Indirect Investor Protection: The Investment Ecosystem and Its Legal Underpinnings

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Holger Spamann
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Abstract

This paper argues that the key mechanisms protecting portfolio investors in public corporate securities are indirect. They do not rely on actions by the investors or by any private actor charged with looking after investors' interests. Rather, they are provided by the ecosystem that investors (are legally forced to) inhabit, as a byproduct of the self-interested, mutually and legally constrained behavior of third parties without a mandate to help the investors such as speculators, activists, and plaintiff lawyers. This elucidates key rules, resolves the mandatory vs. enabling tension in corporate/securities law, and exposes the current system's fragile reliance on trading.

Keywords: Investor Protection, Index Funds, Market Efficiency, Activism, Activist Hedge Fund, Private Equity, Plaintiff Lawyers, Contractarian Model of Corporate Law, Mandatory Law

JEL Classifications: G34, G38, K22

Holger Spamann
Lawrence R. Grove Professor of Law
Harvard University, Harvard Law School
Griswold 307, 1563 Massachusetts Ave
Cambridge, MA 02138, United States
phone: +1 617 496 6710
e-mail: hspamann@law.harvard.edu.

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Holger Spamann[*]

This paper argues that the key mechanisms protecting portfolio investors in public corporate securities are indirect. They do not rely on actions by the investors or by any private actor charged with looking after investors' interests. Rather, they are provided by the ecosystem that investors (are legally forced to) inhabit, as a by-product of the self-interested, mutually and legally constrained behavior of third parties without a mandate to help the investors such as speculators, activists, and plaintiff lawyers. This elucidates key rules, resolves the mandatory vs. enabling tension in corporate/securities law, and exposes the current system's fragile reliance on trading.

[*] Lawrence R. Grove Professor of Law, Harvard Law School; hspamann@law.harvard.edu. For helpful comments and conversations, I thank Jennifer Arlen, Bobby Bartlett, Alon Brav, Tony Casey, Emiliano Catan, Thomas Coendet, Tom Cunningham, Alex Edmans, Andreas Engert, Luca Enriques, Elisabeth de Fontenay, Jeff Gordon, Assaf Hamdani, Howell Jackson, Marcel Kahan, Louis Kaplow, Vic Khanna, Mike Klausner, Adi Libson, Jessica Ljustina, Peter Molk, John Morley, Michael Ohlrogge, Elizabeth Pollman, Gabriel Rauterberg, Adriana Robertson, Ed Rock, Mark Roe, Roberta Romano, Bill Rubenstein, Sarath Sanga, Kathy Spier, and participants at the Corporate Law Academic Webinar Series (CLAWS), the Conference on Executive Power at the University of Chicago Law School (especially my discussants Emiliano Catan and Anne O'Connell), The Public Corporations at a Crossroads conference at Washington University in St. Louis (especially my commentators Mariana Pargendler and Joel Seligman and the convener Andrew Tuch), the research seminar of the Center for Advanced Studies on the Foundations of Law and Finance at Goethe University, the University of Tübingen (especially my discussants Christian Koziol and Christine Osterloh-Konrad), the Max-Planck-Institute for Tax Law and Public Finance, the University of Oxford's Business Law Workshop, Hengeler Mueller, Berkeley's, NYU's, and Columbia's law & economics workshops, Harvard Law School's corporate lunch, law & economics seminar, and faculty workshop, Reinierfest, and the 2019 annual meetings of the American Law & Economics Association and of the European Association of Law & Economics. I thank Jim An, Rosina Curren, Phoebe Lockhart, Amelia Ricketts, and Stephan Strass for excellent research assistance. I gratefully acknowledge financial support from the Harvard Law School summer research program, the RC Clark Corporate Governance Fund, the Israel Institute for Advanced Study, and the Center for Advanced Studies on the Foundations of Law and Finance at Goethe University.

INTRODUCTION

Portfolio investment in public corporate securities is a miraculous affair. Tens of trillions of dollars are entrusted to corporations and their managers by or on behalf of tens of millions of ultimate beneficiaries.[1] The vast majority of these beneficiaries lack the time and expertise to value and manage these investments; most do not even try. And yet, several decades later, they get their money back with a sizeable return.[2] What mechanisms ensure that their money is not squandered on bad investments or, once invested, lost to mismanagement or to transactions favoring savvier players? The standard answer is what I call *direct* investor protection: information and governance rights that investors scour and exercise themselves or through professional asset management—e.g., a mutual or pension fund.[3] This paper's answer is *indirect* investor protection: the ecosystem around public corporate securities obviates the need for information or governance rights for the vast majority of investors. A few others do the work—unintentionally or even unwittingly, constrained by rules and competition.

Section I reviews the standard answer and its well-known problems. The problems of direct investor protection are obvious for retail investors but extend far beyond them. Even large investors that have the skills, means, and incentives to process the information and exercise their rights often *choose* not to do so, for example pension funds in their passive portfolio or a hedge fund temporarily "parking" some money in a diversified portfolio. Other large investors may lack the skills. Retail investors clearly do. Retail investors cannot possibly digest the necessary information themselves. Their fund managers might, but theory and empirics suggest they will be at most partially effective. Passive (index) funds eschew selection of investments by definition and, competing on costs, have low incentives, if any, to exercise governance rights.[4] Actively managed retail funds have better but, barred from charging performance fees, still weak incentives, and in any event have historically been mostly inactive in governance and notoriously underperformed the market, at least net of fees. To the extent direct mechanisms of investor protection do not do the work, which do?

Section II presents the first half of this article's descriptive claim, which is a conceptual generalization of known special cases. It argues that the central mechanisms of portfolio investor protection in public securities markets—beyond deterring theft, fraud, and fees—are indirect: they do not rely on the investors themselves, or on their agents (such as their fund managers), or on any other private party directly charged with looking after the investors' interests. Rather, most investors' main protections in public markets are provided as a *byproduct* of the (mostly) self-interested but mutually and legally constrained behavior of (mostly) sophisticated *third parties* without a mandate to help the investors, such as hedge funds and plaintiff lawyers. Consequently, little would

[1] As of year-end 2019, self-directed retirement accounts alone held USD 22 trillion. *2021 Investment Company Fact Book*, INV. CO. INST., 2021, at 176.

[2] For example, between 1999 and 2018, private defined contribution pension plans with more than 100 participants generated a geometric mean annual return of 4.9%. U.S. DEP'T OF LABOR, PRIVATE PENSION PLAN BULLETIN HISTORICAL TABLES AND GRAPHS 1975–2018, Table E20 (Jan. 2021) (perma.cc/9KRT-XV7T).

[3] *Infra* I.

[4] I use "index fund" in the colloquial sense of a fund that (1) tracks an external index (2) that is broadly diversified and (3) that rarely adjusts its composition. Not all of the text's arguments about "index funds" require all three elements, but the bulk of the "index fund" money is in funds satisfying all. The technical sense of the term may be broader and include funds only satisfying (1), or perhaps not even that (if the "index" is bespoke to the fund). *See generally* Adriana Z. Robertson, *Passive in Name Only: Delegated Management and "Index" Investing*, 36 YALE J. ON REG. 795 (2019).

be lost if most investors and their asset managers picked their portfolios randomly and never exercised their control rights except for minimally informed voting by large investors and managers. Similarly, large, sophisticated investors can safely "let their guard down" in public markets and hold (part of) their money in a passive diversified portfolio. By contrast, such a hands-off approach would be a recipe for disaster in the private securities markets, from which retail investors are generally barred: there, unsophisticated or simply inattentive investors could lose their shirt by buying overpriced or selling underpriced securities, or by failing to monitor their issuers.

Two main categories of indirect mechanisms protect in public markets. First, competition between speculators ensures that public market prices for stocks and other liquid securities are at least roughly equal to their fundamental value, obviating the need for careful selection of assets—including their governance—by investors and their agents. Second, once investors' money is invested in a portfolio company, diversion or mismanagement of this money by the portfolio company's managers or controlling shareholders is policed by plaintiff lawyers, activists, and takeovers.

Speculators, plaintiff lawyers, activist hedge funds, and buyers are not motivated by a concern for the (other) investors. Nor are they legally mandated to have such a concern (with the partial exception of plaintiff lawyers). But under the rules in place, they (mostly) cannot make money without helping others. This is so in part because they constrain each other, i.e., the protection they provide is an emergent property of an interdependent ecosystem: plaintiff attorneys police collusion between activists, buyers, and management; prices informed by speculators constrain activists to value-enhancing interventions; buyers compete with each other for target firms; and speculators constrain each other by competing to eliminate pricing inaccuracies.

Section III—the second half of the article's descriptive claim—shows how this ecosystem is underpinned by rules (understood broadly to include everything from federal legislation to corporate bylaws). Indirect investor protection requires rules and their enforcement just like direct investor protection would. The difference is which private actors fulfill which important roles, and hence *which* rules are important. Indirect investor protection requires rules restricting its protagonists to gain if and only if (other) investors gain, and that steer unsophisticated investors into markets where the indirect mechanisms are active. This analysis unifies the evaluation of well-understood issues such as attorney fee awards and 13D disclosures. It also elucidates otherwise puzzling rules, such as those forcing open-end mutual funds to hold mostly liquid assets.

It follows naturally that some, but only some, investor-protecting rules need to be mandatory (generally in the form of binding legislation[5]): those ensuring interest alignment of sophisticated and unsophisticated investors. Section IV addresses this question, which has hitherto lacked a convincing answer. In the standard, direct investor protection frame, mandatory corporate/securities law, especially for corporate governance, is paradoxical: If investors can decide which businesses to invest in, then those same investors should also be able to decide which governance terms to invest in. Attempts to resolve this paradox within the direct investor protection frame by appeal to externalities on other firms or to contracting failures have been unsuccessful. By contrast, the paradox dissolves in the indirect investor protection frame. Unsophisticated investors do not need to understand the business of their portfolio companies because the smart money does the work for them. However, unsophisticated investors cannot rely on the smart money's scrutiny of the rules—including the rules of the market—to the extent rules can be written precisely to allow the smart money to abuse the dumb money. To the extent rules are priced, there is no problem. But the

[5] Other sources of mandatory rules are possible. *See infra* note 137.

pricing mechanism itself requires rules, which a regulator may have to set to prevent abuse. Unsophisticated investors and their funds should also be warned against—and perhaps barred from—private markets, where indirect investor protection is mostly inoperative.

Section V exposes indirect investor protection's fragile reliance on trading, which is threatened by the rapid rise of passive investing. Speculators and activist hedge funds make money by buying low and selling high. Those on the other side of the trade lose. Meanwhile, passive investors—who do not trade—receive the benefits (unbiased informative prices, activist interventions) for free. This should not be an equilibrium—who would accept losing money forever?—and the extremely rapid growth of index funds suggests that it isn't. The more assets come to be held by passive investors, however, the less trading there will be, and hence the less subsidies may be provided to the governance and price discovery work of hedge funds and speculators. This may require new solutions to compensate socially valuable activity.

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Inchoately, indirect investor protection is already part of corporate and securities law discourse.[6] Proponents of takeovers and hedge fund activism argue that they deter and correct bad management and hence benefit all shareholders.[7] Courts award fees to plaintiff lawyers explicitly for the shared benefit they create.[8] The market efficiency literature has long noted efficient market prices' investor-protective function[9] and dependence on a relatively small number of professionally informed speculators.[10] Market prices' usefulness for internal firm governance is widely appreciated.[11] Finally, there is widespread skepticism about direct investor protection, especially about retail investors' ability to protect themselves and about their fund managers' incentives to

[6] Traces can be found even in ADOLF A. BERLE & GARDINER C. MEANS, THE MODERN CORPORATION & PRIVATE PROPERTY (1932 [2017]), e.g., at 113-114 ("[whether] those in control of a modern corporation will also choose to operate it in the interests of the owners … will depend … on the checks on the use of power which may be established by political, economic, or social conditions.") and at 170 ("For protection the stockholder … must rely for the most part, not on legal rights, but on economic significances,—on an accumulation of conditions which will make it desirable or advantageous, for the purposes of the administration of the corporation, to recognize a participation more or less meeting [the shareholder's] expectations").

[7] *See* on takeovers Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110, 113 (1965) (adding: "Compared to this [takeover] mechanism, the efforts of the SEC and the courts to protect shareholders through the development of a fiduciary duty concept and the shareholder's derivative suit seem small indeed."); on activism Marcel Kahan & Edward B. Rock, *Hedge Funds in Corporate Governance and Corporate Control*, 155 U. PA. L. REV. 1021 (2007); Ronald J. Gilson & Jeffrey N. Gordon, *The Agency Costs of Agency Capitalism: Activist Investors and the Revaluation of Governance Rights*, 113 COLUM. L. REV. 863, 896-902 (2013) (hereinafter "Costs"); id., *The Rise of Agency Capitalism and the Role of Shareholder Activists in Making It Work*, 31 J. APP. CORP. FIN. 8 (2019) (hereinafter "Rise"); *see also* Marcel Kahan & Edward B. Rock, *Hedge Fund Activism in the Enforcement of Bondholder Rights*, 103 NW. U. L. REV. 281 (2009) (focusing on hedge funds' positive impact on bondholder, rather than shareholder, rights).

[8] Americas Mining Corp. v. Theriault, 51 A.3d 1213, 1252–62 (Del. 2012); Sugarland Indus., Inc. v. Thomas, 420 A.2d 142, 147–48 (Del. 1980).

[9] *See, e.g.*, BURTON G. MALKIEL, A RANDOM WALK DOWN WALL STREET (1973); *also see* id., *The Efficient Market Hypothesis and Its Critics*, 17 J. ECON. PERSPS. 59, 59 (2003) (hereinafter ECMH). Again, traces can be found even in BERLE & MEANS, *supra* note 6, e.g., at 265 ("buy in the open market on the faith of the market appraisal").

[10] *See*, *e.g.*, Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984).

[11] *See*, *e.g.*, Jeffrey N. Gordon, *The Rise of Independent Directors in the United States, 1950–2005: Of Shareholder Value and Stock Market Prices*, 59 STAN. L. REV. 1465 (2007), and the references on stock-based executive compensation *infra* note 67

do it for them.[12]

However, the literature has not recognized the common theme, the interconnections, and the implications for mandatory rules and for passive investment. If "the most powerful device for protecting [investors is] liquid markets with professional investors setting the price,"[13] then the questions are which rules, if any, are required to create such markets, and why any other mandatory rules would be necessary; the literature has not satisfactorily answered either question.[14] Passive investment's rapid growth has triggered a vigorous debate on whether index funds have too much or too little (incentive to use) power—i.e., *direct* investor protection—but not its potential to undermine *indirect* investor protection.[15] Most policy debates and scholarship still assume that investors fend for their own rights.[16] To the extent commentators differentiate investor types, many

[12] See references in section I.

[13] FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 25 (1991); *cf.* id. 297–98 (concern for unsophisticated investors "disregards the role of markets in impounding information in prices"); Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 YALE L.J. 2359, 2378 (1998) ("Institutional investors' pricing determinations better protect unsophisticated investors than any of the SEC's mandated disclosure requirements").

[14] *See infra* IV.A-IV.B.

[15] *See infra* V. Concerns about excessive power have been raised by, e.g., Vanguard's late founder John C. Bogle, *Bogle Sounds a Warning on Index Funds*, WALL ST. J., Nov. 29, 2018, https://www.wsj.com/articles/bogle-sounds-a-warning-on-index-funds-1543504551; John C. Coates, *The Future of Corporate Governance Part I: The Problem of Twelve*, working paper (March 2019), https://ssrn.com/abstract_id=3247337, at 10–11. Missing incentives to use the power are identified by, e.g., Lucian A. Bebchuk, Alma Cohen & Scott Hirst, *The Agency Problems of Institutional Investors,* 31 J. ECON. PERSPS. 89 (2017). The most active discussion has circled around the allegedly anticompetitive effects of common ownership; for reviews, see Martin C. Schmalz, *Common-Ownership Concentration and Corporate Conduct*, 10 ANN. REV. FIN. ECON. 413 (2018); id., *Recent Studies on Common Ownership, Firm Behavior, and Market Outcomes*, 66 ANTITRUST BULL. 12 (2021); Matthew Backus, Christopher Conlon & Michael Sinkinson, *Empirical Studies of the Effects of Common Ownership*, manuscript (Feb. 12, 2022). To the extent *indirect* investor protection can continue to be provided by activist hedge funds and other non-diversified players, the competition concerns would largely disappear.

[16] For example, the official position of the SEC is focused on direct investor protection and does not differentiate by investor type (but see *infra* note 34 for hints at the SEC's unofficial position). *See*, *e.g.*, https://web.archive.org/web/20200719235748/https://www.sec.gov/Article/whatwedo.html, as of July 19, 2020 (perma.cc/S7CC-8732) (disclosure "provides a common pool of knowledge for *all* investors to use to judge *for themselves* whether to buy, sell, or hold a particular security" (emphasis added)). In this vein, the SEC's page for *retail* investors provides advice on how to research an investment and how to vote. *See* https://www.investor.gov/research-before-you-invest/research/researching-investments (perma.cc/W7R2-YAUJ); https://www.investor.gov/shareholder-voting (perma.cc/LHM2-95YC) (both last visited June 13, 2021). In the literature, the best recent reviews of corporate and securities law and corporate governance are organized around direct investor protection and provide at most a nod in the direction of indirect investor protection. *Cf.* REINIER KRAAKMAN, JOHN ARMOUR, PAUL DAVIES, LUCA ENRIQUES, HENRY HANSMANN, GERARD HERTIG, KLAUS HOPT, HIDEKI KANDA, MARIANA PARGENDLER, WOLF-GEORG RINGE & EDWARD ROCK, THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH (3rd ed. 2017) (e.g., chapter 9—explaining mandatory disclosure under the securities laws—recognizes that "more informative prices mean that potential buyers and sellers have less to fear that, by trading, they will lose money to counterparties who know more about the issuer's prospects than is already reflected in the market price" and even that "[t]herefore, participation in securities markets will be broader," but it seems to value the latter only for its "positive effect on market liquidity" and does not explain the need for a *mandatory* rule); Robert Bartlett & Eric Talley, *Law and Corporate Governance*, in 1 HANDBOOK OF THE ECONOMICS OF CORPORATE GOVERNANCE ch. 4 (2017) (mentioning takeovers in sec. 5.4, activists in sec. 5.7 and 6.2, plaintiff attorneys in sec. 2.5 apparently only to explain why derivative actions are controversial, and market efficiency nowhere); John Armour, *Shareholder Rights*, 36 OXFORD REV. ECON. POL'Y 314 (2020) (mentioning "entrepreneurial plaintiff attorneys" at 327, takeovers at 330, and executive pay at 331, but none of the other mechanisms discussed in this paper).

vilify the protagonists of indirect investor protection.[17] There have been only partial attempts to replace rational expectations equilibria with an interaction of rational and irrational agents or an ecosystem view in discussions of corporate/securities law and investor protection.[18]

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Five clarifications.

First, "investor protection" is understood capaciously in this article: anything that is necessary to generate high returns on large amounts of investment by many investors. This comprises virtually all traditional concerns of corporate and securities law, including agency cost. It encompasses not only the concern that investors get market rates of return, but also that these market rates are high (which requires, inter alia, a large supply of investable assets). Market rates are a market outcome that transcends interactions between individual firms and investors.[19] Nevertheless, indirect investor protection leveraged across countless individual market interactions increases market rates, in particular by improving project selection and reducing agency costs, as occasionally remarked in the text or footnotes.

Second, I leave aside three other grave dangers to investors: theft and embezzlement (especially at financial intermediaries), fees (for trading, advise, or asset management), and excessive

[17] *See, e.g.*, Martin Lipton, *Takeover Bids in the Target's Boardroom*, 35 BUS. LAW. 101, 104 (1979) ("It would not be unfair to pose the policy issue [of takeovers] as: *Whether the long-term interests of the nation's corporate system and economy should be jeopardized in order to benefit speculators interested not in the vitality and continued existence of the business enterprise in which they have bought shares, but only in a quick profit on the sale of those shares*?" (emphasis in original)); Study on Directors' Duties and Sustainable Corporate Governance: Final Report prepared by EY for the European Commission (July 2020), available at https://op.europa.eu/en/publication-detail/-/publication/e47928a2-d20b-11ea-adf7-01aa75ed71a1/language-en?mc_cid=664fe83cf0&mc_eid=657d91711d (perma.cc/S69B-3GD4), at 28 ("activist investors … place[] intense pressure on corporate boards to prioritise … short-term financial performance … at the expense of better employee compensation and stronger investments that are important for long-term productivity").

[18] The only formal equilibrium model combining rational and irrational agents that I am aware of in the area of corporate and securities law and investor protection writ large is Ryan Bubb & Patrick L. Warren, *An Equilibrium Theory of Retirement Plan Design*, 12 AM. ECON. J.: ECON. POL'Y 22 (2020). The most systematic ecological accounts of corporate and securities law and governance are those examining the co-evolution of corporations and their environment. *See* Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 644-646, 653-658 (1996); Lucian Arye Bebchuk & Mark J. Roe, *A Theory of Path Dependence in Corporate Ownership and Governance*, 52 STAN. L. REV. 127 (1999); Gilson & Gordon, *Costs*, *supra* note 7, 869-874; Dorothy S. Lund & Elizabeth Pollman, *The Corporate Governance Machine*, 121 COLUM. L. REV. 2563 (2021). The literature has paid most attention to the special case of the interaction of activist hedge funds and other institutional investors. See references *supra* note 7 and Jill Fisch, Assaf Hamdani & Steven Davidoff Solomon, *The New Titans of Wall Street: A Theoretical Framework for Passive Investors*, 168 U. PA. L. REV. 17, 50 (2019); Marcel Kahan & Edward B. Rock, *Index Funds and Corporate Governance: Let Shareholders be Shareholders* 100 B.U. L. REV. 1771, 1776-77 (2020). On bankruptcy, see Jared A. Ellias, The Law and Economics of Investing in Bankruptcy in the United States, Report prepared for the 2019 annual meeting of the Netherlands Association for Comparative and International Insolvency Law, https://ssrn.com/abstract_id=3578170 (analyzing the "American bankruptcy ecosystem[, which] is best understood as a complex system inhabited by bankruptcy judges, law firms, investment bankers and specialized investors."). In general finance, *see* J. Doyne Farmer, *Market Force, Ecology, and Evolution*, 11 IND'L & CORP. CHANGE 895 (2002); Maarten P. Scholl, Anisoara Calinescu & J. Doyne Farmer, *How Market Ecology Explains Market Malfunction*, 118(26) PROC. NAT'L ACAD. SCI. e2015574118 (2021); ANDREW W. LO, ADAPTIVE MARKETS: FINANCIAL EVOLUTION AT THE SPEED OF THOUGHT (2017).

[19] Though indirect investor protection is largely limited to public markets, rates will be roughly equal in private and public markets because many investors, particularly institutional investors, straddle both markets and can reallocate capital if returns are unequal.

risk (especially failure to diversify).[20] Direct investor protection has an important role in curbing them, particularly through criminal law enforcement (assisted by gatekeepers, particularly auditors), custody rules, fee regulations, and nudging towards diversified low-cost investments.[21] The present article covers what goes beyond: ensuring that the money is not only not stolen but invested well and not diverted slowly and (de facto) legally into others' pockets through executive compensation or other hard-to-catch means.[22]

Third, most mechanisms of indirect investor protection described in section II are only available for securities that are widely and openly traded (i.e., in public firms).[23] Normatively, this is the reason to restrict retail investors to such securities (III.C and IV.B). Private companies may contractually offer equal treatment rights. These echo indirect investor protection in as much as they allow investors to protect themselves not through their own time and expertise but by mimicking others who would rather not provide this protection and are not paid explicit compensation for it. Such rights include tag-along rights (the right to sell to an outsider on the same terms) and preemptive rights (the right to acquire new shares on the same terms).[24] However, private investments lack at least the crucial protections of competitive prices unless ways can be found to ensure that retail investors always invest on the same terms as sophisticated investors (cf. II.A and IV.B).

Fourth, indirect investor protection is not limited to investment in the (public) U.S. equity market, which I focus on for its importance, for emphasis, and for ease of exposition. In debt markets, distressed debt trading and funds arguably fulfill very similar functions to long/short equity and activist hedge funds in equity markets.[25] (Outside of distress, debt requires no or less indirect investor protection because it is less information sensitive and less governance intensive than equity, reducing both the opportunity and the need for smart money intervention.[26]) Abroad, most large

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[20] These three dangers are especially salient in investment advice and management, whereas the indirect investor protection mechanisms discussed in this paper concern the governance of portfolio companies and the trading of their securities. Nevertheless, the prevention of theft and embezzlement is also a precondition for functioning corporate governance. *See*, *e.g.*, Bernard Black, Reinier Kraakman, & Anna Tarassova, *Russian Privatization and Corporate Governance: What Went Wrong?*, 52 STAN. L. REV. 1731 (2000); Bernard S. Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 UCLA L. REV. 781, 811 (2001).

[21] *See generally* Howell E. Jackson, *To What Extent Should Individual Investors Rely on the Mechanisms of Market Efficiency: A Preliminary Investigation of Dispersion in Investor Returns*, 28 J. CORP. L. 671 (2003).

[22] The oxymoron "de facto legal" makes the point that at a high level of abstraction, there is no difference between theft and embezzlement on the one side and "diversion through hard-to-catch means" or even mismanagement on the other side. There may or may not be a difference in intent. Theft and embezzlement in a technical legal sense are or ought to be differentiated by the unambiguity of their elements (e.g., absence of required approvals; intentional misrepresentation) because this allows the use of drastic criminal punishment without great concern for type I errors (i.e., false convictions; it also facilitates enforcement by relatively unspecialized public prosecutors). The threat of drastic punishments is necessary to remove insiders' temptation simply to take the money and run; finer distinctions between legitimate and illegitimate business transactions can then be handled by subtler mechanisms. *Cf.* Holger Spamann, *Monetary Liability for Breach of the Duty of Care?*, 8 J. LEG. ANALYSIS 337 (2016) (describing the trade-offs involved in threatening sanctions and the comparative advantages of different mechanisms).

[23] This will usually, but it need not, coincide with registered securities listed on a registered exchange (*cf. infra* III.A, III.C, and IV.B).

[24] Merely having the right to participate in a transaction is not enough. To mimic, the unsophisticated and/or uninformed party also needs to know if the insiders are participating. *See* Jesse Fried & Holger Spamann, *Cheap-Stock Tunneling Around Preemptive Rights*, 137 J. FIN. ECON. 353 (2020); Mira Ganor, The Case for Non-Binary, Contingent, Shareholder Action, 23 U. PA. J. BUS. L. 390 (2021). Similarly, equal rights on one dimension—e.g., the cash sale price in tag-along right—are not enough if the insider can also get benefits on another dimension—e.g., a generous executive compensation package.

[25] *See generally* Ellias, *supra* note 18.

[26] *See* Bengt Holmström, *Understanding the role of debt in the financial system* 9–12 (BIS Working Paper No.

foreign markets feature all the mechanisms of indirect investor protection I discuss here, with the exception of plaintiff attorneys discussed below.[27] (The smaller ones may not, but that may be a reason why they are small, and they arguably do not perform the same function of matching firms' capital needs to large-scale retirement saving.) The actors described in this paper are exemplars of types of actors, the concrete instantiation of which may change over time.

Nevertheless, and finally, I do not claim that investment could not possibly be supported by alternative mechanisms. U.S. retail funds' passivity (*infra* I.C) is partly due to regulatory restrictions.[28] The U.S. capital market's traditional rival, the U.K., may have figured out a way to coax its retail asset managers into intelligently exercising their greater ex ante control of related party transactions to obviate the need for ex post control by plaintiff lawyers.[29] Perhaps the U.S.'s new rival, China, has discovered the secret to successful government guidance of investment.[30] What I do claim is that the U.S. capital market as it exists—by far the world's largest, comprising 39% of the world's market capitalization[31]—does rely on the mechanisms I discuss, and that if other countries do not, they either need substitute mechanisms or should be expected to have smaller markets.

479, Jan. 22, 2015), https://ssrn.com/abstract_id=2552018.

[27] On hedge fund activism outside the U.S., see, e.g., Marco Becht, Julian Franks, Jeremy Grant & Hannes F. Wagner, *Returns to Hedge Fund Activism: An International Study*, 30 REV. FIN. STUD. 2933, 2339, 2941 (2017); Lazard, 2020 Review of Shareholder Activism, https://www.lazard.com/media/451536/lazards-2020-review-of-shareholder-activism-vf.pdf (perma.cc/4DBV-7L5L); Jochen Hartmann, Matthias Pelster & Sönke Sievers, Shareholder Activism Around the Globe: Hedge Funds vs. Other Professional Investors, working paper (March 2021), https://ssrn.com/abstract_id=3800001 (descriptive statistics in Table I, Panel I).

[28] *See* Mark J. Roe, *Political Elements in the Creation of the Mutual Fund Industry*, 139 U. PA. L. REV. 1469 (1991) (arguing that the restrictions were adopted intentionally to limit funds' influence); MARK J. ROE, STRONG MANAGERS, WEAK OWNERS 102-123 (1994) (same); Bernard S. Black, *Agents Watching Agents: The Promise of Institutional Investor Voice,* 39 UCLA L. REV. 811, 813-814 (1992).

[29] *Cf.* John Armour, Bernard Black, Brian Cheffins & Richard Nolan, *Private Enforcement of Corporate Law: An Empirical Comparison of the United Kingdom and the United States*, 6 J. EMP. LEG. STUD. 687 (2009) (describing the U.K.'s very low levels of corporate litigation, particularly representative litigation in the style of a class action, and the reasons therefore); LOUISE GULLIFER & JENNIFER PAYNE, CORPORATE FINANCE LAW: PRINCIPLES AND APPLICATIONS 536-7 (3rd ed. 2020) (same); Paul L. Davies, *Related Party Transactions: UK Model*, in THE LAW AND FINANCE OF RELATED PARTY TRANSACTIONS 361 (Luca Enriques & Tobias Tröger eds. 2019) (describing approval requirements for related party transactions in the U.K.). The U.K. also has lower levels of shareholder activism but may compensate for this with greater ease of takeovers, i.e., with another mechanism of indirect investor protection. *Cf.* John Armour & David A. Skeel, *Who Writes the Rules for Hostile Takeovers, and Why?—The Peculiar Divergence of U.S. and U.K. Takeover Regulation*, 95 GEO. L.J. 1727, 1733-39 (2007) (describing the greater ease and higher incidence of hostile takeovers in the U.K.). By contrast, Australia has developed substantial representative litigation supported by third-party litigation funding, alongside an active public enforcement agency. *See* Olivia Dixon & Jennifer G. Hill, *Australia: The Protection of Investors and the Compensation for Their Losses*, in GLOBAL SECURITIES LITIGATION AND ENFORCEMENT 1063 (Pierre-Henri Conac & Martin Gelter eds. 2019).

[30] *Cf.* Tamar Groswald Ozery, *The Politicization of Corporate Governance: A Viable Alternative?*, AM. J. COMP. L. (forthcoming 2022) (describing the success of China's politicized corporate governance system over the last four decades and discussing whether it might be a viable model for the long term). *Also see* Dan W. Puchniak & Lan Luh Luh, *Independent Directors in Singapore: Puzzling Compliance Requiring Explanation*, 65 AM. J. COMP. L. 265 (2017) (describing Singapore's divergent yet very successful approach but acknowledging the unique geographical and political conditions of the small city state). In the 1980s, a voluminous literature analyzed the reasons why the Japanese keiretsu system was superior to the U.S. system – until it was not.

[31] *See Capital Markets Fact Book 2020*, SIFMA, at 7.

I. THE IMPLAUSIBILITY OF DIRECT INVESTOR PROTECTION

A. Investors Generally

In the standard account, investor protection is direct: investors have information and governance rights that they or their asset managers use to pick portfolios and to protect their investment.[32] As an empirical matter, this account is at least incomplete. Even large investors such as pension funds often keep some or all of their money in passive portfolios that eschew portfolio selection and, arguably, meaningful exercise of their governance rights.[33] To the extent they do so, these large investors *choose* to be protected *indirectly* rather than protect themselves directly. For retail investors, it is not even a choice—direct protection is simply not a realistic alternative for them, not even with the help of fund managers. This section focuses on retail because detailed information about large investors' portfolio allocation and operation is hard to come by and because retail's predicament means that direct investor protection could not possibly suffice, with important implications for the discussion of mandatory rules in section IV. Nevertheless, indirect investor protection benefits all investors—at least as an option (that is frequently exercised).

The inadequacy of direct protection for retail investors has long been recognized.[34] By themselves, retail investors cannot possibly digest the streams of relevant information, and they mostly do not exercise their governance rights (B).[35] Investment advisers—particularly fund managers—might help, but empirics and theory suggest that they are at best a partial solution (C). Readers familiar with these arguments may wish to skip ahead to the original sections II–V.

B. Individual Investors

The vast majority of retail investors lack the financial expertise to value a security or to vote sensibly (e.g., on a merger or an executive pay package).[36] But even a financial expert could not

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[32] See references *supra* note 16.

[33] *Infra* note 178 and accompanying text.

[34] *See* BERLE & MEANS, *supra* note 6; William O. Douglas & George E. Bates, *The Federal Securities Act of 1933*, 43 YALE L.J. 171, 172 (1933); William O. Douglas, *Protecting the Investor*, 23 (n.s.) YALE REV. 522, 523-524 (1934) (Douglas joined the SEC shortly after publication of this article and was SEC Chairman from 1937 to 1939 before becoming Associate Justice of the U.S. Supreme Court); SEC. & EXCH. COMM'N, DISCLOSURES TO INVESTORS – A REAPPRAISAL OF FEDERAL ADMINISTRATIVE POLICIES UNDER THE '33 AND '34 ACTS 51–52 (Mar. 27, 1969), http://www.sechistorical.org/museum/galleries/tbi/gogo_d.php ("The Wheat Report"); Homer Kripke, *The Myth of the Informed Layman*, 28 BUS. LAW. 631, 632 (1973); Gilson & Kraakman, *supra* note 10, at 641; Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 711, 713 (2006). For a review of the SEC's position through history, see Kenneth B. Firtel, *Plain English: A Reappraisal of the Intended Audience of Disclosure Under the Securities Act of 1933*, 72 S. CAL. L. REV. 851 (1999).

[35] I am putting aside the question whether the ultimate individual investors might be better placed to make the value judgments involved in environmental and social questions that increasingly occupy corporate governance debates (and that are the closest parallel to choices voters make in political elections). *Cf.* Oliver Hart & Luigi Zingales, *Companies Should Maximize Shareholder Welfare Not Market Value*, 2 J. L. FIN. & ACCTG. 247, 248 (2017) (contrasting shareholder value—a narrow focus on shareholders' financial wellbeing—with shareholder welfare—which also takes into account shareholders' non-financial values—and arguing that corporations should maximize the latter); Scott Hirst, *Social Responsibility Resolutions*, 43 J. CORP. L. 217 (2018) ("institutional investors … often do not follow the interests or the preferences of their own investors. … If such distortion is considered to be a problem, it could be addressed by institutions changing their voting policies"); Roberto Tallarita, *Stockholder Politics*, 73 HASTINGS L.J. (forthcoming 2022) (documenting the use of public-interest shareholder proposals by—mostly—a small number of specialized players and the resulting interaction with companies and shareholders).

[36] A few may do fine, *cf.* Joshua D. Coval, David Hirshleifer & Tyler Shumway, *Can Individual Investors Beat the Market?*, 11 REV. ASSET PRICING STUDIES 552 (2021) (top decile retail traders persistently outperform the market).

possibly select and monitor a sensible portfolio in their spare time without the aid of the indirect mechanisms described in section II, particularly without a market price. Not surprisingly, most retail investor shares are not even voted.[37]

Any sensible portfolio is diversified, i.e., it contains dozens, perhaps hundreds or thousands of securities. To assess any one of these securities independently (i.e., unaided by market prices) would require sifting through, first, dozens or hundreds of pages of dense legalese (corporate charter, bond indenture) and, second, large amounts of company-specific business information. SEC-mandated disclosures alone count in the hundreds of pages at initial issuance and again at periodic intervals. It is unrealistic to think that retail investors read these documents.

It would not be enough to read once. The information needs updating at every new investment (e.g., the monthly 401k contribution) and at every vote (e.g., at least annually for shares). To make things worse, issuers and other sellers of investments have incentives to design securities, financial products, and decisions specifically to exploit individuals' weaknesses.[38]

This does not mean that unsophisticated investors are completely naïve and can be exploited indefinitely. Even unsophisticated investors will eventually "learn" to avoid particular types of investments if enough of them get burned long enough, frequently enough, badly enough, or visibly enough. But this naïve learning is notoriously imprecise and ultimately self-defeating, as investors shun entire markets in reaction to past returns rather than select investments within the market based on expected future returns.[39] For example, retail investors may crowd into bank deposits and savings accounts for fear of being burned in the stock market, adversely affecting risk sharing and, ultimately, returns.[40]

C. Individual Investors' Fund Managers

To overcome these problems, the standard advice and expectation is that retail investors hire a

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Perhaps these few actually read and understand prospectuses etc., or perhaps even they would do poorly if indirect investor protection were stripped away. In any event, the point in the main text is about the vast majority of retail investors.

[37] *See* Alon Brav, Matthew D. Cain & Jonathon Zytnick, *Retail Shareholder Participation in the Proxy Process: Monitoring, Engagement, and Voting*, J. FIN. ECON. (forthcoming) (only 32% of shares held by retail shareholders are voted).

[38] *Cf.*, *e.g.*, Claire Célérier & Boris Vallée, *Catering to Investors Through Security Design: Headline Rate and Complexity*, 132 Q. J. ECON. 1469 (2017) (banks design complex retail products that have high advertised "headline" rates but lower risk-adjusted expected rates of return); Petra Vokata, *Engineering Lemons*, 142 J. FIN. ECON. 737 (2021) (so-called yield enhancement products have negative returns net of embedded fees and are "often statewise dominated by simple combinations of listed options").

[39] *Cf., e.g.*, Shlomo Benartzi & Richard Thaler, *Heuristics and Biases in Retirement Savings Behavior*, 21 J. ECON. PERSPS. 81, 92–94 (2007) (documenting return-chasing behaviors); James J. Choi, David Laibson & Brigitte C. Madrian, *Why Does the Law of One Price Fail? An Experiment in Mutual Funds*, 23 REV. FIN. STUD. 1406 (2010) (experimental subjects tend to choose from identical index funds those with higher annualized returns since inception—which is an irrelevant, random outcome determined purely by time since inception—rather than those with the lowest cost (the only return-relevant criterion)); Ulrike Malmendier & Stefan Nagel, *Depression Babies: Do Macroeconomic Experiences Affect Risk-Taking?*, 126 Q. J. ECON. 373 (2011) (investors who lived through periods of low stock market returns invest less in the stock market); Brad M. Barber & Terrence Odean, *The Behavior of Individual Investors*, in 2B HANDBOOK OF THE ECONOMICS OF FINANCE 1533, 1559 (George M. Constantinides, Milton Harris & René M. Stulz eds. 2013) (investors avoid investments that lost them money). *Also cf.* Brav, Cain & Zytnick, previous note (showing that retail investor votes are highly sensitive to recent poor performance). Individual investors may have information about firms as consumers, etc., but this information is not sufficient to select and monitor firms effectively.

[40] *Cf.*, *e.g.*, Malmendier & Nagel, previous note.

money manager.[41] For the vast majority of investors, this simply means investing in an ETF or mutual fund (collectively, retail fund), and today most would suggest an index fund. Retail funds undoubtedly facilitate portfolio administration. But empirics and theory suggest that they are at best a partial solution for asset selection and monitoring.

Start with the empirics. Retail funds are no help with asset selection. Index funds' stated purpose is *not* to search for good assets or favorable prices: they mechanically buy any security in the index at whatever price. Actively managed funds do search, but not well enough (on average) to do any better for their investors: actively managed funds have been underperforming index funds net of fees for decades.[42] (This is less damning for active funds than it first appears, see *infra* II.A and V.A, but that is because of the forces of indirect investor protection emphasized in this article.)

Retail funds are also tame monitors. Retail funds do not conduct proxy contests, and virtually never submit shareholder proposals or sue (especially not the larger funds).[43] This leaves behind-the-scenes engagement and (reactive) voting. However, engagement is rare, especially by index

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[41] *See*, *e.g.*, Douglas & Bates and Douglas, both *supra* note 34.

[42] *See* Malkiel, ECMH, *supra* note 9, at 76-80, esp. 77 ("remarkably large body of evidence"); Kenneth R. French, *Presidential Address: The Cost of Active Investing*, 63 J. FIN. 1537 (2008); Eugene F. Fama & Kenneth R. French, *Luck versus Skill in the Cross-Section of Mutual Fund Returns*, 65 J. FIN. 1915 (2010); Edwin J. Elton & Martin J. Gruber, *Mutual Funds*, in 2B HANDBOOK OF THE ECONOMICS OF FINANCE ch. 15 (2013), at 1040 ("Mutual funds underperform passive portfolios by from 65 basis points to 2% depending on the set of indexes chosen, the methodology, and the time period chosen. These results are post-expenses. If expenses are added back, most of these studies would find positive pre-expense performance"); Diane Del Guercio & Jonathan Reuter, *Mutual Fund Performance and the Incentive to Generate Alpha*, 69 J. FIN. 1673, 1673 (2014) ("well-known underperformance of the average actively managed mutual fund").

This near-universal view has recently come under theoretical and empirical attack. *See* Jonathan B. Berk & Jules H. van Binsbergen, *Measuring Skill in the Mutual Fund Industry*, 118 J. FIN. ECON. 1 (2015); id., *Mutual Funds in Equilibrium*, 9 ANN. REV. FIN. ECON. 147 (2017). Even Berk & van Binsbergen, however, ultimately estimate a negative "alpha" (i.e., difference in investment returns) for investors in actively managed funds relative to those in passive (Vanguard) funds on a value-weighted basis (i.e., the basis relevant for average investor returns); they merely find that the negative alpha is not statistically significant. *See* Berk & van Binsbergen, *Measuring Skill*, at 4. (Del Guercio & Reuter, *supra*, find that the underperformance is limited to funds sold through brokers.) As a matter of simple arithmetic, on a dollar-weighted basis, the average actively managed fund must underperform net of fees relative to passive investing except to the extent that a third group, such as active individual investors, incurs trading losses greater than the actively managed funds' trading costs. *See* William F. Sharpe, *The Arithmetic of Active Management*, [1991] FIN. ANALYSTS J. 7 (1991), and *infra* V.A.

[43] *Cf.* Nickolay Gantchev & Mariassunta Giannetti, *The Costs and Benefits of Shareholder Democracy: Gadflies and Low-Cost Activism*, 34 REV. FIN. STUD. 5629 (2021), Table 1 (of 4,878 proposals in the years 2003-2014, only 355 were submitted by investment firms, and the only investment firm in the top 10 of institutional submitters, at rank 10 with 71 proposals, is Harrington Investments, a comparatively small, socially responsible fund manager); Sullivan & Cromwell, 2019 Proxy Season Review: Part 1 – 14a-8 Shareholder Proposals (July 12, 2019), https://www.sullcrom.com/files/upload/SC-Publication-2019-Proxy-Season-Review-Part-1-Rule-14a-8-Shareholder-Proposals.pdf (perma.cc/RXP5-TQ3P) at 4-5 (most proposals in 2019 were submitted by individuals, public pension funds, etc., as well as a few "social investment entities," with not a single large retail fund manager in the top 10); Lucian Bebchuk & Scott Hirst, *Index Funds and the Future of Corporate Governance: Theory, Evidence, and Policy*, 119 COLUM. L. REV. 2029 (2019), at 2098 (from 2007 through 2018, the big three index fund managers—BlackRock, State Street, Vanguard—did not nominate a single director candidate), 2104 (from 2015 through 2018, the big three did not submit a single shareholder proposal at Russell 3000 firms), and 2114 (from 2007 through 2018, the big three did not serve as lead plaintiff in any securities class action settling for $10 million or more); Alexander Platt, *Index Fund Enforcement*, 53 U.C. DAVIS L. REV. 1453, 1501 (2020) (counting only 17 direct securities lawsuits by the largest three index and active mutual funds in the years 2000-2018). *cf.* Joseph A. McCahery, Zacharias Sautner & Laura T. Starks, *Behind The Scenes: The Corporate Governance Preferences of Institutional Investors*, 71 J. FIN. 2905, 2912 (2016) (nearly 80% of surveyed institutional investors had not submitted a shareholder proposal over the prior five years).

funds.[44] Voting staffs are small—the big three index funds employ about two dozen each for investments in over ten thousand firms valued at trillions of dollars.[45] Index funds may even forego voting altogether, lending out the shares for a fee.[46] This lack of engagement and staff also belie the possibility that suits and proposals remain a credible threat even though they are never used in actuality. Widespread dissatisfaction with this state of affairs lead to the recent wave of stewardship codes.[47]

However, stewardship codes will likely be ineffective because fund managers have incentives not to engage.[48] First, there is the agency problem of investment management: Of any benefit created for the fund, the fund manager only captures the management fee percentage, which today averages around 0.60% for actively managed and 0.06% for index funds.[49] (Unlike hedge funds, retail funds are not allowed to charge additional asymmetric performance fees.[50]) Second, for monitoring, the agency problem is compounded by the generic collective action problem of pooled investment: even the fund obtains only a fraction of any monitoring benefit created at the portfolio company, namely the fund's percentage share in the company. Fund shares are partly tax-limited to 10% and generally much lower due to fund diversification.[51] The product of these percentages is tiny and thus the compound incentive problem huge. For example, if the fund manager charges 0.06% on funds owning 7% of a portfolio company—similar to the three largest index fund managers—the manager gets only 0.06%×7%=0.0042% of any value created by monitoring the portfolio company.

Competition for fund flows (i.e., investor money) further degrades managers' incentives for

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[44] *See generally* Bebchuk, Cohen & Hirst, *supra* note 15, at 100-101; Bebchuk & Hirst, previous note, at 2084-88; *cf.* McCahery, Sautner & Starks, previous note (40% of surveyed institutional investors had not engaged in discussions with top management over the prior five years, nearly 50% had not voted against management, 65% had not proposed specific action to management).

[45] *See* Edward Rock, *Institutional Investors in Corporate Governance*, in THE OXFORD HANDBOOK OF CORPORATE LAW AND GOVERNANCE 363, 368-372 (Jeffrey N. Gordon & Wolf-Georg Ringe eds. 2018); Dorothy S. Lund, *The Case Against Passive Shareholder Voting*, 43 J. CORP. L. 493, 515-16 (2018); Bebchuk & Hirst, previous note, at 2076-2080.

[46] *See* Edwin Hu, Joshua Mitts & Haley Sylvester, *The Index-Fund Dilemma: An Empirical Study of the Lending-Voting Tradeoff*, working paper (December 2020), https://ssrn.com/abstract=3673531.

[47] *See Stewardship*, ECGI, https://ecgi.global/content/stewardship (last visited Aug. 12, 2020) (perma.cc/6BPN-2833) ("Shareholder Stewardship Codes … represented a response to concern that institutional investors had been too passive … [and] encouraged shareholders to exercise their legal rights and increase their level of engagement in corporate governance as a constraint on managerial power and excessive risk-taking."); *cf.* Dionysia Katelouzou & Mathias Siems, *The Global Diffusion of Stewardship Codes*, ECGI Law Working Paper 526 (November 2020) (analyzing the global spread of stewardship codes).

[48] *See generally, e.g.,* Edward B. Rock, *The Logic and (Uncertain) Significance of Institutional Shareholder Activism,* 79 GEO. L.J. 445, 473 (1991); Gilson & Gordon, *supra* note 7, at 889-895; Bebchuk, Cohen & Hirst, *supra* note 15, at 96–104. *Cf.* Jill Fisch, *The Uncertain Stewardship Potential of Index Funds*, ECGI Law Working Paper 490/2020, at 109 (index funds' "distinctive structure and business model provide practical limitations on their potential effectiveness as corporate stewards"). *Cf.* Roe, ROE, and Black (at 879), *supra* note 28 (U.S. money managers could have better incentives if it were not for the rules). *But see* Fisch, Hamdani & Solomon, *supra* note 18. My point about missing incentives is descriptive, not normative. There may be good reasons not to give retail fund managers high-powered incentives, such as preventing "gambling." Note that Vanguard, the pioneer of low-fee index funds, is owned by the funds it advises, i.e., it is a sort of mutual. *See generally* HENRY HANSMANN, THE OWNERSHIP OF ENTERPRISE (2000).

[49] *Cf. 2021 Investment Company Fact Book*, *supra* note 1, at 140 (asset-weighted average expense ratios).

[50] Investment Advisers Act §205(a)(1), 15 U.S.C. § 80b-5(a)(1).

[51] *Cf.* Internal Revenue Code, 26 U.S.C. § 851(b)(3)(A)(ii) (stipulating conditions to obtain pass-through tax treatment under subchapter M). *See* Roe and ROE, *supra* note 28.

monitoring, and may not improve it for asset selection either.[52] To the extent competing funds hold the same securities—and competing *index* funds hold *exactly* the same securities—monitoring by one manager equally benefits competitor funds' gross returns. The monitoring manager, however, bears all the cost.[53] Managers' incentives are thus not to monitor.[54] Flow incentives for asset selection—relevant only in active funds—may be better because its benefits are not shared with competing funds. However, competition on this dimension only works if fund investors can discern quality. In finance, it is notoriously difficult to distinguish skill from luck and risk-taking.[55] Most retail investors fail even the incomparably simpler test of choosing between S&P 500 index funds that are identical on all relevant dimensions except fees.[56] Financial advisors might help but turn out to be as misguided as their clients.[57] Flow competition based on asset selection is therefore bound to be crude at best.[58]

There is a broader point here. In any system of investor-directed asset management, whatever its regulation, retail investors choose the manager. Delegating asset management will therefore not eliminate investor infirmities but inject them into the process of selecting the asset manager. Imperfect investors will not choose perfect managers.

This is not to say that retail funds and their managers, including index funds, do nothing for their investors and for the governance of their portfolio firms, or that their elaborate regulation (a type of direct investor protection) is superfluous. Retail funds provide their investors the major

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[52] For a discussion of mutual fund managers' flow-based incentives, see Kahan & Rock, *supra* note 18, at 1793-97.

[53] Alternatively, if the manager passes the cost through to its investors, the manager offers lower net returns to investors than its competitors.

[54] This would change if (altruistic) fund investors were willing to pay extra for the public good provided by their fund manager's monitoring, but this happens rarely and almost exclusively in relation to environmental and social concerns ("ESG"), which I bracket in this article. *See* Michal Barzuza, Quinn Curtis & David H. Webber, *Shareholder Value(s): Index Fund ESG Activism and the New Millennial Corporate Governance*, 93 S. CAL. L. REV. 1243 (2020). Whether the incentives thus provided are good or bad depends on retail investors' ability to judge the monitoring's quality.

[55] *See*, *e.g.*, William Goetzmann, Jonathan Ingersoll, Matthew Spiegel & Ivo Welch, *Portfolio Performance Manipulation and Manipulation-proof Performance Measures*, 20 REV. FIN. STUD. 1503 (2007); Paolo Guasoni, Gur Huberman & Zhenyu Wang, *Performance maximization of actively managed funds*, 101 J. FIN. ECON. 574 (2011); Igor Makarov & Guillaume Plantin, *Rewarding Trading Skills without Inducing Gambling*, 70 J. FIN. 925 (2015). *Cf.* Marcin Kacperczyk, Clemens Sialm & Lu Zheng, *Unobserved Actions of Mutual Funds*, 21 REV. FIN. STUD. 2380 (2007) (mutual fund managers make many trades unobservable to their investors).

[56] Choi et al., *supra* note 39. *Cf.* Saurabh Bhagarva, George Lowenstein & Justin Snydor, *Choose to Lose: Health Plan Choices from a Menu with Dominated Options*, 132 Q. J. ECON. 1319 (2017) (in a randomized field experiment of employees choosing among employer-sponsored health care plans, a majority chose dominated plans); Jill E. Fisch, Annamaria Lusardi & Andrea Hasler, *Defined Contribution Plans and the Challenge of Financial Literacy*, 105 CORNELL L. REV. 741 (2020) (most 401(k) investors have low financial literacy). Of course, retail investors are not completely insensitive to fees. *Cf.*, *e.g.*, Mathias Kronlund, Veronika K. Pool, Clemens Sialm & Irina Stefanescu, *Out of sight no more? The effect of fee disclosures on 401(k) investment allocations*, 141 J. FIN. ECON. 644 (2021) (some 401(k) investors shift to lower cost funds when costs are more prominently displayed). But it is too little, too late. *Cf. generally supra* note 39 and accompanying text (retail investors learn but slowly and imprecisely).

[57] *See* Juhani T. Linnainmaa, Brian T. Melzer & Alessandro Previtero, *The Misguided Beliefs of Financial Advisors*, 76 J. FIN. 527 (2021).

[58] *But see* Berk & van Binsbergen, *Mutual Funds in Equilibrium*, *supra* note 42 (arguing that investors will move out of underperforming and into outperforming funds). Their key assumption is investor rationality, which seems misplaced in this context.

administrative convenience of one-stop diversification. Retail fund regulation is essential to counteract managers' enormous financial temptation to sap the fund.[59] As to governance of their portfolio firms, retail funds' engagement, resources, expertise, and incentives compare favorably to individual investors.[60] Removing their vote would shift power to even less informed individual shareholders, conflicted insiders, and, at worst, informed outsiders who might push for transactions that harm the funds' investors.[61] The point is, however, that retail fund managers do little, even if more than nothing.[62] Their incentives—especially those of index funds—are tiny relative to the money at stake and relative to those of other blockholders such as activist hedge funds (*infra* II.B).[63]

II. MECHANISMS OF INDIRECT INVESTOR PROTECTION

Let us now look at the mechanisms of indirect investor protection. Most of those who drive these mechanisms do not do it for the purpose of benefitting investors, and none are hired by the investors. Rather, the main protagonists are strongly—and, presumably, solely—selfishly motivated. Given the chance, they might appropriate every penny of investor money.[64] But rules and competition force them to do good for investors as a byproduct of their selfish pursuit of profit. They are the financial market analogue to Adam Smith's butcher, brewer, and baker.[65]

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[59] *See generally* Howell E. Jackson, *A System of Fiduciary Protections for Mutual Funds*, in FIDUCIARY OBLIGATIONS IN BUSINESS 121 (Arthur Laby & Jacob H. Russell eds. 2021).

[60] Given the enormous size of many listed firms, even the tiny percentage of 0.0042% translates into millions or tens of millions of dollars, which is much larger than the stake of almost any individual investor. Unlike an individual investor, however, the index fund manager controls a disproportionate fraction of votes and thus has a much higher chance to influence the vote and incentive to vote in an informed manner. *See* Kahan & Rock, *supra* note 18, at 1785-86. *Cf. generally* Alex Edmans & Clifford G. Holderness, *Blockholders: A Survey of Theory and Evidence*, in 1 HANDBOOK OF THE ECONOMICS OF CORPORATE GOVERNANCE 541, 549-550 (Benjamin Hermalin & Michael Weisbach eds. 2017) (stressing the importance of dollar ownership).

[61] *But see* Lund, *supra* note 45 (arguing that passive investors should not have voting rights).

[62] *Cf.* Edmans & Holderness, *supra* note 60, at 601-603, 609 (index funds may have a positive effect on implementation of general good governance principles but not bespoke monitoring). Much of the empirical literature on the effect of institutional investors in general and index funds in particular has focused on the Russell 1000/2000 cutoff for identification, which presents major challenges and frequently leads to invalid conclusions. *See* Ian R. Appel, Todd A. Gormley & Donald B. Keim, *Identification using Russell 1000/2000 index assignments: A discussion of methodologies*, CRIT. FIN. REV. (forthcoming).

[63] Hedge fund managers also manage other people's money. However, hedge fund principals tend (to be required) to have significant "skin in the game" (i.e., personal investment in their fund), and charge performance fees on the order of 20% on top of management fees on the order of 2%. *See* AIMA, In Harmony: How hedge funds and investors continue to strike the right note in aligning their interest, 2019, available at https://www.aima.org/educate/aima-research/in-harmony.html (perma.cc/XM4F-JV9Z), at 5, 22-24. Even abstracting from "skin in the game," on a per-dollar-basis, a typical hedge fund manager's instantaneous (one-year) bump in compensation from improving portfolio value is (20%+2%)/0.07%=314 times larger than the average index fund manager's and (20%+2%)/0.52%=42 times larger than the average active retail fund manager's. As to attracting future flows through good performance, the hedge fund manager's incentive to attract an extra dollar is at least 2%/0.52%=4 times larger than the active retail fund manager's and infinitely larger than the index fund manager's (recall that index fund managers cannot distinguish themselves from rival managers through good performance). To be sure, the largest index funds dwarf other funds. For portfolio-wide actions, they thus multiply their managers' per-dollar incentives by a much larger asset base. What matters for monitoring and most other activities, however, is the size of the individual position, which can be as large or even larger in a smaller but less diversified hedge fund: the median activist stake is 6.5% (*see* https://faculty.fuqua.duke.edu/~brav/HFactivism_March_2019.pdf (perma.cc/9W8M-HMYZ)).

[64] For some examples bearing out this conjecture, see the court cases cited in notes 111 and 112.

[65] ADAM SMITH, THE WEALTH OF NATIONS 16 (MetaLibri, 2007) (1776) ("It is not from the benevolence of the

The mechanisms of indirect investor protection help investors when investors enter or liquidate an investment (prices), while investors hold the investment (governance), and—a form of meta-protection—in generating efficient company-level rules in the first place (*infra* IV). But the various mechanisms cannot easily be divided into these functions because the mechanisms interact: they are interdependent (*infra* C).

A. Market Prices

The most important, most generic investor protection is an approximately unbiased and informative market price. It fulfills three roles. First, it ensures investors get fair value when they enter or exit an investment. Second, it screens good projects and corporate structures and thereby incentivizes founders to create them.[66] Third, it can be used as a gauge of performance in existing enterprises, most importantly in stock-based executive compensation.[67]

An unbiased price emerges as the byproduct of selfish trading by savvy speculators.[68] The speculators would prefer to sell to naïve investors at a higher price, or to buy from naïve investors at a lower price. But two-sided competition—i.e., speculators compete to buy *and* (short-)sell—in the centralized market for publicly traded securities precludes this: the speculators outbid each other until they trade with anyone at a price that is neither (much) too high nor (much) too low.[69] Note the importance of two-sidedness: if speculators stood on only one side, naïve investors might yet trade at unfavorable prices. Similarly, if the market were not centralized, naïve investors might trade at the unfavorable price offered by the one sophisticated player they happen to interact with. But in a centralized market, any unfavorable price would immediately be pounced upon (i.e., outbid) by another sophisticated player. The force at work here is competition, which is maximized in a centralized market. By contrast, in a privately negotiated transaction, unskilled or uninformed investors may trade at a highly unfavorable price and thus lose most of their investment—and not even notice. Similarly, in virtually all other types of markets, unskilled or uninformed participants tend to stand on one side of the market (e.g., as buyers) and sophisticated participants on the other (e.g., as sellers), such that a price bias against the unskilled/uninformed is not automatically corrected by competition between the sophisticated participants.

However, unbiasedness is not enough for investors.[70] To see this, imagine a market in which

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butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest."). An important difference between the butcher, brewer, and baker and the present protagonists is that the latter do not contract with those for whom they generate the benefit, which is the reason why rules must be in place to secure this benefit and why there is no inherent guarantee that this benefit will be provided (*infra* V.B). Smith's quote also elides the important role of competition, without which especially the baker could exploit customers' hunger to charge extortionary prices.

[66] *Cf.* EASTERBROOK & FISCHEL, *supra* note 13, at 19 ("These amateurs do not need to know anything about corporate governance and other provisions; the value of these mysterious things is wrapped up in the price established by the professionals.").

[67] *Cf.* Kevin J. Murphy, *Executive Compensation: Where We Are, and How We Got There,* in HANDBOOK OF THE ECONOMICS OF FINANCE 211, 222 (George M. Constantinides, Milton Harris & René M. Stulz eds. 2013) (most US CEO compensation in 2011 was stock-based); Alex Edmans, Xavier Gabaix & Dirk Jenter, *Executive Compensation: A Survey of Theory and Evidence*, in HANDBOOK OF THE ECONOMICS OF CORPORATE GOVERNANCE 383, 399-402 (Benjamin Hermalin & Michael Weisbach eds., 2017) (most US CEO pay in 1994-2014 was stock-based) (like almost all economic literature on executive compensation, these surveys assume that prices are informative). Another use of informative prices is as a signal for monitoring management. *See* Gordon, *supra* note 11. On limits, see *infra* note 105.

[68] Particularly hedge funds, some mutual funds, and investment banks.

[69] On the importance of short-selling, *see* J. Michael Harrison & David M. Kreps, *Speculative Investor Behavior in a Stock Market with Heterogeneous Expectations*, 92 Q. J. ECON. 323 (1978).

[70] Most discussions of stock price informativeness focus exclusively on its role for the efficient allocation of

all traded securities are worthless. It is certainly better for investors to pay the unbiased price of zero for such securities than to pay a strictly positive price. Nevertheless, investing in this market is pointless. To function as a store of value, the market needs to contain valuable securities. To attract such valuable securities, the market has to offer attractive non-zero prices to their issuers. To do so, prices must be informative, i.e., the market must be able to differentiate valuable from worthless securities, which are in infinite supply by charlatans and deluded optimists.[71] The more informative prices are, the less good securities' prices are diluted by bad ones blending in. This in turn attracts more good firms to compete for investor money in the market for capital, pushing up equilibrium returns to investors. Informativeness is also necessary for prices to guide activity inside a firm, particularly through stock-based performance pay. Trading generates informativeness: to anticipate future price moves, speculators collect and process information about the security's ultimate payoffs (dividends etc.), pushing the price towards the payoffs' best possible prediction.

I glossed over the difference between primary and secondary markets (sales by the issuer and re-sales by investors, respectively). Informative prices are generated in the secondary market, where speculators compete on both sides, whereas firms raise investor money in the primary market, where speculators can only be on the buy-side and thus provide no assurance that the price is not too high.[72] The difference is most marked in an initial public offering (IPO), when a secondary market for the stock does not even exist yet (at least not in full-fledged form). However, companies, their founders, and pre-IPO investors usually sell only a small part of their stock in the IPO itself.[73] They sell most later when buyers can observe the secondary market price; in fact, they

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capital within and across firms (although they may discuss questions of liquidity or risk for investors). *Cf.*, *e.g.*, Merritt B. Fox, *Shelf Registration, Integrated Disclosure, and Underwriter Due Diligence: An Economic Analysis*, 70 VA. L. REV. 1005, 1015-1022 (1984); Marcel Kahan, *Securities Laws and the Social Costs of "Inaccurate" Stock Prices*, 41 DUKE L.J. 977 (1992); Romano, *supra* note 13, at 2377 ("A reduction in own-return variance (that is, more accurate stock prices) is of no value to diversified investors"); Goshen & Parchomovsky, *supra* note 34, at 715 ("indifference of liquidity traders to accurate pricing"). However, in an investor-financed (part of the) economy, efficient use of capital by firms and investor returns are two sides of the same coin at the firm level, and closely intertwined at the economy level.

[71] Charlatans will try to sell securities at positive prices in order to divert the money to themselves legally (executive compensation) or illegally (embezzlement); deluded optimists will try to sell securities to finance enterprises that are doomed to fail. If the market could not distinguish them from good firms, the unbiased price would be an average of the value of the two types of securities. If the supply of charlatans' and deluded optimists' securities were literally infinite, the average would be zero. If the supply were finite but non-negligible, the average would be non-negligibly below the value of the good firms' securities. Good firms with excellent projects but desperate for financing might still sell securities at that price, but some would not be able or willing to do so and hence drop out of the market. This would further depress the average. Ultimately, only charlatans and deluded optimists would remain and the price would be zero. Even if the unravelling is incomplete, the mixing in of charlatans and optimists will drive a wedge between good firms' cost of capital and investor returns. *See generally* George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q. J. ECON. 488 (1970); *also see* Stewart C. Myers & Nicholas S. Majluf, *Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have*, 13 J. FIN. ECON. 187 (1984); Black, *supra* note 20, at 805, 838.

[72] To the extent the primary market is not competitively organized, the price might also be too low. Moreover, to the extent trading itself generates information, it is necessarily lacking before trading starts. The discussion in the main text applies to all deviations from secondary market pricing.

[73] *Cf.* table 1a in Jay R. Ritter, Initial Public Offerings: Updated Statistics, available at https://site.warrington.ufl.edu/ritter/files/IPO-Statistics.pdf (last accessed 6/3/2021) (perma.cc/PG6R-YLKW) (showing aggregate proceeds and market valuations implying that stock sold in the IPO is only about 20% of the company's total post-issue stock); B. Espen Eckbo, Ronald W. Masulis & Øyvind Norli, *Security Offerings*, in 1 HANDBOOK OF EMPIRICAL CORPORATE FINANCE ch. 6 (B. Espen Eckbo ed. 2008) at 252-259 (secondary equity offerings are larger and far more frequent than initial public offerings, i.e., firms collectively raise much more capital in direct public issuances once a secondary market is up and running, even though only about half of all IPO firms eventually do so); Jesse M. Fried &

often sell in open-market transactions *at* the secondary market price. IPOs themselves have traditionally been underpriced, possibly to attract less informed investors in the absence of an informative market price.[74]

Price unbiasedness and informativeness are often subsumed under market efficiency. I avoid this notion because it evokes the ideal that prices always, instantaneously, and perfectly reflect all (public) information (while obscuring that unbiasedness results simply from a competitive market for an undifferentiated good). This ideal is not attainable in theory, let alone in reality.[75] But prices need not attain the ideal to be useful: protection by prices admits of degree. The less biased the price, the less investors can lose in a transaction; and the more informative the price, the better it will screen firms and guide corporate behavior. The relevant question to ask is not if, but how prices deviate from the ideal.[76] Bias hurts investors only to the extent it is correlated with investors' trades or corporate actions.[77] This danger is greatest when vulnerable investors are systematically on one side of the trade, such as around index reconstitutions (when large unidirectional trading by index funds may overwhelm counter-trades and the data show mild systematic mispricing).[78] Biases are also a problem if they reward harmful actions by insiders or fail to reward productive

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Charles C.Y. Wang, *Short-Termism and Capital Flows*, 8 REV. CORP. FIN. STUD. 207, 209 (2019) (S&P 500 firms raise even more capital through indirect share issuances, particularly executive compensation, than through direct issuances).

[74] *See generally* Alexander Ljungqvist, *IPO Underpricing*, in 1 HANDBOOK OF EMPIRICAL CORPORATE FINANCE ch. 7 (B. Espen Eckbo ed. 2008).

[75] *See*, *e.g.*, Sanford J. Grossman & Joseph E. Stiglitz, *On the Impossibility of Informationally Efficient Markets,* 70 AM. ECON. REV. 393 (1980); Eugene F. Fama, *Efficient Capital Markets: II*, 46 J. FIN. 1575, 1575 (1991) ("the extreme version of the market efficiency hypothesis is surely false"); ANDREI SHLEIFER, INEFFICIENT MARKETS (Oxford University Press 2000); G. William Schwert, *Anomalies and Market Efficiency*, in 1B HANDBOOK OF THE ECONOMICS OF FINANCE ch. 15 (George M. Constantinides, Milton Harris & René M. Stulz eds. 2003); Ronald J. Gilson & Reinier Kraakman, *The Mechanisms of Market Efficiency Twenty Years Later: The Hindsight Bias*, 28 J. CORP. L. 715 (2003); Markus K. Brunnermeier & Martin Oehmke, *Bubbles, Financial Crises, and Systemic Risk*, in 2B HANDBOOK OF THE ECONOMICS OF FINANCE ch. 18 (George M. Constantinides, Milton Harris & René M. Stulz eds. 2013) (especially at 1229-44); LO, *supra* note 18; and *infra* text accompanying note 104.

[76] *Cf. generally* Kahan, *supra* note 70.

[77] Specifically, investors' trades are in trouble only if $E(X(P-V))>>0$, where X is investors' trades, P is price, and V is the value of the security. An approximately unbiased price conditional on investor trades ($E(V|X)\approx P$) is sufficient but not necessary to ensure $E(X(P-V))\approx 0$. From a diversified investor's perspective, it would even be sufficient if this condition held only across all securities in the portfolio, i.e., if the expectation were taken over all her trades in all her securities. (In all cases, the expectation is (also) conditional on information available to non-insider savvy speculators (traditionally referred to as semi-strong market efficiency).) This means that most phenomena that have animated discussions of market efficiency, such as anomalies and bubbles, are largely irrelevant for investor protection. Even if some bubbles draw in retail investor money, the tool to prick bubbles is financial regulation and interest rate policy, not corporate and securities law.

[78] *See generally* Susan E.K. Christoffersen, David K. Musto & Russ Wermers, *Investor Flows to Asset Managers: Causes and Consequences*, 6 ANN. REV. FIN. ECON. 289, 303 (2014). *Cf.* Itzhak Ben-David, Francesco Franzoni & Rabih Moussawi, *Exchange-Traded Funds*, 9 ANN. REV. FIN. ECON. 169, 180-182 (2017) (reviewing evidence of such effects principally for ETFs); Guido Baltussen, Sjoerd van Bekkum & Zhi Da, *Indexing and Stock Market Serial Dependence Around the World*, 132 J. FIN. ECON. 26, 44 (2019) (documenting that the rise of indexing has generated negative serial dependence in indices and their underlying components, attributing this to price pressure from index investors). A well-known effect of this type is the S&P 500 inclusion effect, i.e., stock prices jump (drop) upon index inclusion (exclusion). *See* Jeffrey A. Wurgler, *On the Economic Consequences of Index-Linked Investing*, *in* CHALLENGES TO BUSINESS IN THE TWENTY-FIRST CENTURY: THE WAY FORWARD (W.T. Allen, R. Khurana, J. Lorsch, G. Rosenfeld eds., 2010). *But see* Benjamin Bennett, René M. Stulz & Zexi Wang, *Does Joining the S&P 500 Index Hurt Firms?*, (Nat'l Bureau of Econ. Research, Working Paper No. 27593, July 2020) (finding that the inclusion effect has disappeared in recent years).

actions (*cf. infra* C). Failure to incorporate some information without bias—i.e., random noise—reduces but does not undermine the usefulness of prices. For most purposes, prices for publicly traded securities are informative and unbiased enough that even critics of market efficiency consider "the efficient markets model a useful approximation of reality for individual firms,"[79] and price impact is routinely considered probative in litigation and commentary (e.g., event study evidence).

To emphasize, price informativeness and unbiasedness provide generic, *rule-generating* protection: given unbiased, informative prices, entrepreneurs maximize their own payoffs by offering slices from the biggest pie, i.e., from a firm with optimal governance (and in any event, badly governed firms will obtain little financing). For example, prices will lead entrepreneurs to provide optimal (not: full) openness to the other indirect mechanisms described below.[80] This resembles the classic contractarian argument that private contracting will lead to optimal governance (*infra* IV.A). There is, however, a subtle but consequential difference in the mechanism. In the classic argument, contracts bring about good governance because *everybody* is savvy, or perhaps because an abstract "market" is assumed to price the securities efficiently. In my argument, not everyone is savvy, and "the market" is broken down into its constituent parts. In particular, in my argument, competitive pricing is not taken for granted, and naïve investors are protected only if and because the "price-setters" do not get payments that simple investors do not get. Unlike the classic contractarian argument, mine thus leads straightforwardly to a role for the regulator, which is to ensure competition and the absence of explicit or implicit side payments (*infra* IV.B).

B. Other Indirect Mechanisms

The ecosystem that investors and corporations inhabit comprises many more elements that may protect investors directly (e.g., criminal prosecution of fraud and theft) or indirectly (e.g., the media).[81] Here I focus on the three most important indirect mechanisms: takeovers, activism, and plaintiff litigation. I shall argue that for most investors, their rights—to vote, sell, and sue—become meaningful only through these indirect mechanisms.

In takeovers, buyers pay large premia to target investors. The buyers do not want to enrich the target investors. On the contrary, buyers would like to pay target investors as little as possible. But fierce competition leaves buyers no choice. The competition is not limited to buyers in the same or adjacent industries. Numerous private equity (PE) funds, small and large, specialize in buying, revamping, and selling firms.[82] This competition forces buyers to leave most of the deal surplus to

[79] Robert J. Shiller, *Speculative Asset Prices*, 104 AM. ECON. REV. 1486, 1501 (2014). *See also* LO, *supra* note 18; id., *Adaptive Markets and the New World Order*, 68 FIN. ANALYSTS J. 18, 18 (2012) ("the EMH is not wrong; it is merely incomplete.").

[80] For the avoidance of doubt, my argument is about the initial, "IPO stage" of private rule-making. "Midstream" changes—after the firm is public and the pre-IPO investors have sold all or most of their stock—are not subject to the pricing mechanism described here and thus need not tend to optimality. *Cf.* Lucian Arye Bebchuk, *Foreword: The Debate on Contractual Freedom in Corporate Law*, 89 COLUM. L. REV. 1399-1401 (1989) (explaining why midstream changes are different). However, the initial rules for making midstream changes (including, e.g., the choice of incorporation state, and the conditions for changing it) do.

[81] On the media, see, e.g., Black, *supra* note 20, at 798-801; Alexander Dyck, Natalya Volchkova & Luigi Zingales, *The Corporate Governance Role of the Media: Evidence from Russia*, 63 J. FIN. 1093 (2008).

[82] On private equity and its economic effects, *see generally*, *e.g.*, Steven N. Kaplan & Per Strömberg, *Leveraged Buyouts and Private Equity*, 23 J. ECON. PERSPS. 121 (2009); Greg Brown, Bob Harris, Tim Jenkinson, Steven Kaplan & David Robinson, *Private Equity: Accomplishments and Challenges*, 32 J. APP. CORP. FIN. 8 (2020).

the sellers.[83] To be sure, if the buyer is a public company, the surplus split is a matter of indifference to diversified investors who are equally invested in buyer and target. Diversified investors do care about the surplus per se, however, whether it stems from synergies or managerial improvements. Moreover, takeovers' most important effect may be ex ante: they create incentives for managers to preempt a takeover through better performance.[84]

An activist investor—usually a hedge fund[85]—profits by buying a stake in a company, engaging with the company to increase its market price, and then selling the stake. The price increase helps all shareholders of the company. For long-term shareholders, this cheerful logic presupposes that the price increase is sustainable, i.e., that price changes correspond to changes in fundamental company value. This is not a fanciful presupposition: it is to be expected from informative market prices (*supra* A) and borne out in the data (*infra* C).[86] Activism can also create salutary incentives

[83] *Cf.* Luc Renneboog & Cara Vansteenkiste, *Failure and success in mergers and acquisitions*, 58 J. CORP. FIN. 650, 650 (2019) ("bidder shareholders earn zero or even negative returns at the takeover announcement ... When studying the share price evolution or operational performance of the merged firm over a longer time window (2–3 years …), many studies equally show that bidders' shareholders receive little or even no positive return on takeover deals"); Elisabeth de Fontenay, *Private Equity's Governance Advantage: A Requiem*, 99 B.U. L. REV. 1095 (2019) (private equity firms now find it hard to make profits in LBOs due to competition by other PE firms and other forces, notably activist hedge funds).

[84] The very extensive empirical literature on the ex ante effects of takeovers and takeover defenses is mired in methodological issues. *See* Emiliano M. Catan & Marcel Kahan, *The Law and Finance of Antitakeover Statutes*, 68 STAN. L. REV. 629 (2016); Jonathan M. Karpoff & Michael D. Wittry, *Institutional and Legal Context in Natural Experiments: The Case of State Antitakeover Laws*, 73 J. FIN. 657 (2018); Emiliano M. Catan, *The Insignificance of Clear-Day Poison Pills*, 48 J. LEG. STUD. 1 (2019); Jens Frankenreiter, Cathy Hwang, Yaron Nili & Eric L. Talley, *Cleaning Corporate Governance*, 170 U. PA. L. REV. 1 (2021); David F. Larcker, Peter C. Reiss & Youfei Xiao, Corporate Governance Data and Measures Revisited, working paper (Nov. 2015), https://ssrn.com/abstract_id=2694802; Emiliano M. Catan & Michael Klausner, Board Declassification and Firm Value: Have Shareholders and Boards Really Destroyed Billions in Value?, working paper (September 2017), https://ssrn.com/abstract_id=2994559; Davidson Heath, Matthew C. Ringgenberg, Mehrdad Samadi & Ingrid M. Werner, Reusing Natural Experiments, working paper (May 2020), https://ssrn.com/abstract_id=3457525; Allen Hu & Holger Spamann, Inference With Cluster Imbalance: The Case of State Corporate Laws, working paper, https://ssrn.com/abstract_id=3998607; Andrew C. Baker, Do State Antitakeover Provisions Matter?, working paper (Jan. 2022). Importantly, anti-takeover provisions, particularly the poison pill, only blunt the takeover threat, they do not eliminate it. (If the offer is good enough, target boards generally fold, either because they too stand to gain from selling their shares, or because they find it hard to defend their position against public opinion or at the next shareholder meeting.) *Cf.* Matthew D. Cain, Stephen B. McKeon & Steven Davidoff Solomon, *Do Takeover Laws Matter? Evidence from Five Decades of Hostile Takeovers*, 124 J. FIN. ECON. 464, 468 (2017) (hostile takeovers have not disappeared after the poison pill).

[85] On hedge fund managers' compensation and resulting incentives, see *supra* note 63.

[86] *See generally* Alon Brav, Wei Jiang & Hyunseob Kim, *Recent Advances in Research on Hedge Fund Activism: Value Creation and Identification*, 7 ANN. REV. FIN. ECON. 579, 592-593 (2015); Edmans & Holderness, *supra* note 60, at 599-601, 608 ("Blockholders are generally correlated with lower executive pay levels, higher investment, and lower accounting fraud. Certain blockholders are associated with higher profitability and superior M&A outcomes. *The strongest effects are documented for activist hedge funds*") (emphasis added); Alon Brav, Wei Jiang & Rongchen Li, Governance by Persuasion: Hedge Fund Activism and the Market for Corporate Influence, OXFORD RESEARCH ENCYCLOPEDIA OF ECONOMICS AND FINANCE (forthcoming 2022). On the link between price and value, see infra notes 101-103 and accompanying text. On the sources of the value increase, *see*, *e.g.*, Alon Brav, Wei Jiang & Hyunseob Kim, *The Real Effects of Hedge Fund Activism: Productivity, Asset Allocation, and Labor Outcomes*, 28 REV. FIN. STUD. 2723, 2753–54 (2015) (increases in productivity and IT investment as well as stagnating wages at the plant level at hedge fund target firms); Nicole M. Boyson, Nickolay Gantchev & Anil Shivdasani, *Activism Mergers*, 126 J. FIN. ECON. 54 (2017) (higher probabilities and better execution of being a merger target); Alon Brav, Wei Jiang, Song Ma & Xuan Tian, *How Does Hedge Fund Activism Reshape Corporate Innovation?*, 130 J. FIN. ECON. 237 (2018) (although R&D spending tightens with hedge fund activism, "target firms increase innovation output"); Lucian

at other companies. If activists only make money by increasing value and managers do not like being targeted, managers may do a better job to preempt an activist attack.[87] The other shareholders make no payments to the activist. But the price mechanism—and the prohibition of side payments—align the incentives of the activist with the other shareholders.

In the two mechanisms just discussed, the actors—buyers and activists—have no legal mandate to help other investors. By contrast, plaintiff lawyers nominally represent a named shareholder. Substantively, however, plaintiff lawyers act as private attorneys general who seek, direct, and finance their own cases; named plaintiffs are figureheads.[88] (The exception is rare litigation by large shareholders.) In return, a successful plaintiff lawyer can expect a cut of the recovery. This cut is not negotiated with the nominal client: it is determined by the court (*infra* III.B). While some shareholder litigation is controversial, some is very likely essential.[89] In particular, fiduciary

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A. Bebchuk, Alon P. Brav, Wei Jiang & Thomas Keusch, *Dancing with Activists*, 137 J. FIN. ECON. 1 (2020) (CEO turnover, higher shareholder payouts, and improved operating performance); Nickolay Gantchev, Merih Sevilir & Anil Shivdasani, *Activism and empire building*, 138 J. FIN. ECON. 526 (2020) (reducing empire-building).

[87] The incentive effect can backfire if managers can take actions that they know are bad for their firm but the market mistakes for good actions. This is possible because managers have inside information that the market does not have. *See* Jeremy C. Stein, *Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior*, 104 Q.J. ECON. 655 (1989). The balance of beneficial and detrimental incentive effects is difficult to assess empirically. By assumption, the relevant inside information is not directly observable. Discerning outcomes is tricky at best because all (comparable) firms in a market are subject to the same activism threat. For an empirical argument that the motivational effects are positive, see Nickolay Gantchev, Oleg Gredil & Pab Jotikasthira, *Governance under the Gun: Spillover Effects of Hedge Fund Activism*, 23 REV. FIN. 1031 (2019); *cf.* Hadiye Aslan & Praveen Kumar, *The Product Market Effects of Hedge Fund Activism*, 119 J. FIN. ECON. 226 (2016) (activism hurts competitors of targeted firms, as one would expect if the targeted firm competes more vigorously in the product market; note that this is bad for overall corporate profits and thus investment returns but good for social welfare).

[88] *See*, *e.g.*, John C. Coffee Jr., *Understanding the Plaintiff's Attorney: The Implications of Economic Theory for Private Enforcement of Law Through Class and Derivative Actions*, 86 COLUM. L. REV. 669, 677-84 (1986). Several preeminent plaintiff lawyers served prison time for paying their "clients." *Cf.* United States Attorney's Office, Central District of California, Press Release No. 08-075 (June 2, 2008) (perma.cc/6QKL-XDQV).

[89] The vast majority of shareholder suits provide little or no recovery for shareholders (whereas many generate fees for the plaintiff attorneys, paid by the corporation). *See* BERLE & MEANS, *supra* note 6, at 195; Roberta Romano, *The Shareholder Suit: Litigation Without Foundation?*, 7 J. L. ECON. & ORG'N 55, 60-65 (1991). However, the most important shareholder suit is the one that is never filed—and hence not observed—because the underlying conduct was successfully deterred. *See* Steven Shavell, *The Social versus the Private Incentive to Bring Suit in a Costly Legal System,* 11 J. LEG. STUD. 333 (1982); id., *The Fundamental Divergence Between the Private and the Social Motive to Use the Legal System*, 26 J. LEG. STUD. 575 (1997); Reinier Kraakman, Hyun Park & Steven Shavell, *When Are Shareholder Suits in Shareholder Interests?*, 82 GEO. L.J. 1733 (1994). Blocking the unwanted suits that we do observe—if they are indeed unwanted—risks also blocking the wanted suits that we do not observe in equilibrium. On the other side of the ledger, the indirect costs of defending shareholder litigation both before (defensive management) and after (management distraction) suit is filed are hard to measure; some of them might even be a benefit, namely improved behavior and non-monetary punishment, respectively. In theory, the net effects of litigation are reflected in more remote observable outcomes such as profitability (indeed, that is why we care in the first place), but such effects are confounded by various other influences. Empirical research designs using changes in state laws, such as the recently popular universal demand laws, encounter the same econometric challenges as other state law tests (*see* Hu & Spamann and Baker, *supra* note 84); they may also not identify the relevant local treatment effect (i.e., perhaps passing a universal demand law is beneficial, but abolishing all litigation would not be). Even the simpler preliminary question whether litigation is targeted at the right cases (i.e., the ones more likely to involve wrongdoing) has eluded a convincing empirical answer, with overlapping sets of authors finding suggestive evidence in favor for derivative and securities litigation (Quinn Curtis & Minor Myers, *Do the Merits Matter? Empirical Evidence on Shareholder Suits from Options Backdating Litigation*, 164 U. PA. L. REV. 291 (2016): positive correlation of filings and recovery with probability and severity of options backdating) but not merger class actions (Charles R. Korsmo & Minor Myers, *The Structure of Stockholder Litigation: When Do the Merits Matter?*, 75 OHIO ST. L. J. 829 (2014): filings correlate with

duty litigation is the only defense against self-dealing by corporate insiders, especially controlling stockholders.[90]

Not all indirect investor protection relies on self-interest, at least not direct monetary interest. Of shareholder proposals at corporations' annual meetings, about half emanate from "gadflies"—a handful of individuals holding the bare minimum of stock that cannot possibly hope even to recoup their out-of-pocket costs.[91] Most of the remaining proposals emanate from public pension funds and labor unions that may be pursuing non-investor concerns. These cheap interventions are less momentous than buy-outs, hedge fund activism, or litigation, in part because Rule 14a-8 only allows non-binding proposals (except for bylaws) and no election interference.[92] Nevertheless, they are indispensable as a catalyst for shareholder votes on items not desired by management and not required by law.[93] (The only other way shareholders can vote on items—especially candidates—not supported by management is a proxy fight, which only activist hedge funds and hostile buyers wage.)

Generalizing the last point, the rights of most shareholders would be largely meaningless but for these indirect mechanisms. Shareholders' rights are often said to be to vote, sell, and sue.[94]

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deal size but not deal premium). Triangulating from various proxies of uncertain validity, different authors reach different bottom lines. Contrast, e.g., the largely positive view of securities class actions in James D. Cox & Randall S. Thomas, *Mapping the American Shareholder Litigation Experience: A Survey of Empirical Studies of the Enforcement of the U.S. Securities Law*, 6 ECFR 164, 203 (2009) ("the data we review presents a most intriguing, even hopeful, mosaic on the value of private enforcement actions for financial reporting") with the negative view of derivative actions in Jessica Erickson, *The (Un)Changing Derivative Suit*, in RESEARCH HANDBOOK ON REPRESENTATIVE SHAREHOLDER LITIGATION 58, 59 (Sean Griffith, Jessica Erickson, David H. Webber & Verity Winship eds. 2018) ("the story is one of high costs and low rewards for plaintiff corporations and their shareholders"). A recent paper uses changes in the legality of fee-shifting bylaws (*infra* n. 119) to argue empirically that the availability of plaintiff shareholder litigation under corporate law in its current form enhances value. Jens Dammann, *Fee-Shifting Bylaws: An Empirical Analysis*, 65 J. L. & ECON. 1 (2022).

[90] *Cf.* Joel E. Friedlander, *Vindicating the Duty of Loyalty: Using Data Points of Successful Stockholder Litigations as a Tool for Reform*, 72 BUS. LAW. 623, 624-629 (2017) (giving examples of successful challenges to duty of loyalty violations).

[91] *See* James R. Copland, *Frequent Filers: Shareholder Activism by Corporate Gadflies* (2014), https://perma.cc/YFK7-C7NQ; Gantchev & Giannetti, *supra* note 43; Sullivan & Cromwell, *supra* note 43; Yaron Nili & Kobi Kastiel, *The Giant Shadow of Corporate Gadflies*, 94 S. CAL. L. REV. 569 (2021). In 2011-2014, a law school clinic, Harvard's Shareholder Rights Project, initiated a largely successful wave of "destaggering" corporate boards at S&P 500 and Fortune 500 companies by shareholder proposal, *see Shareholder Rights Project*, HARV. L. SCH. (2019), http://www.srp.law.harvard.edu/index.shtml (perma.cc/44FS-E2YY).

[92] *Cf.* 17 CFR 240.14a-8(i)(1), (7), and (8) (relieving the company from the obligation to include the proposal in its proxy if the proposal is improper under state law, "relat[es] to the company's ordinary business operations," or could in any way affect the outcome of the upcoming director election).

[93] Gantchev & Giannetti, *supra* note 43, find empirically that some of these proposals harm shareholder value if adopted. This is a priori unlikely because it requires not only the proposal but also the majority of votes to be misguided. Gantchev & Giannetti present evidence that bad proposals pass by accident when shareholders are uninformed. But as Kastiel & Nili point out, the evidence suffers from selection bias. In particular, it omits all proposals that were withdrawn because management voluntarily adopted the proposal before the meeting. *See generally* Kastiel & Nili, previous note, draft notes 254-56 and accompanying text. *Also cf.* John G Matsusaka, Oguzhan Ozbas & Irene Yi, *Opportunistic Proposals by Union Shareholders*, 32 REV. FIN. STUD. 3215 (2019) (unions bring more proposals during contract renegotiation years); id., *Can Shareholder Proposals Hurt Shareholders? Evidence from Securities and Exchange Commission No-Action-Letter Decisions*, 64 J. L. ECON. 107 (2021) (stock price goes up when SEC issues no action letter on companies' request to exclude a proposal).

[94] *See*, *e.g.*, Robert B. Thompson, *Preemption and Federalism in Corporate Governance: Protecting Shareholders Rights to Vote, Sell, and Sue*, 62 L. & CONTEMP. PROB. 215, 216 (1999). *Cf.* ROBERT C. CLARK, CORPORATE LAW 93 (1986) ("The important powers of shareholders can be put under three headings: voting rights, rights to sue, and rights to information.").

Consider first retail shareholders and funds, and recall section I. Suing: Retail shareholders and retail funds do not sue; plaintiff lawyers do it for them. Voting: Retail funds vote (most retail shareholders do not[95]), but only buyers and activists place items on the agenda that expand voting rights beyond vetoes of management proposals.[96] Selling: Some retail funds and shareholders may sell (index funds do not), but this ability exerts pressure on management—and fetches a decent price—mostly because potential buyers include activist hedge funds and takeover buyers.[97] Retail funds may exert influence informally through policy announcements and individual engagement, but absent the aforementioned rights, their leverage would be limited to the media and reputation (also indirect mechanisms).[98] With few exceptions, all of the above also holds for other large shareholders such as endowments, pension funds, and sovereign wealth funds. These large investors might have the financial means to do more but in practice they do not, probably because they are not well-positioned to earn more by exercising direct protection than they can get for free through indirect protection.

C. Emergence

In the language of ecology, indirect investor protection is an emergent property, i.e., a property of the ecosystem that could not be predicted from the selfishness of (most of) its constituents.[99] More prosaically, indirect investor protection depends on the interaction of multiple constituents that, individually, would not protect investors and would likely harm them. Presumably, this explains why the constituents are often vilified and their protective function ignored.[100]

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[95] *See* Brav, Cain & Zytnick, *supra* note 37.

[96] Under the law, boards need shareholder approval only for charter amendments, mergers, dissolution, or sale of substantially all assets (not counting say-on-pay, which is not binding). *See* Bartlett & Talley, *supra* note 16, at 202, 217-219. Boards also need shareholder votes for their own election, but in the absence of a successful challenger or active removal, can theoretically remain in office indefinitely, and can fill any vacancies with successors of their own choice. *Cf.* 8 Del. C. §§ 141(b) ("Each director shall hold office until such director's successor is elected and qualified or until such director's earlier resignation or removal."), 223(a)(1) ("Vacancies … may be filled by a majority of the directors then in office").

[97] Selling—or rather the threat thereof—exerts an independent disciplinary force only if the seller has private information, because only in this case (a) does the sale have permanent price impact and thus constitutes a threat, and (b) is the sale profitable for the seller and hence credible as a threat. *See* Anat Admati & Paul Pfleiderer, *The "Wall Street Walk" and Shareholder Activism: Exit as a Form of Voice*, 22 REV. FIN. STUD. 2646, 2646-47 (2009); Alex Edmans, *Blockholder Trading, Market Efficiency, and Managerial Myopia*, 64 J. FIN. 2481, 2497 (2009). Retail investors are exceedingly unlikely to have relevant private information except if they illegally trade on inside information (in which case they would need to hide their trades, reducing price impact). Retail funds probably do generate some relevant private information through intensive research of their portfolio firms but, for the reasons discussed *supra* I.C, probably much less than investors with more high-powered incentives, such as hedge funds. *Cf.* Alex Edmans, Vivian W. Wang & Emanuel Zur, *The Effect of Liquidity on Governance*, 26 REV. FIN. STUD. 1443, 1472 (2009) (finding that "hedge funds are more effective at governance through exit than other institutions").

[98] Without their enhancement by indirect mechanisms, retail funds' strongest weapon is to withhold their vote from one or more board nominees, which tends to be effective, although this may depend on the endogenous choice of targets and the off-equilibrium threat of more forceful interventions. *See* Diane DelGuercio, Laura Seery & Tracie Woidtke, *Do Boards Pay Attention When Institutional Investor Activists ''Just Vote No''?*, 90 J. FIN. ECON. 84 (2008); Marcel Kahan & Ed Rock, *The Insignificance of Proxy Access*, VA. L. REV. 1347, 1374, 1420-25 (2011).

[99] *Cf.*, *e.g.*, George W. Salt, *A Comment on the Use of the Term Emergent Properties*, 113 AM. NATURALIST 145, 145 (1979) ("An emergent property of an ecological unit is one which is wholly unpredictable from observation of the components of that unit."). To be sure, the investor protection property is predictable with the help of contemporary finance and economics. But the point is that it would hardly be predictable to a naïve observer unarmed with that theoretical knowledge.

[100] *Cf.* the critical references *supra* note 17.

First, there is competition between actors of the same type. Competition between speculators creates the protective effect of approximately unbiased and informative market prices; individually, speculators would much prefer to trade at prices more unfavorable to uninformed investors (*supra* A). Competition between buyers pushes up the prices paid in takeovers. Competition between activist hedge funds and between plaintiff lawyers forces them to intervene earlier in more cases.

Second, there are important interdependencies between the mechanisms of indirect investor protection. Activist hedge funds accelerate or decelerate takeovers. Plaintiff litigation may further price unbiasedness and informativeness by deterring manipulation and disclosure violations. Most importantly, the benign view of activist hedge funds and takeovers hinges on plaintiff litigation to prevent collusion with target management, and on market prices to reward only beneficial interventions. If collusion were possible, target managers could pay off attackers with company money—free for managers, beneficial for attackers, but costly and not helpful for investors. Attackers might then switch their business model to eliciting such payments—a form of extortion referred to as "greenmail"—rather than the hard work of finding and fixing mismanaged firms. If a takeover did occur, buyer and target management might collude to depress the price paid to target shareholders, dividing the spoils. Even without collusion, activism could be harmful in a world of erratic prices. Critics allege that activist hedge funds make money through a form of pump-and-dump: push up the stock price temporarily, sell out before the price crashes back down, and leave long-term investors with not more or even less value in the end.[101] This would require a systematic failure of stock prices to reflect activism's long-term consequences. This is theoretically implausible.[102] It is also empirically refuted or at least not substantiated.[103]

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[101] *See*, *e.g.*, Andrew Ross Sorkin, *'Shareholder Democracy' Can Mask Abuses*, N.Y. TIMES: DEALBOOK, Feb. 26, 2013, https://dealbook.nytimes.com/2013/02/25/shareholder-democracy-can-mask-abuses/ (perma.cc/ZJX9-6VP7) ("It increasingly appears that the rise of `shareholder democracy' is leading, in some cases, to a perverse game in which so-called activist investors take to the media to pump or dump stocks in hopes of creating a fleeting rise or fall in a company's stock price."). In their handbook chapter, Edmans & Holderness, *supra* note 60, at 600, do not cite a single academic paper for this critique but note that it is "espoused in particular by Larry Fink (CEO of BlackRock), Martin Lipton (founding partner of the law firm Wachtell, Lipton, Rosen & Katz), and Delaware judges Leo Strine Jr. and Jack Jacobs" (following his retirement from the bench in late 2019, Strine joined Wachtell as counsel, see www.wlrk.com/attorney/lestrine/ (perma.cc/JLR8-2D8D)).

[102] *See generally supra* II.A. Barring pricing pathologies, an activist could mislead the market (the "pump") only if it had, or could credibly pretend to have, material information about the company that speculators do not have. Under Regulation Fair Disclosure ("Reg FD"), the company would not be allowed to share such information with the activist hedge fund without simultaneously sharing it with the world at large or obtaining an undertaking from the hedge fund not to trade. Regulation Fair Disclosure, 17 C.F.R. § 243.100 (2020). If the hedge fund traded in breach of this agreement, the hedge fund would commit criminal insider trading. Consequently, speculators should have any material information as soon as the activist has it, and prices should adjust accordingly, leaving no trading gain for the activist. Of course, some information may not be legally considered "material," yet be so for a savvy trader (in principle, the two concepts should coincide exactly, but in legal application they may diverge). *See* Eugene F. Soltes, *What Can Managers Privately Disclose to Investors?*, YALE J. ON REG. BULL. (Nov 10, 2019) (perma.cc/8UR5-CY5A). Still, exploiting this grey zone would be very risky for an activist fund. Moreover, an activist with the reputation for doing this would not be able to.

[103] *See* Alon Brav, Wei Jiang, Frank Partnoy & Randall Thomas, *Hedge Fund Activism, Corporate Governance, and Firm Performance*, 63 J. FIN. 1729 (2008); Lucian A. Bebchuk, Alon Brav & Wei Jiang, *The Long-Term Effects of Hedge Fund Activism*, 115 COLUM. L. REV. 1085 (2015); *cf.* Becht, Franks, Grant & Wagner, *supra* note 27, at 2948-68 (reviewing evidence of activism interventions and returns in 23 countries and finding positive returns throughout). *But see* Ed deHaan, David Larcker & Charles McClure, *Long-term economic consequences of hedge fund activist interventions*, 24 REV. ACCTG. STUD. 536 (2019) (value-weighted, as opposed to equal-weighted, long-run financial returns starting one month prior to the intervention are indistinguishable from zero, as are returns on assets

D. Imperfections

Indirect investor protection is not perfect, but the imperfections are minor—and some imperfections are *necessary* for the system to work in the first place.

Grossman and Stiglitz (1980) famously pointed out that prices cannot always perfectly reflect all information.[104] If they did, speculators could not make the requisite trading profits to cover their costs. Without speculators, information could not come into prices. Analogously, if corporations were always perfectly managed, activists/buyers and plaintiff attorneys could not make a living off of fixing mismanagement—they would not cover their fixed costs.[105] For any particular intervention, their variable cost must be less than their expected reward, which is generally less than the social gain, so some socially beneficial interventions will not occur. Fortunately, trading costs are low (though the costs of information acquisition are a different matter), and the more sizeable costs of activism and litigation are leveraged across many firms by way of deterrence.[106]

Institutional and psychological frictions create additional imperfections that are the subject of a burgeoning empirical and theoretical literature. For example, few would argue that market prices were even approximately unbiased in the dot-com bubble of the 1990s, the flash crash of 2010, or the recent GameStop frenzy, and there surely are misguided activism campaigns, opportunistic takeovers, and nuisance suits. Nevertheless, with varying degrees of certainty, the literature's bottom line is that on net, the indirect mechanisms work.[107]

III. THE RULES UNDERPINNING INDIRECT INVESTOR PROTECTION

The ecosystem just described is critically dependent on the rules and their enforcement. Mirroring the last section, this section discusses first (A) the rules underpinning market prices and then (B) the rules underpinning other indirect mechanisms. Some investments do not have market prices—at least not the informative unbiased prices of liquid markets—nor are they subject to the other mechanisms of indirect investor protection. This gives importance to additional rules that

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when matching on pre-intervention trends); Andrew C. Baker, The Effects of Hedge Fund Activism, working paper (October 2021), https://andrewcbaker.netlify.app/publication/baker_jmp/Baker_JMP.pdf (same); *cf.* J.B. Heaton, *Hedge Fund Activism and Financial Performance*, in THE OXFORD HANDBOOK OF HEDGE FUNDS ch. 14 (Douglas Cumming, Sofia Johan, and Geoffrey Wood eds. 2022) (improvements at target firms are modest). The empirical disagreement partially reflects that (a) long-run returns are mostly driven by unrelated noise drowning out the signal (which is exacerbated by value-weighting, which reduces effective sample size), (b) it is difficult to find the right counterfactual for a targeted firm, and (c) in equilibrium, target improvements ought to be small because activists compete to find targets.

[104] Grossman & Stiglitz, *supra* note 75, at 405.

[105] Similarly, mechanisms that use negative price signals to trigger intervention cannot forestall all mismanagement. If they did, the negative signal would never materialize. *See generally* Philip Bond, Alex Edmans & Itay Goldstein, *The Real Effects of Financial Markets*, 4 ANN. REV. FIN. ECON. 339 (2012); for an example regarding CEO removal, see Gary B. Gorton, Lixin Huang & Qiang Kang, *The Limitations of Stock Market Efficiency: Price Informativeness and CEO Turnover*, [2017] REV. FIN. 153 (2016).

[106] The more powerful is deterrence, the fewer actual interventions are necessary and the higher the reward can and should be without eating deeply into investors' returns. *Cf.* Vyacheslav Fos & Charles M. Kahn, The Threat of Intervention, ECGI Finance Working Paper 609/2019 (providing a model in which the threat of intervention can obviate actual interventions, and "more frequent ex post interventions are not necessarily a sign of enhanced economic efficiency"). In theory, it would be worth subsidizing interventions. *Cf. infra* V.B and Kraakman, Park & Shavell and Shavell, *supra* note 89.

[107] In declining order of certainty, see the references and discussion *supra* notes 75, 78 and 79 (market prices), 86-87 and 103 (hedge fund activism), 84 (takeovers), and 89 (plaintiff litigation). All of these findings are, of course, specific to the prevailing legal and ecological conditions.

channel investor money into particular markets (C). This last set of rules is particularly interesting because it would be nonsensical, even counterproductive, from the perspective of *direct* investor protection.

In this section, I merely describe the rules; I do not differentiate legislation, stock exchange rules, charter, bylaws, etc. I defer to the next section the important question whether any of these rules should be mandatory.

A. Market Prices

Unbiased informative prices do not arise in a vacuum. Public securities markets have extensive rules covering, inter alia, disclosure, market making, and anti-manipulation.[108] The main goal of these rules is to foster unbiased informative prices. This is a truism. The rules are discussed extensively in the existing literature.[109] I do not discuss them in detail.

What bears amplification, however, is the difference in perspective between direct and indirect investor protection, partially in preparation for the discussion of mandatory rules below (IV.B). The direct investor protection perspective on these rules would be that all investors, including small ones, need disclosure so they or their agents (fund managers) can make informed investment decisions. By contrast, the indirect investor protection perspective values these rules because they create the conditions for highly competitive trading by savvy speculators, leading to prices at which even unsophisticated investors can safely invest.[110] From the former perspective, it is problematic if disclosures are too complex for unsophisticated investors to understand, or if the information is only available in formats or at times that put unsophisticated investors at a disadvantage. From the latter perspective, these issues are irrelevant. All that matters is that information is available to large numbers of savvy market players. Competing with one another, they convert the information into unbiased informative prices. These prices protect other investors.

B. Other Indirect Mechanisms

The other indirect mechanisms require rules preventing collusion, and some require explicit rewards.

If activist hedge funds and takeover buyers were allowed to, they could profitably collude with the target's management to obtain greenmail or, in the case of a buyer, a sweetheart deal. This would cost the other shareholders directly (the specific cash payment or price reduction) and indirectly (because it would divert activists' and perhaps buyers' activities from fixing up firms to greenmailing management). The threat of fiduciary duty litigation mostly prevents this.[111] Fiduciary duty litigation itself is at risk of collusion between plaintiff attorneys and individual defendants.

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[108] Like "public firms" (*supra* note 23), I use "public securities markets" as a functional term, not in the narrow legal sense of registered stock exchanges trading registered securities. This would include an unregulated trading platform for unregistered securities (or a stock exchange prior to the advent of stock exchange regulation) if it supported active two-sided trading, such that we would expect prices to be approximately unbiased and informative. However, I am unaware of such a platform that does not have its own set of rules to support this sort of trading.

[109] *See*, *e.g.*, Gilson & Kraakman, *supra* note 10; Goshen & Parchomovsky, *supra* note 34; MERRITT B. FOX, LAWRENCE R. GLOSTEN & GABRIEL V. RAUTERBERG, THE NEW STOCK MARKET (2019).

[110] *Cf.* Goshen & Parchomovsky, *supra* note 34, at 714 ("the role of securities regulation is to create and promote a competitive market for information traders").

[111] For activism data, *see* Bebchuk, Brav, Jiang & Keusch, *supra* note 103, at 34; Alon Brav, Dorothy Lund & Edward Rock, Validation Capital, 99 TEX. L. REV. 1247 (2021). For an example of a court refusing to dismiss a claim against a CEO colluding with a buyer for future employment, see In re Mindbody, Inc. Stockholders Litigation, C.A. No. 2019-0442-KSJM (consol.), memo. op. (Del. Ch. Oct. 2, 2020). *See generally* Joel E. Friedlander, *Confronting*

The individual defendants would prefer that any payments in settlement be paid exclusively by the corporation or its insurer. The plaintiff attorneys would prefer that any payments go to them, not to the nominal plaintiff or class. There is thus ample temptation for individual defendants and plaintiff attorneys to strike a settlement deal on the back of the corporation and its investors. But settlements in representative litigation are subject to court oversight, which many courts now take quite seriously.[112]

Explicit rewards are required for litigation and other mechanisms that, unlike activism and takeovers, are not rewarded implicitly by trading profits. Under the common fund doctrine, courts tend to award the attorneys 10–30% of any recovery (including creation of a non-monetary common benefit). Given the large amounts of investor money at stake, awards can reach into the hundreds of millions of dollars.[113]

A panoply of other, often seemingly unrelated rules shape activism, takeovers, and plaintiff litigation—not necessarily for the better!—and are often adopted specifically for this purpose (including the purpose of undermining indirect investor protection for the benefit of others, such as managers). A staggered board is a powerful anti-takeover device when poison pills are legal.[114] Dual-class structures impede both takeovers and shareholder activism.[115] Tenure voting (i.e., greater voting rights for long-term holders of the stock) weakens the influence of activists, which are necessarily short-term holders, and some jurisdictions have adopted it for this very purpose.[116] Poison pills are adopted not only against takeovers but, with some modifications and qualifications, also against activists.[117] Slack in the 13D blockholder disclosure regime is critical for activist hedge funds who make money by buying before their engagement and its expected beneficial effect become known.[118] Rule 14a-8 determines which shareholder proposals a corporation must

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the Problem of Fraud on the Board, 75 Bus. Law. 1441 (2019). Greenmail was considered legal in Polk v. Good, 507 A.2d 531, 537 (Del. 1986), but I doubt this opinion would be followed today.

[112] *Cf.* Fed. R. Civ. P. 23(e), 23.1(c); *In re* Trulia, Inc. S'holder Litig., 129 A.3d 884, 891–99 (Del. Ch. 2016); *In re* Riverbed Tech., Inc. S'holders Litig., 2015 WL 5458041 (Del. Ch. 2015); House v. Akorn, Inc., 385 F.Supp.3d 616, 618, 621 (N.D. Ill. 2019). The courts' intervention against disclosure-only settlements was only partially successful. Not all courts agreed. Plaintiffs predictably took the litigation where courts still allow them. *See* Matthew D. Cain, Jill Fisch, Steven Davidoff Solomon & Randall S. Thomas, *The Shifting Tides of Merger Litigation*, 71 VAND. L. REV. 603 (2018); id., *Mootness Fees*, 72 VAND. L. REV. 1777 (2019)

[113] *Cf.* Americas Mining Corp. v. Theriault, 51 A.3d 1213 (Del. 2012), at 1252 (quoting Chancery Court that common fund award "creates a healthy incentive for plaintiff's lawyers to actually seek real achievement for the companies that they represent in derivative actions and the classes that they represent in class actions") and 1252–63 (awarding $300 million out of a $2 billion recovery). In derivative actions, where recovery goes to the corporation, fees also play a second role: in proportion to the defendant's share ownership, fees act like a penalty and thus increase deterrence.

[114] *See* Lucian A. Bebchuk, John C. Coates & Guhan Subramanian, *The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy*, 54 STAN. L. REV. 887 (2002).

[115] *Cf.* Kobi Kastiel, *Against All Odds: Hedge Fund Activism in Controlled Companies,* 2016 COLUM. BUS. L. REV. 60 (2016) (finding that dual-class companies are not immune from activist interventions if, but only if, activists have formal bargaining mechanisms such as minority rights to board seats).

[116] *See* Mark J. Roe & Federico Cenzi Venezze, *Will Loyalty Shares Do Much for Corporate Governance?*, 76 BUS. L. 467, 487-496 (2021).

[117] *See* Marcel Kahan & Edward Rock, *Anti-Activist Poison Pills,* 99 B.U. L. REV. 915 (2019).

[118] *See* Lucian A. Bebchuk & Robert J. Jackson, *The Law and Economics of Blockholder Disclosure,* 2 HARV. BUS. L. REV. 39, 50 (2012); Gilson & Gordon, Costs, *supra* note 7, at 902-916. In 2011, the law firm that invented the poison pill unsuccessfully petitioned the SEC to shorten the 13D disclosure window. *Petition for Rulemaking Under Section 13 of the Securities Exchange Act of 1934,* WACHTELL, LIPTON, ROSEN & KATZ (Mar. 7, 2011), https://www.sec.gov/rules/petitions/2011/petn4-624.pdf (perma.cc/5SAL-HVT6). In February 2022, the SEC, proposed tightening the 13D regime, *see* SEC. & EXCH. COMM'N, Modernization of Beneficial Ownership Reporting, 87

include in its proxy statement. Plaintiff litigation is critically dependent on the American rule for costs, and on extensive discovery coupled with notice pleading or something close to it.[119] It also depends on the absence of arbitration clauses in corporate charters and bylaws.[120]

C. Channeling Investor Money

Not all investments are protected by the indirect mechanisms described above. Some assets do not trade, at least not at approximately unbiased informative prices. Some assets do not allow activism, takeovers, or plaintiff litigation. There is thus an important role for rules channeling investors into certain types of assets.

In the U.S., there are no restrictions on investors' ability to invest in any particular assets. There are, however, restrictions on issuers' and intermediaries' ability to solicit and accept investments from investors. In particular, public offerings of securities require registration of the security and of the offering. Roughly speaking, registration is required for securities offerings to, and securities held by, the public.[121] Registration triggers most of the obligations applicable to listings, particularly periodic reporting.[122] Registration thus provides an incentive to list as well. To be sure, an ever-growing list of exemptions has allowed private markets to balloon.[123] Nevertheless, unrestricted marketing to, and purchases by, unrestricted investors require registration and will generally be accompanied by a listing. Retail investors in large numbers will thus perforce invest mostly

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Fed. Reg. 13846 (Mar. 10, 2022); *cf.* id., Prohibition Against Fraud, Manipulation, or Deception in Connection With Security-Based Swaps; Prohibition Against Undue Influence Over Chief Compliance Officers; Position Reporting of Large Security-Based Swap Positions, 87 Fed. Reg. 6652 (Feb. 4, 2022) (proposing new rule requiring disclosure, within one day, of positions above $300 million in security-based swaps, which are often used by activists to build positions).

[119] *See* Friedlander, *supra* note 90, at 636-655. In 2015, the Delaware legislature passed section 102(f) and amended section 109(b) of the Delaware General Corporation Law to prohibit fee shifting (i.e., the English rule for costs), which some corporations had recently adopted in their charters or bylaws. Dammann, *supra* note 89, argues empirically that fee shifting reduced shareholder value by removing the litigation threat.

[120] The SEC has repeatedly blocked such clauses but it has not formally prohibited them. In 2012, the SEC blocked Carlyle's attempt to avoid shareholder litigation through an arbitration provision in its IPO charter. *See* Kevin Roose, *Carlyle Drops Arbitration Clause from I.P.O. Plans,* N.Y. TIMES: DEALBOOK, Feb. 3, 2012, https://dealbook.nytimes.com/2012/02/03/carlyle-drops-arbitration-clause-from-i-p-o-plans (perma.cc/BJ4Y-BS5E). Recently, SEC staff granted a no-action letter blessing the exclusion of a mandatory arbitration bylaw proposal under rule 14a-8. *See* Cydney Posner, The Division of Corporation Finance's Response to Mandatory Arbitration Proposal, Harvard Law School Forum on Corporate Governance 2019/2/23, https://corpgov.law.harvard.edu/2019/02/23/the-division-of-corporate-finances-response-to-mandatory-arbitration-proposal/ (perma.cc/KA5E-J9ZB). *Cf.* Jay Clayton, *Statement on Shareholder Proposals Seeking to Require Mandatory Arbitration Bylaw Provisions*, SEC, Feb. 11, 2019, https://www.sec.gov/news/public-statement/clayton-statement-mandatory-arbitration-bylaw-provisions (perma.cc/8ZXS-CJEE).

[121] *See* Securities Act §§ 4(a)(2), 5 (15 U.S.C. §§ 77d(a)(2), 77e); Securities Exchange Act § 12(g) (15 U.S.C. § 78(l)) (requiring registration of securities "held of record" by 2,000 persons, or 500 persons who are not "accredited investors").

[122] *Cf.* Securities Exchange Act § 13 (15 U.S.C. § 78(m)) (disclosure rules for securities registered under § 12 of the Act), § 15(d)(1) (15 U.S.C. § 78(o)(d)(1)) (extension of these rules to issuers having filed an effective registration statement for an offering under the Securities Act).

[123] *Cf.* SEC. & EXCH. COMM'N, Facilitating Capital Formation and Expanding Investment Opportunities by Improving Access to Capital in Private Markets, 86 Fed. Reg. 3496, 3498-99 (Jan. 14, 2021) (table of most common exemptions and their requirements); id., Concept Release on Harmonization of Securities Offering Exemptions, 84 Fed. Reg. 30460, 30465 (June 26, 2019) ("In 2018, registered offerings accounted for $1.4 trillion of new capital compared to approximately $2.9 trillion that we estimate was raised through exempt offering channels"); Elisabeth de Fontenay, *The Deregulation of Private Capital and the Decline of the Public Company*, 68 HASTINGS L.J. 445 (2017) (documenting how deregulation of private capital has allowed much financing to migrate to private markets).

in listed securities. Listed securities generally have unbiased informative prices (*supra* II.A) and rules underpinning them (*supra* A). Moreover, public markets' liquidity facilitates activism (cf. *infra* V.B), and public disclosures facilitate plaintiff litigation.

Retail *funds* are more likely (to be invited) to participate in exempt offerings because they are larger and because certain exemptions are only available for sales to "qualified institutional buyers."[124] However, open-end funds must offer weekly liquidity—i.e., redemption—to their investors, and in practice they offer daily liquidity.[125] They thus risk runs if they invest in illiquid private-market assets.[126] Closed-end funds do not offer redemption and may invest in illiquid assets, but they are a fringe phenomenon, administering less than 1.5% of all assets held by investment companies.[127] In a roundabout way, the rules and investor habits (not to invest in closed-end funds) thus push retail funds into listed, registered assets as well.

From the perspective of direct investor protection, these rules make no sense. Registration's main content and consequence is disclosure. Retail investors do not read corporate disclosures (*cf. supra* I.B). If investors did read and understand these disclosures, they could *a fortiori* understand and judge the absence of disclosure and disclosure obligations, obviating the need for a rule (*infra* IV.A). As to liquidity, retail investors mostly do not and certainly should not need it at daily or even weekly horizons.[128] Illiquid assets earn a return premium.[129] Therefore, the rules should encourage, not discourage, retail funds to invest in illiquid assets if retail fund managers could be trusted to pick and value them, as direct investor protection presumes (but see *supra* I.C for good reasons to doubt this premise).[130] Indirect investor protection makes much better sense of this and other mandatory rules, as the next section will discuss.

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[124] *Cf.* 17 CFR § 230.144A (permitting certain "144A" private resales of securities to institutions), specifically paragraphs (a)(1)(i)(b) and (a)(1)(iv) (defining "qualified institutional buyer" to include registered investment companies and families of registered investment companies with at least $100 million in assets under management). A registered investment company is also automatically an "accredited investor" under 17 CFR § 230.506(a)(1), which matters for other exemptions (however, "accredited investor" status is also accorded to many individuals, in particular anyone with annual income of $200,000 or more, 17 CFR § 230.506(a)(5)).

[125] *Cf.* Investment Company Act § 22(e) (15 USC § 80a-22(e)).

[126] On the mechanics of mutual fund runs, *see* Qi Chen, Itay Goldstein & Wei Jiang, *Payoff complementarities and financial fragility: Evidence from mutual fund outflows*, 97 J. FIN. ECON. 239 (2010). ETFs may offer redemption in-kind but can only do so with public securities without acting as an underwriter in the public distribution of private securities. By contrast, the explicit prohibition for open-end funds to hold more than 15% of their portfolio in illiquid assets (17 CFR § 270.22e-4(b)(1)(iv)) lacks bite. Its sub-subparagraph (B) allows a fund to exceed the 15% threshold if its board determines that the fund's "plans to bring its illiquid investments … to or below 15% of its net assets within a reasonable period of time" is "in the best interest of the fund," and many funds frequently avail themselves of this. I thank John Morley for both points in this footnote.

[127] *See* 2021 Investment Company Fact Book, *supra* note 1, at II (of $29.7 trillion total assets in U.S. registered investment companies, $279 billion were in closed-end funds). On the role of closed-end funds generally and particularly the question whether they are efficiently priced, see Martin Cherkes, *Closed-End Funds: A Survey*, 4 ANN. REV. FIN. ECON. 431 (2012).

[128] An employee saving for retirement does not need liquidity for years or even decades into the future. Should a saver desire (partial) early liquidation for purposes of getting a child through college or repairing a house, this can easily be planned months or even years in advance. Even emergency expenses such as medical cost would rarely if ever require liquidation within days (and could be better dealt with through a bridge loan).

[129] *See* Dimitri Vayanos & Jiang Wang, *Market Liquidity—Theory and Empirical Evidence*, 2B HANDBOOK OF THE ECONOMICS OF FINANCE 1289, 1346-51 (2013).

[130] *Cf.* Kevin S. Haeberle, *Information Asymmetry and the Protection of Ordinary Investors*, 53 U.C. DAVIS L. REV. 145 (2019) (arguing that mandatory disclosure deprives long-term investors of the liquidity premium for more opaque securities).

IV. THE MANDATORY/ENABLING BALANCE OF CORPORATE AND SECURITIES LAW

Indirect investor protection cuts the Gordian knot of the mandatory/enabling balance in corporate and securities law. In indirect investor protection's light, contractual freedom—understood broadly to include charter terms, choice of listing venue, incorporation state, etc.—for some rules and mandates for others are complementary, not contradictory as they hitherto appeared (A). Unsophisticated investors benefit from protection against exploitative terms. However, most of this protection can be provided *indirectly* by other, sophisticated investors negotiating or, more to the point, pricing the terms of the investment (*supra* II.A). The only mandatory rules strictly required are those that align the incentives of some sophisticated investors with those of the unsophisticated with respect to the creation of other rules (B). That is, the required mandatory rules are meta-rules. The sophisticated will take care of the rest. They have the resources, information, and incentives to do it better than any regulator.[131] A few additional mandatory rules may be beneficial as a failsafe (C). The final subsection illustrates this framework with the example of insider trading (D).

The framework matches U.S. law's basic structure but not its details.[132] In the U.S., most corporate law is not mandatory and, given firms' free choice of state corporate law under the internal affairs doctrine, it cannot be.[133] However, federal securities law is largely mandatory, a growing list of exemptions notwithstanding.[134] As a result, corporate governance is largely a matter of private ordering, whereas mandatory rules channel most small investor money into markets with approximately unbiased informative prices (*supra* III.A and III.C). This agrees with the framework laid out below. However, existing law contains many more mandatory rules not supported by my framework, such as the 13D blockholder disclosure regime, while tolerating some schemes that my framework identifies as problematic, such as certain SPACs (*infra* B) or retail investment in erratically priced penny stocks.

My analysis is positive, not normative. It establishes that a limited set of mandatory rules is necessary and sufficient to cost-effectively prevent exploitation of unsophisticated investors, which arguably maximizes welfare.[135] It does not establish that regulation *should* maximize welfare—non-consequentialist libertarians would disagree. It assumes a competent regulator—

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[131] I am not assuming that sophisticated investors are smarter than regulators. But investors are more numerous and better resourced, (consequently) more deeply involved in any individual company, and have (at least some of) their own money at stake. They are thus better placed and motivated to design rules optimal for each company. (If a regulator had better information, perhaps through economies of scale, the regulator could simply share that information.) Real-world founders and sophisticated investors will make mistakes, but they are less likely to make widespread and incorrigible mistakes than a real-world regulator. To the extent optimal rules are found by trial and error rather than design, company-by-company experimentation has a much higher chance of discovering rules (that can then spread by mimicking or survival, i.e., evolution) than centralized—and generally one-shot and one-size-fits-all—efforts by a regulator.

[132] I offer this comparison to reassure readers who intuit that the current mandatory/enabling balance in positive law is roughly right. I do not believe that congruence (or lack thereof) of positive law and my normative framework has any principled bearing on the latter's validity.

[133] *See* Bernard Black, *Is Corporate Law Trivial?*, 84 NW. U. L. REV. 542 (1990); Henry Hansmann, *Corporation and Contract*, 8 AM. L. ECON. REV. 1, 2-4 (2006).

[134] *Cf. supra* notes 121-124 and accompanying text.

[135] *Prima facie*, exploitation of unsophisticated investors is an unproductive, redistributive activity that will reduce welfare by (a) diverting some sophisticated actors from value-creating into exploitative activities; (b) reducing financing for value-creating activities by (i) splitting available financing between value-creating and exploitative activities/businesses and (ii) reducing available financing if and because unsophisticated investors reduce participation (*supra* note 39 and accompanying text); and (c) likely redistributing primarily from poorer to richer (assuming diminish-

clearly, an incompetent regulator should not regulate. It is silent on the form of regulation: Depending on investor psychology and heterogeneity, even welfarists might prefer a stern warning or financial literacy test to a blanket exclusion from certain investments.[136] It does not rule out—although it provides reason to doubt—that "self-regulation" by organizations such as stock exchanges or index providers might suffice.[137] I elide these familiar questions not because they are unimportant but because they are orthogonal to indirect investor protection's contribution to the mandatory/enabling debate.

Like the rest of this paper, this section is exclusively concerned with the protection of investors. To the extent corporate and securities law rules do or should protect other constituencies, the externality justification for making them mandatory is mostly trivial.[138] However, there are few such rules in existing U.S. law, the ones discussed below not among them.[139]

A. The Gordian Knot

The question whether any corporate and securities law thus circumscribed should be mandatory has vexed scholars at least since Jensen and Meckling characterized the corporation as a "nexus for contracting relationships" in 1976.[140] Within the paradigm of *direct* investor protection,

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ing utility of wealth). Theoretically, it is possible that (a) and (b) do not happen (much) such that exploiting unsophisticated investors primarily provides a subsidy to good businesses, which may generate positive externalities through product market competition, innovation, employment, etc. But this is unlikely. Even if subsidies were desirable in principle, those provided by investor exploitation would likely be poorly targeted (see point (a)). For this reason, practically speaking, optimizing investor protection likely also optimizes business financing, and thus maximizes welfare. In a pure rational actor account, there would be no wedge to begin with: rational investors and entrepreneurs would choose rules to maximize the joint pie (*infra* IV.A).

[136] *Cf.* Matt Levine, Earning the Right to Get Swindled, https://www.bloomberg.com/opinion/articles/2018-09-24/earning-the-right-to-get-swindled (perma.cc/2EWA-AK7K) (proposing that access to private markets be granted to anyone signing a single-purpose, mostly empty, large-letter "Certificate of Dumb Investment").

[137] It suffices if and only if the rule-maker acts in the interest of retail and other vulnerable investors (in the sense of weighting their welfare at least roughly equal to those of other market participants). Private rule-makers might do so under pressure from government regulators, or under competitive pressure if and because vulnerable investors shun entire markets where they will be exploited, which is possible (but by no means guaranteed) even if vulnerable investors are unable to assess the quality of individual investments; *cf. supra* note 39 and accompanying text and, for the case of index exclusion, Scott Hirst & Kobi Kastiel, *Corporate Governance by Index Exclusion*, 99 B.U.L. REV. 1229, 1243-48 (2019).

[138] For voluntary constituencies such as workers or consumers, there is a theoretical possibility of internalization by contract or other adjusting behavior. Unlike for investors, however, there is no inconsistency in assuming that workers or consumers are unable to grasp these issues even while they are able to choose jobs and products based on their immediately apparent characteristics. Corporations are also much more likely to have market power vis-à-vis workers and consumers than vis-à-vis investors. Consequently, the basic case for mandatory regulation is easy. The only question is whether *corporate* and *securities* law are suitable tools, especially given that most of the externalities are addressed by other areas of law (e.g., antitrust, environmental, labor). For the recent debate on this topic, see, e.g., Luigi Zingales, *Towards a Political Theory of the Firm*, 31(3) J. ECON. PERSP'S 113 (2017); Lucian A. Bebchuk & Roberto Tallarita, *The Illusory Promise of Stakeholder Governance*, 106 CORNELL L. REV. 91 (2020); Jeffrey Meli & James C. Spindler, *The Promise of Diversity, Inclusion, and Punishment in Corporate Governance*, 99 TEX. L. REV. 1387 (2021).

[139] The main exceptions are the prohibition on exculpating or indemnifing intentional violations of law (cf. 8 Del. C. §§ 102(b)(7), 145(a)/(b)) and occasional disclosure rules such as for conflict diamonds or the CEO-to-median-employee pay ratio (Dodd-Frank Act 2010, Pub. L. 111–203 §§ 1502 (15 U.S.C. 78m(p)), 953(b)). *See generally* Ann M. Lipton, *Not Everything Is About Investors: The Case for Mandatory Stakeholder Disclosure*, 37 YALE J. REG. 499 (2020).

[140] Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure,* 3 J. FIN. ECON. 305, 311 (1976). The classic, book-length expounding of the legal implications

the question almost inevitably leads to one of two extreme answers, both of which seem intuitively wrong to most informed commentators (and neither is current U.S. law).

At one extreme, the standard rational actor paradigm suggests *prima facie* that no corporate or securities law should be mandatory. Investors, founders, and managers will pick the optimal rules.[141] Mandates can only make things worse. I review possible complications below.

At the other extreme, investor irrationality casts suspicion on all privately negotiated rules, potentially requiring all corporate and securities law to be mandatory.[142] However, it does not stop there. Inability to choose/price legal terms presumably implies inability to choose/price good investments in the first place (and casts at least a strong doubt on the ability to make good use of disclosure and voting rights).[143] Consequently, if regulators need to protect investors against their own choices, then they should also screen the businesses that these investors are allowed to invest in (and perhaps limit voting rights, etc.). State blue sky laws decreed this in the early 20th century.[144] A few commentators advocate it today.[145] Current U.S. law does not.[146] Today, investors

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of this "contractarian" theory of the corporation is EASTERBROOK & FISCHEL, *supra* note 13. Some important contributions to the ensuing debate include those published in the symposium on Contractual Freedom in Corporate Law in 89(7) COLUM. L. REV. (1989) and those cited in the subsequent notes, as well as Lucian Arye Bebchuk, *Limiting Contractual Freedom in Corporate Law: The Desirable Constraints on Charter Amendments*, 102 HARV. L. REV. 1820 (1989); Romano, *supra* note 13; Gillian Hadfield & Eric Talley, *On Public versus Private Provision of Corporate Law*, 22 J. L. ECON. ORG'N 414 (2006); Nittai K. Bergman & Daniel Nicolaievsky, *Investor Protection and the Coasian View*, 84 J. FIN. ECON. 738 (2007). The most lucid, recent review is Michael Klausner, *The Corporate Contract Today*, *in* THE OXFORD HANDBOOK OF CORPORATE LAW AND GOVERNANCE (Jeffrey Gordon & Wolf-Georg Ringe eds., May 2016).

[141] Jensen & Meckling, previous note, at 324. Optimal rules include "meta-rules" to amend the substantive rules later (midstream changes, *cf. supra* note 80), and may include a delegation of decision-making authority to institutions such as stock exchanges, courts, or state legislatures. *Cf.* Hansmann, *supra* note 133 (arguing that corporate charters tend to specify very little because this effectively delegates future amendments to the state legislature).

[142] I use "investor irrationality" as a stand-in for any general infirmity in investor decision-making including rational inattention. The existence and relevance of irrational investor behavior is no longer in serious dispute. *See* Nicholas Barberis & Richard Thaler, *A Survey of Behavioral Finance*, 1B HANDBOOK OF THE ECONOMICS OF FINANCE ch. 18 (George M. Constantinides, Milton Harris & René M. Stulz eds. 2003); Malcom Baker & Jeffrey Wurgler, *Behavioral Corporate Finance: An Updated Survey*, in 2A HANDBOOK OF THE ECONOMICS OF FINANCE ch. 5 (George M. Constantinides, Milton Harris & René M. Stulz eds., 2013).

[143] *Cf.* EASTERBROOK & FISCHEL, *supra* note 13, at 21 ("Anyone who thinks markets even bearably good at pricing future profits from well-managed firms must think them better at pricing the effects of governance structures."). The implication arises because the legal terms are much more standardized and hence simpler to understand than the underlying businesses. The best argument *for* regulatory review of the terms but not of the business would be one based on differential costs and benefits rather than a categorical difference: sponsors can gain by promoting bad businesses but they can gain more by contracting for a "license to steal," whereas regulators may struggle to assess the terms but less so than they would struggle to assess the business. To my knowledge, nobody has fleshed out this argument, which is implicit in my treatment of redundancy *infra* IV.C.

[144] *See* Jonathan R. Macey & Geoffrey P. Miller, *Origin of the Blue Sky Laws,* 70 TEX. L. REV. 347, 359–364, 377–80 (1991) (blue sky laws adopted in many U.S. states in 1911-1913 allowed blocking investments in securities that the regulator deemed not to offer a "fair return").

[145] *Cf.* Stephen Choi, *Regulating Investors Not Issuers: A Market-Based Proposal*, 88 CAL. L. REV. 279, 285-302 (2000) (unsophisticated investors should be restricted to investing in index funds); Barbara Black, *Behavioral Economics and Investor Protection: Reasonable Investors, Efficient Markets*, 44 LOY. U. CHI. L.J. 1493, 1507–08 (2013) ("Behavioral economics thus supports the need for (at least some) paternalistic responses to cognitive biases. Disclosure is not the panacea that drafters of federal securities laws may have thought it to be."); Lund, *supra* note 45 (passive funds should not be allowed to vote).

[146] To be more precise, much state "merit regulation" remains on the books but is preempted by federal law. In Europe, some merit regulation remains formally applicable but is rarely used, if ever. *See* KRAAKMAN et al., *supra* note, at 256-7.

can invest in, and promoters can promote, any legal business that they please. Most modern commentators consider this obviously correct.

Let us therefore return to the dominant rational actor paradigm and its *prima facie* conclusion that private contracting will lead to optimal rules. Most commentators resist this conclusion.[147] The reasons offered, however, do not provide a good rationale for mandatory rules, at least not for those we have and commentators advocate.[148]

One reason why private contracting may fail to produce optimal rules is standardization. Network or learning externalities may keep firms stuck in an inefficient collective equilibrium.[149] Relatedly, the initially chosen rules may become outdated in long-lived firms.[150] However, such "inertia" inefficiencies could be addressed by a one-off switch that companies are free to reverse, perhaps after a mandatory testing period; it does not justify a permanent mandatory rule, including restrictions on amendment procedures.[151]

Another reason why private contracting may generate socially suboptimal terms is externalities. The literature on mandatory corporate/securities law identifies two. First, disclosure has positive externalities on competing or otherwise related firms and their investors (and arguably on non-investor constituencies, which are bracketed here by the proviso above).[152] Second, takeover

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[147] *Cf.* Klausner, *supra* note 140, at 2 ("We no longer hear the contractarian refrain in opposition to any and all corporate law reform proposals—that any particular proposal cannot possibly be value enhancing, because if it were, firms would have already adopted it in their charters, at least at the IPO stage."). Even EASTERBROOK & FISCHEL, *supra* note 13, at 212, 221 could not fully accept the contractarian conclusion when it conflicted with their strongly held view that takeover defenses were inefficient. *See* Robert M. Daines & Jon D. Hanson, *The Corporate Law Paradox: The Case for Restructuring Corporate Law*, 102 YALE L. J. 577, 584-599 (1992) (reviewing EASTERBROOK & FISCHEL, *supra* note 13).

[148] I focus on theoretical arguments in the main text because policy requires theory. In any event, empirical tests of efficient contract terms run into a version of the joint hypothesis testing problem well known from research on market efficiency: any test of whether reality conforms to efficiency requires a model of what efficiency would look like (i.e., a model of efficient prices/terms). If reality does not conform to the model, the reason may be inefficiency, or that the model is wrong. *See* Fama, *supra* note 75, at 1575-76. (In a highly controlled lab experiment, a researcher might know the efficient term, but bargaining in the lab is institutionally incomparable to large-stake financial contracting.)

For example, some argue that a high degree of uniformity in corporate charters is evidence against optimal contracting. *See* Klausner, *supra* note 140; id., *The Contractarian Theory of Corporate Law: A Generation Later*, 2006 J. CORP. L. 779, 782-93 (2006). However, the evidentiary conclusion only follows if one accepts the theoretical premise that optimal charters are highly tailored, or more to the point, more tailored than in reality. There actually is substantial variability of corporate charters concerning, e.g., dual-class stock or action by written consent, *see*, *e.g.*, Frankenreiter et al., *supra* note 84, figure 4; *cf. infra* note 170 (waivers of the duty of loyalty). There would be more if law and regulators did not push against it, as in the SEC's push against arbitration clauses, *supra* note 120.

[149] *See* Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757, 774–815 (1995); id., previous note, at 793–96; *cf.* Sarath Sanga, *Network Effects in Corporate Governance*, 63 J. L. & ECON. 1 (2020) (empirically documenting the importance of network effects). For example, companies might be better off collectively if all adopted a novel term, but for an isolated, early adopter the benefit might be overwhelmed, either by the cost of operating under untested law, or perhaps because the market draws negative inferences from the unusual term.

[150] *See* Lucian Arye Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833, 865-66 (2005).

[151] *Cf.* Klausner, previous note, at 836-7; Hansmann, *supra* note 141; Scott Hirst, *The Case for Investor Ordering*, 8 HARV. BUS. L. REV. 227, 231 (2018) ("To ensure that corporations initiate value-enhancing switches, the SEC should [merely] set default arrangements to encourage managers to initiate switching").

[152] *See* Frank H. Easterbrook & Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 VA. L. REV. 669, 685-86, 695, 697 (1984); EASTERBROOK & FISCHEL, *supra* note 13, at 26, 290-91; Merritt B. Fox, *Retaining Mandatory Securities Disclosure: Why Issuer Choice is Not Investor Empowerment*, 85 VA. L. REV. 1335,

defenses have negative externalities on acquirers (by affecting the surplus split).[153] However, these types of externalities emanate not only from public firms but all (large) firms (and, for surplus splits, other assets).[154] They cannot explain why (arguments for) mandatory disclosure and takeover rules are limited to public firms.[155]

Finally, contracting may fail to achieve the optimum due to bargaining breakdown or wasteful signaling.[156] This generic possibility can hardly justify a wholesale rejection of contracting.[157] Specific contracting failures need to be linked to specific solutions. This link seems missing for most actual (e.g., disclosure, duty of loyalty, court oversight) or candidate (e.g., one share – one vote) mandatory rules in corporate and securities law. There is no space here to examine each of these rules from this perspective. It is telling, however, that even authors who introduced contracting failures into the corporate and securities law literature do not invoke them (or either of the prior two reasons, for that matter) in their other academic articles advocating particular mandatory rules.[158]

In summary, direct investor protection cannot even roughly explain the balance of mandatory and enabling rules in current U.S. corporate and securities law, and most commentators seem unwilling to embrace its normative implications, regardless of whether investors are conceived as fully rational or not.

B. Protecting the Pricing Mechanism

Indirect investor protection cuts this Gordian knot, as stated in the opening paragraph of this section. It does so by explicitly recognizing different types of rules and investors, and their interaction. Investors are neither all rational/sophisticated nor all irrational/unsophisticated. Nor do they merely exist side by side: the two types interact. This interaction can be adversarial, but it need not be. With rules in place to align their incentives, the rational/sophisticated will per force look out

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1345 (1999); Anat Admati & Paul Pfleiderer, *Forcing Firms to Talk: Financial Disclosure Regulation and Externalities*, 13 REV. FIN. STUD. 479 (2000).

[153] *See* David Scharfstein, *The Disciplinary Role of Takeovers,* 55 REV. ECON. STUD. 185, 185–86 (1988).

[154] *Cf.* de Fontenay, *supra* note 123 (private companies freeride on public companies' disclosures); Eric A. Posner, E. Glen Weyl, *Property Is Only Another Name for Monopoly*, 9 J. LEG. ANALYSIS 51 (2017) (arguing for periodic mandatory "put in play" of all types of large assets); ERIC A. POSNER & GLEN WEYL, RADICAL MARKETS: UPROOTING CAPITALISM AND DEMOCRACY FOR A JUST SOCIETY (2019) (same).

[155] Differentiating public and private firms might conceivably be justified if the size of the positive externality exceeds the net private cost in public but not in private firms; in particular, disclosure presumably has greater private benefits in public firms. Commentators generally do not even attempt to quantify the costs and benefits, however, nor do they attend to the subtleties identified by Admati & Pfleiderer, *supra* note 152, at 482.

[156] *See generally* Philippe Aghion & Benjamin Hermalin, *Legal Restrictions on Private Contracts Can Enhance Efficiency*, 6 J. L. ECON. ORG'N 381 (1990).

[157] *Cf.* Steven G. Medema, *The Coase Theorem at Sixty*, 58 J. ECON. LIT. 1045, 1108 (2021) ("this 'throwout-the-baby-with-the-bath-water' approach misses out on one of the most important insights to be drawn from the Coase theorem: the possibilities of bargaining and the associated potential of private ordering … [T]he fact that bargaining is costly does not make it, or efficient outcomes, impossible … Likewise, the reality that there is scope for strategic behavior does not tell us that people typically exploit those opportunities.").

[158] For example, arguably the most sophisticated and most comprehensive argument against contractual freedom in corporate law (without appealing to externalities on other firms or constituencies) from (mostly) the rational actor perspective that incorporates all of the above arguments is Bebchuk, *Why Do Firms* and *Asymmetric Information*, *supra* note 140. Yet Bebchuk's policy pieces advocating mandatory rules do not mention these arguments. *Cf.*, *e.g.*, Lucian A. Bebchuk & Kobi Kastiel, *The Untenable Case for Perpetual Dual-Class Stock*, 103 VA. L. REV. 585, 623 (2017).

for the irrational/unsophisticated. In particular, the rational/sophisticated will see to it that the remainder of the rules will be chosen optimally. Regulators can and should therefore focus primarily on rules aligning the incentives of the two groups—and more specifically the (meta-)rules that align their incentives with respect to the generation of other rules.

The novelty here is not the mere recognition that investors are heterogeneous, and that some are (much) more sophisticated than others. That is obvious. But the direct investor protection paradigm distracts from their interaction and thus forces commentators to commit to one type at the exclusion of others. Even when commentators have acknowledged the interaction, they have glossed over the all-important legal and institutional details that determine how it unfolds. For example, Easterbrook and Fischel (1991) dismissed concern for unsophisticated investors with the cursory argument that such concern "disregards the role of markets in impounding information in prices."[159]

Easterbrook and Fischel's argument is very powerful as far as it goes (*supra* II.A). But it relies on a premise—the existence of "markets … impounding information in prices"—that cannot be taken for granted. Markets do not simply exist: they are created. Markets are shaped by rules (*supra* III.A). The market-shaping rules may foster "impounding information in prices" for the benefit of all, as envisioned by Easterbrook and Fischel—or they may not. Left to their own devices, the sophisticated players have incentives to skew these rules in their favor.

One complication Easterbrook and Fischel omit is that not all assets are traded in markets that (unbiasedly) "impound[] information in prices." If unsophisticated investors cannot discern the difference or its relevance—as is likely—they may invest in assets *without* unbiased informative prices. Sophisticated actors have no incentive to stop them, quite the contrary. The key rationale for mandatory rules is to steer unsophisticated investors into safe markets.

Next is the question which markets are safe. "Markets with approximately unbiased informative prices" is not administrable rule, even though it can and should be a regulatory guiding principle. Regulators need to characterize/regulate markets' institutional features. The U.S. securities laws' emphasis on disclosure and anti-manipulation is sound, controversial details notwithstanding: more information and less manipulation lead to more informative, less biased prices.[160]

Note the shift in perspective. The policy recommendations of disclosure and anti-manipulation are conventional. But the justification is not. In the *direct* investor protection perspective, disclosure serves all investors. In this perspective, mandates are paradoxical because investors able to use the disclosures are able to choose which to demand in the first place; it also leaves unclear why investors would be better able to choose rules other than disclosure rules, as they are often allowed (*supra* A). By contrast, *indirect* investor protection requires disclosure not for use by the unsophisticated investors it aims to protect, but for use by others that will benefit unsophisticated investors. Without regulatory supervision, sophisticated actors would choose rules to maximize their own profits even at the expense of unsophisticated investors.[161] The sophisticated would not only tol-

[159] EASTERBROOK & FISCHEL, *supra* note 13, at 297–98. Compare similar quote from Romano, *supra* note 13.

[160] *Cf.* Renhui Fu, Arthur Kraft & Huai Zhang, *Financial Reporting Frequency, Information Asymmetry, and The Cost of Equity,* 54 J. ACCT. & ECON 132, 143, 146 (2012) (more frequent financial disclosure is associated with lower bid-ask spread and price impact based on SEC data from 1951 to 1973). As will become clear in the main text, evidence of disclosure's effects on price levels is not probative for the question whether disclosure makes markets "safer" for retail and other vulnerable investors.

[161] For an example of a formal model of such interaction in the consumer context, see Xavier Gabaix & David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q.J. ECON. 505 (2006).

erate but favor manipulation if it redistributes value from unsophisticated to sophisticated investors. Similarly, the sophisticated would prefer less disclosure if it results in a less competitive market structure that generates information rents or oligopoly rents for them. (In each case, differently affected sophisticated actors could compensate each other with side payments.) How much information and anti-manipulation are optimal is difficult to say given their cost and our limited understanding of trading markets.[162] But we cannot expect sophisticated parties to pick the social optimum before their interests are aligned with the unsophisticated, as in the creation of a pricing mechanism that the unsophisticated depend on for protection from the sophisticated.

Another complication omitted by Easterbrook and Fischel is that prices attach to assets, whereas investors value cash flows. To the extent the same asset generates different cash flows for sophisticated and unsophisticated investors, prices made by the sophisticated will not protect the unsophisticated. Indeed, prices would be higher for assets that systematically divert cash from unsophisticated to sophisticated owners, and assets could be structured specifically for that purpose. There are two principal ways this can happen.

First, some cash flows from the asset depend on their individual owners' actions. For example, appraisal in a merger or redemption in a de-SPAC are only available to those who request it.[163] Unbiased informative prices will take into account whatever gain is to be had from these actions since those who inform prices—informed speculators—would know to obtain that gain. For example, the share prices of SPACs include the redemption benefit up until the de-SPAC—anything lower would be arbitraged away. Unsophisticated investors, however, will generally *not* take the action, in part because they are not paying attention. Arguably, the recent SPAC boom is profitable for sponsors and sophisticated investors only because SPACs are subsidized by non-redeeming retail investors.[164]

Second, cash flows to investors include cash flows from selling the asset, and different investors may predictably sell at different times and thus prices. For this to be a problem for unsophisticated buyers, the price has to be biased. I already mentioned the general concern around index reconstitutions.[165] A specific version of this concern is that index funds may be forced to buy an overpriced security simply because it makes it into an index, perhaps in part *because* it is overpriced and thus hits the relevant valuation thresholds.[166] Issuers might issue a security, and speculators could push up its price, in the expectation that index funds will eventually have to buy at any price. Researchers at the Bank for International Settlements argue that this is already happening for passive bond funds that mechanically buy debt issues included in the relevant index.[167] It

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[162] *Cf.* Marzena Rostek & Ji Hee Yoon, *Equilibrium Theory of Financial Markets: Recent Developments*, J. ECON. LIT. (forthcoming) (acknowledging that "[e]ssentially all of the predictive results in the literature based on demand games have come from models with quadratic payoffs"); Scholl, Calinescu & Farmer, *supra* note 18 ("The toy model that we study here is simple and highly stylized, but it illustrates … several properties of market ecologies that we hypothesize are likely to be true in more general settings.").

[163] Appraisal: *Cf.* 8 Del. C. § 262(d). de-SPAC: A de-SPAC is a transaction in which a SPAC (Special Purpose Acquisition Company) acquires an operating company, which triggers redemption rights of the SPAC shareholders under the standard terms; see generally Michael Klausner, Michael Ohlrogge & Emily Ruan, *A Sober Look at SPACs*, 39 YALE J. REG'N 228 (2022).

[164] *See* Klausner, Ohlrogge & Ruan, previous note. *Cf.* Ganor, *supra* note 24 (arguing that in order to avoid this dynamic and allow unsophisticated SPAC investors to tag along sophisticated investors, the former should be given the right to make their choices contingent on those of the latter).

[165] *Supra* note 78 and accompanying text.

[166] For the vast majority of indices, price and implied market valuation is only indicative, as index inclusion is usually not purely mechanical. *See* Robertson, *supra* note 4.

[167] *See* Vladyslav Sushko & Grant Turner, *The Implications of Passive Investing for Securities Markets*, BIS Q.

is also the only way to make financial sense of institutional investors' concerns about being "forced" to buy securities with governance they find unappealing, such as Snap's non-voting shares.[168] Governance concerns per se make little financial sense because everything is relative to price: even the worst governed firm is a good investment at price zero. The concern thus has to be that these securities are systematically overpriced when the institutional investors must buy them.

C. Redundancy

The discussion thus far has shown that mandatory rules fostering unbiased informative prices (including cash flow alignment) are sufficient to protect unsophisticated investors—in principle. Nevertheless, exclusive reliance on prices or any other single protective mechanism would be bad engineering. Any critical system should have redundancy, i.e., one or more fail-safes in case the principal protective mechanism fails. This design principle is not specific to indirect investor protection. But it becomes relevant only once it has been established that protection by mandatory rules is neither unnecessary (as it would be if everyone were perfectly rational) nor all encompassing (as it arguably should be if most investors were irrational and not protected *indirectly*) (*supra* A). Redundancy is especially important because savvy market participants will likely attempt to exploit any mechanism's imperfections.

There is no hard-and-fast answer which redundant mandatory protective rules are worth their cost. The argument for some redundancy is emphatically not an argument that all existing mandatory rules are justified, or that any governance rule deemed useful by a regulator should automatically be mandatory. Bad mandates can make everyone worse off. Prime candidates for good mandates are rules that prevent the worst while not preventing anything very useful. This includes first and foremost restrictions on self-dealing transactions (the greatest danger to investors) and court oversight (a catch-all for dangers yet unknown). In the U.S., these are guaranteed by the mandatory duty of loyalty and the prohibition of arbitration clauses.[169] Investors have everything to lose from relaxing these rules, whereas businesses usually have little to gain. However, this evaluation is context-specific. In jurisdictions with dysfunctional courts, arbitration may be preferable, and U.S. law allows exceptions from the duty of loyalty for particular transactions.[170]

REV. 113, 121-122, Mar. 2018.

[168] *See*, *e.g.*, Letters from Ken Bertsch, Exec. Dir. of Council of Institutional Investors, and Jeff Mahoney, Gen. Council of Council of Institutional Investors, to the Council Chair of the Corp. Law Section of the Del. State Bar Ass'n and to the Chair of the Am. Bar Ass'n Corp. Laws Comm. (Sept. 13, 2019), available at https://www.cii.org/files/issues_and_advocacy/correspondence/2019/September%2013%202019%20Final%20DGCL%20letter.pdf (perma.cc/L8PC-A42B) and https://www.cii.org/files/issues_and_advocacy/correspondence/2019/September%2013%202019%20Final%20MBCA%20letter.pdf (perma.cc/HW9E-7Q48), respectively.

[169] *Cf.* 8 Del. C. §§ 102(b)(7) (implicitly disallowing exclusion of the duty of loyalty), 111 and 115 (jurisdiction of Delaware courts to hear intra-corporate disputes cannot be excluded). The Federal Arbitration Act trumps state law provisions. But the SEC has prevented public offerings with arbitration provisions, see *supra* note 120 and accompanying text. Promoters could avoid the mandatory corporate duty of loyalty by using a limited partnership, limited liability company, or statutory trust (cf. 6 Del.C. §§ 17-1101(d), 18-1101(d), 12 Del.C. § 3806(a)). With rare exceptions (next note), promoters have not used this option, perhaps because the unfamiliar entity label would have deterred unsophisticated investors (in an instance of the coarse self-help discussed *supra* note 39 and accompanying text).

[170] *Cf.* 8 Del. C. § 122(17) (permitting waiver of the corporate opportunity aspect of the duty of loyalty for specified classes of business opportunities). One might also mention the replacement of the traditional duty of loyalty with conflict committees in publicly traded alternative entities, principally energy master limited partnerships (MLPs) and (for a short while) private equity firms. But it is much less clear if this replacement was efficient. *Cf.* Sandra K. Miller & Karie Davis-Nozemack, *Toward Consistent Fiduciary Duties for Publicly Traded Entities*, 68 FLA. L. REV. 264 (2016) (describing the rise and organization of publicly traded MLPs and noting that most of their investors are individuals).

D. Example: The Prohibition of Insider Trading

To see the framework in action, consider the mandatory prohibition of insider trading, which is by now standard around the world. There is a longstanding debate about the desirability of insider trading.[171] But even if insider trading is judged undesirable, this by itself does not explain why its prohibition needs to be mandatory. In a fully rational world, optimal prohibitions against insider trading would be adopted voluntarily (be it in the charter, the stock exchange rules, or some other form). The standard contractarian argument applies: sophisticated investors will pay less for inefficient governance, such that founders will voluntarily adopt rules against insider trading if insider trading is indeed inefficient.[172] (In a largely irrational world, trading would be a pointless, wasteful casino even without insider trading.) Consequently, there is no argument *for* a mandatory prohibition in a fully rational world. There is, however, the usual argument *against* a mandatory prohibition if one thinks that the regulator is more likely to make mistakes—or less likely to reverse them—than issuers and investors, or that the optimal rule should be tailored to individual issuers.[173]

A better argument for a mandatory prohibition comes from considering who would bear the costs of insider trading ex post, and what this would mean for market prices ex ante. Ex post, sophisticated speculators reduce trading, and market makers quote larger bid-ask spreads, during periods of heightened insider trading, such that the costs are largely borne by naïve traders. Ex ante, sophisticated parties pricing the stock will ignore costs that they will not bear. Consequently, inefficient rules may be adopted (see generally *supra* B). In addition, rules against insider trading are a good candidate for redundancy (see generally *supra* C): even if there is some net benefit to insider trading, that benefit is likely small, whereas the potential harm to unsophisticated investors may be large. In short, the enlightened regulatory concern about insider trading is that unsophisticated investors will unwittingly participate in a rigged game—coming full circle with the instinctive concerns expressed by courts and policy makers.[174]

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[171] *See* EASTERBROOK & FISCHEL, *supra* note 13, at 253-275; Utpal Bhattacharya, *Insider Trading Controversies: A Literature Review*, 6 ANN. REV. FIN. ECON. 385 (2014); Merritt B. Fox, Lawrence R. Glosten & Gabriel V. Rauterberg, *Informed Trading and Its Regulation*, 43 J. CORP. L. 817, 847-858 (2018).

[172] *See* Frank H. Easterbrook, *Insider Trading, Secret Agents, Evidentiary Privileges, and the Production of Information*, (1981) SUPR. CT. REV. 309, 333-335 (1981). Easterbrook and others (e.g., Fox, Glosten & Rauterberg, previous note, at 856-857) caveat that effective enforcement may need a centralized enforcer and the tools of criminal law. But centralized enforcement could also be provided by private actors such as stock exchanges, and criminal law enforcement can be activated via representations in private contracts and criminal fraud liability—it is not the same as, and does not require, a mandatory rule. *See* Easterbrook, id., at 335; EASTERBROOK & FISCHEL, *supra* note 13, at 264.

[173] *Supra* note 131.

[174] Robert Jackson, then-Commissioner of the SEC, and Preet Bharara, former U.S. Attorney for the Southern District of New York, described the unfairness of insider trading for unsophisticated investors: "Insider trading cases are . . . a manifestation of America's basic bargain: that the well-connected should not have unfair advantages over the everyday citizen . . . Fighting insider trading is a refusal to accept a rigged system." Preet Bharara & Robert J. Jackson, Jr., *Insider Trading Laws Haven't Kept Up With the Crooks,* N.Y. TIMES, Oct. 9, 2018, https://www.nytimes.com/2018/10/09/opinion/sec-insider-trading-united-states.html (perma.cc/53ND-NYN4). *See also Foremost-McKesson, Inc. v. Provident Sec. Co.,* 423 U.S. 232, 243 (1976) (stating that in creating § 16 (b) of the Securities Exchange Act of 1934, "Congress recognized that insiders may have access to information about their corporations not available to the rest of the investing public. By trading on this information, these persons could reap profits at the expense of less well informed investors."); *Insider Trading*, SEC. & EXCH. COMM'N, https://www.investor.gov/introduction-investing/investing-basics/glossary/insider-trading (last visited June 19, 2021) (perma.cc/AB9H-8YG2) (arguing that insider trading "undermines investor confidence in the fairness and integrity of the securities markets").

V. PASSIVE'S THREAT TO INDIRECT INVESTOR PROTECTION

The spectacular growth of passive (index) investing reduces trading. It thus threatens those indirect investor protection mechanisms that rely on trading: hedge fund activism and market pricing.[175] These mechanisms have effectively been subsidized by unwitting active investors.[176] The removal of this subsidy may require interventions to stabilize the ecosystem.

A. The Shift to Passive Investing

Index funds grew from 4% of retail funds' assets under management in 1995 to 42% in 2020, and from less than 4% of U.S. stock market capitalization in 2005 to 14% or more in 2020.[177] The growth has not leveled off. These numbers understate the phenomenon of passive investing because they count neither pension plans and others passively tracking indices outside a retail fund structure, nor "closet indexing" by nominally active mutual funds.[178]

This shift to passive is not surprising; it was long overdue.[179] Active investors trade because they think they can beat the market, i.e., do better by trading than by simply holding (a slice of) the pool of assets in question. In this they must, *as a group*, be mistaken (subject to a small caveat below).[180] Trading is a zero-sum game. For every trading gain, there is an equally sized trading loss. Across all traders, the gains and losses cancel out, and the only thing traders as a group are left with are their trading costs.[181] Some active traders may do better, but some must do worse and should rationally switch to holding index funds.

The argument is simple arithmetic. It does not make any assumption about market prices such as market efficiency.[182] More to the point, it does not require the existence of indirect investor

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[175] With a different tone and target, a related view was expressed in the notorious 2016 note "The Silent Road to Serfdom: Why Passive Investing Is Worse Than Marxism" by Inigo Fraser-Jenkins of Sanford C. Bernstein & Co., LLC (an active fund manager). Fraser-Jenkins argued that passive investment would not merely replace private capital allocation with public capital allocation as in Marxism, it would replace it with *no* conscious capital allocation, leading to massive inefficiencies in capital allocation. *See* Luka Kawa, *Bernstein: Passive Investing Is Worse for Society Than Marxism*, BLOOMBERG, Aug. 23, 2016, https://www.bloomberg.com/news/articles/2016-08-23/bernstein-passive-investing-is-worse-for-society-than-marxism (perma.cc/K67P-BJEF).

[176] *Cf.* John H. Cochrane, *Finance: Function Matters, Not Size*, 27 J. ECON. PERSPS. 29, 44 (2013) (price discovery subsidy); Sushko & Turner, *supra* note 167, at 119 (same); Rui Albuquerque, Vyacheslav Fos & Enrique J. Schroth, Value Creation in Shareholder Activism: A Structural Approach, J. FIN. ECON. (forthcoming) (hedge fund activism subsidy).

[177] *See* Kenechukwu Anadu, Mathias Kruttli, Patrick McCabe & Emilio Osambela, *The Shift from Active to Passive Investing: Potential Risks to Financial Stability?*, 76 FIN. ANALYST J. 23, 24 (2020); 2021 Investment Company Fact Book, *supra* note 1, at 50 (15% as of 2019). Some calculate a slightly higher share of U.S. stock market capitalization using different data sources. *Cf.* Matthew J. Mallow, *Asset Management, Index Funds, and Theories of Corporate Control*, working paper, https://ssrn.com/abstract=3483573, at 13-14 (17% in 2018; Mallow is Vice Chairman of BlackRock). Others calculate even higher numbers for the largest three index fund managers (BlackRock, Vanguard, State Street) by adding these managers' active funds and not value-weighting the estimates. *E.g.*, Lucian Bebchuk & Scott Hirst, *The Specter of the Giant Three*, 99 B.U. L. REV. 721, 733-35 (2019).

[178] *See* Anadu et al., previous note; Coates, *supra* note 15.

[179] *Cf.* Cochrane, *supra* note 176 ("we could each avoid being the negative-alpha part of price discovery by only buying index funds. It's a bit of a puzzle that we don't.").

[180] *See* Sharpe, *supra* note 42.

[181] The argument can be specialized to assets in an index. By definition, the value-weighted gross returns of all investments in index assets must add up to the index return. By definition, investments by index funds earn the index return. Thus, the remainder—investments by other investors in index assets—must (collectively) also earn the index return – before trading cost.

[182] Market efficiency would yield the somewhat different, in one sense stronger conclusion that it is impossible

protection, much less of a particular degree of indirect investor protection. Thus, there is no countervailing force from a deterioration of indirect investor protection, and hence no guarantee that the equilibrium level of trading will sustain meaningful indirect investor protection.

Now to the small caveat. The arithmetic assumed a fixed asset pool (in particular, a purely secondary market) and compared active to pure buy-and-hold investors. In reality, the asset pool is never completely fixed (companies go public, issue and repurchase stock, or delist; indices rebalance), and even buy-and-hold investors occasionally trade for liquidity and risk re-allocation purposes. To the extent active investors are on the other side of these trades, they can theoretically outperform passive investors. However, active investors have been trading much more often than that. The annual turnover rate of large broad-market index funds is around 4%, a small fraction of the current stock market's, which is well above 100%.[183] Moreover, the bigger large index funds become, the more they can net most investor purchases and redemptions internally (or, for ETFs, by trading the ETF shares rather than its component shares).

To be sure, the shift is not inexorable. Theoretically, some people may get utility from trading akin to gambling. Empirically, retail trading is up since commissions dropped to zero in 2019.[184] Still, the general trend and its underlying logic are sufficiently strong to contemplate its rational equilibrium endpoint: a world where all but a few gamblers and professionals trade only for liquidity purposes. Trading volume in this world would likely be an order of magnitude lower than today.

B. Passive's Impact on Indirect Investor Protection

This drastic reduction in trading would have profound, possibly fatal effects on those indirect investor protection mechanisms that require trading for their operation and rewards: market prices and hedge fund activism. By contrast, plaintiff litigation, takeovers, and non-financially motivated activism would experience at most incidental effects, which I will not explore.[185]

Hedge fund activism would likely become impossible. Hedge fund activists make money by buying low—before their intervention becomes known—and selling high—after their intervention was (hopefully) successful; they also use their stake to exert pressure (*supra* II.B). Liquidity is essential.[186] When there is much less trading, there is much less opportunity for an activist to build

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to beat the market *systematically* (i.e., other than by random chance) even for a *single* trader (i.e., not just in the aggregate of all traders).

[183] *Cf. S&P 500 ETF,* VANGUARD, https://advisors.vanguard.com/investments/products/voo/vanguard-sp-500-etf (last visited May 29, 2021) (perma.cc/7YL9-4Z45) (Vanguard's S&P 500 ETF's turnover rate for fiscal year 2020 was 4%); Fed. Res. Bank of St. Louis, *Stock Market Turnover Ratio,* FRED, https://fred.stlouisfed.org/series/DDEM01USA156NWDB (last updated Oct. 21, 2019) (perma.cc/2NRU-2JGZ) (the U.S. stock market turnover rate for 2017—the last available year with data—was 133%, down from a peak of 292% in 2008). The value-weighted turnover rate for active equity mutual funds is presumably around 50%, given that equity mutual funds are now about half passive and the rate for all equity mutual funds (active and passive) in 2019 was 32%, *see* 2021 Investment Company Fact Book, *supra* note 1, at 75.

[184] NASDAQ, Who Counts as a Retail Investor?, https://www.nasdaq.com/articles/who-counts-as-a-retail-investor-2020-12-17 (Dec. 17, 2020) (perma.cc/S22M-PSN3) fig. 2a.

[185] Takeovers may become less targeted if prices become less informative (*cf. supra* II.C), and more important if hedge fund activism recedes (*cf.* de Fontenay, *supra* note 83, at 1106–09 (describing the phenomenon in the opposite direction, i.e., how the emergence of activist hedge funds reduced the opportunities available for private equity funds)). Plaintiff attorneys will have reduced incentives to pursue securities class actions where class size is measured as the number of trades during the class period (except to the extent offset by greater mispricing).

[186] *Cf.* Edmans & Holderness, *supra* note 60, at 584 (summarizing the theory of blockholder governance, stating:

up a stake, and even less opportunity to do so in secret.[187] Even if building the same stake were possible, the activist would have to take more time or make larger trades relative to trading volume per time unit, either of which would make it easier for other "smart money" to detect the activist's ploy and run up the price in anticipation of the activist's value creation. For example, if annual turnover in a stock were only 10%, building the current median activist stake of 6.5% secretly in a reasonable time would be near impossible.[188] The hedge fund might try to buy derivatives instead but will likely find that avenue foreclosed as well because key derivative counterparties enter into contracts only if they can hedge their exposure by trading the underlying stock. To avoid such governance deterioration, it might be beneficial to institute an explicit reward system for successful activism akin to common fund rewards for successful plaintiff litigation.[189]

The effect of reduced trading on prices, and of prices on investor protection, is more subtle and more ambiguous.[190] On the one hand, some trading is necessary to compensate (with trading profits) those who invest in the requisite information and expertise to value the security and generate approximately unbiased informative prices (*cf. supra* II.A). Moreover, to hold the reward constant when trades decrease, profits per trade must increase, and if profits per trade are correlated with mispricing, so must mispricing. On the other hand, there is now arguably too much trading, some of which harms prices.[191] Noise traders can push prices away from fundamentals and create risk for informed speculators trading in the right direction (see, e.g., GameStop).[192] Some informed speculators may decide to "front-run" rather than counter the noise traders, i.e., trade in the same direction and thus amplify the mispricing. In general, traders interact in complicated ways, such that the effect of the shift to passive on price accuracy is probably not monotonic.[193]

"Stock liquidity generally improves governance through both voice and exit"), 603-04, 605-06 (summarizing the evidence as supporting this theoretical prediction).

[187] *Cf.* Nickolay Gantchev & Chotibhak Jotikasthira, *Institutional Trading and Hedge Fund Activism*, 64 MGT. SCI. 2930 (2018) (finding that activists build stakes when other institutional investors trade for liquidity reasons, camouflaging the activist's purchases).

[188] *See* source *supra* note 63.

[189] *Cf.* Lucian Arye Bebchuk & Marcel Kahan, *A Framework for Analyzing Legal Policy Towards Proxy Contests*, 78 CALIF. L. REV. 1071 (1990) (advocating compensation for proxy challengers in function of votes received); Adi Libson & Gideon Parchomovsky, *Reversing the Fortunes of Active Funds*, 99 TEX. L. REV. 581 (2021) (proposing a tax subsidy for activists); *cf. generally* Scott Hirst, Initiation Payments, working paper (Feb. 25, 2021), https://papers.ssrn.com/abstract_id=3778436 (proposing payments from the corporation to those initiating corporate changes).

[190] *See* Sushko & Turner, *supra* note 167, at 119-129; *cf.* Wurgler, *supra* note 78 (discussing the consequences of "index-linked investing").

[191] *Cf.* Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Inventive Activity*, 61 AM. ECON. REV. 561 (1971) (pointing out that the private and social incentives for trading diverge, such that the economic welfare theorems do not hold and the current level of trading activity may be highly suboptimal); Martin F. Hellwig, *Market Discipline, Information Processing and Corporate Governance*, in CORPORATE GOVERNANCE IN CONTEXT: CORPORATIONS, STATES, AND MARKETS IN EUROPE, JAPAN, AND THE US 379, 390-4 (Klaus J. Hopt, Eddy Wymeersch, Hideki Kanda, & Harald Baum eds. 2005) (discussing conditions under which there will be over- or under-provision of information acquisition from a social welfare perspective); Pablo Kurlat, *The Social Value of Financial Expertise*, 109 AM. ECON. REV. 556 (2019) (measuring the ratio of social to private value of marginal expertise in the junk bond underwriting market to be 0.16).

[192] *See generally* J. Bradford De Long, Andrei Shleifer, Lawrence H. Summers & Robert J. Waldmann, *Noise Trader Risk in Financial Markets*, 98 J. POL. ECON. 703 (1990); Andrei Shleifer & Robert W. Vishny, *The Limits of Arbitrage*, 52 J. FIN. 35 (1997); Baker & Wurgler, *supra* note 142, at 362-3.

[193] *See*, *e.g.*, Marcin Kacperczyk, Jaromir Nosal & Savitar Sundaresan, *Market Power and Price Informativeness*, working paper (October 2020), https://ssrn.com/abstract_id=3137803 (numerical solution of a rational equilibrium trading model exhibits non-monotonic response to increase of the passive sector); *cf.* Scholl, Calinescu & Farmer, *supra* note 18 (simulation of an agent-based model yields non-monotonicity of volatility in the market shares of value

To the extent prices do become less accurate, they will be less precise as a signal of firm performance. For example, they will generate less targeted, riskier rewards for executives in stock-based compensation schemes; executives might also find it easier to manipulate their compensation. By contrast, and counterintuitively, less accurate prices would probably not increase retail investors' collective trading losses because the increase in loss per trade would be offset by the decrease in number of trades. That said, there would be redistribution of trading losses from investors that are now active and turn passive to investors that remain passive throughout.

CONCLUSION

Biological ecosystems involve the interaction of different species. Any one species can thrive only because of conditions created by others. Interactions are complex. Some inputs to an ecosystem appear benign but turn out to be fatal. For example, nutrient inflow at first increases the growth of organisms but, beyond a tipping point, can turn an entire body of water into a dead zone.[194] Hopefully, index funds will not turn the investment ecosystem into a dead zone. Nevertheless, the broader point of this paper is that financial actors need to be seen as part of an interdependent investment ecosystem. Bad regulation ignores the interdependencies, good regulation harnesses them.

The systemic, big picture view deserves one last emphasis. Individually, each indirect mechanism is controversial, and the evidence, while arguably supportive as far as it goes, is inconclusive, as I discuss in the footnotes. However, my big descriptive point is that some combination of indirect mechanisms sustains the investment ecosystem. This big point can stand even if some individual mechanism does not. Skeptical readers should entertain the following thought experiment: what if either the mechanisms of direct or indirect investor protection were removed? Sections I and II show how the system can function without direct investor protection. How about the other way around? How faithful to investors would corporate insiders be, short of criminal behavior, if the only possible sanction were a negative shareholder vote on one of the few items that require one? (Recall that retail investors and funds by themselves neither sue nor initiate votes, *supra* I.C.) How good would be the assets that retail investors and funds purchase, and the prices that they pay, if there were no informed market prices to guide them? If the answers are "not very much" and "not very good," then this paper's conclusion follows: investors' main protection is indirect.

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investors, noise traders, and trend followers). As an example of a further complication not even included in these models, passive investors are the main provider of stock lending, which is required for short sales, which help impound negative information. At current levels of indexing, this effect predominates. *See* Byung Hyun Ahn & Panos N. Patatoukas, Identifying the Effect of Stock Indexing: Impetus or Impediment to Arbitrage and Price Discovery?, J. FIN. & QUANT. ANALYSIS (forthcoming).

[194] *See*, *e.g.*, https://en.wikipedia.org/wiki/Dead_zone_(ecology) (visited June 19, 2021) (perma.cc/Z9JB-5ENT).

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