

PROMISE & PERIL OF PLAIN ENGLISH: MUTUAL FUND DISCLOSURE READABILITY

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ABSTRACT

The SEC requires mutual funds to write disclosures for the average investor using *plain English*. These requirements make funds' investment strategies and associated risks transparent and accessible to investors. Improved investor understanding furthers the SEC's regulation-through-disclosure regime. But our examination of funds' summary prospectuses—an abbreviated discussion of a fund's strategies and risks—suggests that funds often fail to meet the plain English standard. Our analysis of all summary prospectuses filed between 2010 and 2020 reveals that mutual funds write long, hard-to-read, and complex disclosures. Importantly, we find that failure to draft disclosures in plain English is more than a technical error. Using a regression model, we find that positive past returns predict easier-to-read disclosures, but an increase in fund risk predicts harder-to-read disclosures. Further, we find that compliance with other metrics of plain English, like short sentences and active voice, predicts easier-to-read disclosures. In other words, compliance in one dimension of plain English writing suggests compliance in other aspects as well.

Our results suggest several recommendations. The SEC should update their plain English guidance and adopt text mining measures to better monitor and enforce disclosure standards. Finally, given the incentives to draft overinclusive and exhaustive disclosures, the SEC should issue guidance on liability for summary prospectus risk omissions *if* full disclosure is made elsewhere.

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INTRODUCTION

Over 100 million Americans¹ own mutual fund stock,² often through a 401(k) or college savings account.³ These investors⁴ receive annual disclo-

¹ INV. CO. INST. (ICI), 2022 INVESTMENT COMPANY FACT BOOK 20 (2022) https://www.ici.org/system/files/2022-05/2022_factbook.pdf [hereinafter ICI 2022 FACT BOOK] (reporting the year-end figures for 2021 at 108 million Americans).

² With a slight abuse of language, and for ease, we refer to all registered investment companies as funds throughout the Article. In the Article, we distinguish *funds* from operating companies, also referenced as *firms*. See, e.g., Eric D. Roiter, *Disentangling Mutual Fund Governance from Corporate Governance*, 6 HARV. BUS. L. REV. 1, 12 (2016) (“The term “mutual fund” is a market term. It does not appear in the ICA [Investment Company Act], which instead employs the term “open-end company,” the distinguishing feature of which is the issuance to investors of “redeemable securities.””) (quoting 15 U.S.C. § 80a-5(a)(1) (1987)). For a detailed description of mutual funds, see Jill E. Fisch, *Rethinking the Regulation of Securities Intermediaries*, 158 U. PA. L. REV. 1961, 1967–75 (2010).

³ ICI 2022 FACT BOOK, *supra* note 1, at 24, 161. The rapid rise of self-directed retirement accounts, such as defined contribution plans like the popular 401(k), and tax-deferred education savings plans spurred the growth and growing importance of investment companies, particularly mutual funds. See generally Anne M. Tucker, *The Retirement Revolution: Unmitigated Risks in the Defined Contribution Society*, 51 HOUSTON L. REV. 153–55, 162–63 (2013) (discussing I.R.C. § 414(i) (2006) and the Employee Retirement Income Security Act

tures about their investment.⁵ Yet, we know little about these consumer-facing disclosures in practice, beyond what the Securities and Exchange Commission (SEC) regulations prescribe. To address this knowledge gap, we examine the content and compliance of all investment company summary prospectuses filed with the SEC between 2010–2020. Our work contributes to the growing body of scholarship in law and finance focused on mutual fund performance,⁶ manager influence,⁷ agency conflicts,⁸ voting,⁹ active versus passive management,¹⁰ fund families,¹¹ governance, and regula-

of 1974 (ERISA) Pub. L. No. 93–406, 88 Stat. 829 (codified in part at 29 U.S.C. § 1002 (2006)).

⁴ See generally Tom C.W. Lin, *Reasonable Investor(s)*, 95 B.U. L. REV. 461, 468 (2015) (describing the ordinary or reasonable investor as the “central character of financial regulation” with “average wealth and ordinary financial sophistication that invests passively for the long term”).

⁵ See *infra* notes 39–50 and accompanying text.

⁶ See, e.g., Vikas Agarwal et al., *Mandatory Portfolio Disclosure, Stock Liquidity, and Mutual Fund Performance*, 70 J. OF FIN. 2733 (2015) (empirically testing mandatory portfolio disclosure on stock liquidity and fund performance).

⁷ See, e.g., Linlin Ma et al., *Portfolio Manager Compensation in the U.S. Mutual Fund Industry*, 74 J. OF FIN. 587 (2019) (empirically testing managerial incentives’ effects on fund performance).

⁸ See, e.g., John A. Haslem, *Mutual Fund Agency Conflicts*, 3 J. OF INDEX INVESTING 12 (2012) (studying agency conflicts that negatively impact mutual fund shareholder interests); see also Ronald J. Gilson & Jeffrey N. Gordon, *The Rise of Agency Capitalism and the Role of Shareholder Activists in Making it Work*, 31 J. OF APPLIED CORP. FIN. 8 (2019) (identifying new agency conflicts with agency capitalism and endorsing the interplay between institutional investors and activist investors’ strategic oversight of companies).

⁹ See, e.g., Alon Brav et al., *Picking Friends Before Picking (Proxy) Fights: How Mutual Fund Voting Shapes Proxy Contests*, COLUM. BUS. SCH. RSCH. PAPER No. 18–16 (June 14, 2021), European Corp. Governance Inst. (ECGI)—Finance Working Paper No. 601/2019 (studying voting record from 2008–2015 in contested proxy fights).

¹⁰ See, e.g., K.J. Martijn Cremers et al., *Challenging the Conventional Wisdom on Active Management: A Review of the Past 20 Years of Academic Literature on Actively Managed Mutual Funds*, 75 FIN. ANALYSTS J. 8 (2019) (reviewing extensive literature on the active versus passive management debate).

¹¹ See, e.g., Richard Burtis Evans et al., *Competition and Cooperation in Mutual Fund Families*, 136 J. OF FIN. ECON. 168 (2020) (creating an index of competitive and cooperative incentives within a fund family using fund compensation disclosures and intra-family manager cooperation); Sanjeev Bhojraj et al., *Mutual Fund Family Size and Mutual Fund Performance: The Role of Regulatory Changes*, 50 J. OF ACCT. RSCH. 647 (2012) (examining the effects of fund family size on returns, regulations, and scandals).

tion.¹² It also contributes to the literature on consumer disclosures,¹³ with a specific emphasis on financial disclosures.¹⁴

The SEC primarily regulates mutual funds through a registration and disclosure framework.¹⁵ SEC oversight of mutual funds is particularly important given how mutual funds operate. Investment advisors, not boards of directors, hold the power in mutual funds.¹⁶ Fund securities are not subject to the same pricing concerns as company stock because fund securities are valued at a daily Net Asset Value (NAV).¹⁷ Nor are fund securities subject to

¹² See, e.g., John Morley, *Why Do Investment Funds Have Special Securities Regulation?*, 1 YALE L. & ECON. RSCH. PAPER 1 (2019), appearing in the RESEARCH HANDBOOK OF MUTUAL FUNDS (William Birdthistle & John Morley eds. 2018) (asserting that investment company regulation is distinct from operating company regulation because investments matter less than fund organization); see also Henry T. C. Hu & John D. Morley, *A Regulatory Framework for Exchange-Traded Funds*, 91 S. CAL. L. REV. 839 (2018) (reviewing current investment company regulation and proposing regulations specific to ETFs).

Prior scholarship mines voting disclosures (NPX), holdings filings (13F), and aggregated data available through Thomson Reuters and CRSP. Brav et al., *supra* note 9, at 9–13 (using fund N-PX voting records available on EDGAR); see also Russ Wermers et al., *Forecasting Stock Returns through An Efficient Aggregation of Mutual Fund Holdings*, 25 REV. FIN. STUDIES 3490 (2012) (using Thomson Reuters and CRSP data to identify fund portfolio holdings); George O. Aragon et al., *Why Do Hedge Funds Avoid Disclosure? Evidence from Confidential 13F Filings*, 48 J. OF FIN. & QUANTITATIVE ANALYSIS 1499 (2013) (using 13F filings as a main data source). Our work is the first to use summary prospectus disclosure text as a primary data source to study mutual funds.

¹³ See, e.g., Michael D. Guttentag, *Evolutionary Analysis in Law: On Disclosure Regulation*, 48 ARIZ. ST. L.J. 963, 972–73 (2016) (listing relevant consumer disclosure areas as health care services, personal finance, political spending, real estate transactions, and securities markets).

¹⁴ See, e.g., David Adam Friedman, *Explaining “Bait-and-Switch” Regulation*, 4 WM. & MARY BUS. L. REV. 575, 575–80 (2013) (describing the role of disclosure in consumer protection initiatives); see also Thomas S. Ulen, *A Behavioral View of Investor Protection*, 44 LOY. U. CHI. L.J. 1357, 1365 (2013) (describing consumer protection regulations); Lin, *supra* note 4, at 468 (describing protections for reasonable investors).

¹⁵ See, e.g., Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473, 479 (2007) (describing the SEC regulatory regime as one primarily built around disclosure).

¹⁶ Anita K. Krug, *Downstream Securities Regulation*, 94 B.U. L. REV. 1589, 1627–29 (2014) [hereinafter Krug, *Downstream Securities*]; Anita K. Krug, *Escaping Entity-Centrism in Financial Services Regulation*, 113 COLUM. L. REV. 2039, 2061 (2013) [hereinafter *Entity-Centrism*]; Roiter, *supra* note 2, at 18–19; Anne M. Tucker, *The Outside Investor: Citizen Shareholders & Corporate Alienation*, 11 U. ST. THOMAS L.J. 99, 129–32 (2013) [hereinafter Tucker, *Outside Investor*] (describing the weakened role and authority of mutual fund boards of directors).

Mutual fund boards have little effective power over the investment advisor other than to terminate the advisory contract, which in practice, kills the fund—a move most boards avoid. Fisch, *supra* note 2, at 2011–12. Independent directors on mutual fund boards are not seen as curing the governance defects. John A. Haslam, *Why Have Mutual Fund Independent Directors Failed as “Shareholder Watchdogs”?*, 19 J. OF INVESTING 7, 7–9 (2010).

¹⁷ Henry T. C. Hu, *Disclosure Universes and Modes of Information: Banks, Innovation, and Divergent Regulatory Quests*, 31 YALE J. ON REG. 565, 585 (2014) (discussing the efficient capital market hypothesis and SEC disclosure regulations for operating companies). For a discussion of redemption rights in mutual funds and its distinguishing features from operating company stock ownership, see Anne M. Tucker, *Locked In: The Competitive Disadvantage of Citizen Shareholders*, 25 YALE L.J. FORUM 163, 165–66 (2015) [hereinafter Tucker, *Locked In*]. Redemption rights pose governance consequences as well, having been described as im-

discounted cash flows, short sales, or takeover premiums.¹⁸ These features of fund markets minimize market disciplining forces. Weakened market discipline elevates the role of the regulator (the SEC) and the importance of disclosures communicating investment strategies and risks to investors.

Through disclosures, the SEC seeks to educate and protect investors.¹⁹ Mutual fund disclosures are tiered, so that consumers receive a summary prospectus—our document of interest—providing information necessary to make investment decisions.²⁰ Additional information is filed with the SEC, but not automatically provided to investors to avoid information overload.²¹ SEC regulations also instruct funds to write disclosures for an “average or typical investor who may not be sophisticated in legal or financial matters” —the ordinary investor.²²

Even before The Plain Writing Act of 2010 imposed a similar mandate on all federal agencies,²³ the SEC made plain English standards a cornerstone of securities disclosure in the 1990s when it passed final rules requiring plain English writing and issuing extensive guidance on how to satisfy the standards.²⁴ Despite SEC guidance covering everything from bullet points to font size, plain English can be likened to obscenity standards in First Amendment law: intuitively appealing, highly subjective, and hard to define.²⁵ You know it when you see it.

posing direct discipline on a fund’s advisor by shrinking assets upon which the advisor is paid. Roiter, *supra* note 2, at 12.

¹⁸ Merritt B. Fox et al., *The New Stock Market: Sense and Nonsense*, 65 DUKE L.J. 191, 217, 223 (2015) (describing why fund security pricing is largely insulated from disclosure-based price corrections).

¹⁹ See, e.g., Jumpstart Our Business Startups Act § 302(a), 15 U.S.C.A. §§ 77d(a)(6)(A), 77d-1(a)(3) (2012) (requiring disclosure and education); see also Andrew Schwartz, *Keep It Light Chairman White: SEC Rulemaking Under The Crowd Fund Act*, 66 VAND. L. REV. EN BANC 43, 56 (2013) (noting SEC initiatives to educate through disclosures).

²⁰ Robert A. Robertson, *In Search of the Perfect Mutual Fund Prospectus*, 54 BUS. LAW. 461, 487 (1999) [hereinafter *Perfect Prospectus*].

²¹ Omri Ben-Shahar, *Data Pollution*, 11 J. LEGAL ANALYSIS 104 (2019) (defining data pollution and the harms of mandated consumer disclosures) [hereinafter *Data Pollution*]; see also Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosure*, 159 U. PENN. L. REV. 647, 712–15 (2011) (describing the failures of mandatory financial disclosures).

²² Form N-1A, Registration Statement of Open-End Management Investment Companies, 17 C.F.R. § 239.15A (2021), <https://www.sec.gov/files/formn-1a.pdf> [hereinafter SEC FORM N-1A]; *id.* at General Instructions C.1.(b).

²³ Plain Writing Act of 2010, Pub. L. 111-274, 5 U.S.C. § 301 note (2010).

²⁴ Securities Act Release No. 7497 (“Plain English Release”), 63 Fed. Reg. 6370 (Jan. 28, 1998) [hereinafter *Plain English*] (adopting amendments to Rule 421 under the Securities Act (17 C.F.R. § 230.421) requiring the use of plain English disclosure principles), available at <https://www.sec.gov/rules/final/33-7497.txt>. The SEC also published an eighty-three page handbook on the topic. SEC, *A Plain English Handbook*, Release No. 1113, (Jan. 28, 1998), available at <https://www.sec.gov/pdf/handbook.pdf>.

²⁵ In discussing the obscenity standard, Supreme Court Justice Stewart famously remarked that “I know it when I see it” in *Jacobellis v. Ohio*, 378 U.S. 184 (1964). The primary test for obscenity is found in *Miller v. California*, 413 U.S. 15 (1972).

While readability and disclosure content has been studied in other fields like medical research²⁶ and privacy,²⁷ mutual fund disclosures remain a black box. To address this, we evaluate mutual fund summary prospectus disclosures. We find that funds fail to write disclosures that fulfill the *spirit* of consumer education and ordinary investor empowerment. Summary prospectus disclosures are long and are getting longer. They are also hard to read. Disclosures are written at a college grade level, or higher, and display a range of complex writing. We discuss these findings along with our data in sections II and III. Section IV discusses the implications of our findings.

When talking about financial disclosures, a common response is why bother? No one reads it. What about the claim that sunshine (or in this case, disclosure) is the best disinfectant and means to hold bad actors accountable?²⁸ This view also accepts that we have a largely unregulated market.²⁹ But is it a fact? Does no one read disclosures? In section II, we present evidence that individuals do, in fact, access summary prospectuses, and these numbers represent but a small slice of potential readers. Beyond individual readers, mutual fund market makers, like Morningstar analysts and defined contribution plan fiduciaries, also access disclosures.

Another knee-jerk reaction may be to ask if non-compliance is an error of substance or form. In other words, should we even care if funds blow off technical-seeming disclosure regulations?³⁰ Policing the boundaries to enforce compliance by all market actors reflects the SEC objective of facilitating a fair market.³¹ It levels the playing field.³² This may be particularly important with big, powerful actors. Mutual funds, for example, are the larg-

²⁶ See generally, Kristie Hadden et al., *Improving Readability of Informed Consents for Research at an Academic Medical Institution*, 1 J. CLIN. TRANSL. SCI. 6, 361–65 (2017).

²⁷ Robert Bartlett et al., *Can Machine Learning Address the Non-Readership Problem in Consumer Contracts? Theoretical and Methodological Approaches Using Privacy Policies* (Working Paper) (on file with author).

²⁸ See LOUIS D. BRANDEIS, *What Publicity Can Do*, in OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 92, 92 (1914).

²⁹ Margaret Kwoka & Bridget DuPey, *Targeted Transparency As Regulation*, 48 FLA. ST. U. L. REV. 385, 405 (2021) (“[D]isclosure requirements give the public regulatory power; ordinary people can . . . force powerful actors to protect health and safety [I]t allows the public to . . . directly choose an acceptable level of risk”); see also Krug, *Downstream Securities*, *supra* note 16, at 1591 (arguing that registration and disclosure are main regulatory tools for funds).

³⁰ See, e.g., Kevin S. Haeberle, *Information Asymmetry and the Protection of Ordinary Investors*, 53 U.C. DAVIS L. REV. 145 (2019) (providing a theoretical account of how disclosure law harms ordinary investors with a buy and hold portfolio).

³¹ Victoria Schwartz, *Disclosing Corporate Disclosure Policies*, 40 FLA. ST. U. L. REV. 487, 492 (2013) (arguing that disclosure serves fairness and equality goals by “allowing all investors, big and small, insiders and outsiders, equal access to relevant information”) (citing to Joel Seligman, *The Historical Need for A Mandatory Corporate Disclosure System*, 9 J. CORP. L. 1, 9 (1983) and Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473, 479 (2007)).

³² See, e.g., Lin, *supra* note 4, at 484 (discussing disclosure as a tool to level the playing field).

est shareholders of public companies, holding 22% of U.S. equity shares.³³ Mutual funds also manage 23% of all American household financial assets.³⁴ As a result, mutual funds have outsized importance for individual financial stability and in the national economy.³⁵ Even minor infractions create potentially big consequences.

Under a third view, we may care about funds' compliance with disclosure regulations because the compliance (or lack thereof) suggests something else about the fund. Finance scholars investigating operating company disclosures have found just this. Empirical studies in finance linked company disclosure readability to performance, risk, and pricing.³⁶ The idea is that language choices reveal something about the speaker, it signals something lurking beneath the surface. As individuals, we have some notion of this in other contexts, such as when employers do not hire applicants who lie on a resume because of concerns that a willingness to deceive in one area will be repeated, with negative consequences, in another.

Section III.E presents regression results predicting disclosure readability based on fund attributes and disclosure features. Results suggest that readability is more than just merely a technical matter but also relates to other aspects of compliance, like filing length. We find that disclosure features and fund characteristics have a statistically significant estimated effect on readability. In other words, fund attributes and disclosure features predict how hard or easy it may be to read a disclosure. Most striking in our findings is that positive past returns predict easier-to-read disclosures whereas increases in fund risk predict harder-to-read disclosures. In short, readability matters and provides a potentially important foothold for regulatory oversight.

Further, noncompliance is based on an intuition that hard-to-read disclosures harm ordinary investors by discouraging participation or clouding their judgment when investing. While *direct* evidence of investor harm is beyond the scope of this Article, empirical results presented here support these intuitions and point to clear regulatory interventions.

Finally, section IV leverages disclosure findings in three recommendations for the SEC: (1) use text mining to monitor and enforce standards, (2) consolidate and update plain English guidance with an emphasis on tailored guidance for Principal Risk and Investment Strategy sections, and (3) use guidance to discourage liability based on summary prospectus omissions. These interventions would serve the SEC's goal of protecting average investors, through education and empowerment.

³³ INV. CO. INST. (ICI), 2021 INVESTMENT COMPANY FACT BOOK 47, https://www.ici.org/system/files/2021-05/2021_factbook.pdf [hereinafter 2021 ICI FACT BOOK] (reporting figures for open-ended investment companies). The number grows to thirty percent when factoring in other investment companies beyond mutual funds. *Id.*

³⁴ *Id.* at 42 (reporting figures for open-ended investment companies).

³⁵ See generally, Tucker, *Locked In*, *supra* note 17, at 164.

³⁶ See *infra* notes 126–28 and accompanying text.

I. FUND REGULATIONS

Mutual funds sit at the legislative and administrative intersection of SEC authority under the Securities Act of 1933, the Exchange Act of 1934, the Investment Advisors Act of 1940, and the Investment Company Act of 1940.³⁷ Funds must comply with a suite of regulations, such as (1) registration; (2) periodic reporting of proxy voting records, annual reports and tax information; (3) structural and trading-related obligations; (4) prompt redemption of investors' shares at their net asset value (NAV) on demand; and (5) disclosure of investment strategy and principal risks.³⁸ In the following sections we outline funds' major disclosure requirements.

A. Registration & Disclosures

Mutual funds must file a registration statement (SEC Form N-1A) to form a new open-ended fund,³⁹ whenever material changes occur,⁴⁰ and at least annually thereafter.⁴¹ Mutual funds are considered to be involved in a continuous securities offering, so they must provide additional frequent and

³⁷ Congress created the SEC to regulate the American securities market with the passage of the Securities Act of 1933 and the Securities Exchange Act of 1934, and designed it "to restore investor confidence" in the markets. Securities Act of 1933, Pub. L. No. 73-22, 48 Stat. 74 (codified as amended at 15 U.S.C. § 77a (2017)); Securities Exchange Act of 1934, Pub. L. No. 73-291, 48 Stat. 881 (codified as amended at 15 U.S.C. § 78a (2017)); *see also* SEC, *What We Do, ABOUT THE SEC*, <https://www.sec.gov/about/whatwedo.shtml> [<https://perma.cc/38JP-NXRN>]. In 1940, Congress again acted to pass the Investment Company Act and Investment Advisors Act to regulate companies, including investment companies (commonly called mutual funds) and the investment advisers that manage mutual funds. *See* Investment Company Act of 1940, Pub. L. No. 76-768, 54 Stat. 789 (codified as amended at 15 U.S.C. § 80a-1 to 80a-64 (2017)); *see also* Investment Advisors Act of 1940, Pub. L. No. 76-768, 54 Stat. 847 (codified as amended at 15 U.S.C. § 80b-1 to 80b-21 (2017)).

³⁸ Wolf A. Kaul and Bentley J. Anderson summarized the regulatory landscape as follows:

[T]he Company Act commits the mutual fund to: (1) register as an investment company under the Company Act; (2) comply with detailed periodic governmental reporting and investor disclosure duties; (3) comply with structural and trading-related obligations (including, among others, restrictions on the fund's ability to invest in certain securities industry related issuers, and on its ability to short sell and engage in leveraged transactions); (4) redeem investors' shares at their net asset value (NAV) on demand and promptly pay the proceeds of the redemption; (5) disclose the fund's diversified or non-diversified investment strategy; and (6) disclose the fund's policy on investment concentration.

Wulf A. Kaul & Bentley J. Anderson, *Unconstrained Mutual Funds and Retail Investor Protection*, 36 REV. BANKING & FIN. L. 817, 830 (2017) [hereinafter *Unconstrained*] (citing to 15 U.S.C. §§ 80a-1(b)(1)-(3), (5), (7), § 80a-8(b)(1)(E)).

See also SEC Letter to Karrie McMillan, General Counsel of the Investment Company Institute (July 30, 2010), <https://www.sec.gov/divisions/investment/guidance/ici073010.pdf>.

³⁹ SEC FORM N-1A, *supra* note 22; W. John McGuire, *Registering Investment Companies under Form N-1A*, MUTUAL FUNDS TODAY: CURRENT ISSUES AND DEVELOPMENTS, CW009 ALI-CLE (2014).

⁴⁰ SEC FORM N-1A, *supra* note 22.

⁴¹ Funds use the same form (N-1A) for initial registration and ongoing disclosure required in the prospectus. McGuire, *supra* note 39, at 1.

detailed reports, including updated prospectus or summary prospectuses, supplements, annual reports, semi-annual reports, and tax information.⁴² Funds must also provide annual updates to the registration statement, certified financial statements, certified portfolio holdings, and proxy voting records.⁴³

Despite criticisms by scholars and policymakers, regulators frequently rely on disclosure as a primary governance tool.⁴⁴ The SEC uses disclosures to inform investors, facilitate capital formation through asset pricing and allocation, and prevent fraudulent and abusive practices.⁴⁵

B. Mutual Fund Prospectus

The prospectus is a key disclosure in the SEC's regulatory architecture, because this disclosure is comprehensive, annual, and parts are routinely provided to investors.⁴⁶ The prospectus has three distinct parts: the Summary Prospectus (items 2–8), the “full” Prospectus (items 1, 9–13), and the State-

⁴² Wulf A. Kaal & Bentley J. Anderson, *Unconstrained Mutual Funds and Retail Investor Protection*, 36 REV. BANKING & FIN. L. 817, 832 (2017).

⁴³ *Id.* Mutual funds are subject to additional SEC filing requirements as well as annual and semi-annual financial statements, that are beyond the scope of this Article. *See, e.g.*, Letter from Barry D. Miller, Associate Director of Office of Legal and Disclosure, SEC (July 30, 2010) (detailing disclosure obligations beyond the prospectus) [hereinafter ICI Letter].

⁴⁴ *See, e.g.*, Ben-Shahar & Schneider, *supra* note 21, at 681–84 (describing the regulatory allure of mandatory disclosures); *see also* Robert A. Prentice, *Moral Equilibrium: Stock Brokers and the Limits of Disclosure*, 2011 WIS. L. REV. 1059, 1105 (2011) (describing the failure of conflict disclosures).

[Disclosure] is alluring because it resonates with two fundamental American ideologies. The first is free-market principles. Mandated disclosure may constrain unfettered rapacity and counteracts caveat emptor, but the intervention is soft and leaves everything substantive alone: prices, quality, entry Second, mandated disclosure serves the autonomy principle. It supposes that people make better decisions for themselves than anyone can make for them and that people are entitled to freedom in making decisions.

Id. at 681.

For an example of effective disclosure regimes, see James J. Choi et al., *Small Cues Change Savings Choices*, 142 J. ECON. BEHAVIOR & ORG. 378 (finding that disclosures could change behavior if they use either threshold or goal cues).

⁴⁵ Robertson, *supra* note 20, at 466 (citing Disclosure to Investors: A Reappraisal of Administrative Policies Under the '33 and '34 Acts 10 (1969)).

The mutual fund disclosure system is built on the corporate disclosure system and incorporates many of the objectives served by the 1933 and 1934 Acts. Robertson, *supra* note 20, at 465; *see also* Joseph A. Franco, *A Consumer Protection Approach to Mutual Fund Disclosure and the Limits of Simplification*, 15 STAN. J.L. BUS. & FIN. 1, 10 (2009) (characterizing SEC disclosure laws as eliminating abusive forms of marketing and ensuring access to increasingly simplified disclosures aimed at an unsophisticated investor); *see also* Susanna Kim Ripken, *Predictions, Projections, and Precautions: Conveying Cautionary Warnings in Corporate Forward-Looking Statements*, 2005 U. ILL. L. REV. 929, 986 (2005). Regulators may also prefer disclosure as an elegant solution to mandating ex-ante prescriptions for complex industries and actors. Rather than dictating what funds can or cannot do, disclosures emphasize procedural transparency. Krug, *Downstream Securities*, *supra* note 16, at 1623–25.

⁴⁶ SEC FORM N-1A, *supra* note 22.

ment of Additional Information or SAI (items 14–27).⁴⁷ The three components create tiered disclosures that increase in detail as the items progress. In the summary prospectus disclosure (filed as SEC Form 497K),⁴⁸ funds are encouraged to emphasize the “most important means of achieving the fund’s objectives” with a significant emphasis on performance.⁴⁹ The SAI allows funds to expand on required disclosures that may be of interest to some shareholders but are not deemed necessary for the average investor.⁵⁰

In 2009, the SEC amended funds’ compliance obligations under Section 5(b)(2) of the 1933 Securities Act, authorizing funds to deliver the summary prospectus directly and electronically to investors while making the full prospectus and the SAI available online or through the mail upon request.⁵¹ These amendments expanded on a tradition of bifurcated disclosures that began in 1983 out of similar SEC concerns that full prospectuses were too long and complicated for ordinary investors.⁵² With these changes, the summary prospectus became the primary disclosure for individual investors. While funds have some flexibility in how its annual disclosure obligation is met (for example, a fund may use the full prospectus or an annual report), 93% of mutual funds issue summary prospectuses to shareholders.⁵³

C. Summary Prospectus

The summary prospectus informs investors about a fund’s investment objectives, such as indicating if the fund is an index fund or one that invests in foreign equities.⁵⁴ The summary prospectus also lists fees and expenses charged to investors, as well as past returns.⁵⁵ In the summary prospectus, funds also identify the investment advisors to the fund, rules for buying and

⁴⁷ *Id.*

⁴⁸ We obtained all disclosures from the SEC Edgar website, a public repository for all filings made with the SEC, using the special search page dedicated to mutual fund filings: <https://www.sec.gov/edgar/searchedgar/mutualsearch.html>.

⁴⁹ *Id.*

⁵⁰ *Id.*; McGuire, *supra* note 39, at 1–2 (describing disclosure obligations).

⁵¹ Enhanced Disclosure and New Prospectus Delivery Option for Registered Open-End Management Investment Companies, Final Rule, Release Nos. 33-8998 (Jan. 13, 2009) [hereinafter *Enhanced Disclosures*].

⁵² See Henry Hu, *The New Portfolio Society, SEC Mutual Fund Disclosure and the Public Corporation Model*, 60 BUS. LAW. 1310, 1310 (2005) (citing to Securities and Exchange Commission, Registration Form Used by Open-End Management Investment Companies; Guidelines, Securities Act Release No. 33-6479 (Aug. 12, 1983), 48 Fed. Reg. 37,928 (Aug. 22, 1983)). For a complete discussion of the 2009 amendments, see Franco, *supra* note 45, at 18–33.

⁵³ Tailored Shareholder Reports, Treatment of Annual Prospectus Updates for Existing Investors, and Improved Fee and Risk Disclosure for Mutual Funds and Exchange-Traded Funds; Fee Information in Investment Company Advertisements, Release Nos. 33-10814; 34-89478, 35 (Aug. 5, 2020) (to be codified at 17 C.F.R. pts. 200, 230, 239, 240, 270, and 274) [hereinafter *Annual Prospectus Updates*].

⁵⁴ SEC FORM N-1A, *supra* note 22, at item 2.

⁵⁵ *Id.* at items 3–4.

selling shares, tax information, and money paid to third parties.⁵⁶ We focus on two additional components of the summary prospectus—Investment Strategies and Principal Risks.

1. Principal Investment Strategies in the Summary Prospectus

Item 4(a) of the “Risk/Return Summary: Investments, Risks, and Performance” section requires funds to summarize their principal investment strategies, including their security type and policy regarding concentrated industry investment.⁵⁷ Funds should not list every investment that a fund makes nor every investment that a fund *might* make. Instead, funds should disclose the most important strategies used to achieve returns for investors.⁵⁸ Funds may describe the “types of investors for whom the Fund is intended” or the “types of investment goals that may be consistent with an investment in the Fund.”⁵⁹ Additional strategy information may be provided in the full prospectus and the SAI.⁶⁰

2. Principal Risks in the Summary Prospectus

In item 4(b)—“Principal Risks of Investing in the Fund”—a fund summarizes principal risks of investing in the fund in a narrative disclosure, “including the risks to which the fund’s portfolio as a whole is subject and the circumstances reasonably likely to affect adversely the fund’s net asset value, yield, and total return.”⁶¹ The 2009 amendments increased the scope of textual risk disclosures and their relative importance to investing consumers as the primary source of investment information.

Some risk disclosures are standard (and required), like the statement that losing money is a risk of investment.⁶² Common risks associated with funds include those flowing from the type of assets in which a fund invests

⁵⁶ *Id.* at items 5–8.

⁵⁷ *Id.* at item 4.

⁵⁸ *Id.* at item 9(a) (detailing Form N-1A’s expectations that the Principal Investment Strategies portion highlight the strategies that a fund expects to be the “most important means of achieving the fund’s objectives” with a significant emphasis on performance); *see also* ICI Letter, *supra* note 43, at 2 (discussing principal investment strategies).

⁵⁹ SEC FORM N-1A, *supra* note 22, item 4.

⁶⁰ *Id.* (directing funds to “[d]escribe any investment strategies, including a strategy to invest in a particular type of security, used by an investment adviser of the Fund in managing the Fund that are not principal strategies and the risks of those strategies.”); *id.* at item 16 (emphasizing that funds must also disclose their policy regarding “(i) Issuing senior securities, (ii) Borrowing money . . . , (iii) Underwriting securities of other issuers, (iv) Concentrating investments in a particular industry or group of industries, (v) Purchasing or selling real estate or commodities, (vi) Making loans, and (vii) Any other policy that the Fund deems fundamental . . .”).

The SEC cautions against repetitive language between item 4 (the summary) and item 9 (the full prospectus), noting that the language is often identical. *Enhanced Disclosures*, *supra* note 51, at 3.

⁶¹ SEC FORM N-1A, *supra* note 22, at item 4; *see also* McGuire, *supra* note 39, at 1–2.

⁶² SEC FORM N-1A, *supra* note 22, at item 4.

(i.e., commodities versus equity), fee risks (the cost of active versus passive management), market risks (sector, domestic, and global), and strategy risk (i.e., large capital funds versus micro-capital funds).⁶³ Funds are not required to limit the number of risk factors,⁶⁴ but are encouraged to list risk factors by importance.⁶⁵ In this section, funds must also include a bar chart and table communicating the fund's historical returns to illustrate risk and return of investment.⁶⁶

D. General Guidelines & Plain English

The SEC recommends (but does not require) that the summary prospectus be three to four pages to promote accessibility.⁶⁷ Compliance is uncertain, even before our study. In 2014, for example, the SEC Director of the Division of Investment Management made several speeches lamenting that disclosures, even the summary prospectus, remained complex, technical, duplicative, and long.⁶⁸

Further, funds must write the summary prospectus according to plain English rules, first established in 1998 by the SEC under Rule 421 of the 1933 Act.⁶⁹ Plain English rules prioritize comprehension by “average” in-

⁶³ Illustrative categories generated from hand-collected data on disclosure contents.

⁶⁴ McGuire, *supra* note 39.

⁶⁵ *Id.* at 1–2. In August 2020, the SEC proposed amended language to the principal risk section instructions to list risks in order of importance, not in alphabetical order. *Annual Prospectus Updates*, *supra* note 53, at 311–12. The SEC also proposed that a definition of a “principal” risk means “whether the risk would place more than 10% of the fund’s assets at risk (“10% standard”) and whether it is reasonably likely that a risk will meet this 10% standard in the future.” *Id.* at 314. The proposed rules have not been finalized as of August 2022.

⁶⁶ Mutual funds must provide the information in an interactive format that can be downloaded directly into spreadsheets using the eXtensible Business Reporting Language. SEC Interactive Data for Mutual Fund/ Risk/Return Summary, Final Rules, Release Nos. 33-9006 (Feb. 11, 2009), <https://www.sec.gov/rules/final/2009/33-9006.pdf>. The SEC’s year-by-year presentation has been criticized by Henry Hu as being “absurdly optimistic” because it significantly underweights the probability of extreme events with a normal probability distribution creating a strong structural bias for assuming lower than should be risks. Hu calls this hidden mutual fund investment risk the non-normal probability distribution risk. Hu, *supra* note 52, at 1316.

⁶⁷ SEC, INVESTMENT MANAGEMENT DIVISION, Guidance Update: Guidance Regarding Mutual Fund Enhanced Disclosure, No. 2014-08, 1–2 (June 2014) [hereinafter *Guidance Update*]. SEC FORM N-1A, *supra* note 22. The SEC noted that many disclosures remain “complex, technical and duplicative” and ranging from ten to twenty pages. The absence of page limits may lead to bloat over time, especially in the summary section, undermining the intent of the tiered disclosure.

⁶⁸ Norm Champ, SEC Div. Inv. Mgmt., Remarks to the ICI 2014 Securities Law Developments Conference, <https://www.sec.gov/news/speech/spch121014nc>; see also Sarah B. Zimmer, *Securities and Exchange Commission’s Enhanced Disclosure and New Prospectus Delivery Option for Registered Mutual Funds*, 83 ST. JOHN’S L. REV. 1431, 1448 (2009) [hereinafter *New Prospectus*] (discussing arguments for and against page limits); *Annual Prospectus Updates*, *supra* note 53, at 311 (describing the range in word length for principal risk sections as between 250 to over 7,000 words).

⁶⁹ SEC, *Plain English Disclosure*, Release No. 33,7497; 34,39593; IC, 23011 (1998), <https://www.sec.gov/rules/final/33-7497.txt>.

vestors.⁷⁰ The summary prospectus should be organized in a succinct and user-friendly format, often with bullets and textual clues of importance.⁷¹ Plain English components include: (1) short sentences; (2) definite, concrete, everyday language; (3) active voice; (4) tables and bulleted lists; (5) no legal or investment jargon; and (6) no multiple negatives.⁷²

Common plain English pitfalls include both generic and overly complex (or technical) disclosures, as well as dense writing that clouds the meaning and intent of the summary section.⁷³ Generic disclosures are too broad to educate investors about the risks associated with the fund. Overly complex disclosures make the contents hard to understand. Dense writing chews through readers' attention spans and desire to keep reading.⁷⁴

E. The Goldilocks Problem

What does plain English writing for ordinary investors look like? We think of this as the goldilocks problem—what is the right amount of information delivered in the right way to inform and protect “ordinary” investors without overloading them?⁷⁵

How to best inform ordinary investors has long captured the attention of regulators who focus on accessible disclosure for average or ordinary consumers by writing in plain English.⁷⁶ Similarly, many scholars have weighed in on the debate to document the prevalence and limitations of disclosures and the gaps in existing disclosure laws.⁷⁷ To this rich literature we add a discussion of disclosures pitched to mutual fund investors and data documenting the gap between disclosures in practice and the aspirational plain English disclosure for the ordinary investor.

Based on our review of disclosures, we observed many plain English pitfalls. Many funds use an open-ended disclosure that do not provide educational or useful information for individual investors. For example, a disclo-

⁷⁰ SEC, *A Plain English Handbook* (1998), <https://www.sec.gov/pdf/handbook.pdf>; see also SEC FORM N-1A, *supra* note 22, General Instructions (requiring simple and direct responses to enable an average or typical investor's comprehension).

⁷¹ SEC, *A Plain English Handbook*, (1998), <https://www.sec.gov/pdf/handbook.pdf>.

⁷² *Id.*; see also SEC FORM N-1A, *supra* note 22, at General Instructions (requiring simple and direct responses to enable an average or typical investor's comprehension).

⁷³ ICI Letter, *supra* note 43, at 2–3.

⁷⁴ See *id.* at 3

⁷⁵ *Data Pollution*, *supra* note 21, at 123.

⁷⁶ For additional disclosure laws requiring information to be disclosed “clearly” or in a “clear” manner, see 15 U.S.C. §§ 1601(a), 1632(a) (2012) (Truth in Lending Act); 29 U.S.C. §§ 1001(b), 1022(a) (2012) (Employee Retirement Income Security Act of 1974); 15 U.S.C. § 2302(a) (2012) (the Electronic Fund Transfer Act); 45 C.F.R. § 164.520(a)(1), (b)(1) (2018) (HIPAA Privacy Rule); 12 C.F.R. § 213.3(a) (2018) (Consumer Leasing Act); 12 C.F.R. § 1024.32(a)(1) (2018) (Real Estate Settlement Procedures Act of 1974); 12 C.F.R. § 1030.3(a) (2018) (Truth in Savings Act); 16 C.F.R. § 460.10 (2018) (The R-Value Rule).

⁷⁷ See, e.g., *supra* notes 14, 15, 17; see also Ben-Shahar & Schneider, *supra* note 21, at 652; Michael D. Guttentag, *Evolutionary Analysis in Law: On Disclosure Regulation*, 48 ARIZ. ST. L.J. 963, 972 (2016).

sure that the fund may or may not invest assets in derivatives is too generic to be meaningful.⁷⁸ Similarly, empty strategy discussions like a statement that a transaction may be undertaken for a “hedging or non-hedging purpose” provides no useful information to an individual investor.⁷⁹

Further, we also observed that funds commonly structure the Principal Risk section as a laundry list of untailored risks, such as “correlation, counterparty, credit, leverage, liquidity, market and valuation risks.”⁸⁰ Laundry lists like this read more like the fine print of a liability disclaimer, not like something intended to inform or educate.⁸¹ The kitchen sink approach of listing everything to avoid an error by omission, in the end, provides little useful information.

Our paper reignites old debates about the appropriate pitch of complex disclosures intended for ordinary investors. Prior corporate disclosure literature examined this issue.⁸² One author describes the distance in technological skills and comprehension between ordinary investors and sophisticated investors as a “yawning chasm.”⁸³ How can funds avoid liability with a complete statement of risk, while ensuring the disclosure is understandable by the average investor? On one hand, oversimplification of complex assets leads to rudimentary descriptions that fail to inform future investors about the assets.⁸⁴ On the other hand, too much detail overwhelms investors.⁸⁵

Consider, for example, the following derivative and counterparty risk disclosures:

Derivatives Risk. A derivative is a financial contract, the value of which depends upon, or is derived from, the value of an underlying asset, reference rate, or index. The use of derivatives involves a variety of risks, including the risk that: the party on the other

⁷⁸ ICI Letter, *supra* note 43, at 2–3. Similarly, statements that risk will increase to the extent of the investment are equally vague. *See, e.g.*, Henderson Strategic Income Fund, 2013 Summary Prospectus, filed Apr. 30, 2013, available at: <https://doc.morningstar.com/Document/31192aef2579ba4a1ee5286095f4603ff.msdoc/original?clientid=globaldocuments&key=52dbc583e1012395> (“In addition, the risks associated with the use of derivatives are magnified to the extent that a larger portion of the fund’s assets are committed to derivatives in general or are invested in a few types of derivatives.”).

⁷⁹ ICI Letter, *supra* note 43, at 3; *see also* SEC, Investment Management Division, Guidance Update: Fund Disclosure Reflecting Risks Related to Current Market Conditions, No. 2016-02, at 4 (Mar. 2016) [hereinafter Current Market Conditions].

⁸⁰ ICI Letter, *supra* note 43, at 2–3.

⁸¹ For further support of our observation, *see Annual Prospectus Updates, supra* note 53, at 311–12 (describing the risk of laundry list disclosure not accurately representing fund risks to investors).

⁸² *See, e.g.*, Steven M. Davidoff & Claire A. Hill, *Limits of Disclosure*, 36 SEATTLE U. L. REV. 599, 607 (2013) (summarizing prior research on disclosure); *see also* Uri Benoliel & Xu (Vivian) Zheng, *Are Disclosures Readable? An Empirical Test*, 70 ALA. L. REV. 237, 253 (2018) (documenting hard-to-read Franchise Disclosure Documents, despite plain English requirements).

⁸³ Charles R. Korsmo, *The Audience for Corporate Disclosure*, 102 IOWA L. REV. 1581, at 1616–17 (2017).

⁸⁴ Hu, *supra* note 52, at 1308; Korsmo, *supra* note 83, at 1619.

⁸⁵ *Data Pollution, supra* note 21, at 123.

side of a derivative transaction will be unable to honor its financial obligation; leverage created by investing in derivatives may result in losses to the Portfolio; derivatives may be difficult or impossible for the Portfolio to buy or sell at an opportune time or price, and may be difficult to terminate or otherwise offset; derivatives used for hedging may reduce or magnify losses but also may reduce or eliminate gains; and the price of commodity-linked derivatives may be more volatile than the prices of traditional equity and debt securities.⁸⁶

Many derivatives create leverage thereby causing the fund to be more volatile than it would be if it had not used derivatives. Derivatives also expose the fund to counterparty risk (the risk that the derivative counterparty will not fulfill its contractual obligations), including the credit risk of the derivative counterparty. Certain derivatives are synthetic instruments that attempt to replicate the performance of certain reference assets. With regard to such derivatives, the fund does not have a claim on the reference assets and is subject to enhanced counterparty risk.⁸⁷

These excerpts demonstrate attempts to describe complex and technical transactions in plain English. The disclosures' language fails to accessibly describe hard-to-grasp concepts (i.e., a synthetic transaction). The language also oversimplifies the complexity of certain financial concepts and instruments. We see this in the fund's efforts to caution potential investors that derivatives may result in losses or may be hard to sell at an "opportune time or price."⁸⁸ Oversimplifying details of the securities may hide their risk, yet providing complete information would likely hinder ordinary investors' comprehension. The disclosures excerpted above demonstrate the tension between accuracy and accessibility. So, what is the right balance?

The SEC has become increasingly interested in this very question.⁸⁹ In 2016, for example, the SEC adopted Liquidity Management Program rules with enhanced disclosure requirements for funds.⁹⁰ In 2018, the SEC sought

⁸⁶ Advanced Series Trust, AST Cohen & Steers Realty Portfolio Summary Prospectus (Form 497K) (Apr. 28, 2014) (rev. July 1, 2014).

⁸⁷ JPMorgan Trust II, JPMorgan Multi-Cap Market Neutral Fund Summary Prospectus (Form 497K) (Nov. 1, 2014).

⁸⁸ Advanced Series Trust, *supra* note 86.

⁸⁹ The SEC has taken several actions in addition to the previously described 2009 amendments concerning fund disclosure regulations. See *Enhanced Disclosures*, *supra* note 51 (to be codified at 17 C.F.R. pts. 230, 232, 239, 274).

⁹⁰ The SEC's interest in promulgating Liquidity Management Program rules was to combat liquidity costs, alongside other structural concerns related to the mutual fund industry. See Fund Liquidity Risk Mgmt. Programs; Swing Pricing; Re-Opening Comment Period for Inv. Co. Reporting Modernization Release, 80 Fed. Reg. 62274 (proposed Oct. 15, 2015) (originally released Sept. 22, 2015).

For the SEC's final rule on this matter, see Inv. Co. Liquidity Risk Mgmt. Programs, 81 Fed. Reg. 82142 (Nov. 18, 2016) (effective date Jan. 2018) (to be codified at 17 C.F.R. pts. 210,

further changes by soliciting consumer feedback on the “investor experience”⁹¹ as it pertains to disclosure content, design, and delivery.⁹² In 2022, the SEC finalized rules updating annual shareholder report content and design, but left prospectus risk statements unchanged and undefined.⁹³

One challenge in solving the goldilocks problem of disclosure is that fund investors are not homogeneous. SEC regulations, however, place a thumb firmly on the scales, focusing disclosures on the “average” investor above other audiences. Regulations instruct funds to write disclosures for an “average or typical investor who may not be sophisticated in legal or financial matters.”⁹⁴ Disclosures should “help [ordinary] investors to evaluate the risks of an investment and to decide whether to invest in a Fund by providing a balanced disclosure of positive and negative factors.”⁹⁵

Even if existing disclosure successfully informs ordinary investors, many other types of investors exist. Other investors include sophisticated individual investors,⁹⁶ other institutional investors,⁹⁷ investment in-

270,274) (stating the SEC’s goal with respect to the Liquidity Rule was ensuring funds meet shareholder redemptions and avoiding shareholder investment dilution).

⁹¹ Then SEC Chairman Jay Clayton summarized the initiative as seeking to “present information in a way that works best for investors” and “harness technology to make disclosure more interactive and personalized — and better meet the needs of 21st century investors.” Statement from SEC Chairman Jay Clayton on Inv. Co. Design, Delivery, and Disclosures Rulemaking Package (June 5, 2018) (on file with SEC archives system); *see also* SEC Request for Comment on Fund Retail Inv. Experience and Disclosure, SEC Release Nos. 33-10503; 34-83376 (to be codified at 17 C.F.R. Pts 210, 229, 230, 232, 240, 270, 274); *see also* SEC Comments on Request for Comment on Fund Retail Inv. Experience and Disclosure, Release No 33-1050; 34-83376 (listing comments received, including 111 from retail investors).

⁹² *See generally* Optional Internet Availability of Inv. Co. S’holder Rep., 83 Fed. Reg. 29158 (June 22, 2018) (to be codified in 17 C.F.R. pts. 200, 230, 239, 240, 249, 270, 274) (encapsulating SEC final rule promulgation in consideration of the information received from those comments).

⁹³ *Annual Prospectus Updates*, *supra* note 53, at 70716; Tailored Shareholder Reports for Mutual Funds and Exchange-Traded Funds, Fee Information in Investment Company Advertisements, Final Rule, Release Nos. 33-11125; 34-96158; IC-34731 (Oct. 26, 2022), at 2 (streamlining report content, making reports available online, updating rules on fee and expense reporting; *id.* at 30–31 (describing the proposed rules updating prospectus disclosures and the decision not to finalize the proposed rules).

⁹⁴ SEC FORM N-1A, *supra* note 22, at ii.

⁹⁵ *Id.* at ii–iii.

⁹⁶ Sophisticated investors may mean those with above-average financial literacy and acumen, but securities regulations recognize a specific class of accredited individual investors with sufficient net worth or high income as sophisticated investors. Cary Martin, *Private Investment Companies in the Wake of the Financial Crisis: Rethinking the Effectiveness of the Sophisticated Investor Exemption*, 37 DEL. J. CORP. L. 49, 67–68 (2012) (citing to 17 C.F.R. §§ 230.501(a)(1)–(8), 230.506 (b)).

Cf. Lin, *supra* note 4, at 473 (describing an ordinary or “reasonable investor” as those of “average wealth and ordinary financial sophistication”).

⁹⁷ Institutional investors include those investors such as registered investment companies, insurance companies, banks, broker-dealers, hedge funds, and asset managers; distinctions between sophisticated and unsophisticated investors determine eligibility for certain private (exempt) investment offerings. *See* Martin, *supra* note 96, at 67; Lin, *supra* note 4, at 473–74. These distinctions also shape “reasonable reliance” for purposes of establishing a Rule 10b(5) claim. *See* Roger W. Reinsch, et al., *Trust Your Broker?: Suitability, Modern Portfolio Theory, and Expert Witnesses*, 17 ST. THOMAS L. REV. 173, 184, 186, 188 (2004). (stating investor’s

intermediaries and professionals,⁹⁸ and defined contribution plan sponsors and administrators⁹⁹ selecting funds for inclusion in benefit plans.¹⁰⁰

Perhaps unsurprisingly, the disclosures read as those pitched to sophisticated investors, not ordinary investors. In addition to the range of investors, other audiences read fund disclosures, including SEC examiners,¹⁰¹ parties in litigation,¹⁰² and financial intermediaries (such as Morningstar, with its ubiquitous five-star rating of funds).¹⁰³

The recommendations presented in section IV address the tensions between different disclosure audiences and present a path forward.

II. DATA & METHODOLOGY

To investigate the contents and compliance of mutual fund disclosures, we batch download from the SEC's Edgar website the htm files of 497K summary prospectuses filed between 2010–2020 from all registered investment companies. This produced a total of 213,861 filings. We dropped filings without principal risk sections¹⁰⁴ and small files (under 8 KB),¹⁰⁵ leaving

“reasonable reliance” forms the basis of a 10b-5 claim and explaining analysis for reasonability of reliance is dependent on several factors, one being “sophistication of the investor”).

⁹⁸ See, e.g., INV. CO. INST. (ICI), 2017 INVESTMENT COMPANY FACT BOOK 15 (57th ed. 2017) (reporting estimated 80% of individuals supplementing their retirement savings invest through financial professionals).

⁹⁹ See generally Tucker, *Outside Investor*, supra note 16, at 106–08.

¹⁰⁰ Defined contribution plan participants—people who invest through a 401(k)—may warrant their own category given the unique ways that they invest and obtain information about investments through the plan sponsor. They invest a portion of tax deferred employment earnings in a limited menu of funds selected by employers. The information they receive is often within specially tailored plan information compiled for the employer with shortened fund descriptions, morning star ratings, and other digested presentations of funds' prospectus. See, e.g., Tucker, *Locked In*, supra note 17, at 167–69.

¹⁰¹ A 1995 report by the Investment Company Institute (ICI) supports this suspicion that SEC staff shape compliance obligations. The ICI report identified SEC staff and state examiners comments as a source of overly long disclosures by funds that focus erroneously on individual portfolio securities. ICI, ICI PERSPECTIVES, *Improving Mutual Fund Risk Disclosure 2* (Nov. 1995), <https://www.ici.org/pdf/per01-02.pdf>.

¹⁰² Funds face liability under the Securities Act, including § 11 issuer liability for a materially false or incomplete registration statement (with mutual funds, the first filed N-1A); § 12(a)(2) for selling a security with a materially false or incomplete prospectus; and under § 10(b) for fraudulent statements or omissions. 15 U.S.C. § 77k(a)(1)-(3); 15 U.S.C. § 77l(a)(2); Section 17(a) of the Securities Act prohibits fraudulent conduct in the “offer or sale” of securities, and § 10(b) of the Exchange Act and rule 10b-5 prohibit fraud in connection with the “purchase or sale” of securities. See 15 U.S.C. §§ 77q(a), 78j(b); 17 C.F.R. § 240.10b-5 (1998). Private parties and the SEC may bring actions under § 10(b) and Rule 10b-5. *Herman & MacLean v. Huddleston*, 459 U.S. 375, 387 (1983) (holding that “[w]e therefore reject an interpretation of the securities laws that displaces an action under Section 10(b)”).

¹⁰³ See, e.g., Kristin Grind et al., *The Morningstar Mirage*, THE WALL ST. J., Oct. 25, 2017, <https://www.wsj.com/articles/the-morningstar-mirage-1508946687>.

¹⁰⁴ When funds files a supplement to the prospectus and the fund is not updating the principal risk section, the keywords would be omitted from the filing and dropped from our sample.

¹⁰⁵ Files under 8 KB in size suggest a supplement to a filing. We also drop small file sizes from our sample, unless the text contains the principal risk keywords.

a total of 164,602 filings. Funds may file more than one disclosure each year, however. To correct for this, we dropped duplicate filings for the same fund and kept only the latest filed disclosure. Figure 1 shows the year-by-year distribution; see Appendix Section A for additional information on data compilation.

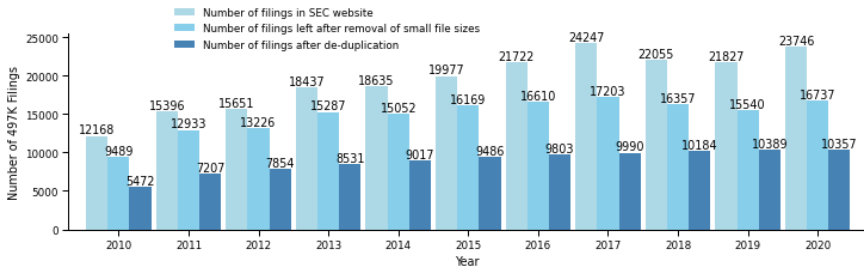


Figure 1: 2010–2020 Summary Prospectus Filings

Filings increase over time. Funds may file more than one prospectus and separate disclosures for different share classes of the same fund (i.e., retail and institutional classes of the same fund). These practices, combined with more registered funds over the sample period, result in an increased number of filings over time.¹⁰⁶

Which funds are represented in the sample? We merged our scraped prospectus data with the CRSP Survivor Bias Free U.S. Mutual Fund Database investment objective codes to categorize the funds.¹⁰⁷ Appendix Table 6 reports the CRSP style objective codes and the six broad categories we used to group funds in like-asset classes together. After dropping unclassified funds, our sample distribution is as follows: domestic equity funds account for 31% of our sample, with foreign equity funds at 14%. Index funds are 16%. Fixed income funds (including bonds) and Money market funds account for 9%, each. Other funds account for 23%.

¹⁰⁶ Consider that in 2010 there were 8,523 registered mutual funds and 9,027 in 2020. ETFs numbered 950 in 2010 and 2,296 in 2020. ICI 2021 *FACT BOOK*, *supra* note 33, at 40.

¹⁰⁷ Note the CRSP database (available at <https://crsp.org/>) excludes closed end funds and other registered investment vehicles that are not mutual funds, bonds, international equities, or money market funds.

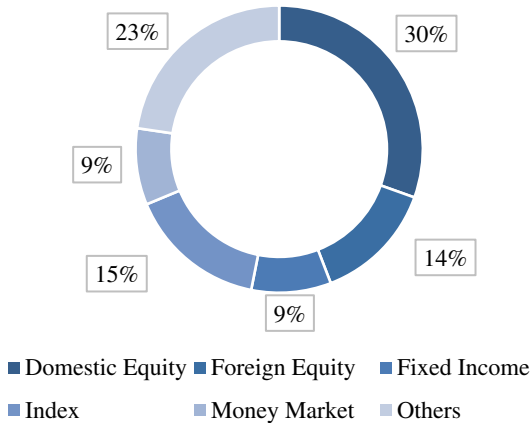


Figure 2: Funds in Sample by CRSP Category, 2010–2020

Plain English measures (length, readability scores, complex words, and voice) are derived from narrative descriptions in two distinct sections: Principal Risk (PR) and Investment Strategy (IS). The sections are subject to overlapping rules (i.e., plain English) but fall under distinct regulations, as previously described in Section II. We calculate all measures for PR and IS sections separately.

While the SEC predicates disclosure requirements on individual investors, common experience suggests that few people actually read disclosures, even the summary prospectus.¹⁰⁸ We meet this *who even cares?* skepticism head on by reviewing SEC server access file logs for 497Ks in 2017 to understand who accesses¹⁰⁹ fund disclosures. Some (but not many) individuals access summary prospectuses: an average of 138 individuals for each disclosure document.¹¹⁰ But the good news if you want disclosures to matter is that server logs paint an incomplete picture of individual access. Server logs do not account for disclosure information accessed through fund websites, retirement plan summary information through an investor’s 401(k), third-party websites like the popular MorningStar, or information provided through brokerage offices.¹¹¹ A 2019 ICI survey found that 89% of mutual

¹⁰⁸ See, e.g., Schwartz, *supra* note 19, at 46 (noting that few consumers read or understand investment disclosures).

¹⁰⁹ We use file access online as a proxy to count who “reads” the disclosures.

¹¹⁰ Tim Loughran & Bill McDonald, *The Use of EDGAR Filings by Investors*, 18 J. BEHAVIORAL FIN. 2, 232 (2017) (relying on unique IP addresses as opposed to API and batch downloads).

¹¹¹ Our findings are compatible with the 1996 ICI study reporting that 72% of respondents performed “a lot” of research before investing and, among the sources identified, the prospectus was the second-most frequently cited research resource (with 50% reviewing it before purchase). ICI, *The Profile Prospectus: An Assessment by Mutual Fund Shareholders, A Report to the US SEC*, 21–22 (May 1996), https://www.ici.org/pdf/trpt_profprspctus2.pdf. It is

fund-owning households considered a fund's investment objective and 90% reviewed risk levels in selecting funds.¹¹²

III. DISCLOSURE READABILITY & COMPLIANCE FINDINGS

Do funds comply with SEC regulations targeting accessibility by ordinary investors, specifically disclosure size and readability? We find that funds write lengthy, hard-to-read, and complex disclosures likely intended for regulators, lawyers, and sophisticated investors—not the average investor. Principal Risk (PR) and Investment Strategy (IS) sections are not written in plain English when assessed by readability score, length, complexity, or voice. Each component of our plain English analysis is discussed below.

A. Summary Prospectus File Size

Funds write long summary prospectuses that do not comply with the SEC's intended page length (3–4 pages). Disclosures start at over five pages in length in 2010, increased to over six pages by 2015, and have often been nearly eight pages since 2020.¹¹³ We generate an estimated page number length, based on word counts, of each filing and report the counts by year.¹¹⁴ Figure 3 displays the words counts by year and section; Table 1 lists the average number of pages for the whole corpus for each year, with breakouts by Investment Strategy and Principal Risk sections.

Principal Risk sections have doubled in word count and length since 2010 (see Figure 3). Bloated PR discussions drive the increasing page lengths of the summary prospectus overall. PR sections are longer than IS sections, and PR sections are expanding at a faster rate than IS sections.

hard to extrapolate too much from this dated study given that the respondents were predominantly white, educated males, with high assets and confidence in their independent investment abilities. *Id.* at 21–23.

¹¹² INV. CO. INST. (ICI), 2020 INVESTMENT COMPANY FACT BOOK 155, https://www.ici.org/pdf/2020_factbook.pdf. Contrast this with a 2016 J.P. Morgan Chase survey where nearly half of survey participants (48%) admitted that they do not spend enough time thinking about or planning for retirement. J.P. MORGAN, *Guiding Participants from Intent to Action: 2016 Defined Contribution Plan Participant Survey Findings*, <https://am.jpmorgan.com/us/en/asset-management/gim/adv/insights/plan-participant-survey-findings>. Note, the survey did not focus on prospectus reliance, and there is no comparable study focused on DC participant use of prospectus.

¹¹³ Compare these findings with prior scholarship on disclosure page creep. Prior studies documented the increase in length from 16 to 166 pages of a sample of Fortune 500 companies' 10-Ks disclosure documents from 1950 to 2004. MD&A pages went from 1.88 to 24.05 pages in 1974 to 2004. Davidoff & Hill, *supra* note 82, at 607.

¹¹⁴ To calculate filing size, we first count the number of words in each filing. Variation in filing formats, fonts, layouts and graphics made the page numbers of pdf printouts unreliable and other formats similarly poorly suited to our inquiry. We ran a parsing script over 10,000 HTML 497K filings to perform a page count and word count in order to calculate the average words per page (489) with the following formula:

(total words per filing) / pages

Principal Risk sections accounted for 35% of the disclosure in 2010 and steadily climb to 48% of the text in 2020. Investment Strategy sections have also increased over time but hold a steady 15–17% of the summary prospectus’ real estate throughout the sample period. Investment Strategy section growth is consistent with the overall gains in disclosure size whereas PR section growth outstrips increases to the summary prospectus as a whole.

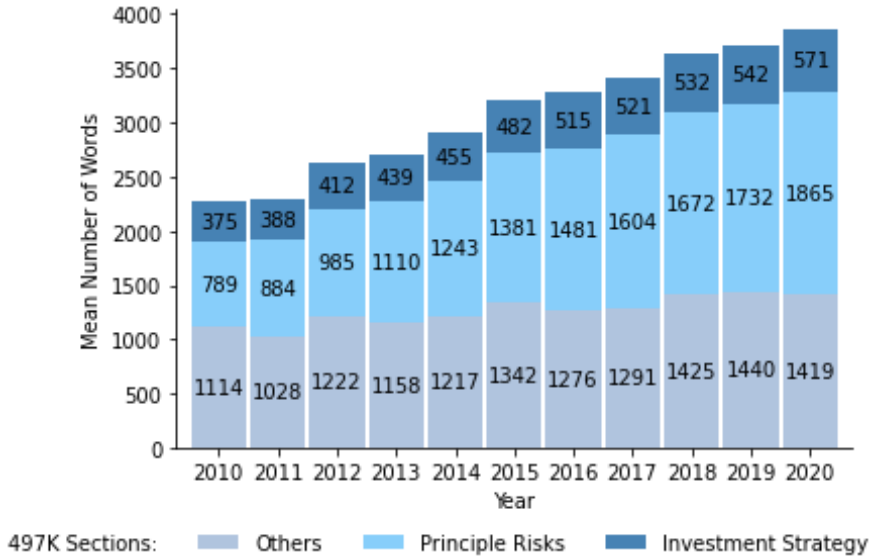


Figure 3: Corpus Word Counts by Year and Section

TABLE 1: PAGE COUNT OF 497K FILINGS BY YEAR AND SECTION

Year	Total Pages	IS Page Count (%)	PR Page Count (%)
2010	4.66	0.77 (17%)	1.62 (35%)
2011	4.7	0.79 (17%)	1.81 (39%)
2012	5.36	0.84 (16%)	2.02 (38%)
2013	5.54	0.9 (16%)	2.27 (41%)
2014	5.96	0.93 (16%)	2.54 (43%)
2015	6.56	0.99 (15%)	2.83 (43%)
2016	6.69	1.05 (16%)	3.03 (45%)
2017	6.99	1.07 (15%)	3.28 (47%)
2018	7.42	1.09 (15%)	3.42 (46%)
2019	7.6	1.11 (15%)	3.54 (47%)
2020	7.88	1.17 (15%)	3.82 (48%)

B. Readability

SEC guidance warns that overly complex and technical disclosures violate plain English standards and are inaccessible for individuals (that is, non-financial professionals).¹¹⁵ Further, SEC guidance cautions that language complexity reduces the value of otherwise useful information.¹¹⁶ Yet funds write disclosures that require college-level reading skills.

Readability scores roughly estimate textual accessibility, allowing us to quantify and compare *relative* readability between disclosure sections over time. Higher scores suggest harder-to-read disclosures. It is not an absolute measure. However, writing intended for large audiences should not be hard

¹¹⁵ *Enhanced Disclosures*, *supra* note 51, at 3.

¹¹⁶ *Id.* at 3–4.

to read.¹¹⁷ A broader readership pool will likely include those with high and low ability ranges. The more critical the information, the greater the need for readability by everyone.

Given the 100 million Americans invested in funds, often saving for education and retirement, the intended readership pool for a summary prospectus is broad, and the information is crucial. Therefore, the need for accessible information is great. This is the central promise of plain English requirements, and its failure, the peril.

We measure readability using three simple scores.¹¹⁸ The first is the Gunning Fog Index (Fog). It is the most conservative estimate and is reported below. Alternative measures, the ARI and SMOG¹¹⁹ are reported in Table 9 in the Appendix. All three measures are positively correlated as shown in Table 10 in the Appendix.

The Fog score is the linear combination of average sentence length and the proportion of complex words (words with more than two syllables).¹²⁰ The higher the raw score, the harder to read.

$$\text{Fog Index} = 0.4 (\text{average number of words per sentence} + \% \text{ of complex words})$$

Principal Risk sections, on average, are written at 14.1 grade level (Fog), which corresponds to the reading level of a sophomore in college.¹²¹ Investment Strategy sections score higher, across all measures, with 15.6 Fog Index scores and scores of 17 on ARI and SMOG.¹²²

¹¹⁷ William DuBay, *The Principles of Readability* 9 (2015), <https://files.eric.ed.gov/fulltext/ED490073.pdf>.

¹¹⁸ To measure readability, we drop an additional 2,989 (2.25%) filings with outlier scores. Following the methodology outlined in Kelleher et al., *Fundamentals of Machine Learning for Predictive Data Analytics Algorithms, Worked Examples, and Case Studies* (2015), we removed extreme values resulting from fragmented sentences, lack of punctuation, and zero values as a result of no content in the section. The Appendix provides further methodological details. Total observations are reported in Table 4 in the Appendix.

¹¹⁹ Bartlett et al., *supra* note 27.

¹²⁰ DuBay, *supra* note 117, at 24.

¹²¹ Compare with readability of Franchise Disclosure Documents, where the median score is 20.18, and the fog mean is 20.36 implying the need for twenty years of education to comprehend the text. Benoliel & Zheng, *supra* note 82, at 253.

¹²² The reported readability scores are high, but not as high as a sample of 2008 PR and IS text, before the 2009 amendments on tiered disclosures heightened the role of the summary prospectus. The average 2008 readability score (Fog) was 19.96 for PR and 21.16 for IS. Differences in scores between the two time periods are statistically significant. Appendix, Table 12 reports our full results.

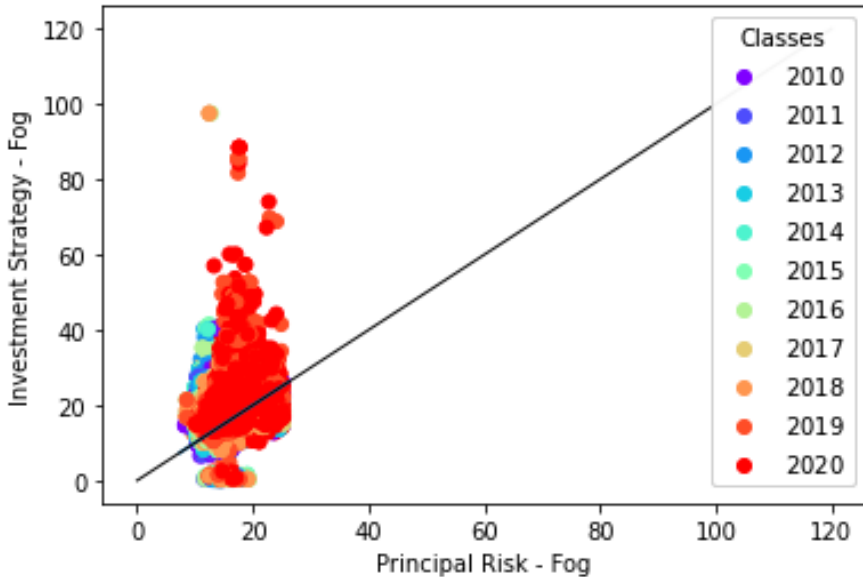


Figure 4: FOG Index Readability Scores: IS vs. PR

Figure 4 plots Investment Strategy and Principal Risk Fog scores against each other to show the breadth of the scores and illustrate the comparison between the two. IS sections are harder to read than the PR sections in over 76% of our observations. On average, IS disclosures are written at a 1.6 higher grade level than PR disclosures for the same fund, a finding that is statistically significant at $p < 0.01$.

Regarding trends over time, Fog scores slightly decline over our sample period by approximately 0.5 grade level in both Investment Strategy and Principal Risk sections.

C. Complexity

Here, we look to the words used in mutual fund disclosures to examine complexity beyond mathematical estimates of readability. Readability measures, when used alone, have been criticized as too rough a measure that does not account for context and audience.

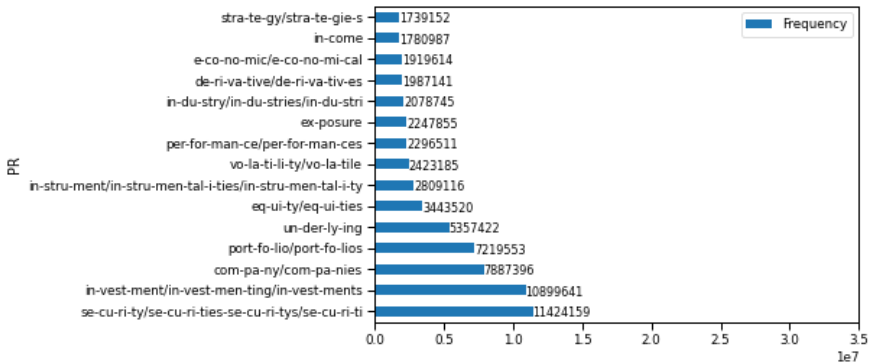
For example, finance scholars Loughran and McDonald, who established the field of text mining operating company disclosures, eschew readability measures entirely.¹²³ Loughran and McDonald argue that words like *corporation*, *company*, *agreement*, *management*, and *operations*, which are

¹²³ Tim Loughran & Bill McDonald, *Measuring Readability in Financial Disclosures*, 64 J. OF FIN. 1643, 1645–46 (2014).

considered complex under the Fog score, are easily understood by the audience for 10Ks, including sophisticated financial analysts.¹²⁴

Audience differences between fund and company disclosures undercut their critique as applied to mutual fund summary prospectuses.¹²⁵ Mutual fund summary prospectuses are intended for a consumer audience, not sophisticated analysts.¹²⁶ While mutual fund market professionals exist (i.e., 401K plan fiduciary), there is no price discovery in mutual fund markets meaning that far fewer market makers and analysts pour over fund disclosures looking for tea leaves that signal future stock prices.

Like other scholars, particularly legal scholars, we use the *relative* readability score of each disclosure to observe trends over time, make comparisons between disclosures, and identify outliers.¹²⁷ Figure 5 reports the fifteen most common complex words in Principal Risk and Investment Strategy sections. Our corpus includes over 16,000 unique words, so the most common fifteen words paint a limited picture. Words like *volatility*, *security*, *portfolio*, and *derivative* have technical meanings in the investment context. Our human judgment when we read the disclosures is that they are substantively complex, as reflected in the readability scores.



¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ SEC FORM N-1A, *supra* note 22; *see also* Schwartz, *supra* note 19, at 46 (2013) (noting that outside of public companies, investors are “on their own to read and understand” disclosures).

¹²⁷ *See generally* Feng Li, *Annual Report Readability, Current Earnings and Earnings Persistence*, 45 J. OF ACCOUNT. & ECON. 221–47 (2008); for legal scholarship, *see* Benoliel & Zheng, *supra* note 82, at 249 (measuring readability of franchise documents).

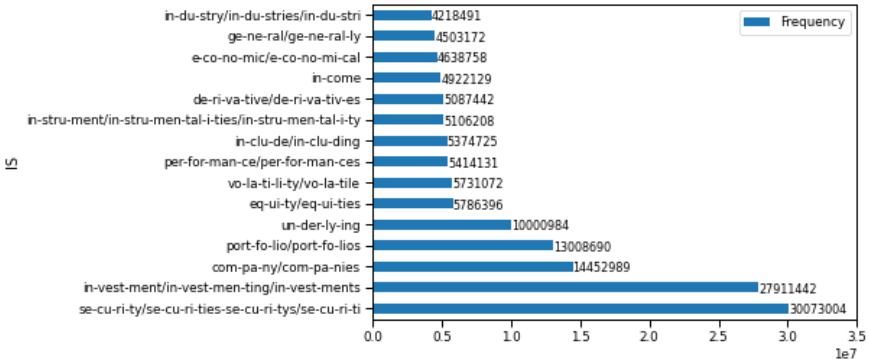


Figure 5: Most Common Words in Fund Disclosures by Section

Figure 12 and Figure 13, in the Appendix, show a heat map of the top twenty-five words over the sample period, by year. With this, we see that the list of the top words is relatively stable over time, but do evolve.

D. Passive Voice

In addition to complexity, we evaluate the use of passive voice in the disclosure discussions by creating a variable: *Voice*.¹²⁸ A *voice* score of 1 indicates an equal number of passive and active verbs (1:1 ratio). A *voice* score of > 1 indicates more passive than active verbs, an unlikely outcome. A score of < 1 indicates more active than passive verbs.

The measure allows us to compare the use of passive voice between sections and observe trends over time. For example, Investment Strategy sections have more passive verbs than Principal Risk sections. Table 2 and Figure 7 show the scores.

¹²⁸ We drop an additional 2,989 (2.25%) filings with outlier scores for voice. Total observations are reported in Table 4 in the Appendix.

TABLE 2: PASSIVE VOICE, BY YEAR AND SECTION

	Risk_Voice	Strategy_Voice
2010	0.07	0.14
2011	0.06	0.13
2012	0.06	0.13
2013	0.07	0.14
2014	0.06	0.13
2015	0.06	0.14
2016	0.06	0.14
2017	0.06	0.15
2018	0.06	0.14
2019	0.07	0.16
2020	0.06	0.13
Mean	0.06	0.14
Median	0.05	0.09
Std. dev.	5.87%	20.54%

We see little change in the average voice score over time, as shown in Figure 6. Figure 7 shows that IS sections use a higher ratio of passive to active verbs than do PR sections in more than 79.2% of observations. Investment Strategy disclosures have more passive than active phrases when compared to Principal Risk disclosures for the same fund, a result with statistical significance at the $p < 0.001$ level.

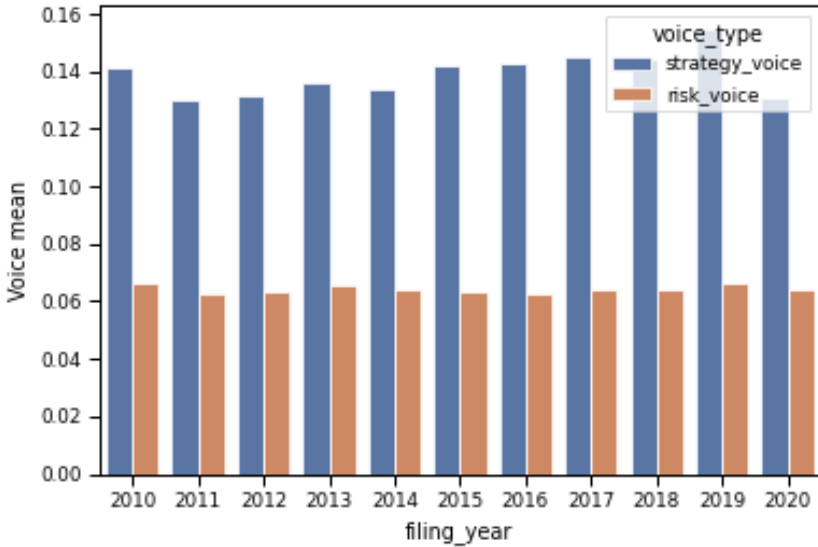


Figure 6: Mean Voice Ratio of IS and PR by Year



Figure 7: Investment Strategy and Principal Risk Voice Scores, 2010–2020

Readability, complexity, and voice all measure attributes of plain English writing. Interpreting our results collectively, we conclude that Principal Risk and Investment Strategy sections of the consumer-facing summary prospectus are not written in plain English, as required by the SEC. Table 9 in the Appendix reports our full results. We return to our findings to discuss possible regulatory interventions in section IV.

E. Does Disclosure Readability Matter?

Descriptive results demonstrate that summary prospectuses are generally complex in terms of length, readability, and writing style (language and voice). Yet we observe a wide range of scores across our measures. Funds choose not only what information to disclose but also *how* to disclose it. What drives Fund A to write hard-to-read disclosures, but not Fund B? We explore readability predictors in this section using a regression model. We find that both fund characteristics, like size, and disclosure features, like length, predict how hard or easy a disclosure will be to read.

Financial literature spurred our curiosity. Finance scholars reviewed operating company disclosures, like the 10K, to identify text attributes, including readability. Like with mutual fund summary prospectuses, operating company disclosures vary widely in terms of content and readability.

There is growing evidence in finance literature linking readability of company disclosures (and other textual features) to metrics of company performance. For example, company 10-K readability scores affect analyst forecast dispersion, accuracy, and effort.¹²⁹ Textual complexity also influences credit ratings and firms' cost of debt.¹³⁰

Li documents that increased word counts of 'risk' and 'uncertainty' are associated with poor future stock returns.¹³¹ In other words, more risk discussion is linked to bad returns. Similarly, Li found that disclosures were more complex when company performance was worse.¹³² Scholars interpret the negative relationship between firm performance and financial statement complexity as evidence of obfuscation or hiding.¹³³ That is to say, there is incentive to bury bad news in complex writing.

Disclosure length, a proxy for complexity, is also associated with firm performance.¹³⁴ The length of mandatory risk discussions in 10-K filings in-

¹²⁹ Reuven Lehavy et al., *The Effect of Annual Report Readability on Analyst Following and the Properties of Their Earnings Forecasts*, 86 THE ACCT. REV. 1087, at 1090 (2011).

¹³⁰ Samuel Bonsall IV & Brian Miller, *The Impact of Narrative Disclosure Readability on Bond Ratings and the Cost of Debt Capital*, 22 REV. ACCT. STUDIES 608, 610 (2017).

¹³¹ Li, *supra* note 127, at 240–41.

¹³² *Id.* at 239–40. On the other hand, legal incentives encourage disclosing meaningful information to survive SEC review and fend off future litigation. Karen Nelson & A.C. Pritchard, *Carrot or Stick? The Shift from Voluntary to Mandatory Disclosure of Risk Factors*, 13 J. OF EMP. L. STUD. 266, 271–72 (2016).

¹³³ Li, *supra* note 127, at 224.

¹³⁴ Loughran & McDonald, *supra* note 123, at 1648.

creases investors' risk.¹³⁵ Further, the number and length of textual risk disclosures are associated with increased stock return volatility and trading volume around and after the filings, linking users' risk perceptions to textual disclosures.¹³⁶

Individual investors appear to be sensitive to textual attributes of disclosures as well. Individuals, on average, invest more in firms with clear and concise financial disclosures, and 'buy-and-hold investors' benefit from improved corporate disclosure practices.¹³⁷ Similarly, textual readability (shorter sentences and lexical diversity) in earnings press releases improves both public and private information and reduces uncertainty.¹³⁸

What about mutual fund disclosures: does readability signal something about the fund? We explore this relationship in the model provided below that estimates disclosure section readability based on fund features and disclosure characteristics.

1. Predicting Readability

We return to this section's original question: What drives Fund A to write hard-to-read disclosures, but not Fund B?

One contributing force may be features of the fund itself. Riskier funds may write longer Principal Risk sections. Actively managed funds with sophisticated investment strategies may write longer or more complex Investment Strategy disclosures compared to passive index funds. It seems logical that fund operations would influence disclosure features, especially given empirical work linking operating company features and disclosures.¹³⁹

Here, we present regression analysis predicting readability scores. We include only equity funds: domestic equity, foreign equity, and index funds. We estimate the Investment Strategy and Principal Risk section readability scores separately.¹⁴⁰ Two categories of independent variables—fund features and disclosure characteristics—estimate the dependent variable: readability

¹³⁵ John Campbell et al., *The Information Content of Mandatory Risk Factor Disclosures in Corporate Filings*, 19 REV. ACCOUNT. STUD. 396, 400 (2014) (using beta and stock return volatility as proxies for risk perception).

¹³⁶ Todd Kravet & Volkan Muslu, *Textual Risk Disclosures and Investors' Risk Perceptions*, 18 REV. ACCT. STUD. 1088, 1113 (2013). Other researchers have found that investors under-react to longer 10-K filings, pointing to the time and effort spent on interpreting the filings. Haifeng You & Xiao-jun Zhang, *Financial Reporting Complexity and Investor Under-reaction to 10-K Information*, 14 REV. ACCT. STUD. 559, 584–85 (2009) (characterizing investors' reaction to 10-K information as "sluggish").

¹³⁷ Alastair Lawrence, *Individual Investors and Financial Disclosure*, 56 J. OF ACCOUNT. & ECON. 130, 139, 144 (2013).

¹³⁸ Zahn Bozanic & Maya Thevenot, *Qualitative Disclosure and Changes in Sell-Side Financial Analysts' Information Environment*, 32 CONTEMPORARY ACCOUNT. RES. 1595, 1596 (2015).

¹³⁹ See *supra* notes 129–138 and accompanying texts.

¹⁴⁰ We exclude fixed income, money market, and other funds from the regression analysis because these funds introduce different strategies, from equities, that may affect the ability to estimate readability based on the independent variables.

scores (Fog). The formula is provided below, and a discussion follows before the results.

$$y_i = \beta_0 + \beta_1(\text{Voice}_i) + \beta_2(\text{Deriv_Risk_High}_i) \\ + \beta_3(\text{Number of sentences}_i) \\ + \beta_4(\text{Four factor alpha}_i) + \beta_5(\text{Std. dev.}_i) \\ + \beta_6(\text{Size}_i) \\ + \beta_7(\text{Turnover ratio}_i) + u_i$$

a. Dependent Variable: Readability

Readability, what the regression is estimating, is the linear combination of average sentence length and the proportion of complex words.¹⁴¹ Higher readability values are counter-intuitive because an increase in the *raw* readability scores means that the disclosure is *harder* to read. We saw this in the previous section where the average Investment Strategy section readability is 15.4, which is higher than (and harder to read than) the average Principal Risk readability score of 14.6.¹⁴² This becomes particularly confusing in the regression results where a predicted increase in readability actually means the disclosure is harder to read. As a solution, we reverse the values by subtracting each filing Principal Risk Fog and Investment Strategy Fog from the maximum score among all filings in our sample (i.e., new PR Fog score = max_PR_Fog – PR Fog score, new IS Fog score = max_IS_Fog – IS Fog score) in the regression. Transforming the variable in the model makes results more easily interpretable. A positive coefficient in Table 3 now indicates an easier-to-read disclosure. Note that u_i refers to time-invariant individual-level effects.¹⁴³ Our unit of analysis is the annual fund disclosure.¹⁴⁴

b. Independent Variables: Fund Features

Independent variables of fund features include fund return (four-factor alpha);¹⁴⁵ fund risk (Standard Deviation of returns);¹⁴⁶ fund size as measured

¹⁴¹ Formally, the Fog Index is calculated as $0.4 * (\text{average number of words per sentence} + \% \text{ of complex words})$. See, e.g., Readability Formulas, <https://readabilityformulas.com/gunning-fog-readability-formula.php> (last visited Feb. 4, 2022).

¹⁴² See *supra* notes 121–122.

¹⁴³ JEFFREY M. WOOLDRIDGE, *ECONOMETRIC ANALYSIS OF CROSS SECTION AND PANEL DATA* 247–49 (MIT Press 2002).

¹⁴⁴ Where a fund files multiple 497K for a year, we analyze the filing with the latest annual date for each fund.

¹⁴⁵ Mark M. Carhart, *On Persistence in Mutual Fund Performance*, 52 J. OF FIN. 57, 60–61; see also Eugene F. Fama & Kenneth R. French, *The Capita Asset Pricing Model: Theory and Evidence*, 18 J. OF ECON. PERSPECTIVES 25 (2004) (providing evidence against using a standard CAPM model).

¹⁴⁶ Christopher R. Blake & Matthew R. Morey, *Morningstar Ratings and Mutual Fund Performance*, 35 J. OF FIN. & QUAL. ANALYSIS 451, 453 (2000).

by total asset value (log);¹⁴⁷ and portfolio turnover ratio to control for turnover of different classes of a fund.¹⁴⁸

c. Disclosure Characteristics

Independent variables of disclosure characteristics include the Voice score, which is the ratio of passive to active verbs introduced earlier in Section III.D.¹⁴⁹ A second variable, number of sentences, is a proxy for disclosure length that is not directly related to values of readability score.¹⁵⁰

The third independent variable (High_Deriv) requires more explanation. High_Deriv, a binary variable, flags all disclosures with an above-normal-occurrence of the word “derivative” in the disclosure (top 25% of all disclosures).¹⁵¹ Derivative is a multi-syllabic word (i.e., der-iv-a-tive) and a common fund strategy.¹⁵² We include this variable to investigate readability where funds may be required to include a certain amount of complexity in the narrative description.¹⁵³

We run the model once for the Principal Risk section and again for the Investment Strategy section to examine the different roles of the two sections. We report combined model results in Table 3.

¹⁴⁷ Massimo Massa & Rajdeep Patgiri, *Incentives and Mutual Fund Performance: Higher Performance or Just Higher Risk Taking?*, 22 REV. OF FIN. STUD. 5, 1786 (2009).

¹⁴⁸ *Id.*

¹⁴⁹ Recall that a voice score of 1 indicates an equal number of passive and active verbs (1:1 ratio). A score of *greater than* 1 indicates *more passive* than active verbs, and a score of *less than* indicates *more active* than passive verbs.

¹⁵⁰ See Loughran & McDonald, *supra* note 123, at 1654; *see also* Li, *supra* note 127, at 221–47.

¹⁵¹ First, we count the keyword derivative—an investment strategy and top 25 most frequent word in our corpus (see Figure 12 and Figure 13). We label disclosures as ‘high’ derivative disclosures using the distribution of keyword counts for each year in the PR and IS sections by identifying any filing in the top 25th percentile. A high derivative label for the PR section suggests that the derivative disclosure is not boilerplate and represents a ‘principal’ risk to the fund. The same logic applies for IS sections.

¹⁵² According to a 2015 whitepaper, up to 77% of funds policies authorize the use of derivatives, but only 32% of funds hold one or more derivative. Daniel Deli et al., SECURITIES AND EXCHANGE COMMISSION, Economic and Risk Analysis White Paper, *Use of Derivatives by Registered Investment Companies 2* (Dec. 7, 2015), https://www.sec.gov/dera/staff-papers/white-papers/11dec15_derivatives.html.

¹⁵³ Daniel Awrey, *Complexity, Innovation and the Regulation of Modern Financial Markets*, 2 HARV. BUS. L. REV. 235, 246 (2012) (identifying six drivers of complexity in financial products: technology, opacity, interconnectedness, fragmentation, regulation and reflexivity); Bruno Biais et al., *Risk-Sharing or Risk-Taking? Counterparty Risk, Incentives, and Margins*, 71 J. OF FIN. 1669, 1669–71 (2016) (describing the complexity of derivatives).

Table 3: Regression Results for Fund Readability

	Risk Section	Strategy Section
Disclosure Characteristics		
Voice	-0.1974 ^{***} (0.0010)	-0.2619 ^{***} (0.0189)
Deriv_Risk_High	0.0478 ^{***} (0.0399)	-0.0361 ^{***} (0.0086)
Number of sentences	0.2210 ^{***} (0.0116)	0.2568 ^{***} (0.0161)
Fund Features		
Four factor alpha	0.0759 ^{***} (0.0025)	0.0509 ^{***} (0.0030)
Std. dev.	-0.0645 ^{***} (0.0031)	-0.0645 ^{***} (0.0088)
Size (Log_tna)	0.0490 ^{***} (0.0114)	0.0165 [*] (0.0088)
Turnover ratio	-0.0102 (0.0043)	-0.0195 ^{***} (0.0058)
Number of obs.		
	100987	100734
R-squared		
	0.1395	0.1264
F-Statistics		
	1961.9	1745.5

Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Results suggest that fund features and disclosure characteristics predict readability for both Principal Risk and Investment Strategy sections. As the disclosure writing becomes more passive, readability decreases in both Principal Risk and Investment Strategy sections (-0.1974 and -0.2619, respectively, both $p = < .001$). An increase in the number of sentences predicts an increase in readability for both Risk and Strategy sections (0.2210 and 0.2568, respectively, both $p = < .001$). Both findings comport with common foundations for good writing: active voice and short sentences.¹⁵⁴

For fund features, an increase in past fund returns predicts an easier-to-read Principal Risk and Investment Strategy section (0.0759, and 0.0509, respectively, both $p = < .001$). On the other hand, an increase in fund risk, as measured by the standard deviation of returns or volatility, predicts a

¹⁵⁴ See, e.g., THE CHICAGO MANUAL OF STYLE 5.118 (17th ed. 2017) (discussing active and passive voice).

harder-to-read disclosure in both Principal Risk and Investment Strategy sections. These results are consistent with obfuscation theories suggesting that a manager may want to hide or bury bad news, but make good news, like positive past returns, easier for ordinary investors to read.¹⁵⁵

Larger fund size by total net assets (TNA) predicts an easier to read disclosure in both sections, but with lower statistical significance for the Investment Strategy section (0.0165, $p = < .10$).

Results differ, however, between Investment Strategy and Principal Risk sections on two variables: High_Deriv and portfolio turnover. With these two variables, we can observe the different roles that Investment Strategy discussions play compared to Principal Risk sections. The two sections have overlapping regulations, like plain English, but different content requirements.¹⁵⁶ Those differences are apparent here.

The first divergent variable is the High Derivative flag, which indicates that a disclosure is in the top 25% frequency of the word derivative. This variable predicts increasing readability in Risk sections (0.0478, $p = < .001$), but decreasing readability in Strategy sections (0.0361, $p = < .001$). The Investment strategy section coefficient with High_Deriv makes intuitive sense: complex investment strategies (derivative trading) may require more-difficult-to-read disclosures.

The second divergent variable is fund turnover—how frequently a fund sells its assets. This variable estimates a harder-to-read IS disclosure when funds sell assets more frequently (-0.0195, $p = < .001$), but no statistically significant results for PR sections. When a fund's strategy relies on more trading activity, more complex language may be required to describe the approach.

The role of lawyers, a well-documented force in contracts and disclosures, may be another contributing factor to disclosure readability.¹⁵⁷ In the world of funds, the lawyers work for the fund *family* (like Vanguard or State Street), rather than the individual fund (like State Street Index fund). To explore this, we group disclosure scores by fund family and repeat the analysis described above. Table 13 in the Appendix, Section G reports results.

Taken together, model results suggest a relationship between fund features, like past returns and risk, as well as investment objectives. Findings suggest that readability signals are more than a mere matter of technical compliance. Readability is linked to fund features and performance. Our findings suggest that ordinary investors may have more trouble compre-

¹⁵⁵ See Li, *supra* note 127, at 224, and accompanying text.

¹⁵⁶ See *supra* notes 54–66, and accompanying text.

¹⁵⁷ See, e.g., Anne Tucker et al., *Text, Tone, and Legal Language: Analyzing Mutual Fund Disclosure Sentiment*, 38 (Oct. 31, 2021) (working draft, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3674572) [hereinafter Tucker, *Tone*]; see also Adam B. Badawi & Elisabeth de Fontenay, *Is There a First-Drafter Advantage in M&A?*, 107 CAL. L. REV. 1119, 1131–33 (2019).

hending increased risks. When higher fund risk estimates harder-to-read disclosures, regulators have a reason to scrutinize readability.

IV. FULFILLING THE PROMISE OF PLAIN ENGLISH

There is no bright line test for plain English writing tailored for ordinary investors. This reality presents a peril for regulators to enforce and for funds to comply with the elusive standard. Using several measures to investigate plain English, we conclude that many mutual fund summary prospectuses are written in a manner inaccessible to ordinary investors. They are long, complex, and hard to read. The average grade level equates to college or higher. Not all individuals invested in mutual funds have college educations or financial sophistication. Easy-to-read disclosures can level the playing field for more investors.¹⁵⁸ While the SEC's current plain English regulations are not producing disclosures accessible to the ordinary investor, there is great promise in doing so.

We observe variation in plain English attributes between funds' Principal Risk and Investment Strategy sections. For example, nearly doubled word counts in Principal Risk sections account for the increase in disclosure size overall. This suggests Principal Risk disclosures are written in a kitchen-sink style of over-disclosure to minimize litigation risks. Laundry list disclosures violate the spirit of SEC regulation and bury major risks.

The Investment Strategy sections are written, on average, 1.5 grade levels higher than Principal Risk sections and contain more passive verbs. This suggests that Investment Strategy sections, which disclose fund-specific investment information, are even less accessible than Principal Risk sections. But higher readability may be necessary. High_Derivative disclosures predict harder-to-read Investment Strategy sections, as did more fund turnover. Sophisticated investment strategies may necessitate harder-to-read disclosure text.

Fund features like size, trading frequency, and performance estimate readability. Model results suggest that funds are not immune to market pressures to bury bad news and highlight good news. In the case of harder-to-read disclosures following poor fund performance, a plain English violation is more than a technical error—it is hiding information from investors.

Further, differences between Investment Strategy and Principal Risk readability estimates map onto regulated content differences. Higher readability in the Investment Strategy section may reflect more complexity of the

¹⁵⁸ Experimental research found that less sophisticated investors with easy-to-read disclosures performed equal to more sophisticated investors given harder-to-read disclosures. Eileen Taylor and Jennifer Riley, *Leveling the Playing Field for Less-Sophisticated Non-Professional Investors: Does Plain English Matter?*, 1 J. CAP. MARKETS STUD. 36, 45 (2017) (“similarity between less-sophisticated NPIs using plain English disclosures and more-sophisticated NPIs using less-readable disclosures.”).

investment strategy as with funds relying on derivatives and higher turnover ratios to achieve investment objectives.

Taken together, our findings have policy implications. The plain English requirements are unenforced and, perhaps, impossible for funds to even comply with. Our findings, however, suggest paths for improvement to deliver on the promise of plain English regulations. We discuss those below.

A. Update Plain English Requirements

Consolidating and updating the Plain English handbook,¹⁵⁹ including suggestions for page length and readability standards would clarify plain English standards. Through the office of Investment Management, the SEC should reissue guidance directly speaking to mutual fund disclosures, similar to the guidance from 2014.¹⁶⁰ Such SEC guidance should address the Investment Strategy and Principal Risk Sections separately. Our results found key differences in the length, readability, and function of the two sections, which supports writing guidance tailored to each individual section.

For example, the ballooning Principal Risk sections call for a different set of prescriptions than the Investment Strategy sections. The increasing length of Principal Risk sections suggests a kitchen sink approach to disclosures where funds disclose more on top of more potential risks. Increasing PR sections also reflect a compliance culture where the fund lawyers writing the disclosures have incentives to protect the fund from liability, but no incentives to educate individual investors.¹⁶¹ Tailored SEC guidance should address both problems by, for example, capping the number of Principal Risks for the summary prospectus at 7–10 risks, leaving the full prospectus and SAI for a more fulsome discussion, as intended. The SEC’s proposal to list risks by order of importance, over alphabetical order, while not finalized, is memorialized for funds in staff comments.¹⁶² Further, if implemented, the existing SEC proposed rule to define principal risks with a 10% assets threshold, would also force funds to limit the risk disclosures.¹⁶³

In contrast, Investment Strategy sections, by SEC content regulation, may require more complexity such as shown with harder-to-read disclosures in funds with High-Derivative discussion. To counteract the resulting tension between required complexity and accessibility, the SEC should issue gui-

¹⁵⁹ See Plain English, *supra* note 24.

¹⁶⁰ See Guidance Update, *supra* note 67.

¹⁶¹ Susan N. Smelcer, et al., *Regulating Dynamic Risk in Changing Market Conditions*, 13 WM. & MARY BUS. L. REV. 1, 35 (2022) (finding evidence of adding risk disclosures terms).

¹⁶² SEC Accounting & Disclosure Information, *ADI 2019-08 Improving Principal Risks Disclosure* (2019), available at: <https://www.sec.gov/investment/accounting-and-disclosure-information/principal-risks/adi-2019-08-improving-principal-risks-disclosure>; see also *Annual Prospectus Updates*, *supra* note 53, at 311–15.

¹⁶³ *Annual Prospectus Updates*, *supra* note 53 at 314, 537.

dance specific to the Investment Strategy section.¹⁶⁴ Such guidance should focus on standardized formatting and suggested language for common, yet complex, strategies.

SEC mutual fund disclosure guidance should also be tailored for the different fund types, creating a common template for different fund categories such as domestic equity, index, and bond funds. Common templates would reduce the compliance burden on funds. Increasing uniformity between different fund disclosures would also reduce the cognitive burden on ordinary investors reading such disclosures. Eliminating uninformative variation in style facilitates comparisons by ordinary investors.

B. Use Length and Readability Data as an Enforcement Tool

Text mining disclosure page length, readability, and other textual attributes linked to complexity would enhance SEC monitoring of funds' compliance with plain English standards. The SEC should use length and readability data to *target* disclosures for additional review and enforcement. The SEC should not use these measures to automate ultimate compliance decisions—that should stay in the realm of human judgment.¹⁶⁵ Aggregating data across all fund disclosures identifies outliers, those funds that significantly over or under shoot the middle. For example, the SEC could flag fund disclosures in the top decile (10%) of readability scores for review or a justification from the fund why the disclosure is written at such a high reading level. The same approach of 'comply or explain' could be used with page length or other complexity measures.

The SEC can also use fund-specific metrics, like the year-to-year percentage of change from a fund's filing from one year to the next. Given the relationship between disclosure readability and fund performance and risk, monitoring the percentage of change provides the SEC with a new enforcement tool. For example, monitoring the percentage of change in readability and length between 2020–2021 for all funds creates a baseline, or average amount of year-to-year variation. Funds that dramatically increase or decrease readability outside of the expected percentage of change could be flagged for additional SEC review.

Future research by academics and the SEC will likely identify additional text features to extract and review, such as the Voice or High_deriv

¹⁶⁴ Investment strategies are not addressed in the proposed rules. *Annual Prospectus Updates*, *supra* note 53.

¹⁶⁵ The allure of declaring a singular readability standard for all disclosures is high. A bright line creates clear boundaries for compliance. But a range of readability standards is probably best—allowing for context specific writing and a focus on information over compliance. Further, in other fields, bright line readability standards are rarely met or enforced. See Michael K. Paasche-Orlow et al., *Readability Standards for Informed-Consent Forms as Compared with Actual Readability*, 348 NEW ENG. J. MED. 721, 724 (2003) (citing to studies finding only 8% compliance on readability standards for informed consent noting that consent documents exceeded standards by 2.8 grade levels).

flag we used. Future work examining fund flows as the dependent variable would also explore the relationship between plain English attributes and consumer choices, a topic of particular policy importance. Separately modeling results on actively-managed versus passively-managed funds would explore information signals around professional management. Finally, tone—a disclosure attribute studied in the operating company literature—is absent from this study. With the appropriate computational tools, mutual fund disclosure sentiment is another field ripe for study.¹⁶⁶

C. Rethinking Liability

A central purpose of disclosure—educating ordinary investors—is eroded when disclosures are used primarily as a defense against liability. When fund lawyers write disclosures to preclude a claim of material misstatement or *omission* in the prospectus, it morphs the disclosure from informative into a defensive tool. Yet, funds face the specter of liability under the Securities Act, including § 11 issuer liability for a materially false or an incomplete registration statement;¹⁶⁷ for selling a security with a materially false or incomplete prospectus;¹⁶⁸ and under § 10(b) for fraudulent statements or omissions.¹⁶⁹ SEC enforcement and private litigation focus on misrepresentations and omissions in Investment Strategy and Principal Risk sections. Disclosures, especially risk discussions, may be drafted with the intent to avoid, as a matter of law, material misrepresentations and omissions, or even questionable language that would give rise to an expensive and time-consuming lawsuit.¹⁷⁰ When drafting a disclosure, funds appear to be choosing to write it as a defense against litigation rather than an educational tool for investors. While this may not seem surprising, it is not how the disclosure was intended. Furthermore, it favors exhaustive discussions over comprehension, motivating funds to write laundry list disclosures.¹⁷¹

¹⁶⁶ Tucker, *Tone*, *supra* note 157.

¹⁶⁷ 15 U.S.C. § 77k(a)(1)-(3) (2012) (with mutual funds, the first filed N-1A); 15 U.S.C. § 12(a)(2).

¹⁶⁸ 15 U.S.C. § 77l(a)(2) (2012).

¹⁶⁹ Section 17(a) of the Securities Act prohibits fraudulent conduct in the “offer or sale” of securities, and § 10(b) of the Exchange Act and rule 10b-5 prohibit fraud in connection with the “purchase or sale” of securities. *See* 15 U.S.C. § 77q(a) (2012); *id.* § 78j(b); 17 C.F.R. § 240.10b-5 (1998). Private parties and the SEC may bring actions under § 10(b) and rule 10b-5. *Herman & MacLean v. Huddleston*, 459 U.S. 375, 387, 103 S. Ct. 683, 689 (1983) (“We therefore reject an interpretation of the securities laws that displaces an action under Section 10(b).”).

¹⁷⁰ For a discussion of the defense bar interests in prospectus disclosures, see *Perfect Prospectus*, *supra* note 20, at 477–80. *See also* Henry T. C. Hu, *Disclosure Universes and Modes of Information: Banks, Innovation, and Divergent Regulatory Quests*, 31 *YALE J. ON REG.* 565, 589 (2014) (describing SEC civil enforcement proceedings and state attorneys general authority to bring criminal proceedings).

¹⁷¹ *See, e.g.*, Alex Raskolnikov, *Probabilistic Compliance*, 34 *YALE J. REG.* 492, 495 (2017) (describing an optimal deterrence framework and identifying over-deterrence when compliance behavior surpasses the optimum).

We saw evidence of this in our individual reviews, which revealed a laundry list approach to drafting. We also saw this in the page count data, where growth in the Principal Risk sections outpaced other growth. Both violate the spirit of SEC disclosures—which are intended to inform ordinary investors—by hiding risks, burying important information, and favoring risk mitigation over education.

What can be done? Securities liability ultimately rests with Congress and the courts interpreting the laws. Congress, in theory, could carve out funds' liability for incomplete summary prospectus principal risk statements, if the fund makes a complete disclosure in the full prospectus or SAI. But are there practical options not prevented by Congressional gridlock? The SEC, the designated agency for securities regulation, has the power to shape both compliance and interpretation standards.¹⁷²

New SEC disclosure regulations could clarify investment strategy and risk discussion expectations and set clearer liability hurdles. Disclosure rules could also include interpretation standards, giving the interpretations the force of law. Rulemaking procedures that follow notice and comment take time and agency will to enact,¹⁷³ but receive *Chevron* deference.¹⁷⁴ Because the SEC has rule-making authority under the Securities and Exchange Acts (1933 and 1934),¹⁷⁵ the SEC's standards and interpretations, if part of a rulemaking procedure and so long as "reasonable," would be eligible for *Chevron* deference.¹⁷⁶

The SEC can also shape judicial interpretation through guidance, which is easier to enact but receives less protection than rulemaking.¹⁷⁷ For exam-

¹⁷² For an example of guidance nudging fund compliance with disclosure regulations, see Current Market Conditions, *supra* note 79.

¹⁷³ See, e.g., Office of the Federal Register, A Guide to the Rulemaking Process https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf (last visited Sept. 1, 2022) (describing formal notice and comment rulemaking). See also, SEC, Rulemaking: How It Works, <https://www.investor.gov/introduction-investing/investing-basics/glossary/rulemaking-how-it-works> (last visited Sept. 1, 2022).

¹⁷⁴ *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 843–44 (1984).

If Congress has explicitly left a gap for the agency to fill, there is an express delegation of authority to the agency to elucidate a specific provision of the statute by regulation. Such legislative regulations are given controlling weight unless they are arbitrary, capricious, or manifestly contrary to the statute.¹² Sometimes the legislative delegation to an agency on a particular question is implicit rather than explicit. In such a case, a court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency.

Id. at 843–44.

The United States Supreme Court is seen as quietly abandoning *Chevron*. In *American Hospital Association v. Becerra*, 142 S.Ct. 1896 (2022), a unanimous Supreme Court declined to revisit *Chevron* deference, making no mentions of the doctrine in the ruling. See also, James Romoser, *In an opinion that shuns Chevron, the court rejects a Medicare cut for hospital drugs*, SCOTUSBLOG (June 15, 2022) <https://www.scotusblog.com/2022/06/in-an-opinion-that-shuns-chevrons-the-court-rejects-a-medicare-cut-for-hospital-drugs/>.

¹⁷⁵ See *supra* note 19 and accompanying text.

¹⁷⁶ *Chevron*, 467 U.S. at 843–44.

¹⁷⁷ *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944).

ple, the SEC could issue guidance encouraging courts to read the prospectus disclosure *as a whole*—meaning the summary content along with the full prospectus—for liability purposes. This is admittedly the intent of tiered disclosure, however, a clear statement from the SEC could curb over-drafting out of fear.¹⁷⁸ Agency guidance on liability would be persuasive, even if not determinative, and it could dampen fund lawyers’ zeal for kitchen-sink style disclosures while encouraging cautious jurisprudence.¹⁷⁹ SEC interpretive guidance that there is no “omission” liability if a risk is disclosed in the full prospectus or SAI, but not in the summary prospectus could encourage fund compliance and shape judicial interpretation. While not ironclad,¹⁸⁰ the proposed SEC guidance would have persuasive value under the Supreme Court’s *Skidmore* analysis, and such guidance could be issued quickly and by the SEC’s own initiative.¹⁸¹ Interpretive guidance provides a stopgap measure and an opportunity to test the effect of the nudge, before advancing to formal rulemaking procedures.

Both proposals—rulemaking and guidance—avoid the thornier administrative law questions of agency power in the face of waning *Chevron* deference.¹⁸² The proposals are modest in scope, filling a narrow interpretive gap. It is hard to conceive of a party in interest with incentive (and standing) to challenge either proposed SEC action. The proposed regulatory framework would reduce funds’ compliance burdens and uncertainty, so funds are unlikely challengers. The new guidance would also attempt to facilitate ordinary investor comprehension, so investors are unlikely to challenge it. If both investors and funds benefit from SEC clarity around disclosure standards, there is no likely harm, or plaintiff with standing to challenge the agency act.¹⁸³

¹⁷⁸ See, e.g., *supra* notes 46–53 and accompanying text.

¹⁷⁹ *Skidmore*, 323 U.S. at 134.

¹⁸⁰ See, e.g., *U.S. ex rel. Drakeford v. Tuomey*, 792 F.3d 364, 380 (4th Cir. 2015) (upholding a district court’s rejection of the commentary promulgated by the Centers for Medicare & Medicaid Services as it developed implementing regulations for the Stark Law).

¹⁸¹ *Skidmore*, 323 U.S. at 140.

We consider that the rulings, interpretations and opinions of the Administrator under this Act, while not controlling upon the courts by reason of their authority, do constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance. The weight of such a judgment in a particular case will depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control.

See also, *Kisor v. Wilkie*, 139 S. Ct. 2400, 2415 (2019) (affirming the Auer deference for Agency interpretation of ambiguous regulations, as opposed to statutes).

¹⁸² See *supra* note 174 and accompanying text.

¹⁸³ Cf., *Am. Hosp. Ass’n v. Becerra*, 142 S.Ct. 1896, 6 (2022) (where hospitals negatively impacted by revised Medicare reimbursement rules challenged HHS’s authority to issue the reimbursement rules without a survey under Medicare), https://www.supremecourt.gov/opinions/21pdf/20-1114_09m1.pdf.

Liability interpretations coupled with text analysis-enhanced enforcements of summary prospectuses, like that proposed above, would bring disclosures closer to the intended goal of educating average investors.

CONCLUSION

Our results contribute to the growing body of textual analysis of disclosures generally, and mutual funds specifically. SEC regulations require mutual funds to write disclosures in plain English for the average investor. Plain English standards are intended to make funds' investment strategies and the associated risks clear and digestible for average investors. Market transparency and investor education further the SEC's regulation-through-disclosure regime, which is the primary method to regulate mutual funds.

But our examination of funds' summary disclosures—an abbreviated discussion of a fund's strategies and risks—reveals that these disclosures are long, complex, and hard to read. In reviewing over 160,000 summary prospectuses filed from 2010–2020, we find that summary prospectuses grew to nearly eight pages in 2020, well above the recommended 3–4 pages. The Principal Risk section has doubled in size and drives the overall growth of the summary prospectus. Further, the narrative discussions in the Investment Strategy and Principal Risk sections are written at a college reading level, along with other indicators of complexity, like passive voice. In other words, mutual funds fail to write even the most consumer-facing disclosure in plain English.

Importantly, we find that funds' failures to draft their disclosures in plain English are more than mere technical errors. Using a regression model, we find systematic relationships between fund characteristics and disclosure attributes on a disclosure's predicted readability. In particular, we find that positive past returns predict easier-to-read disclosures, but an increase in fund risk predicts harder-to-read disclosures. Our results suggest that funds may skirt the SEC's plain English rules to dampen bad news, like increased risk, and highlight the good news, like increased past returns. Concurrently, we find that compliance with other metrics of plain English, like short sentences and active voice, predicts easier-to-read disclosures as is expected. In other words, compliance in one dimension of plain English writing suggests compliance in other aspects as well.

Collectively, our results support three recommendations. Given the reality about how funds write disclosures, which are out of step with general plain English standards, the SEC should update the guidance on plain English requirements. The guidance should include tailored guidance for the Investment Strategy and Principal Risk sections. Second, the SEC should adopt text mining measures to better monitor and enforce plain English standards. For example, tracking readability and other plain English measures can identify outliers to target a fund for enforcement or implementation of a “comply or explain” approach. Finally, given the threat of liability for omis-

sion of a risk, there is incentive for fund lawyers to write disclosures that include everything and the *kitchen sink*. Liability shields make good risk mitigation sense for a fund's lawyers but are at odds with the main goal of the disclosure: to educate and protect average investors. To this end, the SEC should issue interpretive guidance clearly severing the liability link between an omission in the summary prospectus *if* the risk is fully disclosed in the full prospectus or Statement of Additional Information. This nudge may help reorient disclosure drafters to the intended informational goals.

Mutual funds have not fulfilled the promise of plain English disclosures, but hope remains to improve the disclosure regime through updated guidance, enhanced monitoring, and reorientation to the average investor.

* * *

APPENDIX

A. *Corpus Methodology*

Table 4 describes the beginning data sample, what filings were dropped and why (file size too small, no principal risk, or a duplicate filing). Section III in the paper provides additional details. In pre-processing, we made all words lower case, removed and replaced special characters such as: '?/'''\&^\%\\$#\#@()' with blank spaces, and ignore punctuation contained in a standard set of abbreviations.¹⁸⁴

We retain sentence punctuations but ignore punctuation contained in a standard set of abbreviations. For the PR section, we parse a total of 97,987,817 words. After removing the stop words and simple cleaning, 24,706 unique words remain. For the IS section, we parse a total of 38,450,450 words. After removing stop words and simple cleaning such as dropping 2-character words, 3,410 unique words remain. Following Loughran and McDonald,¹⁸⁵ we do not stem the words, unless otherwise noted.

Table 4: Sample Construction and Data Loss

Total filings 2010–2020	213,861
Filings after dropping for missing principal risk and small file sale	164,602
De-duplicate filings (keeping the last filing per year)	98,290

We categorized open-ended filing funds by merging our scraped prospectus data with the CRSP Survivor Bias Free U.S. Mutual Fund Database investment objective codes to categorize open-ended filing funds.¹⁸⁶ We use six broad CRSP categories to group funds in like-asset classes: domestic equity (DE), foreign equity (FE), fixed income (FI), money market (M), index (I), and other. We group funds with no CRSP codes in the “missing” category. Within our sample Domestic Equity funds and Index funds together make up 47% of the sample. See the distribution of fund types in Table 5 for additional sample data.

¹⁸⁴ These abbreviations include: i.e., U.S., e.g., etc., J.P., Inc., LLC., Co., l.p., ltd., S.E.C., Inv. Co. Act, months (such as Sept., Dec., Jan., Nov., Oct., Aug., Feb., etc.), vs., dr., mr., mrs., and ms. For example, the abbreviation U.S. to describe investment in U.S. companies would be changed to us.

¹⁸⁵ See Loughran & McDonald, *supra* note 123, at 1645–46.

¹⁸⁶ Note the CRSP database excludes closed end funds and other registered investment vehicles that are not mutual funds, bonds, international equities, or money market funds.

Table 5: Disclosure Counts by Year and Fund Type 2010–2020

Fund Type \ Year	Year										
	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
Domestic Equity	1308 34%	1745 32%	1939 31%	2195 31%	2370 31%	2524 30%	2697 30%	2796 30%	2765 29%	2745 29%	2617 29%
Foreign Equity	561 14%	722 13%	830 13%	965 14%	1070 14%	1186 14%	1279 14%	1319 14%	1328 14%	1309 14%	1225 13%
Fixed Income	473 12%	574 11%	619 10%	652 9%	657 9%	692 8%	714 8%	731 8%	726 8%	729 8%	711 8%
Index	326 8%	686 13%	805 13%	951 13%	1070 14%	1295 15%	1498 16%	1700 18%	1909 20%	1996 21%	1958 21%
Money Market	363 9%	473 9%	544 9%	626 9%	685 9%	743 9%	793 9%	796 8%	761 8%	770 8%	710 8%
Others	865 22%	1230 23%	1440 23%	1664 24%	1833 24%	1995 24%	2104 23%	2110 22%	2076 22%	2070 22%	1925 21%
Missing CRSP Code	1576 n/a	1777 n/a	1677 n/a	1478 n/a	1332 n/a	1051 n/a	718 n/a	538 n/a	619 n/a	770 n/a	1211 n/a

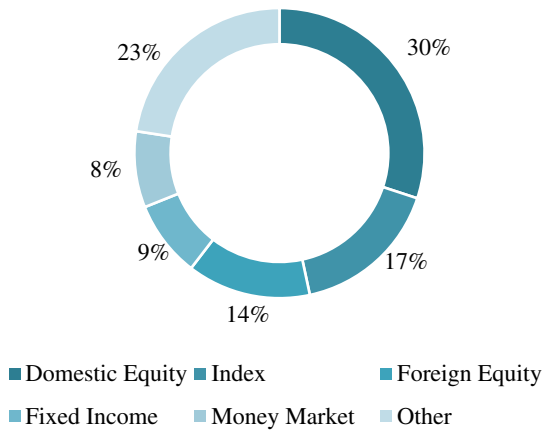


Figure 8: Distribution of Fund Types in Data Sample 2010–2020 Excluding Missing CRSP Data

Table 6: Asset Class by CRSP Classifications

CRSP Category	Contributing CRSP Style_Objective codes	Number (de-duplicates)	Percent (de-duplicates)
DE Domestic Equity	EDCM, EDCS, EDCI, EDYB, EDYG, EDYI	23392	25.01%
FE Foreign Equity	EF, EFRC, EFRQ, EFRM, EFRE, EFRI, EFRJ, EFRL, EFRP, EFRX, EFSO, EFSH, EFSF, EFSN, EFSR, EFST, EFSU, EFSG, EFSC, EFSS, EFSI, EFSM, EFSA, EFCM, EFCF, EFCI	11103	11.87%
FI Fixed Income	IG, IU, IGDI, IUS, IUI, ICQH, ICQM, ICQY, ICDS, ICDI, IGT, IGDS, IGD, IGI, IMM	7965	8.52%
Index	EDCL plus fund names containing either 'index' or 'ETF'	8844	9.46%
M Money Market	M	19703	21.07%
O Other	I, IM, EDSR, EDSG, IF, OM, EDSH, EDSU, EDYH, EDST, EDSC, EDSA, EDSS, EDSN, EDSF, EDSI, EDSM, OC, EDYS, EDSO, O,	22511	24.07%

The 497K summary prospectus has no standard formatting other than the SEC-required content. This means that the author of each disclosure makes style choices about how to display the text—some with bullets or numbering, some with all caps, some with bold or underline, some with headings, and many with a combination thereof. As a result, we do not rely on HTML tags to parse the documents with standardized formatting, as is the practice with 10-Ks and related research on operating company disclosures. Instead, we strip the HTML tags and rely on the text alone as our guideposts. Subject matter experts reviewed at least 100 random filings per year to confirm the accuracy and completeness of the scrap and to identify any time-variant trends in style or language that would affect the scraping code. The process described herein and the tools we develop in this project are applicable to a wide range of non-standardized legal text.

First, we write code to identify the two main sections relevant to our study: PR and IS. Second, we write code to analyze the content. Figure 9 illustrates our process.

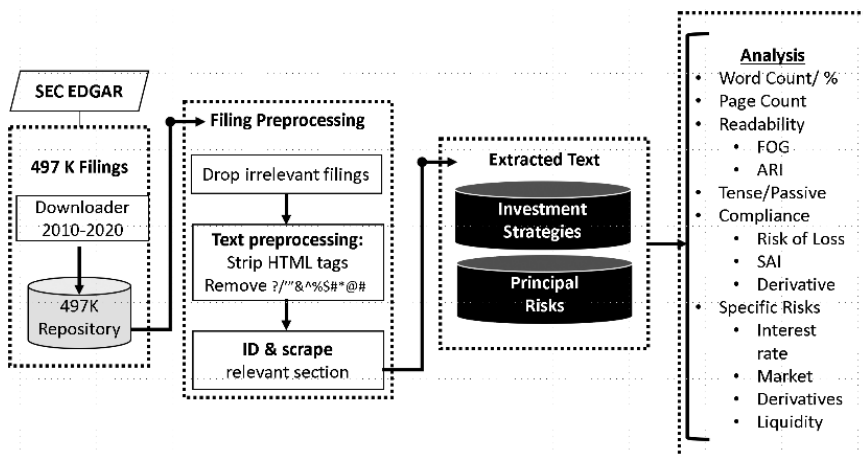


Figure 9: Text Mining Process

B. Server Access Logs

We downloaded the 2017 server file access log from the SEC at <https://www.sec.gov/data/edgar-log-file-data-set>. From the server file access log, we obtained the Internet Protocol (IP) address (anonymized), a timestamp, and the SEC accession number for every client request and matched the accession number (9,203 unique numbers) to those in our data set of 497K filings. We follow Loughran and McDonald,¹⁸⁷ who define IP addresses that access more than fifty unique firms' filings in a given day as being a robot. All observations flagged as a web crawler or index page request are excluded from all tabulations, as are requests with missing CIK, accession number, IP, or date.

Table 7 illustrates our findings, which are discussed in the main body of the paper.

¹⁸⁷ See Loughran & McDonald, *supra* note 110, at 232.

Table 7: Server Access Summary of SEC 497K Filings of Year 2017

	Unignored requests	Unignored requests Unique ip addresses	Unignored requests Unique ip addresses by robots	Unignored requests Unique ip addresses by not robots	Ignored requests from crawlers
Mean	393	139	0	138	1
Media	264	127	0	126	0
Std Dev	839	60	1	60	4
Max	24614	3361	19	3361	71
Min	62	38	0	38	0
Observations:	9212	9212	9212	9212	9212

C. Derivative Disclosures

Using the keyword ‘derivative’, we count the number of occurrences of the phrase within the PR and IS sections. We mark the top quartile (75th percentile) of keyword counts in the IS and the PR sections separately to identify “high” derivative PR and IS filings. We calculate distributions per year and report the 75th percentile count for each year and section below. See Figure 10 for the average ‘Derivative’ keyword counts by section and year, and Figure 11 for results.

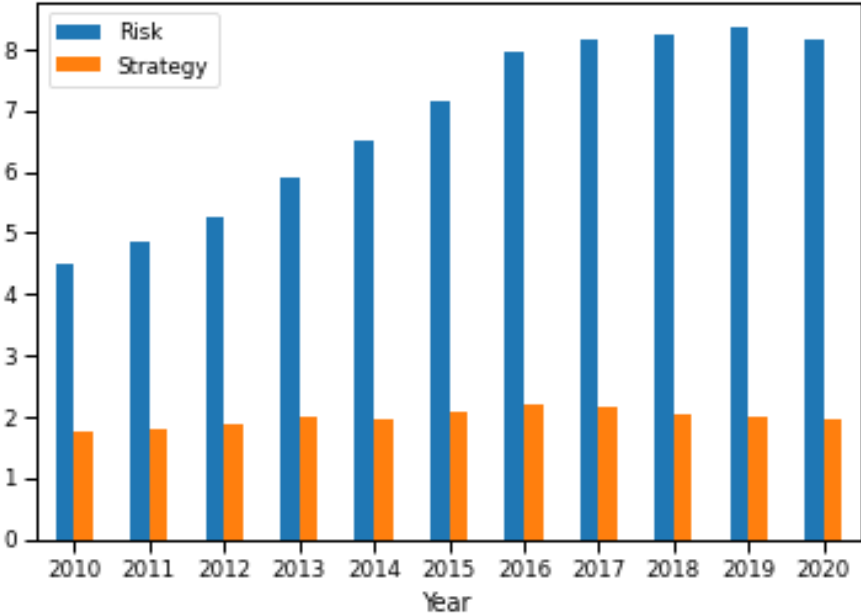


Figure 10: Average Derivative Keyword Counts by Section and Year

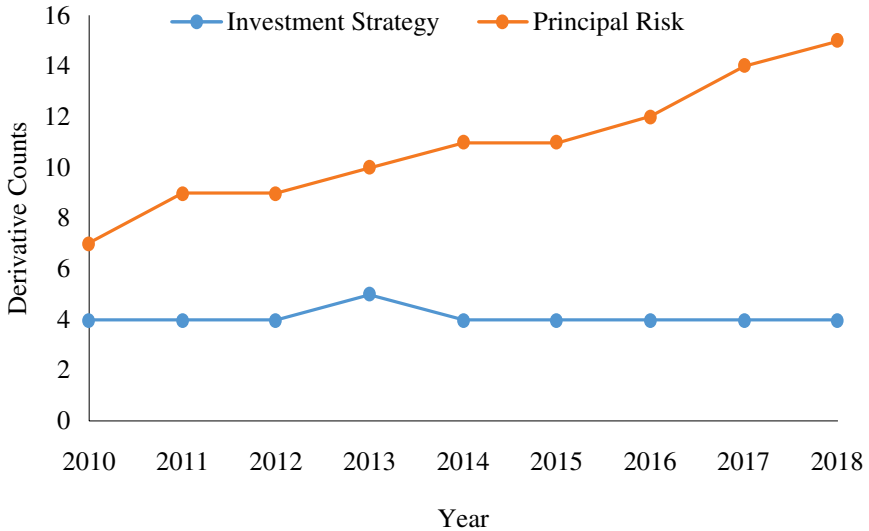


Figure 11: Average Derivative Keyword Counts of 75th Percentile

D. Complexity

Figure 12 and Figure 13 demonstrate that the top 25 words averaged over the 10-year period, are largely stable from 2011, but do evolve. We see

the most change from 2010-2014. We first counted the frequency of the top 100 words for each year, then selected the top 25 words across all years to build the heat map. Reported year-by-year numbers are divided by 100,000. The lighter the box for a word in a given year, the higher the frequency count. For displayed words with a zero count in 2010, like “derivatives,” the word does not appear in the top 100 list for that year, so the individual occurrence count was not included for that year.

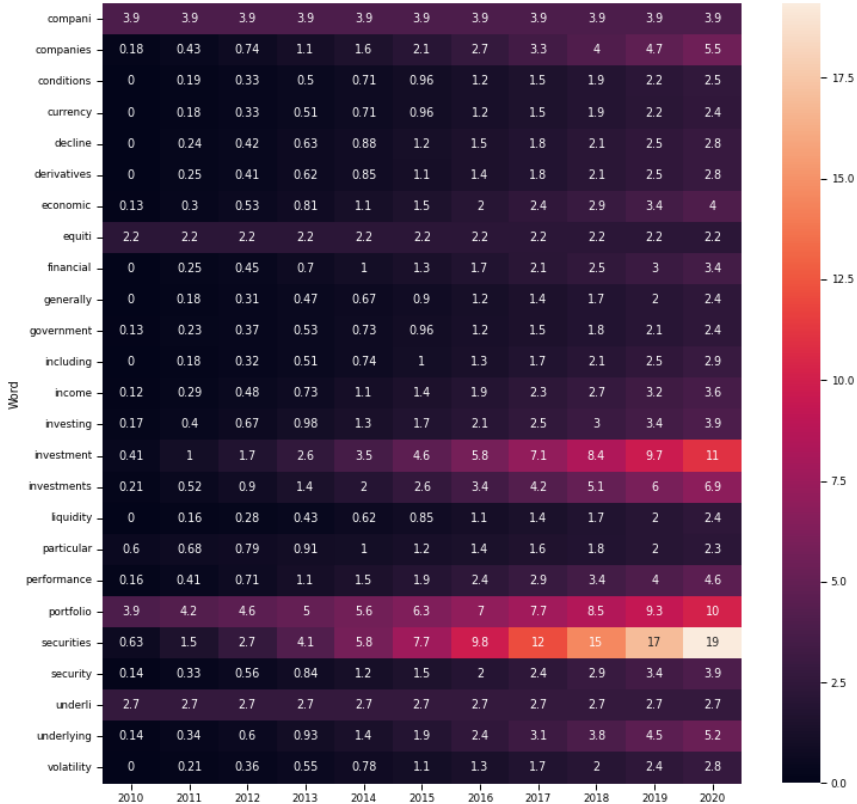


Figure 12: Heatmap of Top 25 Words in the Principal Risk Section by Year

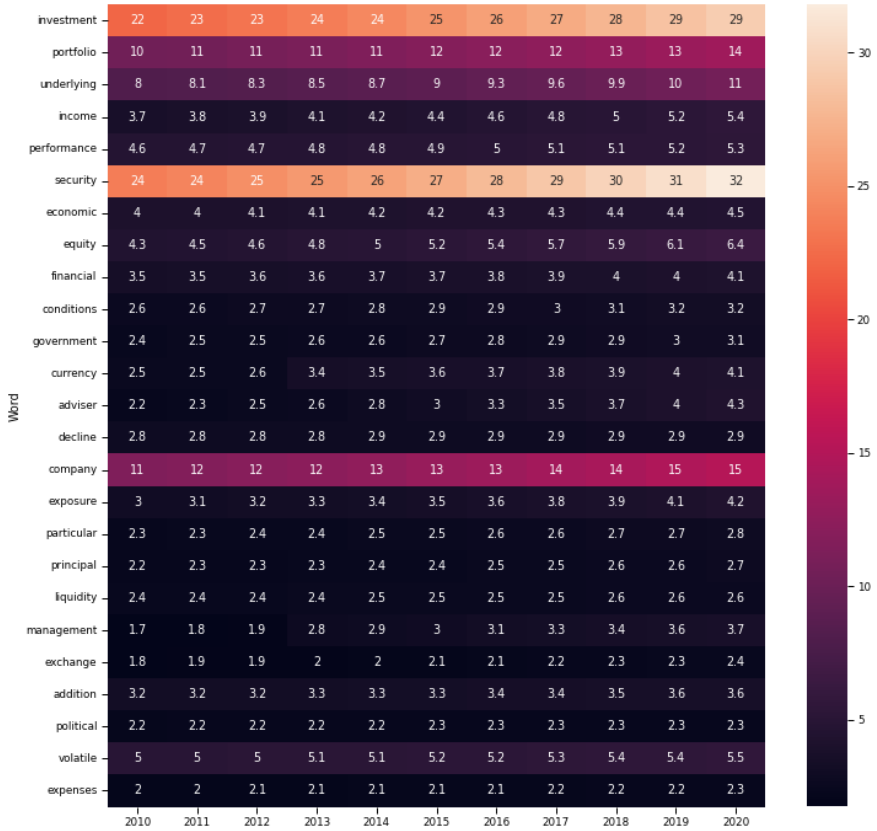


Figure 13: Heatmap of Top 25 Words in the Investment Strategy Section by Year

E. Alternative Readability Measures

1. ARI

For comparison, we generate another readability score, the Automated Readability Index score (ARI), which calculates ratios of the word difficulty (number of letters per word) and sentence difficulty (number of words per sentence).¹⁸⁸ Tables 8–9, 11–12 report the scores. Table 10 reports correlations.

We expect similarity between ARI and Fog scores, which we observe, but note that Fog scores are 1-2 grade levels lower than ARI.

¹⁸⁸ See, e.g., Readability Formulas, *supra* note 141.

$$\text{ARI} = 4.71 \times \frac{\text{characters}}{\text{words}} + 0.5 \times \frac{\text{words}}{\text{sentences}} - 21.43.$$

Figure 14 plots IS and PR section ARI scores against one another to demonstrate the breadth of scores and provide a comparison. IS ARI scores are larger than the PR ARI scores in 70% of observations. On average, IS disclosures are harder to read (written at a 1.5 higher grade level) than PR disclosures for the same fund, a result that is statistically significant at $p < 0.01$. Table 12 illustrates the difference between year 2008 and years from 2010-2018, and their significance tests.

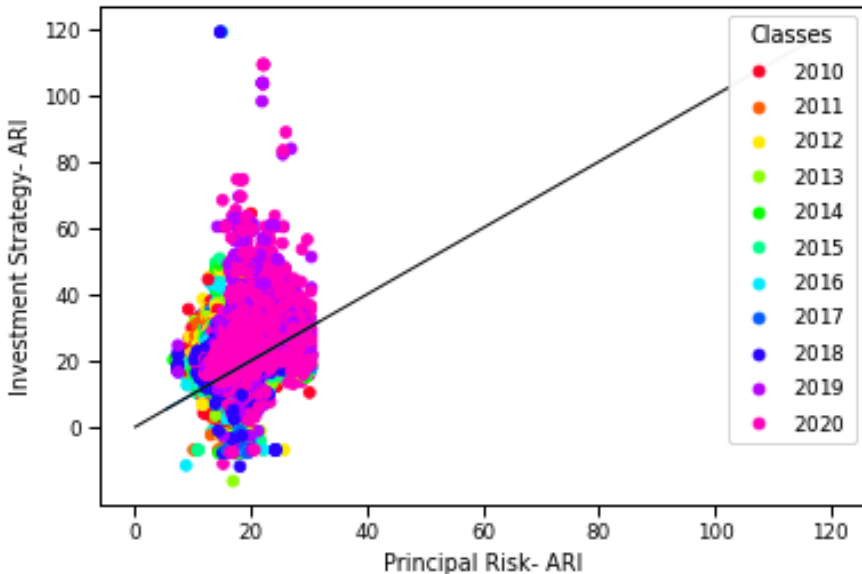


Figure 14: IS and PR ARI Readability Scores

2. SMOG

Following Bartlett, Nyarko & Plaut,¹⁸⁹ we generate a third readability score, the SMOG score, which calculates readability based on polysyllable (3 or more syllable) words.¹⁹⁰

Bartlett, Nyarko & Plaut found the SMOG score to perform best on legal privacy documentation, but the formula used requires 30 sentences or more of text.¹⁹¹ This exceeds the length of the PR and IS sections in our sample. Therefore, we modified the formula as follows:

¹⁸⁹ Bartlett et al., *supra* note 27.

¹⁹⁰ See, e.g., Readability Formulas, *supra* note 141.

¹⁹¹ Bartlett et al., *supra* note 27.

$$SMOG = 1.043 \sqrt{30 \times \frac{\text{Number of polysyllabic words}}{\text{number of sentences}}} + 3.1291.$$

$$SMOG \text{ revised} = 1.043^p \text{polysyllables} + 3.1291.$$

SMOG and Fog scores are highly correlated (.82 and .86 for IS and PR sections respectively). SMOG scores are, on average, 2 grade levels higher than Fog Index scores, and the difference is statistically significant.

Figure 15 plots IS and PR section SMOG scores against one another to demonstrate the breadth of scores and provide a comparison. It shows that IS SMOG scores are larger than the PR SMOG scores in 70% of observations. On average, IS disclosures are harder to read (written at nearly 1 higher grade level) than PR disclosures for the same filing, a result that is statistically significant at $p < 0.01$.

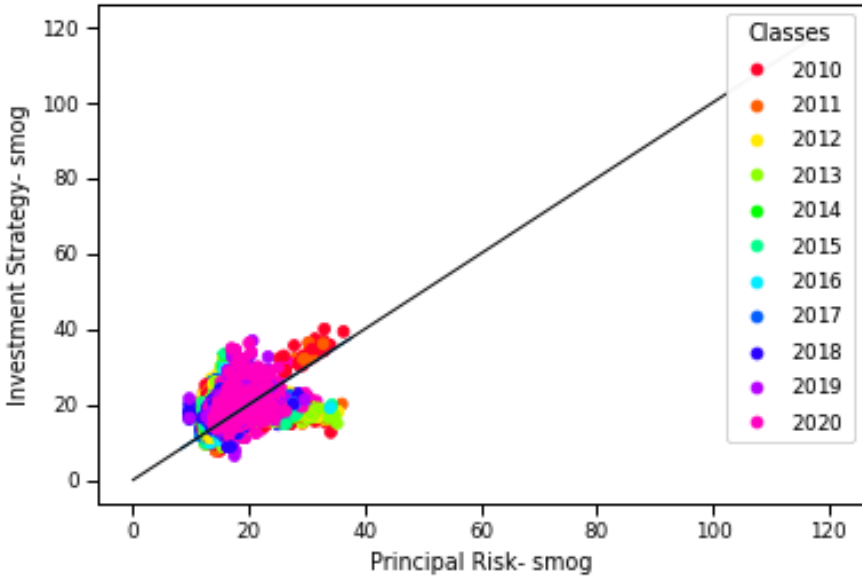


Figure 15: IS and PR SMOG Readability Scores

F. Plain English Measures- Complete Scores

The following tables provide additional data on the plain English measures discussed in Sections II and III of the paper.

Table 8: 2010–2020 Mean of Plain English Measures

Variable	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
risk_ari	16.58	16.40	16.49	16.61	16.63	16.74	16.75	16.80	16.88	17.76	19.28
risk_fog	14.78	14.49	14.45	14.41	14.33	14.32	14.23	14.19	14.22	14.98	16.05
risk_smog	16.27	16.19	16.26	16.37	16.43	16.47	16.48	16.50	16.55	16.95	17.42
risk_voice	0.07	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.07	0.06
strategy_ari	19.04	18.48	18.54	18.62	18.63	18.78	18.87	18.89	18.93	20.16	21.50
strategy_fog	17.18	16.59	16.52	16.50	16.46	16.47	16.50	16.50	16.53	17.43	17.64
strategy_smog	17.57	17.49	17.60	17.66	17.72	17.76	17.81	17.83	17.84	18.22	18.35
strategy_voice	0.14	0.13	0.13	0.14	0.13	0.14	0.14	0.15	0.14	0.16	0.13
filings	5472	7207	7854	8531	9017	9486	9803	9990	10184	10389	10357

Table 9: 2010–2020 Plain English Summary Statistics (98290 filings).

Variable	Mean	Median	Std. dev.
risk_ari	17.06	16.50	4.47
risk_fog	14.60	14.05	3.57
risk_smog	16.57	16.40	2.08
risk_voice	6.42%	5.56%	5.87%
strategy_ari	19.19	18.70	4.74
strategy_fog	16.76	16.23	3.65
strategy_smog	17.84	17.70	2.01
strategy_voice	13.97%	9.09%	20.54%

Table 10: 2010–2018 Correlations of Plain English Measures

Pearson correlation coefficient FOG & ARI Risk Means	0.96
Pearson correlation coefficient FOG & SMOG Risk Means	0.87
Pearson correlation coefficient FOG & ARI Strategy Means	0.93
Pearson correlation coefficient FOG & SMOG Strategy Means	0.36
paired-t test of ARI Strategy & Risk Means	Significant
paired-t test of Fog Index Strategy & Risk Means	Significant
paired-t test of SMOG Strategy & Risk Means	Significant

Table 11: 2010–2020 Comparison of Plain English Measures

	No.	Perc.
Total # of rows	98290	100%
risk_ari ≥ strategy_ari	25262	26%
risk_ari < strategy_ari	72993	74%
TOTAL% risk_fog ≥ strategy_fog	19369	20%
risk_fog < strategy_fog	78886	80%
risk_smog ≥ strategy_smog	24953	26%
risk_smog < strategy_smog	71771	74%

Table 12: Plain English Comparison, 2008 and 2010–2020

		2008	2010–2020	Significance of difference
FOG	Risk	19.96	14.60	< 0.001
FOG	Strategy	21.16	19.19	< 0.001
ARI	Risk	28.37	17.06	< 0.001
ARI	Strategy	30.58	19.19	< 0.001
SMOG	Risk	20.06	16.57	< 0.001
SMOG	Strategy	22.17	17.84	< 0.001

G. Regression Results

Table 13 repeats the regression analysis described in Section III, shows results grouped by fund family, rather than focused on individual fund disclosures. For four independent variables in the model, findings are largely consistent with what is reported above. First, for fund family groupings, more passive writing predicts hard-to-read Investment Strategy disclosures (Voice). Second, higher sentence counts predict easier-to-read writing in both sections. Third, increasing returns predict easier-to-read Principal Risk disclosures (Alpha). Fourth, larger fund size predicts easier-to-read writing in both sections.¹⁹² Fund family results further validate initial findings that fund features and disclosure characteristics predict readability.

¹⁹² Differences emerge with High_Derivative, standard deviation of returns (risk), and fund turnover, as well as differences between the sections on Voice and Alpha.

The model loses statistical significance for High Derivative disclosure flags, standard deviation of returns (risk), and fund turnover. The model also loses statistical significance for PR readability with voice and IS readability with fund returns.

Table 13: Fixed Effects Regression Results with Readability and Derivative Risk

	Risk Section	Strategy Section
Disclosure Characteristics		
Voice	0.1591 ^{***} (-2.763)	-0.1386 ^{**} (-1.998)
Deriv_Risk_High	-0.1386 ^{**} (-1.998)	-0.1386 ^{**} (0.803)
Number of sentences	0.5363 ^{***} (7.543)	0.1383 [*] (1.918)
Fund Features		
Four factor alpha	0.2020 ^{***} (3.580)	0.0623 (1.039)
Std. dev.	-0.1498 ^{***} (-2.734)	0.1441 ^{**} (2.410)
Size (Log_tna)	-0.0709 (-1.273)	0.1451 ^{**} (2.454)
Turnover ratio	0.0442 (0.803)	0.0241 (0.409)
Number of obs.	269	269
R-squared	0.249	0.141
F-Statistics	12.36	6.145

Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

