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Uncovering Elon's Data Empire

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UNCOVERING ELON'S DATA EMPIRE

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** © 2024, All Rights Reserved. Associate Professor of Law and 2023–2024 Storey Distinguished Faculty Fellow, Southern Methodist University Dedman School of Law; Faculty Fellow, Hunt Institute for Engineering and Humanity, Southern Methodist University Lyle School of Engineering; Faculty, Institute for Cryptocurrency and Contracts (IC3); Affiliated Faculty, Indiana University Bloomington Ostrom Workshop Program on Cybersecurity and Internet Governance; Research Associate, University College London Center for Blockchain Technology. The authors extend deep gratitude to each of the participants in the *Stetson Law Review* Symposium, and specifically to Professor Joan Heminway for initially organizing the discussion that led to this fantastic opportunity. We also extend our thanks to the *Stetson Law Review* editors for their excellent work on this Article and the entire volume. Finally, we note our joy at being able to return to the place that gave us our first entry into legal academia as Visiting Assistant Professors, and to the many members of the Stetson Law faculty who have mentored us and befriended us over the years.

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INTRODUCTION

What do the following have in common? A business that designs, develops, manufactures, and sells fully electronic vehicles—some with self-driving capability.¹ A venture that manufactures and markets energy generation and storage systems.² A corporation that manufactures and launches spacecraft and operates a satellite communications network.³ A developer of brain-computer interfaces.⁴ A residential solar panel production and installation company.⁵ A producer of automated manufacturing systems.⁶ The developer of a generative chatbot.⁷ Stumped? What if the corporate names are revealed: Tesla, SpaceX, Neuralink, Tesla Energy, Maxwell Technologies, Grohmann Engineering, Perbix Machine Co., Hibar Systems, and OpenAI? The obvious answer now is that Elon Musk is or was involved in each of these companies. But the commonalities run deeper than that.

Indeed, two commonalities pervade that list of corporations: (1) Elon Musk owns or has owned directly, or through a corporation he controls, or is a former founder of each of them, and (2) each business relies heavily on the acquisition and computation of incredibly large datasets. Musk does not own just any corporate empire; he owns a corporate *data* empire. For a long time, the fact that Musk's business empire focused on data flew under the radar—until Musk's sloppy acquisition of Twitter, that is.

1. *Tesla Profile*, FORBES, <https://www.forbes.com/companies/tesla/?sh=6c5cc1b248d4> (last visited Oct. 3, 2023).

2. MAXWELL TECHS., <https://maxwell.com/> (last visited Oct. 3, 2023).

3. Eric Mack, *SpaceX Simplified: Everything You Need to Know About Elon Musk's Rocket Empire*, CNET (Jan. 11, 2021, 6:08 PM), <https://www.cnet.com/science/spacex-simplified-everything-you-need-to-know-about-elon-musks-rocket-empire/>.

4. Isobel Asher Hamilton, *The Story of Neuralink: Elon Musk's AI Brain-Chip Company Where He Had Twins with a Top Executive*, INSIDER (Dec. 3, 2022, 9:05 AM), <https://www.businessinsider.com/neuralink-elon-musk-microchips-brains-ai-2021-2>.

5. Lora Kolodny & Jeniece Pettitt, *Why Tesla's Solar Business Has Not Yet Taken Off as Elon Musk Promised*, CNBC (Oct. 6, 2021, 8:30 AM), <https://www.cnbc.com/2021/10/06/why-teslas-solar-business-has-not-yet-taken-off-as-elon-musk-promised.html>.

6. Emma Jarratt, *Tesla Acquires Canadian Battery Specialist, Hibar Systems*, ELEC. AUTONOMY CAN. (Oct. 4, 2019), <https://electricautonomy.ca/2019/10/04/tesla-acquires-canadian-battery-specialist-hibar-systems/>; *Accelerating a Sustainable Energy Future*, TESLA, <https://www.tesla.com/perbix> (last visited Oct. 5, 2023).

7. Ryan Browne, *Elon Musk, Who Co-founded Firm Behind ChatGPT, Warns A.I. Is 'One of The Biggest Risks' to Civilization*, CNBC (Mar. 6, 2023, 7:40 AM), <https://www.cnbc.com/2023/02/15/elon-musk-co-founder-of-chatgpt-creator-openai-warns-of-ai-society-risk.html>.

In 2022, Elon Musk publicly announced that he would purchase Twitter after acquiring a nine percent stake in the company.⁸ His failure to report this acquisition—and the company’s failure to notice—allowed Musk to continue purchasing stock at a deflated price, costing the company more than \$156 million.⁹ After the signing of a merger agreement, the details of the transaction caused wild fluctuations in Tesla’s stock price.¹⁰ Musk’s complaints about the management of Twitter and the existence of bots on the platform led Twitter’s stock to also drop in value, as did Musk’s attempts to withdraw from the transaction.¹¹

To many observers at the time, Musk’s obsession with bots on Twitter made little sense. This Article argues that, when viewed through a data lens, Musk’s obsession with Twitter bots reflected his broader corporate data strategy. Indeed, this Article argues that all of Musk’s business empire should be examined through a data lens, and that doing so reveals a potential alternative motive for Musk’s acquisition of Twitter, one that exposes key gaps in federal laws designed to protect investors and consumers from the negative externalities of certain corporate behaviors.¹² Specifically, federal law is not well equipped to account for the negative externalities of data-driven mergers, where a purchase of a company is not undertaken primarily to operate the business in question, but rather to gain access to the data and data exhaust generated by the target company to share that data with a broader

8. *Elon Musk to Acquire Twitter*, NASDAQ (Apr. 25, 2022, 2:50 PM), <https://www.nasdaq.com/press-release/elon-musk-to-acquire-twitter-2022-04-25>.

9. See Ben Gilbert, *Elon Musk Made an Extra \$156 Million from his Twitter Investment by Failing to Disclose his Stake Earlier*, YAHOO FIN. (Apr. 7, 2022), <https://finance.yahoo.com/news/elon-musk-made-extra-156-153424935.html>.

10. Faiz Siddiqui, *Tesla’s Value Dropped Tuesday by more than Double the Cost of Twitter*, WASH. POST (Apr. 26, 2022, 6:11 PM), <https://www.washingtonpost.com/technology/2022/04/26/elon-musk-tesla-twitter-stock/>.

11. Russell Brandom, *Twitter Shares Plummet as Musk Raises New Doubts About Acquisition*, THE VERGE (May 13, 2022, 9:55 AM), <https://www.theverge.com/2022/5/13/23070422/musk-twitter-buyout-acquisition-analysts-stock-drop>.

12. Notably, because Musk’s business ventures are not linked in a way that traditional antitrust law normally accounts for, Musk’s acquisition of Twitter has not previously been readily identified as a data-driven merger. In this way, in addition to its contributions to the corporate governance literature which has not previously considered data-mergers in any depth, this Article also contributes to the antitrust discussion by introducing a new model for analysis—the corporate data family—a group of data-driven companies loosely and horizontally affiliated with one another who seek to use corporate structuring to remain out of the reach of antitrust law. We plan to further explore the impact of corporate data families on the antitrust regime in future work.

portfolio of entities.¹³ Notably, a merger or acquisition can be a data-driven merger or acquisition even when the target company will not become vertically integrated with other companies in the portfolio.

This Article seeks to start a broader discussion around the role of data and data value in corporate mergers and acquisitions. In particular, the Article outlines an initial argument that policymakers should rely less on federal securities laws to ensure market and investor protection in the context of data-driven mergers and acquisitions. Instead, this Article argues that state law related to corporate governance is better equipped to mitigate the negative externalities of data-driven mergers and acquisitions. Part I examines the Twitter-Musk saga through a data lens, uncovering and examining the data linkages between the companies in Musk's emerging technology portfolio. Part II uncovers the gaps in federal securities regulation that reduce federal law's effectiveness in mitigating the harms that can result, like those resulting from Musk's acquisition of Twitter, from data-driven mergers and acquisitions. Part III argues that state law can better cabin data-driven mergers and acquisitions and possesses a greater capacity for limiting resulting harms. The Article concludes by highlighting important implications of the emergence of data-driven mergers and acquisitions for corporate law.

I. EXAMINING THE TWITTER-MUSK SAGA THROUGH A DATA LENS

This Part explores the details of the Twitter-Musk transaction in some depth. In the wake of the transaction and its related litigation, a variety of legal scholars wrote commentary about the high profile, rather odd, corporate acquisition.¹⁴ Many examine the

13. Data exhaust is the data generated as a byproduct of online activities. SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* 67–69 (2019). Data exhaust is generated passively as users interact with digital technologies and platforms. *Id.* For a review of the existing literature on data-driven mergers, generally found in antitrust scholarship, see *infra* notes 43–45 and accompanying text.

14. See, e.g., Christine Hurt, *Socially Acceptable Securities Fraud* J. CORP. L. (forthcoming); Rupert Macey-Dare, *Elon's Unhappy Twitter Meal – Big MAC Spam with Reduced mDAU* (Aug. 19, 2022) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4192705; Rupert Macey-Dare, *Elon's Happier Twitter Meal Deal – Swallowing the Big Acquisition* (Oct. 5, 2022) (unpublished manuscript) (available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4238958).

implication of Twitter's suit for the doctrine of specific performance.¹⁵ Others consider what the Twitter-Musk deal and its related litigation say about how corporate law and its doctrine impact stakeholders and society.¹⁶ We take a different approach. We argue that the federal legal regime designed to maintain stable capital markets features a variety of regulatory gaps, which were compounded and revealed by the Twitter-Musk transaction because of the data-intensive nature of Musk's business activities. To begin advancing that argument, this Part first presents the core timeline of events in the Twitter-Musk transaction, and then uncovers a deeper story by examining those events through a data lens.

A. A Brief History of the Twitter-Musk Ordeal

Elon Musk quietly began buying Twitter shares in January 2022, amassing over nine percent ownership of Twitter by March 2022.¹⁷ These purchases cost Musk around \$2.6 billion.¹⁸ In April, Musk filed a disclosure statement with the SEC regarding these purchases, indicating that he intended to remain a passive investor in Twitter.¹⁹ By April 14, Musk offered to buy all of Twitter's stock for \$54.20 per share.²⁰ Viewing the offer warily, the Twitter board adopted a plan (a "poison pill") that would sell new,

15. See, e.g., Robert Anderson, Limited Specific Performance in the Musk-Twitter Case and Beyond (Sept. 22, 2022) (unpublished manuscript) (available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4222557); Carliss Chatman, *Twitter Wants to Force Musk to Buy It. But There's a Hitch*, BARRON'S (July 30, 2022), <https://www.barrons.com/articles/twitter-elon-musk-thirteenth-amendment-51659101363>; Michael Bobelian, *Twitter Has a Far Stronger Case as It Heads into Trial Against Elon Musk*, FORBES (July 27, 2022, 9:31 AM), <https://www.forbes.com/sites/michaelbobelian/2022/07/27/twitter-has-a-far-stronger-case-as-it-heads-into-trial-against-elon-musk/?sh=115e066e4cf9>.

16. See, e.g., Ann M. Lipton, Every Billionaire is a Policy Failure (July 16, 2023) (unpublished manuscript) (available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4442029); Lucian A. Bebchuk, Kobi Kastiel & Anna Toniolo, *How Twitter Pushed Stakeholders Under the Bus*, 28 STAN. J.L. BUS. & FIN. 307 (2023).

17. Bebchuk et al., *supra* note 16, at 311.

18. Elon R. Musk, Schedule 13D (Apr. 4, 2022), https://www.sec.gov/Archives/edgar/data/1418091/000110465922042863/tm2211757d1_sc13d.htm.

19. Lipton, *supra* note 16, at 12 (citing Twitter, Inc., Schedule 14A (filed July 26, 2022)) (also alleging the disclosure was inaccurate because Musk began talks with Twitter leadership about buying Twitter as early as March 2022, before his April 2022 disclosure claimed he would remain a passive investor).

20. Elon R. Musk, Amendment No. 2 to Schedule 13D (Apr. 13, 2022), https://www.sec.gov/Archives/edgar/data/1418091/000110465922045641/tm2212748d1_sc13da.htm.

low-priced stock to public shareholders if Musk grew his ownership by another six percent.²¹ In response, Musk produced a financing agreement as proof of the seriousness of his offer.²² Ultimately, Twitter and Musk signed a merger agreement on April 25, 2022, at the \$54.20 share price.²³

After the signing and public announcement of the deal, the stock prices of a variety of technology companies took a hit.²⁴ Musk's personal wealth, which is inexorably linked to the stock market through his Tesla shares, also took a steep nosedive.²⁵ Musk would later attempt to exit the deal.²⁶ Many commentators believe Musk's attempts to exit were driven by the decline in stock market conditions, which both dealt him big personal losses and made his originally moderate offer of \$54.20 a share seem suddenly expensive.²⁷ But on May 13, 2022, the public facing reason Musk gave for attempting to retract his offer to purchase Twitter focused on what he alleged amounted to Twitter's misleading disclosures related to the number of bots present on the platform.²⁸ Specifically, Musk demanded confirmation that, as Twitter claimed in public filings, ninety-five percent of Twitter's monetizable daily active user ("mDAU") accounts are real, and only five percent or less are bot accounts.²⁹ Many commentators believe this sudden emphasis on Twitter bots to be a very odd, somewhat flamboyant, and fairly ridiculous excuse to get out of the deal when Musk realized he just couldn't afford it anymore.³⁰

21. Lipton, *supra* note 16, at 14. Some commentators view the poison pill plan as an appropriate response, *see id.*, while others question the Twitter Board's authority to adopt the plan at all. *See* Jeffrey Gordon, *The Twitter Board Bears Personal Responsibility for a Bad Outcome in the Twitter Sale*, CLS BLUE SKY BLOG (May 5, 2022), <https://clsbluesky.law.columbia.edu/2022/05/05/the-twitter-board-bears-personal-responsibility-for-a-bad-outcome-in-the-twitter-sale/>.

22. Lipton, *supra* note 16, at 14.

23. *Id.* at 16.

24. Bebhuk et al., *supra* note 16, at 312.

25. Siddiqui, *supra* note 10.

26. Jack Holmes, *Elon Musk Wanted to Buy Twitter. Or Did He?*, ESQUIRE (July 27, 2022), <https://www.esquire.com/news-politics/a40709381/elon-musk-buy-twitter/>.

27. Bebhuk et al., *supra* note 16, at 312; Lipton, *supra* note 16, at 16–17, 26.

28. Caleb Ecarma, *So What's Actually Up With Elon Musk and These Twitter Bots?*, VANITY FAIR (May 18, 2022), <https://www.vanityfair.com/news/2022/05/elon-musk-twitter-bots>.

29. *Id.*; Elizabeth Lopatto, *There's a Wonky Number at the Core of Elon Musk's Case Against Twitter*, THE VERGE (Aug. 24, 2022, 3:05 PM), <https://www.theverge.com/2022/8/24/23320461/twitter-mdau-mudge-zatko-elon-musk-discovery>.

30. Lipton, *supra* note 16, at 21, 22, 26; Ecarma, *supra* note 28.

Musk's lawyers sent at least five letters to Twitter requesting "the data and information necessary to 'make an independent assessment of the prevalence of fake or spam accounts on Twitter's platform'" as part of the due diligence process.³¹ Musk insisted that the requested information "is fundamental to Twitter's business and financial performance."³² Twitter gave Musk access to some information, including capped access to its Application Programming Interfaces ("APIs") in response to Musk's demands, but Musk asserted that such production of information failed to adequately fulfill Twitter's disclosure obligations as part of the diligence process for the deal.³³ Indeed, Musk viewed Twitter's failure to produce sufficient information to allow an independent assessment of Twitter's mDAU to be a breach of Sections 6.4 and 6.11 of the merger agreement.³⁴ On July 8, 2022, Musk sent a letter to Twitter purporting to exercise his right to terminate the merger agreement.³⁵ On July 12, Twitter sued Musk, seeking to enforce the specific performance clause it negotiated into the merger agreement.³⁶ Ultimately, just before trial, Musk agreed to perform the contract, and the deal closed on October 27, 2022.³⁷

B. Applying a Data Lens to the Twitter-Musk Saga

Most view Musk's obsession with Twitter bots as strange, immaterial, or worse.³⁸ Some of the most generous commentary offered the following explanation: because of Twitter's dependence on advertising revenue, a large number of fake accounts could cause advertisers to spend less and cause a bad user experience that causes real users to leave the platform.³⁹ Even still, such commentary views Musk's complaints about Twitter bots as

31. Letter from Mike Ringler of Skadden, Arps, Slate, Meagher & Flom LLP to Twitter, Inc., Terminating Agreement (July 8, 2022), https://www.sec.gov/Archives/edgar/data/1418091/000110465922078413/tm2220599d1_ex99-p.htm.

32. *Id.*

33. *Id.*

34. *Id.*

35. *Id.*

36. Verified Complaint, Twitter, Inc. v. Elon R. Musk, X Holdings I, Inc., No. 2022-0613, 2022 WL 2713259 (Del. Ch. July 12, 2022).

37. Bebhuk et al., *supra* note 16, at 312.

38. *See, e.g.*, Lipton, *supra* note 16, at 18; Lopatto, *supra* note 29; Peter Weber, *Why Is Elon Musk so Obsessed with Twitter's Bot Accounts?*, THE WEEK (June 13, 2022), <https://theweek.com/elon-musk/1014191/elon-musk-vs-twitter-bots>.

39. Lipton, *supra* note 16, at 18.

“superficial.”⁴⁰ But what if Musk’s obsession with bots was neither superficial nor primarily related to advertising revenue? Viewing the Twitter-Musk saga through a data lens reveals a different narrative altogether, one that could reveal major gaps in the federal regimes we expect to protect shareholders and markets.

Scholars have applied a data lens to various aspects of capital markets and corporate law for nearly two decades. For example, the flash crash of 2010 first highlighted the role of data and digital capital market manipulation.⁴¹ Later, identification and discussion of the surveillance economy and information capitalism emerged.⁴² More recently, emerging discussions around the economic value of social media data have deepened our understanding of the importance of data in driving corporate value.⁴³ Some have considered the role of data-related collusion in the broader market context.⁴⁴ Indeed, some scholars have investigated the role of “data-driven mergers”—in which major conglomerates acquire data-heavy target companies for the primary purpose of acquiring data—in avoiding antitrust regulation.⁴⁵ This, however, is the first

40. *See id.*

41. Tom C.W. Lin, *The New Market Manipulation*, 66 EMORY L.J. 1253, 1257–58 (2017) (explaining the article “aims to highlight the emerging ways that new financial technologies, electronic communications, and information systems can be leveraged to manipulate financial markets to unfairly privilege the few to the detriment of the many”).

42. *See, e.g.*, ZUBOFF, *supra* note 13; Shoshana Zuboff, *Big Other: Surveillance Capitalism and the Prospects of an Information Civilization*, 30 J. INFO. TECH. 75 (2015).

43. *See, e.g.*, Amanda Parsons & Salome Viljoen, *Valuing Social Data* (July 17, 2023) (unpublished manuscript) (available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4513235).

44. *See, e.g.*, Anca Daniela Chirita, *Data-Driven Unfair Competition in Digital Markets*, 29 B.U. J. SCI. & TECH. L. (forthcoming 2023); Viktoria H.S.E. Robertson, *Antitrust Law and Digital Markets: A Guide to the European Competition Law Experience in the Digital Economy*, in THE ROUTLEDGE HANDBOOK OF SMART TECHS.: AN ECON. AND SOC. PERSP. 432 (2022); Thibault Schrepel, *Computational Antitrust: An Introduction and Research Agenda*, 1 STAN. COMPUTATIONAL ANTITRUST 1, 5 (2021); Katharine Kemp, *Concealed Data Practices and Competition Law: Why Privacy Matters*, EUROPEAN COMPETITION J. 628 (2020); Allen P. Grunes & Maurice E. Stucke, *No Mistake About It: The Important Role of Antitrust in the Era of Big Data*, ANTITRUST SOURCE, Apr. 2015, at 1.

45. MAURICE E. STUCKE & ALLEN P. GRUNES, *BIG DATA AND COMPETITION POLICY* (2016) (considering data-driven mergers and the challenges preventing antitrust law from adequately mitigating harm); Andressa Lin Fidelis, *Data-Driven Mergers: A Call For Further Integration of Dynamic Effects Into Competition Analysis*, 23 REVISTA DO IBRAC 123 (2017) (arguing that law needs to define a market for data to help address competition law’s challenges in adequately addressing antitrust concerns); Orla Lynskey, *A Legal Response to Data-Driven Mergers*, in BEING PROFILED 78 (Emre Bayamlioglu et al., eds., 2018); Anca D. Chirita, *Data-Driven Mergers Under EU Competition Law*, in THE FUTURE OF COMMERCIAL LAW: WAYS FORWARD FOR HARMONISATION 147 (J. Linarelli & O. Askeli, eds., 2019) (arguing for the application of the public policy exception when privacy interests

Article to consider the corporate governance implications of data-driven mergers, using Musk's acquisition of Twitter and the related drama as a case study. This Article argues that to properly account for market harms of data-driven mergers beyond antitrust concerns requires applying a data lens to transactions, even when the transaction does not initially appear to be a data-driven merger. For example, to date, scholars have almost exclusively considered mergers that vertically integrate a target into the acquiring company: Facebook's acquisition of WhatsApp, Google's acquisition of Waze, Microsoft's acquisition of LinkedIn, and Google's acquisition of Fitbit.⁴⁶ When a big technology company purchases a smaller data-heavy firm, the data purpose is more readily apparent. This Article argues that such acquisitions only represent a small fraction of data-driven mergers and that many of the corporate governance impacts of other such mergers go unnoticed and unresolved. To address this gap, the Article further argues that fully accounting for the market impact of mergers and acquisitions will increasingly require viewing those transactions and the players involved through a data lens.

Capturing the full range of data-driven mergers requires applying a data lens to any transaction and related dispute using three steps. First, accept that, increasingly, a company's capacity to harvest data forms a core element of a company's valuation.⁴⁷ Second, given this reality, consider the data elements and data purposes of companies that provide high technology goods or services. Importantly, this analysis must be performed whether the acquisition makes a target company a part of the corporate family vertically, or merely connects the target company horizontally to other companies in a corporate family.⁴⁸ Third, consider the extent to which those companies reserve for themselves the capacity to use and sell harvested data in downstream commerce, other data-driven products and services,

in data are at stake in a data-driven merger); Roberto Augusto Castellanos Pfeiffer, *Digital Economy, Big Data and Competition Law*, 3 MKT. & COMP. L. REV. 53 (2019) (examining whether competition law should play a role in data-driven markets where privacy matters).

46. Parsons & Viljoen, *supra* note 43, at 41.

47. Sebastian Benthall & Salome Viljoen, *Data Market Discipline: From Financial Regulation to Data Governance*, 8 J. INT'L & COMPAR. L. 459, 463 (2021).

48. Carliss N. Chatman, *Corporate Family Matters*, 12 U.C. IRVINE L. REV. 1, 7 (2021) (defining a corporate family as "an enterprise formed by weaving corporations, partnerships, and limited liability companies (LLCs) together into a mix of public and private entities acting together for the benefit of a parent corporation or the personal gain of one or more leaders of the enterprise").

or horizontally with other affiliated entities. Analyzing corporate behavior in this way may reveal insights that are not readily apparent through antitrust analysis or by simply applying other, more traditional corporate governance narratives.

This Article seeks to apply this type of data-centered analysis to the Musk acquisition of Twitter as an illustration of what a corporate data acquisition looks like. To get at the heart of the value of Twitter's data, we must first understand spam bots and their role on Twitter. The term "bots" is referred to in the social media industry interchangeably with the terms "spam" and "fake accounts."⁴⁹ Each of those terms refers to inauthentic accounts—whether automated (bots) or operated by people pretending to be someone they are not (fake accounts).⁵⁰ In a whistleblower disclosure, Twitter's former chief of security alleged that Twitter had more spam bots on the platform than it had admitted.⁵¹ Viewing this through a corporate law lens, the full number of bots on the platform may not have had any bearing on the merger agreement.⁵² As Professor Anne Lipton points out, Twitter used a metric called "mDAU" or "monetizable daily active users" to report the size of its user base.⁵³ When Twitter says anything about spam bots publicly, it does so with reference to the mDAU metric, saying spam bots account for roughly five percent of mDAU.⁵⁴ If the question is how many total bots and fake accounts exist on Twitter, discussing spam bots as part of the mDAU metric is less useful. It is possible for the total number of fake accounts on Twitter to be higher than five percent while also simultaneously possible for the number of spam accounts counted in the mDAU number to be less than five percent.⁵⁵ Indeed, the whistleblower report points this out, arguing that mDAU is the wrong metric for assessing the true

49. Sheera Frenkel, *What Are Spam Bots and Why They're an Issue in Elon Musk's Twitter Deal*, N.Y. TIMES (July 11, 2022), <https://www.nytimes.com/2022/07/09/technology/elon-musk-twitter-spam-bots.html>.

50. Chavi Mehta & Nivedita Balu, *Explainer: What Are These Spam Bots That Musk Has Vowed to Defeat or Die Trying?*, REUTERS (May 13, 2022, 2:09 PM), <https://www.reuters.com/technology/what-are-these-spam-bots-that-musk-has-vowed-defeat-or-die-trying-2022-05-13/>.

51. Nik Popli, *What the Twitter Whistleblower Disclosure Means for Elon Musk*, TIME MAG. (Aug. 23, 2022, 6:22 PM), <https://time.com/6207992/twitter-bots-elon-musk/>.

52. Lipton, *supra* note 16; Popli, *supra* note 51.

53. Lipton, *supra* note 16.

54. Popli, *supra* note 51.

55. Andrew R. Chow, Vera Bergengruen & Billy Perrigo, *'Egregious Deficiencies,' Bots, and Foreign Agents: The Biggest Allegations from the Twitter Whistleblower*, TIME MAG. (Aug. 23, 2022, 8:26 AM), <https://time.com/6207996/twitter-whistleblower-allegations/>.

number of spam bots on Twitter.⁵⁶ But at the heart of Musk's legal argument with regard to the contract he signed with Twitter is the mDAU metric and whether Musk was misled as to that metric.⁵⁷ As a result, Lipton and others argue that the total number of bots on the platform was of little relevance to the transaction and the question of whether it should be completed.⁵⁸ Viewing the transaction through a data lens, however, suggests that the corporate law focus on the contract's definition of mDAU may be missing another important element of the deal.

It is clear from the Musk-Twitter saga that data is part of how Twitter is valued, whether looking at the mDAU metric or the total number of bots. But to get at why the total number of bots might matter to the market—and to Musk—requires looking beyond advertising revenue to a more holistic understanding of the data's value.⁵⁹ To do so requires a deeper understanding of the role data plays in the business of the acquirer. Thus, having accepted that the data Twitter produces may be of value to an acquirer and impact Twitter's valuation, a data-centric approach to evaluating the Musk-Twitter deal continues with an analysis of the role that data plays in each of Musk's current ventures. Musk is well known for his role in Tesla, which promises self-driving cars.⁶⁰ Indeed, Musk himself views Tesla as an AI play,⁶¹ and has discussed the potential role for Tesla in creating Artificial General Intelligence.⁶² SpaceX may design, build, and launch reusable rockets and spacecraft,⁶³ but SpaceX is preeminently a data analytics and AI-fueled company with its own deployment of data-gathering satellites.⁶⁴ Neuralink builds brain-computer interfaces ("BCIs"),⁶⁵

56. *Id.*

57. Lipton, *supra* note 16.

58. Lipton, *supra* note 16; Popli, *supra* note 51.

59. Parsons & Viljoen, *supra* note 43.

60. *Elon Musk*, TESLA, <https://www.tesla.com/elon-musk> (last visited Dec. 29, 2023).

61. Rebecca Elliott, *Elon Musk Doubles Down on Artificial Intelligence at Tesla Amid Scrutiny of Autopilot*, WALL ST. J. (Aug. 20, 2021, 12:06 AM), <https://www.wsj.com/articles/tesla-ai-day-2021-11629408749>.

62. Fred Lambert, *Elon Musk: Tesla Could Play a Role in Artificial General Intelligence, Decentralize Tesla Bot to Avoid Terminator Scenario*, ELECTREK (Jan. 19, 2022, 5:20 AM), <https://electrek.co/2022/01/19/elon-musk-tesla-artificial-general-intelligence-decentralize-tesla-bot-avoid-terminator-scenario/>.

63. *Mission*, SPACEX, <https://www.spacex.com/mission/> (last visited Dec. 29, 2023).

64. Elizabeth Mixson, *SpaceX: The Next Frontier of Space Data and Analytics*, AI DATA & ANALYTICS NETWORK (May 11, 2021), <https://www.aidataanalytics.network/data-science-ai/articles/spacex-the-next-frontier-of-space-data-and-analytics>.

65. Homepage, NEURALINK, <https://neuralink.com/> (last visited Dec. 29, 2023).

and commentators expect that BCIs will increasingly merge with AI to improve complexity, efficiency, and accuracy.⁶⁶ Tesla Energy Operations, Inc. builds and sells solar power systems,⁶⁷ and when such systems are used by consumers they generate useful data similar to that mined by other utility companies.⁶⁸ The Boring Company builds freight tunnels, and although freight tunnels might seem far from high tech AI products, the company has ambitions for building a Hyperloop—"an ultra-high-speed public transportation system in which passengers travel in autonomous electric pods at 600+ miles per hour."⁶⁹ Autonomous pods, like all AI-based applications, can only run autonomously if they have sufficient data. Grohmann Engineering, owned by Tesla, has been described as "the world leader in automated manufacturing."⁷⁰ Even without considering the last three companies on the list of Musk's major ventures,⁷¹ it remains quite clear that each company relies on data-driven and/or AI-related products and services. Data-driven products and services improve as they amass more data. As a result, access to large quantities of data, however it is obtained, becomes an important element of business success and a core corporate governance concern.⁷²

Musk's objectively discernable interest in acquiring and managing data-intense companies as he built a data empire allows us to consider his acquisition of Twitter in a different light. With 500–700 million tweets per day, Twitter produces around twelve terabytes of data every twenty-four hours, including data about

66. Bernard Marr, *AI's Next Frontier: Are Brain-Computer Interfaces the Future of Communication?*, FORBES (Aug. 11, 2023, 2:00 AM), <https://www.forbes.com/sites/bernardmarr/2023/08/11/ais-next-frontier-are-brain-computer-interfaces-the-future-of-communication/?sh=44ea878d51d9>.

67. *Energy*, TESLA, <https://www.tesla.com/energy> (last visited Dec. 29, 2023).

68. Christophe Guille & Stephan Zech, *How Utilities Are Deploying Data Analytics Now*, BAIN & CO. (Aug. 30, 2016), <https://www.bain.com/insights/how-utilities-are-deploying-data-analytics-now/>.

69. *Our Projects*, THE BORING CO., <https://www.boringcompany.com/projects#lvcc> (last visited Dec. 29, 2023).

70. Edward Taylor, *Exclusive: Tesla's Klaus Grohmann Ousted After Clash with CEO Musk*, REUTERS (Apr. 27, 2017, 11:28 AM), <https://www.reuters.com/article/us-tesla-germany-exclusive-idUSKBN17T2IY>.

71. These companies include Perbix Machine Co. and Hibar Systems. Musk was also among the original co-founders of OpenAI, the developer of the Large Language Model ChatGPT that has taken public interest by storm.

72. We think there is a role for data governance as a core part of the fabric of corporate governance, an arena we plan to investigate in future work.

active users and anyone that views their tweets.⁷³ Twitter's co-founder Jack Dorsey referred to Twitter as "an information utility,"⁷⁴ and Twitter is thought to provide a data treasure trove for potential AI applications.⁷⁵ Although Twitter offers APIs for companies, users, and third-party developers, the APIs only allow access to public information on Twitter without certain additional permissions, and limit the total number of calls per hour.⁷⁶ Further, in order to use the APIs, registration with Twitter (and now X) is required.⁷⁷ Registration requires agreeing to the APIs' terms of service, which limits the rights of developers that use Twitter APIs and Twitter content to "a non-exclusive, royalty free, non-transferable, non-sublicensable, revocable license to solely:" (1) use Twitter APIs only to integrate Twitter content into the developer's services or conduct analysis "as explicitly approved by Twitter;" "copy a reasonable amount of and display" Twitter content on the developer's services; change the format of content for display on the developer's services; and use Twitter content to give attribution to Twitter.⁷⁸ In other words, a developer using the Twitter API can make only limited use of Twitter content. Notably, Twitter content is a defined term that represents a subset of the total data that Twitter users produce through their interaction with the platform.⁷⁹ This means developers using the API can only make limited use of a limited amount of Twitter data. Twitter also prohibits developers from redistributing Twitter content obtained via the API with others.⁸⁰ Under the Twitter Privacy Policy that existed at the time of the acquisition by Musk, the only way to

73. Arthur Herman, *Twitter, Data and Elon Musk*, FORBES (Oct. 5, 2022, 4:38 PM), <https://www.forbes.com/sites/arthurherman/2022/10/05/twitter-data-and-elon-musk/?sh=3755442a1553>.

74. Cornelius Puschmann & Jean Burgess, *The Politics of Twitter Data*, HIIG Discussion Paper Series No. 2013-01, 4 (Jan. 23, 2013) (unpublished manuscript) (available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2206225).

75. Herman, *supra* note 73.

76. *About X's APIs*, X HELP CTR., <https://help.twitter.com/en/rules-and-policies/twitter-api> (last visited Dec. 29, 2023).

77. Puschmann & Burgess, *supra* note 74.

78. *Developer Agreement*, X DEV. PLATFORM ¶ I.A. (Nov. 14, 2023), <https://developer.twitter.com/en/developer-terms/agreement>.

79. *Id.* ¶ I.12 ("X Content" means Posts, the unique identification number generated for each Post, X end user profile information, and any other data and information made available to you through the X API or by any other means authorized by X, and any copies and derivative works thereof.").

80. *More About Restricted Uses of the Twitter APIs*, X DEV. PLATFORM, <https://developer.twitter.com/en/developer-terms/more-on-restricted-use-cases> (last visited Dec. 29, 2023).

obtain wholesale access to Twitter's data was through a change of control of the company via merger or acquisition.⁸¹

If Musk's main purpose in acquiring Twitter was to access more and better data than the Twitter API could provide, his complaints about bots, rather than mDAU, make perfect sense. A data-driven acquisition—purchase of a company to get access to the data it collects and produces through its products and services—is only as valuable as the quality of the data obtained through the transaction. How does owning Twitter get better and more data to Musk? Through concealed data practices common to most social media companies. The concept of concealed data practices refers to “when suppliers’ terms provide weak privacy protections for consumers while the extent of those terms, the resultant data practices and the consequences of these data practices are concealed from consumers.”⁸² Research consistently shows that privacy policies are misunderstood,⁸³ ignored,⁸⁴ and generally too long for the average to person to read consistently anyway.⁸⁵ Importantly, some of the most misunderstood privacy policy provisions include those regarding the collecting company's data sharing practices.⁸⁶ Indeed, even when experts were asked to interpret data sharing provisions of privacy policies, they disagreed as to the correct interpretation and “agreed *even less* as to the various nuances of data sharing.”⁸⁷

Indeed, if we sample even just a few privacy policies from key companies amongst the many AI-related and data-hungry endeavors Musk owns and operates, the potential data sharing opportunities between them become clear. While Tesla's privacy

81. *Twitter Privacy Policy*, TWITTER (effective May 18, 2023), <https://twitter.com/en/privacy#current>.

82. Kemp, *supra* note 44, at 11.

83. See, e.g., Ari Ezra Waldman, *A Statistical Analysis of Privacy Policy Design*, 93 NOTRE DAME L. REV. ONLINE 159, 160 (2018); Ari Ezra Waldman, *Privacy, Notice, and Design*, 21 STAN. TECH. L. REV. 74 (2018); Joel R. Reidenberg et al., *Disagreeable Privacy Policies: Mismatches Between Meaning and Users' Understanding*, 30 BERKELEY TECH. L.J. 39 (2015); Daniel J. Solove, *Privacy Self-Management and the Consent Dilemma*, 126 HARV. L. REV. 1880 (2013).

84. Jonathan A. Obar, *The Biggest Lie on the Internet: Ignoring the Privacy Policies and Terms of Service Policies of Social Networking Services*, 23 INFO., COMM'N & SOC'Y 128 (2020).

85. Lorrie Faith Cranor, *Necessary but Not Sufficient: Standardized Mechanisms for Privacy Notice and Choice*, 10 J. TELECOMM. & HIGH TECH. L. 273, 274 (2012) (estimating at the time that it would take an average of 244 hours a year to read every privacy policy that applied to a person).

86. Reidenberg et al., *supra* note 83, at 83.

87. *Id.* (emphasis in original).

policy assures anonymization of data collected from customers and Tesla cars, the policy also specifies that Tesla may: (1) use such data to “improve and enhance development of our products and services,” including “to conduct research, develop and promote new products and services,” and (2) share collected data with its “business partners and affiliates.”⁸⁸ Affiliates of Tesla include “[c]ompanies that are owned or controlled by Tesla, or where [Tesla has] a substantial ownership interest.”⁸⁹ Meanwhile business partners include “[c]ompanies [Tesla has] hired to provide services like . . . infrastructure and other professional service providers.”⁹⁰ SpaceX’s StarLink Privacy Policy provides that it will use data collected about consumers both directly and through third parties to “use data analytics to . . . improve our products and services” and that such data may be shared with SpaceX’s affiliates or through a corporate merger or acquisition.⁹¹

Tesla Energy, the Boring Company, and OpenAI each boast privacy policies with similar language. Tesla, SpaceX, and the Boring Company are business partners, allowing them to share data for the purpose of researching, improving, and creating products under the terms of the privacy policies.⁹² Several of the companies are connected through their capital structures as well. For example, Tesla owns Tesla Energy. Such interlocking ownership structures allow for data sharing through affiliate-sharing provisions. While these privacy policy provisions are not unique, or even original, to Musk’s ventures, the extent to which companies might use them as a core part of their corporate expansion strategy has been underappreciated by the corporate governance literature. Indeed, Musk appears to have previously used a corporate acquisition to obtain access to data. In particular, the acquisition and later sale of Maxwell Technologies allowed for the transfer of data to Tesla which allowed Tesla, as Musk put it, to “learn[] what it needed to out of the Maxwell acquisition within

88. *Customer Privacy Notice*, TESLA, <https://www.tesla.com/legal/privacy> (last visited Dec. 29, 2023).

89. *Id.*

90. *Id.*

91. *Privacy Policy*, STARLINK (May 1, 2023), <https://www.starlink.com/legal/documents/DOC-1000-41799-67?regionCode=US>.

92. Lora Kolodny, *How Tesla Worked With and Got Paid by SpaceX and The Boring Company Last Year*, CNBC (May 3, 2021, 8:18 AM EDT), <https://www.cnbc.com/2021/05/03/heres-how-tesla-worked-with-spacex-and-the-boring-company-in-2020.html>.

[] two years.”⁹³ Musk disposed of Maxwell once he had obtained the needed data, signaling a relatively unusual approach to an acquisition: buying a company, not for the purpose of running the business after purchase, but rather to mine the acquired company for valuable data.

To the casual observer, Musk's acquisition of Twitter may have outwardly been about an attempt to imbue the platform with Musk's views on free speech.⁹⁴ To market analysts and corporate law commentators, the acquisition was likely about access to Twitter's revenue—generated by advertising.⁹⁵ Under either of those narratives, an attempt to kill the deal because of the presence of too many bots (as opposed to not enough mDAU) seems ludicrous.⁹⁶ But if the real play is to acquire Twitter for access to the data generated by its users, including data not accessible through Twitter APIs, then objecting to the overall number of bots present on the platform makes more sense, as too many bots would skew the data intended for use as inputs for other AI-related economic activity.⁹⁷ In fact, not long after finalizing his purchase of Twitter, Musk launched a new AI startup company called xAI.⁹⁸ Musk would later rename Twitter “X Corp.”⁹⁹ The connection between the two corporate names is hard to miss, and on its website, xAI states that it will work closely with X, Tesla, and “other companies” “to make progress towards our mission.”¹⁰⁰ In apparent anticipation of this cooperative activity, X amended its

93. Iqtidar Ali, *Tesla Sells Maxwell Technologies Since It Does Not Plan to Use Ultracapacitor Technology*, TESLA ORACLE (July 23, 2021), <https://www.teslaoracle.com/2021/07/23/tesla-sells-maxwell-technologies-since-its-not-needed-anymore/>.

94. Jeffrey Rosen, *Elon Musk is Right that Twitter Should Follow the First Amendment*, THE ATLANTIC (May 2, 2022), <https://www.theatlantic.com/ideas/archive/2022/05/elon-musk-twitter-free-speech-first-amendment/629721/>.

95. Popli, *supra* note 51.

96. *Id.*

97. Indeed, if viewed through a data lens, some of the many operational changes Musk has attempted to make to X after purchase signal an attempt to clean data inputs and ensure human data generation, rather than ensure users enjoy the user interface of a social media company.

98. Fred Lambert, *Elon Musk Launches New AI Startup, Says Will Work Closely with Tesla*, ELECTREK (July 12, 2023, 10:29 AM), <https://electrek.co/2023/07/12/elon-musk-launches-xai-startup-work-closely-with-tesla/>. Notably, Musk, a co-founder of Open AI, now employs former Open AI employees at xAI. *Id.*

99. Kate Conger, *So What Do We Call Twitter Now Anyway?*, N.Y. TIMES (Aug. 3, 2023), <https://www.nytimes.com/2023/08/03/technology/twitter-x-tweets-elon-musk.html>.

100. *Announcing xAI*, XAI (July 12, 2023), <https://x.ai/>; Will Henshall, *What to Know About Elon Musk's New AI Company, xAI*, TIME (July 17, 2023, 12:57 PM), <https://time.com/6294278/elon-musk-xai/>.

privacy policy to specifically address data use for AI. Changes to the X privacy policy, effective September 29, 2023, specifically provide that X “may use the information we collect and publicly available information to help train our machine learning or artificial intelligence models for the purposes outlined in this policy,” and such purposes include product testing and improving products and services.¹⁰¹ If X feeds xAI data filled with inaccuracies fueled by bots, xAI either must do additional work to scrub the data before it becomes useful, or must otherwise find a way to account for the bots in whatever AI-model xAI intends to build from X data. If acquiring data for use in AI-related endeavors sits at the heart of the business reason for acquiring Twitter, objections to purchasing data that is not fit for that purpose start to sound more like a reasonable business rationale for attempting to withdraw from the transaction, and less like a ludicrous excuse for buyer’s remorse.

As the prevalence and importance of AI continues to grow, analyzing corporate mergers and acquisitions through a data lens will become increasingly important. Data-driven mergers and acquisitions, like that undertaken in Musk’s acquisition of Twitter are likely to increase in number, and in order to account for the real potential harms to the market that can result from such data-driven mergers and acquisitions, market participants should reconsider complete reliance on federal securities laws, which failed to protect investors during the Musk acquisition of Twitter, and should instead consider the role state law can play in protecting investors and other market participants in such scenarios.

II. FEDERAL LAW’S DATA BLIND SPOTS COMPOUND MARKET HARMS RELATED TO MUSK’S GROWING DATA EMPIRE

This Part argues that federal securities laws are ill-suited to account for the potential negative externalities that can result

101. *X Privacy Policy*, X (effective Sept. 29, 2023), <https://twitter.com/en/privacy#current>. Again, this specific provision is neither particularly unique nor unusual to social media companies that plan to use user data in other products and services. *See, e.g., How Do We Respond to Legal Requests, Comply with Applicable Law and Prevent Harm?*, META PRIV. CTR. (effective June 15, 2023), https://www.facebook.com/privacy/policy?section_id=10-HowDoWeRespond. The point is merely that it continues to evidence Musk’s larger data play, and the value of Twitter’s data to his other ventures.

from data-driven mergers and acquisitions. Using the Musk acquisition of Twitter and related litigation as a case study, this Part surveys the harm done to various market participants. Notably, those harms are not limited to Twitter shareholders, who were directly involved in the acquisition. Rather, the failures of federal securities regulation to adequately account for the negative externalities of Musk's data-driven acquisition of Twitter impacted investors and other stakeholders throughout Musk's data empire. Ultimately, this Part argues that, not only is federal securities law ill-equipped to protect the market from data-driven acquisitions, but its data blind spots can also compound market harms from data-driven acquisitions, requiring a re-examination of how we think about such corporate acquisitions in the long run.

A. A Survey of the Ways Federal Securities Laws Failed in the Twitter-Musk Saga

In the spring of 2022 when Elon Musk made his public proclamations about acquiring Twitter, and apparently purchased a stake of Twitter stock without meeting the disclosure requirements of the securities regulations, many were left to wonder what remedies the shareholders of Tesla, who suffered collateral harm, and of Twitter, who were subjected to the volatility caused by Musk's statements, would have for the impact on their investments.¹⁰² Shareholders of Twitter filed a lawsuit under Section 13(d), which requires an investor to inform the SEC within 10 days of taking more than a five percent stake in a company.¹⁰³ Reports allege that Musk acquired five percent by March 14, 2022, requiring him to inform the SEC by March 24.¹⁰⁴ His failure to report, the complaint alleges, allowed him to continue purchasing stock at a deflated price, which may have helped him save \$156 million on shares purchased between March

102. Peter Eavis & Jack Ewing, *Why Musk's Twitter Bid Has Shaken Tesla Investors*, N.Y. TIMES (May 8, 2022), <https://www.nytimes.com/2022/05/06/business/elon-musk-tesla-twitter.html>.

103. *Block & Leviton LLP Has Filed a Lawsuit Against Elon Musk for Securities Law Violations*, GLOBENEWSWIRE (Apr. 12, 2022, 4:49 PM), <https://www.globenewswire.com/news-release/2022/04/12/2421464/0/en/Block-Leviton-LLP-Has-Filed-a-Lawsuit-Against-Elon-Musk-for-Securities-Law-Violations.html>.

104. Lipton, *supra* note 16; Isobel Asher Hamilton, *The SEC Is Investigating Elon Musk Over His Late Disclosure That He Had Purchased Twitter Stock, a Report Says*, BUS. INSIDER (May 12, 2022, 4:53 AM), <https://www.businessinsider.com/sec-investigates-elon-musks-twitter-stake-disclosure-report-2022-5>.

24 and April 4 when his stake was disclosed.¹⁰⁵ The road to recovery for the harm caused by Elon Musk's actions will be difficult for Twitter's shareholders.

Unfortunately for these shareholders, courts have held that no private cause of action for monetary damages exists under Section 13(d) of the Securities Exchange Act of 1934 ("Exchange Act").¹⁰⁶ What is evident from Musk's domination of the news cycle and his impact on the capital markets is the inability of the current regime to quickly respond to market-based harm that is outside the scope of securities regulations.¹⁰⁷ To understand why this is true, a brief overview of the securities regulation regime and its approach to disclosures—a combination of required disclosure and penalties for misstatements—is required.

Corporate governance, while predominately a matter of state law, is impacted at the federal level by various agency activity. For starters, the corporate governance of any public company is impacted by federal regulation of capital markets. Capital markets regulation is complex, but a key feature of the U.S. regime is the Securities Exchange Commission ("SEC"), established by the Exchange Act of 1934.¹⁰⁸ The SEC enjoys regulatory authority through a delegation of Congress' power under the Commerce Clause, which enables the federal regulation of interstate commerce.¹⁰⁹ As a result, the federal regulation of capital markets primarily focuses on mitigating negative externalities—primarily through the regulation of the market for publicly traded securities.

105. *Elon Musk Sued by Twitter Investors for Delaying Disclosure of Stake*, THE GUARDIAN (May 26, 2022, 1:17 PM), <https://www.theguardian.com/technology/2022/may/26/elon-musk-twitter-investors-sue>.

106. On May 27, 2008, the U.S. Court of Appeals for the Fifth Circuit affirmed a decision by the U.S. District Court for the Northern District of Texas in *Motient Corp. v. Dondero*, holding that there is no private cause of action for monetary damages under Section 13(d) of the Exchange Act. See *Motient Corp. v. Dondero*, 529 F.3d 532, 533 (5th Cir. 2008).

107. See Chris Prentice, *US SEC Presses Judge to Force Elon Musk to Testify in Twitter Probe*, REUTERS (Nov. 16, 2023, 4:06 PM), <https://www.reuters.com/markets/deals/us-sec-urges-judge-force-musk-testimony-twitter-takeover-probe-filing-2023-11-16/>.

108. THOMAS LEE HAZEN, *PRINCIPLES OF SECURITIES REGULATION* 200 (2d ed. 2006); JOEL SELIGMAN, *THE TRANSFORMATION OF WALL STREET: A HISTORY OF THE SECURITIES AND EXCHANGE COMMISSION AND MODERN CORPORATE FINANCE* 39–40 (3d ed. 2003). Although federal agencies like the SEC only regulate the capital markets aspect of corporate governance, through licensing, industry regulation, and other compliance norms, federal agencies provide greater oversight of specific industries. Robert B. Thompson & Hillary A. Sale, *Securities Fraud as Corporate Governance: Reflections upon Federalism*, 56 VAND. L. REV. 859, 869 (2003); Marc I. Steinberg, *The Federalization of Corporate Governance—An Evolving Process*, 50 LOY. U. CHI. L.J. 539, 542–550 (2019).

109. Thompson & Sale, *supra* note 108 at 861.

Many federal securities regulations, like Section 13(a), do not allow for a private right of action—meaning that shareholders are unable to directly address harms at the federal level.¹¹⁰ Instead, shareholders must depend on state law, and due to the procedural hurdles, typically they must wait for federal administrative fact finding to successfully pursue those state claims.¹¹¹ The SEC's greatest tools are its periodic and special reporting mechanisms, and its oversight of special events like proxies at shareholder meetings and initial public offerings ("IPOs").¹¹² As discussed through a brief overview of these tools below, the disclosure regime does not provide shareholders like those at Tesla and Twitter with a means to address harm. And although such difficulties can exist in any transaction, they are particularly heightened in the context of data-driven mergers and acquisitions because the disclosure regime suffers from serious data gaps.

The securities regulatory scheme is based on a policy of full and fair disclosure, on the belief that the market will operate efficiently if there is a fully informed public.¹¹³ The primary federal securities laws include: Securities Act of 1933 ("Securities Act" or "'33 Act");¹¹⁴ and the Securities Exchange Act of 1934 ("Exchange Act" or "'34 Act").¹¹⁵ The laws have been amended several times since 1933 and 1934, usually in response to financial scandals,¹¹⁶ and now also include: Trust Indenture Act of 1939; Investment Company Act of 1940 ("40 Act"); Investment Advisers Act of 1940 ("Advisers Act"); Sarbanes-Oxley Act of 2002 ("SOX"); Dodd-Frank Wall Street Reform & Consumer Protection Act of 2010 ("Dodd-Frank"); Jumpstart Our Business Startups Act of 2012 ("JOBS

110. Mark I. Steinberg, *Curtailling Investor Protection Under the Securities Laws: Good for the Economy?*, 55 SMU L. REV. 347, 351–53 (2002) (detailing the limitations of lawsuits under federal securities laws).

111. Carliss Chatman & Tammi S. Etheridge, *Federalizing Caremark*, 70 UCLA L. REV. 908 (2023).

112. Kristin N. Johnson, *Decentralized Finance: Regulating Cryptocurrency Exchanges*, 62 WM. & MARY L. REV. 1911, 1933–34 (2021).

113. *Id.* at 1947.

114. Securities Act of 1933, 15 U.S.C. §§ 77a–77mm

115. Securities Exchange Act of 1934, 15 U.S.C. § 78a et seq.

116. See Chatman & Etheridge, *supra* note 111, at 933; Lawson v. FMR LLC, 571 U.S. 429, 429 (2014) ("To safeguard investors in public companies and restore trust in the financial markets following the collapse of Enron Corporation, Congress enacted the Sarbanes–Oxley Act of 2002."); Koch v. S.E.C., 793 F.3d 147, 150 (D.C. Cir. 2015) ("Like the crash in 1929, the wreckage wrought by the Great Recession of 2008 produced calls for reform, ultimately resulting in the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), Pub. L. No. 111–203, 124 Stat. 1376 (2010).").

Act”); and Fixing America’s Surface Transportation Act of 2015 (“FAST Act”).¹¹⁷ In addition, the SEC, established by the Exchange Act, is empowered with the ability to supplement the statutes with regulations.¹¹⁸

The SEC is not the only government entity acting as a regulatory force governing the capital markets. The Commodities Futures Trading Commission (“CFTC”) regulates sales of commodity and financial futures and options.¹¹⁹ The Financial Industry Regulatory Authority (“FINRA”), under the supervision of the SEC, regulates broker-dealers and activities by national exchange members.¹²⁰ The stock exchanges, such as NASDAQ and the NYSE, also have listing standards that greatly influence the corporate governance norms for publicly traded companies.¹²¹ Lastly, states have “blue sky” laws, which are anti-fraud laws designed to protect investors by requiring issuers of securities to register and disclose details about their offerings.¹²²

The foundation of the entire regime, however, rests on the 1934 Act’s registration and reporting requirements on issuers of certain types of securities.¹²³ Typically, a publicly traded corporation is required to file reports quarterly (Form 10-Q) and

117. Trust Indenture Act of 1939, 15 U.S.C. 77aaa-77bbbb; Investment Company Act of 1940, 15 U.S.C. 80a-1–80-a-64; Investment Advisors Act of 1940, 15 U.S.C. 80b-1–80b-21; Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (codified as amended in scattered sections of 15 and 18 U.S.C.); Dood-Frank Wall Street Reform and Consumer Protection Act of 2010, Pub. L. No. 111-203, 124 Stat. 1376 (codified as amended in scattered sections of 7, 12, and 15 U.S.C.); Jumpstart Our Business Startups Act of 2012, Pub. L. No. 112-106, 126 Stat. 306 (codified as amended in scattered sections of 15 U.S.C.); Fixing America’s Surface Transportation Act of 2015, Pub. L. No. 114-94, 129 Stat. 1312 (codified as amended in scattered sections of 23 U.S.C.).

118. Thompson & Sale, *supra* note 108, at 872.

119. Jerry W. Markham, *Manipulation of Commodity Futures Prices—The Unprosecutable Crime*, 8 YALE J. REGUL. 281, 333 (1991).

120. Nicole G. Iannarone, *Structural Barriers to Inclusion in Arbitrator Pools*, 96 WASH. L. REV. 1389, 1391 n.2 (2021).

121. John C. Coffee Jr., *Racing Towards the Top?: The Impact of Cross-Listing and Stock Market Competition on International Corporate Governance*, 102 COLUM. L. REV. 1757, 1781–82 (2022).

122. “Blue sky laws generally [fall] within one of three categories: antifraud, registration or licensing of securities professionals, and registration or licensing of securities.” Christopher R. Lane, *Halting the March Toward Preemption: Resolving Conflicts Between State and Federal Securities Regulators*, 39 NEW ENG. L. REV. 317, 326 (2005) (citing LOUIS LOSS & EDWARD M. COWETT, *BLUE SKY LAW* 18-19 (1958)). See generally Jonathan R. Macey, *Origin of the Blue Sky Laws*, 70 TEX. L. REV. 347 (1991); Joel Seligman, *The Historical Need for a Mandatory Corporate Disclosure System*, 9 J. CORP. L. 1, 18–33 (1983).

123. Securities Exchange Act of 1934 § 12, 15 U.S.C. § 78l.

annually (Form 10-K) with the SEC.¹²⁴ Some aspects of Forms 10-Q and 10-K are always required and others are based on specified numerical thresholds.¹²⁵ Other aspects are discretionary, based on a determination of materiality, a standard that requires officers to make a judgment call that could be challenged after the fact.¹²⁶

The 1934 Act also requires officers, directors, and ten percent beneficial owners to file reports of all transactions in the company's shares and requires any person acquiring five percent of an equity security to disclose.¹²⁷ The Sarbanes-Oxley Act empowered the SEC to promulgate additional disclosures as it deems necessary to protect investors.¹²⁸ In determining what must be disclosed under these provisions, the regulations and case law all rely on the materiality standard.¹²⁹

Companies are not expected to predict the future, but they are expected to be honest about the past. The 1934 Act prohibits fraud in connection with all securities transactions under Rule 10b-5, regardless of whether the company is publicly traded.¹³⁰ For publicly traded companies, information having an impact on the business or financial condition must be disclosed either in the next quarter on the Form 10-Q, or for some matters, within four business days on Form 8-K.¹³¹ Thus, all false statements can trigger liability, but a failure to make statements only imposes liability for issuers of publicly traded securities. Incentive exists to remain silent unless there is a benefit to providing the public with

124. Securities Exchange Act of 1934 §§ 12, 13(a), 15 U.S.C. §§ 78l, 78m(a); THOMAS LEE HAZEN, *PRINCIPLES OF SECURITIES REGULATION* 203–05 (4th ed. 2006).

125. See Business and Financial Disclosure Required by Regulation S–K, 81 Fed. Reg. 23916, 23925 (Apr. 22, 2016) (to be codified at 17 C.F.R. pts. 210, 299, 230, 232, 239, 240, 249); 17 C.F.R. §§ 229.101(c)(ii), 229.601(b), 229.404 (2022).

126. STEPHEN J. CHOI & A. C. PRITCHARD, *SECURITIES REGULATION: CASES AND ANALYSIS* 49 (4th ed. 2015).

127. Securities Exchange Act of 1934 §§ 16(a), 13(d).

128. Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, § 409, 116 Stat. 745, 791 (codified as amended in scattered sections of 15 and 18 U.S.C.).

129. See George S. Georgiev, *Too Big to Disclose: Firm Size and Materiality*, 64 UCLA L. REV. 602, 617–18 (2017) (giving examples of various regulations that require disclosure based on materiality); Dale A. Oesterle, *The Overused and Under-Defined Notion of “Material” in Securities Law*, 14 U. PA. J. BUS. L. 167, 170 (2011). Frank H. Easterbrook & Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 VAND. L. REV. 669, 673–74 (1984) (noting asymmetric information in the securities market).

130. 17 C.F.R. § 240.10b-5 (2022).

131. Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date, 69 Fed. Reg. 15594 (Mar. 25, 2004) (to be codified at 17 C.F.R. pts. 228, 229, 230, 239, 240, 249); Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date; Correction, 69 Fed. Reg. 48370 (Aug. 10, 2004) (to be codified at 17 C.F.R. pts. 239, 249).

information. Nondisclosure alone does not violate 10b-5 without an independent duty. The sources of these independent duties are state law or industry-specific agencies.¹³² So even the SEC disclosure regime relies on the symbiotic relationship between federal and state law that enables shareholders to pursue claims of corporate wrongdoing.¹³³

As a publicly traded company, Twitter was required by the securities regulations to file periodic reports, including the annual report known as the 10-K, and the quarterly report, known as a 10-Q. They were also required to file 8-Ks to alert the public of material events. Elon Musk was required to alert the public of his ownership stake once it exceeded five percent by Section 13-d. But, the potential buyout of Twitter is governed, beyond reporting protocols, by Delaware state law. Although Elon Musk's behavior led to wide fluctuations in the valuation of Twitter, the company he planned to acquire, and Tesla, the company whose securities he planned to sell to partially finance the transaction, any harm to stockholders is best addressed by the Delaware courts, not the SEC.¹³⁴ This is in part because the only area of corporate governance subject to federal control is through the regulation of the capital markets,¹³⁵ so the federal system is by nature reactionary. The Securities Exchange Act of 1934 is focused on the structure and operation of securities markets, and the SEC's regulation of the market is limited by the bounds of the 1934 Act.¹³⁶ As such, the SEC is excluded from the traditional domain of the states, corporate governance.¹³⁷ The concern of the regulatory system is the market impact of fraudulent reports, which hide the flaws and failures of a company from the target audience, the "reasonable investor."¹³⁸ These structures trigger the strongest penalties and requirements when actions alter the information available to investors on the open market.¹³⁹

132. Thompson & Sale, *supra* note 108.

133. Chatman & Ethridge, *supra* note 111.

134. More than one million business entities are based in Delaware, including more than sixty-six percent of the Fortune 500 companies. *About the Division of Corporations*, DEL. DIV. OF CORPS., <https://corp.delaware.gov/aboutagency/> (last visited Dec.28, 2023).

135. Thompson & Sale, *supra* note 108, at 869.

136. HAZEN, *supra* note 108, at 200; JOEL SELIGMAN, *THE TRANSFORMATION OF WALL STREET* 39–40 (3d ed. 2003).

137. HAZEN, *supra* note 108; *The Bus. Roundtable v. SEC*, 905 F.2d 406, 408 (D.C. Cir. 1990).

138. Chatman, *supra* note 48, at 46.

139. *Id.*

A disclosure regime such as this is ill-suited to appropriately account for the market impact of data-driven mergers and acquisitions. A company that offers services to consumers and collects consumer data and data exhaust along the way may not itself know the uses to which it will eventually put the data—usefulness of the data may only emerge after the company applies data mining processes.¹⁴⁰ A regime that does not require companies to predict the future and penalizes misstatements to the market incentivizes companies to remain quiet about any products and services they may hope to develop using consumer data. In the Musk acquisition of Twitter, for example, Musk could not come out and explain that his interest in the overall number of bots centered on the value of the social media data Twitter produced instead of the advertising revenue that Twitter produced through mDAU. Not only would doing so jeopardize his persona as a protector of free speech and privacy, but he would also risk disclosing predictions that never come to pass if the data failed to be useful in the way he hoped. Such false statements could get him into trouble under the existing disclosure regime. Ultimately, the Musk-Twitter saga reveals that the federal securities laws have data gaps—the disclosure regime does not adequately account for what a reasonable investor might want to know in the context of a data-driven merger or acquisition.

B. The Failures of Federal Securities Laws in the Twitter-Musk Saga Impacted Shareholders Throughout Musk's Data Empire

A properly structured disclosure regime can protect investors and promote good corporate governance, but when that structure facilitates manipulation, it undermines the purpose of the system. Unscrupulous management can use the federal mandatory disclosure standard in conjunction with the business judgment rule to evade state law duties. To determine whether a breach has occurred, shareholders need extensive information to meet the burden of proof.¹⁴¹ If a company is too big or too complex for many

140. Gordon Hull, *Successful Failure: What Foucault Can Teach Us About Privacy Self-Management in a World of Facebook and Big Data*, 17 ETHICS & INFO. TECH. 89, 91 (2017) (“the uses to which data will be put are not knowable to the user—or perhaps even the company—at the time of consent” and collection).

141. Roy Shapira, *Corporate Law, Retooled: How Books and Records Revamped Judicial Oversight*, 42 CARDOZO L. REV. 1949, 1959 (2021).

matters that are potentially triggering to be material, and therefore mandatory, the necessary information can be concealed to defraud and harm investors.¹⁴² Thus, with most publicly traded corporations, the shareholders can only get access to the information they need when it is material to investigations by industry-specific agencies. The minutia of day-to-day operations and compliance do not meet the standard for mandatory reporting. Musk's data empire offers an example of such a scenario. Arguably, the fate of his many companies, all of which have a data and/or AI layer to them, are intertwined. The extent to which those connections are fruitfully or detrimentally explored through business deals are subject to state corporate governance rules, but do not require disclosure to investors whose decisions might be impacted by the details of those interconnections. This is true both for public companies like Tesla, because corporate law does not recognize value of data as "material," and for private companies like X, which is not subject to the federal disclosure regime in the same way as publicly traded companies.

Outside of the limited items that must be filed in the interim reports on Form 8-K, all other disclosures under the 1934 Act are voluntary.¹⁴³ The existence of voluntary disclosures makes matters

142. Georgiev, *supra* note 129, at 646 (arguing that materiality blind spots make it easier for management to engage in fraud, waste, or suboptimal practices and can hinder monitoring by a firm's board of directors); see Mihailis E Diamantis, *Functional Corporate Knowledge*, 61 WM. & MARY L. REV. 319, 354 n.217 (2019).

143. Section 409 of the Sarbanes provides "[e]ach issuer reporting under Section 13(a) or 15(d) . . . disclose to the public on a rapid and current basis such additional information concerning material changes in the financial condition or operations of the issuer . . . as the Commission determines . . . is necessary or useful for the protection of investors and in the public interest." Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, § 409, 116 Stat. 745, 791 (codified as amended in scattered sections of 15 and 18 U.S.C.); see also Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date, 69 Fed. Reg. 15594 (Mar. 25, 2004) (to be codified at 17 C.F.R. pts. 228, 229, 230, 239, 240, 249); Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date; Correction, 69 Fed. Reg. 48370 (Aug. 10, 2004) (to be codified at 17 C.F.R. pts. 239, 249). Following amendments in 2004, 8-K requirements now include: entry into or termination of a material non-ordinary course agreement; creation of a material direct financial obligation or a material obligation under an off-balance sheet transaction; departure of directors or principal officers, election of directors, and appointment of principal officers; and amendments to Articles of Incorporations or Bylaws. There are also mandatory disclosures under the Foreign Corrupt Practices Act (FCPA) which are designed to combat international bribery and corruption. Under the FCPA companies are subject to sanctions for failure to keep an adequate system of internal controls. See Karen E. Woody, *Securities Law as Foreign Policy*, 15 NEV. L.J. 297, 307 (2014).

worse, not better.¹⁴⁴ When combined with mandatory disclosures based on materiality, and state law definitions that make it clear that each entity is a distinct legal person, voluntary disclosure can be utilized to reveal what is positive, while concealing what is less favorable under the protection of materiality.¹⁴⁵ Voluntary disclosures need not be complete; they need only to be true.¹⁴⁶ Companies are also required to correct information previously reported if it becomes untrue.¹⁴⁷

The Twitter and Elon Musk saga provides an example of the results of this regime. Capital markets reward positive periodic reports,¹⁴⁸ corporate leaders whose personality inspires the kind of confidence that obfuscates the reality of return on investment,¹⁴⁹ and leaders who are innovative and cutting edge.¹⁵⁰ When faced with these incentives, disclosure, standing alone, fails to protect investors.¹⁵¹ As Elon Musk attempted to unwind himself from his commitment to buy Twitter, he alleged that Twitter's disclosures were inadequate, and that the valuation of the company may be

144. Voluntary disclosure and private ordering, including agreements between industry groups and stock exchanges, while well-meaning, can serve as an end run around securities regulation and what the system is designed to protect. These disclosures can manipulate the market and have even greater consequences. *See, e.g.,* Sarah C. Haan, *Shareholder Proposal Settlements and the Private Ordering of Public Elections*, 126 *YALE L.J.* 262, 302–09 (2016) (discussing the role of private voluntary disclosure of campaign finance expenditures and the risk of harm).

145. Michael R. Siebecker, *Trust & Transparency: Promoting Efficient Corporate Disclosure Through Fiduciary-Based Discourse*, 87 *WASH. U. L. REV.* 115, 118 (2009) (“Excessive amounts of disclosure, or communication of poor-quality information, can actually impede rather than promote corporate accountability. Unintentional obfuscation may turn into bald deception, as corporations seek market advantages by promoting a false socially responsible image.”).

146. Georgiev, *supra* note 129, at 607.

147. Chatman, *supra* note 48, at 26.

148. There are many examples of companies concealing fraudulent and other harmful misconduct while continuing to post positive periodic reports and thus continuing to induce investment. *See, e.g.,* Bernard W. Bell, *Recalling the Lawyers: The NHTSA, GM, and the Chevrolet Cobalt*, 84 *FORDHAM L. REV.* 1899, 1904 (2016) (discussing the GM ignition failure); John Carreyrou, *Blood-Testing Firm Theranos to Dissolve*, *WALL ST. J.* (Sept. 5, 2008, 12:10 AM), <https://www.wsj.com/articles/blood-testing-firm-theranos-to-dissolve-1536115130>.

149. Chatman, *supra* note 48, at 37.

150. *See* Elizabeth Pollman, *Corporate Disobedience*, 68 *DUKE L.J.* 709, 732 (2019); Elizabeth Pollman & Jordan M. Barry, *Regulatory Entrepreneurship*, 90 *S. CAL. L. REV.* 383, 398 (2017) (exploring how “effective regulatory entrepreneurs weave together both time-tested and innovative new tactics to create a larger strategy for changing the law Many regulatory entrepreneurs follow the maxim that it is better to beg forgiveness than to ask for permission. In this context, that means that it is better to enter markets and start providing services to the public—legally or otherwise—than to seek approval from regulators”).

151. Chatman, *supra* note 48, at 26.

inflated.¹⁵² Musk's complaints reflect how most of us engage with a company, and how the reporting regimes can fail to give a clear picture of a company's business and value. When people engage with a company, either through investment or purchases of its goods and services, they consider more than the numbers.¹⁵³ Traditionally, the narrative related to considerations beyond the numbers include recognition that companies trade on their reputation and goodwill with consumers and investors.¹⁵⁴ Corporate law has also recently acknowledged that other factors, such as social pressures and cultural beliefs, can also impact how people engage with companies.¹⁵⁵ Courts and companies tend to put greater weight on measurable outcomes and less weight on these soft considerations when determining materiality.¹⁵⁶ So positive statements may be deemed mere puffery, and other statements must be taken in the context of the surrounding communications, but concrete factors like diminished stock price as a result of an action are clear evidence of materiality.¹⁵⁷

To date, the impact of data disclosures, or failure to disclose a data purpose for a corporate acquisition, has not been evaluated as part of this regime.¹⁵⁸ Does the manipulation of metrics like mDAU as opposed to talking in terms of total bots on the platform count as soft information or measurable outcomes? Does it matter that discussing metrics such as mDAU leads to assumptions about the

152. Todd Spangler, *Elon Musk Says He's 'Obviously Overpaying' for Twitter in \$44 Billion Deal But Sees Huge Upside Long-Term*, VARIETY (Oct. 20, 2022, 8:55 AM), <https://variety.com/2022/digital/news/elon-musk-twitter-obviously-overpaying-deal-1235409500/#>.

153. See, e.g., Cary Martin Shelby, *Profiting From Our Pain: Privileged Access to Social Impact Investing*, 109 CALIF. L. REV. 101, 108–10 (2021); Peter H. Huang, *How Do Securities Laws Influence Affect, Happiness & Trust?*, 3 J. BUS. & TECH. L. 257, 266 (2008); Douglas A. Kysar, *Preferences for Process: The Process/Product Distinction and the Regulation of Consumer Choice*, 118 HARV. L. REV. 526, 528–29, 531–32 (2004).

154. Tonny Stenheim & Dag Oivind Madsen, *Goodwill Impairment Losses, Economic Impairment, Earnings Management and Corporate Governance*, 16 J. ACCT. & FIN. 11 (2016).

155. Chatman, *supra* note 48, at 26.

156. *Id.* at 26–27.

157. Recent trading of “meme stocks” has challenged the impact of information and what may be material. See Sergio Alberto Gramitto Ricci & Christina Sautter, *Corporate Governance Gaming: The Power of Retail Investors*, 22 NEV. L.J. 51, 53 (arguing the new generation of wireless investors may not be focused on the traditional indicators; instead, they will use corporate governance to pursue social and environmental causes).

158. Sebastian Benthall and Salome Viljoen have argued that financial disclosures be adapted and used as a regulatory framework for data governance but did not consider the impact of opaque corporate data mergers and acquisitions on the market. Benthall & Viljoen, *supra* note 47.

business model for the platform—such as pursuing advertising revenue—that may not actually serve as the rationale driving business decisions? Or do companies—particularly social media and other consumer facing companies—quietly pursuing other sources of revenue through the development of AI models based on, even in part, user data, have sound business reasons for keeping such information from the public so that it falls under the business judgment rule? If the law thinks the public should know, under which disclosure regime do we expect companies, including companies pursuing data-driven mergers and acquisitions, to make such disclosures?

In the Musk-Twitter saga, the existence of bots on the platform, raised by Musk as a defense to going through with the purchase, is clearly material to regulators and investors. Musk's comments sparked state action and impacted the market valuation of Twitter.¹⁵⁹ Prior to these developments, it is possible the disclosure of this information was within the business judgment rule discretion of Twitter management. This is, perhaps, a particularly strong possibility if Twitter management pre-Musk acquisition only viewed Twitter as a social media company with primary revenue from advertisements. The Musk acquisition of Twitter shows that information such as the number of bots on the platform and quality of Twitter-produced data is soft information not found in mandatory periodic financial statements.¹⁶⁰ If it is to be found in disclosures at all, such information would be found in the easier-to-manipulate voluntary data. Soft information on a micro level may not be deemed material, but in the aggregate, it can influence public opinion, which in turn can influence the market for securities.¹⁶¹ Because this soft information falls outside

159. Clare Duffy, *Twitter Was Questioned by SEC Over Bots, User Numbers in June*, CNN BUS. (Aug. 29, 2022, 5:55 PM), <https://www.cnn.com/2022/08/29/tech/twitter-sec-bot-probe/index.html>.

160. See *infra* Part III.

161. See Kishanthi Parella, *Reputational Regulation*, 67 DUKE L.J. 907, 940 (2018) (arguing legal sanctions and reputational costs work together with the former influencing the magnitude and effectiveness of the latter); Huang, *supra* note 153, at 293 (“An individual’s emotional reactions to any particular stimulus and regulatory policy are likely to be distributed non-uniformly over a population.”); Claire A. Hill & Erin Ann O’Hara, *A Cognitive Theory of Trust*, 84 WASH. U. L. REV. 1717, 1785 (2006) (“[A]cquisition of reputational capital is an important benefit of board service; overlooking Enron-level misdeeds could not only limit the reputational capital acquired, but could even have reputational costs that would compromise future earnings possibilities.”); Jonathan

of the realm of material information and mandatory reporting, either heuristically or by a rule of thumb, it is the least regulated and the object of the greatest management discretion. Musk's allegations that Twitter failed to disclose the number of users that may potentially be fake profiles (bots) illustrates the problem with the mix of mandatory and voluntary reporting that weighs heavily on management decision making—and that is, in turn, protected by the business judgment rule at the state level.

The worst corporate scandals are born out of market manipulation, but the systems in place at the SEC do not enable shareholders to intervene at a point that can protect all stakeholders, or to seek redress for their own harms. To make a company look as positive as possible in public filings, management will walk as close to the line as possible without crossing it.¹⁶² Corporations need only to tell us about business arrangements that will alienate some customers, while endearing others to the brand, when the information suits them best. If Twitter users realized the level of data they produce through the platform and the related potential value creation it represents, users might balk at continued use. The idea that the public town square might implement such dataveillance and capitalize on it might turn a good segment of users away. In the absence of a mandatory disclosure requirement, the publicly traded Twitter, and now the

Karpoff, John Lott & Eric Wehrly, *The Reputational Penalties for Environmental Violations: Empirical Evidence*, 48 J.L. & ECON. 653, 655–56 (2005) (“[R]eputation disciplines certain types of wrongdoing because market transactions internalize their costs.”); John R. Nofsinger, *Social Mood and Financial Economics*, 6 J. BEHAV. FIN. 144, 147–49, 152–55, 157–58 (2005); Brian M. Lucey & Michael Dowling, *The Role of Feelings in Investor Decision-Making*, 19 J. ECON. SURVS. 211, 218 (2005); Christopher K. Hsee & Yuval Rottenstreich, *Music, Pandas, and Muggers: On the Affective Psychology of Value*, 133 J. EXPERIMENTAL PSYCH. 23, 24 (2004); Richard L. Peterson, “Buy on the Rumor:” *Anticipatory Affect and Investor Behavior*, 3 J. PSYCH. & FIN. MKTS. 218, 218 (2002) (“Many investors are not aware that a positive event outcome does not necessarily cause security price appreciation. Their high levels of risk exposure may surprise naive investors when the euphoric affect that guided the ACCUMULATION of their high-risk positions dissipates following the event. Their diminished euphoria motivates increased caution (risk aversion) and investment repositioning (selling) of high-risk positions. In this market environment, a general increase in selling causes negative price pressure. But price decline alone increases investors’ negative affect and risk aversion.”); Lynn A. Stout, *The Investor Confidence Game*, 68 BROOK. L. REV. 407, 415, 420 (2002); Donald C. Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 NW. U. L. REV. 135, 157–58 (2002); Stephen M. Bainbridge, *Mandatory Disclosure: A Behavioral Analysis*, 68 U. CIN. L. REV. 1023, 1050 (2000).

162. Carliss N. Chatman, *Myth of the Attorney Whistleblower*, 72 SMU L. REV. 669, 722 (2019).

privately held X, had no incentive to disclose such information voluntarily.

Corporate failures arise from ambiguity and complexity—an ambiguity that is encouraged by a focus on positive periodic reports, payment of regular dividends, and other surface indications of a company's success.¹⁶³ The line between good governance aimed at profit maximization and criminal or fraudulent corporate behavior is difficult to discern when the people who are typically the most egregious bad actors are also the same people tasked with aggressively using all the legal tools available to produce positive results. A company may legally paint itself in the best light by manipulating business structures, tax laws, accounting rules, and other regulations with the assistance of attorneys and other experts and may be deemed to be in breach of its duties if it fails to do so.¹⁶⁴ A new arena for this kind of opacity in information that goes to the core of some corporate valuations is data. The federal securities law disclosure regime suffers from regulatory gaps when it comes to data and the importance of data to corporate decision-making and profit-maximization. These data gaps lead to corporate governance failures that state law is better positioned to mitigate and prevent.

III. STATE LAW IS BETTER POSITIONED TO CABIN DATA-DRIVEN MERGERS AND ACQUISITIONS

In the absence of a federal agency focused on data, and in the presence of federal securities regulation's failure to properly incentivize adequate and accurate disclosures about the role that data collection, processing, and sharing plays in a corporation's business plan, state law is the best avenue to protect shareholders, stakeholders, and the public in a data-driven merger or acquisition. To mitigate the potential harms to stakeholders from opaque data-driven mergers and acquisitions, the value of data as

163. See Henry T. C. Hu, *Too Complex to Depict? Innovation, "Pure Information" and the SEC Disclosure Paradigm*, 90 TEX. L. REV. 1601, 1608 (2012) (arguing that not only is it difficult to communicate financial realities when they are fully understood, but it will often be the case that the realities are not fully understood).

164. See Diamantis, *supra* note 142, at 325–26 (noting that “[t]he line between criminal and innocent conduct frequently turns on what defendants knew,” making monitoring of employees and compliance leaving the company worse off); Maurice E. Stucke, *In Search of Effective Ethics & Compliance Programs*, 39 J. CORP. L. 769, 779–80 (2014) (describing penalties and prosecutions as a means to deter corporate crime as well as to increase compliance efforts by firms).

such should be formally included in corporate valuations. Doing so would trigger additional flexibility in the tools available to the target directors and allow shareholders to use the tools available to them—record inspection and appraisal rights—to protect themselves. Further, the simple act of formally recognizing the value of data to various data-intensive companies enables the prospect of a new role for corporate governance in consumer privacy protection.

A. Mitigating Harms from Data-Driven Mergers and Acquisitions Requires Recognizing the Value of Data as Part of a Company's Overall Valuation.

State law applicable to corporate governance protects shareholders through a combination of requiring a minimum standard of director behavior and shareholder rights to information. For example, directors owe fiduciary obligations to the corporation and its shareholders.¹⁶⁵ Although the Model Business Corporation Act and the Delaware Corporation Act both impose duties of care and loyalty on directors, in reality, shareholders can shape the scope of liability for potential breaches of fiduciary duties via contract.¹⁶⁶ Furthermore, directors normally receive the benefit of the business judgment rule, which assumes directors make decisions in good faith and in the best interests of the company and its shareholders. In the context of mergers and acquisitions, directors must uphold elevated fiduciary duties¹⁶⁷ under two landmark cases: *Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.*¹⁶⁸ and *Unocal Corp. v. Mesa Petroleum Co.*¹⁶⁹

When there is a decision to undertake a transaction which will cause a change in corporate control, or a break-up of the company, *Revlon* requires a board to seek the best price reasonably available to the stockholders.¹⁷⁰ When there is a bid to take over the

165. D. Gordon Smith & Andrew S. Gold, *Introduction* to RESEARCH HANDBOOK ON FIDUCIARY LAW, 1, 1 (D. Gordon Smith & Andrew S. Gold eds., 2018).

166. Christopher M. Bruner, *Opting Out of Fiduciary Duties and Liabilities in U.S. and U.K. Business Entities*, in RESEARCH HANDBOOK OF FIDUCIARY LAW, *supra* note 165, at 285, 187, 288–89.

167. Bernard S. Sharfman, *Shareholder Wealth Maximization and its Implementation Under Corporate Law*, 66 FLA. L. REV. 389, 414 (2014) (“The *Unocal* test is considered an intermediate standard of review typically referred to as ‘enhanced scrutiny.’”).

168. 506 A.2d 173 (Del. 1986).

169. 493 A.2d 946 (Del. 1985).

170. *Revlon*, 506 A.2d at 182.

company, *Unocal* requires the board to show that it reasonably believed that such a takeover would be a threat to corporate policy and effectiveness and that its responsive actions were reasonable in relation to that threat.¹⁷¹ In a data-driven merger, if law recognized the value of the data as part of the company's formal valuation, its value would factor into the analysis to protect target shareholders under *Revlon* and *Unocal*.

For example, in the context of a threat of hostile takeover the law presumes that directors act in their own interest when they attempt to block the takeover.¹⁷² The law therefore imposes an enhanced duty which calls for judicial examination at the threshold before the protections of the business judgment rule may be conferred.¹⁷³ In a data-driven merger, like the Musk acquisition of Twitter, to properly assess the threat of Elon Musk's actions under *Unocal* would require the Twitter board to properly factor in not just the value of the data, but also whether Musk posed a threat to the proper protection of that data, and whether he intended to use the data in violation of law posing a risk to the valuation of the company for the shareholders.

Although *Unocal* presumes that directors are acting in their own best interest when they make moves to block a takeover—because presumably a new set of shareholders will replace them¹⁷⁴—in the case of data-driven mergers, if directors hold proprietary information that shareholders cannot access about the nature and value of the company's data, that information may enable the directors to meet the heightened greater than business judgment rule standard. In the context of Musk's acquisition of

171. *Unocal*, 493 A.2d at 955.

172. Michal Barzuza, *The State of State Antitakeover Law*, 95 VA. L. REV. 1973, 1981 (2009) (noting that *Unocal* applies “when the firm receives a hostile bid—an offer to acquire shares from shareholders at a specified price, typically at a significant premium to market price” and that “[i]n this situation, when managers rely on defensive tactics in order to remain independent . . . Delaware courts apply the *Unocal* standard”).

173. *Id.* (“Under *Unocal*, the use of defensive tactics is valid only if managers can show that there was a cognizable threat to their firm's policy and that the defensive measure in question is proportional to the threat posed.”) (citing *Unocal*, 493 A.2d at 955); Sharfman, *supra* note 167, at 414 (“The *Unocal* test can be thought of ‘as a conditional business judgment rule.’ That is, in order for the defensive measure to receive the protection of the business judgment rule, the directors must first pass the *Unocal* test.”).

174. Sharfman, *supra* note 167, at 414 (explaining that the *Unocal* test “is necessary because directors may be conflicted and ‘acting primarily in [their] own interests,’ such as for purposes of trying to entrench themselves in office, when responding to a takeover threat that is either imminent or in the future”) (citing *Unocal*, 493 A.2d at 954; *Moran v. Household Int'l, Inc.*, 500 A.2d 1346, 1349–50 (Del. 1985)).

Twitter, for example, recall that after Musk's April 14, 2022 offer to buy Twitter stock at \$54.30 a share, the Twitter board adopted a poison pill that would sell new, low-priced stock to public shareholders if Musk grew his ownership by another six percent.¹⁷⁵ Scholars have openly debated whether the Twitter board had the power to adopt the poison pill under the circumstances.¹⁷⁶ If the Twitter board knew, or had reason to know,¹⁷⁷ that Musk's offer was low in light of Musk's actual purpose in acquiring the company—the value of Twitter's data for commercial purposes other than generating advertising revenue—using defensive measures against Musk's offer would likely pass the higher *Unocal* standard.¹⁷⁸ Instead of justifying the poison pill with vague references to ensuring payment of an appropriate control premium and “providing the Board sufficient time to make informed judgements and take actions that are in the best interests of shareholder,”¹⁷⁹ the board could justify the defensive measure because Musk posed a threat to the company's policies regarding its key asset—the data. By recognizing data as a formal asset that forms part of the company's formal value, the board could raise concerns about data protection, Musk's capacity to lawfully share and use Twitter data in his other ventures, and to challenge the proposed share price as inadequate. Viewed in such a light, a

175. Lipton, *supra* note 16, at 14.

176. See, e.g., Sharfman, *supra* note 163, at 414 (arguing the poison pill was an appropriate response); Gordon, *supra* note 21 (questioning the Twitter board's power to adopt the poison pill).

177. Notably, at least one member of Twitter's board of directors at the time that Musk made his offer and the board adopted the poison pill was the CEO of private equity firm Silver Lake, which had previously worked with Musk on financing for taking Tesla private. Greg Roumeliotis & Krystal Hu, *Twitter Adopts 'Poison Pill' As Challenger to Musk Emerges*, REUTERS (Apr. 15, 2022, 4:54 PM), <https://www.reuters.com/technology/twitter-adopts-poison-pill-fight-musk-2022-04-15/>. Such connections, particularly when paired with Musk's open criticism of Twitter's over-reliance on advertising revenue, make it quite likely that the data purpose for Musk's acquisition would not be difficult to uncover. *Id.*

178. Barzuza, *supra* note 172, at 1981–82 (noting that in the ordinary case, poison pills can satisfy the proportionality standard).

179. Twitter, Inc., *Press Release Twitter Adopts Limited Duration Shareholder Rights Plan, Enabling All Shareholders to Realize Full Value of Company*, PRN NEWS WIRE (Apr. 15, 2022, 12:10 ET), <https://www.prnewswire.com/news-releases/twitter-adopts-limited-duration-shareholder-rights-plan-enabling-all-shareholders-to-realize-full-value-of-company-301526627.html>.

poison pill neither appears coercive or preclusive and likely falls within the range of reasonableness.¹⁸⁰

Revlon, for its part, imposes a duty on a board to maximize the company's value by selling it to the highest bidder when they put the company up for sale: "The directors' role changes from defenders of the corporate bastion to auctioneers charged with getting the best price for the stockholders at a sale of the company."¹⁸¹ Musk's allegations about bots on the platform highlights what is necessary to get shareholders the best price in a data merger—disclosing information about data and its potential value to all buyers. If that information is confidential, proprietary, or difficult to value, how can directors disclose the data to have a proper auction? Corporate governance law needs to further develop to address the role that data plays in the valuation of the modern company. Failure to do so may lead to a corporate governance gap in the context of data-driven mergers and acquisitions. Without the proper framework within which to talk about and formally value data, directors may find it impossible to fulfill their *Revlon* duties in the context of a data-driven merger or acquisition.

Formal inclusion of the value of data as part of a company's valuation would also expand the rights of shareholders to protect themselves in the face of a data-driven merger or acquisition. Section 262 of the Delaware General Corporate Law entitles a shareholder appraisal or "dissenters' rights," which provide for a judicially determined "fair value" of shares.¹⁸² Section 262 gives objecting shareholders appraisal rights in certain mergers,¹⁸³ but

180. Barzuza, *supra* note 172, at 1983 ("In *Unitrin*, the court held that a defensive measure that is neither preclusive nor coercive is merely required to be within 'the range of reasonableness.')" (citing *Unitrin, Inc. v. Am. Gen. Corp.*, 651 A.2d 1361, 1387–88 (Del. 1995)).

181. *Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.*, 506 A.2d at 182 (Del. 1986); see also Sharfman, *supra*, note 167, at 398 (explaining that the board's duty becomes "to seek the best available price . . . when a company embarks on a transaction—on its own initiative or in response to an unsolicited offer—that will result in a change of control.") (citing *Lyondell Chem. Co. v. Ryan*, 970 A.2d 235, 242 (Del. 2009)).

182. DEL. CODE ANN. tit. 8, § 262 (2023).

183. Yair J. Listokin & Inho Andrew Mun, *Rethinking Corporate Law During a Financial Crisis*, 8 HARV. BUS. L. REV. 349, 382 (2018) ("Under Section 262 of the DGCL, shareholders that did not vote in favor of a merger have this appraisal right in front of the Chancery Court, when the merger is effectuated pursuant to [Sections] 251-258, 263, or 264 and when shareholders follow specified procedures to perfect their rights and meet other criteria.").

requires proper valuation.¹⁸⁴ Seeking appraisal of a company whose value is heavily based on data could be a simple solution—if it is possible to disclose that data to an expert and if an expert with the ability to value that data exists. The parties would need experts who are familiar with the type of data to give it proper value, but also who can properly factor in the loss of value for improperly managing personal information and adhering to privacy protocols.¹⁸⁵ Appraisal is about getting shareholders a fair price, but it is unclear how the market prices a data-driven merger.¹⁸⁶ An appraisal of Twitter may have defaulted to what has become the recent standard in Delaware—the publicly traded stock price.¹⁸⁷ However, it remains unclear whether the public price of Twitter was ever an accurate valuation. Requiring proper inclusion of data's value in the formal valuation of the company can resolve this uncertainty and provide shareholders with additional tools to help mitigate the harms they may suffer in the face of a data-driven merger.

B. Properly Cabining Data-Driven Mergers and Acquisitions
May Require Making Data Protection Part of Corporate
Governance.

While corporate governance can help expand the tools available to the board of a target company and can potentially trigger additional shareholder protections in the face of a data-driven merger or acquisition, identifying the data-driven merger or acquisition as such may prove difficult as a practical matter. This Article has argued for the application of a data lens to help

184. Scott Callahan, Darius Palia & Eric Talley, *Appraisal Arbitrage and Shareholder Value*, 3 J.L. FIN. & ACCT. 147, 148 (2018) (“When sought by an eligible shareholder, appraisal obliges a court to ‘determine the fair value of the shares’ of the target corporation, ‘taking into account all relevant factors’ and with no explicit assignment of the burden of proof.”) (citing Del. Code. Ann. tit. 8, § 262(h)).

185. Callahan et al., *supra* note 184, at 148-149 (explaining that fair valuation in the appraisal process relies on “modern tools of financial valuation” and involve competing experts).

186. This is because it remains unclear how the market prices data, particularly when the data is sought for its prediction value—the specific value form produced from the cultivation and accumulation of social data.” Parsons & Viljoen, *supra* note 43, at 3. “Prediction value does not always reduce quickly or neatly to exchange value (i.e. a monetary price), which is a problem because many areas of law do not register, apprehend, or consider significant forms of value production that predate and/or do not convert into exchange value.” *Id.* at 4–5.

187. See Lynn Bai & William A. Murphy, *Shareholder Appraisal Rights: Delaware's Flawed Market-Out Exception*, 56 U. MICH. J.L. REFORM CAVEAT (2022).

evaluate the role of data in driving any corporate transaction and used a backward-looking case study to demonstrate how applying a data lens could reveal a deeper transactional purpose than might be immediately apparent. Without recognition of the importance of data to the company, however, boards and shareholders may not be in the best position to identify and protect against a data-driven merger or acquisition. As a result, properly cabining data-driven mergers and acquisitions may require integrating the idea of approaching corporate activities through a data lens into the fabric of corporate governance. For example, corporate governance rules may need to incorporate some level of data protection and privacy into the state corporate governance framework.

By way of brief background, the collection of data from consumers largely relies on a regime of notice and choice.¹⁸⁸ Generally speaking, companies can collect data as they see fit so long as they tell consumers what they are doing in a privacy notice and offer some choice to consumers about whether to share data.¹⁸⁹ Companies increasingly saw the value of both the data they intentionally collected and the data exhaust almost unintentionally collected.¹⁹⁰ As a result, the data economy exploded and a number of new privacy-concerning market practices appeared, including market manipulation¹⁹¹ through nudges¹⁹² and dark patterns.¹⁹³ The desire to create increasingly powerful AI, both for the purposes of nudging consumers to make certain purchases, and for the purpose of selling AI-driven tools and services, has only increased corporate desire to accumulate massive amounts of data.¹⁹⁴ The rise of corporate data stores as

188. Woodrow Hartzog & Neil Richards, *Privacy's Constitutional Moment and the Limits of Data Protection*, 61 B.C. L. REV. 1687, 1691 (2020).

189. *Id.*

190. ZUBOFF, *supra* note 13, at 8.

191. Jon D. Hanson & Douglas A. Kysar, *Taking Behaviorism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420, 1505–24 (1999).

192. RICHARD THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (2008) (describing how to use cognitive science strategies to nudge people and entities to do certain things).

193. Neil Richards & Woodrow Hartzog, *A Duty of Loyalty for Privacy Law*, 99 WASH. U. L. REV. 961, 974–75 (2021) (“Dark patterns are ‘user interfaces whose designers knowingly confuse users, make it difficult for users to express their actual preferences, or manipulate users into taking certain actions.’”) (quoting Jamie Luguri & Lior Jacob Strahilevitz, *Shining a Light on Dark Patterns*, 13 J. LEGAL ANALYSIS 43, 43 (2021)).

194. David Shaw & Daniel W. Engels, *The Data Market: A Proposal to Control Data About You*, 2 SMU DATA SCI. REV. 1, 2 (2019) (“The ability to gain value from the analysis

both a threat to personal privacy and a real corporate compliance risk caused a variety of scholars to consider the intersection of corporate governance and data protection from a variety of angles.

For example, scholars have previously raised the idea of incorporating data protection into corporate governance by, for example, considering cybersecurity risk part of a corporate board's monitoring and oversight responsibilities.¹⁹⁵ Scholars have also proposed the inverse—integrating concepts from corporate governance into privacy law.¹⁹⁶ In that context, Professors Richards and Hartzog argue that a duty of loyalty should feature as a key element of an “information relationship”—a relationship “in which human information changes hands, often as part of the delivery of a service such as search engine results.”¹⁹⁷ In this formulation, companies that collect data from consumers would be prohibited from “designing technologies and processing data that conflicts with the trusting parties’ best interests, up to the limits of the relationship between the parties.”¹⁹⁸ Another approach identified “information fiduciaries”—companies that provide certain network services involving the collection, analysis, use, sale, and distribution of personal information—and argued for the imposition of fiduciary duties when such companies misuse or misappropriate consumer data.¹⁹⁹ Some scholars view the imposition of a duty of loyalty in privacy law generally or to information fiduciaries specifically as potentially creating a conflict with core corporate governance duties of loyalty and care that directors already owe by virtue of their office.²⁰⁰ One scholar attempts to mitigate that conflict by assigning the information fiduciary role solely to a corporate data protection officer.²⁰¹

of huge data sets combined with the ease with which such data sets may be created and distributed with modern networks and computing systems has resulted in a data economy rife with over-collection and over-distribution of private data.”).

195. Benjamin P. Edwards, *Cybersecurity Oversight Liability*, 35 GA. ST. U. L. REV. 663 (2019).

196. Richards & Hartzog, *supra* note 193.

197. *Id.* at 964.

198. *Id.* at 968.

199. Jalk M. Balkin, *Information Fiduciaries and the First Amendment*, 49 U.C. DAVIS L. REV. 1183, 1186 (2016).

200. Lina M. Khan & David E. Pozen, *A Skeptical View of Information Fiduciaries*, 133 HARV. L. REV. 497, 523 (2019).

201. Zhaoyi Li, *Layered Fiduciaries in the Information Age*, 98 IND. L.J. 625, 643–45 (2023) (“This paper argues that DPOs, instead of companies, should take the information fiduciary duty and fulfill their duty of care and duty of loyalty to end-users.”).

These proposals may help mitigate the risk to corporations from cybersecurity breaches and increase user privacy by relying on certain corporate governance concepts like fiduciary duties. However, the proposals do not consider the broader corporate governance and capital markets implications of data-driven mergers for the increasingly complex data economy. Indeed, a data-driven merger is itself an information relationship—a transaction in which human data changes hands from one corporate entity to another, thereby fundamentally transforming the information relationship users believed themselves to be entering at the outset of engaging in the information relationship. Further, the nature of fiduciary litigation is such that inquiries into breaches will occur *ex post*—at the conclusion of the data-driven merger or acquisition. As a result, these proposals will not prevent consumer privacy harm in the context of data-driven mergers. That does not mean, however, that corporate governance cannot help mitigate privacy harms.

Indeed, if privacy and data protection were integrated into the fabric of corporate governance rules for data-driven mergers and acquisitions, the law may be able to address both the potential exacerbation of consumer privacy harms through such transactions and the potential financial harms facing shareholders due to the opacity surrounding the purpose of some data-driven mergers. If the value of data becomes part of the core elements of overall corporate valuation, greater transparency into corporate data practices may be able to transform corporate approaches to collecting, storing, using, selling, and transferring data because questions about such practices will become relevant to the capital markets. Further, data protection and cybersecurity practices by data-driven companies would become relevant to the capital markets. If such information about consumer privacy and data protection practices becomes relevant to the capital markets, such information could become material information and cause a cascade of corporate governance effects at both the state and federal levels. Indeed, in the case of public companies, the materiality of data-related information may even help fill some of the existing data gaps in the federal securities laws. By examining Musk's data-driven acquisition of Twitter through a data lens, this

Article illuminated a new arena for potential inquiry into the interplay between corporate governance and privacy law.²⁰²

CONCLUSION

The Musk acquisition of Twitter, its conversion to X, and its clear relation to Musk's other AI-related and data-centric companies xAI,²⁰³ Neuralink, Solar City, Tesla, and Tesla Energy, opens the door for increased scholarly and legal attention to the impact of data-driven mergers and acquisitions on issues that fall squarely within the realm of corporate governance, such as preventing shareholder and market harm from opaque corporate transactions. This Article takes the first investigative step toward more fully understanding the intersection between data-driven mergers and acquisitions and corporate governance. The Article first made the case that the Musk acquisition of Twitter, and indeed, the entire Musk-Twitter saga, can only fully be understood through a data lens, and that once applied, the relatively hidden linkages between Musk's many corporate endeavors reveal that he has amassed a data empire. Doing so offered a window into the importance of using a data lens when approaching what otherwise seemed like a regular corporate governance dispute and shined a light on the fact that even when data-driven mergers do not rise to the level of an anti-competition concern they can nevertheless cause market harms that corporate governance is designed to address.

The Article then revealed that one major source of corporate governance rules, the federal securities laws, suffer from data gaps. Namely, federal law fails to require companies like Twitter, Tesla, and X to disclose the future purposes to which the data they collect may be put. In fact, due to the potentially speculative nature of such data uses, federal securities laws disincentivize disclosure of such information via voluntary disclosures. These data gaps have real consequences on the market. Indeed, both Tesla and Twitter shareholders experienced negative repercussions from the way the Musk acquisition of Twitter played out. Some of the

202. We intend to further explore this inquiry in future work. We anticipate that a new approach to consumer privacy and data protection through corporate governance beyond fiduciary duties will be particularly salient in light of objections to current proposals and recent developments in privacy law.

203. It even shares part of X's name!

controversies could have been avoided if the data purpose of the acquisition was made clear.

Considering the data gaps in federal securities laws, other areas of corporate governance need to step in to ensure shareholders remain protected. While we intend to further explore the potential for other areas of federal law,²⁰⁴ this Article argues that state law can provide an as yet under-explored line of defense against the negative externalities of data-driven mergers and acquisitions. First, the fact that a data-merger is, in fact, a data-merger can be made more transparent by including the value of a company's data to its current and future revenue streams as part of the company's formal valuation metrics. Information about such a core element of a business model may move such information from a disincentivized topic of voluntary disclosure to a topic for required disclosures. Further, including data value in a company's formal valuation expands the target board's toolbox by providing a clear path to satisfying the heightened fiduciary duties that apply in the context of a hostile takeover, such as Twitter's use of a poison pill to repel Musk. Finally, applying a data lens to corporate assets and transactions may impact target shareholder appraisal rights. Each of these corporate governance impacts of data-driven mergers and acquisitions signal that data-related market harms can no longer be siloed into either the antitrust or big technology company arenas. The Musk data-driven corporate plan involves everything from large public companies like Tesla to small start-ups like xAI. Corporate governance needs to better account for the data-driven nature of every company, not just the mega-technology companies. Importantly, if corporate governance can better account for the increasingly data-driven nature of every company,

204. For example, antitrust law may have a role to play in preventing data empires like the one amassed by Musk from harming investors and consumers alike. We intend to explore this further in future research. Others have considered the intersection of data and antitrust in other contexts and other merger and acquisition models. *See, e.g.*, STUCKE & GRUNES, *supra* note 45; Castellanos Pfeiffer, *supra* note 45; Chirita, *supra* note 45; Lynskey, *supra* note 45; Herbert Hovenkamp, *Antitrust and Platform Monopoly*, 130 YALE L.J. (2021); Maurice E. Stucke, *Should We Be Concerned About Data-Opolies?*, 2 GEO. L. TECH. REV. 275 (2018); Maurice E. Stucke & Allen P. Grunes, *Introduction: Big Data and Competition Policy*, in *BIG DATA AND COMPETITION POLICY* (2016); D. Daniel Sokol & Roisin Comerford, *Antitrust and Regulating Big Data*, 23 GEO. MASON L. REV. 1129 (2016); *see also* sources *supra* note 38. Notably, much of this literature focuses on the impact of big social media and other Internet platforms. We intend to investigate the extent to which other data empires exist that look more like the one that Musk amassed, with data generation across multiple sectors harnessed to power artificial intelligence.

it may play a pivotal role in finding new levers to turn in the quest to increase consumer privacy and improve consumer data protection.

Ultimately, this Article proposes that using a data lens become a core part of how the law and legal scholars approach corporate governance issues. Sometimes doing so will reveal no real data-driven issue to speak of. On other occasions, applying a data lens will reveal that what initially appeared to one billionaire's very odd, and perhaps even haphazard, approach to acquiring, and then running, a social media company was actually a calculated data play with significant corporate governance consequences for the shareholders of both the target company and other companies in the related data-driven corporate portfolio, and for the consumers who give up their data in the information marketplace.