

INDIRECT INVESTOR PROTECTION
THE INVESTMENT ECOSYSTEM AND ITS LEGAL UNDERPINNINGS

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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 directly 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 mostly self-interested, mutually and legally constrained behavior of third parties without a mandate to help the investors (e.g., speculators, activists, plaintiff lawyers). This elucidates key rules, resolves the mandatory vs. enabling tension in corporate/securities law, and exposes passive investing's fragile reliance on others' trading.

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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 bad management or to transactions favoring savvy players? The standard answer is what I call *direct* investor protection: information and governance rights that investors scour and exercise themselves or through their professional asset manager—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. In simple terms, a few do the work, and equal treatment rights make sure that the others are brought along.

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. 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. 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. 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. 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 be lost if retail investors and their fund managers picked their portfolios randomly and never exercised their control rights except for minimally informed voting by fund 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 firms, or by failing to monitor them.

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 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.

Two main categories of indirect mechanisms protect in public markets. First, competition between savvy 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 take-overs.

Speculators, plaintiff lawyers, activist hedge funds, and buyers are not motivated by a concern for the 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 fundamentally shaped by the rules in place. Indirect investor protection requires rules and enforcement just like direct investor protection would. The difference is which private actors fulfill which important roles, and hence *which* rules and enforcement are important. Indirect investor protection requires rules restricting its protagonists to gain if and only if (other) investors gain, and that steer retail 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 the securities laws' restriction of open-end mutual funds to liquid assets.

It follows naturally that some, but only some, rules of corporate and securities law need to be mandatory: those ensuring interest alignment of sophisticated and unsophisticated investors. Section IV addresses this question, which had hitherto lacked a convincing answer. In the standard, direct investor protection frame, mandatory rules, especially for corporate governance, are paradoxical: If investors can decide which businesses to invest in, then those same investors should also be able to decide which governance arrangements to invest in. Attempts to resolve this paradox within the direct investor protection frame by appeal to externalities or 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 investment terms to the extent those terms could be written precisely to allow the smart money to abuse the dumb money. Unsophisticated investors and their funds should also be 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.

Inchoately, indirect investor protection is already part of corporate and securities law discourse.⁴ Proponents of takeovers and hedge fund activism argue that they deter and correct bad management and hence benefit all shareholders.⁵ Courts award fees to plaintiff lawyers explicitly for the shared benefit they create.⁶ Even the early market efficiency literature noted market prices' investor-protective function.⁷ That literature also already recognized that, if prices approximate fundamental value, it is due to trading by a relatively small number of professionally informed speculators rather than universal rationality.⁸ The use of market prices for internal firm governance is widely appreciated.⁹ Finally, there is widespread skepticism about direct investor protection, especially about retail investors' ability to protect themselves and about their fund managers' incentives to do it for them.¹⁰

However, the literature has not recognized the common theme, the interconnections, and the implications for mandatory rules and for passive investment. If “accurate pricing is the best protection for retail investors,”¹¹ then the questions are which rules, if any, are required to support

⁴ 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”).

⁵ 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).

⁶ *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).

⁷ 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 4, e.g., at 265 (“buy in the open market on the faith of the market appraisal”).

⁸ See, e.g., Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984).

⁹ 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 60

¹⁰ See references in section I.

¹¹ Charles R. Korsmo, *The Audience for Corporate Disclosure*, 102 IOWA L. REV. 1581, 1585 (2017). Cf. FRANK H. EASTERBROOK & DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 297–98 (1991) (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”).

such pricing, and why any other mandatory rules would be necessary; the literature has not satisfactorily answered either question.¹² 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.¹³ Most policy debates and scholarship still assume that investors fend for their own rights.¹⁴ To the extent commentators differentiate investor types, many vilify the protagonists of indirect investor protection.¹⁵ There have been only partial attempts to replace rational expectations equilibria with an

¹² See *infra* IV.A-IV.B.

¹³ 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.

¹⁴ 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 30 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 mandator 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 why this function of disclosure would need to be supported by 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).

¹⁵ 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”).

interaction of rational and irrational agents or an ecosystem view in discussions of corporate/securities law and investor protection.¹⁶

Four clarifications before continuing.

First, I leave aside three other grave dangers to investors: theft and embezzlement, fees (for trading or advice), and excessive risk (especially failure to diversify).¹⁷ 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.¹⁸ 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.¹⁹

¹⁶ 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 5, 869-874; Dorothy S. Lund & Elizabeth Pollman, *The Corporate Governance Machine*, 122 COLUM. L. REV. (forthcoming 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 5 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. Dooyne Farmer, *Market Force, Ecology, and Evolution*, 11 IND'L & CORP. CHANGE 895 (2002); Maarten P. Scholl, Anisoara Calinescu & J. Dooyne Farmer, *How Market Ecology Explains Market Malfunction*, PROC. NAT'L ACAD. SCI. (forthcoming 2020); ANDREW W. LO, ADAPTIVE MARKETS: FINANCIAL EVOLUTION AT THE SPEED OF THOUGHT (2017).

¹⁷ 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).

¹⁸ 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).

¹⁹ 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 too great a 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).

Second, 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).²⁰ 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).²¹ 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).

Third, 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. Indirect investor protection helps all investors in public markets, including institutions. In debt markets, distressed debt trading and funds arguably fulfill very similar functions to long/short equity and activist hedge funds in equity markets.²² (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.²³) Abroad, most large foreign markets feature all the mechanisms of indirect investor protection I discuss here, with the exception of plaintiff attorneys discussed below.²⁴ (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. 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.²⁵ Perhaps

²⁰ 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).

²¹ 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*, working paper (2020), https://ssrn.com/abstract_id=3530596. 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.

²² See generally Ellias, *supra* note 16.

²³ See Bengt Holmström, *Understanding the role of debt in the financial system* 9–12 (BIS Working Paper No. 479, Jan. 22, 2015), https://ssrn.com/abstract_id=2552018.

²⁴ 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).

²⁵ 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); Bernard S. Black, *Agents Watching Agents: The Promise of Institutional Investor Voice*, 39 UCLA L. REV. 811, 813-814 (1992) (arguing that U.S. money managers' passivity is partially the result of

the U.S.'s new rival, China, has discovered the secret to successful government guidance of investment.²⁶ What I do claim is that the U.S. capital market—by far the world's largest, comprising 39% of the world's market capitalization²⁷—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.

I. THE IMPLAUSIBILITY OF DIRECT INVESTOR PROTECTION

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.²⁸ 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.²⁹ 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 simply is 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 sorts of investors.

The inadequacy of direct protection for retail investors has long been recognized.³⁰ By themselves, retail investors cannot possibly digest the streams of relevant information, and they mostly

restrictive legal rules); 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).

²⁶ *Cf.* Tamar Groswald Ozery, *The Politicization of Corporate Governance: A Viable Alternative?*, *AM. J. COMP. L.* (forthcoming 2021) (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.

²⁷ *See Capital Markets Fact Book 2020*, SIFMA, at 7.

²⁸ *See* references *supra* note 14.

²⁹ *Infra* note 167 and accompanying text.

³⁰ *See* BERLE & MEANS, *supra* note 4; 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 8, at 641; Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 *DUKE L.J.* 711, 713 (2006); Korsmo, *supra* note 11, at 1585. 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.*

do not exercise their governance rights (A).³¹ Investment advisers—particularly fund managers—might help, but empirics and theory suggest that they are at best a partial solution (B). Readers familiar with these arguments may wish to skip ahead to the original sections II-V.

A. 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). But even a financial expert could not 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.³²

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.³³

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.³⁴

851 (1999).

³¹ 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 have increasingly caught the attention of 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 2021) (documenting the use of public-interest shareholder proposals by—mostly—a small number of specialized players and the resulting interaction with companies and shareholders).

³² See Alon Brav, Matthew D. Cain & Jonathon Zytznick, *Retail Shareholder Participation in the Proxy Process: Monitoring, Engagement, and Voting* (ECGI Fin. Working Paper 637/2019), <https://ssrn.com/abstract=3387659> (only 32% of shares held by retail shareholders are voted).

³³ 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*, J. FIN. ECON. (in press) (so-called yield enhancement products have negative returns net of embedded fees and are “often statewise dominated by simple combinations of listed options”).

³⁴ Cf., e.g., Shlomo Benartzi & Richard Thaler, *Heuristics and Biases in Retirement Savings Behavior*, 21 J. ECON. PERSPS. 81, 92–94 (2007) (describing observed 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)

B. *Individual Investors' Fund Managers*

To overcome these problems, the standard advice and expectation is that retail investors hire a money manager.³⁵ 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.³⁶ (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).³⁷ This leaves behind-

(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 & Zytznick, previous note (showing that retail investor votes are highly sensitive to recent poor performance). Individual investors may also have information about firms as consumers or otherwise. However, by itself, this information is not sufficiently precise to select and monitor firms effectively.

³⁵ See, e.g., Douglas, *supra* note 30.

³⁶ See Malkiel, ECMH, *supra* note 7, 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.

³⁷ *Cf.* Nickolay Gantchev & Mariassunta Giannetti, *The Costs and Benefits of Shareholder Democracy: Gadflies and Low-Cost Activism*, REV. FIN. STUD. (forthcoming), 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>

the-scenes engagement and (reactive) voting. However, engagement is rare, especially by index funds.³⁸ 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.³⁹ Index funds may even forego voting altogether, lending out the shares for a fee.⁴⁰ 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.⁴¹

However, fund managers have incentives not to engage, suggesting that stewardship codes will be ineffective.⁴² 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.⁴³ (Unlike hedge funds, retail funds are not allowed to charge additional performance fees.⁴⁴) Second, for monitoring, the

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).

³⁸ See generally Bebchuk, Cohen & Hirst, *supra* note 13, 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).

³⁹ 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.

⁴⁰ 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>.

⁴¹ 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 & Matthias Siems, *The Global Diffusion of Stewardship Codes*, ECGI Law Working Paper 526 (November 2020) (analyzing the global spread of stewardship codes).

⁴² 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 5, at 889-895; Bebchuk, Cohen & Hirst, *supra* note 13, 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”). See also Black, *supra* note 25, at 879 (arguing that U.S. money managers do not have sufficient incentives and levers to monitor corporate behavior, but could have them if the rules were amended appropriately). *But see* Fisch, Hamdani & Solomon, *supra* note 16. 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).

⁴³ *Cf.* 2021 *Investment Company Fact Book*, *supra* note 1, at 140 (asset-weighted average expense ratios).

⁴⁴ Investment Advisers Act §205(a)(1), 15 U.S.C. § 80b-5(a)(1).

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.⁴⁵ The product of these percentages is tiny and thus the compound incentive problem huge. For example, if the manager charges 0.06% on funds owning 7% of a portfolio company—similar to the three largest index fund managers—, the manager gets only $0.06\% \times 7\% = 0.0042\%$ of any value created by monitoring the portfolio company.

Competition for fund flows (i.e., investor money) further degrades managers' incentives for monitoring, and may not improve it for asset selection either.⁴⁶ 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.⁴⁷ Managers' incentives are thus not to monitor.⁴⁸ 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.⁴⁹ 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.⁵⁰ Financial advisors might help but turn out to be as misguided as their clients.⁵¹ Flow competition based on asset selection is therefore bound to be crude at best.⁵²

⁴⁵ Cf. Internal Revenue Code, 26 U.S.C. § 851(b)(3)(A)(ii) (stipulating conditions to obtain pass-through tax treatment under subchapter M).

⁴⁶ For a discussion of mutual fund managers' flow-based incentives, see Kahan & Rock, *supra* note 16, at 1793-97.

⁴⁷ Alternatively, if the manager passes the cost through to its investors, the manager offers lower net returns to investors than its competitors.

⁴⁸ This would change if (altruistic) fund investors were willing to pay extra for the public good provided by their monitoring fund manager, but this happens little 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. (forthcoming 2020). Whether the incentives thus provided are good or bad depends on retail investors' ability to judge the monitoring's quality.

⁴⁹ 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).

⁵⁰ Choi et al., *supra* note 34. Cf. Saurabh Bhagat, George Lowenstein & Justin Snyder, *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 34 and accompanying text (retail investors learn but slowly and imprecisely).

⁵¹ See Juhani T. Linnainmaa, Brian T. Melzer & Alessandro Previtero, *The Misguided Beliefs of Financial Advisors*, 76 J. FIN. 527 (2021).

⁵² But see Berk & van Binsbergen, *Mutual Funds in Equilibrium*, *supra* note 36 (arguing that investors will move out of underperforming and into outperforming funds). Their key assumption is investor rationality, which seems misplaced in this context.

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 administrative convenience of one-stop diversification. Retail fund regulation is essential to counteract managers' enormous financial temptation to sap the fund.⁵³ As to governance of their portfolio firms, retail funds' engagement, resources, expertise, and incentives compare favorably to individual investors.⁵⁴ 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.⁵⁵ The point is, however, that retail fund managers do little, even if more than nothing.⁵⁶ 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).⁵⁷

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 investors to protect investors' interests. Rather, the main protagonists are strongly—and, presum-

⁵³ See generally Howell E. Jackson, *A System of Fiduciary Protections for Mutual Funds*, in FIDUCIARY OBLIGATIONS IN BUSINESS (Arthur Laby & Jacob H. Russell eds., forthcoming 2021).

⁵⁴ 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 16, 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).

⁵⁵ But see Lund, *supra* note 39 (arguing that passive investors should not have voting rights).

⁵⁶ Cf. Edmans & Holderness, *supra* note 54, 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).

⁵⁷ 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 and thus leverage their managers' per-dollar incentives across 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)).

ably, solely—selfishly motivated. Given the chance, they might appropriate every penny of investor money.⁵⁸ But laws 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.⁵⁹

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. Third, it can be used as a gauge of performance in existing enterprises, most importantly in stock-based executive compensation.⁶⁰

An unbiased price emerges as the byproduct of selfish trading by savvy speculators.⁶¹ 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.⁶² 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.

However, unbiasedness is not enough for investors.⁶³ To see this, imagine a market in which

⁵⁸ For some examples bearing out this conjecture, see the court cases cited in notes 103 and 104.

⁵⁹ ADAM SMITH, *THE WEALTH OF NATIONS* 16 (MetaLibri, 2007) (1776) (“It is not from the benevolence of the 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 laws 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 also omits the important role of competition, without which especially the baker could exploit customers’ hunger to charge extortionary prices.

⁶⁰ 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 9. On limits, see *infra* note 97.

⁶¹ Particularly hedge funds, some mutual funds, and investment banks.

⁶² 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).

⁶³ Most discussions of stock price informativeness focus exclusively on its role for the efficient allocation of 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 11, 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 30, 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 attractive investments for investors are two sides of the same coin at the firm level, and closely

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, however, the market has to offer attractive non-zero prices to their issuers. To do so, the price 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.⁶⁴ The more informative the price, the higher the price offered for better securities and hence the more good firms will find it attractive to compete for investor money, which in turn pushes up the returns to investors. Informativeness is obviously also necessary for prices to guide activity inside a firm, particularly through stock-based performance pay. Fortunately, 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.⁶⁵ 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.⁶⁶ They sell most later when buyers can observe the secondary market price; in fact, they often sell in open-market transactions *at* the secondary market price. IPOs themselves have traditionally been underpriced, arguably precisely to attract less informed investors in the absence of

intertwined at the economy level.

⁶⁴ 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 up the cost of capital to good entrepreneurs and drive down the returns to investors. *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 17, at 805, 838.

⁶⁵ 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.

⁶⁶ *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 & 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).

an informative market price.⁶⁷

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. This ideal is not attainable in theory, let alone in reality.⁶⁸ 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.⁶⁹ Bias hurts investors only to the extent it is correlated with investors' trades or corporate actions.⁷⁰ This danger is greatest when (passive) 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).⁷¹ Biases are also a problem if they reward harmful actions by insiders or fail to reward productive 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,”⁷² and price impact is

⁶⁷ See generally Alexander Ljungqvist, *IPO Underpricing*, in 1 HANDBOOK OF EMPIRICAL CORPORATE FINANCE ch. 7 (B. Espen Eckbo ed. 2008).

⁶⁸ 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 16; and *infra* text accompanying note 96.

⁶⁹ *Cf. generally* Kahan, *supra* note 63.

⁷⁰ Specifically, investors' trades are in trouble only if $E(X(P-V)) \gg 0$, 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 investors' 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.

⁷¹ 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).

⁷² Robert J. Shiller, *Speculative Asset Prices*, 104 AM. ECON. REV. 1486, 1501 (2014). See also LO, *supra* note 16; id., *Adaptive Markets and the New World Order*, 68 FIN. ANALYSTS J. 18, 18 (2012) (“the EMH is not wrong; it

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.⁷³ 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 from the firm 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).⁷⁴ 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.⁷⁵ This competition forces buyers to leave most of the deal surplus to the sellers.⁷⁶ 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

is merely incomplete.”)

⁷³ 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) would.

⁷⁴ On the media, see, e.g., Black, *supra* note 17, at 798-801; Alexander Dyck, Natalya Volchkova & Luigi Zingales, *The Corporate Governance Role of the Media: Evidence from Russia*, 63 J. FIN. 1093 (2008).

⁷⁵ 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).

⁷⁶ 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).

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.⁷⁷

An activist investor—usually a hedge fund—profits by buying a stake in a company, engaging with the company to increase its value, and then selling its stake at the concomitantly increased price.⁷⁸ This helps all investors because the value of their shares goes up as well (except for those who sold to the activist, *cf. infra* V.B), and because the threat of an activist intervention spurs managers to manage better.⁷⁹ But the other investors make no payments to the activist, nor is the

⁷⁷ Unfortunately, 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*, U. PA. L. REV. (forthcoming 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 (December 2020), https://ssrn.com/abstract_id=3499101; Andrew C. Baker, David F. Larcker & Charles C.Y. Wang, *How Much Should We Trust Staggered Difference-In-Differences Estimates?*, working paper (March 2021), https://ssrn.com/abstract_id=3794018. 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).

⁷⁸ *Cf.* Edmans & Holderness, *supra* note 54, at 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). The compensation and resulting incentives of activist fund managers are reported *supra* note 57.

⁷⁹ This benign view of activism is contested but supported by theory and data. Theoretically, activists could make money without doing good only if the market systematically mispriced (i.e., overpriced) the effect of the activists' intervention, which is implausible (*see infra* note 94). Empirically, activist interventions lead to positive abnormal returns at targeted firms in the short- and long-run as well as improved operating performance. 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). A growing literature documents the channels through which this value increase is achieved. 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, Nikolay 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 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); Nikolay Gantchev, Merih Sevilir & Anil Shivdasani, *Activism and empire building*, 138 J. FIN. ECON. 526 (2020) (reducing empire-building). 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 54, at 599–601; Alon Brav, Wei Jiang & Rongchen Li, *Governance by Persuasion: Hedge Fund Activism and the Market for Corporate Influence*, working paper (November 2021), http://ssrn.com/abstract_id=3955116. *Cf.* Becht, Franks, Grant & Wagner, *supra* note 24, at 2948–68 (reviewing evidence of activism

activist in any other way mandated to help the other investors. The activist helps the other investors if and because the only way for the activist to make money is to increase the stock price, which perforce helps the other investors as well (*infra* C and III.B).

In the two mechanisms just discussed, the actors—buyers and activists—have no legal mandate to help other investors. By contrast, in litigation, plaintiff lawyers nominally represent a named shareholder. Substantively, however, plaintiff lawyers act as private attorney generals who seek, direct, and finance their own cases; named plaintiffs are figureheads.⁸⁰ (The exception is rare litigation by large shareholders.) In return, a successful plaintiff lawyer can expect a cut of the recovery, but 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, in particular corporate fiduciary duty litigation against self-dealing by corporate insiders, especially controlling stockholders, at the expense of outside investors.⁸¹

interventions and returns in 23 countries and finding positive returns throughout). *But see* J.B. Heaton, *Hedge Fund Activism and Financial Performance*, in THE OXFORD HANDBOOK OF HEDGE FUNDS (Douglas Cumming and Geoffrey Wood, eds., forthcoming) (arguing that improvements at target firms are modest, and that activist hedge funds have underperformed the market); 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 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. 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 because it reduces the effective sample size), (b) it is difficult to find the right counterfactual for a targeted firm, and (c) in equilibrium, target improvements and activist returns ought to be small (the marginal activist entrant will earn zero expected rents, and the distribution of realized outcomes will include negative values; competition between activists will lead them to target firms even when the possible improvements are fairly small). Conceptually, the firm-level evidence is unable to capture activism's most important effect, which is that activism's existence may motivate the managers of potential targets to change their ways (i.e., in the good view of activism: working harder; in the bad view of activism: taking costly measures to stay out of the activists' way, such as slashing spending on activities that the manager knows to be useful but the outside world cannot distinguish from waste (*cf.* Jeremy C. Stein, *Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior*, 104 Q.J. ECON. 655 (1989))). For an empirical argument that these 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). There would also be spillover effects through product markets: improvements at a targeted firm would hurt its competitors (for evidence that this is the case, see Hadiye Aslan & Praveen Kumar, *The Product Market Effects of Hedge Fund Activism*, 119 J. FIN. ECON. 226 (2016)), which is bad for overall corporate profits and thus investment returns but good for social welfare.

⁸⁰ *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). Nothing illustrates this better than the fact that several preeminent plaintiff lawyers served prison time for paying their nominal clients. *Cf.* United States Attorney's Office, Central District of California, Press Release No. 08-075 (June 2, 2008) (perma.cc/6QKL-XDQV).

⁸¹ *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). The controversy arises from the undisputed fact that shareholder litigation is very costly, yet 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 4, at 195; Roberta Romano, *The Shareholder Suit: Litigation Without Foundation?*, 7 J. L. ECON. & ORG'N 55, 60-65 (1991). All would probably agree that some lawsuits should be brought but many should not. The question is if rules can distinguish them *ex ante*, and to the extent they cannot, whether we are better off with both types or none. The difficulty is that the main benefit of litigation—*ex ante* deterrence—is hard to impossible to measure. (The indirect costs of defending shareholder litigation both before (defensive management) and after (management distraction) suit is filed are also hard to measure; some of them might even be a benefit, namely improved behavior and non-monetary punishment, respectively.) It is not

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—, and most of the remainder from public pension funds and labor unions.⁸² 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.⁸³ Nevertheless, they are indispensable as a catalyst for shareholder votes on items not desired by management and not required by law.⁸⁴

equal to the recovery in individual suits. 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). The most important shareholder suit is the one that is never filed—and hence not observed—because the underlying conduct was successfully deterred. Researchers can observe (changes in) the means of deterrence—i.e., the availability of suit—but generally not its effectiveness because wrongdoing is concealed. In theory, deterrence should have beneficial effects on more remote observable outcomes such as profitability, 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 77); 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—or, more to the point, recovery—is even targeted at the right cases (i.e., the ones more likely to involve wrongdoing) has eluded a convincing 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 deal size but not deal premium). Triangulating from various proxies of uncertain validity, different authors reach different bottom lines on the overall desirability of shareholder litigation in its current form. 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”).

⁸² See James R. Copland, *Frequent Filers: Shareholder Activism by Corporate Gadflies* (2014), <https://perma.cc/YFK7-C7N9>; Gantchev & Giannetti, *supra* note 37; Sullivan & Cromwell, *supra* note 37; Yaron Nili & Kobi Kastiel, *The Giant Shadow of Corporate Gadflies*, 94 S. CAL. L. REV. (forthcoming 2021). Gadflies do not hold nearly enough stock to hope to cover their out-of-pocket costs even if their proposal is very good and is adopted; they also do not earn any other palpable reward. Similarly, 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).

⁸³ 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).

⁸⁴ Gantchev & Giannetti, *supra* note 37, 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

(The only other way shareholders can vote on items—in this case, 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.⁸⁵ Consider first retail shareholders and funds, and recall section I. Retail shareholders and retail funds do not sue; plaintiff lawyers do it for them. Retail funds vote (most retail shareholders do not⁸⁶), but only buyers and activists place items on the agenda that expand voting rights beyond vetoes of management proposals.⁸⁷ 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.⁸⁸ 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).⁸⁹ 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

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).

⁸⁵ 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).

⁸⁶ See Brav, Cain & Zytznick, *supra* note 32.

⁸⁷ 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 14, 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").

⁸⁸ 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.B, 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").

⁸⁹ 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).

of the ecosystem that could not be predicted from the selfishness of (most of) its constituents.⁹⁰ 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.⁹¹

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

Second, there are important interdependencies between the mechanisms of indirect investor protection.⁹² 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. The last point addresses critics' allegations that activist hedge funds make money through a form of pump-and-dump: push up stock prices temporarily, sell out before the price crashes back down, and leave long-term investors with not more or even less value in the end.⁹³ This would require a systematic failure of stock prices to reflect activism's long-term consequences, which is implausible (and empirically refuted or at least not substantiated).⁹⁴ Similarly,

⁹⁰ *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.

⁹¹ *Cf.* the critical references *supra* note 15.

⁹² Other interactions include: Activist hedge funds accelerate or decelerate takeovers. Price unbiasedness and informativeness themselves may be partially underpinned by plaintiff litigation if and because it deters disclosure violations or market manipulation.

⁹³ *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 54, 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)).

⁹⁴ *See supra* note 79. If activists operated incognito, some pump-and-dumpers could blend in with the good activists (*cf.*, e.g., Joshua Mitts, *Short and Distort*, 49 J. LEG. STUD. 287, 295-97 (2020) (describing an equilibrium mix of honest and dishonest pseudonymous writers on SeekingAlpha, a financial blogging platform)). Even then, however, activists could trigger initial price increases only if and because the average activist intervention leads to sustainable increases. In any event, the activists at issue here reveal their identity, in part because of 13D disclosure obligations. Putting aside market learning about activism in general or about individual activists in particular, 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.

given informed unbiased prices, buyers can take over a firm if and only if they can make it more valuable.⁹⁵

D. Imperfections

Indirect investor protection is not perfect, but the imperfections are minor.

Residual inefficiency inheres in fixed and variable costs. Grossman and Stiglitz famously pointed out that if prices always perfectly reflected all information, the speculators whose trades impounded the information into prices could not make the requisite trading profits to cover their costs.⁹⁶ Analogously, if corporations were always perfectly managed, activists/buyers and plaintiff attorneys could not make a living off of fixing mismanagement.⁹⁷ They also will not intervene in a particular situation if their costs exceed their expected reward, which is generally less than the social gain, so some socially beneficial interventions will not occur. Fortunately, trading costs are low, and the more sizeable costs of activism and litigation are leveraged across many firms by way of deterrence.⁹⁸

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.⁹⁹

III. LEGAL UNDERPINNINGS OF INDIRECT INVESTOR PROTECTION

The ecosystem just described is critically dependent on the rules and on the institutions enforcing them. I discuss in turn the rules shaping market prices (A) and other indirect mechanisms (B). Not all investments are subject to these rules and mechanisms, so an important additional set of rules are those channeling investor money into those that are (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

BULL. (Nov 10, 2019), [https://www.yalejreg.com/bulletin/regulatory-takings-without-confiscatory-returns-3/\(perma.cc/8UR5-CY5A\)](https://www.yalejreg.com/bulletin/regulatory-takings-without-confiscatory-returns-3/(perma.cc/8UR5-CY5A)). Still, exploiting this grey zone would be very risky for an activist fund.

⁹⁵ See, e.g., Fox, *supra* note 63, at 1020-21.

⁹⁶ Grossman & Stiglitz, *supra* note 68, at 405.

⁹⁷ Similarly, mechanisms that use negative price signals to trigger intervention cannot forestall all mismanagement because 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).

⁹⁸ 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 81.

⁹⁹ In declining order of certainty, see the references and discussion *supra* notes 68, 71 and 72 (market prices), 79 and 94 (hedge fund activism), 77 (takeovers), and 81 (plaintiff litigation). All of these findings are, of course, specific to the prevailing legal and ecological conditions.

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 are subject to extensive rules covering, inter alia, disclosure, market making, and anti-manipulation.¹⁰⁰ The main goal of these rules is to foster unbiased informative prices. This is a truism and the rules are discussed extensively in the existing literature, so I do not discuss them in detail here.¹⁰¹

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 unsophisticated investors can safely be allowed to invest.¹⁰² 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 the savvy market players who convert it into unbiased informative prices because it is through the price that the other investors will be protected.

B. Other Indirect Mechanisms

The other indirect mechanisms depend for their proper functioning on rules preventing collusion, may require explicit rewards, and are shaped by a panoply of other rules.

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.¹⁰³ Fiduciary duty litigation itself is at risk of collusion between plaintiff attorneys and defendants, who might collusively settle the case for only attorney fees, possibly paid by the corporation. For this reason, settlements in representative litigation are subject to court oversight, which many courts

¹⁰⁰ Like "public firms" (*supra* note 20), I use "public securities markets" as a functional term, not in the narrow legal sense of registered stock exchange 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.

¹⁰¹ See, e.g., Gilson & Kraakman, *supra* note 8; Goshen & Parchomovsky, *supra* note 30; MERRITT B. FOX, LAWRENCE R. GLOSTEN & GABRIEL V. RAUTERBERG, *THE NEW STOCK MARKET* (2019).

¹⁰² Cf. Goshen & Parchomovsky, *supra* note 30, at 714 ("the role of securities regulation is to create and promote a competitive market for information traders").

¹⁰³ For activism data, see Bebhuk, Brav, Jiang & Keusch, *supra* note 79, at 34; Alon Brav, Dorothy Lund & Edward Rock, Validation Capital, working paper (2021), https://ssrn.com/abstract_id=3786161. 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 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).

now take quite seriously.¹⁰⁴

Mechanisms that, unlike activism and takeovers, are not rewarded implicitly by trading profits, namely litigation, require explicit rewards. Under the common fund doctrine, courts tend to award the attorneys 10-30% of any recovery, which, given the large amounts of investor money at stake, can reach into the hundreds of millions of dollars.¹⁰⁵

A panoply of other, often seemingly unrelated rules shape activism, takeovers, and plaintiff litigation, and are often adopted specifically for this purpose. A staggered board is a powerful anti-takeover device when poison pills are legal.¹⁰⁶ Dual-class structures impede both takeovers and shareholder activism.¹⁰⁷ 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.¹⁰⁸ Poison pills are adopted not only against takeovers but, with some modifications and qualifications, also against activists.¹⁰⁹ 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.¹¹⁰ Rule 14a-8 determines which shareholder proposals a corporation must include in its proxy statement.¹¹¹ Plaintiff litigation is critically dependent on the American rule for costs, and on extensive discovery coupled with notice pleading or something close to it.¹¹² It also depends on the absence of arbitration

¹⁰⁴ 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, however, because not all courts agreed and 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)

¹⁰⁵ 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 if the defendant is a (large) shareholder: fees act like a penalty and thus increase deterrence.

¹⁰⁶ 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).

¹⁰⁷ 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).

¹⁰⁸ In France, the 2014 Florange Act granted double voting rights to shares held for at least two years unless firms opt out. Italy, Belgium, and the Netherlands also allow some form of tenure voting that companies use. See Chiara Mosca, *Should Shareholders Be Rewarded for Loyalty? European Experiments on the Wedge Between Tenured Voting and Takeover Law*, 8 MICH. BUS. & ENTREPRENEURIAL L. REV. 245, 252–54 (2019).

¹⁰⁹ See Marcel Kahan & Edward Rock, *Anti-Activist Poison Pills*, 99 B.U. L. REV. 915 (2019).

¹¹⁰ 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 5, 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*, Release Nos. 33-11030; 34-94211.

¹¹¹ The SEC recently adopted more stringent criteria for shareholder to submit such proposals. See SEC. & EXCH. COMM'N, *Procedural Requirements and Resubmission Thresholds Under Exchange Act Rule 14a-8*, 85 Fed. Reg. 70240, 7 (Nov. 4, 2020) (to be codified at 17 C.F.R. § 240.14a-8).

¹¹² See Friedlander, *supra* note 81, 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.

clauses in corporate charters and bylaws.¹¹³

C. Channeling Investor Money

The indirect mechanisms described above function fully only in publicly listed companies and securities.¹¹⁴ Consequently, rules channeling (retail) investor money into listed companies play an important role. These rules would be difficult to impossible to explain from the perspective of *direct* investor protection.

There are no rules in the United States forcing a company to list its securities. However, there are rules forcing a company to register its securities and sales of its securities, which triggers most of the obligations applicable to listings, particularly periodic reporting, and thus provides an incentive to list as well.¹¹⁵ In broadest terms, registration is required for securities offerings to, and securities held by, the public.¹¹⁶ This means that, by design, retail investors will generally not be able to invest directly in unregistered offerings and securities. To be sure, an ever-growing list of exemptions has allowed private markets to balloon.¹¹⁷ Nevertheless, unrestricted marketing to, and purchases by, unrestricted investors—the only way to raise large amounts directly from small investors—require registration and will generally be accompanied by a listing.

Retail *funds* are more likely (to be invited) to participate in exempt offerings because they are

¹¹³ 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).

¹¹⁴ The price mechanism presupposes liquid trading, which private markets do not provide, at least not to the same extent and not subject to all the rules mentioned above (III.A). Takeovers and hedge fund activism presuppose the ability to purchase the majority or at least a sizeable block of a company’s stock, which will often not be possible in private companies due to transfer restrictions and lack of (willingness to) trade. Plaintiff litigation in private companies lacks access to the public disclosures that plaintiff attorneys use to screen and build cases.

¹¹⁵ 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).

¹¹⁶ See Securities Act §§ 4(a)(2), 5 (15 U.S.C. §§ 77d(a)(2), 77e) (requiring registration of public offering of securities); 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”).

¹¹⁷ 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).

larger and because certain exemptions are only available for sales to “qualified institutional buyers.”¹¹⁸ However, open-end funds must offer daily liquidity—i.e., redemption—to their investors.¹¹⁹ They thus risk runs if they invest in illiquid private-market assets.¹²⁰ Indeed, open-end funds are not allowed to hold more than 15% of their portfolio in illiquid assets.¹²¹ 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.¹²²

These mandatory rules make no sense from the perspective of direct investor protection. Registration’s main content and consequence is disclosure. Retail investors do not read corporate disclosures (*cf. supra* I.A). 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 mandatory rule (*infra* IV.A). As to liquidity, retail investors mostly do not and certainly should not need it at daily or even weekly horizons.¹²³ Illiquid assets earn a return premium.¹²⁴ 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.B for good reasons to doubt this premise).¹²⁵ Indirect investor protection makes much better sense of this and other mandatory rules, as the next section will discuss.

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 its 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). Mandates may be necessary

¹¹⁸ *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)).

¹¹⁹ *Cf.* Investment Company Act § 22(e) (15 USC § 88-22(e)). Exchange-traded funds are regulated in an ad hoc manner. *See generally* Henry T.C. Hu & John D. Morley, *A Regulatory Framework for Exchange-Traded Funds*, 91 S. CAL. L. REV. 839 (2018).

¹²⁰ 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).

¹²¹ 17 CFR § 270.22e-4(b)(1)(iv).

¹²² *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 Cherkas, *Closed-End Funds: A Survey*, 4 ANN. REV. FIN. ECON. 431 (2012).

¹²³ 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).

¹²⁴ *See* Dimitri Vayanos & Jiang Wang, *Market Liquidity—Theory and Empirical Evidence*, 2B HANDBOOK OF THE ECONOMICS OF FINANCE 1289, 1346-51 (2013).

¹²⁵ *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 longterm investors of the liquidity premium for more opaque securities).

to protect unsophisticated investors against exploitative terms.¹²⁶ 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). Consequently, the main mandatory rules required are those that align the incentives of these sophisticated investors with those of the unsophisticated investors who invest alongside (B). The sophisticated investors will then take care of the rest and have the resources, information, and incentives to do it better than any regulator.¹²⁷ A few additional mandatory rules may be justified as a fail-safe (C). In rough outline, albeit not in the details, this matches the positive law in the U.S., where most corporate law is not mandatory, but some relevant law is, particularly the disclosure and other obligations under the federal securities laws.¹²⁸ The final subsection illustrates these principles with the example of insider trading (D).

Like the rest of this paper, this section is exclusively concerned with the protection of investors.¹²⁹ To the extent corporate and securities law rules do or should protect other constituencies, the justification for making them mandatory is mostly trivial (externalities).¹³⁰ However, there are

¹²⁶ In this article, I bracket the question whether the requisite mandatory rules (mandatory, that is, from the perspective of individual firms) need to be provided by a government regulator, or whether they could alternatively be provided by “self-regulation” (as in stock exchange rules, the original UK Takeover Code, or perhaps today index inclusion rules). The relevant question is 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 34 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). I also assume that the regulator is sufficiently competent, an obvious caveat to any argument for regulation.

¹²⁷ This argument does not require or imply 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.) 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. This is not to claim that real-world founders and sophisticated investors will not make mistakes, but merely that they are less likely to make widespread and incorrigible mistakes than a real-world regulator.

¹²⁸ On U.S. corporate law’s largely enabling character, *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). I offer this comparison to reassure readers who intuit that the current mandatory/enabling balance in positive law is roughly right. I do not mean to suggest that all the existing mandatory rules, such as the details of the disclosure obligations, are justified, or that the congruence of positive law and my normative framework has any principled bearing on the latter’s validity.

¹²⁹ An alternative, common framing of the discussion below is from the business’s perspective, i.e., capital-raising and corporate governance. The two frames are identical if the concern for businesses is merely instrumental, or if businesses and investors interact rationally in competitive capital markets, because maximizing the corporate pie will generate the biggest slices for investors and entrepreneurs alike. In the more differentiated account given in this paper, there is a wedge: unsophisticated investors might be lured into subsidizing businesses, or with a more positive spin: some investor protection might be sacrificed for the sake of greater business performance even though the tradeoff is negative for unsophisticated investors. Even if one were to deem such subsidies desirable in principle, however, degrading investor protection would be a poorly targeted subsidy: it would benefit good and bad businesses alike and would reorient some entrepreneurial and managerial attention away from running good businesses to fleecing investors. The subsidy might even backfire: if it were large, even unsophisticated investors might eventually notice and subsequently avoid investments indiscriminately. *See generally supra* note 34 and accompanying text.

¹³⁰ 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

few such rules in existing U.S. law, the ones discussed below not among them.¹³¹

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 1976.¹³² Within the paradigm of *direct* investor protection, 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.¹³³ 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.¹³⁴ 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

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.

A separate question is whether other areas of law (e.g., antitrust, environmental, labor) leave meaningful externalities to tackle effectively with corporate and securities law. 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*, working paper, <https://ssrn.com/abstract=3810027> (April 16, 2021).

¹³¹ The main exceptions are the prohibition to exculpate or indemnify 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 (codified at 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).

¹³² 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 of this “contractarian” theory of the corporation is EASTERBROOK & FISCHER, *supra* note 11. 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 11; Lucian Arye Bebchuk, *Why Do Firms Adopt Antitakeover Arrangements*, 152 U. PA. L. REV. 713 (2003); *id.*, *Asymmetric Information and Corporate Governance*, Harvard Olin Discussion Paper 398 (2002); 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).

¹³³ Jensen & Meckling, previous note, at 324. Optimal rules include “meta-rules” to amend the substantive rules later (midstream changes, *cf. supra* note 73), and may include a delegation of decision-making authority to institutions such as stock exchanges, courts, or state legislatures. *Cf.* Hansmann, *supra* note 128 (arguing that corporate charters tend to specify very little because this effectively delegates future amendments to the state legislature).

¹³⁴ I use “investor irrationality” as a stand-in for any general infirmity in investor decision-making. The existence and relevance of irrational behavior in financial markets 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).

disclosure and voting rights).¹³⁵ Consequently, if regulators need to protect investors against their own choices, then they should also screen the businesses that (retail) investors are allowed to invest in (and perhaps limit voting rights etc.). This is indeed what the state blue sky laws decreed in the early 20th century, and what a few commentators advocate today.¹³⁶ Current U.S. law does not.¹³⁷ Investors can invest in, and promoters can promote, any legal business that they please. Most 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.¹³⁸ The reasons offered, however, do not provide a good rationale for mandatory rules, at least not for those currently in existence.¹³⁹ One reason offered is standardization and, more to the point, network or learning externalities that may keep firms stuck in an inefficient collective equilibrium.¹⁴⁰

¹³⁵ The presumptive 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.

¹³⁶ 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”); 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); *cf.* 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 39 (passive funds should not be allowed to vote).

¹³⁷ 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.

¹³⁸ *Cf.* Klausner, *supra* note 132, 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 11, 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 11).

¹³⁹ 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 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 that there is inefficiency, or it may be that one’s model is wrong. See Fama, *supra* note 68, 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 132; *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.*, Frankreiter et al., *supra* note 77, figure 4; *cf. infra* note 160 (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 113. That the potential harm from mandated uniformity is small when optimal rules differ little from firm to firm is a conceptually separate issue.

¹⁴⁰ For arguments to this effect, *see, e.g.*, Michael Klausner, *Corporations, Corporate Law, and Networks of*

However, this “inertia” inefficiency 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.¹⁴¹

Another reason offered is standard externalities: in particular, disclosure generates positive externalities on competing or otherwise related firms and their investors,¹⁴² while takeover defenses generate negative externalities on acquirers (by affecting the surplus split).¹⁴³ However, such standard externalities emanate not only from public firms but all (large) firms (and, for surplus splits, other assets), yet the mandatory disclosure and takeover rules are limited to public firms.¹⁴⁴

The final reason offered is generic: contracting may fail to achieve the optimum due to bargaining breakdown or wasteful signaling.¹⁴⁵ Unless this generic reason is to degenerate into a wholesale rejection of contracting, however, specific contracting failures need to be linked to specific solutions.¹⁴⁶ 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.¹⁴⁷

Contracts, 81 VA. L. REV. 757, 774–815 (1995); id., previous note, at 793–96; Lucian Arye Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833, 865–66 (2005). Cf. Sarath Sanga, *Network Effects in Corporate Governance*, 63 J. L. & ECON. 1 (2020) (demonstrating empirically the importance of network effects in incorporation choices). For example, companies collectively might be better off if all adopted a novel term, but for an isolated, early adopter the benefit might be overwhelmed by the cost of operating under untested law, or perhaps because the market draws negative inferences from the unusual term.

A related argument is that firms are long-lived and that whatever choice was optimal at their founding may turn out to be suboptimal later. However, this is not a reason to restrict the choice of updating mechanism (*cf. supra* note 133), and in any event a corrective intervention could and should be defeasible, see next note and accompanying text.

¹⁴¹ Cf. 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”).

¹⁴² See Frank H. Easterbrook & Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 VA. L. REV. 669, 685–86, 695, 697 (1984); Merritt B. Fox, *Retaining Mandatory Securities Disclosure: Why Issuer Choice is Not Investor Empowerment*, 85 VA. L. REV. 1335, 1345 (1999); Anat Admati & Paul Pfleiderer, *Forcing Firms to Talk: Financial Disclosure Regulation and Externalities*, 13 REV. FIN. STUD. 479 (2000).

¹⁴³ See David Scharfstein, *The Disciplinary Role of Takeovers*, 55 REV. ECON. STUD. 185, 185–86 (1988).

¹⁴⁴ Cf. de Fontenay, *supra* note 117 (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). 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 142, at 482.

¹⁴⁵ See generally Philippe Aghion & Benjamin Hermalin, *Legal Restrictions on Private Contracts Can Enhance Efficiency*, 6 J. L. ECON. ORG’N 381 (1990).

¹⁴⁶ 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.”).

¹⁴⁷ For example, arguably the most sophisticated and most comprehensive argument against contractual freedom

In summary, direct investor protection cannot 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 (*supra* p. 28). 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 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.

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.”¹⁴⁸

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. Mandatory regulation is warranted. Whether it should take the form of a prohibition (as under existing law, *supra* III.C), stern warning, or financial literacy test, depends on one’s views on paternalism and investor psychology.¹⁴⁹

Next is the question which markets to designate “safe.” “Markets with approximately unbiased informative prices” is not an administrable rule (although it can and should be a regulatory guiding principle).¹⁵⁰ Regulators need to characterize (regulate) markets’ institutional features. The U.S. securities laws’ emphasis on disclosure and anti-manipulation seems sound, controversial details notwithstanding: more information and less manipulation presumably lead to more informative, less biased prices.¹⁵¹

in corporate law (without appealing to externalities) from (mostly) the rational actor perspective that incorporates all of the above arguments is Bebchuk, *Why Do Firms and Asymmetric Information*, *supra* note 132. Yet Bebchuk’s policy pieces advocating mandatory rules do not mention these arguments, nor even cite these pieces. *Cf.*, e.g., Lucian A. Bebchuk & Kobi Kastiel, *The Untenable Case for Perpetual Dual-Class Stock*, 103 VA. L. REV. 585, 623 (2017).

¹⁴⁸ EASTERBROOK & FISCHEL, *supra* note 11, at 297–98. Compare similar quotes from Korsmo and Romano, *supra* note 11.

¹⁴⁹ *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”).

¹⁵⁰ The concept is hard to measure and, in any event, measuring it after unsophisticated investors invest is too late, while measuring it beforehand is measuring a different market (one without unsophisticated investors).

¹⁵¹ *Cf.* Renhui Fu, Arthur Kraft & Huai Zhang, *Financial Reporting Frequency, Information Asymmetry, and The*

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, 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 maximize their own profits even at the expense of unsophisticated investors. The sophisticated might tolerate inefficient amounts of manipulation if it redistributes value from unsophisticated investors, and demand inefficiently little disclosure if it generates information rents or oligopoly rents for them (in each case, differently affected sophisticated actors could compensate each other with side payments).¹⁵²

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, and that mandatory regulation should prevent.

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.¹⁵³ 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 arbitrated 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

Cost of Equity, 54 J. ACCT. & ECON 132, 143, 146 (2012) (finding that 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.

¹⁵² I voice these specific concerns hypothetically and tentatively because our understanding of trading markets is still rather limited. 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 16 ("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."). Nevertheless, the big-picture conceptual point seems unassailable: sophisticated actors have incentives to pick rules imposing externalities on unsophisticated investors who do not demand proper compensation for it (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)). It stands to reason that the victims of manipulation would be disproportionately unsophisticated, and that disclosure reduces speculators' rents because it lowers the information cost of entry and thus increases competition between speculators. This is not to say that sophisticated actors would be best off with unlimited manipulation and no disclosure (indeed, stock exchanges required some disclosure long before regulation). Inversely, even from a social welfare perspective, it is possible to spend too much on disclosure and anti-manipulation. This hampers the interpretation of empirical results.

¹⁵³ 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*, YALE J. REG'N (forthcoming 2021).

retail investors.¹⁵⁴

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.¹⁵⁵ 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.¹⁵⁶ 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.¹⁵⁷ It 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.¹⁵⁸ 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.

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. 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. 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), which, in the U.S., are guaranteed by the mandatory duty of

¹⁵⁴ See Klausner, Ohlrogge & Ruan, previous note. Cf. Ganor, *supra* note 21 (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).

¹⁵⁵ *Supra* note 71 and accompanying text.

¹⁵⁶ For the vast majority of indices, price and implied market valuation is only indicative, as index inclusion is usually not purely mechanical. See Adriana Z. Robertson, *Passive in Name Only: Delegated Management and "Index" Investing*, 36 YALE J. ON REG. 795 (2019).

¹⁵⁷ See Vladyslav Sushko & Grant Turner, *The Implications of Passive Investing for Securities Markets*, BIS Q. REV. 113, 121-122, Mar. 2018.

¹⁵⁸ 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.

loyalty and the prohibition of arbitration clauses.¹⁵⁹ 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.¹⁶⁰

D. Example: The Prohibition of Insider Trading

To illustrate these principles, 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.¹⁶¹ 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.¹⁶² (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, an argument *against* a mandatory prohibition if one thinks that the regulator is more likely to make mistakes than issuers and investors, or that the optimal rule should be tailored to individual issuers.

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 do not bear. Consequently, inefficient rules may well be adopted (see generally *supra* B). In addition, rules against insider

¹⁵⁹ *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 such state law provisions, but the SEC has prevented public offerings with arbitration provisions, see *supra* note 113 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 investors (in an instance of the coarse investor self-help discussed *supra* note 34 and accompanying text).

¹⁶⁰ *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).

¹⁶¹ See 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).

¹⁶² 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. In any event, a regulatory prohibition of insider trading could allow for opt-out. See Robert T. Miller, *Insider Trading and the Public Enforcement of Private Prohibitions: Some Complications in Enforcing Simple Rules for a Complex World*, working paper (Jan. 12, 2021), https://papers.ssrn.com/abstract_id=3764835, at 10-11.

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 concern about insider trading is that, without the benefit of indirect investor protection, unsophisticated investors will unwittingly participate in a rigged game—which happens to be the justification often given by courts and policy makers for prohibiting insider trading.¹⁶³

V. PASSIVE’S THREAT TO INDIRECT INVESTOR PROTECTION

Indirect investor protection created perfect conditions for the growth of passive investing into the public market’s dominant species over the last two decades. However, passive’s continuing growth may eventually threaten indirect investor protection that depends on trading activity directly (hedge fund activism) or through the price (screening etc.) (B).¹⁶⁴ As will become clear, active investors have unwittingly been subsidizing passive investors via trade-financed indirect investor protection.¹⁶⁵ Their move to passive withdraws this subsidy. There will, of course, be an equilibrium point at which passive’s growth ends. Unfortunately, once the fundamental logic of passive is widely understood, this point is far towards the passive end of the active-passive balance (A). Interventions may be required 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 2020.¹⁶⁶ The

¹⁶³ 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.” See 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”).

¹⁶⁴ 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).

¹⁶⁵ Cf. John H. Cochrane, *Finance: Function Matters, Not Size*, 27 J. ECON. PERSPS. 29, 44 (2013) (price discovery subsidy); Sushko & Turner, *supra* note 157, at 119 (same); Rui Albuquerque, Vyacheslav Fos & Enrique J. Schroth, Value Creation in Shareholder Activism: A Structural Approach, ECGI Finance Working Paper 685/2020 (hedge fund activism subsidy).

¹⁶⁶ See Kenechukwu Anadu, Mathias Kruttli, Patrick McCabe & Emilio Osambela, *The Shift from Active to Passive Investing: Potential Risks to Financial Stability?* 2-3 (Federal Reserve Bank of Boston, Working Paper No. RPA 18-04, updated May 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. Mal-

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.¹⁶⁷

This shift to passive is not surprising; it was long overdue.¹⁶⁸ 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).¹⁶⁹ 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.¹⁷⁰ 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 require market efficiency.¹⁷¹

The aforementioned caveat is that 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 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%.¹⁷²

In the past, retail investors trading on their own account might have been the ones on the losing side of trades (on average), and active retail funds may have outperformed the market (before fees). Now that institutions—professionals all—own 80% of all stocks and do 90% of all stock trading,

low, *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).

¹⁶⁷ See Anadu et al., previous note; Coates, *supra* note 13.

¹⁶⁸ *Cf.* Cochrane, *supra* note 165 (“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.”).

¹⁶⁹ See Sharpe, *supra* note 36.

¹⁷⁰ 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.

¹⁷¹ Market efficiency would yield the somewhat different, in one sense stronger conclusion that it is impossible 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).

¹⁷² *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.

however, even professionals are almost as likely to be wrong as right on average, and some professionals are surely worse.¹⁷³ After fees, active retail funds underperform.¹⁷⁴ The shift to passive is thus only rational. 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 2019.¹⁷⁵ 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.¹⁷⁶

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.¹⁷⁷

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.¹⁷⁸ When there is much less trading, there is much less opportunity for an activist to build up a stake, and even less opportunity to do so in secret.¹⁷⁹ 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.¹⁸⁰ To avoid such governance deterioration, it might be beneficial to institute an explicit reward system for successful activism akin to common fund

¹⁷³ Cf. Pensions & Investments, 80% of equity market cap held by institutions, <https://www.pionline.com/article/20170425/INTERACTIVE/170429926/80-of-equity-market-cap-held-by-institutions> (Apr. 25, 2017) (perma.cc/BUX3-89J4); 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) (20% of all U.S. equity trades involve a retail investor on one side).

¹⁷⁴ See *supra* note 36 and accompanying text.

¹⁷⁵ NASDAQ, *supra* note 173, fig. 2a.

¹⁷⁶ Compare the 4% turnover rate of the Vanguard S&P 500 ETF to the 133% stock market turnover rate today, *supra* note 172. Importantly, the bigger large index mutual funds become, the more they can net most investor purchases and redemptions internally; in the case of index ETFs, the more liquidity can be generated by trade of the ETF share rather than the ETF’s component shares.

¹⁷⁷ 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 76, 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).

¹⁷⁸ Cf. Edmans & Holderness, *supra* note 54, at 584 (summarizing the theory of blockholder governance, stating: “Stock liquidity generally improves governance through both voice and exit”), 603-04, 605-06 (summarizing the evidence as supporting this theoretical prediction).

¹⁷⁹ 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).

¹⁸⁰ See source *supra* note 57.

rewards for successful plaintiff litigation.¹⁸¹

The effect of reduced trading on prices, and of prices on investor protection, is more subtle and more ambiguous.¹⁸² 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.¹⁸³ Noise traders can push prices away from fundamentals and create risk for informed speculators trading in the right direction (see, e.g., GameStop).¹⁸⁴ 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.¹⁸⁵

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.)

It is likely that, if trading is generally much reduced, there will be much greater price impact

¹⁸¹ *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. (forthcoming 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).

¹⁸² *See* Sushko & Turner, *supra* note 157, at 119-129; *cf.* Wurgler, *supra* note 71 (discussing the consequences of “index-linked investing”).

¹⁸³ *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).

¹⁸⁴ *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 134, at 362-3.

¹⁸⁵ *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 16 (simulation of an agent-based model yields non-monotonicity of volatility in the market shares of value 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. Pataoukas, *Identifying the Effect of Stock Indexing: Impetus or Impediment to Arbitrage and Price Discovery?*, working paper (September 6, 2019), <https://ssrn.com/abstract=3753637>.

from large trades, such as sales by founders or purchases by index funds around index reconstitutions. Such price impact would directly reduce the returns to founders and index investors alike.¹⁸⁶ To the extent the price impact were predictably unequal for different firms, it would also undermine the crucial screening function of prices for projects and governance structures (*supra* II.A, IV.A, IV.B). To dampen the price impact, index providers might experiment with gradual index adjustments (perhaps in coordination with issuers etc.), similar to the customary spreading of large block trades. One can also imagine private placements from firms directly to passive investors at the market price, provided care is taken to prevent manipulation of the market price. If the market price were bypassed altogether, investing in the public market would resemble a private market.

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.¹⁸⁷ 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.B.) 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.

¹⁸⁶ Conversely, active investors could predictably gain in these large trades, even as a group, because they would systematically stand one on side of the trade, not both.

¹⁸⁷ See, e.g., [https://en.wikipedia.org/wiki/Dead_zone_\(ecology\)](https://en.wikipedia.org/wiki/Dead_zone_(ecology)) (visited June 19, 2021) (perma.cc/Z9JB-5ENT).