Act's lifting of Regulation D's ban on general solicitations for accredited investors).

84. *See* Ibrahim, *supra* note 1, at 16–20; Elizabeth Pollman, *Information Issues on Wall Street 2.0*, 161 U. PA. L. REV. 179, 193–202 (2012).

85. *See infra* Section III.C.

86. *See* Pollman, *supra* note 84, at 205 (explaining that “secondary markets provide a ‘release valve’” for participants’ liquidity needs); de Fontenay, *supra* note 29, at 461 (“Going public is now viewed primarily as a mechanism for founders, employees, and early investors to cash out their relatively illiquid stakes in the firm.”).

During the Obama administration, Congress attempted to stanch the decline of IPOs by passing the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”).⁸⁷ The JOBS Act created the “IPO On-Ramp,” which relieved “emerging growth companies” from certain disclosure obligations and other regulations for the first five years after IPO.⁸⁸ It also postponed the onset of SOX section 404’s provision mandating an internal controls report from two years to five years after IPO.⁸⁹ A true unicorn may not be an “emerging growth company” for long after it goes public because the definition excludes companies with a public float (the total value of its publicly traded shares) of \$700 million or more.⁹⁰

Despite its stated goal of encouraging IPOs, the JOBS Act also made it easier for growing companies to remain private. In 2010, Facebook briefly considered bundling capital from multiple investors into a single investment vehicle to avoid section 12(g)’s record shareholder rule.⁹¹ Congress responded to this perceived problem by raising the record shareholder threshold for public company status from 500 to 2000 shareholders, as long as fewer than 500 are unaccredited investors.⁹² The JOBS Act did not achieve a sustained increase in venture-backed IPOs.⁹³ Instead, notwithstanding a relatively hot IPO market in 2020, the number of unicorns continued to rise.⁹⁴

B. Unicorn Misconduct

The rise of unicorns has been accompanied by high-profile scandals involving misconduct—fraud, gross negligence, or other illicit activity. Some of the misconduct harmed not only the companies’ investors, but also their employees, consumers, or communities. These unicorn misconduct scandals have taken varied forms. Theranos’s product, a reliable finger prick blood test, never materialized, but the company fraudulently claimed it had. Uber provided a real service to its customers but expanded its business by illegally spying on regulators. Juul took advantage of regulatory uncertainty to illegally market its addictive product to minors. In each case, regulators eventually acted and imposed penalties. The

87. Jumpstart Our Business Startups Act, Pub. L. No. 112-106, 126 Stat. 306 (2012).

88. See, e.g., 15 U.S.C. § 77g(a)(2) (relief from certain Securities Act disclosures); *id.* § 78m(a) (Exchange Act disclosures).

89. *Id.* § 7262(b).

90. See *id.* § 78c(a)(80) (providing that a company is no longer an “emerging growth company” on “the date on which such issuer is deemed to be a ‘large accelerated filer’”); 17 C.F.R. § 240.12b-2(2) (2021) (defining “large accelerated filer”).

91. See Steven Davidoff Solomon, *Facebook and the 500-Person Threshold*, N.Y. TIMES: DEALBOOK (Jan. 3, 2011, 4:03 PM), <http://dealbook.nytimes.com/2011/01/03/facebook-and-the-500-person-threshold/> [https://perma.cc/M2D6-9NTU].

92. See Langevoort & Thompson, *supra* note 28, at 338; 15 U.S.C. § 78l(g)(1)(a).

93. This was not immediately obvious, because an anomalously high number of venture-backed startups went public in 2014. See Ritter, *supra* note 61, at 3. In recent years, the number of venture-backed IPOs has resembled the numbers from the post-2001, pre-JOBS Act years. See *id.*

94. There were 110 VC-backed IPOs in 2020, more than in any year in the last two decades except 2014. See *id.* at 3.

companies lost value after the misconduct was revealed. But the harm done was at least partially irreversible.

1. Theranos

Elizabeth Holmes dropped out of Stanford to found the company that would become Theranos in 2003.⁹⁵ She took an early investment from Tim Draper, the father of one of her childhood friends and a partner of the blue-chip VC firm Draper Fisher Jurvetson.⁹⁶ Theranos repeatedly claimed to have developed a reliable finger prick alternative to venous blood tests. For example, in 2006, Holmes gave a demo of an early prototype blood test to Novartis executives and faked the results of the test to mask that the device had malfunctioned.⁹⁷ When Theranos's CFO confronted Holmes about the fake results and her exaggerations to investors, he was fired.⁹⁸ In 2008, Theranos's general counsel and its head of sales and marketing told a Theranos director that Holmes had misled the board about the company's finances and the state of its technology.⁹⁹ The board met without Holmes and decided to replace her as CEO.¹⁰⁰ But after a two-hour meeting, Holmes convinced the other directors to change their minds.¹⁰¹

Theranos grew quickly. Walgreens and Safeway both agreed to partnerships in which Theranos would conduct blood tests in their stores.¹⁰² But observers who got close to Theranos continued to have doubts. Theranos had told Walgreens that its devices could handle 192 kinds of blood tests.¹⁰³ A Walgreens employee tasked with vetting Theranos wrote in a report that the company might be "overselling or overstating" what its technology could do.¹⁰⁴ An anonymous review left on the workplace review website Glassdoor suggested that Theranos had lied to VCs, doctors, patients, and regulators.¹⁰⁵ Nevertheless, in 2013, Theranos publicly announced the launch of its first consumer tests in Walgreens stores and got a favorable write-up in the opinion pages of the *Wall Street Journal*.¹⁰⁶ In 2014, the company reported a valuation of about \$9 billion.¹⁰⁷

Theranos managed to forestall closer regulatory scrutiny for years by arguing that its devices were "laboratory-developed tests."¹⁰⁸ The Food and Drug Administration (FDA) believed it had the authority to regulate lab-developed tests.¹⁰⁹ But the agency

95. CARREYROU, *supra* note 5, at 13–15.

96. *Id.* at 15.

97. *See id.* at 1–7.

98. *See id.* at 7–8.

99. *Id.* at 50.

100. *Id.* at 50–51.

101. *Id.* at 51.

102. *See id.* at 91–94.

103. *See id.* at 85.

104. *Id.* at 88.

105. *Id.* at 264.

106. *See id.* at 174–75.

107. *Id.* at 183.

108. *See id.* at 121–27 (explaining Holmes's plan to bypass FDA scrutiny).

109. *Id.* at 125.

had deferred to the Centers for Medicare and Medicaid Services (CMS), which had its own authority to regulate under the Clinical Laboratory Improvement Amendments Act of 1988 (CLIA).¹¹⁰ Theranos employee Tyler Shultz grew concerned that the company was cheating on CLIA-mandated proficiency testing.¹¹¹ Theranos was taking the proficiency tests with third-party commercial analyzers, even though it had started to use its own devices for tests on real patients.¹¹² Shultz looked up the relevant CLIA provision and found that it required proficiency test samples to be “analyzed ‘in the same manner’ as patient specimens ‘using the laboratory’s routine methods.’”¹¹³

In March 2014, Shultz confirmed with the New York State Department of Health that Theranos’s proficiency testing method violated the regulation and filed an anonymous complaint with state regulators.¹¹⁴ The state forwarded the complaint to CMS, but it got “lost in the shuffle.”¹¹⁵ Shultz also raised concerns with his grandfather, former U.S. Secretary of State and Theranos board member George Shultz. The elder Shultz encouraged his grandson to address the issue with Holmes directly.¹¹⁶ When he did, Holmes responded angrily, and Shultz resigned.¹¹⁷

Another Theranos employee, Erika Cheung, also blew the whistle on the company’s regulatory cheating. CMS had outsourced routine CLIA lab inspections in California to an underfunded state agency.¹¹⁸ In November 2013, a state inspector visited Theranos’s facility, but Theranos President Sunny Balwani and other employees misled the inspector so that he never saw the part of the lab that contained its proprietary devices.¹¹⁹ In September 2015, Cheung sent an email to CMS describing Theranos’s misconduct and specifically mentioning that Theranos had misled a state lab inspector in 2013.¹²⁰ This time, regulators acted quickly, conducting a surprise inspection of Theranos’s lab three days after receiving the email.¹²¹

Outside experts had suspicions about Theranos too. Some physicians in Arizona questioned the results their patients had received from Theranos blood tests.¹²² In December 2014, Adam Clapper, a pathologist living in Missouri, learned about Theranos from a profile of Holmes in the *New Yorker*.¹²³ He wrote a blog post questioning whether Theranos’s devices could be as accurate as the company

110. *Id.*

111. *Id.* at 194.

112. *Id.*

113. *Id.* (quoting 42 C.F.R. § 493.801(b), (b)(1) (2020)).

114. *See id.* at 195.

115. *Id.* at 248.

116. *Id.* at 195–97.

117. *Id.* at 196–97.

118. *Id.* at 113.

119. *Id.* at 188–89.

120. *Id.* at 281; *see also id.* at 189 (explaining that CMS outsourced routine lab inspections to the state).

121. *See id.* at 282.

122. *See id.* at 232–36.

123. *Id.* at 219.

claimed.¹²⁴ In February 2015, Stanford epidemiologist John Ioannidis wrote an opinion article in the *Journal of the American Medical Association* raising doubts about whether Theranos could have achieved such an important innovation without publishing it in a peer-reviewed journal.¹²⁵

Yet Theranos did not face any consequences until October 16, 2015, when the *Wall Street Journal* reporter John Carreyrou revealed that Theranos had been using third-party commercial analyzers rather than its own technology for many of its consumer blood tests.¹²⁶ Carreyrou had been tipped off by Clapper.¹²⁷ He uncovered the fraud by speaking with employee whistleblowers, including Shultz and Cheung.¹²⁸

A few days after Carreyrou's initial article, Bill Maris, the founder of Google's VC arm, Google Ventures (GV), told a reporter that GV had passed on investing in Theranos in 2013.¹²⁹ According to Maris, GV had sent an employee to take a Theranos blood test at Walgreens as due diligence on its technology.¹³⁰ Maris claimed that when the employee "went to get a test done, Theranos wanted more than just a drop of blood."¹³¹ When the employee refused a full venous blood draw, he was asked to come back a week later "to give more blood."¹³²

In January 2016, CMS sent Theranos a letter stating that its lab was not in compliance with CLIA and its practices posed a danger to patient health and safety.¹³³ In March 2018, the SEC brought a civil enforcement action against Theranos, Holmes, and Balwani.¹³⁴ Holmes agreed to a settlement in which she paid a \$500,000 penalty, relinquished her voting control of Theranos, and was barred for ten years from serving as an officer or director of a public company.¹³⁵ In June 2018, Holmes and Balwani were indicted on fraud and conspiracy charges.¹³⁶ Later that year,

124. *Id.* at 220.

125. John P.A. Ioannidis, *Stealth Research: Is Biomedical Innovation Happening Outside the Peer-Reviewed Literature?*, 313 J. AM. MED. ASS'N 663, 663 (2015).

126. John Carreyrou, *Hot Startup Theranos Has Struggled with Its Blood-Test Technology*, WALL ST. J., <https://www.wsj.com/articles/theranos-has-struggled-with-blood-tests-1444881901> [<https://perma.cc/LF7Y-BKWW>] (Oct. 16, 2015, 3:20 PM).

127. CARREYROU, *supra* note 5, at 222.

128. *See id.* at 231–32 (conversations between Carreyrou and Shultz); *id.* at 236–37 (conversation between Carreyrou and Cheung).

129. Jillian D'Onfro, *Bill Maris: Here's Why Google Ventures Didn't Invest in Theranos*, INSIDER (Oct 20, 2015, 6:33 PM), <https://www.businessinsider.com/bill-maris-explains-why-gv-didnt-invest-in-theranos-2015-10> [<https://perma.cc/7KRG-UFAT>].

130. *Id.*

131. *Id.*

132. *Id.*

133. Letter from Karen Fuller, Manager, State Oversight & CLIA Branch, Div. of Surv. & Certification, Ctrs. for Medicare & Medicaid Servs., to Sunil Dhawan, Dir., Theranos, Inc. 1 (Jan. 25, 2016), https://cdn2.vox-cdn.com/uploads/chorus_asset/file/5969923/Theranos_Inc_Cover_Letter_01-25-2016.0.pdf [<https://perma.cc/S4SL-EFX4>].

134. Press Release, SEC, Theranos, CEO Holmes, and Former President Balwani Charged with Massive Fraud (Mar. 14, 2018), <https://www.sec.gov/news/press-release/2018-41> [<https://perma.cc/J9QA-PY7C>].

135. *Id.*

136. Indictment at 1, United States v. Holmes, No. 5:18-cr-00258-LHK (N.D. Cal. June

Theranos dissolved.¹³⁷ In January 2022, a jury found Holmes guilty on some but not all of the charges.¹³⁸

2. Uber

Uber was one of the most highly valued startups in VC history.¹³⁹ But Uber may never have grown so valuable without its illegal spying software, Greyball.¹⁴⁰ The program started in 2014.¹⁴¹ In June of that year, Uber raised a Series D round and reported a valuation of \$18.2 billion.¹⁴² Uber was rapidly expanding, and that July, Uber had announced that it was entering China.¹⁴³ But it was encountering increasing opposition from local regulators in the United States. For example, that fall, the Philadelphia Parking Authority started an aggressive enforcement campaign against Uber.¹⁴⁴ Its agents would hail rides, fine the drivers, and impound their vehicles.¹⁴⁵ The campaign was effective. Drivers in Philadelphia “became too scared to drive for Uber.”¹⁴⁶

Uber developed the Greyball program to fight back against the Philadelphia Parking Authority.¹⁴⁷ Uber’s engineers “came up with about a dozen ways to spot authorities,” like checking which users opened and closed the app rapidly near police stations.¹⁴⁸ To identify regulators or law enforcement, Uber’s city managers would “scan other details on new user accounts—personal information like credit cards,

14, 2018), <https://www.justice.gov/usao-ndca/page/file/1135066/download> [<https://perma.cc/6AYC-N3YS>].

137. John Carreyrou, *Blood-Testing Firm Theranos to Dissolve*, WALL ST. J., <https://www.wsj.com/articles/blood-testing-firm-theranos-to-dissolve-1536115130> [<https://perma.cc/23F6-9ZB5>] (Sept. 5, 2018, 12:10 AM).

138. Sara Randazzo, Heather Somerville & Christopher Weaver, *The Elizabeth Holmes Verdict: Theranos Founder Is Guilty on Four of 11 Charges in Fraud Trial*, WALL ST. J., <https://www.wsj.com/articles/the-elizabeth-holmes-verdict-theranos-founder-is-guilty-on-four-of-11-charges-in-fraud-trial-11641255705> [<https://perma.cc/R37S-PWK8>] (Jan. 3, 2022, 11:45 PM).

139. Dana Olsen, *Uber by the Numbers: A Timeline of the Company's Funding and Valuation History*, PITCHBOOK (Nov. 29, 2017), <https://pitchbook.com/news/articles/uber-by-the-numbers-a-timeline-of-the-companys-funding-and-valuation-history> [<https://perma.cc/HG2W-RVC4>] (showing that Uber’s private valuation peaked around \$68 billion in 2016).

140. For a discussion of how Greyball fit into Uber’s business model of strategic lawbreaking, see Charles M. Yablon, *The Lawyer as Accomplice: Cannabis, Uber, Airbnb, and the Ethics of Advising “Disruptive” Businesses*, 104 MINN. L. REV. 309, 349–56 (2019).

141. See ISAAC, *supra* note 6, at 244.

142. See Olsen, *supra* note 139.

143. Carlos Tejada, *Uber Launches in Beijing, Will Face Uber-Heavy Traffic Jams*, WALL ST. J., <https://blogs.wsj.com/chinarealtime/2014/07/15/with-beijing-launch-uber-to-face-uber-heavy-traffic-jams/> [<https://perma.cc/K2AQ-TJWD>] (July 15, 2014, 3:53 AM).

144. See ISAAC, *supra* note 6, at 244.

145. *Id.*

146. *Id.*

147. See *id.*

148. *Id.* at 245.

phone numbers, and home addresses—to check whether the data were tied directly to a police credit union.”¹⁴⁹ Once Uber was confident that a user was a police officer or parking enforcer, Greyball would make it impossible for the user to hail an Uber.¹⁵⁰

Greyball succeeded in allowing Uber to evade regulators. The Philadelphia Parking Authority never realized they were being spied on, and its campaign to impound cars failed.¹⁵¹ Greyball rapidly expanded beyond Philadelphia.¹⁵² At one point, Uber held a secret summit of its general managers from “more than a dozen countries” to share best practices for using Greyball.¹⁵³ Uber justified the program to its employees on the ground that regulators trying to enforce local rules were hailing rides “fraudulently” and therefore “violating Uber’s terms of service agreement.”¹⁵⁴ Uber continued to expand. In December 2014, it reported a valuation of \$41.2 billion.¹⁵⁵ In August 2016, its valuation neared \$68 billion.¹⁵⁶

Even though its employees around the world knew about Greyball, Uber successfully concealed it until 2017. In that year, an employee whistleblower approached a *New York Times* reporter.¹⁵⁷ On March 3, 2017, the *New York Times* published its first story on Greyball, which was based on the whistleblower’s information.¹⁵⁸ Within days, Uber instructed employees not to use Greyball.¹⁵⁹ In May 2017, it was reported that federal prosecutors had launched an investigation into Greyball.¹⁶⁰ The combined effect of the Greyball revelations and other scandals damaged Uber’s reputation. In January 2018, Uber’s valuation had fallen to around \$54 billion, wiping about \$14 billion off its earlier valuation in 2016.¹⁶¹ Uber would later recover and go public in 2019.¹⁶²

149. *Id.* at 245–46.

150. *Id.* at 246.

151. *See id.*

152. *See id.* at 26.

153. *Id.* at 246.

154. *Id.*

155. *See* Olsen, *supra* note 139.

156. *See id.*

157. ISAAC, *supra* note 6, at 241–43 (describing Isaac’s interactions with the whistleblower). The whistleblower sought out Isaac because of his earlier articles on sexual harassment at Uber. *See id.* at 241–42.

158. Mike Isaac, *How Uber Deceives the Authorities Worldwide*, N.Y. TIMES (Mar. 3, 2017), <https://www.nytimes.com/2017/03/03/technology/uber-greyball-program-evade-authorities.html> [https://perma.cc/R64P-BXBZ].

159. ISAAC, *supra* note 6, at 247.

160. Mike Isaac, *Uber Faces Federal Inquiry over Use of Greyball Tool to Evade Authorities*, N.Y. TIMES (May 4, 2017), <https://www.nytimes.com/2017/05/04/technology/uber-federal-inquiry-software-greyball.html> [https://perma.cc/4CUN-QBP9].

161. *See* Olsen, *supra* note 139 (explaining how the \$54 billion figure was derived).

162. *See* Mike Isaac, Michael J. de la Merced & Andrew Ross Sorkin, *How the Promise of a \$120 Billion Uber I.P.O. Evaporated*, N.Y. TIMES (May 15, 2019), <https://www.nytimes.com/2019/05/15/technology/uber-ipo-price.html> [https://perma.cc/E7WZ-2EWM].

3. Juul

JUUL Labs, better known as Juul, is a startup that sells vaping devices that resemble USB drives.¹⁶³ A “Juul” mixes nicotine with benzoic acid, which gives users a burst of nicotine when they inhale.¹⁶⁴ When Juuls were introduced to the market, they contained “as much as three times the concentration of nicotine contained in most e-cigarettes.”¹⁶⁵ Juul’s executives insisted that the company’s target customers were adult smokers looking to quit cigarettes.¹⁶⁶ But it is now clear that the company was at best indifferent to the risk that its advertising would reach minors.¹⁶⁷

When Juul was considering how to launch its product in 2015, its leadership was presented with an ad campaign that would compare cigarettes to obsolete technologies like boomboxes and joysticks.¹⁶⁸ But the management team rejected that idea in favor of a campaign that would feature cool, young models.¹⁶⁹ An anonymous Juul manager who spoke with the *New York Times* said that “[w]hile the campaign wasn’t targeted specifically at teenagers, . . . he and others in the company were well aware it could appeal to them.”¹⁷⁰ Juul’s “employees and its board of directors acknowledged concern that models photographed for the . . . [c]ampaign appeared to be too young,” but used the images anyway.¹⁷¹ Juul also bought banner ads on websites frequented by teenagers, including the sites for Nickelodeon, Cartoon Network, and *Seventeen*.¹⁷²

The campaign succeeded in reaching minors. The whistleblower told the *New York Times* that “within months of Juul’s 2015 introduction, it became evident that teenagers were either buying Juuls online or finding others who made the purchases for them. Some people bought more Juul kits on the company’s website than they could individually use—sometimes 10 or more devices.”¹⁷³ He said that when his colleagues “saw the social media, in fall and winter of 2015, they suspected it was teens.”¹⁷⁴ A study would later find that 44.9% of Juul’s Twitter followers were likely between the ages of thirteen and seventeen.¹⁷⁵ It would also later be revealed that in

163. The Juul was developed in 2015 by a startup called Pax Labs. Richtel & Kaplan, *supra* note 7. Juul became independent from Pax Labs in 2017. Complaint at 5, Commonwealth v. JUUL Labs, No. 2084CV00402 (Mass. Super. Ct. Feb. 12, 2020), <https://www.mass.gov/doc/juul-complaint/download> [<https://perma.cc/SBG7-2U8S>] [hereinafter Mass. Complaint].

164. Richtel & Kaplan, *supra* note 7.

165. Mass. Complaint, *supra* note 163, at 8.

166. Richtel & Kaplan, *supra* note 7 (quoting Juul co-founder James Monsees’s statement that “selling Juuls to youth was ‘antithetical to the company’s mission’”).

167. *See id.*

168. *See* Mass. Complaint, *supra* note 163, at 8–10.

169. *See id.* at 10–11.

170. Richtel & Kaplan, *supra* note 7.

171. Mass. Complaint, *supra* note 163, at 15.

172. *Id.* at 17–18.

173. Richtel & Kaplan, *supra* note 7.

174. *Id.*

175. Annice E. Kim, Robert Chew, Michael Wenger, Margaret Cress, Thomas Bukowski, Matthew Farrelly & Elizabeth Hair, *Estimated Ages of JUUL Twitter Followers*, 173 J. AM.

2017, Juul “refused to sign a pledge not to market to teenagers” as part of a civil settlement.¹⁷⁶

Juul’s website purported to verify customers’ ages by asking for their birthday and the last four digits of their social security number.¹⁷⁷ But Juul sent marketing emails to approximately 40,000 of its website visitors who failed the age verification process as well as to 269,000 visitors who never completed it.¹⁷⁸ An analysis conducted by a firm retained by Juul concluded that 83% of the email addresses on the company’s mailing list could not be matched to an adult.¹⁷⁹ In at least one case, Juul’s customer service team allegedly advised a would-be customer who failed the age verification process to use the address of an adult friend or relative to complete their order.¹⁸⁰

Juul’s marketing worked. In a four-week period in the spring of 2017, Juul’s sales rose 627%.¹⁸¹ Then, in July 2018, the *Washington Post* reported on Juul’s practice of marketing to consumers who failed its age verification process.¹⁸² In August 2018, the *New York Times* published the whistleblower’s inside account of Juul’s advertising campaign.¹⁸³ By then, Juul controlled 72% of the e-cigarette market and had reported a valuation of \$16 billion.¹⁸⁴ In December 2018, Altria, the tobacco company formerly known as Philip Morris, paid nearly \$13 billion for 35% of Juul’s equity.¹⁸⁵

Increasing scrutiny eventually caught up to Juul in late 2019. In September of that year, Juul replaced its CEO with an Altria executive.¹⁸⁶ In October, Altria wrote down its investment in Juul by \$4.5 billion, citing the likelihood that the FDA would take flavored vaping products off the market.¹⁸⁷ In November, New York and California sued Juul over its marketing to young people, and the American Medical

MED. ASS’N PEDIATRICS 690, 691 (2019).

176. Julie Creswell & Sheila Kaplan, *How Juul Hooked a Generation on Nicotine*, N.Y. TIMES, <https://www.nytimes.com/2019/11/23/health/juul-vaping-crisis.html> [https://perma.cc/9ASA-94DU] (June 28, 2021).

177. Mass. Complaint, *supra* note 163, at 36–37.

178. *Id.* at 30.

179. *Id.*

180. *Id.* at 41–42.

181. Richtel & Kaplan, *supra* note 7.

182. Deanna Paul, *E-Cigarette Maker Juul Targeted Teens with False Claims of Safety, Lawsuit Says*, WASH. POST (July 30, 2018), <https://www.washingtonpost.com/news/to-your-health/wp/2018/07/30/e-cigarette-maker-juul-targeted-teens-with-false-claims-of-safety-lawsuit-claims/> [https://perma.cc/883J-UJHP].

183. Richtel & Kaplan, *supra* note 7.

184. *Id.*

185. Sheila Kaplan & Matt Richtel, *Juul Closes Deal with Tobacco Giant Altria*, N.Y. TIMES (Dec. 20, 2018), <https://www.nytimes.com/2018/12/20/health/juul-reaches-deal-with-tobacco-giant-altria.html> [https://perma.cc/W2NU-7SSA].

186. Sheila Kaplan, Matt Richtel & Julie Creswell, *Juul Replaces Its C.E.O. with a Tobacco Executive*, N.Y. TIMES, <https://www.nytimes.com/2019/09/25/health/juul-vaping.html> [https://perma.cc/C39A-8ES2] (June 28, 2021).

187. Katie Robertson, *Juul’s Meltdown Costs Tobacco Giant Altria \$4.5 Billion*, N.Y. TIMES, <https://www.nytimes.com/2019/10/31/business/altria-juul.html> [https://perma.cc/2Q9S-Y9PK] (Nov. 20, 2019).

Association called for a ban on vaping products.¹⁸⁸ In December, Congress enacted legislation that raised the minimum age for purchasing tobacco products, including e-cigarettes, from eighteen to twenty-one.¹⁸⁹ In January 2020, federal officials announced a ban on some, but not all, flavorings in vaping products.¹⁹⁰ Later that month, Altria wrote down its investment by another \$4.1 billion.¹⁹¹ At the time Altria bought its stake in 2018, Juul's implied valuation was \$38 billion; that figure fell to \$12 billion in 2020.¹⁹² But Juul succeeded in creating a new market for tobacco companies. By 2019, an estimated 27.5% of U.S. high school students were reporting recent e-cigarette use.¹⁹³

4. Commonalities

Theranos, Uber, and Juul each committed misconduct to facilitate exponential growth. Theranos pushed to get its devices in stores quickly with inflated claims about the number of blood tests they could reliably handle. Uber used Greyball to avoid the sluggish and uncertain process of negotiating with local governments as it entered new markets. Juul's marketing to minors created a much larger market for its devices. Each of the companies saw its valuation rise rapidly while it was committing misconduct and fall after it was exposed.

Another feature that these scandals have in common is the long latency period between when the misconduct started and when it was revealed. Theranos's board was made aware that Holmes had misled them about the state of the company's technology in 2008.¹⁹⁴ Theranos launched its commercial service in September 2013.¹⁹⁵ But the public did not learn that Theranos was committing fraud until

188. Karen Zraick, *A.M.A. Urges Ban on Vaping Products as Juul Is Sued by More States*, N.Y. TIMES (Nov. 19, 2019), <https://www.nytimes.com/2019/11/19/health/juul-lawsuit-ny-california.html> [<https://perma.cc/J2GC-G427>].

189. Sheila Kaplan, *Congress Approves Raising Age to 21 for E-Cigarette and Tobacco Sales*, N.Y. TIMES (Dec. 19, 2019), <https://www.nytimes.com/2019/12/19/health/cigarette-sales-age-21.html> [<https://perma.cc/PWY8-PY47>].

190. Abby Goodnough, Maggie Haberman & Sheila Kaplan, *With Partial Flavor Ban, Trump Splits the Difference on Vaping*, N.Y. TIMES, <https://www.nytimes.com/2020/01/02/health/flavor-ban-e-cigarettes.html> [<https://perma.cc/CK5Q-U5YR>] (Feb. 12, 2020).

191. Katie Robertson, *Altria Takes a \$4.1 Billion Hit on Juul Stake*, N.Y. TIMES (Jan. 30, 2020), <https://www.nytimes.com/2020/01/30/business/juul-altria-vaping.html> [<https://perma.cc/RJ8R-9JL5>].

192. *See id.* Altria may have paid a premium for its stake in Juul over what public investors would have paid to have influence over a potential competitor. *See* Lemley & McCreary, *supra* note 1 at 12–26 (describing the recent increase in incumbents acquiring potentially competitive startups).

193. Karen A. Cullen, Andrea S. Gentzke, Michael D. Sawdey, Joanne T. Chang, Gabriella M. Anic, Teresa W. Wang, MeLisa R. Creamer, Ahmed Jamal, Bridget K. Ambrose & Brian A. King, *E-Cigarette Use Among Youth in the United States, 2019*, 322 J. AM. MED. ASS'N 2095, 2095 (2019).

194. *See* CARREYROU, *supra* note 5, at 50.

195. *Id.* at 174.

October 2015.¹⁹⁶ Uber deployed Greyball between the fall of 2014 and March 2017.¹⁹⁷ Juul advertised to minors from 2015 through at least 2017.¹⁹⁸ These long latencies matter because the time allowed the companies to harm more consumers and communities. In the case of Theranos, the latency enabled the company to provide nearly one million inaccurate blood tests to consumers.¹⁹⁹

The long latencies are even more remarkable because of how many people knew or suspected that the companies were committing misconduct. Juul's marketing was, of course, public. At Uber, managers in more than a dozen countries attended the summit discussing Greyball.²⁰⁰ At Theranos, the list of people with knowledge or suspicions includes insiders like the anonymous reviewer on Glassdoor, Tyler Shultz, Erika Cheung, the company's former CFO, its former head of sales, its former general counsel, and all its directors. But it also includes people outside the company, like Theranos's business partners at Walgreens, the investors at GV, physicians in Arizona, and technical experts like Ioannidis and Clapper. It is worth asking whether some of this information could have reached the public sooner.

II. TRADING AND DETERRENCE

The market for a company's securities creates a market for information about the company.²⁰¹ The price of a company's stock reflects expectations about its future profits. Traders stand to gain by acquiring information that is relevant to a company's expected profits but not already reflected in its stock price.²⁰² Short sellers who uncover negative information about a company can trade based on the information, reveal it publicly, and profit from the ensuing decline. Trading also subsidizes the work of analysts and financial journalists.²⁰³ These intermediaries apply their specialized skills to help traders process newly revealed information.²⁰⁴ They also use their reputations or their institutions' trades as a costly signal to help traders verify information.²⁰⁵

196. See Carreyrou, *supra* note 126.

197. See ISAAC, *supra* note 6, at 244; Isaac, *supra* note 158.

198. See Richtel & Kaplan, *supra* note 7 (reporting that Juul's advertising campaign that reached minors started in 2015). Juul gradually refocused its advertising away from minors. See, e.g., *id.* ("The company said that toward the end of 2016 and around the beginning of 2017, it changed its social marketing campaign and guidelines to require all models to be over the age of 35."). But, even in 2017, Juul was refusing to sign a pledge to stop marketing to minors as part of a civil settlement. Creswell & Kaplan, *supra* note 176.

199. CARREYROU, *supra* note 5, at 293.

200. ISAAC, *supra* note 6, at 246.

201. See Gilson & Kraakman, *supra* note 11, at 596–609.

202. See *id.* at 563–64 ("[I]nvestors who lack either hard or soft information may act to acquire it, rather than waiting passively for the passage of time to reveal it to them.").

203. See *id.* at 594 ("Evaluation of information . . . requires special skills, such as a facility in accounting, finance or securities analysis, that can ordinarily be obtained only through investment in expensive professional training. The cost of such training is reflected in the wages of the skilled employee . . .").

204. See *id.* at 607 (explaining how "the services of information intermediaries such as financial analysts" can help traders economize on information processing costs).

205. See *id.* at 604–05 (explaining how intermediaries use their reputations or investments

The information market facilitates the acquisition, revelation, processing, and verification of information about corporate misconduct. News that a company is committing misconduct can affect the price of its securities in many ways. It could increase the chance that the company will incur a regulatory penalty or face costly litigation. It could undermine confidence in management. It could raise questions about the underlying value of the company's products or services. If traders expect that information about misconduct will have any of these effects, they will value it. Short sellers will attempt to acquire information about misconduct, and analysts and financial journalists will attempt to process and verify that information.

The actions of self-interested traders lead to deterrence. Traders undertake investigative work that may be more costly for regulators. Once traders reveal information about corporate misconduct, regulators and private litigators may start their own investigations or feel pressure to expedite ongoing investigations. In some cases, their actions lead to costly penalties, settlements, or damages. Other market actors do not need to wait for lawsuits to be filed to act. Corporate boards can independently investigate reports of misconduct and sack the managers responsible. When executives expect that misconduct will be revealed by traders and penalized by the market or the law, they will be less willing to commit misconduct *ex ante*. This is how the information market creates the positive social externality of deterrence.

Empirical research on corporate whistleblowers confirms that the market for information about companies with traded securities facilitates the revelation of misconduct. In a widely cited study, economists Alexander Dyck, Adair Morse, and Luigi Zingales (DMZ) examined 216 cases of corporate frauds in large U.S. companies between 1996 and 2004 to identify who revealed the fraud.²⁰⁶ They found that the parties that the law directly tasks with preventing fraud—the SEC and private litigants—are rarely the first to reveal misconduct.²⁰⁷ Instead, they found that “detectors with monetary or career incentives are more likely to blow the whistle, as are detectors with better access to information.”²⁰⁸ DMZ identified six groups that blew the whistle in more than 10% of cases in their dataset: analysts, auditors, employees, industry regulators, media, and short sellers.²⁰⁹ Three of these groups—short sellers, analysts, and financial journalists—are attracted to companies with tradable securities.

A. Short Sellers

Short sellers are investors who bet on declines in securities prices. A short seller starts by taking out a loan. She uses the borrowed money to borrow shares from one

as costly signals).

206. Dyck, Morse & Zingales, *supra* note 9, at 2213. DMZ's study was limited to companies with more than \$750 million in assets, a group that was overwhelmingly public companies during the period studied. *See id.*

207. *See id.* at 2225 (finding that fraud was detected by the SEC in 6.6% of cases and by law firms in 3.3% of cases).

208. *Id.* at 2230.

209. *Id.* at 2225.

of the existing shareholders of the company she wants to short.²¹⁰ She promises to return the borrowed shares on a fixed expiration date. Then she sells the borrowed shares. When the expiration date arrives, she “covers” the short position by buying the same number of shares she borrowed and returning them to their original owner.²¹¹ If the price of the stock declines between when she sold and repurchased the shares, the difference in price, minus the interest on the loan, becomes her profit.

Short selling is often a risky proposition. Short sellers must achieve gains that more than offset the expected market return and the interest on the loan.²¹² The worst thing that can happen to an investor taking a long position in a security is that its price falls to zero. The short seller’s potential loss is theoretically infinite.²¹³ A short seller is also exposed to the risk of any unanticipated event that might cause the price to rise between the sale and the repurchase.²¹⁴ If the company being shorted pays a dividend, a short seller must compensate the owner of their borrowed shares.²¹⁵ The owner also has a right to demand return of the shares at any time, so a short seller is exposed to the risk that the short position will be closed prematurely.²¹⁶ Companies targeted by short sellers also sometimes fight back by suing them, seeking regulatory action against them, or hiring private investigators.²¹⁷ Nathan Anderson, the short seller who exposed Nikola, has been repeatedly sued by companies he investigated.²¹⁸ Retail investors do not always like short sellers either, as the populist campaign to squeeze the hedge funds shorting GameStop has illustrated.²¹⁹

But despite their reputation, short sellers play an important role in the economy: keeping public companies honest. The opportunity to profit from short selling fuels the investigation of corporate misconduct. Even investors who exclusively take long positions will find negative information valuable in deciding which stocks to avoid.

210. See SEC, INVESTOR BULLETIN: AN INTRODUCTION TO SHORT SALES (2015), <https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins-51> [<https://perma.cc/8DVZ-QQQ7>].

211. Bliss, Molk & Partnoy, *supra* note 13, at 1338 n.14.

212. See *id.* at 1377 (explaining that “long positions in equity earn a risk premium over time” (footnote omitted)).

213. See *id.*

214. One way to mitigate this risk is to hedge a short position with a long position in related stocks. So, for example, if a short seller uncovered negative information about Delta and wanted to short its stock, she might simultaneously take a long position of equal value in United or in a basket of other airline stocks. In that case, she would be indifferent to events that affected the airline industry as a whole. See Peter Molk & Frank Partnoy, *Institutional Investors as Short Sellers?*, 99 B.U. L. REV. 837, 870–71 (2019) (describing how institutional investors might offset some of the risks of short positions by taking a long position in the stocks of another company in the industry).

215. SEC, *supra* note 210.

216. See Bliss, Molk & Partnoy, *supra* note 13, at 1378.

217. Owen A. Lamont, *Go Down Fighting: Short Sellers vs. Firms*, 2 REV. ASSET PRICING STUD. 1, 1 (2012).

218. See Zuckerman, *supra* note 15.

219. See Matt Phillips & Taylor Lorenz, ‘Dumb Money’ Is on GameStop, and It’s Beating Wall Street at Its Own Game, N.Y. TIMES, <https://www.nytimes.com/2021/01/27/business/gamestop-wall-street-bets.html> [<https://perma.cc/BZR6-NB34>] (Oct. 18, 2021).

But short sellers stand to profit disproportionately from negative information about a specific company.²²⁰ They have a greater incentive to invest the time and money to substantiate their case against a potential target. Once they uncover information about misconduct, they have an incentive to publicize that information quickly, so that the price of the company's stock declines before any unexpected positive news intervenes to offset the decline.

There is strong empirical evidence that short sellers detect corporate misconduct. For example, one study of 454 companies disciplined by the SEC for financial misrepresentations between 1988 and 2005 found that 96% of those companies experienced "negative abnormal returns on the days their misconduct was publicly revealed, with an average 1-day stock price decline of 18.2%."²²¹ The study also found that "abnormal short interest rises significantly in the 19-month period before the misrepresentation is publicly revealed," and the amount of short selling is positively correlated with the severity of the misconduct.²²² A more recent study examined a pilot program that the SEC conducted in 2004 in which short selling regulations were relaxed for certain randomly selected public companies.²²³ Companies subject to the relaxed regulations were more likely to be caught for committing fraud.²²⁴ DMZ found that short sellers detected 14.5% of the frauds in their dataset.²²⁵ Yet DMZ also found that short sellers were identified as the fraud detector in media reports in only 3.5% of cases.²²⁶ The disparity suggests that many short sellers prefer anonymity.

Not all short sellers choose to remain anonymous, though. Some short sellers use publicity and reputation to draw attention to the information they reveal. Consider short seller Bill Ackman. In 2012, Ackman announced that he had taken a short position against the multi-level marketing company Herbalife.²²⁷ He simultaneously released research claiming that the company was a "pyramid scheme."²²⁸ Ackman provided an analysis of Herbalife's financial statements in which he showed that the company's distributors made only a small portion of their income from retail sales and a large portion from aggressively recruiting new distributors.²²⁹ He also provided

220. See Dyck, Morse & Zingales, *supra* note 9, at 2222 (citation omitted) ("Short sellers have a strong incentive to identify and disseminate bad news . . .").

221. Jonathan M. Karpoff & Xiaoxia Lou, *Short Sellers and Financial Misconduct*, 65 J. FIN. 1879, 1880 (2010).

222. *Id.*

223. Vivian W. Fang, Allen H. Huang & Jonathan M. Karpoff, *Short Selling and Earnings Management: A Controlled Experiment*, 71 J. FIN. 1251, 1251–52 (2016).

224. *Id.* at 1254.

225. Dyck, Morse & Zingales, *supra* note 9, at 2225. Despite these numbers, DMZ seemed unimpressed with short sellers' performance as fraud detectors because short sellers "have the strongest incentive to see fraud come to light." *Id.* at 2226.

226. *Id.* at 2225.

227. William Alden, *Ackman Outlines Bet Against Herbalife*, N.Y. TIMES: DEALBOOK (Dec. 20, 2012, 2:08 PM), <https://dealbook.nytimes.com/2012/12/20/ackman-outlines-bet-against-herbalife/> [<https://perma.cc/Y2DL-86X4>].

228. PERSHING SQUARE CAP. MGMT., L.P., WHO WANTS TO BE A MILLIONAIRE? 64 (2012), <https://factsaboutherbalife.com/documents/Who-wants-to-be-a-Millionaire.pdf> [<https://perma.cc/5D6M-EKW3>].

229. See *id.* at 147–48.

evidence that Herbalife lured financially unsophisticated individuals into becoming distributors with misleading statements about the income they could earn.²³⁰ The tactics Ackman used against Herbalife were controversial. At one point, it was reported that federal prosecutors were investigating Ackman's firm for market manipulation.²³¹ Ackman ultimately lost money on his short position.²³²

But from a social perspective, Ackman's campaign was a success. In 2014, the Federal Trade Commission (FTC) announced that it had opened an investigation into Herbalife's business practices.²³³ In 2016, Herbalife reached a settlement with the FTC in which it paid a \$200 million fine and agreed to restructure its business so that "[a]t least two-thirds of rewards paid by Herbalife to distributors [would] be based on retail sales."²³⁴ The settlement also "prohibits Herbalife from misrepresenting distributors' potential or likely earnings."²³⁵ Ackman may have been indifferent to the welfare of the people that Herbalife deceived, but they were the long-run beneficiaries of his campaign. If Herbalife had been private, Ackman would have had no incentive to fund the research.

The threat of short selling improves management behavior. For example, the study of the SEC pilot program found that companies selected for relaxed short-seller regulations were significantly less likely to manipulate how they reported their earnings.²³⁶ Corporate executives' own statements suggest that short sellers constrain their behavior. For example, Tesla is one of the most shorted companies in history.²³⁷ In 2018, the self-described "Shorty Air Force" raised questions about demand for Tesla's Model 3 by using drones to take photos of parking lots where Tesla was storing its inventory.²³⁸ When Tesla CEO Elon Musk briefly considered taking Tesla

230. See *id.* at 209–12 (showing exaggerated earnings claims); *id.* at 231–38 (targeting the financially unsophisticated).

231. Christopher M. Matthews, *Prosecutors Interview People Tied to Ackman in Probe of Potential Herbalife Manipulation*, WALL ST. J., <https://www.wsj.com/articles/prosecutors-interview-people-tied-to-ackman-in-probe-of-potential-herbalife-manipulation-1426196822> [<https://perma.cc/7URF-DQTZ>] (Mar. 12, 2015, 6:18 PM).

232. See Matthew Goldstein, *Ackman Ends His 5-Year Fight with Herbalife*, N.Y. TIMES: DEALBOOK (Feb. 28, 2018), <https://www.nytimes.com/2018/02/28/business/dealbook/ackman-herbalife-pershing-square.html> [<https://perma.cc/8V62-3E2Z>].

233. Sara Germano & Brent Kendall, *Federal Trade Commission Starts Herbalife Probe*, WALL ST. J., <https://www.wsj.com/articles/federal-trade-commission-starts-herbalife-probe-1394646213> [<https://perma.cc/9ARR-8ZZD>] (Mar. 12, 2014, 3:42 PM).

234. Press Release, FTC, *Herbalife Will Restructure Its Multi-Level Marketing Operations and Pay \$200 Million for Consumer Redress to Settle FTC Charges* (July 15, 2016), <https://www.ftc.gov/news-events/press-releases/2016/07/herbalife-will-restructure-its-multi-level-marketing-operations> [<https://perma.cc/8VFT-WGZP>].

235. *Id.*

236. Fang, Huang & Karpoff, *supra* note 223, at 1252–53.

237. See Crystal Kim, *Tesla Shorts to Amass First-Ever \$20 Billion Bet Against a Stock*, BLOOMBERG (July 9, 2020, 5:33 PM), <https://www.bloomberg.com/news/articles/2020-07-09/tesla-shorts-to-amass-first-ever-20-billion-bet-against-a-stock> [<https://perma.cc/Y5W7-LTP8>].

238. See Neal E. Boudette, *Unraveling a Tesla Mystery: Lots (and Lots) of Parked Cars*, N.Y. TIMES (Oct. 1, 2018), <https://www.nytimes.com/2018/10/01/business/tesla-cars-questions.html> [<https://perma.cc/BD9W-FW6Z>].

private that year, he said that “as the most shorted stock in the history of the stock market, being public means that there are large numbers of people who have the incentive to attack the company.”²³⁹ What Musk hates, though he would not put it this way, is that short sellers hold him accountable and keep him honest.

B. Analysts

The information market also subsidizes the work of financial analysts. Analysts are investment advisors who research and make recommendations on specific companies or industries. “Buy-side” analysts work for money managers like mutual funds or hedge funds.²⁴⁰ They usually keep their recommendations confidential, so that the money managers who employ them can attempt to beat the market.²⁴¹ “Sell-side” analysts work for brokerage firms and investment banks.²⁴² They usually make their recommendations public, so that their firms can attract more institutional clients.²⁴³

Sell-side analyst recommendations account for a significant percentage of changes in securities prices.²⁴⁴ This is an impressive testament to the quality of their recommendations because institutional investors—who have their own buy-side analysts—are the main price movers.²⁴⁵ In the aggregate, analysts’ recommendations outperform the market.²⁴⁶ Sell-side analysts have, however, been criticized for being biased in favor of positive recommendations.²⁴⁷ It is widely known that “buy” ratings are more common than “sell” ratings.²⁴⁸ There is a larger audience for a buy

239. Elon Musk, *Taking Tesla Private*, TESLA (Aug. 7, 2018), <https://www.tesla.com/blog/taking-tesla-private> [<https://perma.cc/TVA7-SWMQ>].

240. Jill E. Fisch, *Does Analyst Independence Sell Investors Short?*, 55 UCLA L. REV. 39, 46 (2007); Goshen & Parchomovsky, *supra* note 28, at 723.

241. See Fisch, *supra* note 240, at 46 (footnote omitted) (explaining that buy-side analysts “produce research exclusively for the benefit of their employers”); Goshen & Parchomovsky, *supra* note 28, at 723 (explaining that buy-side analysts “keep their analytical products confidential and profit through trading based on discrepancies between their valuation and the market price”).

242. Fisch, *supra* note 240, at 46; Goshen & Parchomovsky, *supra* note 28, at 723.

243. See Fisch, *supra* note 240, at 52 (explaining that rules constraining firms’ ability “to subsidize research through transactions with retail investors means that research is funded largely if not exclusively by the firm’s institutional customers”); Goshen & Parchomovsky, *supra* note 28, at 723 (“The coverage of sell-side analysts aims at attracting investors to the covered stocks and firms to the investment bank.”).

244. See Fisch, *supra* note 240, at 60–61.

245. See *id.* at 61.

246. See *id.* at 63–64 (footnotes omitted) (“On the whole, analyst-recommended stocks outperform the market, and this performance persists and is not a short-term reaction to the recommendation itself.”).

247. Analysts also used to be suspected of slanting their recommendations to curry favor with companies, so that the companies would disclose private information to them first. See *id.* at 58. In 2000, the SEC promulgated Regulation FD, which banned the practice of selective disclosure. See 17 C.F.R. § 243.100(a) (2017).

248. See Stephen J. Choi, *The Problems with Analysts*, 59 ALA. L. REV. 161, 170–72 (2007) (reviewing the empirical literature).

recommendation (all potential buyers) than a sell recommendation (only current shareholders).²⁴⁹ Analysts' brokerage firm employers also earn more commissions if more shares are sold.²⁵⁰ But ratings are not the only way to convey negative information about a company. Analysts can send a negative signal by deciding to no longer cover the company's stock.²⁵¹

In the DMZ study, sell-side analysts detected 13.8% of the frauds.²⁵² DMZ found that analysts who had been recognized as "all-stars" in the industry were more likely to detect fraud.²⁵³ They did not find, however, that detecting fraud had significant positive career effects for analysts.²⁵⁴ So why are analysts successful fraud detectors even though they might not gain much professionally? DMZ hypothesized that analysts simply "gather a lot of relevant information as a byproduct of their normal work."²⁵⁵ For example, analysts who are affiliated with investment banks can absorb information through observing their banks' operations.²⁵⁶

Analysts' work fuels investigations of corporate misconduct. Consider Wirecard, the German payments company. Wirecard grew rapidly in the 2010s and was added to the DAX, an index of Germany's thirty leading public companies.²⁵⁷ But analysts who scrutinized Wirecard's growth noticed a suspicious pattern in its financial statements.²⁵⁸ Wirecard was spending hundreds of millions of euros buying small, unprofitable businesses in Asia, which suddenly became highly profitable.²⁵⁹ After analysts raised doubts, the *Financial Times* launched a years-long investigation into the company.²⁶⁰ In 2019, the paper reported that Wirecard had developed a "round-tripping" scheme to inflate its revenue: money would leave Wirecard in Germany, "show its face on the balance sheet of a dormant subsidiary in Hong Kong, depart to sit momentarily in the books of an external 'customer', then travel back to Wirecard in India, where it would look to local auditors like legitimate business revenue."²⁶¹ By 2020, Wirecard had unraveled under scrutiny and filed for insolvency.²⁶²

The primary victims of Wirecard's misconduct were investors. But misconduct that harms investors can be intertwined with misconduct that harms third parties. Wells Fargo's fake account scandal—for which it ultimately paid a \$185 million

249. See Fisch, *supra* note 240, at 56.

250. *Id.*

251. *Id.* at 47.

252. Dyck, Morse & Zingales, *supra* note 9, at 2225.

253. See *id.* at 2235–37.

254. See *id.*

255. *Id.* at 2228.

256. See Fisch, *supra* note 240, at 64.

257. See Liz Alderman & Christopher F. Schuetze, *In a German Tech Giant's Fall, Charges of Lies, Spies and Missing Billions*, N.Y. TIMES (June 26, 2020), <https://www.nytimes.com/2020/06/26/business/wirecard-collapse-markus-braun.html> [<https://perma.cc/JDD3-QR3V>].

258. See *id.*

259. See *id.*

260. See *id.*

261. Dan McCrum & Stefania Palma, *Wirecard: Inside an Accounting Scandal*, FIN. TIMES (Feb. 7, 2019), <https://www.ft.com/content/d51a012e-1d6f-11e9-b126-46fc3ad87c65> [<https://perma.cc/THM4-HWUK>].

262. See Alderman & Schuetze, *supra* note 257.

fine—is a good example.²⁶³ Before the scandal unfolded, “[a]nalysts ha[d] marveled at the bank’s ability to cross-sell mortgages, credit cards and auto loans to customers.”²⁶⁴ But the *Los Angeles Times* showed that Wells Fargo achieved these cross-selling numbers by pressuring customers to sign up for accounts they did not want and, in some cases, forging their signatures.²⁶⁵ Investors saw fake numbers because customers got unwanted accounts. Likewise, Theranos sold fraudulent blood tests to consumers *and* gave inflated revenue projections to business partners.²⁶⁶ Holmes may have felt the need to exaggerate revenue projections in part because the technology could not do what she claimed it could do. If Theranos had disclosed accurate financial statements, and analysts had scrutinized them, Holmes would have found it harder to conceal the true state of the company’s technology.

C. Financial Journalists

Journalists, like analysts, have an incentive to learn about corporate misconduct not because they trade on that information, but because traders fund their work. DMZ found that journalists detected 13.2% of the frauds in their dataset.²⁶⁷ They found that journalists are especially likely to detect frauds that lead to large settlements or large fines.²⁶⁸ They also observed positive career effects for journalists who detect fraud.²⁶⁹

Journalists, of course, cover both public and private companies. At first glance, the Theranos, Uber, and Juul cases may seem to reflect well on the media. Undoubtedly, the *New York Times* and the *Wall Street Journal* deserve praise for their reporting. But it is worth noting that in each case, the misconduct was revealed years after it happened, and the journalists would not have uncovered the misconduct without the help of employee whistleblowers. Before Carreyrou’s exposé in October 2015, Theranos had received highly favorable media coverage. Holmes was on the cover of *Forbes* and *Fortune*.²⁷⁰ Even the *New Yorker* profile of Holmes that raised Adam Clapper’s suspicions was largely positive.²⁷¹

Financial journalists—like the journalists at the *Financial Times* who uncovered the round-tripping at Wirecard—are more likely to cover a company with tradable

263. See Michael Corkery, *Wells Fargo Fined \$185 Million for Fraudulently Opening Accounts*, N.Y. TIMES: DEALBOOK (Sept. 8, 2016), <https://www.nytimes.com/2016/09/09/business/dealbook/wells-fargo-fined-for-years-of-harm-to-customers.html> [<https://perma.cc/U6DV-MGXH>].

264. *Id.*

265. E. Scott Reckard, *Wells Fargo’s Pressure-Cooker Sales Culture Comes at a Cost*, L.A. TIMES (Dec. 21, 2013, 12:00 PM), <https://www.latimes.com/business/la-fi-wells-fargo-sale-pressure-20131222-story.html> [<https://perma.cc/FTK5-8XQN>].

266. See CARREYROU, *supra* note 5, at 48–50 (explaining how Theranos’s head of sales and marketing grew skeptical of the revenue projections Holmes made to drugmakers).

267. Dyck, Morse & Zingales, *supra* note 9, at 2225.

268. *Id.* at 2226.

269. *Id.* at 2239–40.

270. See CARREYROU, *supra* note 5, at 208–10.

271. See Ken Auletta, *Blood, Simpler*, NEW YORKER (Dec. 8, 2014), <https://www.newyorker.com/magazine/2014/12/15/blood-simpler> [<https://perma.cc/2DZ4-V5ZX>].

securities because the company's current and prospective investors form an audience willing to pay for high-quality journalism. Journalists also cover those companies differently. Like analysts, good financial journalists combine analysis of company disclosures with independent research to help traders process information relevant to the pricing of tradable securities. They develop the technical skills needed to make sense of information buried in dense accounting statements.

To be sure, there is no bright line between financial journalism and general interest journalism. E. Scott Reckard, the *Los Angeles Times* business reporter who wrote the exposé of Wells Fargo, told the *Columbia Journalism Review* that his editors "always insisted on having a real consumer focus in their reporting. It was always hard to get the higher-up editors interested in what you might call pure business stories, giant banks creating derivatives."²⁷² Reckard said that his editors' limited interest in pure business stories created good incentives, because it "forced [him] to go out and tell stories from the perspective of employees and customers on the front lines."²⁷³ But Reckard's investigation was facilitated by his ability to examine Wells Fargo's financial statements and explain to his readers that Wells Fargo was "brag[ging] in earnings reports of its prowess in 'cross-selling.'"²⁷⁴

Venture-backed startups would greatly benefit from the attention of analysts and financial journalists. The opacity of private company financial statements creates opportunities for manipulation. Some late-stage startups pitched to investors by using accounting metrics that do not conform to Generally Accepted Accounting Principles (GAAP), like "bookings" or "billings" or using a definition of "revenue" that includes payments to third parties.²⁷⁵ In 2015, reporters at the *Wall Street Journal* "compared sales figures and projections made by 50 tech companies when they were private with financial results reported later for the same period."²⁷⁶ They found that in fifteen cases, the companies later reported lower numbers, and in six of those cases, "the difference was caused by using more conservative accounting measurements when the companies went public."²⁷⁷ These discrepancies might never have been revealed if the companies' financial statements had never been subject to outside scrutiny.

D. Employees

A company's employees usually have better access to information about its misconduct than outsiders do. Employees detected the fraud first in 17.1% of the

272. Pete Vernon, *Q&A: Former LA Times Reporter on Story that Led to \$185 Million Wells Fargo Fine*, COLUM. JOURNALISM REV. (Sept. 12, 2016), https://www.cjr.org/q_and_a/wells_fargo_la_times_accounts.php [https://perma.cc/93KM-9EUN].

273. *Id.*

274. Reckard, *supra* note 265.

275. See Telis Demos, Shira Ovide & Susan Pulliam, *Tech Startups Woo Investors with Unconventional Financial Metrics—but Do Numbers Add Up?*, WALL ST. J. (June 10, 2015, 10:41 PM), <https://www.wsj.com/articles/how-tech-startups-play-the-numbers-game-1433903883> [https://perma.cc/RCU5-4ZPY].

276. *Id.*

277. *Id.*

cases in the DMZ study.²⁷⁸ But employee whistleblowers risk social ostracism, demotion, termination, and other forms of retaliation. In the DMZ study, in the cases in which an employee detected the fraud, the whistleblower chose to conceal his or her identity 37% of the time.²⁷⁹ Anonymity is often a wise decision. Of the employee whistleblowers whose identities were revealed, 82% were “fired, quit under duress, or had significantly altered responsibilities.”²⁸⁰

Theranos tried to intimidate its whistleblowers. Boies Schiller, Theranos’s outside counsel, pressured Tyler Shultz to sign an affidavit stating that he “had never spoken to any third parties about Theranos and that he pledged to give the names of every current and former employee who he knew had talked to the *Journal*.”²⁸¹ When he refused, a Boies Schiller litigator “let it be known that if Tyler didn’t sign the affidavit and name the *Journal*’s sources, the firm would make sure to bankrupt his entire family when it took him to court.”²⁸² Shultz heard that private investigators were surveilling him.²⁸³ Boies Schiller also had a man approach Erika Cheung unexpectedly in the parking lot of her new workplace with a threatening letter.²⁸⁴

Employee whistleblowers who are reluctant to publicize misconduct themselves may find a trader, an analyst, or a financial journalist who is motivated to reveal the misconduct. Consider the famous case of *Dirks v. SEC*.²⁸⁵ In 1973, analyst Raymond Dirks got a tip from Ronald Secrist, a former officer of Equity Funding of America, that the company was overstating its assets as a result of fraud.²⁸⁶ Secrist told Dirks that Equity Funding employees had brought this information to the attention of regulatory agencies, but the regulators had failed to act.²⁸⁷ Secrist “urged Dirks to verify the fraud and disclose it publicly.”²⁸⁸ Dirks visited Equity Funding to investigate. The company’s senior managers denied the charges, but other employees corroborated them.²⁸⁹ Dirks also tried to persuade the *Wall Street Journal* to report on the charges. The Los Angeles bureau chief declined, saying that he did not believe “that such a massive fraud could go undetected.”²⁹⁰

During his investigation, Dirks shared the information about Equity Funding with his clients and other investors.²⁹¹ Some of those investors sold the stock.²⁹² Equity Funding’s stock price slid from \$26 to less than \$15 per share.²⁹³ The price decline spurred action. The SEC filed a complaint against the company, and the *Wall Street*

278. Dyck, Morse & Zingales, *supra* note 9, at 2225.

279. *Id.* at 2240.

280. *Id.*

281. CARREYROU, *supra* note 5, at 244.

282. *Id.* at 247.

283. *Id.*

284. *See id.* at 254–56.

285. 463 U.S. 646 (1983).

286. *Id.* at 648–49.

287. *Id.* at 649.

288. *Id.*

289. *Id.*

290. *Id.* at 649–50.

291. *Id.* at 649.

292. *Id.*

293. *Id.* at 650.

Journal belatedly published the information that Dirks had shared.²⁹⁴ The SEC censured Dirks for insider trading, and Dirks challenged the censure all the way up to the Supreme Court.²⁹⁵

The Court sided with Dirks. Justice Powell, writing for the majority, noted that Dirks had “no pre-existing fiduciary duty” to Equity Funding.²⁹⁶ He reasoned that Dirks did not create any expectation that he would keep the company’s information confidential and had not misappropriated the information or obtained it illegally.²⁹⁷ The Court held that Secrist and the other Equity Funding employees did not breach a duty either because they “received no monetary or personal benefit for revealing Equity Funding’s secrets, nor was their purpose to make a gift of valuable information to Dirks.”²⁹⁸ Instead, the Court found “the tippers were motivated by a desire to expose the fraud.”²⁹⁹

Dirks makes it clear that tippees who learn of material, nonpublic information about corporate misconduct from insiders can legally trade on that information, as long as (1) the tippees do not have a preexisting duty to the company, and (2) the tippers are not motivated by a quid pro quo. *Dirks* therefore protects a valuable channel for publicizing misconduct. Employee whistleblowers just need to find someone with a megaphone who stands to profit from trading on the misconduct, like a short seller or an analyst, and they can reveal it. The facts of *Dirks* also show how regulators, and even journalists, may be reluctant to act until the publicity and credibility of a market signal embarrasses them.

E. Regulators and Litigators

Regulators and private litigators play a critical role in deterring corporate misconduct by ensuring that public revelations lead to financial consequences. But they usually rely on third parties to reveal the misconduct first. DMZ found that private litigators detected only 3.3% of the frauds in their dataset.³⁰⁰ The SEC detected only 6.6%.³⁰¹ Industry regulators fared better than the SEC, detecting 13.2% of the frauds.³⁰² DMZ attributed this disparity to industry regulators having greater access to information about the businesses they regulate as a byproduct of their routine interactions.³⁰³

DMZ’s results match common sense. Individual regulators will rarely value the information they acquire about their regulatory targets as much as society would.³⁰⁴

294. *Id.*

295. *Id.* at 651–52.

296. *Id.* at 665.

297. *Id.*

298. *Id.* at 667.

299. *Id.*

300. Dyck, Morse & Zingales, *supra* note 9, at 2225.

301. *Id.*

302. *Id.*

303. *Id.* at 2228.

304. See Matthew C. Stephenson, *Information Acquisition and Institutional Design*, 124 HARV. L. REV. 1422, 1432 (2011) (“[A] government agent’s private marginal benefit from additional research may often be systematically lower than the social marginal benefit of such

Regulators respond to political incentives, not financial incentives.³⁰⁵ Regulators face political pressure to act *after* misconduct has been revealed, not before it is revealed. Securities litigators do respond to financial incentives, but their incentives kick in after misconduct has been revealed. Securities litigators are compensated by contingency fees paid out of settlements, which are based on expected damages. Damages in securities fraud cases are calculated based on stock price declines.³⁰⁶ Only after misconduct has been revealed and share prices have fallen will securities litigators be confident that a securities fraud suit is valuable. Hunting for potential misconduct that *could* lead to a stock price decline later is not a profitable use of their time.

It may appear like regulators and litigators play a larger role in uncovering misconduct because they often lead the investigations in which the details of misconduct are revealed. But these investigations are usually triggered by earlier, partial revelations of misconduct. The initial revelations enable regulators and litigators to obtain subpoenas, which give them access to documents and depositions that produce the more detailed revelations. DMZ's data show that regulators and litigators rely on others to provide the initial revelations.

There is one kind of litigation that does create incentives for initial revelations—*qui tam* suits. The False Claims Act imposes liability for companies that defraud the government.³⁰⁷ The statute's *qui tam* provision allows whistleblowers, who are usually employees, to bring suit on behalf of the government and receive between 15 and 25 percent of the damages or settlement.³⁰⁸ DMZ measured the effect of *qui tam* suits on fraud detection by examining the health care industry, which relies on government contracts.³⁰⁹ They found that “employees reveal the fraud in 41% of cases in the health care industry but only in 14% of cases in industries where the *qui tam* suits are not available.”³¹⁰ *Qui tam* suits, though, are the exception. In most cases, regulators and litigators need the information market to reveal the misconduct.³¹¹

research . . .”).

305. Cf. Daryl J. Levinson, *Making Government Pay: Markets, Politics, and the Allocation of Constitutional Costs*, 67 U. CHI. L. REV. 345, 380–86 (2000) (reviewing social scientific theories of bureaucratic behavior and expressing skepticism that individual government actors are motivated by damages paid out of public funds).

306. See Hillary A. Sale & Robert B. Thompson, *Market Intermediation, Publicness, and Securities Class Actions*, 93 WASH. U. L. REV. 487, 503 (2015) (explaining that damages in securities fraud class actions are usually calculated by event studies that measure the decline in share price between a misstatement and the time that it is corrected).

307. 31 U.S.C. § 3729(a).

308. *Id.* § 3730(d).

309. Dyck, Morse & Zingales, *supra* note 9, at 2246.

310. *Id.*

311. Verity Winship has persuasively argued that public company whistleblower bounties should be expanded to private company whistleblowers. See Verity Winship, *Private Company Fraud*, 54 U.C. DAVIS L. REV. 663, 712–23 (2020). But bounties would only work in certain circumstances. The incentives they create are attenuated by time and risk. An employee must reveal the misconduct and hope that the SEC not only decides to pursue the action but also prevails or reaches a favorable settlement. Even if private company employee whistleblowers were given legal protection against retaliation, they would still face the social ostracism that public company whistleblowers report. Whistleblower bounties would also only

III. UNDERDETERRENCE OF UNICORN MISCONDUCT

Private companies are less deterred from misconduct than their public counterparts because there is no comparable market for information about them. Securities regulation restricts the sale and resale of private company securities. The secondary markets where private company securities are traded are highly illiquid, low volume, and opaque. They do not create opportunities for short sellers, and they have not attracted many analysts and financial journalists. In late-stage startups, the absence of robust trading in their securities combines with the economics of VC investing to undermine deterrence.

A. Venture Capitalists

VCs have considerable power over the startups they fund. VCs invest in stages, funding twelve to twenty-four months of a startup's life in each round.³¹² VCs gain leverage over entrepreneurs by their credible threat to not reinvest in subsequent rounds.³¹³ VCs also syndicate their investments.³¹⁴ A VC firm's willingness to vouch for its portfolio company is critical to soliciting other VC firms to join a syndicate.³¹⁵ VCs often serve on a startup's board of directors. In most startups, the VCs and founders share control of the board.³¹⁶ In some startups, VCs control the board outright.³¹⁷ After each funding round, one of the newly added VCs usually takes a

apply to misconduct that fits the definition of securities fraud. By contrast, a market for trading securities encourages the revelation of any misconduct that would affect the price of a company's securities.

312. See Gilson, *supra* note 56, at 1078–81 (explaining why VCs use staged financing); Gornall & Strebulaev, *supra* note 70 (stating that startups raise funds every twelve to twenty-four months).

313. See Gilson, *supra* note 56, at 1079 (footnote omitted) (“If the portfolio company does not meet the milestone whose completion was funded in the initial round of financing, the venture capital fund has the power to shut the project down by declining to fund the project's next round.”).

314. Robert P. Bartlett, III, *Venture Capital, Agency Costs, and the False Dichotomy of the Corporation*, 54 UCLA L. REV. 37, 55–56 (2006) (explaining how and why VCs syndicate their investments).

315. See *id.* at 56 (footnote omitted) (explaining that in a startup fundraising round, “[a] new investor may use the willingness of existing investors to co-invest as a signal of the company's perceived quality among its existing investors”).

316. See Steven N. Kaplan & Per Strömberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts*, 70 REV. ECON. STUD. 281, 289–90 (2003) (finding, in a study of 213 investments in 119 startups by 14 VC firms, that 25% of boards were VC-controlled, 14% were founder-controlled, and 61% were controlled by neither).

317. See *id.*

seat on the startup's board.³¹⁸ VC directors are expected to take an active role in governance and to provide management advice.³¹⁹

VCs have the power to prevent misconduct at their portfolio companies and the power to expose misconduct at startups they vet. But VCs lack the incentive to use their power to deter misconduct because of their asymmetric risk preferences, the auction-like structure of their investments, and social norms that discourage them from publicly criticizing startups.

1. Asymmetric Risk Preferences

Venture capital is a home run industry. VCs invest their funds in a portfolio of startups with the expectation that most will generate only modest or negative returns, but one or a few will generate exponential returns that will offset all the others.³²⁰ Consequently, VCs are motivated to fund companies with upside potential and are largely indifferent to downside risk. VCs are also partially insulated from downside risk because the preferred stock they purchase carries a liquidation preference.³²¹ The liquidation preference usually ensures that if the startup is sold, VCs receive back what they invested before founders or employees receive anything.³²²

VCs' asymmetric risk preferences influence which startups they are willing to fund. From a VC's perspective, the financial difference between a portfolio company that implodes in scandal and the many that simply never develop a product or find a market niche is not significant.³²³ In either case, the failed startup is just one of the many startups in the VC's portfolio that did not generate an exponential return. What VCs care about is upside potential. A VC might see a startup like Uber, with a founder willing to cross ethical lines, as having above average downside risk but also above average upside potential.³²⁴ Tim Draper offered similar reasoning to defend his investment in Theranos, telling *CNBC* that "when I'm an investor in a startup, I assume that 60% of them are going to go out of business . . . I make my money on a few really extraordinary companies. Theranos was one of those extraordinary companies that could have been one of these big, huge winners."³²⁵

318. See D. Gordon Smith, *The Exit Structure of Venture Capital*, 53 *UCLA L. REV.* 315, 326 (2005) ("[V]enture capitalists typically gain additional board seats with each round of investment . . .").

319. See Gilson, *supra* note 56, at 1072 (explaining that VCs are expected to provide their portfolio companies with "management assistance, corresponding to that provided by management consultants").

320. See Dixon, *supra* note 24 (explaining the extreme lopsidedness of VC returns).

321. See Kaplan & Strömberg, *supra* note 316, at 288 (finding that in all but one of the contracts in their dataset, "VCs have claims that in liquidation are senior to the common stock claims of the founders").

322. See *id.* at 290 (finding that in 98% of the funding rounds, "the claims of the VCs in liquidation are typically at least as large as the original investments").

323. Pollman, *supra* note 8, at 392 ("[F]or a VC it might make little difference if a loss in the portfolio comes from a company that made material misstatements or one that simply failed to successfully execute the business plan or develop technology . . .").

324. See *id.* (footnote omitted) ("[O]n the whole [VCs] might prefer to invest in teams and companies that push boundaries even if that means that some will cross the line.").

325. *VC Draper: Theranos Founder Elizabeth Holmes Was Bullied into Submission*,

VCs' asymmetric risk preferences lead them to tolerate startups that grow at an unsustainably rapid pace. Reid Hoffman, the cofounder of LinkedIn and a partner at the VC firm Greylock, calls it "blitzscaling."³²⁶ Hoffman told the *Harvard Business Review*: "When you're blitzscaling, a whole bunch of things are inevitably broken, and you can't work on them all at once. You have to triage. You fix the things that will get investors to give you more cash."³²⁷ Hoffman's examples of things that might get broken are anodyne.³²⁸ If a startup's product is a platform for making business connections over the internet, that may be the worst thing that can happen. If the product is a blood test, deferring fixing problems in the rush of blitzscaling can have more serious consequences.

VCs need not tell their portfolio companies to break the law. It is highly unlikely that VCs told Uber's executives to spy on regulators or Juul's executives to market their product to minors. It is almost certain that Theranos's VCs did not tell Holmes to misrepresent the state of the company's technology.³²⁹ After all, the board tried to remove her for misleading them.³³⁰ Founders just need to understand that the economics of VC investing rely on exponential growth. Then founders will "fix the things that will get investors to give [them] more cash."

Investors in *late-stage* startups may have less skewed risk preferences. Early-stage startups primarily raise money from VCs, but late-stage startups have taken investment from mutual funds, pension funds, hedge funds, and other institutional investors.³³¹ A late-stage startup's potential for exponential growth may be weaker, and its equity will be more expensive. Accordingly, downside risk may factor more into the expected value of the investment. It is a cliché in Silicon Valley that companies try to "clean up" before an IPO and the revelations that the enhanced scrutiny of public markets will bring.³³² For example, in 2017, two years before its IPO, Uber replaced Travis Kalanick with Dara Khosrowshahi and gave him "a mandate to clean up the mess left by the company's exiled founder."³³³ The sensitivities of late-stage investors, however, do not prevent unicorns from doing

CNBC (May 10, 2018, 3:19 PM), <https://www.cnn.com/video/2018/05/10/vc-drapeer-theranos-founder-elizabeth-holmes-was-bullied-into-submission.html> [<https://perma.cc/5JPW-Z5NR>].

326. See Tim Sullivan, *Blitzscaling*, HARV. BUS. REV., Apr. 2016, at 45, 46.

327. *Id.* at 50.

328. *See id.*

329. See CARREYROU, *supra* note 5, at 296–99 (concluding that Holmes "channeled" the "fake-it-until-you-make-it culture" of Silicon Valley, but that she was firmly in control of the company and manipulated others, including VC Don Lucas).

330. *See id.* at 50–51.

331. See Elizabeth Pollman, *Startup Governance*, 168 U. PA. L. REV. 155, 175 (2019).

332. See, e.g., Jeff Jordan, *16 Things CEOs Should Do Before an IPO*, TECHCRUNCH (Aug. 22, 2017, 12:30 PM), <https://techcrunch.com/2017/08/22/16-things-ceos-should-do-before-an-ipo/> [<https://perma.cc/LR26-8W2G>] (recommending that startups planning IPOs "clean up" their capitalization table, add independent directors, hire a reputable accounting firm, and decide whether founders will have control).

333. Mike Isaac, *With Uber's I.P.O., Dara Khosrowshahi Is Taking Travis Kalanick's Company Public*, N.Y. TIMES (May 3, 2019), <https://www.nytimes.com/2019/05/03/technology/uber-ipo-ceo-dara-khosrowshahi-travis-kalanick.html> [<https://perma.cc/7MQG-PKAQ>].

damage before the IPO draws near. After all, if the incentive effect of the IPO extended back all the way to the company's founding, there would be no need to clean up the company's mistakes in the first place.

2. The Winner's Curse

VCs are selective in making investments. The typical VC firm will fund only a small percentage of the startups it screens.³³⁴ VCs conduct due diligence before they invest, and they typically receive financial statements as part of the process.³³⁵ Some unicorns, however, have provided little information to investors in later rounds.³³⁶ When Uber pitched itself to prospective investors in 2016, it gave them no financial statements, just a list of risk factors.³³⁷ Some observers claim that the increased availability of VC financing and competition among VCs for promising startups is undermining incentives to conduct thorough due diligence.³³⁸ Due diligence could—and sometimes does—lead VCs to screen out startups that have committed misconduct or appear to have a propensity to do so. The problem is that due diligence would need to turn off *all* deep-pocketed prospective investors for a startup to be pushed out of business.

VC fundraising works like an auction. If ten investors review a public company, and nine think the company is overvalued, its stock price will likely decline, because some of the investors will bet against it. But if ten VC firms vet a startup, and nine decide it is a bad investment, the startup will raise its round from the one contrarian VC firm. The VC firm that bids highest in the auction experiences the winner's curse: it will have overestimated the startup's value, at least relative to the field.³³⁹ The

334. See, e.g., Stan. Grad. Sch. of Bus., *Marc Andreessen on Big Breakthrough Ideas and Courageous Entrepreneurs*, YOUTUBE at 17:21–18:24 (Mar. 8, 2014), <https://www.youtube.com/watch?v=JYYsXzt1VDc> [https://perma.cc/X5Y4-MVR9] (claiming that each year Andreessen Horowitz screens 3,000 opportunities, vets “a couple hundred,” and funds twenty).

335. See Fan, *supra* note 23, at 605 (footnote omitted) (explaining that under the National Venture Capital Association's Model Investors' Rights Agreement, “a company is required to provide major investors with year-end, quarterly, and monthly financial statements, as well as budgets and business plans”).

336. See Bill Gurley, *On the Road to Recap: Why the Unicorn Financing Market Just Became Dangerous...for All Involved*, ABOVE THE CROWD (Apr. 21, 2016), <https://abovethecrowd.com/2016/04/21/on-the-road-to-recap/> [https://perma.cc/X64S-XVGW] (lamenting the “relative absence of pertinent financial information” disclosed to investors in unicorns).

337. See Julie Verhage, *Here's What Morgan Stanley Is Telling Its Wealthiest Clients About Uber*, BLOOMBERG (Jan. 14, 2016, 9:42 AM), <http://www.bloomberg.com/news/articles/2016-01-14/here-s-what-morgan-stanley-is-telling-its-wealthiest-clients-about-uber> [https://perma.cc/N34U-BU7S].

338. See Kate Clark, *The Dark Side of the Funding Boom: Skimpy Due Diligence, Burnout*, INFO. (Aug. 12, 2021, 6:00 AM), <https://www.theinformation.com/articles/the-dark-side-of-the-funding-boom-skimpy-due-diligence-burnout> [https://perma.cc/B2L7-UFA8].

339. Joseph Bankman and Ronald Gilson have argued that VC investments result in a winner's curse. Joseph Bankman & Ronald J. Gilson, *Why Start-Ups?*, 51 STAN. L. REV. 289, 298 (1999). They use the term to describe the result of an auction between a VC and an

auction-winning VC firm may be especially credulous or reckless. To be sure, startups can raise more capital if more VC firms offer competing term sheets. But in VC investing, what ultimately matters is the highest bid, not the market consensus. In the classical version of the winner's curse, the curse ends with the winner who overestimated the value of the good being auctioned. But in VC markets, the winner's curse can have social consequences when it allows excessively risky startups to be funded. Juul exemplifies the problem. The startup pitched itself to many VCs in Silicon Valley, and most chose to pass.³⁴⁰ Instead, it was able to raise funds from a small number of obscure VCs, hedge funds, and mutual funds.³⁴¹

VC markets' capacity to fund ideas that are speculative or controversial can create private wealth and social value. VCs pride themselves on finding investment opportunities that challenge conventional wisdom.³⁴² They lament the times they missed out because they followed the crowd. The VC firm Bessemer features its "Anti-Portfolio" on its website: a list of the successful companies that the firm considered but ultimately passed on.³⁴³ The Anti-Portfolio includes the story of a Bessemer partner telling Facebook co-founder Eduardo Saverin, "Kid, haven't you heard of Friendster? Move on. It's over!"³⁴⁴ In other cases, though, the contrarian VCs funding a startup's next round may simply be missing or choosing to ignore the red flags that led other VCs to pass. If due diligence raises questions about whether a startup has misled its business partners, and all but one VC firm balks, the startup still gets funded.

3. Norm of Silence

When VCs pass on investment, they tend to do so quietly.³⁴⁵ Likewise, when VCs decide not to reinvest, they rarely broadcast their decisions. VCs are known for their

entrepreneur in which the winning VC is cursed by paying more than the better-informed entrepreneur would pay for her own ideas. *Id.* I use the term to describe an auction among VCs in which the winning VC is cursed by overestimating the value of the startup relative to other VCs.

340. See Erin Griffith, *Silicon Valley Investors Shunned Juul, but Back Other Nicotine Start-Ups*, N.Y. TIMES (Oct. 7, 2018), <https://www.nytimes.com/2018/10/07/technology/silicon-valley-investors-juul-nicotine-start-ups.html> [<https://perma.cc/X89T-JBL7>].

341. See *id.*; see also Juul: Financials, CRUNCHBASE, https://www.crunchbase.com/organization/juul/company_financials [<https://perma.cc/4MAC-T25Z>] (listing Juul's known investors).

342. See, e.g., Geoff Lewis & Eric Stromberg, *In Search of Narrative Violations*, BEDROCK, <http://www.bedrockcap.com/letter> [<https://perma.cc/MLF5-M3FM>] (proclaiming that their new VC firm will "invest in promising companies that are underestimated precisely because they are incongruent with the storyline").

343. *The Anti-Portfolio*, BESSEMER VENTURE PARTNERS, <https://www.bvp.com/anti-portfolio> [<https://perma.cc/4EYB-R39W>] (listing opportunities that the firm missed, including Apple, Facebook, and Google, and lamenting, "if we had invested in any of these companies, we might not still be working").

344. *Id.*

345. See Erin Griffith, *Should Venture Capitalists Avoid Publicly Criticizing Startups?*, FORTUNE (July 12, 2017, 10:39 AM), <https://fortune.com/2017/07/12/venture-capital->

few spectacularly successful investments, not for the vast majority that fail or underwhelm. What VCs fear the most is that deal flow will dry up. They compete to be “founder-friendly.”³⁴⁶ VCs who publicly criticize startups they passed on would be less likely to attract a pitch from the next promising founder. Recall that Bill Maris spoke out about Theranos only after Carreyrou’s exposé was published.³⁴⁷ VCs who lack Maris’s reputation and institutional support may be reluctant to speak out at all.³⁴⁸ In 2019, Jason Palmer, a less well-known VC focused on educational technology, tweeted about why his firm had passed on the failed startup AltSchool.³⁴⁹ Palmer was excoriated online, including by the founder of *TechCrunch*.³⁵⁰ Palmer apologized profusely.³⁵¹

VCs’ practice of not revealing negative information they learn about startups during the investment process is more remarkable because VCs routinely refuse to sign NDAs.³⁵² VCs claim they cannot sign NDAs because the number of startups they screen makes it impractical to keep track of where they absorbed certain information.³⁵³ They also claim that NDAs would create potential conflicts of interest because they often screen multiple startups working on similar technologies or exploring similar business models.³⁵⁴ Startups generally share sensitive information with VCs in spite of their refusal to sign NDAs because they expect that social norms will prevent VCs from revealing that information. But there is no *legal* obligation preventing VCs from revealing what they learn or even trading on it.

VCs’ practice of not revealing negative information they learn about startups in the investment process can have social consequences. Maris’s comments about Theranos may have been self-serving, but it is likely true that many VCs looked at Theranos, decided it was suspicious, passed on investing, and kept quiet. If Theranos had been publicly traded, Maris or his colleagues could have acted on the suspicious blood test and shorted the stock. The negative information about Theranos would have been reflected in its stock price. A sharp decline in price might have attracted more scrutiny to Theranos. Instead, because the VCs keep their doubts to themselves, Theranos continued to sell fake blood tests.

criticize-startups/ [<https://perma.cc/9N9X-VB8Z>] (acknowledging the norm against VCs criticizing startups, but also suggesting it may be changing).

346. See Ben Marcus, *What Makes a Founder-Friendly Investor?*, MEDIUM (Apr. 10, 2016), <https://medium.com/@FlyingBenji/what-makes-a-founder-friendly-investor-6573b770cf18> [<https://perma.cc/6WE9-64E6>].

347. See D’Onfro, *supra* note 129.

348. To be sure, the norm is not absolute. Multiple VCs have criticized Juul. See Griffith, *supra* note 345.

349. Nellie Bowles, *Want to Do Business in Silicon Valley? Better Act Nice*, N.Y. TIMES, <https://www.nytimes.com/2019/09/10/style/oh-behave.html> [<https://perma.cc/MA9S-7JYF>] (Sept. 20, 2019).

350. *Id.*

351. *Id.*

352. See Lincoln, *supra* note 25.

353. See *id.*

354. See *id.* (“Adhering to hundreds of NDAs . . . would create untenable conflicts and may prevent investors from offering candid industry advice and guidance to existing portfolio companies, which may conflict with the investor’s fiduciary duties to these portfolio companies.”).

B. Restraints on Tradability

VCs' weak incentives to deter startup misconduct would not be so consequential if other investors had the opportunity to profit from uncovering and revealing negative information about startups. But private company securities are not widely traded, and they are nearly impossible to short. The Securities Act provides that all offers or sales of securities must be registered with the SEC or subject to an exemption.³⁵⁵ The Act exempts "transactions by an issuer not involving any public offering."³⁵⁶ In *SEC v. Ralston Purina Co.*, the Supreme Court interpreted that language to mean that a transaction would be exempted only if the offerees could "fend for themselves" and therefore did not need the protections of the securities laws.³⁵⁷ The Court suggested that offerees could fend for themselves if they had access to the kind of information about a company that would be provided in public disclosures.³⁵⁸ Over time, an investor's wealth has become the regulatory proxy for whether the investors can fend for themselves.³⁵⁹

Most startups offering private placements of their equity to outsiders rely on the Rule 506(b) safe harbor in Regulation D.³⁶⁰ In fact, in 2018, companies raised more capital through Rule 506(b) than they did through registered public offerings.³⁶¹ Rule 506(b) permits the sale of private securities to an unlimited number of "accredited investors" and no more than thirty-five unaccredited investors.³⁶² Accredited investors include, among others, VC firms, financial institutions, and businesses with assets over \$5 million.³⁶³ A person who has an annual income over \$200,000 or a net worth over \$1 million also qualifies.³⁶⁴ Because the income and net worth tests have not been indexed for inflation, thirteen percent of U.S. households now qualify as accredited investors.³⁶⁵ If the tests had been adjusted for inflation from the start, an

355. See 15 U.S.C. § 77e(c).

356. *Id.* § 77d(a)(2).

357. 346 U.S. 119, 125 (1953).

358. See *id.* at 127.

359. See Rodrigues, *supra* note 26, at 3418–21.

360. Jones, *supra* note 36, at 176 ("Most private financing transactions proceed under Rule 506 of Regulation D . . .").

361. See Concept Release, *supra* note 30, at 30,465–66 (estimating that in 2018, \$1.4 trillion was raised through registered public offerings and \$1.5 trillion was raised through Regulation 506(b)).

362. 17 C.F.R. § 230.506(b) (2020).

363. See *id.* § 230.501(a)(1)–(3).

364. *Id.* § 230.501(a)(6) (including in the definition of accredited investor "[a]ny natural person who had an individual income in excess of \$200,000 in each of the two most recent years or joint income with that person's spouse in excess of \$300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year"); *id.* § 230.501(a)(5) (including in the definition of accredited investor "[a]ny natural person whose individual net worth, or joint net worth with that person's spouse, exceeds \$1,000,000"). A person's primary residence does not count for the net worth calculation. *Id.* § 230.501(a)(5)(i)(A).

365. Concept Release, *supra* note 30, at 30,471.

investor would need an annual income of approximately \$538,000 or a net worth of approximately \$2.7 million to qualify today.³⁶⁶

Startups may also sell shares or options to employees, directors, and officers as part of a “compensatory benefit plan” under the safe harbor of Rule 701.³⁶⁷ Sales under Rule 701 during any twelve-month period must not exceed the greatest of \$1 million, fifteen percent of the company’s assets, or fifteen percent of the outstanding amount of the class of shares being offered.³⁶⁸ Rule 701 also provides that if the aggregate sales price of the securities that a startup sells during any twelve-month period exceeds \$10 million, it must provide purchasers with certain information, including financial statements.³⁶⁹

Shares that are sold under Rules 506 and 701 are “restricted securities,” which are not freely tradable.³⁷⁰ Any resale of a restricted security must itself be exempt from registration.³⁷¹ Holders of restricted startup shares generally rely on the safe harbor for resales in Rule 144.³⁷² Rule 144 permits the resale of restricted securities after a one-year holding period.³⁷³ If the seller is an affiliate of the company, the seller must provide specified information, including certain financial statements, to the purchaser.³⁷⁴

In 2015, Congress enacted a new exemption for resales in section 4(a)(7) of the Securities Act.³⁷⁵ It provides that restricted securities can be resold to *accredited investors* without a holding period, provided that certain requirements are met.³⁷⁶ The most important requirement is that the seller makes available to the purchaser certain information about the company that issued the securities.³⁷⁷

Private companies must also be careful to avoid inadvertently triggering public company status under section 12(g)’s record shareholder rule. Section 12(g) provides that a company must register its securities once it accumulates assets exceeding \$10

366. Tara Siegel Bernard, *Opening the Door to Unicorns Invites Risk for Average Investors*, N.Y. TIMES (Jan. 4, 2020), <https://www.nytimes.com/2020/01/04/your-money/investing-private-market-startups.html> [<https://perma.cc/HG4F-FX7D>].

367. 17 C.F.R. § 230.701(c) (2020).

368. *Id.* § 230.701(d)(2)(i)–(iii).

369. *Id.* § 230.701(e).

370. *Id.* §§ 230.502(d), 230.701(g)(1).

371. *See id.* §§ 230.502(d), 230.701(g)(2).

372. A second safe harbor, Rule 144A, permits the resale of restricted securities without a holding period, but only if the buyer is a “qualified institutional buyer” (QIB). *Id.* §§ 230.144A(b), 230.144A(d)(1). A QIB includes institutional investors that own and invest at least \$100 million in securities. *Id.* § 230.144A(a)(1)(i). In 2007, investment banks developed markets for trading Rule 144A equity securities. *See Sjostrom, supra* note 47, at 430–32. But the markets never generated significant liquidity, likely because they were limited to QIBs. *See Schwartz, supra* note 31, at 562–63.

373. 17 C.F.R. § 230.144(d)(1)(ii) (2020).

374. *See id.* §§ 230.144(b)(2), 230.144(c)(2). An affiliate is “a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with” the company issuing the security. *Id.* § 230.144(a)(1).

375. *See Fixing America’s Surface Transportation Act*, Pub. L. No. 114-94, 129 Stat. 1787 (2015).

376. *See* 15 U.S.C. § 77d(d).

377. *See id.* § 77d(d)(3).

million and 2000 record shareholders or 500 record shareholders who are not accredited investors.³⁷⁸ A record shareholder is the person in whose name the share is held, rather than its beneficial owner.³⁷⁹ But an SEC rule provides that “[i]f the issuer knows or has reason to know that the form of holding securities of record is used primarily to circumvent the provisions of section 12(g) . . . the beneficial owners of such securities shall be deemed to be the record owners.”³⁸⁰

The net effect of these regulations is that private companies must monitor sales and resales of their securities closely. Startups comply in part by encumbering their shares with a right of first refusal in favor of the company.³⁸¹ State corporate law generally permits restraints on share alienability that are “reasonable.”³⁸² Many startups also regulate the sale of their stock by company policy. One recent study of thirty-four private companies traded on the secondary markets found that eighty-six percent of those companies required their employees to obtain company approval before selling their shares.³⁸³ Rights of first refusal and company approval policies are sensible means to comply with securities regulations, but they also enable companies to monitor who is buying or selling its shares and make it impractical to short the shares.

C. Secondary Markets

In the last two decades, organized secondary markets for buying and selling private company shares have emerged.³⁸⁴ The secondary markets are limited by the regulatory restrictions on trading private company securities and by the preferences of companies themselves. In their early stages, some of the secondary markets modeled themselves as marketplaces. For example, SecondMarket used to connect

378. 15 U.S.C. § 78l(g)(1)(A). For the purpose of counting the number of record shareholders, employees who received their shares as part of an employee compensation plan do not count. *Id.* § 78l(g)(5).

379. See Langevoort & Thompson, *supra* note 28, at 355–56 (criticizing the definition of record shareholder).

380. 17 C.F.R. § 240.12g5–1(b)(3) (2020).

381. See Fan, *supra* note 23, at 597 (describing the Right of First Refusal and Co-Sale Agreement in the National Venture Capital Association’s template documents); Ibrahim, *supra* note 1, at 44 (reporting that secondary market participants interviewed by the author stated that “stock option grants to start-up employees typically include rights of first refusal”); David F. Larcker, Brian Tayan & Edward Watts, *Cashing It In: Private-Company Exchanges and Employee Stock Sales Prior to IPO 3* (Stan. Univ. Grad. Sch. of Bus., Research Paper No. 18-45, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3247877 [<https://perma.cc/5DTG-8JFR>] (reporting that many private companies interviewed by the authors “specified that their company has right of first refusal on the shares”).

382. Jonathan Macey & Maureen O’Hara, *Stock Transfer Restrictions and Issuer Choice in Trading Venues*, 55 CASE W. RES. L. REV. 587, 607 (2005). See also *id.* (listing compliance with “exemptions from the registration requirements of the Securities Act” as an example of restrictions on share alienability).

383. Larcker, Tayan & Watts, *supra* note 381, at 9. In 41% of cases, the board controlled approval. *Id.* The remainder split between the CEO, CFO, GC, or the HR department. *Id.*

384. See Ibrahim, *supra* note 1, at 16–20; Pollman, *supra* note 84, at 193–202.

buyers and sellers in a common marketplace.³⁸⁵ SharesPost started as a passive bulletin board that allowed users to post offers to buy or sell shares.³⁸⁶

Over time, the secondary markets evolved to allow companies tighter control of how their shares are bought and sold. Today, SecondMarket is called NASDAQ Private Market, and its business model is to work directly with private companies to facilitate secondary block sales.³⁸⁷ SharesPost is now a registered broker-dealer.³⁸⁸ It warns its customers that it does not provide a “formal, central marketplace where pricing from prior trades is published.”³⁸⁹ Newer secondary markets like EquityZen and Forge developed a different model for secondary transactions. They create special funds that serve as investment vehicles to purchase startup equity, and they solicit investors to become limited partners in the fund.³⁹⁰

Why did the markets evolve this way? The regulations on restricted securities set some limits on tradability, but companies have discretion to limit trading further. The market organizers want to stay in the good graces of the companies with shares traded on their platforms, so they cooperate with company policies. It is in the self-interest of a company’s directors and managers to adopt a policy of *selective liquidity*. A company’s board can approve one-off sales for directors and managers when they need liquidity. Investor directors should have an incentive to oppose liquidity deals for managers that leaves them with too little skin in the game.³⁹¹

In recent years, some founders have nonetheless cashed out equity worth staggering amounts. For example, in 2018, Travis VanderZanden, the founder of Bird (an electric scooter startup), cashed out part of his equity stake worth \$44

385. Pollman, *supra* note 84, at 196–97.

386. *Id.* at 200.

387. *Q&A with Nasdaq Private Market on Secondary Sales of Private Company Stock*, NASDAQ (Dec. 17, 2019, 9:25 AM), <https://www.nasdaq.com/articles/qa-with-nasdaq-private-market-on-secondary-sales-of-private-company-stock-2019-12-17> [<https://perma.cc/CR2D-YGSD>]; see also Pollman, *supra* note 84, at 197 (describing the change in SecondMarket’s business model); Schwartz, *supra* note 31, at 560 (same).

388. See Pollman, *supra* note 84, at 200 (explaining how SharesPost acquired a registered broker-dealer in response to an investigation by the SEC); see also *Frequently Asked Questions*, FORGE GLOBAL, https://forgeglobal.com/faqs/?utm_term=sharespost_about/faqs [<https://perma.cc/9ZXM-VPHW>] [hereinafter FORGE GLOBAL] (“Forge Markets is a full-service broker dealer dedicated to the private growth equity asset class.”).

389. FORGE GLOBAL, *supra* note 388.

390. See *Frequently Asked Questions*, EQUITYZEN, <https://equityzen.com/faq/> [<https://perma.cc/8Y5K-B3K3>] [hereinafter EQUITYZEN]; FORGE GLOBAL, *supra* note 378. In 2020, Forge announced plans to merge with SharesPost. See Connie Loizos, *Once Rivals, Secondary Market Player Forge Is Acquiring SharesPost in a \$160 Million Cash-and-Stock Deal*, TECHCRUNCH (May 12, 2020, 8:00 AM), <https://techcrunch.com/2020/05/12/once-rivals-secondary-market-player-forge-is-acquiring-sharespost-in-a-160-million-cash-and-stock-deal/> [<https://perma.cc/Z6ZY-U4QV>]. The announcement does not clarify which business model the surviving company will pursue, but it is keeping the Forge brand. See *id.*

391. See Gilson, *supra* note 56, at 1083–84 (explaining that VCs create high-powered incentives for managers by compensating them primarily in equity, which ensures that “the overwhelming percentage of management’s compensation is dependent on the portfolio company’s success”).

million in a secondary transaction—even though the company was only a year old.³⁹² Adam Neumann, the founder of WeWork, reportedly cashed out \$500 million in secondary transactions before the company imploded.³⁹³ A law firm partner based in San Francisco told the Silicon Valley insider publication the *Information* that “[h]alf of Series A and B deals now have some secondary component for founders.”³⁹⁴

Sometimes a board will have reasons to give non-manager shareholders liquidity. Boards can strategically approve secondary sales for employees or outside investors who get too noisy. A board may also decide to allow a broader set of employees to sell, but only as part of a structured liquidity program that guarantees the incoming investors are only making long bets. That is the selective liquidity business model that EquityZen and Forge pioneered.

Even the minimal, selective liquidity that these secondary markets provide can be valuable. Investors who believe the board will allow them to cash out on the secondary markets if they desire will demand less of an illiquidity discount, which reduces the cost of raising capital.³⁹⁵ The option for either founders or VCs to exit their investments before an IPO can also improve startup governance by reducing opportunism.³⁹⁶

But the secondary markets do not allow for the kind of robust trading that would create a market for information about private companies. The private secondary markets lack (1) volume, (2) liquidity, (3) price transparency, and (4) trader anonymity. The presence of these features of public capital markets attracts short sellers, analysts, and financial journalists. The absence of these features in the private secondary markets prevents the kind of trading that could deter misconduct.

First, the secondary markets lack trading volume.³⁹⁷ The four main markets executed over \$4 billion worth of transactions in 2017.³⁹⁸ That number may sound impressive, but it is multiple orders of magnitude lower than public capital markets. The World Bank estimates that in the same year, the total value of stocks traded in the United States was over \$39 trillion.³⁹⁹ The low trading volume in secondary

392. See Amir Efrati & Alfred Lee, *One Year in, Bird Founder Sells Some Shares*, INFO. (June 17, 2018, 9:13 AM), <https://www.theinformation.com/articles/one-year-in-bird-founder-sells-some-shares> [https://perma.cc/ZZJ8-ZD6A].

393. Berber Jin, *Startup Founders Use Record-High Valuations to Cash Out Earlier*, INFO. (Sept. 13, 2021, 6:01 AM), <https://www.theinformation.com/articles/startup-founders-use-record-high-valuations-to-cash-out-earlier> [https://perma.cc/L3H4-2SPJ].

394. *Id.*

395. See Ibrahim, *supra* note 1, at 23; Pollman, *supra* note 84, at 204.

396. Darian Ibrahim argues that VCs and entrepreneurs may behave less opportunistically toward each other when both parties have a credible threat to exit in the secondary markets. See Ibrahim, *supra* note 1, at 24–27. He also argues that when VCs and managers disagree about an acquisition or IPO, the secondary markets could mitigate the conflict by allowing one party to exit while the other remains. See *id.* at 27–29.

397. See Schwartz, *supra* note 31, at 557 (collecting news reports indicating little trading activity on secondary markets).

398. Larcker, Tayan & Watts, *supra* note 381, at 3.

399. *Stocks Traded, Total Value (Current US\$) – United States*, WORLD BANK, <https://data.worldbank.org/indicator/CM.MKT.TRAD.CD?locations=US> [https://perma.cc/D3UV-2YTT].

markets makes prices less accurate.⁴⁰⁰ It also inhibits coverage by analysts and financial journalists. Markets with fewer traders have fewer potential clients for brokerage firms employing analysts and fewer potential subscribers to financial news sites.

Second, the secondary markets are still highly illiquid compared to public markets.⁴⁰¹ In public markets, short sellers can reduce their exposure to risk by selling shares just before revealing information and then repurchasing shares and reselling them quickly after the price declines.⁴⁰² In private secondary markets, traders cannot always be assured that they can exit their position on demand. They often need to wait for an acquisition or IPO.⁴⁰³ In the intervening time, the information about misconduct that an investor had hoped to trade on may have been offset by other news.

Third, secondary markets lack price transparency.⁴⁰⁴ This is partially due to the structure of the markets—not all trades are reflected in a price on a centralized list—and partially due to the complicated capital structure of venture-backed startups. Inferring the price of a common share from the price of the most recently added class of preferred shares is not straightforward because each class can carry different contractual rights. The complexity of valuing startups creates opportunities for manipulation. For example, at one point, EquityZen told prospective investors that they could purchase shares of the unicorn Wish at “a 20.6% discount to the price paid by recent investors.”⁴⁰⁵ EquityZen did not, however, acknowledge that the “recent investors” purchased preferred shares or explain what rights the preferred shares had, which renders the comparison misleading.⁴⁰⁶ The absence of a uniform market price makes investors reluctant to trade, which in turn reduces trading volume and liquidity.⁴⁰⁷

Fourth and finally, the secondary markets lack trader anonymity. Suppose that an investor with legally acquired information about a unicorn’s misconduct wanted to short its stock on a secondary market. If the company were public, the investor would find *any* trader with a long position, borrow their shares, reveal the information, and

400. See Ken Nyholm, *Estimating the Probability of Informed Trading*, 25 J. FIN. RSCH. 485, 485–86 (2002) (finding, based on NYSE trading data, that “low volume stocks . . . are slower to incorporate new information than are high-volume stocks”).

401. See Schwartz, *supra* note 31, at 557–60.

402. See *supra* Section II.A.

403. For example, Forge tells investors that its investment vehicle will distribute “the shares in each fund to investors once it determines that the shares become freely, practically, and feasibly transferable for any reason”—and then lists as examples an acquisition or IPO. FORGE GLOBAL, *supra* note 388. EquityZen tells investors to expect an investment horizon of two to five years. EQUITYZEN, *supra* note 390.

404. See Letter from Elisabeth D. de Fontenay, Professor of L., Duke Univ. Sch. of L., et al., to Vanessa Countryman, Secretary, SEC 7 (Sept. 24, 2019), <https://www.sec.gov/comments/s7-08-19/s70819-6193340-192501.pdf> [<https://perma.cc/UNR2-PFTD>] (“[T]here is generally no single ‘market price’ at any given time for private securities . . .”).

405. Gornall & Strebulaev, *supra* note 70, at 122.

406. See *id.* at 123.

407. See Marcel Kahan, *Securities Laws and the Social Costs of “Inaccurate” Stock Prices*, 41 DUKE L.J. 977, 1018–19 (1992).

then repurchase the shares at a lower price. In a private company, shareholders are unlikely to be interested in loaning their shares for short sales. Because most startup shareholders are angels, VCs, founders, or employees, they are generally loyal to the company. Indeed, many shares will be held by individuals with fiduciary obligations to the company. Even if there were interested shareholders, the parties would need the company's approval before a secondary market transaction could take place. If the company knew the investor was a potential whistleblower or connected to a whistleblower, it would almost certainly refuse the sale.

For these reasons, as they are presently organized, private secondary markets provide little deterrence to corporate misconduct.

D. Derivative Bets

In theory, investors could bet against a late-stage startup by investing in a derivative. The most promising kind of derivative would be a synthetic swap. A swap is an investment contract in which two parties, called counterparties, agree to exchange payments over a fixed period.⁴⁰⁸ The value of the payments is derived from the value of an underlying asset. In a synthetic swap, neither counterparty owns the underlying asset.⁴⁰⁹ The synthetic swap contract is nothing more than a pure bet on how the underlying asset's value will change. Investors who wanted to bet on the value of a startup could agree to a synthetic swap based on the value of its securities. Suppose that an investor learned about unreported misconduct by Toast, a restaurant payments systems unicorn. The investor could propose to a bank that they agree to a synthetic swap contract in which they would pay each other periodic cash flows equal to the change in value of a certain number of shares of Toast stock. If Toast's value declined, the bank would make a net payment to the investor. If it rose, the investor would pay the bank. The synthetic swap would allow the investor to avoid the regulatory and contractual limits on trading private company securities because no actual Toast shares would change hands. It would also allow the investor to be anonymous, which could be critical if the investor was a whistleblower or obtained information from one.

However, some of the practical problems that bedevil the secondary markets would also make a synthetic swap more costly. Because private secondary markets lack transparent prices, it would be difficult to mark the value of the swap to shares traded in those markets. The counterparties would need to rely on Toast's publicly reported valuations. Again, the complex capital structure of late-stage startups would complicate the valuation.⁴¹⁰ The counterparties would need to calculate the price of

408. Dan Awrey, *The Mechanisms of Derivatives Market Efficiency*, 91 N.Y.U. L. REV. 1104, 1107 n.10 (2016) (“[A] swap is a series of mutual forward obligations whereby two counterparties agree to periodically exchange cash flows over a specified period of time.”).

409. *See id.* at 1122 (“[D]erivatives are often utilized in order to create synthetic exposures to relatively illiquid assets . . .”).

410. Basing a swap solely on the change in publicly reported valuations, without accounting for the contractual rights for each new share class, would create the risk that the cash flows exchanged would be distorted by a startup's decision to give idiosyncratic terms to its latest round of investors. That risk may not be random noise. There is evidence that startups struggling to raise capital often give investors especially generous terms, which inflates their

a common share by working backward from the latest valuation that Toast reported and accounting for the special contractual rights in that round of shares.⁴¹¹ The counterparties would face uncertainty about when Toast would raise funds and report its next valuation.⁴¹²

The bank would also face an adverse selection problem. It would struggle to find information to independently assess the value of Toast stock. Because Toast is private, the bank would not be able to evaluate its prospects by reviewing its disclosures. Worse, the bank would know that its presumably better-informed counterparty believed that Toast was overvalued. The bank could try to reduce the information asymmetry by investigating the company, but the cost of the investigation would have to be deducted from the net expected return of the swap. The bank would also need to account for the investor's credit risk.⁴¹³ A long position on equity would be costly for the bank's capital requirements. For these reasons, it is exceedingly unlikely a bank would agree to this kind of synthetic swap.

Even if a bank were interested, only very wealthy investors could propose the bet. Provisions in the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank") ban the sale, purchase, or offer of any "security-based swap" by a "person who is not an eligible contract participant" unless the security is registered.⁴¹⁴ Eligible contract participants include certain financial institutions and individuals who have "amounts invested on a discretionary basis" in excess of \$10 million.⁴¹⁵ The SEC has demonstrated its willingness to enforce this provision. For example, in 2016, the SEC settled charges against a company called Equidate for trying to sell derivative contracts based on startup equity to persons who were not eligible contract participants.⁴¹⁶ After the settlement, Equidate switched its business model and became the secondary market now known as Forge.⁴¹⁷

reported valuations. See Gornall & Strebulaev, *supra* note 70, at 142.

411. The counterparties could pull the most recently amended version of Toast's certificate of incorporation to determine the total number of authorized shares and estimate the number of outstanding shares. They could then take the valuation that Toast reported after its most recent fundraising round and divide it by the total number of shares outstanding. This would yield the price of one share of the most recent class of preferred shares. The counterparties would then need to scrutinize the certificate of incorporation to determine the special rights that the new class of shares had, price those rights, and then calculate the value of shares without the special rights.

412. The counterparties would also not know what contractual rights might be included in the next round of preferred shares. When Toast announced a new round, the counterparties would again have to pull the certificate of incorporation, assess the special rights of the new class, and work backwards to derive the value of common shares.

413. See Awrey, *supra* note 408, at 1127 (emphasis in original) (explaining that the duration of derivatives contracts "introduces the risk that a trader may become insolvent or default . . . [which] in turn, makes the creditworthiness—and thus the *identity*—of the traders highly relevant").

414. 15 U.S.C. § 77e(c).

415. 7 U.S.C. § 1a(18)(A)(xi).

416. Press Release, SEC, Firm Settles Charges for Selling Unregistered Swaps Involving Pre-IPO Companies (Dec. 6, 2016), <https://www.sec.gov/news/pressrelease/2016-257.html> [<https://perma.cc/NQ9M-LK7Z>].

417. See Loizos, *supra* note 390 (noting that Forge used to be known as Equidate).

In some situations, investors can indirectly bet against some private companies by taking a long position in their public company competitors. For example, between Carreyrou's first article about Theranos in October 2015 and May 2016, the stocks of the two leading publicly traded blood testing companies, LabCorp and Quest, rose considerably.⁴¹⁸ One analyst explained that "[i]t certainly hasn't hurt their stock prices that this hard-to-perfectly-handicap risk"—potential competition from Theranos—"has become less of one."⁴¹⁹ Similarly, the stock of Medallion Financial, a publicly traded company that lends to taxi medallion purchasers, lost value steadily as Uber's private valuations climbed in 2014 and 2015.⁴²⁰

But betting in favor of the competition is a highly risky strategy. Because the long position cannot be hedged with a short position in the private company, the bet is exposed to risks that would affect the industry as a whole. Late-stage startups often lack clear public company competitors, especially if their business model is unconventional. Public company competitors may also be more diversified, which would make it hard to isolate the effect of reduced competition from a private company. Whistleblowers should not expect that they can reliably profit from revealing misconduct by betting on a synthetic swap or betting on the competition. Even when they can, it is not clear that regulators or securities litigators will understand the signal sent by their trading. Derivative bets would not allow for the kind of robust trading that could deter unicorn misconduct.

IV. A MARKET FOR UNICORN SECURITIES

The best way to deter unicorn misconduct is to encourage trading of unicorn securities. This Part proposes a three-pronged plan to build a market for more robust trading of private company securities, without compromising investor protection. First, reform section 12(g)'s record shareholder rule in order to liberalize trading among accredited investors. Second, attach a regulatory MFN clause to private company securities sold through certain SEC safe harbors, so that companies may decide if their stock will be tradable but cannot selectively grant that right. Third, require that all private companies that let their securities be traded make limited public disclosures.

A. Secondary Market Liberalization

Part III explained how existing secondary markets for trading private company securities do not allow the kind of robust trading that would deter misconduct. These markets are highly illiquid and low volume. Prices are not transparent. Trading is not

418. Lewis Krauskopf, *Lab Stocks Quest, LabCorp Shine as Testing Outlook Brightens*, REUTERS, <https://reuters.com/article/questdiagnostics-laboratory-corp-stocks/lab-stocks-quest-labcorp-shine-as-testing-outlook-brightens-idUKL2N18K1T0> [https://perma.cc/ARS8-PY4Y] (May 31, 2016, 7:01 AM).

419. *Id.*

420. See *The 'Uber Effect' Is Crushing Taxi Medallion Prices and Spilling Over into Public Markets*, CB INSIGHTS: RSCH. BRIEFS (Oct. 1, 2015), <https://www.cbinsights.com/research/public-stock-driven-uber/> [https://perma.cc/B2H9-3JFE].

anonymous. Consequently, short selling is impractical, and analysts and financial journalists pay limited attention to private companies. The cause of these problems is a combination of regulatory restrictions and contractual restraints. But these regulations are designed to protect investors, and to some extent, they do.

A liberalized secondary market could allow robust trading—and protect investors—by limiting access to accredited investors and simultaneously requiring companies with securities being traded in the market to make basic public disclosures. The conventional rationale for treating accredited investors differently from retail investors is that they are more financially sophisticated than retail investors.⁴²¹ Critics have rightly pointed out that an investor's wealth does not reliably indicate sophistication, so the definition of accredited investor is both over- and underinclusive.⁴²² A trust fund kid might fit the definition, yet a finance professor might not.⁴²³ The SEC could make the definition less underinclusive by allowing sophisticated investors who are not wealthy to become certified by a test,⁴²⁴ but it is harder to make the definition significantly less overinclusive without diminishing trading volume.

A better defense of treating accredited investors differently is that they are better able to absorb risk, because their investment portfolios are larger and more diversified.⁴²⁵ The definition of accredited investor also has the advantage of being objective and easy to implement.⁴²⁶ An accredited investor can demonstrate her wealth simply by sending a bank statement to the market gatekeeper. The SEC could stop the erosion of the wealth threshold by indexing it for inflation.⁴²⁷

Some scholars have argued that existing secondary markets for accredited investors contribute to economic inequality by locking out investors of modest means.⁴²⁸ Liberalizing secondary markets further could exacerbate the problem. But in recent years, mutual funds have started to invest in unicorn securities.⁴²⁹ If mutual funds invest in the liberalized secondary markets, they would enable less affluent retail investors to invest in private company securities indirectly, without exposing them to concentrated risk in any particular private company.

Limiting resales to accredited investors would also align the rules governing sales and resales of private company securities. For example, Rule 506(b) allows private

421. See Sjostrom, *supra* note 31, at 667.

422. See Rodrigues, *supra* note 26, at 3422–25.

423. See *id.*

424. The SEC is considering that possibility. See Concept Release, *supra* note 30, at 30,473.

425. See Langevoort & Thompson, *supra* note 28, at 363.

426. See Sjostrom, *supra* note 31, at 666–67 (describing why the SEC and regulated parties value objective rules).

427. The SEC is also considering that possibility. See Concept Release, *supra* note 30, at 30,478.

428. See Rodrigues, *supra* note 26, at 3415.

429. See Sergey Chernenko, Josh Lerner & Yao Zeng, *Mutual Funds as Venture Capitalists? Evidence from Unicorns* 47 (Eur. Corp. Governance Inst., Working Paper No. 675/2020, 2020), <https://ssrn.com/abstract=2897254> [<https://perma.cc/467M-S3GF>] (providing data showing the increase in mutual fund participation in unicorn fundraising rounds).

placements to only thirty-five unaccredited investors but to an unlimited number of accredited investors.⁴³⁰ It would also follow the practice of existing secondary markets, which are generally limited to accredited investors.⁴³¹

Most importantly, *robust trading is itself a form of investor protection*. This point is so obvious that it is often overlooked. Many investors never read a company's disclosures before they invest. Instead, they are protected by the actions of more informed traders, who impound the information contained in public disclosures and other sources, both public and private, into market prices.⁴³² Private companies need not be subjected to the more demanding disclosure requirements of public companies for traders to gather information about them. All traders need is an incentive to look and some basic information to get started. A more liquid, higher-volume, and transparent market for trading private company securities would impound the information that informed traders uncover into prices and protect less informed investors.

The first step to liberalize trading among accredited investors is for Congress to reform section 12(g) of the Exchange Act. Recall that section 12(g) requires companies to register their securities if they have \$10 million in assets and a class of securities "held of record" by 2000 shareholders or 500 shareholders who are not accredited investors.⁴³³ If private companies allowed unrestricted trading of their securities to accredited investors, they would quickly trigger the 2000 record shareholder limit and be forced to go public prematurely. As long as the record shareholder rule persists in its current form, companies will impose contractual restraints on the alienation of their securities.

Eliminating the record shareholder rule *as to accredited investors* would obviate the need for companies to restrict trading on markets limited to accredited investors. Companies would still need to go public if they accumulated 500 unaccredited record shareholders. In a sense, this reform would take the logic of the JOBS Act to its logical conclusion: companies should only be forced to go public if their securities are traded by many retail investors.⁴³⁴

Reforming section 12(g) would enable traders to make use of the recently enacted section 4(a)(7) of the Exchange Act.⁴³⁵ That provision exempts from registration resales of restricted securities among accredited investors, provided that certain

430. See 17 C.F.R. § 230.506(b) (2020).

431. See, e.g., EQUITYZEN, *supra* note 390 ("EquityZen offers private offerings, open to accredited investors only."); FORGE GLOBAL, *supra* note 390 ("Typically, to purchase unregistered securities (i.e., private company stock), you must be . . . an 'accredited investor.'").

432. See Gilson & Kraakman, *supra* note 11, at 572 (explaining that information uncovered by professionally informed traders "is rapidly assimilated into price").

433. 15 U.S.C. § 78l(g).

434. See Langevoort & Thompson, *supra* note 28, at 365 (explaining that the JOBS Act's expansion of section 12(g)'s limit on the number of record shareholders who are accredited investors "is a bow to the idea that such investors should protect themselves in terms of information rights, but the number of shareholders is then capped at 1,999, so that the idea cannot be taken to the extreme of an unlimited 'sophisticated' shareholder base that never triggers 1934 Act registration").

435. See 15 U.S.C. § 77d(d).

requirements are met.⁴³⁶ Today, most private companies are not keen to permit their shares to be resold under section 4(a)(7) because (1) they worry about tripping section 12(g)'s record shareholder rule and (2) they do not want to provide the information—especially financial statements—that must be provided to purchasers.⁴³⁷ Reforming section 12(g) would obviate the first concern. Mandating that private companies make limited public disclosures would make the second concern irrelevant.

Enabling accredited investors to use the section 4(a)(7) exemption would increase the liquidity and trading volume of the secondary markets. Employee whistleblowers who want to expose a company could liquidate their shares. Short sellers could propose trades with existing shareholders. Companies would no longer need to monitor their shareholders' trades, provided that the shareholders traded over market platforms restricted to accredited investors. The process of getting permissions or legal opinions would end. If the market volume grew enough, analysts and financial journalists would start to cover the traded companies and put their information-gathering networks to work.

It might be objected that liberalizing secondary markets will cause unicorns to multiply faster. Some commentators concerned about the rise of unicorns have sought to reverse the trend. For example, in 2019, a group of leading securities regulation scholars wrote in a comment to the SEC that “Congress and the Commission may need to take more aggressive action to usher firms into the public markets.”⁴³⁸

It is true that liberalizing secondary markets will provide more private company shareholders with liquidity. That will in turn reduce the illiquidity discount on their shares, lower the cost of raising capital, and—on the margin—diminish the appeal of going public. But the public capital markets have retail investors in addition to accredited investors, so those markets will always be more liquid. Therefore, companies will still have a financial incentive to go public to further reduce the illiquidity discount. Most importantly, though, companies that remained private could no longer evade the accountability that robust trading delivers.

B. Most Favored Nation Clause

Several scholars have called for liberalizing secondary trading in private company securities.⁴³⁹ Some, but not all, of them would limit these newly liberalized markets to accredited investors.⁴⁴⁰ These scholars advocate liberalization not because trading

436. *See id.*

437. *See id.* § 77d(d)(3).

438. de Fontenay et al., *supra* note 404, at 15. The scholars suggested “tightening the asset size or shareholder threshold in Section 12(g)” or “making existing securities registration exemptions available to an issuer only for a fixed time period.” *Id.*

439. *See* Pritchard, *supra* note 31, at 1019–21; Schwartz, *supra* note 31, at 580–92; Sjostrom, *supra* note 31, at 661–72.

440. *See* Pritchard, *supra* note 31, at 1019–21 (proposing that securities on the private market could only be sold to accredited investors); Schwartz, *supra* note 31, at 598 (rejecting the idea that trading on the emerging firm market should be limited to accredited investors, but suggesting that the market could be labeled “highly risky” and investors could be required to “sign a form certifying that they understand the risks of participation”); Sjostrom, *supra*

creates deterrence, but because greater liquidity reduces the cost of capital.⁴⁴¹ Consequently, they would give companies discretion to decide whether, and on what terms, they would allow their shareholders to participate in the secondary markets.⁴⁴²

It is unlikely, however, that most unicorns would voluntarily relinquish control over their shares' tradability just because they no longer needed to worry about section 12(g)'s record shareholder rule. Unicorn managers would still want to avoid the accountability of robust trading, just as Musk wanted to take Tesla private to avoid short sellers.⁴⁴³ If private company managers strongly valued expanding liquidity for their shareholders, they would be maximizing their shareholders' access to secondary markets under existing regulations. But instead, many companies practice selective liquidity.⁴⁴⁴ They permit director and manager shareholders to cash out in carefully controlled transactions. Directors and managers like selective liquidity precisely because it allows them to limit their personal risk without facing the scrutiny of trading.

Congress could force all companies to allow their securities to be traded by banning the enforcement of all restraints on alienation. But that would effectively end the possibility of concentrated ownership. Many companies prefer concentrated ownership, and it is plausible that it can increase efficiency under certain circumstances.⁴⁴⁵ For example, concentrated ownership might give an entrepreneur more freedom to pursue her idiosyncratic vision.⁴⁴⁶ Managers with illiquid equity stakes might consider longer time horizons in their decisions.⁴⁴⁷

note 31, at 668, 675–78 (proposing that securities on the sophisticated-investors-only market could be sold only to accredited investors or investors who passed a “licensing exam created and administered by the SEC”).

441. See Pritchard, *supra* note 31, at 1019 (suggesting that his proposal would “achieve more efficient capital formation and better investor protection simultaneously”); Schwartz, *supra* note 31, at 579 (explaining that his proposal would “offer both liquidity and investor protection”); Sjostrom, *supra* note 31, at 662 (“The objective of this proposal is to carve a new path to equity capital and share liquidity for private companies without compromising investor protection.”).

442. See Pritchard, *supra* note 31, at 1020 (“The[] private markets would need the issuer’s consent for the trading of their shares”); Schwartz, *supra* note 31, at 581 (expressing hope that companies would find listing on the emerging firm market appealing); Sjostrom, *supra* note 31, at 661–77 (proposing to create the sophisticated-investors-only market simply by relaxing existing restrictions on the sale and resale of private securities).

443. See *supra* Section II.A.

444. See *supra* Section III.C.

445. See, e.g., Henry Hansmann & Reinier Kraakman, *The End of History for Corporate Law*, 89 GEO. L.J. 439, 443 (2001) (“[B]oth concentrated and dispersed shareholdings have been celebrated, at different times and by different commentators, for their ability to advance shareholder interests in the face of serious agency problems.”).

446. See Zohar Goshen & Assaf Hamdani, *Corporate Control and Idiosyncratic Vision*, 125 YALE L.J. 560, 577–83 (2016). There is some evidence that going public inhibits innovation, though it is not clear how much of that effect is attributable to trading. See Shai Bernstein, *Does Going Public Affect Innovation?*, 70 J. FIN. 1365, 1367 (2015) (finding that a company’s innovation novelty, as measured by patent citations, declines after an IPO, but this effect is counterbalanced by the company’s greater capacity to acquire innovative companies).

447. See Ibrahim, *supra* note 1, at 6–7 (summarizing the debate over whether “lock-in” is

The better solution is a surgical ban on the practice of selective liquidity. The SEC could attach a most favored nation clause to private company securities sold privately through its regulatory safe harbors, like Rule 506(b) and Rule 701.⁴⁴⁸ An MFN clause would provide that if the company granted any holder of any of the company's securities the right to sell, that right would automatically apply to all holders of the company's securities.

An MFN clause would come with an unanimity exception and a special rights exception. The unanimity exception would provide that if all the company's shareholders consented to allow a particular resale, the transaction could proceed without triggering the MFN clause for other securities. The special rights exception would permit companies to require that any shareholders who held shares with rights not granted to common shareholders—such as the rights found in the preferred shares that VCs typically hold—convert their shares to common shares before selling them.⁴⁴⁹ For example, if a VC's preferred shares gave the VC the right to appoint a director, the company would not be forced to allow the anonymous third party (to whom the VC resold the shares) to appoint a director. The VC would have to convert those preferred shares to common shares before reselling them.

An MFN clause would strongly encourage private companies to allow trading. If directors and managers wanted the right to sell their own shares, they would have two options: allow all their shareholders to sell or obtain the consent of all shareholders each time they wanted to sell. For some directors and managers, their personal desire for liquidity would lead them to support a company policy allowing all shareholders to sell. If the directors and managers opted instead for the unanimity route, other shareholders would at least have transparency into their sales. Outside investors might ask why they should keep their capital in the company while one of its leaders cashed out. Similarly, employee shareholders might have questions about why they should continue to work for the company if their leadership's revealed preference indicated the company was a bad investment.⁴⁵⁰

The unanimity exception to the MFN clause would protect businesses that preferred concentrated ownership, especially smaller businesses. The owners could meet, discuss any shareholder's proposed sale, and approve it. If any shareholder objected, the company would be forced to disapprove the proposed sale, change the company policy to let every shareholder sell, or agree by unanimous consent to let the objecting shareholder sell as well. The unanimity exception would work well if all owners were committed to concentrated ownership.

desirable). The empirical evidence on whether public company regulations promote short-term thinking is mixed, and, again, it would be difficult to disentangle how much of any observed effect is attributable to trading. See James J. Park, *Do the Securities Laws Promote Short-Termism?*, 10 U.C. IRVINE L. REV. 991, 1012–19 (2020).

448. The regulation may need to preempt state corporate law. See Macey & O'Hara, *supra* note 382, at 607 (explaining that state corporate law regulates contractual restraints on alienability).

449. See Smith, *supra* note 318, at 345–55 (discussing the special rights in a sample of documents from 367 venture-backed startups).

450. Cf. Abraham J.B. Cable, *Fool's Gold? Equity Compensation & the Mature Startup*, 11 VA. L. & BUS. REV. 613, 634–38 (2017) (expressing concern that employee shareholders' and founders' interests are misaligned in larger, late-stage startups).

For most unicorns, though, obtaining the consent of every shareholder would be difficult. The directors and managers would either need to agree that every shareholder was locked in or adopt a permissive policy towards trading. The combination of the MFN clause and the liberalization of secondary markets would lead most unicorns to make their shares tradable. That in turn would create a market for information about unicorn misconduct.

C. Limited Disclosure Mandate

Private companies that elect to allow their shares to be traded would also be required to make certain limited public disclosures. Specifically, they would need to disclose the information that private companies must make available for resales of restricted securities under section 4(a)(7).⁴⁵¹ That information includes, among other things: “[a] statement of the nature of the business of the issuer and the products and services it offers,” “[t]he names of the officers and directors of the issuer,” and “[t]he issuer's most recent balance sheet and profit and loss statement and similar financial statements.”⁴⁵² The financial statements must cover the two “preceding fiscal years as the issuer has been in operation” and “be prepared in accordance with generally accepted accounting principles.”⁴⁵³

The disclosure mandate would ensure that investors could identify the company and understand its basic financial condition—a long-standing concern with existing secondary markets.⁴⁵⁴ It would also enable investors to start their own research on the company’s product, market, and personnel. But the burden of complying with these disclosures would not be nearly as demanding as complying with Exchange Act reporting regulations. For example, under the limited disclosure mandate, companies would only need to provide financial statements annually, not quarterly.

The proposal reflects a similar thinking to the JOBS Act’s IPO On-Ramp.⁴⁵⁵ Private companies participating in the new secondary markets would face greater disclosure obligations than private companies without tradable shares, but not as demanding as those for public companies. Of course, companies would be permitted to make more extensive disclosures, and investors in the secondary market might reward them for it with higher share prices.

Some scholars have argued that all large private companies should be subject to minimal disclosure requirements.⁴⁵⁶ Recent reporting suggests that the SEC may be

451. See 17 C.F.R. § 230.144(c) (2020). For private companies, the current public information requirement does not apply to resales by nonaffiliates. See *id.* § 230.144(b)(1)(ii).

452. 15 U.S.C. § 77d(d)(3)(G)-(H), (J).

453. *Id.* § 77d(d)(3)(J)(i)-(ii).

454. Pollman, *supra* note 84, at 207–11 (explaining how little information noninsider secondary market investors can find about private companies).

455. See *supra* Section I.A.

456. See Fan, *supra* note 23, at 609 (proposing that the mandate would apply to unicorns); Guttentag, *supra* note 36, at 208–11 (proposing that the mandate would apply to companies with over \$35 million in market capitalization and over 100 beneficial owners *unless* they restrict the tradability of their shares or comply with an alternative disclosure regime); Lipton, *supra* note 36, at 563 (proposing that the mandate would vary based “on size, taking into account gross receipts, number of employees, asset values, or some combination of the three”

listening to them.⁴⁵⁷ The conventional rationale for mandating disclosures is investor protection. These scholars argue, however, that a company's disclosures also provide useful information to noninvestor stakeholders—competitors, suppliers, workers, and the communities in which it operates.⁴⁵⁸ The rise of unicorns—large, socially significant private companies—has strengthened that argument.⁴⁵⁹

Mandating limited disclosures for private companies that allow trading would go part of the way to these scholars' goal of universal disclosure by large private companies. Liberalized secondary markets and a regulatory MFN clause would likely push most large private companies to allow trading and accept the limited disclosure mandate. Companies that elected not to allow trading would likely be smaller businesses.

Disclosures alone would deter some kinds of misconduct, especially self-dealing. Consider the SoftBank-backed unicorn The We Company, better known as WeWork. WeWork paid founder Adam Neumann approximately \$5.9 million in stock for the trademark to its distinctive use of the pronoun “We.”⁴⁶⁰ When WeWork filed the registration statement for its later-aborted IPO, it was required to disclose the transaction.⁴⁶¹ Once the deal was revealed, WeWork was widely criticized in the press, and Neumann reluctantly agreed to return the shares.⁴⁶² As Felix Frankfurter once wrote, “There is a shrinking quality to such transactions; to force knowledge of them into the open is largely to restrain their happening.”⁴⁶³

It is hard to feel too much sympathy for SoftBank or WeWork's VC investors, who were undoubtedly aware of the transaction and should have realized that it was inappropriate. But disclosure would also have protected WeWork's rank-and-file

(footnote omitted).

457. See Kiernan, *supra* note 37.

458. See Lipton, *supra* note 36, at 511–19 (describing the value of disclosure for noninvestor audiences). Some of Lipton's arguments relate to misconduct. See, e.g., *id.* at 517 (arguing that disclosures would help regulators trying to determine if a company in their jurisdiction is compliant). Others address broader distributional concerns. See, e.g., *id.* at 511–12 (arguing that disclosures would help employees or consumers who can use knowledge of a company's margin to drive a harder bargain).

459. See Jones, *supra* note 36, at 179 (“Because Unicorns are free from public disclosure requirements, they can engage in questionable activities with less fear of exposure . . .”); Lipton, *supra* note 36, at 522–23 (emphasis in original) (“[T]he secrecy afforded by private status, coupled with the sizes to which [late-stage startups] can grow, makes problems more likely to develop and less likely to be addressed, which magnifies the harms they can cause.”).

460. See Eric Platt, *WeWork's Adam Neumann Returns Controversial \$5.9m Payment*, FIN. TIMES (Sept. 4, 2019), <https://www.ft.com/content/d6cb7a44-cf07-11e9-b018-ca4456540ea6> [<https://perma.cc/BU2M-UT9Q>].

461. The We Co., Registration Statement (Form S-1) 199 (Aug. 14, 2019), https://www.sec.gov/Archives/edgar/data/1533523/000119312519220499/d781982ds1.htm#toc781982_10 [<https://perma.cc/N46W-8XB2>] (“[T]he Company issued to WE Holdings LLC partnership interests in the We Company Partnership with a fair market value of approximately \$5.9 million . . .”); *id.* at 192 (stating that Adam Neumann “serves as a managing member” of WE Holdings LLC).

462. See Platt, *supra* note 460.

463. Felix Frankfurter, *The Federal Securities Act: II*, FORTUNE, Aug. 1933, at 53, 55.

employee shareholders, who might not have been aware of the deal.⁴⁶⁴ To be sure, WeWork had to disclose the deal as a related-party transaction.⁴⁶⁵ But even if it had been required only to release a balance sheet, it would have been hard to hide the \$5.9 million expense.

Greater disclosure might also deter other kinds of misconduct, especially by shining light on how startups use financial metrics that do not comply with GAAP.⁴⁶⁶ Ackman's analysis of Herbalife's financial statements is what showed that Herbalife was making money from its distributors, not from selling its product.⁴⁶⁷ Wells Fargo's seemingly impressive cross-selling numbers were inextricably linked to its practice of opening accounts without its customers' consent.⁴⁶⁸ Disclosure requirements that reveal accounting fraud can illuminate other misconduct.

But disclosures alone will not always deter misconduct.⁴⁶⁹ Disclosures *combined* with trading deter misconduct. Disclosures alone would not create opportunities for short sellers. Disclosures would likely not attract the scrutiny of many analysts or financial journalists, who have the skills to catch the subtle analytical sleights of hand in financial statements. The opportunity to profit from trading Wirecard's stock created the professional incentives to dig into Wirecard's complex transactions in Asia.⁴⁷⁰ The absence of short sellers, analysts, and financial journalists in a disclosure-only system would also make it harder for employee whistleblowers—who have the information to prove that financial statements are false—to amplify their message. Secrist would not have gotten the word out as quickly without Dirks.

CONCLUSION

Securities regulation reflects the philosophy that sophisticated investors should fend for themselves. If unicorn misconduct only affected VCs or other sophisticated investors, the appropriate reaction might be to tell those investors: *caveat emptor*. But the misconduct at Theranos, Uber, and Juul harmed third parties irreversibly. Neither tort liability nor substantive regulation provided adequate deterrence. If those companies' securities had been widely traded, information about misconduct would likely have been revealed earlier, and some of the harm would have been avoided. Hundreds of millions of dollars of scarce capital would not have been allocated to fraudulent companies or illicit markets.

There is a large and growing group of companies that may not yet be ready for the discipline of quarterly earnings calls but have the power to commit misconduct at scale. The securities laws do not have a regulatory category that fits them.

464. See Cable, *supra* note 436, at 635–39 (offering reasons to doubt that employee shareholders' interests are adequately protected in late-stage startups).

465. See Regulation S-K, 17 C.F.R. § 229.404(a) (2020).

466. See Demos, Ovide & Pulliam, *supra* note 275 and accompanying text.

467. See *supra* Section II.A.

468. See *supra* Section II.B and accompanying notes.

469. Private companies would, however, be exposed to liability for these disclosures. The workhorses of securities fraud litigation, section 10(b) of the Exchange Act and Rule 10b-5, apply to private company securities. See Winship, *supra* note 311, at 680–81.

470. In fact, one of the first analysts to expose Wirecard specialized in advising short sellers. See Alderman & Schuetze, *supra* note 257.

Regulation should adapt now that unicorns are multiplying, and we know they are not all harmless. Unicorns should not be killed, but they should be tamed.