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Perfect Hedge: Adding Precision to the Proposed SEC Rule on Investment Company Use of Derivatives with a Hedging Exception

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PERFECT HEDGE: ADDING PRECISION TO THE PROPOSED SEC RULE ON INVESTMENT COMPANY USE OF DERIVATIVES WITH A HEDGING EXCEPTION

Abstract: Derivatives are complex financial instruments that derive their value from an underlying asset. Used and valued by commercial and financial institutions, derivatives are booming. Indeed, the growing \$600 trillion derivative market dwarfs the \$67 trillion stock market. Yet, the magnification effect of derivative leverage on losses has well-documented ties to the 2008 Financial Crisis when AIG, Lehman Brothers, and other financial institutions found themselves indebted on hundreds of billions of dollars in derivative transactions. Since the crisis, investment companies and funds constrained by the Investment Company Act to protect unsophisticated and vulnerable investors have increased their use of derivatives. In response to a dearth of regulation of investment company use of derivatives, the SEC introduced Proposed Rule 18f-4 in 2015. The proposed rule would control risky derivative use through mandating portfolio limitations, asset segregation requirements, the establishment of Derivative Risk Management Programs, and additional recordkeeping requirements. The current wind in government, however, blows against such a rule. This Note argues that Proposed Rule 18f-4 should not be abandoned but rather implemented to prevent hazardous derivative use by investment companies. The rule, if implemented, should allow for the beneficial and vital use of hedging in its calculation of fund risk exposure and use expected shortfall instead of Value at Risk in making such a calculation. These augmentations to the rule would allow investment companies to benefit from derivatives and still follow the Investment Company Act's goal of protecting unsophisticated investors.

INTRODUCTION

Currently estimated to be over \$600 trillion, the growing derivatives market is up from \$445 trillion in 2006 and is much larger than even the \$67 trillion global stock market.¹ U.S. investment companies, who currently manage

¹ See BANK FOR INT'L SETTLEMENTS, EXCHANGE-TRADED FUTURES AND OPTIONS BY LOCATION OF EXCHANGE 1 (2017) [hereinafter BIS, EXCHANGE-TRADED FUTURES] (providing statistics on the 2006 and 2016 exchange traded derivative market sizes); BANK FOR INT'L SETTLEMENTS, OTC DERIVATIVES MARKET ACTIVITY IN THE SECOND HALF OF 2016, at 1 (2017) (providing statistics on the 2006 and 2016 over-the-counter ("OTC") derivative market sizes); WORLD FED'N OF EXCHS., ANNUAL STATISTICS GUIDE 2016, at 1 (2017) (providing statistics on the global stock market). There are numerous definitions for derivatives, but the term has generally been defined as financial instruments that derive their value from an underlying asset. See JOHN HULL & SANKARSHAN BASU, OP-

over \$19.5 trillion in assets—up from \$11 trillion in 2006—are also enjoying substantial growth, both in the amount of assets held and number of firms.² As they have continued to grow, investment companies funds (“funds”), such as mutual funds and exchange-traded-funds (“ETFs”), have increased their use of derivatives and innovatively engineered them.³ The U.S. Securities and Exchange Commission (“SEC”) has pushed back on the risky use of derivatives by funds and proposed Rule 18f-4 in 2015 in an effort to bring fund derivative use under the purview of the Investment Company Act of 1940 (“ICA”).⁴

Derivatives have drawn immense criticism, reaching a crescendo with the 2008 Financial Crisis.⁵ Financial calamities in the 1990s and early 2000s, such

TIONS, FUTURES, AND OTHER DERIVATIVES 1 (9th ed. 2016) (defining “derivative”); *see also infra* notes 31–59 and accompanying text (providing an in-depth explanation of derivatives).

² INV. CO. INST., 2017 INVESTMENT COMPANY FACT BOOK: A REVIEW OF TRENDS AND ACTIVITIES IN THE U.S. INVESTMENT COMPANY INDUSTRY 8–9 (57th ed. 2017) (providing statistics on fund holdings and number of firms in 2006 and 2016); *see also* PAUL HANOUNA ET AL., DIV. OF ECON. & RISK ANALYSIS, LIQUIDITY AND FLOWS OF U.S. MUTUAL FUNDS 1–2 (2015) (pointing out that mutual funds experienced a 300% growth of assets under management from 2000 to 2014). Investment companies (“funds”) with less liquidity have also grown significantly within that time period. HANOUNA ET AL., *supra*, at 1. The Investment Company Act (“ICA”) generally defines investment companies as companies that issue securities and are chiefly in the “business of investing” in securities. *See* 15 U.S.C. § 80a-3(a)(1) (2012) (defining “investment company” under the ICA); *see also infra* notes 60–79 and accompanying text (providing an in-depth explanation of investment company). Private investment companies, such as hedge funds, typically meet requirements to be exempted from the ICA. Henry Ordower, *The Regulation of Private Equity, Hedge Funds, and State Funds*, 58 AM. J. COMP. L. 295, 300 (2010). Some common fund complexes include BlackRock, Vanguard Group, and Fidelity Investments. John Morley & Quinn Curtis, *Taking Exit Rights Seriously: Why Governance and Fee Litigation Don’t Work in Mutual Funds*, 120 YALE L. J. 84, 92 (2010).

³ *See* DANIEL DELI ET AL., DIV. OF ECON. & RISK ANALYSIS, USE OF DERIVATIVES BY REGISTERED INVESTMENT COMPANIES 2–3 (2015) (describing derivative development); Dan Awrey, *Complexity, Innovation, and the Regulation of Modern Financial Markets*, 2 HARV. BUS. L. REV. 235, 271–74 (2012) (explaining some particularly complex derivative uses by funds). In one random study of 10% of U.S. funds, alternative strategy funds, which typically employ a heavy use of derivatives, increased their assets from \$320 billion in 2010 to \$469 billion in 2014. DELI ET AL., *supra*, at 2, 21.

⁴ *See* Use of Derivatives by Registered Investment Companies and Business Development Companies, Investment Company Act Release No. 31933, 112 SEC Docket 6625, at 9–13 (proposed Dec. 11, 2015) [hereinafter Proposing Release] (explicitly addressing what abuses in the market spurred targeting derivative use). Derivative use by funds was not explicitly addressed in either the ICA or Release No 10666. *See generally* 15 U.S.C. §§ 80a-1 to -64 (making no mention of derivatives); Securities Trading Practices of Registered Investment Companies, Investment Company Act Release No. 10666, 44 Fed. Reg. 25,128 (Apr. 27, 1979) [hereinafter Release 10666] (targeting financial commitment transactions). Later, however, the SEC addressed derivative use in numerous no-action letters. *See* Kelly S. Kibbie, *Dancing with the Derivatives Devil: Mutual Funds’ Dangerous Liaison with Complex Investment Contracts and the Forgotten Lessons of 1940*, 9 HASTINGS BUS. L. J. 195, 232–35 (2013) (listing no-action letters addressing derivatives). No-action letters are SEC replies to requests for guidance on whether a certain action meets the requirements of current law. THOMAS HAZEN, THE LAW OF SECURITIES REGULATION § 1:4[4] (7th ed. 2017).

⁵ *See* Brooksley Born, *Foreword: Deregulation: A Major Cause of the Financial Crisis*, 5 HARV. L. & POL’Y REV. 231, 237 (2011) (stating that derivatives were major role-players in the Financial Crisis); Mark J. Roe, *The Derivatives Market’s Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539, 588 (2011) (concluding that the 2008 Financial Crisis was accelerated by deriva-

as Enron's collapse, Long-Term Capital Management's \$4.6 billion loss, followed by collapse, and Metallgesellschaft AG's \$1.3 billion loss were all tied to derivatives use.⁶ The 2008 Financial Crisis was accelerated by the use of derivatives by some major financial institutions, such as AIG and Lehman Brothers, who were unable to pay hundreds of billions in derivatives obligations as the housing bubble burst.⁷ Although the destructive systematic impact

tives); Lynn A. Stout, *Derivatives and the Legal Origin of the 2008 Credit Crisis*, 1 HARV. BUS. L. REV. 1, 37 (2011) (arguing that the lack of regulation of derivatives caused the 2008 Financial Crisis); Editorial Board, *The New Danger from Derivatives*, BLOOMBERG, Mar. 7, 2016, at 2 (arguing that the exchanges that some derivatives are traded on face risks that could spread to other sectors); Tony Jackson, *Crazy Crisis May Herald the End of New Derivative Folly*, FIN. TIMES (Dec. 23, 2007), <https://www.ft.com/content/69293026-b16e-11dc-9777-0000779fd2ac> [<https://perma.cc/M7T7-2RG4>] (positing that the current market would be safer without derivatives).

⁶ See generally *The Fall of Enron: How Could It Have Happened?: Hearing Before the Sen. Comm. on Gov't Affairs*, 107th Cong. 376 (2002) [hereinafter Partnoy Testimony] (testimony of Frank Partnoy, Professor of Law, University of San Diego School of Law) (outlining how Enron traders used derivatives to hide losses); Alexia Brunet & Merideth Shafe, *Beyond Enron: Regulation in Energy Derivatives Trading*, 27 NW. J. INT'L L. & BUS. 665 (2007) (covering Enron's abuse of derivatives); Franklin Edwards, *Derivatives Can Be Hazardous to Your Health: The Case of Metallgesellschaft*, DERIVATIVES Q., Spring 1995, at 9, 9–13 (explaining the circumstances behind Metallgesellschaft's losses); Andrew Verstein, *Benchmark Manipulation*, 56 B.C.L. REV. 215 (2015) (demonstrating how derivatives can be used by benchmark manipulators to obtain gains); Michael Siconolfi et al., *How Salesmanship and Brainpower Failed to Save Long-Term Capital*, WALL ST. J. (Nov. 16, 1998, 12:13 AM), <https://www.wsj.com/articles/SB911168945488412500> [<https://perma.cc/T69L-RX7X>] (explaining the circumstances behind the losses caused by Long-Term Capital Management's derivative use).

⁷ See *The Role of Derivatives in the Financial Crisis: Hearing Before the Fin. Crisis Inquiry Comm'n* (2010) (statement of Michael Greenberger, Professor, University of Maryland School of Law) (transcript available at http://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1036&context=cong_test [<https://perma.cc/BQH4-B3UD>]) (covering the rise of deregulated derivative use and its ties to the Financial Crisis); FIN. CRISIS INQUIRY COMM'N, THE FINANCIAL CRISIS INQUIRY REPORT 279 (2011) (concluding that the massive losses of major financial institutions were due to derivatives); René Stulz, *Financial Derivatives: Lessons from the Subprime Crisis*, MILKEN INST. REV., First Quarter 2009, at 70 (linking derivatives to losses in the Financial Crisis); Tim Adam & Andre Guettler, *The Use of Credit Default Swaps by U.S. Fixed-Income Mutual Funds* 10 (Fed. Deposit Ins. Corp., Working Paper No. 2011-01, 2010) (stating that the use of certain derivatives caused substantial losses at banks and funds during the Financial Crisis); Robert L. McDonald & Anna L. Paulson, *AIG in Hindsight* 12–18 (Nat'l Bureau of Econ. Research, Working Paper No. 21108, 2015) (explaining AIG's derivative use). Alan Greenspan, the revered former chairman of the Federal Reserve, once championed the use of derivatives but recanted that view after the Financial Crisis. See FIN. CRISIS INQUIRY COMM'N, *supra*, at 47–49 (quoting Greenspan as stating before the financial crisis that he believed the regulation of derivatives was “unnecessary” but then stated that he was “not opposed to the regulation of derivatives”). There were warning signs indicating that derivative use could cause problems. See *id.* at xxi (explaining some of the variables indicating dangers of derivative use prior to the Financial Crisis); Born, *supra* note 5, at 5 (covering efforts to regulate derivatives prior to the Financial Crisis); Martin Mayer, *The Dangers of Derivatives*, BROOKINGS, May 20, 1999, at 2 (raising concerns with the use of derivatives prior to the Financial Crisis); René Stulz, *Should We Fear Derivatives?*, 18 J. ECON. PERSPECTIVE 173, 190 (2004) (outlining the dangers of derivatives in 2004); Letter from Warren Buffett, Chief Exec. Officer, Berkshire Hathaway, Inc., to S'holders of Berkshire Hathaway (Feb. 21, 2003) (calling derivatives “weapons of mass destruction”) (on file with Berkshire Hathaway, Inc.). Brooksley Born, Chairwoman of the Commodities Futures Trading Commission, tirelessly pushed for

had already been felt, Congress enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010, in part, to address select types of derivatives in response to the massive losses sustained and calls for derivative regulation.⁸ Even with regulations in place, worries still continue to surface about a repeat of the systemic failures of the 2008 Financial Crisis that were magnified by derivatives use.⁹

Despite the risks, derivatives are seen as beneficial and important instruments for capital markets.¹⁰ They allow for lower transaction costs and price discovery, improve liquidity, and can be tools for efficient market risk alloca-

regulation but was rebutted by Alan Greenspan and Congress. See Richard B. Schmitt, *The Born Prophecy*, 95-MAY ABA. J. 50, 55 (2009) (outlining Born's fight for regulation and the push-back from the Treasury); Stout, *supra* note 5, at 20–21 (describing Born's push for regulation). Born continues to advocate for derivative regulation. See Born, *supra* note 5, at 242–43 (advocating for greater derivative regulation).

⁸ See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010) (regulating certain derivatives); Michael Greenberger, *Overwhelming a Financial Regulatory Black Hole with Legislative Sunlight: Dodd-Frank's Attack on Systemic Economic Destabilization Caused by an Unregulated Multi-Trillion Dollar Derivatives Market*, 6 J. BUS. & TECH. L. 127, 152–55 (2011) (outlining how the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank") was intended to regulate certain derivatives). Systemic risk is all "non-business specific risk." JEFFREY HAAS, CORPORATE FINANCE 3 (2014). Specifically, it is the risk that an economic tremor will result in market losses or losses to financial institutions that lead to increases in the cost of capital. Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L. J. 193, 204 (2008).

⁹ See OFF. OF FIN. RESEARCH, ASSET MANAGEMENT & FINANCIAL STABILITY 18–19 (2013) (finding that current use of derivatives poses risks to financial stability); Colleen M. Baker, *Regulating the Invisible: The Case of Over-the-Counter Derivatives*, 85 NOTRE DAME L. REV. 1287, 1292 (2010) (arguing for more transparency of derivative use due to their possible systemic impact); Michael Simkovic, *Paving the Way for the Next Financial Crisis*, 29 NO. 3 BANKING & FIN. SERVICES POL'Y REP. 1, 2, 6 (2010) (arguing that concerns remain about the regulation of OTC derivatives); John Dizard, *Derivatives Market Is Short of a \$3.7tn Lifeboat*, FIN. TIMES (Feb. 10, 2017), <https://www.ft.com/content/1726ae08-eee9-11e6-930f-061b01e23655> [<https://perma.cc/6KBT-P4ZV>] (stating that the OTC derivative market is under-collateralized at about \$3.69 trillion); Mayra Rodríguez Valladares, *Derivatives Markets Growing Again, with Few New Protections*, N.Y. TIMES: DEALBOOK (May 13, 2014, 4:35 PM), <https://dealbook.nytimes.com/2014/05/13/derivatives-markets-growing-again-with-few-new-protections/> [<https://perma.cc/9CUW-8ATY>] (highlighting the concentration of derivatives in few financial institutions). In the instances of Bear Sterns, AIG, and Long-Term Capital Management, all had numerous outstanding derivatives contracts that would have shifted back to their counterparties and had an immense effect on the markets. ALAN RECHTSCHAFFEN, CAPITAL MARKETS, DERIVATIVES AND THE LAW 160 (2009); see also *infra* note 36 and accompanying text (explaining derivative counterparties).

¹⁰ See Proposing Release, *supra* note 4, at 9–13 (acknowledging the multiple uses of derivatives); MICHAEL CHUI, IFC BULLETIN NO. 35, DERIVATIVES MARKETS, PRODUCTS AND PARTICIPANTS: AN OVERVIEW 3 (Feb. 2012) (listing the benefits of derivatives); Jonathan R. Macey, *Derivative Instruments: Lessons for the Regulatory State*, 21 J. CORP. L. 69, 72–81 (1995) (listing the benefits of derivatives); Shelly Antoniewicz, *Derivatives—Please Don't Let Them Be Misunderstood*, INV. CO. INST. (Feb. 22, 2016), https://www.ici.org/viewpoints/view_16_derivatives_imf [<https://perma.cc/28J9-K874>] (arguing that there are many benefits that can be derived by using derivatives); see also *infra* notes 31–106 (covering the variety of uses of derivatives).

tion.¹¹ Funds specifically benefit through the ability to hedge risks and maximize gains on investments.¹² Although derivative use has received immense criticism, oversimplifications of measurements, incomplete data, and quick conclusions can muddy risk delineations between different derivative uses.¹³

The inherent risk in derivative use still persists, however, and is of particular concern to the SEC when funds, which are accessible to unsophisticated and vulnerable investors, utilize them.¹⁴ Additionally, there has been no formal SEC guidance on fund use of derivatives since 1979, and even then, derivatives were not explicitly addressed.¹⁵ With the 2008 Financial Crisis fresh in regulators' minds, a growing derivatives market, an influx of investment company use of derivatives, and evidence suggesting that funds pose systemic risk,

¹¹ See HAAS, *supra* note 8, at 119 (explaining the beneficial uses of derivative hedging); RECHTSCHAFFEN, *supra* note 9, at 159–60 (explaining that derivatives are a means to shift risk to parties who are willing to take it on or are better suited to take it on and that derivatives lower fund costs, allow for hedging, help manage assets, and increase profits); Macey, *supra* note 10, at 72–76 (stating that derivatives allow parties to shift risk); Keith Sill, *The Economic Benefits and Risks of Derivative Securities*, BUS. REV., Jan. 1997, at 15, 20 (explaining that derivatives help spread risk). Derivatives also enjoy special treatment in bankruptcy. See Franklin R. Edwards & Edward R. Morrison, *Derivatives and the Bankruptcy Code: Why the Special Treatment?*, 22 YALE J. REG. 91, 95 (2005) (explaining that that derivatives counterparties are prevented from terminating them during bankruptcy).

¹² See COMM. ON FED. REGULATION OF SEC., ABA, REPORT OF THE TASK FORCE ON INVESTMENT COMPANY USE OF DERIVATIVES AND LEVERAGE 6 (2010) (outlining how funds benefit from derivatives); Kibbie, *supra* note 4, at 208–09 (outlining how funds benefit from derivatives); Terry Tian, *The Use of Derivatives in Mutual Funds*, MORNINGSTAR, Apr. 18, 2012, at 1 (stating that mutual funds use derivatives to manage risk); Antoniewicz, *supra* note 10 (finding that there are many benefits for funds from derivatives).

¹³ See INV. CO. INST., 2016 INVESTMENT COMPANY FACT BOOK: A REVIEW OF TRENDS AND ACTIVITIES IN THE U.S. INVESTMENT COMPANY INDUSTRY, at ix (56th ed. 2016) (highlighting common misconceptions about derivatives); Lisa Pollack, *How NOT to Argue That Derivatives Are the Devil's Spawn*, FIN. TIMES (June 13, 2012), <https://ftalphaville.ft.com/2012/06/13/1041931/how-not-to-argue-that-derivatives-are-the-devils-spawn/> [<https://perma.cc/P7A5-EF6U>] (criticizing another news outlet's conclusions about derivatives because they “cherry-picked” support); Antoniewicz, *supra* note 10 (highlighting common misconceptions about derivatives).

¹⁴ See 15 U.S.C. § 80a-42 (2012) (granting power to SEC to investigate violations of and enforce the ICA); Timothy E. Lynch, *Derivatives: A Twenty-First Century Understanding*, 43 LOY. U. CHI. L.J. 1, 5 (2011) (describing derivatives as inherently maintaining the ability to magnify losses). The general purpose of the laws governing funds is to protect individual investors. See *Herpich v. Wallace*, 430 F.2d 792, 816 (5th Cir. 1970) (“The history and whole pattern of the Investment Company Act convince us that Congress by this statute intended to deter mismanagement of investment companies for the protection of investment company security holders . . .”); *Greater Iowa Corp. v. McLendon*, 378 F.2d 783, 795 (8th Cir. 1967) (stating that the ICA “was primarily aimed at the protection of individuals who purchase the security issued by the investment company”). The ICA specifically limits fund use of leverage, a characteristic of many derivatives. See 15 U.S.C. § 80a-18(h) (regulating fund leverage); see also *infra* notes 31–50 and accompanying text (discussing leverage).

¹⁵ Proposing Release, *supra* note 4, at 19. The guidance has been limited to Release 10666 and no-action letters. *Id.* Mary Jo White, the former SEC Chair, stated at the time of Rule 18f-4's proposal that the existing regulations did not sufficiently carry out the objectives of the ICA. Mary Jo White, Chair, SEC, Statement at Open Meeting (Dec. 11, 2015) (transcript available at <https://www.sec.gov/news/statement/chair-white-statement-at-open-meeting.html> [<https://perma.cc/3MWU-GMYF>]).

the SEC has taken a more aggressive regulatory approach to protect investors.¹⁶ In 2015, the SEC proposed Rule 18f-4, its most comprehensive rule governing fund use of derivatives.¹⁷ There are six regulatory components to Rule 18f-4: (1) portfolio limitations; (2) asset segregation; (3) the Derivatives Risk Management Program; (4) requirements for Financial Commitment Transactions; (5) recordkeeping; and (6) amendments to proposed SEC forms N-PORT and N-CEN.¹⁸

The mutual fund industry, as well as Michael Piwowar, then Acting Chairman of the SEC and now a Commissioner on the SEC, criticized the proposal as lacking flexibility and possessing imprecise definitions.¹⁹ Critics,

¹⁶ See Proposing Release, *supra* note 4, at 1–2 (outlining the reasoning behind Proposed Rule 18f-4); OFF. OF FIN. RESEARCH, *supra* note 9, at 18 (stating that failure of a large asset management firm could pose a risk to the financial system). There has been an upward trend in SEC enforcement actions between 2014 and 2016, with 2016 being an exceptional year for SEC enforcement. Jessica Dye, *US Securities Regulators Tout Another Record Year for Enforcement*, FIN. TIMES (Oct. 11, 2016), <https://www.ft.com/content/65676ae6-670c-3c9a-8c0b-7b32ed43d3d8> [<https://perma.cc/X2U9-XPRH>].

¹⁷ See Proposing Release, *supra* note 4, at 1 (proposing a comprehensive rule on derivatives); David C. Sullivan, *Proposed Rule on Registered Funds' Use of Derivatives*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Jan. 17, 2016), <https://corpgov.law.harvard.edu/2016/01/17/proposed-rule-on-registered-funds-use-of-derivatives/> [<https://perma.cc/EV6Z-GG6J>] (summarizing key aspects of Proposed Rule 18f-4). Proposed Rule 18f-4, if approved as a Final Rule by the SEC, would supplant a substantial amount of former no-action letters and SEC guidance. See Proposing Release, *supra* note 4, at 54 (listing the regulations that 18f-4 would replace). The Proposed Rule can become a Final Rule only after it is voted on by the SEC Commission. See *Fast Answers: Rulemaking, How It Works*, SEC, <https://www.sec.gov/fast-answers/answersrulemaking.htm> [<https://perma.cc/5LAU-XECF>] (providing a short explanation of the rulemaking process).

¹⁸ Proposing Release, *supra* note 4, at 51–54 (summarizing the main components of the Proposed Rule 18f-4). Proposed forms N-PORT and N-CEN were introduced on May 20, 2015 in an attempt to modernize fund disclosure. Investment Company Reporting Modernization, Securities Act Release No. 33-9776, Exchange Act Release No. 34-75,002, Investment Company Act Release No. 31,610, 80 Fed. Reg. 33,590 (proposed June 12, 2015).

¹⁹ See, e.g., Fidelity Management & Research Company, Comment Letter on Proposed Rule Regarding the Use of Derivatives by Registered Investment Companies (Mar. 28, 2016) [hereinafter Fidelity Comment Letter] (advocating for the allowance of hedging in exposure calculation) (on file with the SEC); Vanguard, Comment Letter on Proposed Rule: Use of Derivatives by Registered Investment Companies (Mar. 28, 2016) (advocating for an expansion of qualifying coverage assets and recognition of offsetting transactions) (on file with the SEC); Joe Rennison, *Mutual Funds Hit Back at SEC Proposal to Limit Derivative Use*, FIN. TIMES (Mar. 29, 2016), <https://www.ft.com/content/cb563284-f5fe-11e5-96db-fc683b5e52db> [<https://perma.cc/S8VB-CZWW>] (outlining some of the responses by mutual funds to the Proposed Rule and highlighting that a recent study found that 471 funds with \$613 billion in assets would not meet the requirements of the proposed rule); Michael Piwowar, Comm'r, SEC, Dissenting Statement at Open Meeting on Use of Derivatives by Registered Investment Companies (Dec. 11, 2015) [hereinafter Piwowar Statement] (transcript available at <https://www.sec.gov/news/statement/piwowar-dissenting-statement-use-of-derivatives-funds.html> [<https://perma.cc/JY5G-ZZ77>]) (stating that he could not support the proposed rule because the SEC did not do a high-quality analysis of comprehensive data on fund use of derivatives); Letter from Barbara Novivk, Vice Chairman, BlackRock, to Brent J. Fields, Secretary, SEC (Dec. 5, 2016), <https://www.sec.gov/comments/s7-24-15/s72415-266.pdf> [<https://perma.cc/KKT2-WF5R>] (advocating for an expansion of what constitutes qualifying covering assets).

however, conceded that there is a need for updated regulations.²⁰ The change in presidential administrations in 2016, however, has turned the tide against regulation generally, leaving Proposed Rule 18f-4's fate up in the air.²¹ This Note argues that Proposed Rule 18f-4 should be implemented in order to protect investors and the national public but should be modified to allow for the beneficial use of hedging in its calculation of fund exposure to risks.²²

Part I of this Note discusses the current use of derivatives by funds and the current regulatory scheme.²³ Part II explores the provisions set out by Proposed Rule 18f-4.²⁴ Part III argues that Proposed Rule 18f-4 serves as a necessary starting point for the regulation of derivative use by funds, but must be tailored in some of its key components to allow funds to simultaneously benefit investors and adequately protect unsophisticated investors.²⁵

I. FUND DERIVATIVE USE AND THE CURRENT REGULATORY SCHEME

Derivatives and funds have long-held significance in U.S. financial markets predating the Great Depression.²⁶ In the past few years, however, invest-

²⁰ See Fidelity Comment Letter, *supra* note 19, at 2 (supporting updated regulations); Daisy Maxey, *Seeking More Clarity on Derivatives in Mutual Funds*, WALL ST. J. (June 15, 2015, 9:54 AM), <https://www.wsj.com/articles/seeking-more-clarity-on-derivatives-in-mutual-funds-1434376452> [<https://perma.cc/ZB7Q-4M33>] (finding that funds generally supported an update of regulations); Dave Michaels, *Here Come ETF Regulations (and Why the Industry Is Happy About It)*, WALL ST. J. (Mar. 6, 2017, 4:18 PM), <https://www.wsj.com/articles/here-come-etf-regulations-and-why-the-industry-is-happy-about-it-1488770041> [<https://perma.cc/NQE3-W3EW>] (quoting the Chief Executive of the Investment Company Institute as believing that “a well-drawn up rule on derivatives would be a good one”); Piowar Statement, *supra* note 19, at 1 (stating the need for updated regulations).

²¹ See Exec. Order No. 13,771, 82 Fed. Reg. 9339 (Jan. 30, 2017) (requiring that two existing regulations be identified as “to be repealed” when an agency or executive department proposes notice and comment); Exec. Order No. 13,772, 82 Fed. Reg. 9965 (Feb. 3, 2017) (setting out the “Core Principles” of regulation for the Trump administration and ordering the Financial Stability Oversight Council to report on current regulations). Though Dodd-Frank has been targeted as a regulation that could be scaled back in the coming years, the U.S. derivatives industry is not necessarily in favor of a complete return to pre-Financial Crisis regulation. See Joe Rennison & Phillip Stafford, *US Derivatives Industry Anticipates Modest Dodd-Frank Changes*, FIN. TIMES (Feb. 7, 2017), <https://www.ft.com/content/1f6ccfbc-ed2e-11e6-ba01-119a44939bb6> [<https://perma.cc/MV4H-FLNT>] (pointing out that chief executives of exchanges do not think a total repeal of the law is prudent). The current SEC Chairman, Jay Clayton, is a former Wall Street lawyer. Dave Michaels, *Jay Clayton Confirmed as SEC Chairman*, WALL ST. J. (May 2, 2017, 6:29 PM), <https://www.wsj.com/articles/jay-clayton-confirmed-as-sec-chairman-1493763672> [<https://perma.cc/NK5V-6YCM>]; see also Jay Clayton, Chairman, SEC, Remarks at the Economic Club of New York (July 12, 2017) (transcript available at <https://www.sec.gov/news/speech/remarks-economic-club-new-york> [<https://perma.cc/ND2W-34WE>]) (speaking on his policy views).

²² See *infra* notes 184–226 and accompanying text.

²³ See *infra* notes 26–106 and accompanying text.

²⁴ See *infra* notes 107–183 and accompanying text.

²⁵ See *infra* notes 184–226 and accompanying text.

²⁶ See CLIFFORD KIRSCH, MUTUAL FUNDS AND EXCHANGE TRADED FUNDS REGULATION § 1A:1 n.3 (3d ed. 2013) (stating that the funds began to flourish in the 1920s but had been established in the United States in the 1800s); see also Stout, *supra* note 5, at 11–17 (tracing the history of derivatives in

ment volumes in both have reached unprecedented heights.²⁷ This Part explores the current use of derivatives by funds and the existing regulatory guidance.²⁸ Section A provides an explanation of derivatives and funds and discusses how funds currently utilize derivatives.²⁹ Section B examines the current SEC regulations that govern fund use of derivatives that Rule 18f-4 seeks to replace.³⁰

A. Expansion of Fund Use of Derivatives

1. Derivatives

Legal practitioners and academics alike have difficulty explaining derivatives.³¹ Generally, derivatives are financial instruments that derive their value from an underlying asset.³² They are bilateral contracts between counterparties who each take opposing positions, with each party contracting to buy, sell, or transfer an asset at a certain date in the future.³³ Derivatives are aleatory con-

the United States); Alan Greenspan, Chairman, Bd. of Governors of the Fed. Reserve, Remarks at the Financial Markets Conference of the Federal Reserve Bank of Atlanta (Feb. 21, 1997) (transcript available at https://fraser.stlouisfed.org/scribd/?item_id=8587&filepath=/files/docs/historical/greenspan/Greenspan_19970221.pdf [<https://perma.cc/K5BH-JQ6Z>]) (outlining some of the major developments in derivatives history in the United States). The 1990s saw an explosion of derivative use, with Alan Greenspan remarking in 1999 that “[b]y far the most significant event in finance during the past decade has been the extraordinary development and expansion of financial derivatives.” Alan Greenspan, Chairman, Federal Reserve Bank, Address at Futures Industry Association Conference (Mar. 1999).

²⁷ See BIS, EXCHANGE-TRADED FUTURES, *supra* note 1, at 1 (showing an increase in the derivatives market from less than \$100 trillion to more than \$700 trillion between the 1990s and 2010s); INV. CO. INST., *supra* note 2, at 9 (presenting statistics on immense fund growth). Funds have become important choices for retirement plans, with mutual funds managing 63% of 401(k) plans. See KIRSCH, *supra* note 26, § 1A:2.5[C]; *Retirement Assets Total \$27.2 Trillion in Third Quarter 2017*, INV. CO. INST. (DEC. 20, 2017), https://www.ici.org/research/stats/retirement/ret_17_q3 [<https://perma.cc/WEZ8-X7US>] (providing data on retirement assets). Currently, over 43% of U.S. households invest in mutual funds. INV. CO. INST., *supra* note 2, at 112.

²⁸ See *infra* notes 31–106 and accompanying text.

²⁹ See *infra* notes 31–91 and accompanying text.

³⁰ See *infra* notes 92–106 and accompanying text.

³¹ See Lynch, *supra* note 14, at 9 (explaining that many practitioners misunderstand derivatives). There are numerous definitions of derivatives that are similar to the one presented, which lends credence to the struggle scholars have in defining the term. See *id.* at 16 n.39 (listing nine different definitions of derivatives by scholars).

³² See HULL & BASU, *supra* note 1, at 1 (defining “derivatives”); Frank H. Easterbrook, *Derivative Securities and Corporate Governance*, 69 U. CHI. L. REV. 733, 734 (2002) (same); Lynch, *supra* note 14, at 5 (same). The “underlying asset” need not be a physical asset that can be possessed. See HULL & BASU, *supra* note 1, at 1 (stating that derivatives can be based on practically any variable). Indeed, many derivatives are based on events such as credit derivatives, weather derivatives, and interest rate derivatives. See HULL & BASU, *supra* note 1, at 1 (listing different types of assets that derivatives are based upon); Lynch, *supra* note 14, at 24 (same).

³³ See *Procter & Gamble Co. v. Bankers Tr. Co.*, 925 F. Supp. 1270, 1275 (S.D. Ohio 1996) (stating that a derivatives transaction is a “bilateral contract or payments exchange agreement whose value derives . . . from the value of an underlying asset or underlying reference rate or index”) (internal

tracts, meaning that the outcome is based on an event that the counterparties have no control over.³⁴ Derivatives typically come in four different forms: forwards, futures, options, and swaps.³⁵ One of the simplest derivative transactions is a future.³⁶ For example, if Trader A wishes to enter into a three-month futures contract in January to buy 100 pounds of wheat at \$0.15 per pound (the long position), Trader B will contract to sell the 100 pounds of wheat at \$0.15 at the end of the three-month period (the short position).³⁷ If the price of wheat during that time increases above \$0.15, then trader A will buy the wheat at a discounted price and be able to then sell it for a profit and if the price of wheat drops below \$0.15 then trader B will be selling the wheat at an above market price.³⁸

quotations omitted); WALLACE TURBEVILLE, DEMOS, DERIVATIVES, INNOVATION IN THE ERA OF FINANCIAL DEREGULATION 8–9 (2013) (“[A] bilateral contract between two parties, requiring performance in the future.”). Counterparties are not in the position to have an effect on the event. Lynch, *supra* note 14, at 17–18. Derivatives are often zero-sum in that they redistribute wealth to one party rather than create value. *Id.* at 18–19. If used for hedging, derivatives can create value by offering insurance. *Id.* at 18–19. Derivatives are either deliverable or non-deliverable based on the physical nature of the asset. *Id.* at 17–18. Even if a derivative is deliverable, the holder might not want to deliver the underlying asset. *Id.* at 17–18. Other holders may want actual physical delivery of the asset. *See id.* at 17–18. In the case where the holder does not want to deliver the underlying asset, the contract is cash settled. HULL & BASU, *supra* note 1, at 857. Cash settlement means that the counterparty pays the intrinsic value of the derivative. HAAS, *supra* note 8, at 123.

³⁴ *See* RESTATEMENT (SECOND) OF CONTRACTS § 76 cmt. c (AM. LAW INST. 1981) (defining “aleatory contract”); Timothy E. Lynch, *Gambling by Another Name: The Challenge of Purely Speculative Derivatives*, 17 STAN. J.L. BUS. & FIN. 67, 71 (2011) (same).

³⁵ *See* HULL & BASU, *supra* note 1, at 6–20 (covering the different types of basic derivatives). Forward contracts are agreements to sell or buy an asset at a certain price at a certain date. *See id.* at 6. Futures contracts are similar to forward contracts in that they are contracts to buy or sell an asset at a certain price at a certain date but are more often traded on an exchange. *Id.* at 8. Unlike forwards and futures, options contracts do not obligate the trader to exercise the contract, but rather give the trader a right to exercise the contract. *Id.* at 9. Forwards and futures also do not usually require upfront payment. *Id.* at 7. Options are divided into two types: call options and put options. *Id.* at 8. A call option gives the trader the right to buy for a certain price at a certain date and a put option gives the trader the right to sell for a certain price at a certain date. *Id.* In the United States, an option holder has the right to execute up to any time before the expiration date. *Id.* at 9. For example, Trader A wishes to enter into a call option in month one. *See id.* The exchange will list a strike or exercise price, the price of the underlying asset to be sold or bought when the buyer of the option exercises the option, and the price of the option to buy at that price for a certain period of time. *See id.* at 9. In month one, Trader A will choose which strike price (say, \$100) he or she wishes to buy the assets (100 shares of stock) that matures or expires on a certain date, in this case one year. *See id.* Trader A will then pay the exchange the cost of the listed contracts, in this case \$10 for the right to buy each share or \$1000 total for the right to buy 100 shares. *See id.* Trader A will exercise the call option if the price of each share rises above \$100 before the year period. *See id.* If it does not rise above \$100 Trader A will not exercise the right to buy and will lose the \$1000. *See id.* Swaps are more complicated derivatives that are contracts to exchange cash flows of typically an interest or exchange rate at a certain date. *Id.* at 175.

³⁶ *See id.* at 8 (explaining futures contracts). In a futures contract, one party seeks to buy an asset, called the long position, and the other party seeks to sell, called the short position. *Id.*

³⁷ *See id.*

³⁸ *See id.*

Derivatives are traded either on exchanges or over-the-counter (“OTC”).³⁹ Exchange traded derivatives are those traded on regulated exchanges such as the Chicago Mercantile Exchange, the Chicago Board of Trade, or the Minneapolis Grain Exchange.⁴⁰ The exchange regulates the contracts between the parties, serves to keep the market orderly, and mitigates risk.⁴¹ OTC derivatives are negotiated and entered into off of regulated exchanges through either another party (called a central counterparty), or solely between the two traders (called a bilateral trade).⁴²

One of the most common uses of derivatives is to hedge the risk of an asset or another derivatives contract.⁴³ For example, an option gives the trader

³⁹ See *id.* at 1–2 (explaining the distinction between exchange-traded and OTC derivatives); Lynch, *supra* note 14, at 30 (same); see also RECHTSCHAFFEN, *supra* note 9, at 162 (finding that the distinction was made by the United States Treasury).

⁴⁰ See HULL & BASU, *supra* note 1, at 2 (listing exchanges); Lynch, *supra* note 14, at 30 (same). Exchange-traded derivatives provide a “central marketplace,” “standardized terms,” and “constant maturity.” RECHTSCHAFFEN, *supra* note 9, at 163. Originally, exchanges were open outcry systems where traders would perform the transactions on a physical floor, but electronic trading is becoming increasingly popular. HULL & BASU, *supra* note 1, at 3.

⁴¹ See HULL & BASU, *supra* note 1, at 2 (explaining derivative exchanges); Norman Menachem Feder, *Deconstructing Over-the-Counter Derivatives*, 2002 COLUM. BUS. L. REV. 677, 717–18 (same). The exchange clearinghouse acts as a middle party between the two trading counterparties. HULL & BASU, *supra* note 1, at 3. Instead of the traders directly dealing with each other, they take a side opposite of the contract with the clearinghouse. *Id.* For example, if a Trader A wishes to enter into the long position of a futures contract on an exchange, the clearinghouse will take the short position. See *id.* The clearinghouse will then take the long position in the contract with trader B who is taking the short position. See *id.* This method decreases the counterparty risk of parties not holding up their end of the contract. *Id.* Counterparty risk is the risk that a counterparty defaults on its obligation and the related risk of having many derivatives transactions with one counterparty. *Id.* at 208.

⁴² See HULL & BASU, *supra* note 1, at 3, 46 (explaining OTC derivatives transactions and central counterparties); Henry T.C. Hu, *Misunderstood Derivatives: The Causes of Informational Failure and the Promise of Regulatory Incrementalism*, 102 YALE L.J. 1457, 1457 (1993) (expressing worries about the OTC market); Jeremy Kress, *Credit Default Swaps, Clearinghouses, and Systemic Risk: Why Centralized Counterparties Must Have Access to Central Bank Liquidity*, 48 HARV. J. ON LEGIS. 49, 65 (2011) (listing the benefits of OTC derivatives). The OTC market allows for flexible contract terms. RECHTSCHAFFEN, *supra* note 9, at 163. Central counterparties perform a role similar to that of the exchange by taking the counterparty position for each trader. HULL & BASU, *supra* note 1, at 46. When the transaction is completed only between the two traders, it is called a bilateral clearance. *Id.* OTC deals typically include a collateral requirement to cover the value of the contract. *Id.*

⁴³ See HULL & BASU, *supra* note 1, at 11; RECHTSCHAFFEN, *supra* note 9, at 163–65; Erik F. Gerding, *Credit Derivatives, Leverage, and Financial Regulation’s Missing Macroeconomic Dimension*, 8 BERKELEY BUS. L.J. 29, 37 (2011) [hereinafter Gerding, *Credit Derivatives*] (explaining hedging); Lynch, *supra* note 14, at 38. Hedging is commonly done with forwards and options contracts. See HULL & BASU, *supra* note 1, at 13 (noting common hedging derivatives). Forward contracts hedge risk by locking in the trader to buy or sell at a certain price. See *id.* Hedging, in the context of Credit Default Swaps, does not always result in a full mitigation of risk. See Gina-Gail S. Fletcher, *Hazardous Hedging: The (Unacknowledged) Risks of Hedging with Credit Derivatives*, 33 REV. BANKING & FIN. L. 813, 865 (2014) (stating that perfect hedges are near impossible); Edwin Patterson, *Hedging and Wagering on Produce Exchanges*, 40 YALE L. J., 843, 878 (1930) (finding that courts struggle with the distinction). Hedging, however, is viewed as vital to the marketplace. Erik F. Gerding, *Code, Crash, and Open Source: The Outsourcing of Financial Regulation to Risk Models*

insurance while still allowing the trader to attain financial gain.⁴⁴ Consider Trader A, who wishes to hedge against the risk that the price of her 100 shares dips to below \$10.⁴⁵ By entering into a put option to sell the 100 shares at \$10, Trader A ensures that she will be able to sell at \$10 if the stock drops below that point at the maturity date.⁴⁶ Derivatives can hedge pre-existing risk such as credit and lending risk and therefore eventuate certain financing arrangements that would not have otherwise occurred.⁴⁷ When a trader uses derivatives not to hedge risk but to gain a spot in the market or stake on a certain event, they are partaking in the controversial speculative use of derivative.⁴⁸

Often requiring little or no deposit to secure obligations, derivatives can be greatly leveraged.⁴⁹ Leverage refers to the investment strategy by which investors are able to achieve a return on capital that is substantially greater than what they initially contributed.⁵⁰ Leverage acts as a magnifier, giving in-

and the Global Financial Crisis, 84 WASH. L. REV. 127, 195 (2009) [hereinafter Gerding, *Code, Crash, and Open Source*] (“[T]hese instruments, including securitizations and credit derivatives, enable companies to reduce their cost of capital by disaggregating the residual risk traditionally borne by shareholders; companies can then offload these risks to more efficient risk bearers.”); Ronald J. Gilson & Charles K. Whitehead, *Deconstructing Equity: Public Ownership, Agency Costs, and Complete Capital Markets*, 108 COLUM. L. REV. 231, 252 (2008) (“A company will use risk management instruments to transfer those risks that counterparties can manage at lower cost . . .”).

⁴⁴ HULL & BASU, *supra* note 1, at 11.

⁴⁵ *See id.*

⁴⁶ *See id.*

⁴⁷ *Id.* at 12–14; Lynch, *supra* note 14, at 38–41. Hedging against pre-existing risk is mitigating the risk of a certain event occurring, such as the price of wheat falling. *See Lynch supra* note 14, at 40. Credit risk can be hedged by taking a swap that provides the hedger with the right to receive payment if a default occurs. *Id.* A lender can hedge risk by requiring the debtor to enter into a futures contract that fixes their position. *Id.*

⁴⁸ *See* HULL & BASU, *supra* note 1, at 14; Lynch, *supra* note 34, at 129–30 (arguing that speculative derivatives contracts are the most dangerous because they resemble betting). Purely speculative derivatives are sometimes viewed as zero-sum transactions that do nothing more than transfer wealth. Lynch, *supra* note 34, at 73.

⁴⁹ *See* KIRSCH, *supra* note 26, § 8A:3.1 (noting the leverage involved with derivatives); RECHTSCHAFFEN, *supra* note 9, at 160 (same). Leverage is often used synonymously with the term debt. HAAS, *supra* note 8, at 157. This is especially true for derivatives contracts that do not require an upfront payment or margin account. *See* Andrew Ang et al., *Hedge Fund Leverage* 5–6 (Nat’l Bureau of Econ. Research, Working Paper No. 16801, 2011); Gerding, *Credit Derivatives*, *supra* note 43, at 41–42. “The margin is a cash amount required as a deposit for an option or future trade.” HULL & BASU, *supra* note 1, at 867. A margin account is where funds are deposited, the amount required will increase or decrease as the value of the underlying asset increases or decreases. *Id.* at 42. The daily adjustment is called marking to market or daily settlement. *Id.*

⁵⁰ *See* Release 10666, *supra* note 4, at 25, 129 n.5 (explaining derivative leverage); HAAS, *supra* note 8, at 157 (same); KIRSCH, *supra* note 26, § 8A:3.1 (same). Leverage increases with the increase in the amount of debt that a company maintains. HAAS, *supra* note 8, at 157. There are two types of leverage, indebtedness leverage and economic leverage. KIRSCH, *supra* note 26, § 8A:3.1. Indebtedness leverage occurs when a derivative creates an obligation or potential indebtedness to a person other than the shareholders. *Id.* Economic leverage is when the derivative gives the right to a gain or a loss that exceeds the initial investment but requires no payment obligation above the initial investment. *Id.*

vestors the ability to attain immense gains but also great losses, as seen in the Great Depression and the 2008 Financial Crisis.⁵¹ For example, if Trader A invests \$100 in shares of Stock A with solely her own equity and later sells her shares at \$200, she realizes a 100% return on her initial investment.⁵² If she instead invests \$20 and borrows the \$80 of the \$100 Stock A purchase price and later sells the shares at \$200, she realizes a 500% gain on her initial \$20 investment.⁵³ A loss operates in the same manner.⁵⁴ Derivative leverage similarly amplifies gains or losses that can far exceed the initial investment because there is little or no initial investment made on the transaction.⁵⁵

The acceleration of the failures of financial institutions during the 1990s, early 2000s, and the 2008 Financial Crisis highlighted the derivative counterparty and systemic risk created by derivative leverage and speculation.⁵⁶ Counterparty risk—the risk of a counterparty defaulting on the contract—links to systemic risk when the amount and number of losses caused by a derivatives

⁵¹ See Release 10666, *supra* note 4, at 25,128 (noting the loss potential of derivatives due to leverage); KIRSCH, *supra* note 26, § 8A:3.1 (same); Kibbie, *supra* note 4, at 203 (covering the role of derivatives in the 2008 Financial Crisis); Azam Ahmed, *As One JPMorgan Trader Sold Risk Contracts, Another One Bought Them*, N.Y. TIMES: DEALBOOK (May 15, 2012, 8:46 PM), <https://dealbook.nytimes.com/2012/05/15/as-one-jpmorgan-trader-sold-risky-contracts-another-one-bought-them/> [<https://perma.cc/YT5M-Q6J2>] (covering J.P. Morgan's \$2 billion loss caused by the company's mutual funds use of derivatives). Warren Buffet regularly used leverage to attain immense successes that surpassed many hedge fund performances. See Andrea Franzini et al., *Buffets Alpha 24* (Nat'l Bureau of Econ. Research, Working Paper No. 19681, 2013). On the other side of JP Morgan's losses were hedge funds that had taken counterparty positions on the contracts. Ahmed, *supra*, at 1.

⁵² See HAAS, *supra* note 8, at 157 (explaining leverage).

⁵³ See *id.*

⁵⁴ See *id.*

⁵⁵ See COMM. ON FED. REGULATION OF SEC., *supra* note 12, at 8 (explaining derivative leverage); KIRSCH, *supra* note 26, § 8A:3.1 (same); RECHTSCHAFFEN, *supra* note 9, at 160 (same). Leverage allows a trader to use capital on other assets rather than cover the derivative obligation. Gerding, *Credit Derivatives*, *supra* note 43, at 41. For example, a fund enters into one hundred long futures contracts to buy Stock A for \$10 per share in three months. See *id.* Remember that futures contracts do not involve payment for the contract up front. See HULL & BASU, *supra* note 1, at 7. If the futures contracts mature and Stock A's spot price has sprung up to \$20, the fund can make a 100% return on its investment after it sells the shares. See *id.* If the spot price is \$1, then there has been a 90% loss. See *id.* By using no initial investment, the fund can incur both the gains and losses. See *id.* This would be considered indebtedness leverage. See KIRSCH, *supra* note 26, § 8A:3.1. If the fund were to have bought call options, where there is an initial investment to purchase the right to buy, it likewise could attain gains and losses in excess of its initial investment. See *id.* This would be considered economic leverage. See *id.*

⁵⁶ See FIN. CRISIS INQUIRY COMM'N, *supra* note 7, at 279 (concluding that the massive losses of major financial institutions were, in part, due to derivatives); Lynch, *supra* note 34, at 84–94; Stulz, *supra* note 7, at 70 (linking derivatives to losses in the Financial Crisis); Adam & Guettler, *supra* note 7, at 1 (stating that the use of certain derivatives caused substantial losses at banks and funds during the Financial Crisis); McDonald & Paulson, *supra* note 7, at 12–18 (explaining AIG's derivative use); see also Dan Fitzpatrick et al., *J.P. Morgan's \$2 Billion Blunder*, WALL ST. J. (May 11, 2012, 12:47 PM), <https://www.wsj.com/articles/SB10001424052702304070304577396511420792008> [<https://perma.cc/F295-ZQPC>] (covering J.P. Morgan's over \$2 billion loss caused by derivative use).

default could impact the greater financial system.⁵⁷ In 1998, Long-Term Capital Management, a hedge fund leveraged twenty-eight to one due to the use of derivatives, required a government bailout because of counterparty and systemic risk after losing \$40 billion in assets over the course of a year.⁵⁸ During the 2008 Financial Crisis, Bear Stearns, AIG, and Lehman Brothers would have defaulted on derivatives transactions that posed immense counterparty risk and ultimately would have had substantial successive effects on the economic system if not for government intervention.⁵⁹

2. Investment Companies

Considered a vital part of the financial services sector, funds are generally defined as financial intermediaries that raise capital from investors, invest that capital in other establishments, and then issue securities that give investors an interest in the investments.⁶⁰ Investors typically use funds as investment vehi-

⁵⁷ See RECHTSCHAFFEN, *supra* note 9, at 161 (covering counterparty risk in the derivative context). Systemic risk is all non-business specific risk. HAAS, *supra* note 8, at 3. Specifically, it is the risk that an economic tremor will result in market losses or losses to financial institutions that lead to increases in the cost of capital. Schwarcz, *supra* note 8, at 204.

⁵⁸ See PRESIDENT'S WORKING GRP. ON FIN. MKTS., HEDGE FUNDS, LEVERAGE, AND THE LESSONS OF LONG-TERM CAPITAL MANAGEMENT 29 (1999) (covering Long-Term Capital Management's losses); Siconolfi et al., *supra* note 6, at 1 (same); see also ROGER LOWENSTEIN, WHEN GENIUS FAILED: THE RISE AND FALL OF LONG-TERM CAPITAL MANAGEMENT (2000) (providing a comprehensive overview of Long-Term Capital Management's actions). Having leverage of 28 to 1 means that Long-Term Capital Management was indebted on derivatives contracts 28 times the amount of actual capital that the fund owned. See Gerding, *Credit Derivatives*, *supra* note 43, at 41 (explaining leverage).

⁵⁹ See Anupam Chander & Randall Costa, *Clearing Credit Default Swaps: A Case Study in Global Legal Convergence*, 10 CHI. J. INT'L L. 639, 683 (2010) (connecting derivatives to the Financial Crisis); John E. Marthinsen, *Derivative Scandals and Disasters*, in FINANCIAL DERIVATIVES: PRICING AND RISK MANAGEMENT, at 313, 313–14 (Robert W. Kolb & James A. Overdahl eds., 2010) (explaining derivatives involvement with AIG and Bear Sterns); William K. Sjostrom, Jr., *The AIG Bailout*, 66 WASH. & LEE L. REV. 943, 943 (2009) (explaining AIG's bailout).

⁶⁰ See RICHARD CARNELL ET AL., THE LAW OF FINANCIAL INSTITUTIONS 643 (5th ed. 2013) (explaining the importance of funds); KIRSCH, *supra* note 26, §§ 1:1, 1B:1 (highlighting the importance of funds); see also 15 U.S.C. § 80a-3 (2012) (defining "investment company" under the ICA). Whether a company is considered an investment company under the ICA often turns on whether the company is "primarily engaged in business of investing, reinvesting, or trading in securities." See 15 U.S.C. § 80a-3 (defining investment company); H. Norman Knickle, *The Investment Company Act of 1940: SEC Enforcement and Private Actions*, 23 ANN. REV. BANKING & FIN. L. 777, 783 (2004) (covering investment companies). Hedge funds and private equity funds are typically exempt from the ICA. See Mercer Bullard, *Regulating Hedge Fund Managers: The Investment Company Act as a Regulatory Screen*, 13 STAN. J.L. BUS. & FIN. 286, 287 (2008) (covering hedge funds); Robert S. Reder et al., *Private Equity Funds: The Development of the Secondary Market*, 9 No. 12 ANDREWS DERIVATIVES LITIG. REP. 11, 11 (2003) (stating that private equity funds generally use the 100-investor exemption, which generally allows a private fund to be exempt from investment company status if the fund has no more than 100 investors).

cles to diversify their portfolios and take advantage of skillful administration of their portfolios.⁶¹

As public investment companies who sell their shares to the general public, funds are registered and structurally regulated under the ICA, and their activities are regulated by the Securities Act of 1933 and the Securities and Exchange Act of 1934.⁶² Accordingly, funds must register under both the ICA and the Securities Act of 1933.⁶³ Additionally, funds must identify themselves as diversified or non-diversified and are bound by certain liquidity requirements.⁶⁴

Generally organized as corporations, funds maintain a board of directors and are owned by shareholders.⁶⁵ The portfolio management, however, is not run by employees but by third party advisors, called investment advisors.⁶⁶

⁶¹ See THOMAS HAZEN, SECURITIES REGULATION § 16.1 (2011) (outlining why investors look to funds); Jill E. Fisch, *Rethinking the Regulation of Securities Intermediaries*, 158 U. PA. L. REV. 1961, 2008 (2010) (finding that mutual funds are relatively safe for retail investors); Roberta S. Karmel, *Mutual Funds, Pension Funds, Hedge Funds and Stock Market Volatility—What Regulation by the Securities and Exchange Commission Is Appropriate?*, 80 NOTRE DAME L. REV. 909, 914 (2005) (exploring rationale for choosing funds); *The Investment Company Act of 1940*, 50 YALE L. J. 440, 440 (1941) (describing why investors look to funds).

⁶² See 15 U.S.C. § 80a-8 (requiring registration under § 8 of the ICA); *id.* § 77e (2012) (setting forth the registration requirements under the Securities Act); *id.* § 78a-qq (2012 & Supp. III 2015, Supp. IV 2016) (setting forth the rules under which securities can be purchased and sold under the Exchange Act); John Morley, *The Regulation of Mutual Fund Debt*, 30 YALE J. ON REG. 343, 345–55 (2013) (explaining registration under the ICA). The ICA does not require investors of investment companies to be sophisticated or accredited. See generally 15 U.S.C. §§ 80a-1 to -64 (not requiring a sophisticated or accredited status). Sophisticated investors have sufficient knowledge in financial areas that they can evaluate risks. See generally *SEC v. Ralston Purina Co.*, 346 U.S. 119 (1953) (providing a foundational definition of sophisticated investor). Accredited investors are those investors defined under rule 501 of the Securities Act of 1933 that have either a minimum income of \$200,000 or have a net worth of \$1 million. See 17 C.F.R. § 230.501 (2017) (defining accredited investor).

⁶³ See 15 U.S.C. § 80a-8(a) (requiring registration for funds); *id.* § 77e(c) (requiring the filing of a registration statement); Knickle, *supra* note 60, at 784 (covering registration requirements). Registration requires the disclosure of extensive information that the SEC will review. See *id.* § 80a-8(b). These requirements include registering with the SEC, filing notice of registration, filing a registration statement that includes policies, providing semiannual reports, undergoing audits, and keeping certain records. See CARNELL ET AL., *supra* note 60, at 655 (listing the requirements).

⁶⁴ KIRSCH, *supra* note 26, §§ 1:4.3, 33:2. Diversification turns on whether the management company meets the ICA requirement that certain percentages of the value of assets be represented by certain types of assets. *Id.* § 33:2. A fund must generally have their investments in no greater than 15% of illiquid assets. *Id.* § 1:4.2[F]. Liquidity refers to the ability of the asset to be sold. HULL & BASU, *supra* note 1, at 867.

⁶⁵ CARNELL ET AL., *supra* note 60, at 651; KIRSCH, *supra* note 26, § 1:2.1; Karmel, *supra* note 61, at 914–15. A corporation is a distinct legal entity that is owned by shareholders, who select the board of directors to manage the entity. 1 JAMES D. COX & THOMAS LEE HAZEN, TREATISE ON THE LAW OF CORPORATIONS § 7.1, § 9:1, Westlaw (database updated Dec. 2017). Funds must maintain a board of directors. KIRSCH, *supra* note 26, § 1:2.1. The board must maintain a 40% membership of disinterested directors. 15 U.S.C. § 80a-10(a). An “interested person” is broadly defined. See § 80a-2(a)(19). The board is generally considered a “watchdog” of the industry. *Burks v. Lasker*, 441 U.S. 471, 484 (1979).

There are three major categories of funds: open-ended mutual funds, ETFs, and closed-end companies.⁶⁷ Mutual funds are the most common type of fund and have the highest assets under management.⁶⁸ Over 44% of American households are invested in mutual funds, and 65% of 401(k) plans are managed by mutual funds.⁶⁹ In addition to investment expertise, mutual funds offer diversification, daily redemption, and economies of scale.⁷⁰ In function, they sell redeemable shares to investors and stand ready to redeem those shares at net asset value on a daily basis.⁷¹ The net asset value is the value of the company's assets minus liabilities divided by the total number of shares.⁷²

⁶⁶ CARNELL ET AL., *supra* note 60, at 651; KIRSCH, *supra* note 26, § 1:2.1. The responsibility of the investment advisor is to manage and oversee the fund. CARNELL ET AL., *supra* note 60, at 651. They are specifically regulated under the Investment Advisors Act. 15 U.S.C. §§ 80b-1 to -21 (2012 & Supp. III 2015). Typically, the investment advisor will appoint one of its members to be the portfolio manager. KIRSCH, *supra* note 26, § 1:2.2.

⁶⁷ CARNELL ET AL., *supra* note 60, at 644. Open-end refers to the ability of investors to “redeem” or exchange their shares for cash. *See* 15 U.S.C. § 80a-5(a) (2012) (defining an open-end). The ICA recognizes three greater general categories: management companies, unit investment trusts, and face-amount certificate companies. CARNELL ET AL., *supra* note 60, at 644. Management companies—which include mutual funds, ETFs, and closed-end companies—is the catch-all type for funds as they are any fund other than unit investment trusts and face-amount certificate companies. *See id.* (quoting 15 U.S.C. § 80a-4(3)). Unit investment trusts issue only redeemable securities, do not maintain board members, and maintains a fixed portfolio. *Id.* Face-amount certificate companies are no longer used. *Id.* at 645. Additionally, funds are broken down into the securities types that they invest in: money market, fixed income, equity, and hybrid. *Id.* at 647. Money market funds invest in short maturity, low risk, unsecured debt instruments, offering smaller risk to investors. *Id.* at 728. Fixed income securities are average maturity and are those other than money market securities. *Id.* at 647. Equity securities are typically shares issued by corporations. *Id.* Hybrid consists of both equity and fixed income. *Id.*

⁶⁸ KIRSCH, *supra* note 26, § 1:1. The total number of U.S. mutual fund assets under management in 2015 was \$15.7 trillion compared to ETF's, which had a total of \$2.1 trillion, and closed-end funds, which had a total of \$261 billion. INV. CO. INST., *supra* note 2, at 9. Mutual funds have enjoyed substantial growth in the past century, growing from \$500 million at the time of the ICA to \$15.7 trillion today. *Id.* (providing current statistics); Meyer Eisenburg & Richard M. Phillips, *Mutual Fund Litigation—New Frontiers for the Investment Company Act*, 62 COLUM. L. REV. 73, 74 (1962) (outlining the growth of mutual funds from 1940 to 1960).

⁶⁹ INV. CO. INST., *supra* note 2, at 112 (providing comprehensive statistics on mutual fund holdings); *see also* INV. CO. INST., THE US RETIREMENT MARKET: THIRD QUARTER 2017, http://www.ici.org/info/ret_17_q3_data.xls (providing statistics on fund holdings of retirement assets); KIRSCH, *supra* note 26, §§ 1:2.1, 1A:2.5[C].

⁷⁰ *See* KIRSCH, *supra* note 26, § 1:2.1 (listing the benefits of mutual funds); Karmel, *supra* note 61, at 914; Zhi Da et al., *Informed Trading, Liquidity Provisions, and Stock Selection by Mutual Funds* 31 (Nat'l Bureau of Econ. Research, Working Paper No. 14609, 2008) (finding that mutual funds add value through expert stock selection and timing methods). Redeemable shares are those that the issuing company must buy back from the holder upon request. CARNELL ET AL., *supra* note 60, at 644. Diversification occurs when an investor buys multiple different assets. HAAS, *supra* note 8, at 113. This can lead to decreased risk because risk is spread over multiple assets. *See id.* An economy of scale is the decrease in average costs that occurs when a business entity increases production. Stewart L. Brown, *Mutual Fund Advisory Fee Litigation: Some Analytical Clarity*, 16 J. BUS. & SEC. L. 329, 344 (2016).

⁷¹ KIRSCH, *supra* note 26, § 1:2.1.

⁷² CARNELL ET AL., *supra* note 60, at 644; KIRSCH, *supra* note 26, § 18:1. Due to the fact that mutual funds must redeem the shares, mutual funds typically have greater expenses than closed-end

The increasingly popular ETF is considered a hybrid investment vehicle.⁷³ Unlike mutual funds, they sell shares through a public offering and the shares trade on a stock exchange at prices set by supply and demand.⁷⁴ ETFs offer the ability to know what's in the fund, risk benefits of exchange listing, certain tax benefits, and spread risk across different assets.⁷⁵ Shares of ETFs

companies. KIRSCH, *supra* note 26, § 1B:3.2. The net asset value is computed on a daily basis. INV. CO. INST., *supra* note 2, at 59.

⁷³ See INV. CO. INST., *supra* note 2, at 11 (showing the increase in ETF assets from \$16 billion in 2000 to \$2 trillion in 2015); Matt Turner, *The Rise of America's Hottest Investment Product Is Shaking Up Wall Street Trading*, BUS. INSIDER (Feb. 10, 2017, 4:15 PM), <http://markets.businessinsider.com/news/etf/etf-trading-now-makes-up-a-huge-chunk-of-wall-street-trading-2017-1-1001656495> [<https://perma.cc/6EWW-5K2T>] (finding that ETFs consisted of some of the most traded securities in 2016). See generally STUART STRAUSS, PRACTICING LAW INST., FINANCIAL PRODUCT FUNDAMENTALS: LAW, BUSINESS, COMPLIANCE, CHAPTER 17: EXCHANGE TRADED FUNDS (2d ed. 2017) (covering ETFs). The increase in demand for ETFs has affected mutual funds flows. See INV. CO. INST., *supra* note 2, at 30 (noting the change in flux of asset levels). As the ETF market has increased, competition within the ETF market and the new strategies deployed by funds have both increased. Chris Dieterich, *Now There's an ETF That Tracks the ETF Industry*, WALL ST. J. (Apr. 20, 2017, 1:16 PM), <https://blogs.wsj.com/moneybeat/2017/04/20/now-theres-an-etf-that-tracks-the-etf-industry/> [<https://perma.cc/4EQ4-4H8Q>] (covering an ETF that follows the ETF market); Sarah Krouse, *Vanguard's Offer to Shareholders: Cede Power in Exchange for Lower Costs*, WALL ST. J. (Feb. 24, 2017, 4:19 PM), <https://www.wsj.com/articles/vanguards-offer-to-shareholders-cede-power-in-exchange-for-lower-costs-1487971140> [<https://perma.cc/RC77-SJSP>] (covering a new move by an asset manager to obtain more flexibility in selecting fund managers); Asjlynn Loder, *Goldman's \$3 Billion Drop in the ETF Bucket*, WALL ST. J. (Mar. 2, 2017, 6:57 PM), <https://www.wsj.com/articles/goldmans-3-billion-drop-in-the-etf-bucket-1488483434> [<https://perma.cc/TLE7-XHNJ>] (highlighting the recent entrance of investment banks into the ETF market and that Goldman Sachs, an investment bank, maintains prices lower than those of ETFs already in a market controlled by Vanguard, BlackRock, and State Street); Imani Moise, *E*Trade Becomes Latest Online Brokerage to Cut Commissions*, WALL ST. J. (Mar. 2, 2017, 1:59 PM), <https://www.wsj.com/articles/e-trade-becomes-latest-online-brokerage-to-cut-commissions-1488468015> [<https://perma.cc/S3YA-VZLF>] (outlining the new "pricing war" between asset managers for the trading of ETFs); Nathaniel Popper, *S.E.C. Rejects Winklevoss Brothers' Bid to Create Bitcoin E.T.F.*, N.Y. TIMES: DEALBOOK (Apr. 13, 2018, 3:17 PM), <https://www.nytimes.com/2017/03/10/business/dealbook/winkelvoss-brothers-bid-to-create-a-bitcoin-etf-is-rejected.html> [<https://perma.cc/A4AB-WN3B>] (covering a new ETF asset class that an asset manager attempted to use); Jason Zweig, *How Dangerous Is a Stock Market of Mindless Robots*, WALL ST. J. (Feb. 24, 2017), <https://www.wsj.com/articles/how-dangerous-is-a-stock-market-of-mindless-robots-1487967352> [<https://perma.cc/X5E9-Q8BQ>] (covering developments in ETF and mutual fund use of electronic fund advisors).

⁷⁴ CARNELL ET AL., *supra* note 60, at 645. The net asset value of an ETF is computed constantly, meaning the price is calculated at the time of sale. INV. CO. INST., *supra* note 2, at 61. Retail investors may only buy and sell ETFs on exchanges while institutional investors have the option to buy and redeem shares in large quantities. KIRSCH, *supra* note 26, § 1B:3.3. An initial public offering is the first instance that a public company offers to sell shares of its stock to the public. HAAS, *supra* note 8, at 3.

⁷⁵ DAVID ABNER, THE ETF HANDBOOK: HOW TO VALUE AND TRADE EXCHANGE TRADED FUNDS 22 (2016). An ETFs is the only fund that allows an investor to know from day to day what the fund holds. *Id.* at 23.

are also redeemable in large blocks, called creation units, which give ETFs open-end company attributes.⁷⁶

Closed-end companies, the least popular types of funds, are funds that sell non-redeemable shares to their investors on an exchange.⁷⁷ They issue a set number of shares in an initial public offering that are traded on a stock exchange.⁷⁸ Closed-end companies can elect to be regulated under the ICA as a Business Development Company (“BDC”), which functions as a type of venture capital company.⁷⁹

3. Current Fund Use of Derivatives

Funds see derivatives as a way to augment market exposure, hedge risks, increase returns through leverage, acquire lower transaction costs and positions otherwise unavailable, gain entry to particular markets, and manage flows through increased liquidity.⁸⁰ Due to their potential benefits, funds have vastly expanded their use of derivatives since they first started using them in the 1980s.⁸¹

⁷⁶ KIRSCH, *supra* note 26, § 34:1; STRAUSS, *supra* note 73, § 17.1. These creation blocks usually consist of 50,000 or more shares. KIRSCH *supra* note 26, § 35:2.2. The purchase is typically done through a clearing agency. *Id.*

⁷⁷ CARNELL ET AL., *supra* note 60, at 730; KIRSCH, *supra* note 26, § 1B:3.1. Due to the general illiquidity of their non-redeemable shares, closed-end companies are unpopular. KIRSCH *supra* note 26, § 33:3.1. This is despite the potential lower operating costs for closed-end companies. *Id.* The shares are sold at a discount and it is argued that this is due to the increased risks of investing in closed-ended companies. CARNELL ET AL., *supra* note 60, at 733. The risks include the devaluation of stock if the demand for the stock decreases. *Id.*

⁷⁸ CARNELL ET AL., *supra* note 60, at 645.

⁷⁹ 15 U.S.C. § 80a-54 (2012); *id.* § 80a-2(a)(48); STRAUSS, *supra* note 73, § 7.4. *See generally* Reginald Thomas & Paul Royce, *Regulation of Business Development Companies Under the Investment Company Act*, 55 S. CAL. L. REV. 895, 895–96 (1982) (providing an explanation of Business Development Companies (“BDCs”). A BDC must be closed-end, incorporated, and meet the requirements of § 80a-2(a)(48), which prescribes that the companies principally partake in investing in and provide managerial assistance to small, growing businesses that the BDC issues securities of. STRAUSS, *supra* note 73, § 7.4. They are classified as non-diverse companies. *Id.*

⁸⁰ *See* Use of Derivatives by Investment Companies Under the Investment Company Act of 1940, Investment Company Act Release No. 29776, 101 SEC Docket 3523, at 14 (proposed Aug. 31, 2011) [hereinafter Concept Release] (listing uses); Robert A. Robertson & Bradley W. Paulson, *A Methodology for Mutual Fund Derivative Investments*, 1 STAN. J.L. BUS. & FIN. 237, 238 (1995) (listing uses); Eric D. Roiter, *Investment Companies’ Use of OTC Derivatives: Does the Existing Regulatory Regime Work?*, 1 STAN. J.L. BUS. & FIN. 271, 273 (1995) (listing uses of OTC derivatives).

⁸¹ *See* COMM. ON FED. REGULATION OF SEC., *supra* note 12, at 12 (suggesting that funds have been using derivatives since the 1980s); DELI ET AL., *supra* note 3, at 6 (finding that funds that typically use derivatives with greater frequency grew the most out of all other funds between 2010 and 2014); KIRSCH, *supra* note 26, § 8A:1 (positing that the use of derivatives has dramatically increased in the past two decades); Kibbie, *supra* note 4, at 209–10 (highlighting the increased use).

The most common use of derivatives by funds is to further the fund's investment goals by hedging investments from risks.⁸² Mutual funds will use credit derivatives, currency derivatives, interest rate derivatives and equity derivatives to hedge against certain investment-specific risks.⁸³

Funds also use derivatives for their leverage characteristics.⁸⁴ Alternative strategy funds, mutual funds that hold non-traditional investments, make use of leverage through extensive derivatives in their portfolios in a way similar to hedge funds.⁸⁵ Some funds use what is called a 130/30 leverage strategy.⁸⁶ The increasingly popular geared or leveraged ETFs, double or triple returns of daily indexes through derivatives leverage.⁸⁷ Synthetic ETFs, funds that are created to mimic the value of an index, commonly use swaps.⁸⁸

⁸² See COMM. ON FED. REGULATION OF SEC., *supra* note 12, at 6 (covering hedging); Tian, *supra* note 12, at 1 (same). Risk management and sharing is considered the "primary purpose" of derivative use by mutual funds. Tian, *supra* note 12, at 1. Derivatives allow funds to shift risk to those who wish to bear it. *Id.* It is considered an important function of the market to maintain efficient risk allocation. *Id.*

⁸³ ROY GIRASA, SHADOW BANKING: THE RISE, RISKS, AND REWARDS OF NON-BANK FINANCIAL SERVICES 218 (2016); KIRSCH, *supra* note 26, § 8A:3.2; Letter and Memorandum from Arthur Levitt, Chairman, SEC, to Edward J. Markey, Chairman, U.S. House of Representatives Subcomm. on Telecomms. & Fin. and Jack Fields, Ranking Republican Member, U.S. House of Representatives Subcomm. on Telecomms. & Fin. 2 (Sept 26, 1994) [hereinafter Levitt Letter & Memorandum] (on file with SEC). Currency derivatives hedge against changes in currency rates. Concept Release, *supra* note 80, at 14. For example, a fund may hedge against the rise in the value of foreign currency by taking a short forward in the currency. *Id.* at 15. Interest rate derivatives can be used to hedge against changes in interest rates. *Id.* This can be accomplished through the use of interest rate swaps. *Id.* at 16. Equity derivatives allow funds to achieve liquidity or "equitize" cash using long futures. *Id.* Credit derivatives can hedge against credit default or other events that an investment may be based upon. *Id.* Though a fund may use these derivatives to hedge, each can also be used to expose the fund to possible gains. *Id.* at 14–17.

⁸⁴ Proposing Release, *supra* note 4, at 12; COMM. ON FED. REGULATION OF SEC., *supra* note 12, at 8; KIRSCH, *supra* note 26, § 8A:3.1.

⁸⁵ DELI ET AL., *supra* note 3, at 2; INV. CO. INST., *supra* note 13, at 42. Alternative strategy funds often use hedge fund strategies of hedging risk with derivatives. Drew Singer, *X. SEC Regulation of Mutual Funds' Illiquid Assets*, 34 REV. BANKING & FIN. L. 491, 498 (2015); Mallory Horejs, *Interpreting Morningstar's Alternative Categories: A Category Guide to Navigating the Increasingly Complex World of Alternative Investing*, MORNINGSTAR ALTERNATIVE INV. OBSERVER, Second Quarter, 2011, at 2.

⁸⁶ See J.P. MORGAN, SPOTLIGHT ON: 130/30 STRATEGIES (Feb. 2012), <https://www.jpmorgan.com/cm/BlobServer/II-13030-KNOW.pdf?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&blobwhere=1320550610494&blobheader=application%2Fpdf&blobheadername1=Content-Disposition&ssbinary=true&blobheadervalue1=inline;filename=II-13030-KNOW.pdf> [https://perma.cc/EZR3-E2J2] (describing the strategy); Shefali Anand, *Leverage Shakes Up Mutual Funds, Which Discover a Strategy's Downside*, WALL ST. J. (Jan. 24, 2009), <https://www.wsj.com/articles/SB123276245590712349> [https://perma.cc/P8AN-2WUQ]. The 130/30 strategy entails using a great deal of leverage, shorting 30% of held securities. Anand, *supra*, at 2.

⁸⁷ See Tim Dulany, et al., *Leverage, Inverse, and Futures-Based ETFs*, 19 NO. 1 PIABA B.J. 83, 84–85 (2012) (explaining leveraged ETFs); Lewis Braham, *Leveraged ETFs Raise the Ante*, BARRON'S (Apr. 8, 2017), <http://www.barrons.com/articles/leveraged-etfs-raise-the-ante-1491627055> [https://perma.cc/M26V-QEZK] (covering new leveraged ETFs that are four times leveraged); Crystal Kim, *Triple Leveraged Crude Oil ETFs: Speculation Cubed?*, BARRON'S (Mar. 28, 2017), <http://>

The leverage characteristics of derivatives had unintended effects on some mutual fund portfolios in the 2008 Financial Crisis.⁸⁹ For example, Oppenheimer Champion Income Fund sustained an 80% loss and Oppenheimer Core Bond Fund sustained a 30% loss.⁹⁰ More recently, Catalyst Hedged Futures Strategy Fund, a mutual fund, sustained a loss of \$600 million over a five-day period by trading options.⁹¹

www.barrons.com/articles/triple-leveraged-crude-oil-etfs-speculation-cubed-1490722447 [<https://perma.cc/HS7D-P6AN>] (covering a the launch of a new triple-leveraged crude oil ETF); Adam Zoll, *How Some Funds Give More Than 100% When It Comes to Asset Allocation*, MORNINGSTAR (Mar. 23, 2015), <http://cawidgets.morningstar.ca/ArticleTemplate/ArticleGL.aspx?culture=en-CA&id=689628> [<https://perma.cc/S4VX-6C7Q>] (explaining how leveraged ETFs use leverage to gain greater exposure). There are also inverse ETFs that seek to return the inverse of the index it is tracking. See *Leveraged and Inverse ETFs: Specialized Products with Extra Risks for Buy-and-Hold Investors*, SEC, <https://www.sec.gov/investor/pubs/leveragedetfs-alert.htm> [<https://perma.cc/UB3J-2TAS>] (covering leveraged and inverse ETFs). See generally Thomas Hazen, *Volatility and Market Inefficiency: A Commentary on the Effects of Options, Futures, and Risk Arbitrage on the Stock Market*, 44 WASH. & LEE L. REV. 789, 789 (1987) (providing an overview of index derivatives). These inverse and leveraged ETFs use swaps and futures to meet their goals. See Morley, *supra* note 62, at 375; *Leveraged and Inverse ETFs*, *supra*. Funds like funds of Hedge Funds invest in private investment pools for sophisticated investors that may use derivatives. See *Funds of Hedge Funds—Higher Costs and Risks for Higher Potential Returns*, Fin. Industry Reg. Authority, <http://www.finra.org/investors/alerts/funds-hedge-funds-higher-costs-and-risks-higher-potential-returns> [<https://perma.cc/38K5-J84R>] (covering funds of funds).

⁸⁸ See Awrey, *supra* note 3, at 271–73 (covering synthetic ETFs). These funds use what are called total return swaps, swapping cash flows of floating interest rate with a total return on an asset or portfolio. See Srichander Ramaswamy, *Market Structures and Systemic Risks of Exchange-Traded Funds* 4–6 (Bank for Int'l Settlements, Working Paper No. 343, 2011) (covering total return swaps).

⁸⁹ See OFF. OF FIN. RESEARCH, *supra* note 9, at 18 (covering mutual fund use of derivatives in the Financial Crisis); Adam & Guettler, *supra* note 7, at 1 (same).

⁹⁰ See OFF. OF FIN. RESEARCH, *supra* note 9, at 18; Adam & Guettler, *supra* note 7, at 1. Several mutual funds also saw great losses in the 1990s due to derivative use. See Jerry W. Markham, *Protecting the Institutional Investor—Jungle Predator or Shorn Lamb?*, 12 YALE J. ON REG. 345, 361 (1995) (covering mutual fund losses in the 1990s); see also *In re UBS Willow Mgmt. L.L.C.*, Investment Company Act Release No. 31869, 2015 WL 6123024 (Oct. 16, 2015) (settled action) (involving a fund that was forced to liquidate after derivative use led to immense losses); *In re Claymore Advisors, LLC*, Investment Company Act Release No. 30308, 2012 WL 6608205 (Dec. 19, 2012) (describing a fund that lost 45% of its assets due and eventual liquidation due to derivative use). A 2015 study found that is it “theoretically possibly,” given the wide parameters allowed by current regulations that funds could default “solely” based upon their derivative use. Dominika Paula Galkiewicz, *Regulation, Leverage, and Derivative Use by Mutual Funds* 42 (Mar. 23, 2015) (unpublished dissertation, Humboldt University of Berlin) (on file with Humboldt University of Berlin).

⁹¹ Chris Dieterich & Gunjan Banerji, *Fund's \$600 Million Lost Week Captivates Traders*, WALL ST. J. (Feb. 16, 2017, 7:40 PM), <https://www.wsj.com/articles/funds-600-million-lost-week-captivates-traders-1487292045> [<https://perma.cc/VD62-Q6KQ>]; Matt Levine, *Volatility Trades and Explosive Shorts*, BLOOMBERG: VIEW (Feb. 17, 2017, 9:10 AM), <https://www.bloomberg.com/view/articles/2017-02-17/volatility-trades-and-explosive-shorts> [<https://perma.cc/4DEH-2AFQ>]. The VIX or the CBOE volatility index, sometimes called the “fear index” measures market volatility for options markets and will typically go up as the S&P 500 goes down. Eric L. Talley, *On Uncertainty, Ambiguity, and Contractual Conditions*, 34 DEL. J. CORP. L. 755, 768 (2009). The VIX increased substantially despite an increase in equity markets. Dieterich & Banerji, *supra* note, at 1.

B. Current SEC Regulation of Fund Use of Derivatives

The ICA specifically governs fund capital structure but makes no mention of derivatives.⁹² During the 1920s and 1930s, the SEC found that funds exploited unsophisticated investors and lacked sufficient assets to cover their heavy use of leverage.⁹³ Accordingly, the ICA was passed in 1940 and the SEC was charged with enforcing the provisions that serve to protect investors from the harmful consequences of leverage.⁹⁴

Section 18 of the ICA addresses leverage by prohibiting funds from issuing a senior security or selling a security of which it is the issuer unless the fund has sufficient asset coverage.⁹⁵ Senior securities are defined in the ICA as obligations or instruments that are a security that signal indebtedness or stock that has priority over classes that distribute assets or pay dividends and thus increase a fund's leverage.⁹⁶

Derivatives were later recognized in the General Statement of Policy in the Investment Company Act Release 10666 ("Release 10666") and in an assortment of no-action letters as falling under the functional definition of senior

⁹² See generally 15 U.S.C. § 80a-18 (2012) (regulating fund capital structure); *The Investment Company Act of 1940*, *supra* note 61, at 449–51 (explaining § 18 of the ICA). Under the ICA, an investment company is a securities issuer who holds itself out as being "primarily engaged in the business of investing, reinvesting, or trading in securities." See 15 U.S.C. § 80a-3(a)(1)(A) (defining "investment company" under the ICA); see also *supra* notes 60–79 (providing a more in-depth explanation of an investment company under the ICA). Funds are subject to numerous statutory requirements under the ICA. See CARNELL ET AL., *supra* note 60, at 655 (listing the regulations funds are subject to). Capital structure is the distribution of debt and equity that a company chooses to have. 1 COX & HAZEN, *supra* note 65, § 18.1.

⁹³ See *Investment Trusts and Investment Companies: Hearings on S. 3580 Before a Subcomm. of the Sen. Comm. on Banking & Currency*, 76th Cong. 265–78 (1940) (finding abuses by funds); see also Levitt Letter & Memorandum, *supra* note 83, at 21 (describing the practices in the 1920s and 1930s that gave rise to § 18's limitations on leverage, and specifically discussing the potential abuse of senior security holders). Shareholder losses in the 1930s were found to be over \$1 billion. Knickle, *supra* note 60, at 781.

⁹⁴ See KIRSCH, *supra* note 26, § 3:3.1[A] (covering the context of the ICA's enactment); *The Investment Company Act of 1940*, *supra* note 61, at 440 (same). The SEC was given power to make, issue, amend, and rescind rules and regulations to enforce the ICA. See 15 U.S.C. § 80a-38 (listing the powers granted the SEC).

⁹⁵ See 15 U.S.C. § 80a-18; Release 10666, *supra* note 4, at 25, 129. There are different requirements for open-end and closed-end companies. See 15 U.S.C. § 80a-18(a) (addressing closed-end); *id.* § 80a-18f(a) (addressing open-end). Open-end companies cannot issue any senior security but may borrow from a bank if it has 300% asset coverage. *Id.* § 80a-18(f)(1). Closed-end companies, however, can issue three securities classes. *Id.* § 80a-18(a). This essentially limits funds to borrowing from a bank. KIRSCH, *supra* note 26, § 1B:3.2[C]. Congress was concerned with abuse of senior security purchasers, the increase in undue speculation of junior securities caused by senior securities, and inadequate covering reserves. See 15 U.S.C. § 80a-1(b)(7)–(8) (listing the purposes of the ICA).

⁹⁶ See 15 U.S.C. § 80a-18(g) (defining "senior security"). This would include bonds, debentures, and other instruments that enjoy priority rights, such as preferred stock. See *id.*

securities because of their potential for leverage.⁹⁷ Despite this characterization, funds may still avoid the senior security treatment in their use of derivatives, so long as they establish a segregated account and cover the securities with offsetting positions.⁹⁸

The segregated account requirement prescribes that liquid assets be maintained and frozen in a separate account.⁹⁹ The liquid assets that “cover” within the segregated account must completely amount to and increase with the total notional amount of the obligation of the derivatives.¹⁰⁰ A fund may also cover its obligations through ownership or holding the right to obtain the instrument that it has been obligated to deliver.¹⁰¹

The notional amount of a derivative is the number of assets that are stated in the derivatives contract multiplied by the value of the asset.¹⁰² If the amount of the contract is known at the beginning of the transaction, notional amount

⁹⁷ See Dreyfus Strategic Investing and Dreyfus Strategic Income, SEC No-Action Letter, [1987 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 78,472 (June 22, 1987) [hereinafter Dreyfus No-Action Letter] (recognizing derivatives); Release 10666, *supra* note 4, at 25,128 (recognizing the dangers of instruments that involve leverage); KIRSCH, *supra* note 26, § 8A:1 (covering Release 10666); Kibbie, *supra* note 4, at 232 (same). No-action letters are SEC replies to requests for guidance on whether a certain action meets the requirements of current law. HAZEN, *supra* note 4, § 1:4[4]. Though influential and insightful, no-action letters are not binding. *Id.* The SEC issues staff no-action letters when posed with the question of whether the federal securities laws apply with respect to certain transactions. Concept Release, *supra* note 80, at 23 n.68. As such, they are not binding as to how the Commission would actually address a given situation. TAMAR FRANKEL, INVESTMENT MANAGEMENT REGULATION 32 (4th ed., 2011). Release 10666 did not expressly address derivatives, but rather financial commitment transactions. See Release 10666, *supra* note 4, at 25,128 (failing to directly mention derivatives). “Financial commitment transaction” is a new term defined by the SEC Proposing Release. Proposing Release, *supra* note 4, at 58–59. The SEC generally characterizes these transactions as those that have a conditional or unconditional obligation to pay or deliver assets. *Id.* It includes “reverse repurchase agreements, short sales, firm standby commitment agreements or similar agreement.” *Id.* Reverse repurchase agreements are short-term investment tools where a buyer agrees to buy a certain financial instrument and the seller agrees to buy back the asset. Michael Spielman, *Whole Loan Repurchase Agreements: An Assessment of Investment Transaction Risks in Light of Continuing Legal Uncertainty*, 99 COM. L.J. 476, 476–77 (1994). Short sales are the sales of securities whereby the seller does not have ownership of the security. Perrie M. Weiner & Edward D. Totino, *New SEC Rules Change Regulation of Short Sales*, 10 NO. 13 ANDREWS SEC. LITIG. & REG. REP. 16, 16 n.1 (2004). Firm standby commitment agreements are rights to sell an underlying security within a certain period at a price of the security plus interest. 17 C.F.R. § 270.2a41-1 (2017).

⁹⁸ Release 10666, *supra* note 4, at 25, 134; Dreyfus No-Action Letter, *supra* note 97, at 2.

⁹⁹ Release 10666, *supra* note 4, at 25,132. Liquid assets are defined as “cash, U.S. government securities, or other appropriate high-grade debt obligations.” *Id.*

¹⁰⁰ *Id.* The No-Action Letter to Merrill Lynch Asset Management greatly broadened the scope of liquid assets that could cover obligations by adding that any liquid asset could cover obligations. Kibbie, *supra* note 4, at 235. Due to the change, portfolio securities could be used to cover derivative positions. COMM. ON FED. REGULATION OF SEC., *supra* note 12, at 14.

¹⁰¹ Concept Release, *supra* note 80, at 24. The Dreyfus No-Action Letter added this option. Dreyfus No-Action Letter *supra* note 97, at 3.

¹⁰² Feder, *supra* note 41, at 683. The mark to market approach is used in valuing the notional amount. Concept Release, *supra* note 80, at 22 n.65.

segregation is used to calculate the amount.¹⁰³ If the transaction does not involve a physical settlement, funds will use the mark-to-market approach.¹⁰⁴ The segregated account requirement can also be met by making a designation in the fund's books.¹⁰⁵

II. PROPOSED RULE 18F-4

In 2011, over thirty years after issuing Release 10666, the SEC produced a Concept Release requesting comments on whether the existing law on the use of derivatives by funds was sufficient.¹⁰⁶ After considering the comments received and making the determination that updated and complete regulations were needed, the SEC conceived Proposed Rule 18f-4.¹⁰⁷ The exemptive rule

¹⁰³ Concept Release, *supra* note 80, at 9. The notional amount is the full amount of the underlying asset. *Id.*

¹⁰⁴ *Id.* at 26–27. Mark-to-market accounting values assets at the fair market value, or the current market price, of the underlying asset rather than the price paid. Michelle Clark Neely, *Making Sense of Mark to Market*, FED. RESERVE BANK ST. LOUIS, <https://www.stlouisfed.org/publications/regional-economist/january-1994/making-sense-of-mark-to-market> [<https://perma.cc/4HBU-GXHN>]. The daily gains or losses are calculated and then funds must be added or subtracted to compensate. See *CFTC Glossary: Mark-to-Market*, U.S. COMMODITY FUTURE TRADING COMM'N, http://www.cftc.gov/consumerprotection/educationcenter/cftcglossary/glossary_m [<https://perma.cc/8LAD-9G2A>] (covering mark-to-market accounting). Some have argued that mark-to-market accounting led to the Financial Crisis. See Nicole Gelinias, *Mark to Market: A False Culprit*, 6 J.L. ECON. & POL'Y 145, 145 (2010) (rebutting the argument that mark to market caused the Financial Crisis); Elizabeth Williamson & Kara Scannell, *Momentum Gathers to Ease Mark-to-Market Accounting Rule*, WALL ST. J. (Oct. 2, 2008, 12:01 AM), <https://www.wsj.com/articles/SB122290736164696507> [<https://perma.cc/4V6F-VYKP>] (outlining the push to suspend mark to market accounting). For example, if a fund entered into a futures contract to purchase 100 shares of Stock A at \$100 per share, the fund would need to place \$10,000 (100 shares multiplied by the notional amount of the share (\$100)) in a segregated account that it could not remove until performance of the contract. See Dreyfus No-Action Letter *supra* note 97, at 2; Release 10666, *supra* note 4, at 25,132.

¹⁰⁵ Concept Release, *supra* note 80, at 26.

¹⁰⁶ Release 10666, *supra* note 4, at 25,128 (released in 1979); Concept Release, *supra* note 80, at 1. Comments are a right that the public has to address issues posed by the SEC. ALFRED AMAN & WILLIAM MAYTON, ADMINISTRATIVE LAW 41 (2014). A Concept Release is a precursor to a proposed rule that the SEC publishes to identify an area of concern and solicit questions from the public. J. WILLIAM HICKS, INTERNATIONAL DIMENSIONS OF U.S. SECURITIES LAW § 5:2, Westlaw (database updated Apr. 2017). The SEC received comments addressing the qualifying liquid covering assets, mark-to-market approach, and the cash settlement of swaps. Proposing Release, *supra* note 4, at 41 n.113.

¹⁰⁷ Proposing Release, *supra* note 4, at 8. Proposed Rule 18f-4 was voted upon in December of 2015. Press Release, SEC, SEC Proposes New Derivatives Rules for Registered Funds and Business Development Companies (Dec. 11, 2015) (on file with SEC). The Commission's vote was 3–1 in favor of the rule. *SEC Proposes New Exemptive Rule to Regulate Funds' Use of Derivatives*, DECHERT LLP (Dec. 11, 2015), <https://www.dechert.com/knowledge/onpoint/2015/12/sec-proposes-new-exemptive-rule-to-regulate-funds-use-of-derivat.html> [<https://perma.cc/5H9H-ZZ74>]. Commissioner Michael Piwowar dissented. See Piwowar Statement, *supra* note 19, at 1 (explaining his reasons for dissenting). Comments closed on March 16, 2016. Proposing Release, *supra* note 4, at 2. Administrative law requires that agencies provide an opportunity for the public to comment on proposed rules after notice has been given. 1 CHARLES H. KOCH, JR. & RICHARD MURPHY, ADMINISTRATIVE LAW AND PRAC-

is intended to provide a more extensive regulatory framework for derivatives use by registered funds in light of the expansion of derivatives use in the past few decades.¹⁰⁸ In furthering that objective, Proposed Rule 18f-4 prescribes limits on derivative leverage, requires the holding of sufficient assets to cover derivative obligations, and mandates the establishment of an official risk management program before a fund can enter into derivatives transactions.¹⁰⁹ Section A of this Part explores the purposes of the rule and the specific circumstances the SEC believed necessitated Proposed Rule 18f-4.¹¹⁰ Section B outlines the portfolio limitations that Proposed Rule 18f-4 would prescribe.¹¹¹ Section C outlines the asset segregation requirements for derivative transactions and the additional provisions of the proposed rule, including the derivatives risk management program, recordkeeping requirements, and proposed amendments to Form N-PORT and Form N-CEN.¹¹²

A. Background and Purpose of Proposed Rule 18f-4

Substantial increases in the volume and complexity of derivatives led the SEC to conclude that investors were exposed to increasing portfolio risks because of derivative use.¹¹³ In order to further § 18 of the ICA's goal of protecting investors, the SEC moved to modernize and broaden the regulation of fund use of derivatives through Proposed Rule 18f-4.¹¹⁴ Two interconnected deter-

TICE § 4:33, Westlaw (database updated Feb. 2018). Mary Jo White stated in a letter in December of 2016 that Proposed Rule 18f-4 was ready for SEC consideration. Letter from Mary Jo White, Chair, SEC, to Sherrod Brown, Chair, Senate Comm. on Banking and Mark Warner, Chair, Hous. & Urban Affairs, Chairman, Senate Subcomm. on Sec., Ins., & Inv. (Dec. 12, 2016) (on file with SEC).

¹⁰⁸ Proposing Release, *supra* note 4, at 8 (finding that current regulations insufficiently addressed the current market uses of derivatives). Derivatives are considered senior securities under the ICA and therefore cannot be used by funds unless they adhere to the exemptions. *Id.* at 9. Proposed Rule 18f-4 lays out what exactly a fund must do before it can use derivatives. *See id.*

¹⁰⁹ *Id.* at 9. If adopted, it would supplant Release 10666 and the numerous no-action letters that cover derivatives and financial commitment transactions and fall within § 18 of the ICA. *Id.* at 54.

¹¹⁰ *See infra* notes 113–125 and accompanying text.

¹¹¹ *See infra* notes 126–158 and accompanying text.

¹¹² *See infra* notes 159–182 and accompanying text.

¹¹³ Proposing Release, *supra* note 4, at 9. In the 2011 Concept Release, the SEC concluded that derivative use had grown enough to warrant further review. Concept Release, *supra* note 80, at 6. No-action letters intervening for the period between the 1994 Report and the Concept Release relaxed some of the standards set out in Release 10666. *See* Merrill Lynch Asset Management, L.P., SEC No-Action Letter, 1996 WL 429027, at *5 (July 2, 1996) (expanding the adequate liquid assets that could cover obligations); Letter from Lawrence A. Friend, Chief Accountant, Div. of Inv. Mgmt., to Chief Fin. Officers (Nov. 7, 1997) (on file with SEC) (permitting easier provisions to set up segregated account).

¹¹⁴ Proposing Release, *supra* note 4, at 9. The ICA was enacted to protect the public and investors from harmful fund practices. 15 U.S.C. § 80a-1(b) (2012). The SEC has calculated the economic effect of Proposed Rule 18f-4 to be an overall net increase in investor protection. Proposing Release, *supra* note 4, at 275. A full quantification of the effects is limited due to the lack of information available. *Id.* at 274. From its calculations, the SEC believes that the rule will result in an increased likelihood of

minants drove the SEC to take a new approach: (1) changes in derivative use that occurred after Release 10666 and (2) current derivative uses that implicate § 18 of the ICA.¹¹⁵

According to the SEC, existing regulations did not contemplate the current market or sufficiently mitigate the risks involved with the use of derivatives.¹¹⁶ Specifically, Release 10666 was found to insufficiently address new fund practices because the total amount of leverage that a fund could obtain under Release 10666's segregated account approach was much greater than initially envisioned.¹¹⁷ The mark-to-market approach for cash settled derivatives allowed under Release 10666 had been expanded to a broader set of cash settled derivatives, sometimes for any cash settled derivative.¹¹⁸ This allowed for greater exposure because a mark-to-market approach permits a fund to only cover losses during each day.¹¹⁹ In addition, funds could use "any" liquid assets to cover the obligations, allowing funds to use less liquid and higher risk

investments that could then lead to an increase in capital for funds. *Id.* at 276. The SEC concluded that an increase in investor protection could, in turn, lead to an increase in confidence amongst investors who will then be more likely to invest in these kinds of financial instruments. *Id.* By providing more solidified regulation than the no-action letter and interpretive guidance that currently controls, the proposed rule could also reduce costs. *Id.* at 277. Funds would, however, bear one-time costs and ongoing costs in meeting the requirements of the rule. *Id.* at 319. The extent of the costs was hypothesized to differ depending on an individual fund's use of derivatives as well as differing investment strategies, portfolio compositions, market reactions, and incentives to move out of the § 18 limitations. *Id.* Transactions costs could result if funds shift away from derivatives to other instruments or assets. *Id.*

¹¹⁵ Proposing Release, *supra* note 4, at 14–30. Release 10666 echoed the leverage and asset coverage concerns of § 18 of the ICA. Release 10666, *supra* note 4, at 25, 128. Section 18 of the ICA governs the capital structure of a fund. 15 U.S.C. § 80a-18. The SEC's conclusions rely heavily on the DERA White Paper on the Use of Derivatives by Registered Investment Companies ("DERA White Paper"), a study done on a random sample of 10% of funds. *See* Proposing Release, *supra* note 4 (citing DERA White Paper over forty-five times); *see also* DELI ET AL., *supra* note 3, at 1 (explaining the general concepts of the study). Morningstar and semiannual reporting documents aided the random sampling. DELI ET AL., *supra* note 3, at 1–2. The DERA White Paper uses Morningstar's nine categories of funds. *Id.* at 1 n.2. Alternate strategy funds, as used in the Proposing Release, include Morningstar's alternative, nontraditional bond, and commodity funds categories. Proposing Release, *supra* note 4, at 109 n.87.

¹¹⁶ Proposing Release, *supra* note 4, at 22, 34 (finding that certain fund practices allow for funds to circumvent regulations).

¹¹⁷ *Id.* at 22, 37; *see also supra* note 91–105 and accompanying text (explaining the segregated account approach). The SEC presented two chief concerns in Release 10666: (1) the ability of funds to obtain leverage; and (2) the ability of funds to meet their obligations. Proposing Release, *supra* note 4, at 33. Under the mark-to-market approach, a fund might not have to segregate any of its assets. *Id.* at 37. For example, the SEC found that some funds had obtained notional exposures ten times of net assets. *See id.* at 38.

¹¹⁸ Proposing Release, *supra* note 4, at 21.

¹¹⁹ *Id.* For example, if a fund that was involved in cash-settled futures took the long position, the fund would only need to segregate assets to cover the obligation if, by the end of the trading day, the obligation would have a loss instead of segregating the total obligation. *See id.* Some funds use the approach for all cash settled derivatives. *See id.* Cash settlement occurs when settling a futures contract where cash is provided rather than the physical asset. HULL & BASU, *supra* note 1, at 857.

assets than what was initially required under Release 10666.¹²⁰ The SEC concluded that, through the use of both mark-to-market and the nature of the covering assets, funds could segregate a significantly smaller and insufficient amount of assets to cover obligations and therefore could be unable to perform their obligations.¹²¹

The SEC also found that the current use of derivatives by funds implicated the senior security concerns in § 18 of the ICA raised by undue speculation and insufficient assets to cover obligations.¹²² Funds' derivatives use caused undue speculation concerns addressed in § 1(b)(7) of the ICA through extensive derivatives leveraging.¹²³ Through their leveraging, funds achieved notional investment exposure that far exceeded their net asset values, with some funds maintaining alarming exposures as high as 900% of their assets.¹²⁴ Additionally, the SEC found that derivative use by some funds implicated the insufficient assets concerns in § 1(b)(8) of the ICA.¹²⁵ Due to the leverage inherent in some derivatives, a transaction could cause losses that surpass delivered collateral or margin.¹²⁶ Consequently, fund advisors may have to sell fund in-

¹²⁰ Proposing Release, *supra* note 4, at 36. This approach was allowed by the Merrill Lynch No-Action Letter that expanded liquid assets to mean any liquid asset to cover obligations in segregated accounts. *Id.* at 36 n.99. For example, a fund can now use equity securities and lower grade debt securities that it maintains in its portfolio to cover its obligations. *Id.* at 21. By using less liquid, meaning more difficult to convert to cash, assets to cover, a fund may not be able to fulfill an obligation when it comes due. *Id.*

¹²¹ *Id.* at 35. For example, a fund could enter into a derivatives transaction and use its portfolio equity to cover its obligation, instead of using more liquid assets like cash, and would only need to segregate assets to cover a daily loss. *Id.* The mark-to-market approach does not take into consideration the future losses. *Id.* The approach only accounts for losses that have already been sustained. *Id.* The SEC found that some funds had obtained notional exposures that were greatly in excess of net assets and had the potential to increase exposures. *See id.* at 38. Exposure is the greatest amount of loss due to a counterparty default. HULL & BASU, *supra* note 1, at 863.

¹²² Proposing Release, *supra* note 4, at 25.

¹²³ *Id.* at 25–26. In addressing derivative use risks, leverage is a chief concern of the SEC. *Id.* at 12. The SEC quoted the definition of leverage from Release 10666: “leverage exists when an investor achieves the right to a return on a capital base that exceeds the investment which he as personally contributed to the entity or instrument achieving a return.” *Id.* Leverage magnifies changes in the value of the underlying asset. *See Ang et al., supra* note 49, at 38 (defining characteristics of leverage).

¹²⁴ Proposing Release, *supra* note 4, at 27, 102. The notional investment exposure is the number of assets that are stated in the derivatives contract multiplied by the value of the asset. Feder, *supra* note 41, at 683. Net asset values are calculated by subtracting the fund's total liabilities from total assets. *Fast Answers: Net Asset Value*, SEC, <https://www.sec.gov/answers/nav.htm> [<https://perma.cc/A34J-U4AV>].

¹²⁵ 15 U.S.C. § 80a-1(b)(8) (2012); Proposing Release, *supra* note 4, at 28. Companies that operate without adequate assets are deemed to be adversely affecting the national public interest. 15 U.S.C. § 80a-1(b)(8).

¹²⁶ Proposing Release, *supra* note 4, at 28.

vestments that could lead to investor losses and the possible insolvency of the fund.¹²⁷

B. Portfolio Limitations for Derivatives Transactions

With the intent of addressing § 1(b)(7)'s undue speculation and leverage concerns triggered by current fund practices, Proposed Rule 18f-4 requires adherence to one of two portfolio limitations before a fund can enter into a derivative transaction.¹²⁸ A fund must meet either an exposure-based or a risk-based portfolio limit.¹²⁹

1. Exposure-Based Portfolio Limitation

The exposure-based portfolio limit constrains a fund's leverage gained through senior securities by limiting the fund's total exposure, or the total risk of loss from derivatives transactions.¹³⁰ Under this portfolio limit, the maximum amount of total calculated exposure cannot surpass 150% of the fund's net assets.¹³¹ In balancing the benefits and risks of derivatives use, the SEC

¹²⁷ *Id.* at 29. Liquid assets would need to be produced from the fund's investments in the event of a derivative transaction that results in a loss magnified by leverage. *Id.* The margin is a cash amount required as a deposit for an option or future trade. HULL & BASU, *supra* note 1, at 867; *see also supra* note 49 and accompanying text (explaining margin account).

¹²⁸ Proposing Release, *supra* note 4, at 64–65. The limitations also have a secondary aim of ensuring that funds can adequately meet their obligations to counterparties in order to prevent the liquidation of fund assets. *Id.* at 65 n.152.

¹²⁹ *Id.* at 64. Mandated by section 4(a)(5)(i) of the Proposed Rule, the fund's board of directors and a majority of uninterested directors would need to approve of the portfolio limitation that the fund will use. *Id.* at 411. The fund's board of directors is the overseer for the fund's dealings and the investment advisor. CARNELL ET AL., *supra* note 60, at 651. A fund would only need to comply with the limitation after it entered into a senior security transaction. Proposing Release, *supra* note 4, at 150. If the transaction resulted in an increase in exposure that was greater than the limits, the fund does not have to terminate the transaction, but the fund could not enter into another transaction until it complied with the limit. *Id.* at 150–51.

¹³⁰ Proposing Release, *supra* note 4, at 66. Exposure is generally defined in section 4(c)(3)(i)-(iii) of the Proposed Rule as the sum of the fund's aggregate notional amount of senior securities transactions. *Id.* at 414, 418 (defining "senior securities transaction" as including derivatives, financial commitment transaction, and any other senior security transaction entered into pursuant to § 18 or § 61 of the ICA). Senior securities are defined in the Proposing Rule and the ICA as obligations or instruments that are both a security and signal indebtedness and stock that has priority over classes that distribute assets or pay dividends. Proposing Release, *supra* note 4, at 414; *see also* 15 U.S.C. § 80a-18(g) (defining "senior security").

¹³¹ Proposing Release, *supra* note 4, at 66. In deciding on the 150% limit, the SEC considered numerous factors. *Id.* at 92. The SEC considered lower percentages (50% and 100%) but concluded that those thresholds could prevent beneficial uses of derivatives. *Id.* at 93–94. Higher levels were viewed by the SEC as possibly promoting speculative use. *Id.* at 95. The SEC made the conclusion that fund strategies would not be greatly impacted due to their finding that most funds use derivatives with small notional amounts. *Id.* at 95–96. Lastly, the SEC made the determination that, although the 150% limit would not alone prevent all losses driven by derivatives, other provisions of Proposed Rule 18f-4 would sufficiently aid in mitigation. *Id.* at 96.

hopes that the overall limit will provide sufficient flexibility for funds to continue to use derivatives but to limit the risks involved.¹³² Exposure is calculated as the total of: (1) the total adjusted notional amounts of derivatives transactions; (2) the total obligations under financial commitment transactions; and (3) the total indebtedness caused by other senior securities transactions pursuant to § 18 or § 61 of the ICA.¹³³

The first part of the exposure calculation, the total notional amount of derivatives transactions, measures the fund's exposure to the underlying asset.¹³⁴ Notional amount is generally defined in Proposed Rule 18f-4 as the "market value of the underlying reference asset or the principal amount on which payment obligations under the derivatives transaction are calculated."¹³⁵ This definition was adopted to measure fund exposure while capturing the wide variety of derivative uses.¹³⁶

Three types of special derivatives transactions would be subject to an adjusted notional amount calculation.¹³⁷ For the first type of derivatives transactions, those that yield returns contingent upon leveraged performance of an

¹³² *Id.* at 71–72.

¹³³ *Id.* at 66; *see infra* note 135 and accompanying text (setting forth the Proposed Rule's definition of notional amount).

¹³⁴ Proposing Release, *supra* note 4, at 67.

¹³⁵ *Id.* at 415–16. It is "notional" because there has been no payment or receipt of the asset. *See HULL & BASU, supra* note 1, at 868 (explaining why the term "notional" is used with derivatives). The principal is the face value of the instrument. *Id.* at 870. The payment obligation that the definition refers to is the margin requirements of some derivatives transactions. *Id.* at 867. The margin is a cash amount required as a deposit for an option or future trade. *Id.*; *see also supra* note 49 and accompanying text (explaining margin account).

¹³⁶ Proposing Release, *supra* note 4, at 67. It was also generally consistent with both the use of notional amount in other agencies' regulations and the private market's calculation of exposure in the market. *Id.* at 67–68. The U.S. Commodity Futures Trading Commission ("CFTC") also uses notional amount to measure exposure. Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants, 79 Fed. Reg. 59,898 (proposed Oct. 3, 2014). The CFTC has jurisdiction over derivatives exchanges. Brunet & Shafe, *supra* note 6, at 668. The Chicago Mercantile Exchange Group Inc., International Swaps and Derivatives Association, and the Bank for International Settlements, all financial institutions that facilitate derivatives trading, use a similar definition. *See Glossary: Notional Value*, CME GROUP, <http://www.cmegroup.com/education/glossary.html> [<https://perma.cc/UAM8-MKEM>]; BANK FOR INT'L SETTLEMENTS, GUIDE TO THE INTERNATIONAL FINANCIAL STATISTICS 31 (July 2009) (hereinafter BIS Guide), <http://www.bis.org/statistics/intfnstatsguide.pdf> [<https://perma.cc/G5XX-RWLM>] (same). The SEC concedes, however, that the definition does have limitations but the difficulty in shaping future fund tactics and uses of derivatives make notional amount a more attractive choice compared to other definitions. Proposing Release, *supra* note 4, at 70–71. Measurements of leverage can discount notional amount. *Id.* at 70–71. Additionally, some measurements have more precise calculations of hedging. *Id.* at 70–71. The definition does not precisely differentiate the different risks involved with different derivative uses. *Id.* at 70. Two derivative transactions could have the same notional amount but have vastly differing risks. *Id.* The SEC made the determination that notional amount was the most effective and administrable definition and addressed the issue that leverage can be calculated in more precise ways. *Id.* at 70–71.

¹³⁷ Proposing Release, *supra* note 4, at 72. In these cases, the SEC found that the standard notional amount calculation would not adequately measure exposure. *Id.*

underlying asset, the notional amount is multiplied by the leverage factor to calculate the adjusted notional amount.¹³⁸ For the second type of transaction, those where the underlying asset is an investment managed account/entity or an index of a managed account/entity, the fund must do what is referred to as a “look-through.”¹³⁹ Such a process references the fund’s “pro-rata share” of the notional amounts of the derivatives transactions of such account/entity to determine the adjusted notional amount.¹⁴⁰ The third and last type of transaction addressed, those involving complex transactions, have notional amounts that are difficult to calculate.¹⁴¹ For any complex derivatives transaction, the notional amount would be equal to another non-complex derivatives transaction, called a substituted instrument, which would have the same market risk.¹⁴²

The final two parts of the exposure calculation is the addition of the total amount of exposure created by financial commitment transactions and other securities.¹⁴³ The amount of exposure that is added is the total of the amount of

¹³⁸ See *id.* For example, a total return swap with a notional value of \$100 that provides a return that is three times the index would have a notional amount of \$300 under the Proposed Rule. *Id.* Without this added calculation, a fund could avoid limitation requirements. *Id.* at 72–73. The SEC believes that if such additional requirements were not in place, funds could structure around exposure limitations. *Id.* at 73. The leverage factor, sometimes called the leverage ratio, is determined by the ratio of the debt to equity. See *id.* The leverage factor is calculated by multiplying the delta by the underlying price and dividing the sum by the derivative price per underlying unit. *Derivatives: Leverage Factor*, INV. & FIN., <http://www.investment-and-finance.net/derivatives/l/leverage-factor.html> [<https://perma.cc/QLZ4-643U>]. The delta is the “rate of price change of the derivative contract with the price of the underlying asset,” or, in other words, the number of units held to completely hedge all risk. HULL & BASU, *supra* note 1, at 860.

¹³⁹ Proposing Release, *supra* note 4, at 73.

¹⁴⁰ *Id.* These transactions are deemed to be equal to a direct investment in the derivatives traded by the managed account or entity. *Id.* at 73–74. Thus, a fund could get around exposure limitations. *Id.* at 74. This type of calculation would apply to the swaps on pooled investment vehicles that are primarily investing in derivatives transactions such as leveraged ETFs, hedge funds, and managed futures funds. *Id.* If there was no “look-through” calculation, a fund could get around the portfolio limitations by investing in funds that are highly engaged in derivatives transactions and would not have to invest in derivatives itself. *Id.* at 73–74.

¹⁴¹ *Id.* at 74. A complex derivatives transaction is defined by section 4(c)(1) of the Proposed Rule as any derivative transaction for which the amount payable by either party upon settlement date, maturity or exercise: “(1) is dependent on the value of the underlying reference asset at multiple points in time during the term of the transaction; or (2) is a non-linear function of the value of the underlying reference asset, other than due to optionality arising from a single strike price.” *Id.* at 414. Linear function refers to payouts changing on dollar for dollar basis as the value of the underlying asset changes. *Id.* at 76. Examples of the first category would include path dependent options, American lookback options, barrier options, and Asian options, the payoff of each depending on the price of the underlying asset in addition to the spot price. See *id.* at 76 n.177; HULL & BASU, *supra* note 1, at 668 (explaining path dependent options). Examples of the second category include variance swaps, where the payoffs are based on variance. Proposing Release, *supra* note 4, at 76.

¹⁴² Proposing Release, *supra* note 4, at 79. Barrier options, which can sometimes be hedged by standard options (a non-complex derivative), could be calculated to have an aggregate notional amount the same as an option that would hedge a barrier option. *Id.* at 79–80.

¹⁴³ *Id.* at 82. Financial commitment transactions and other senior securities bear resemblance to derivatives in that they evidence indebtedness. *Id.* These types of investments include bank borrow-

cash or other assets that the fund is conditionally or unconditionally obligated to pay or deliver under any financial commitment transactions and the total debt created by any other senior securities transactions that the fund enters into.¹⁴⁴

In computing the sum aggregate notional exposure of a derivative transaction, a fund may net offsetting derivatives transactions.¹⁴⁵ Reference asset, maturity, and other material terms must, however, be the same in both transactions.¹⁴⁶ The exposure-based portfolio limitation, however, does not permit a fund to calculate hedging or cover transactions in the total notional amount.¹⁴⁷

2. Risk-Based Portfolio Limitation

A fund can instead choose to adopt the risk-based portfolio limit approach and, by doing so, maintain greater exposure levels than the exposure-based portfolio limit permits.¹⁴⁸ In order to meet the requirements of this portfolio limit, a fund must satisfy the Value at Risk (“VaR”)-based test.¹⁴⁹ The test focuses on derivative use rather than exclusively a fund’s exposure.¹⁵⁰ After

ings and insurance of debt or preferred shares a closed-end fund or business development company. *Id.* at 82 n.194.

¹⁴⁴ *Id.* at 82.

¹⁴⁵ *Id.* at 80. Netting is the when a trader can “aggregate reciprocal claims.” Adam R. Waldman, *OTC Derivatives & Systemic Risk: Innovative Finance or the Dance into the Abyss?*, 43 AM. U. L. REV. 1023, 1059 (1994). For example, if Trader A entered into two transactions with Trader B and Trader A was owed \$100 from one transaction with Trader B and was indebted \$50 from the second transaction with Trader B, netting would allow Trader B to give Trader A \$50. *See id.* The netting provision would generally apply to situations where a fund uses an offsetting transaction to settle a transaction before its maturity or expiration. Proposing Release, *supra* note 4, at 80.

¹⁴⁶ Proposing Release, *supra* note 4, at 81. Netting can only be undertaken when the instruments used by each party are the same and the underlying asset of the contracts are the same. *Id.* The Proposed Rule does not define material terms. *Id.* at 414–19 (providing the definitions section of the proposed rule).

¹⁴⁷ *Id.* at 110. Cover transactions were permitted by the SEC through the Dreyfus No-Action Letter. Dreyfus No-Action Letter, *supra* note 97, at 2. Difficulty in providing an appropriate standard, imperfect hedges, and the complicated nature of some offsetting transactions, were cited as reasons to why the SEC did not deem them fit for the calculation. Proposing Release, *supra* note 4, at 111–14. The SEC found that due to the fact that most funds in the DERA White Paper study did not exceed the 150% limit, additional reductions were not needed. *Id.* at 111.

¹⁴⁸ Proposing Release, *supra* note 4, at 115. The SEC concluded that the Value-at-Risk (“VaR”) test was the best choice to measure risk because it allows portfolio risk to be measured consistently and its ability to measure the effect holding a certain position on market risk. *See id.* at 119–21. Additionally, the SEC found that funds are already likely to have the capacity to conduct the VaR test. *See id.* at 123.

¹⁴⁹ *Id.* at 115–16. The SEC defines market risk as the risk of financial loss resulting from changes in market prices. *See id.* at 116 n.249. The definition includes general market risk—the risks connected to the market as a whole—and specific market risk—the risk connected with changes in the price of the underlying asset. *Id.*; see Michael S. Bennett & Michael J. Marin, *The Casablanca Paradigm: Regulatory Risk in the Asian Financial Derivatives Markets*, 5 STAN. J.L. BUS. & FIN. 1, 6 n.37 (1999) (defining “market risk”).

¹⁵⁰ Proposing Release, *supra* note 4, at 117; see *supra* notes 128–144 and accompanying text (discussing exposure calculation). This is in contrast to the exposure-based portfolio limitation, which

passing the VaR test, the fund must calculate its exposure and be within the exposure limitation of 300% of the fund's net assets.¹⁵¹

VaR is an estimate of potential losses on an instrument or portfolio, expressed in positive dollars, over a stipulated time horizon, and at a certain confidence level.¹⁵² The VaR test requires that, after the fund enters into a senior securities transaction, the fund's full portfolio VaR be lower than the fund's securities VaR.¹⁵³ Full portfolio VaR is defined to include securities, derivatives transactions, and other investments.¹⁵⁴ Securities VaR is the full portfolio minus any derivatives transactions.¹⁵⁵

Fund calculations of VaR are limited by specific model and parameters requirements.¹⁵⁶ A fund's model must incorporate all significant, identifiable

does exclusively measure exposure. See Proposing Release, *supra* note 4, at 117. VaR is generally a determination of potential losses. See HULL & BASU, *supra* note 1, at 523–24.

¹⁵¹ Proposing Release, *supra* note 4, at 116. The exposure calculation that a risk-based portfolio limitation uses is identical to that of the exposure-based portfolio limitation. See *id.* at 414 (presenting section 4(c)(3), the calculation method for determining exposure); see also notes 146–160 and accompanying text (explaining the exposure calculation). The 300% limitation would help to relieve concerns about VaR limitations while still allowing funds to use the flexibility of VaR. Proposing Release, *supra* note 4, at 146.

¹⁵² Proposing Release, *supra* note 4, at 119 (citing to Proposed Rule 18f-4(c)(11)(i)(A)). This definition comports with other regulatory definitions and scholarly literature. See *id.* A time horizon, measured in days, is the length of time the investment is held. HULL & BASU, *supra* note 1, at 523–24. A confidence level, expressed as a percentage, is the certainty that a loss will occur. *Id.* at 523–24. It is used across the industry to provide a single number that quantifies total risk. *Id.* at 522. Essentially, it presents a number representing the worst-case scenario. See *id.* at 523. The SEC addresses the fact that VaR has limitations, chiefly its inability to reflect tail risks and its tendency to miscalculate loss under stressed market conditions. See Proposing Release, *supra* note 4, at 126–29.

¹⁵³ Proposing Release, *supra* note 4, at 118. For example, a fund with a Securities VaR of \$10 million wishes to hedge with certain swaps. See *id.* If the full portfolio VaR of the fund is less than \$10 million after purchasing the swaps, the fund meets the risk-based VaR test. See *id.* at 124.

¹⁵⁴ *Id.* at 118. Other investments would include securities and investments that the fund has within its portfolio. *Id.*

¹⁵⁵ *Id.* at 118–19. Derivatives transactions would not include derivatives transactions that do not have future payment obligations. *Id.* at 119 n.253. A fund that has a portfolio VaR that is greater than its securities VaR will presumably be using derivatives in a manner that decreases overall exposure to market risk. *Id.* at 122.

¹⁵⁶ *Id.* at 134. There are many different models that funds use when computing VaR. See BNY MELLON, RISK ROADMAP: HEDGE FUNDS AND INVESTORS' EVOLVING APPROACH TO RISK 1, 16 (Aug. 2012), <https://www.thehedgefundjournal.com/sites/default/files/riskroadmap.pdf> [<https://perma.cc/2VU2-6YT4>] (finding that funds use multiple models). See generally Christopher Culp et al., *Value at Risk: Uses and Abuses*, 10 J. APPLIED CORP. FIN. 26, 26–38 (1998) (exploring the vast amount of uses of VaR by many different financial institutions). A fund would not be limited to using historical simulation and could choose from Monte Carlo and parametric models as well. Proposing Release, *supra* note 4, at 135–36. Historical simulation requires the creation of a database that is composed of daily movements in market variables during a period of time. HULL & BASU, *supra* note 1, at 546. Three years of historical data would be required to estimate historical VaR, if the fund uses historical simulation. See *id.* at 137. Monte Carlo simulation uses hypothetical changes in market values and simulates profits and losses. See Kate Litvak, *Monte Carlo Simulation of Contractual Provisions: An Application to Default Provisions in Venture Capital Limited Partnership Agreements*, 98 CORNELL

market risks factors.¹⁵⁷ In calculating VaR, the confidence interval must be a minimum of 99%.¹⁵⁸ The time horizon used must be not less than ten and not more than twenty days.¹⁵⁹ Finally, the fund must apply its VaR model consistently between the securities and portfolio VaR in order to prevent a fund from using different models to attain greater exposure.¹⁶⁰

C. Asset Segregation Requirements for Derivatives Transactions and Additional Provisions

1. Asset Segregation

With the intent of directly addressing § 1(b)(8) of the ICA's asset coverage concerns triggered by current fund practices, Proposed Rule 18f-4 requires adherence to asset segregation requirements.¹⁶¹ Under this requirement, a fund must preserve an amount of liquid assets to a sum, calculated by adding the mark-to-market coverage amount and the risk-based coverage amount, that would allow the fund to meet obligations incurred from derivatives transactions.¹⁶² The coverage amount for derivatives transactions must be equal to the sum of: (1) the mark-to-market coverage amount or the amount that would be payable by the fund if the fund were to exit the derivatives transaction at the time of determination and (2) the risk-based amount or a "reasonable estimate" of the "potential amount payable by the fund were to exit the derivatives transaction under stressed conditions."¹⁶³

L. REV. 1495, 1496 (2013) (defining Monte Carlo simulation). Parametric models estimate key parameters to create hypothetical returns. Proposing Release, *supra* note 4, at n.293.

¹⁵⁷ Proposing Release, *supra* note 4, at 135. These risk factors include, but are not limited to, equity price risk, interest rate risk, credit spread risk, foreign currency risk, and commodity price risk. *Id.* These risks account for changes in the value of an asset held. *Id.* A fund would also need to address risks from "nonlinear price characteristics" for derivatives that have "embedded optionality." *Id.*

¹⁵⁸ *Id.* at 138. This is also called a one-tailed confidence level. *Id.* at 138 n.302.

¹⁵⁹ *Id.* at 139. This calculation deviates from typical time parameters that only reflect the period an investment is being held. *Id.* By having such a time horizon, the SEC is attempting to balance short time horizons that are inefficient in identifying VaR risk fluctuations and longtime horizons that could cause estimated losses to drop. *Id.* at 139-40.

¹⁶⁰ *Id.* at 142. Inconsistent use could allow a fund to change the results of the test and allow the fund to use derivatives in a manner inconsistent with the proposed rule. *Id.*

¹⁶¹ *Id.* at 153. Asset segregation was first addressed in Release 10666. See Release 10666, *supra* note 4, at 25,132 (covering asset segregation).

¹⁶² Proposing Release, *supra* note 4, at 156; see *supra* note 103 and accompanying text (discussing mark-to-market). The required assets would need to be those liquid assets that the Proposed Rule has defined as qualified. Proposing Release, *supra* note 4, at 178. Unlike the previous practice proscribed by Release 10666, funds would not be required to place qualifying assets in a separate segregated account. See *id.* at 179 n.366; Release 10666, *supra* note 4, at 25,128. The term segregate is now meant to mean that the qualifying coverage amounts are identified as such on the fund's books. Proposing Release, *supra* note 4, at 179 n.366.

¹⁶³ Proposing Release, *supra* note 4, at 156. A similar requirement would exist under Proposed Rule 18f-4 for financial commitment transactions. *Id.* at 228. The SEC defines financial commitment

Under the mark-to-market coverage amount, calculations would need to be done daily.¹⁶⁴ A fund may net its payment obligations and use assets that are variation margin or collateral to reduce the required coverage amount.¹⁶⁵

The more flexible risk-based coverage amount is meant to measure the amount of assets needed in the event of stressed market conditions that led to future losses.¹⁶⁶ Under the risk-based coverage amount, calculations would also need to be done once daily in conjunction with the mark-to-mark daily calculation.¹⁶⁷ The calculations allow for netting and margin or collateral to reduce the required coverage amount.¹⁶⁸

The actual characterization of the qualifying coverage assets required to meet the total amount calculated by the mark-to-market and risk-based coverage amounts must fall under two categories: “cash and cash equivalents” or the particular asset that could satisfy an obligation under a derivative transaction that required the particular asset to be delivered.¹⁶⁹

transactions under Proposed Rule 18f-4 as any firm or standby commitment agreement or similar agreement, any reverse repurchase agreement, or short sale borrowing. *Id.* at 229. Financial commitment obligation under Proposed Rule 18f-4 is defined as the amount of cash or other assets that the fund is conditionally or unconditionally obligated to pay or deliver under a financial commitment transaction. *Id.* Where the fund is conditionally or unconditionally obligated to deliver a particular asset, the financial commitment obligation under the proposed rule would equal the value of the asset. *Id.* Only specific assets qualify as coverage assets for financial commitment transactions. *Id.* Assets that would be deemed to be sufficient under the proposed rule would be: (1) cash and cash equivalents; (2) with respect to any financial commitment transaction under which the fund may satisfy its obligations under the transaction by delivering a particular asset, that particular asset; or (3) assets that are convertible to cash or that will generate cash, equal in amount to the financial commitment obligation. *Id.* The rule limits the use of these transactions by funds by requiring that the funds cover each transaction with an equal qualifying asset. *Id.* In other words, each financial commitment transaction would need to be covered with a value that is equal to the amount of the financial commitment obligation associated with the transaction. *Id.*

¹⁶⁴ *Id.* at 158. Funds may choose to calculate more than once daily. *Id.* at 66 n.335.

¹⁶⁵ *Id.* at 160–61. Netting is the “ability to offset contracts with positive and negative values in the event of a counterparty default.” HULL & BASU, *supra* note 1, at 868; *see also supra* note 49 and accompanying text (explaining margin account).

¹⁶⁶ Proposing Release, *supra* note 4, at 166–67. The SEC concluded that this measurement was necessary due to a finding that the mark-to-market coverage amount would not adequately measure future loss. *Id.* at 166. The fund’s board would need to determine procedures for the risk-based coverage amount. *Id.* at 167.

¹⁶⁷ *Id.* at 166. The risk-based coverage amount is a new addition to the coverage amount calculation set out in Release 10666. *See* Release 10666, *supra* note 4, at 25, 128.

¹⁶⁸ Proposing Release, *supra* note 4, at 171–73. These calculations are determined the same way as the mark-to-market coverage amount is determined. *Id.*

¹⁶⁹ *Id.* at 178. The total amount of “coverage assets could not exceed the fund’s net assets.” *Id.* at 183. The SEC posits that allowing a fund to maintain additional coverage assets could allow a fund to maintain a greater amount of leverage. *Id.* at 184–85. Cash and cash equivalents are considered qualified due to their extremely liquid nature. *Id.* at 179. Cash equivalents include short-term, highly liquid investments that are easily turned into cash, such as treasury bills, agency securities, bank deposits, commercial paper, and shares of money market funds. *Id.* Deliverable assets are the particular assets that would satisfy an obligation but not a derivative that provides offsetting exposure. *Id.* at 182. The SEC prohibits such offsetting to be considered as qualifying because there is counterparty risk and a

2. Derivatives Risk Management Program

Funds that exceed the threshold of fifty percent notional derivatives exposure or that use any complex derivatives would also be required to maintain a formal derivatives risk management program.¹⁷⁰ A fund's program would be required to have policies and procedures that: (1) assess the risks of derivatives transactions that the fund has entered into; (2) manage derivatives risks through monitoring of derivatives use and communication with fund management; (3) segregate program functions from portfolio management; and (4) review and update the risk management program.¹⁷¹

First, a fund must evaluate the risks associated with the use of derivatives transactions through identifying the derivatives it currently in use and those it plans to use in the future.¹⁷² The fund must then evaluate five risks related to the derivative.¹⁷³ Second, the fund must establish policies and procedures that align with the fund or its investment advisor's investment guide.¹⁷⁴ The fund would be required to inform the portfolio manager of derivatives risks.¹⁷⁵ Third, the functions related to the administration of the risk management program would need to be reasonably segregated from those related to portfolio

fund could end up with insufficient assets to cover its obligations. *Id.* Counterparty risk is the risk of default. *Id.* at 207–08.

¹⁷⁰ *Id.* at 190. The 50% requirement mirrors the 50% threshold set out in § 18 of the ICA that limits fund borrowing from banks. *Id.* at 193–94. Complex derivatives are deemed to have special risk characteristics that the SEC believes require greater attention in order to facilitate safe use. *Id.* at 200.

¹⁷¹ *Id.* at 191. A titled derivatives risk manager would run the program. *Id.* In addition to the required elements, the proposed rule specifies certain requirements for the administration of the program. *Id.* at 221. A board-approved individual within the fund would need to be charged with administering the program's policies and procedures. *See id.* The board, along with a majority of uninterested directors, must approve of the derivatives risk manager. *Id.* This individual would need independence to administer the program. *Id.* at 222. Furthermore, the fund's board would need to have an understanding of the program's objectives as well as approve the program, approve any material changes to the program, and review the derivatives risk manager. *Id.* at 225–27.

¹⁷² *Id.* at 205.

¹⁷³ *Id.* at 205–06. The fund must evaluate five stated risks but can choose to identify other potential risks. *Id.* at 210. The first risk to be identified is leverage risk, which includes the risks connected to the magnification of “effects by changes in market value underlying derivatives transactions where the value of the underlying asset exceeds the initial investment.” *Id.* The second risk is market risk, which includes the risk related to possible adverse market changes that may impact derivative returns and obligations. *Id.* at 207–08. The third risk is counterparty risk, which is the risk that a counterparty defaults on its obligation and the related risk of having many derivatives transactions with one counterparty. *Id.* at 208. The fourth risk is liquidity risk. *Id.* at 209. Liquidity risk is the risk that a fund could not meet requests to redeem shares issued by the fund that are expected under normal conditions without materially affecting the fund's net asset value. *Id.* The final risk is operational risk, which is the risk associated with documentation issues, settlement issues, system failures, and human error. *Id.* at 210.

¹⁷⁴ *Id.* at 212. The fund would not be required to impose risk limits. *Id.* A fund might consider written guidelines at revisiting contingency plans. *Id.* at 214.

¹⁷⁵ *Id.* at 215. As risks present themselves or are anticipated, those risks would need to be reported to the portfolio manager. *Id.*

management.¹⁷⁶ Lastly, the fund would be required to annually review its policies and procedures to evaluate the efficiency of the program and update the program as necessary.¹⁷⁷

3. Recordkeeping

Proposed Rule 18f-4 would also require funds to comply with recordkeeping requirements that mandate the disclosure of information relating to the compliance with the portfolio limitations, asset segregation, and the formalized risk management program requirements.¹⁷⁸ These records would need to be easily accessible for five years for examiners to evaluate compliance.¹⁷⁹

4. Amendments to Proposed Forms

The final adjustments to current regulations that Proposed Rule 18f-4 would make are the amendments to two of the SEC's proposed forms.¹⁸⁰ Amendments to Proposed Form N-PORT include the addition of fund's gamma

¹⁷⁶ *Id.* at 216. The SEC intends the segregation to be a way to independently assess risk, cross check portfolio management, and “enhance the protections provided by the program.” *Id.* at 216–17. Without such a separation, the risk management program could be harmed by a lack of checks and balances. *Id.* at 217. A variety of methods could be used to sufficiently segregate. *Id.* Communication between the two managements would still be allowed, however, as the SEC believes that such communication would be key to the program's success. *Id.* The SEC proposes that a “firewall” be in place between the two managers. *Id.* The SEC believes that this could create issues for entities that have a limited number of employees. *Id.* at 217 n.435.

¹⁷⁷ *Id.* at 218. The SEC requires review of models, measurement tools, and policies and procedures. *Id.* The SEC believes that a fund should consider reviewing more than once per year. *Id.*

¹⁷⁸ *Id.* at 246. The recordkeeping requirement consists of three major provisions that provide that a fund maintain records relating to: (1) the fund's chosen portfolio limitation; (2) compliance with other requirements; and (3) the risk management program if a fund is required to maintain one. *Id.* at 246–47. Under the first provision, the fund would need to have records of the determination of which portfolio limitation, either the exposure-based portfolio limitation or the risk-based limitation. *Id.* at 247. Changes to portfolio limitations and the initial determination would need to be recorded for SEC examiners to evaluate. *Id.* Under the second provision, funds would be required to maintain written records of its compliance with requirements. *Id.* at 227–28. The fund would need a written record of its maintenance of qualifying coverage amounts, compliance with portfolio limitations, and the fund's mark-to-market and risk-based coverage amounts. *Id.* at 228. Further, the fund would need to have written records of senior securities transactions “immediately after entering into” such a transaction, its full portfolio VaR, and its securities VaR. *Id.* For derivatives transactions, the fund would need to have written records of the total amount of coverage amounts rather than the assets maintained for each specific derivatives transaction. *Id.* Such records would need to be compiled daily in conjunction with the coverage amount calculations. *Id.* Under the third provision, funds would be required to possess records of its derivatives risk management program. *Id.* at 249. The fund would need to maintain written records of the program's policies and procedures, materials relating to the approval of the program, and documents relating to the periodic updates and review of the program. *Id.*

¹⁷⁹ *Id.* at 247.

¹⁸⁰ *Id.* at 251. These forms were proposed on May 20, 2015, in an attempt to modernize fund disclosure. Investment Company Reporting Modernization, *supra* note 18, at 1.

and vega for certain instruments.¹⁸¹ The Amendments to Proposed Form N-CEN requires that funds identify which portfolio limitation that they have chosen.¹⁸²

III. PROPOSED RULE 18F-4 IS NECESSARY BUT MUST SPECIFICALLY ADDRESS SPECULATIVE DERIVATIVE USE TO ALIGN REGULATIONS WITH THE ICA

The systemic and specific risks to investors that derivatives use poses are well documented.¹⁸³ The exponential expansion of the overall derivatives market and the increase in use by funds, however, strongly suggest that derivatives are still highly valued financial instruments.¹⁸⁴ This Part argues that, although the political tide is turning against regulation, the SEC has a duty to implement

¹⁸¹ Proposing Release, *supra* note 4, at 250. Proposed Form N-PORT originally just maintained a delta requirement. *Id.* at 254. Delta is the rate of change of the price of a derivative with the price of the underlying asset. HULL & BASU, *supra* note 1, at 860. Gamma “measures the sensitivity of delta.” Proposing Release, *supra* note 4, at 255; HULL & BASU, *supra* note 1, at 864 (stating that gamma is the “rate of change of delta with respect to the asset price”). Vega measures the “amount that an options contract’s price changes in relation to a 1% change in the volatility of an underlying asset.” Proposing Release, *supra* note 4, at 255. Volatility is the measured uncertainty of the return realized on an asset. HULL & BASU, *supra* note 1, at 875.

¹⁸² Proposing Release, *supra* note 4, at 256.

¹⁸³ See *In re* Claymore Advisors, LLC, Investment Company Act Release No. 30308 (Dec. 19, 2012) (involving a fund that lost 45% of its assets due and eventual liquidation due to derivative use); *In re* UBS Willow Management L.L.C. and UBS Fund Advisor L.L.C., Investment Company Act Release No. 31869 (Oct. 16, 2015) (settled action) (involving a fund that was forced to liquidate after derivative use led to immense losses); OFF. OF FIN. RESEARCH, *supra* note 9, at 19 (finding that current use of derivatives pose risks to financial stability); RECHTSCHAFFEN, *supra* note 9, at 160 (explaining AIG and Bear Stern’s derivative losses); Baker, *supra* note 9, at 1292 (arguing for more transparency of derivative use due to their possible systemic impact); Markham, *supra* note 90, at 361 (finding that several mutual funds saw great losses in the 1990s due to derivative use); Simkovic, *supra* note 9, at 14 (arguing that there should be greater regulation of OTC derivatives); Dieterich & Banerji, *supra* note 91, at 1 (covering a \$600 million loss incurred by a mutual fund’s use of derivatives); Dizard, *supra* note 9, at 3 (stating that the OTC derivative market is under collateralized at about \$3.69 trillion despite efforts to use central clearing); Edwards, *supra* note 6, at 9–13 (explaining the circumstances behind Metallgesellschaft’s losses); Fitzpatrick et al., *supra* note 56, at 2 (covering J.P. Morgan’s over \$2 billion loss caused by derivative use); Valladares, *supra* note 9, at 1 (highlighting the concentration of derivatives in few financial institutions); Partnoy Testimony, *supra* note 6, at 58–62 (outlining how Enron traders used derivatives to hide losses).

¹⁸⁴ See Proposing Release, *supra* note 4, at 4 (acknowledging the beneficial uses of derivatives); BIS, EXCHANGE-TRADED FUTURES, *supra* note 1, at 1 (providing statistics on the 2016 derivative market size and showing that the derivatives market has septupled in size since the 1990s); RECHTSCHAFFEN, *supra* note 9, at 159 (stating that derivatives are a means to shift risk to parties who are willing to take it on or are better suited to take it on); Sill, *supra* note 11, at 20 (explaining that derivatives aid in risk allocation); Tian, *supra* note 12, at 1 (arguing that derivatives are an important function of the market to maintain efficient risk allocation); Valladares, *supra* note 9, at 2 (highlighting some of the major developments in growth); Michael S. Gibson, *Credit Derivatives and Risk Management* 1 (Fed. Reserve Bd., Divs. of Research & Statistics & Monetary Affairs, Working Paper No. 47, 2007) (“The growth of credit derivatives suggests that market participants find them useful for risk management.”); Antoniewicz, *supra* note 10 (arguing that there are many benefits for derivatives and that derivatives risk can be overstated when simple measurements are used).

Proposed Rule 18f-4 given the possible risks to investors.¹⁸⁵ The Proposed Rule, however, must take the additional step of eliminating speculative derivative use in order to align regulations with the ICA.¹⁸⁶ Section A asserts that Proposed Rule 18f-4 is a necessary rule given the ICA's policy of protecting the national public and investors and derivatives' documented risks to the financial system and investors.¹⁸⁷ Section B asserts that, in regulating their use, the SEC should make a greater distinction between derivatives used for speculation purposes and derivatives used for hedging.¹⁸⁸

A. 18f-4 Is a Necessary Starting Point for Fund Use of Derivatives

The stated policy of the ICA requires that its provisions be interpreted to "eliminate the conditions" that have an adverse effect on the "national public interest and the interest of investors."¹⁸⁹ Not only has derivatives use been found to pose systemic risk, but research also suggests that funds are institutions whose failure could have an impact on the greater financial system.¹⁹⁰ These public funds are invested in by unsophisticated and unaccredited investors who possess neither the knowledge nor the assets to be exposed to the risks of derivatives use.¹⁹¹ Exactly to what extent funds use derivatives is also not well documented.¹⁹² The SEC must act on its Congressionally mandated

¹⁸⁵ See *infra* notes 189–225 and accompanying text.

¹⁸⁶ See *infra* notes 189–208 and accompanying text.

¹⁸⁷ See *infra* notes 209–221 and accompanying text.

¹⁸⁸ See *infra* notes 222–225 and accompanying text.

¹⁸⁹ 15 U.S.C. § 80a-1 (2012).

¹⁹⁰ See FIN. CRISIS INQUIRY COMM'N, *supra* note 7, at 279 (concluding that the massive losses of major financial institutions were due to derivatives); FIN. STABILITY BD., PROPOSED POLICY RECOMMENDATIONS TO ADDRESS STRUCTURAL VULNERABILITIES FROM ASSET MANAGEMENT ACTIVITIES 1–2 (2016) (laying out the financial stability risks that certain asset management firms pose); OFF. OF FIN. RESEARCH, *supra* note 9, at 18–19 (finding that current use of derivatives pose risks to financial stability and that large asset management firms could pose risks to the financial system); Adam & Guettler, *supra* note 7, at 1 (stating that the use of certain derivatives caused substantial losses at banks and funds during the 2008 Financial Crisis).

¹⁹¹ See CLIFFORD J. ALEXANDER & ARTHUR C. DELIBERT, MONEY MANAGER'S COMPLIANCE GUIDE ¶ 710, Westlaw (database updated Mar. 2015) (outlining the public nature of investment companies under the ICA); Paul Justice, *Warning: Leveraged and Inverse ETFs Kill Portfolios*, MORN-INGSTAR, Jan. 22, 2009 (finding that investors do not understand derivative laden products); Charlie Wells, *An Alternative Investment by Any Other Name Is Still . . .*, WALL ST. J. (Aug. 10, 2015), <https://www.wsj.com/articles/an-alternative-investment-by-any-other-name-is-still-1439172115> [<https://perma.cc/NGU2-4RL3>] (finding that some mutual fund brokers avoid the use of the word "derivatives" when marketing to investors because of the lack of understanding); *supra* note 62 and accompanying text (laying out investor requirements under the ICA).

¹⁹² See DELI ET AL., *supra* note 3, at 3 (finding that accessible data on derivative use by funds is not available); Piwowar Statement, *supra* note 19, at 2 (stating that he could not support the proposed rule because the SEC did not do a high-quality analysis of comprehensive data on fund use of derivatives).

duty and use its powers to bring derivatives under the purview of the ICA through enacting Proposed Rule 18f-4.¹⁹³

Fund derivative use poses substantial dangers to the national public because of the systemic risks involved with derivatives and the outsized role of funds in the financial system.¹⁹⁴ The 2008 Financial Crisis clearly enumerated the systemic risks that derivatives pose to the national public.¹⁹⁵ Funds are institutions that maintain important positions in the financial system.¹⁹⁶ The fact that 45% of fund assets are concentrated in the largest five complexes makes fund use of derivatives especially dangerous.¹⁹⁷ The growth of fund use of derivatives has continued for over a decade, but the fund industry has seen a recent influx of competitive tactics and the entrance of investment banks—developments that may increase the likelihood of funds to seek out alternate strategies that use derivatives in order to maximize returns.¹⁹⁸ In a very recent

¹⁹³ 15 U.S.C. §§ 80a-1, a-38 (stating the policy of the ICA and granting the SEC the power to make necessary rules under the ICA); FIN. STABILITY BD., *supra* note 190, at 1–2 (laying out the financial stability risks that certain asset management firms pose); OFF. OF FIN. RESEARCH, *supra* note 9, at 18–19 (finding that current use of derivatives poses risks to financial stability and that large asset management firms could pose risks to the financial system). The current political climate is against regulation. *See* Exec. Order No. 13,771, 82 Fed. Reg. 9339 (Jan. 30, 2017) (requiring that two existing regulations must be identified as to be repealed when an agency or executive department proposes for notice and comment); Exec. Order No. 13,772, 82 Fed. Reg. 9965 (Feb. 3, 2017) (setting out the “Core Principles” of regulation for the Trump administration and order the Financial Stability Council to report on current regulations); *see also supra* note 21 and accompanying text (addressing regulatory policy changes).

¹⁹⁴ *See* FIN. CRISIS INQUIRY COMM’N, *supra* note 7, at 279 (concluding that the massive losses of major financial institutions were due to derivatives); FIN. STABILITY BD., *supra* note 190, at 1–2 (laying out the financial stability risks that asset management firms pose); Adam & Guettler, *supra* note 7, at 1 (stating that the use of certain derivatives caused substantial losses at banks and funds during the Financial Crisis); *see also supra* note 57 and accompanying text (discussing systemic risk).

¹⁹⁵ *See* FIN. CRISIS INQUIRY COMM’N, *supra* note 7, at 279 (concluding that the massive losses of major financial institutions were due to derivatives); Lynch, *supra* note 14, at 84–94 (covering the dangers of derivative use); Adam & Guettler, *supra* note 7, at 1 (stating that the use of certain derivatives caused substantial losses at banks and funds during the Financial Crisis); Sheri M. Markose, *Systemic Risk from Global Financial Derivatives: A Network Analysis of Contagion and Its Mitigation with Super-Spreader Tax* 47–48 (Int’l Monetary Fund, Working Paper 12/282, 2012) (finding that derivatives systemic risk was evident in the Financial Crisis); McDonald & Paulson, *supra* note 7, at 12–18 (explaining AIG’s derivative use).

¹⁹⁶ *See* CARNELLE ET AL., *supra* note 60, at 643 (explaining the importance of funds); KIRSCH, *supra* note 26, §§ 1:1, 1B:1 (highlighting the importance of funds); *supra* notes 60–79 and accompanying text (discussing funds and their role in the markets).

¹⁹⁷ INV. CO. INST., *supra* note 2, at 17 (covering the concentration of assets); *see* Adam & Guettler, *supra* note 7, at 1 (finding that concentration of derivative use increases systemic risk). The largest twenty-five complexes control 75% of assets. INV. CO. INST., *supra* note 2, at 17. Additionally, although data on fund use of derivatives is incomplete, the risks of leverage are very well known through ties to the Great Depression and the 2008 Financial Crisis. *See* DELI ET AL., *supra* note 3, at 3 (finding that accessible data on derivative use by funds is not available).

¹⁹⁸ *See* DELI ET AL., *supra* note 3, at 2–3 n.7 (finding that there has been an increase in fund use of derivatives over the past decade); Krouse, *supra* note 73, at 1 (covering a new move by an asset manager to obtain more flexibility in selecting fund managers); Loder, *supra* note 73, at 1 (highlight-

incident of fund use of derivatives under current regulations, the market felt substantial tremors as a single fund lost \$600 million due to options trading.¹⁹⁹

Individual investors in funds are often unsophisticated and likely have neither the knowledge to comprehend nor the assets to sustain the risks of derivatives.²⁰⁰ It is, therefore, against the policy of the ICA to allow individual investors to be exposed to such risks.²⁰¹ Indeed, even scholars and practitioners struggle with understanding derivatives.²⁰² There is also no minimum income or net worth requirement for investors in funds.²⁰³ But, the assets managed by funds are particularly important to individuals in that an immense amount of retirement assets, with sixty-three percent of 401(k)'s under management of funds.²⁰⁴ With some fund use of derivatives mirroring that of private funds, individual investors in funds are exposed to risks that should be contained to more sophisticated hedge fund investors.²⁰⁵

The SEC should move to emplace regulations while continuing to gather data on fund derivative use so as to properly regulate derivatives under the ICA, a move not entirely objected to by the industry.²⁰⁶ The SEC cannot con-

ing the recent entrance of investment banks into the ETF market and that Goldman Sachs, an investment bank, maintains prices lower than those of ETFs already in a market controlled by Vanguard, BlackRock, and State Street); Moise, *supra* note 73, at 1 (outlining the new “pricing war” between asset managers for the trading of ETFs); Popper, *supra* note 73, at 1 (covering a new ETF asset class that an asset manager attempted to use); Zweig, *supra* note 73, at 1 (covering developments in ETF and mutual fund use of electronic fund advisors).

¹⁹⁹ See Dieterich & Banerji, *supra* note 91, at 1; *supra* note 90 and accompanying text (explaining the fund loss).

²⁰⁰ See SEC v. Ralston Purina Co., 346 U.S. 119, 119 (1953) (laying out the sophisticated investor requirements); 17 C.F.R. § 230.501 (2017) (defining “accredited investor”); Justice, *supra* note 191, at 1 (finding that investors do not understand derivative laden products); Wells, *supra* note 191, at 1 (finding that some mutual fund brokers avoid the use of the word “derivatives” when marketing to investors because of the lack of understanding).

²⁰¹ See Wells, *supra* note 191, at 1 (finding that some mutual fund brokers avoid the use of the word “derivatives” when marketing to investors because of the lack of understanding); *supra* note 62 and accompanying text (laying out investor requirements under the ICA).

²⁰² See Awrey, *supra* note 3, at 271–73 (explaining some particularly complex derivative uses by funds); Lynch, *supra* note 14, at 9 (explaining that many practitioners misunderstand derivatives); Stout, *supra* note 5, at 5–6.

²⁰³ See generally 15 U.S.C. §§ 80a-1 to -64 (2012) (failing to state income or net worth threshold requirements for investors to purchase shares of a fund).

²⁰⁴ See KIRSCH, *supra* note 26, § 1A:2.5[C]. Currently, over 43% of U.S. households invest in mutual funds. INV. CO. INST., *supra* note 2, at 112.

²⁰⁵ See DELI ET AL., *supra* note 3, at 2 (finding that some funds use derivatives in a similar manner to hedge funds); INV. CO. INST., *supra* note 2, at 42 (finding an increase in alternative strategy funds). Alternative strategy funds often use hedge fund strategies of hedging risk. See Singer, *supra* note 85, at 498 (same); Horejs, *supra* note 85, at 2 (explaining alternative strategy funds). The Catalyst Futures incident occurred when a hedge fund converted to a mutual fund and maintained its hedge fund derivative strategies. Dieterich & Banerji, *supra* note 91, at 1.

²⁰⁶ 15 U.S.C. §§ 80a-1, a-38 (stating the policy of the ICA and granting the SEC the power to make necessary rules under the ICA); Fidelity Comment Letter, *supra* note 19, at 2 (supporting updated regulations); FIN. STABILITY BD., *supra* note 190, at 1–2; OFF. OF FIN. RESEARCH, *supra* note 9, at

tinue to rely on Release 10666 and subsequent no-action letters, all of which do not directly address derivative use and are loosely interpreted to the detriment of some funds.²⁰⁷ The Proposed Rule's portfolio limitations and asset segregation would serve to limit fund exposure to derivatives use and, thus, curb both the systemic and individual risks pose.²⁰⁸ Additionally, the Proposed Rule can help collect the data needed to determine exactly the extent to which funds use derivatives.²⁰⁹

B. Properly Aligning Proposed Rule 18f-4's Portfolio Limitations with the ICA's Undue Speculation Policy

The SEC should make a distinction between derivatives used for hedging and derivatives used for speculation in order to properly align Proposed Rule 18f-4 with the ICA's policy to eliminate undue speculation.²¹⁰ Derivative use with the intention of hedging assets or other derivatives transactions maintains value for the entire financial system.²¹¹ Hedging through derivatives can de-

18–19; Maxey, *supra* note 20, at 1 (finding that funds generally supported an update of regulations); Michaels, *supra* note 20, at 1 (quoting the Chief Executive of the Investment Company Institute as believing that “a well-drawn up rule on derivatives would be a good one”); Piwowar Statement, *supra* note 19, at 1 (stating the need for updated regulations).

²⁰⁷ See BlackRock, Comment Letter on Use of Derivatives by Investment Companies Under the Investment Company Act of 1940 (Nov. 4, 2011) (on file with SEC) (“Any set of mechanical rules cannot take account of the diversity of derivatives and the multiplicity of ways they may be used by portfolio managers.”); Davis Polk, Comment Letter on Use of Derivatives by Investment Companies Under the Investment Company Act of 1940 (Nov. 11, 2011) (on file with SEC) (stating that “funds and their sponsors may interpret the available guidance differently, even when applying it to the same instruments, which may unfairly disadvantage some funds”); Proposing Release, *supra* note 4, at 19 (listing the applicable no-action letters); Release 10666, *supra* note 4, at 25,128 (failing to explicitly address derivatives). See generally 15 U.S.C. §§ 80a-1 to -64 (failing to explicitly address derivatives). Release 10666 is over thirty years old as of 2018 and was not created in anticipation of the evolution. See Release 10666, *supra* note 4, at 25,128; see also *supra* notes 113–125 and accompanying text (discussing the inapplicability of Release 10666 to address the current market).

²⁰⁸ See Proposing Release, *supra* note 4, at 69–151 (explaining the portfolio limitations and asset segregation requirements of Proposed Rule 18f-4); *supra* notes 126–158 and accompanying text (discussing the portfolio requirements).

²⁰⁹ See DELI ET AL., *supra* note 3, at 2–3 (finding that accessible data on derivative use by funds is not available); Piwowar Statement, *supra* note 19, at 1 (stating that he could not support the proposed rule because the SEC did not do a high-quality analysis of comprehensive data on fund use of derivatives).

²¹⁰ 15 U.S.C. § 80a-1 (2012) (stating the policy of the ICA is to eliminate undue speculation); § 80a-38 (granting the SEC the power to make necessary rules under the ICA); Proposing Release, *supra* note 4, at 111. The exposure-based portfolio limitation does not permit a fund to calculate hedging or cover transactions into the total notional amount. See *id.* at 111–14; see also *supra* notes 43–48 and accompanying text (explaining the benefits of hedging and the risks of speculative derivative use).

²¹¹ See U.S. GEN. ACCOUNTING OFF., FINANCIAL DERIVATIVES: ACTIONS NEEDED TO PROTECT THE FINANCIAL SYSTEM 6 (1994) (finding that derivatives are important risk management tools for the functioning of global markets); HAAS, *supra* note 8, at 119 (explaining the useful use of derivative hedging); RECHTSCHAFFEN, *supra* note 9, at 159–60 (explaining that derivatives are a means to shift risk to parties who are willing to take it on or are better suited to take it on and that derivatives lower

crease risk to investors and absent a safe harbor for hedging transactions in the proposed rule, these valuable transactions could be discouraged.²¹²

Calculations of leverage caused by hedging may be difficult, but the SEC may curtail the beneficial and vital use of hedging if it does not allow for hedging to be added into the calculation.²¹³ Conversely, speculative derivatives use neither provides efficient risk allocation nor creates any wealth.²¹⁴ The portfolio limitations should therefore distinguish between derivatives use for hedging and derivatives use for speculation and curtail speculative use through an Expected Shortfall calculation instead of VaR.²¹⁵ In the alternative, speculative derivative use should be prohibited by funds entirely and then portfolio limitations should be lifted to allow for greater hedging use.²¹⁶

fund costs, allow for hedging, help manage assets, and increase profits); Frank D'Souza et al., *Illuminating the Need for Regulation in Dark Markets: Proposed Regulation of the OTC Derivatives Market*, 12 U. PA. J. BUS. L. 473, 474 (2010) (stating that derivatives "can be used as a hedge against potential losses from unpredictable changes in commodity and financial markets. As such, if used properly, derivatives are a good way of transferring risk"); Fletcher, *supra* note 43, at 818 (stating that derivatives "have become essential tools for risk management"); Macey, *supra* note 10, at 72–81 (stating that derivatives allow parties to shift risk); Schwarcz, *supra* note 8, at 221–22 ("These hedging strategies, at least theoretically, facilitate risk-spreading to parties better able to bear the risks This diversification of risk also reduces the likelihood that a default will cause any given institution to fail and mitigates the impact of any such failure on other institutions"); Sill, *supra* note 11, at 20 (explaining that derivatives aid in risk allocation); *see also supra* notes 43–48 and accompanying text (explaining derivatives hedging).

²¹² See Gerding, *Code, Crash, and Open Source*, *supra* note 43, at 195 (finding that hedging is vital to the marketplace); Lynch, *supra* note 14, at 18–19 (finding that derivatives used for hedging can create value by offering insurance).

²¹³ See Proposing Release, *supra* note 4, at 110, 115–16; COMM. ON FED. REGULATION OF SEC., *supra* note 12, at 6; Tian, *supra* note 12, at 1. Risk management and risk sharing are considered the "primary purpose" of derivative use by mutual funds. See Tian, *supra* note 12, at 1. Difficulty in providing an appropriate standard, imperfect hedges, and the complicated nature of some offsetting transactions were cited as reasons to why the SEC did not deem them fit for the calculation. See Proposing Release, *supra* note 4, at 110. Withholding cover transactions from the calculation could also lead to disincentivizing funds from using these potentially beneficial transactions. See Tian, *supra* note 12, at 1.

²¹⁴ See Thomas Lee Hazen, *Rational Investments, Speculation, or Gambling?—Derivative Securities and Financial Futures and Their Effect on the Underlying Capital Markets*, 86 NW. U. L. REV. 987, 994 (1992) (pointing out speculative derivative use's similarities with gambling); Lynch, *supra* note 34, at 82–83 (explaining the particular dangers of derivatives speculation); Lynn A. Stout, *Betting the Bank: How Derivatives Trading Under Conditions of Uncertainty Can Increase Risks and Erode Returns in Financial Markets*, 21 J. CORP. L. 53, 57 (1995) (highlighting the much greater risk involved with speculative derivative use). Purely speculative derivatives are sometimes viewed as zero-sum transactions that do nothing more than transfer wealth. See Lynch, *supra* note 34, at 84.

²¹⁵ See Proposing Release, *supra* note 4, at 110; Robert P. Bartlett, III, *Making Banks Transparent*, 65 VAND. L. REV. 293, 331–32 (2012) (explaining that expected shortfall calculates for the worst-case scenarios for portfolio loss). The exposure-based portfolio limitation does not permit a fund to calculate hedging or cover transactions into the total notional amount. See Proposing Release, *supra* note 4, at 111–14. The SEC found that due to the fact that most funds in the DERA White Paper study did not exceed the 150% limit, additional reductions were not needed. See *id.* at 111.

²¹⁶ See Proposing Release, *supra* note 4, at 111, 115–16; Hazen, *supra* note 214, at 994 (pointing out speculative derivative use's similarities with gambling); Lynch, *supra* note 34, at 82–83 (explain-

Under the first approach to portfolio limitations, speculative derivative use would be permitted but contained through an Expected Shortfall calculation of risk and hedging would be calculated into the exposure limitation.²¹⁷ Such an approach would better align the Proposed Rule with the ICA because, by separating speculative derivatives transactions from hedging transactions, undue speculation caused by derivative transactions could properly be constrained.²¹⁸

Generally, Expected Shortfall measures the total risk of loss in a portfolio and accounts for tail risk.²¹⁹ It would replace the current VaR model in calculating for exposure, which only measures expected risk and fails to measure what is tail-end risk.²²⁰ VaR was shown to have significant failings under market stress during the 2008 Financial Crisis and should not be used when attempting to protect investors.²²¹ The first approach would also allow for hedging to be calculated into the exposure limitations.²²² Hedging can be distinguished from speculative derivative transactions by appropriately matching a derivatives transaction with the asset it is hedging.²²³

The alternative approach to portfolio limitations entails banning all speculative derivative use by funds and lifting portfolio limitations for hedging.²²⁴

ing the particular dangers of derivatives speculation); Stout, *supra* note 214, at 57 (highlighting the much greater risk involved with speculative derivative use).

²¹⁷ See Proposing Release, *supra* note 4, at 110, 115–16; Bartlett, *supra* note 215, at 331–32.

²¹⁸ See 15 U.S.C. § 80a-1(b)(7) (2012); Proposing Release, *supra* note 4, at 111.

²¹⁹ See Bartlett, *supra* note 215, at 331–32 (explaining expected shortfall); John Hull, *VAR Versus Expected Shortfall*, RISK.NET (Mar. 1, 2007), <http://www.risk.net/risk-magazine/technical-paper/1506669/var-versus-expected-shortfall> [<https://perma.cc/JX43-Q5KA>] (outlining the benefits of using expected shortfall over VaR).

²²⁰ See Proposing Release, *supra* note 4, at 115–16; Culp et al., *supra* note 156, at 26 (exploring the deficiencies of VaR); Andrew L. McElroy, *Drastic Times Call for Drastic Measures: Value-at-Risk Is (Still) a Flawed Preventive of Financial Crises and What Regulators Can Do About It*, 6 J. BUS. ENTREPRENEURSHIP & L. 219, 224 (2013) (finding that “catastrophic losses” can be “hidden in the tail”).

²²¹ See Suleyman Basak & Alexander Shapiro, *Value-at-Risk- Based Risk Management: Optimal Policies and Asset Prices*, 14 REV. FIN. STUDIES 371, 390 (2001) (finding that risk managers that use VaR take on greater losses than those who do not use VaR); Pablo Triana, *The Flaws of Value at Risk: Tracking a True Culprit*, CORP. FIN. REV., July-Aug. 2009, at 1 (covering the flaws of VaR); Yasuhiro Yamai & Toshinao Yoshiba, *Comparative Analyses of Expected Shortfall and Value-at-Risk Under Market Stress*, MONETARY & ECONOMIC STUDIES, Oct. 2002, at 183 (finding that prevalent use of VaR for risk management could lead to great losses).

²²² See Proposing Release, *supra* note 4, at 111; RECHTSCHAFFEN, *supra* note 9, at 159–60 (explaining that derivatives are a means to shift risk to parties who are willing to take it on or are better suited to take it on and that derivatives lower fund costs, allow for hedging, help manage assets, and increase profits); Macey, *supra* note 10, at 72–81 (stating that derivatives allow parties to shift risk).

²²³ See BlackRock, Comment Letter on Use of Derivatives by Registered Investment Companies and Business Development Companies 18–19 (Mar. 28, 2016) (on file with SEC) (presenting a method of hedging calculation). This matching could be done by looking to the net exposures of the physical securities and derivatives transactions. See *id.* If, after calculating both net exposures, the physical securities and derivatives transactions are opposite signs the fund is using the derivative as a hedge and therefore excluded from the calculation. See *id.*

²²⁴ See Proposing Release, *supra* note 4, at 111, 115–16.

This approach would be safer and would more properly align the Proposed Rule with the ICA because the ICA's policy is to "eliminate" undue speculation.²²⁵ Although speculative derivatives use by funds would be completely barred, funds would be able to use hedging transactions with greater leeway.²²⁶ The new asset segregation requirements would act as a sufficient backstop to hedging transactions that could maintain some speculative characteristics.²²⁷

CONCLUSION

Investment company use of derivatives continues to increase. Proposed Rule 18f-4 sets out long overdue and reasonable provisions to mitigate the risks involved with the continued increases of derivative use. Though there is now an anti-regulation wind blowing in government, Proposed Rule 18f-4 should not be abandoned so as to prevent hazardous derivative use by registered funds. The rule should, however, allow for the beneficial use of hedging in its calculation of fund exposure to risks and use the calculation of tail-end risk in place of the VaR model. Such augmentations to the rule would allow funds to benefit from derivatives but track the greater risks that can follow. In the alternative, the Proposed Rule should entirely prohibit speculative derivatives use and lift the portfolio limitations for hedging. Failing to emplace Proposed Rule 18f-4 contravenes the SEC's duty under the ICA to interpret its provisions to eliminate undue speculation.

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²²⁵ See 15 U.S.C. § 80a-1(b)(7) (2012); Hazen, *supra* note 214, at 994 (pointing out speculative derivative use's similarities with gambling); Lynch, *supra* note 34, at 82–83 (explaining the particular dangers of derivatives speculation). Stout, *supra* note 214, at 57 (highlighting the much greater risk involved with speculative derivative use).

²²⁶ See Proposing Release, *supra* note 4, at 159; HAAS, *supra* note 8, at 119 (explaining the useful use of derivative hedging); RECHTSCHAFFEN, *supra* note 9, at 159–60 (explaining that derivatives are a means to shift risk to parties who are willing to take it on or are better suited to take it on and that derivatives lower fund costs, allow for hedging, help manage assets, and increase profits); Macey, *supra* note 10, at 72–81 (stating that derivatives allow parties to shift risk).

²²⁷ See Proposing Release, *supra* note 4, at 159. Hedging, in the context of Credit Default Swaps, does not always result in a full mitigation of risk. See Fletcher, *supra* note 43, at 865 (stating that "a perfect hedge is almost impossible"); see also *supra* notes 159–176 and accompanying text (discussing asset segregation requirements). Indeed, the distinction between hedging and speculation can be difficult to distinguish, one author noting close to a century ago that "courts are between the devil and the deep sea" when making the distinction. See Patterson, *supra* note 43, at 878 (discussing the difficulties with distinguishing between hedging and speculative derivative use).