

NEW YORK UNIVERSITY
JOURNAL OF LAW & BUSINESS

VOLUME 13

WINTER 2017

NUMBER 2

HOW SHOULD RETIREMENT PLANS
BE ORGANIZED?

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Americans have a tough time saving for their retirement. To make matters worse, the shift over recent decades from defined benefit plans that are regulated by ERISA to defined contribution plans requires greater investor sophistication, discipline, and sound investment advice. As of the printing of this Article, the fate of the most recent regulation regarding investment advice for defined contribution plans—the fiduciary rule promulgated by the Department of Labor—is uncertain. Even if implemented in its current form, the rule does not address the two critical deficiencies of the current system, namely opacity and conflicts of interest. Instead, we propose that a one-principal standard be instituted along with strict transparency requirements to control the conflicts of interest and improve retirement savings advice. We also recommend that only low-cost, passive, well-diversified index funds for stocks and bonds should qualify as retirement vehicles to address concerns regarding opacity.

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† We thank Stephen Handlon, Ivana Tullett (Mrazova), and Yeshiahu Weinstein for excellent research assistance, Dana Muir and Vikram Khanna for extensive comments, and participants at University of Michigan Ross School of Business finance seminar and participants at the 2016 FMA Las Vegas meetings for helpful discussions.

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INTRODUCTION

Designing sensible retirement-plan rules is a challenging task since most Americans do not have sufficient financial acumen and self-discipline to manage their own retirement portfolio. In spite of the fact that retirement plans constitute the bulk of their savings, most American families struggle with the management of defined contribution plans. Consequently, their savings are inadequate to meet their retirement needs. According to a recent report, fifty-six percent of Americans

have less than ten thousand dollars in their retirement accounts.¹ One in three Americans reported that they had no retirement savings.² Clearly, the current defined contribution plans for retirement savings are not working very well for the typical American. In this Article, we outline the problems inherent in most retirement plans and propose simple and sensible guidance that can help every American family get the most out of its defined contribution retirement plan.

Since 1975, a structural change has occurred in the private retirement system in the United States, resulting in fewer defined benefit plans and greater reliance upon defined contribution plans, which include self-directed Keogh and IRAs and employer-sponsored 401(k) and 403(b) plans. In defined benefit plans, the pension benefit is set by a calculation based upon employee tenure and salary with the employer made responsible for ensuring that there are sufficient assets in the plan to meet the benefit obligation. In defined contribution plans, the employers' contributions to the retirement plan are set in advance, with the beneficiary made responsible for managing the assets held in the plan.³ Defined contribution plans provide tax-advantaged retirement savings vehicles for individuals and typically represent a large portion of the individual's savings. At the end of 2015, U.S. defined contribution plan assets alone totaled \$6.7 trillion.⁴ This massive shift from defined benefit plans to defined contribution plans has increased the urgency and importance of both transparency and sound investment advice regarding retirement savings.

One of the causes of inadequate retirement savings in defined contribution plans is the poor performance of trillions of dollars of investments in such plans.⁵ The poor perform-

1. Elyssa Kirkham, *1 in 3 Americans Have Saved \$0 for Retirement*, TIME (last updated Mar. 14, 2016), <http://time.com/money/4258451/retirement-savings-survey>.

2. *Id.*

3. See Edward A. Zelinsky, *The Defined Contribution Paradigm*, 114 YALE L.J. 451, 460–62 (2004) (describing defined benefit and defined contribution plans in detail and suggesting that in defined contribution plans employees have more control over and more responsibility for investment than in defined benefit plans).

4. *2016 Investment Company Fact Book*, INV. CO. INST. 136, (2016), https://www.ici.org/pdf/2016_factbook.pdf.

5. During 1990–2012, the geometric average annual return of defined contribution plans was 2.7 percentage points lower than equity returns and

ance itself is a consequence of the lack of investor sophistication and discipline, as well as the complexity of the investment instruments and concepts. Another critical factor that compounded the problem was that regulations did not require investment advice to be in the best interest of plan beneficiaries.

To address these serious and growing problems, policy-makers have targeted the existing standard for providing investment advice, the “suitability rule.” The Department of Labor (DOL) adopted a new rule⁶ under which brokers and investment advisers for defined contribution retirement accounts would be subject to a higher fiduciary standard and investment advisers must recommend investment products with the “best interest” of the beneficiaries in mind. The rule was due to take effect on April 10, 2017. However, President Donald Trump directed the Labor Secretary to study the impact of the rule and to rescind or revise the new standard if it

2.8 percentage points lower than long-term corporate bond returns. Defined contribution plans also returned 0.7 percentage points less than defined benefit plans. See Alicia H. Munnell, Jean-Pierre Aubry & Caroline V. Crawford, *Investment Returns: Defined Benefit vs. Defined Contribution Plans*, 15–21 CTR. FOR RETIREMENT RES. AT B.C., Dec. 2015, at 3–4 (listing the returns of defined contribution plans, long-term corporate bonds, equities, and defined benefit plans).

6. Under the DOL’s definition, any individual receiving compensation for providing advice that is *individualized or specifically directed* to a particular plan sponsor (e.g., an employer with a retirement plan), plan participant, or Individual Retirement Account (IRA) owner for consideration in making a retirement investment decision is a fiduciary. Such decisions can include, but are not limited to, what assets to purchase or sell and whether to rollover from an employer-based plan to an IRA. The fiduciary can be a broker, registered investment adviser, insurance agent, or other type of adviser (together referred to as “advisers” here). Some of these advisers are subject to federal securities laws and some are not. Being a fiduciary simply means that the adviser must provide impartial advice in their client’s best interest and cannot accept any payments creating conflicts of interest unless they qualify for an exemption intended to assure that the customer is adequately protected. DOL’s regulatory impact analysis estimates that the rule and related exemptions would save investors over \$40 billion over ten years, even if one focuses on just one subset of transactions that have been the most studied. The real savings from this new rule are likely much larger as conflicts and their effects are both pervasive and well hidden. See *Department of Labor Proposes Rule to Address Conflicts of Interest in Retirement Advice, Saving Middle-Class Families Billions of Dollars Every Year*, U.S. DEPT. OF LABOR, <https://www.dol.gov/sites/default/files/documents/featured/protectyoursavings/factsheetcoi.pdf> (last visited Dec. 16, 2016).

is found to be inconsistent with the administration's priorities.⁷ As this Article went to print, the DOL had delayed implementation of the rule for sixty days.⁸

Though it is unclear whether the fiduciary rule will be implemented in its current form,⁹ the rule, as it was released in 2016,¹⁰ is prima facie laudable. However, there are two provisions in the standard that undermine its primary intent of ensuring that investors get unbiased investment advice at a reasonable cost. If the rule is not implemented or the fiduciary requirements are diluted, there is even greater risk that investors will not be able to receive unbiased advice.

The first concerning provision allows brokers and investment advisers to receive certain non-fee based compensation, such as commissions, from financial institutions whose products they recommend for inclusion in the investors' retirement portfolios.¹¹ By allowing advisers to receive compensation from both the buyer (investor) and the seller (financial institution), this provision creates an obvious conflict of interest between the investor and the adviser. Furthermore, these fees get passed on to the investor, reducing net returns.¹²

The second provision of concern allows brokers and advisers to include proprietary products (privately owned, non-traded assets, also referred to as alternative investments) in the

7. See, e.g., Ryan Tracy & Michael C. Bender, *Trump Signs Actions to Begin Scaling Back Dodd-Frank*, WALL ST. J. (Feb. 3, 2017), <https://www.wsj.com/articles/trump-signs-executive-actions-toward-scaling-back-dodd-frank-financial-regulation-1486148274?mod=BNM>; Michael Wursthorn & Lisa Beilfuss, *Brokers Spared from Fiduciary Rule*, WALL ST. J. (Feb. 3, 2017), <https://www.wsj.com/articles/brokers-spared-from-fiduciary-rule-1486165894>.

8. See Lisa Beilfuss & Michael Wursthorn, *Donald Trump's Labor Department Proposes Delaying 'Fiduciary' Rule*, WALL ST. J. (Mar. 1, 2017), <https://www.wsj.com/articles/fiduciary-rule-to-be-delayed-for-60-days-1488385535>.

9. See Lisa Beilfuss, *How the Fiduciary-Rule Review Is Likely to Play Out*, WALL ST. J. (Feb. 9, 2017), <https://www.wsj.com/articles/how-the-fiduciary-rule-review-is-likely-to-play-out-1486660677>.

10. Conflict of Interest Rule—Retirement Investment Advice, 29 CFR §§ 2509, 2510, 2550; Definition of the Term “Fiduciary”, 81 Fed. Reg. 20946 (Apr. 8, 2016).

11. See 81 Fed. Reg. 20946, *supra* note 10.

12. Cf. Ian Ayers & Quinn Curtis, *Beyond Diversification: The Pervasive Problem of Excessive Fees and “Dominated Funds” in 401(k) Plans*, 124 YALE L.J. 1476, 1509 (2015) (discussing the double agency issue in service provider's construction of plan menus).

retirement portfolio.¹³ These products are also allowed in defined benefit plans.¹⁴ Alternative and proprietary investments are created by the investment sponsors and they are not publicly available. They require additional education and marketing expenses. In many cases, the structure is a zero-sum game where the investment sponsor shares the return on the underlying assets with the investor. Consequently, higher investment returns for the beneficiary necessarily means lower profits for the investment sponsor.

Alternative and proprietary investments suffer from greater informational asymmetry than traditional investment products—with the seller holding an informational advantage over the investor—and have complex features that are difficult for the average investor to understand and analyze. There is considerable evidence that the average investor is not as financially sophisticated as she needs to be to evaluate non-traded retirement assets.¹⁵ Moreover, proprietary products and alternative investments are also likely to involve higher transaction costs. While either informational asymmetry or complexity alone is sufficient to put the investor at a significant disadvantage, the combination compounds the problem. The above two provisions in combination exacerbate the concern that investors might not get sound advice: brokers and advisers who receive compensation from institutions have a greater incentive to recommend costly alternative investments and proprietary products that earn them greater commissions. In summary, the provisions that create potential conflicts of interest between advisers and investors are further compounded by al-

13. See 81 Fed. Reg. 20946, *supra* note 10; see also, Marlene Y. Satter, *Defined Benefit Plans Shifting Toward Alternatives*, BENEFITSPRO (Sept. 14, 2016), <http://www.benefitspro.com/2016/09/14/cm-defined-benefit-plans-shifting-toward-alternati>.

14. See *Department of Labor's Final Rule Defining Fiduciary Investment Advice and Conflicts of Interest*, DAVIS POLK & WARDWELL LLP (April 16, 2016), https://www.davispolk.com/sites/default/files/2016-04-18_Department_of_Labor%E2%80%99s_Final_Rule_Defining_Fiduciary_Investment_Advice_and_Conflicts_of_Interest.pdf (noting that final rule does not flatly prohibit the sale of proprietary investment products).

15. Jason Furman & Betsy Stevenson, *The Effects of Conflicted Investment Advice on Retirement Savings*, WHITE HOUSE BLOG (Feb. 23, 2015, 9:45 AM), <https://www.whitehouse.gov/blog/2015/02/23/effects-conflicted-investment-advice-retirement-savings>.

lowing non-traded proprietary products and alternative investments.

The relevant policy question is how significant these two issues are. That is, are these potential conflicts of interest likely to result in significant losses to investors due to poor advice? And does the lack of transparency in proprietary products have adverse consequences to investors? In this Article, we provide evidence that the answer to both questions is “yes.”

To answer the first question regarding the effect of conflicts of interest, we chose a unique setting in which a similar potential conflict of interest exists: defined benefit pension funds that are already subject to the fiduciary standard under ERISA. We analyze the performance of defined benefit pension funds in which an executive of the firm that employs the beneficiaries is also a fiduciary of the fund. Such an arrangement creates a conflict of interest with a fiduciary–executive required to serve two principals: the beneficiaries of the defined benefit fund and the shareholders of the firm.

Our evidence indicates that a simple requirement subjecting investment advisers to the fiduciary standard (under ERISA) does not by itself address the conflict of interest issue in defined benefit pension funds. In funds with conflicts of interest, beneficiaries are short-changed for the benefit of shareholders. Returns from insider trades of pension funds in which conflicts of interest are likely to be present underperform the market by more than 5.5% over a year.¹⁶ This figure understates the loss to plan beneficiaries; returns from insider trades in general outperform the market. This loss is significantly greater than the figures reported by others using different methods.¹⁷ Based on this experience from defined benefit pension funds, we can conclude that the adverse effect of conflicts of interest is much bigger than previously documented, and will very likely be to the detriment of the beneficiaries of the defined contribution plans as well. Therefore, without addressing the cause of the conflict of interest issue, the fiduciary rule for defined contribution plans, even if implemented in its current form, is unlikely to be successful in addressing the issue of inadequate retirement savings.

16. See *infra* Table 2 in Section III.C.,

17. See Munnell, Aubry & Crawford, *supra* note 5; see also Furman & Stevenson, *supra* note 15.

To address the second question regarding non-traded alternative assets and proprietary products, we consider two representative products that would continue to be allowed as appropriate retirement investments under the DOL's rule. We simulate the performance of these products and find that, on a risk-adjusted basis, the performance is inferior as compared to both the risk-free rate (ten-year Treasury notes) and the Standard & Poor's 500 Index (S&P 500). Our evidence suggests that without also addressing the transparency problem, the fiduciary standard for defined contribution plans cannot fully protect investors.

The empirical evidence in this Article suggests that the investment advisory rules are deficient. On the one hand, the fiduciary rule requires that brokers and investment advisers act in the best interest of the beneficiaries, yet the rule allows them to receive income from third parties. In addition, the rule does not prohibit opaque, non-traded alternative investments and proprietary products, which would lead to uninformed and costly investment decisions. In fact, the rule, even if implemented in its current form, is likely to lead to continued conflicted investment advice, confusion, and widespread litigation to sort out these internal conflicts in a multi-trillion dollar market.¹⁸ We offer three policy recommendations to remedy these problems.

Our first policy recommendation addresses the current provision that allows brokers and advisers to receive income both from the investor as well as the sponsor of the investment product. Any serious reform in retirement investment area must address the conflict of interest problem caused by this income exemption provision. The key to eliminating conflicts of interest involves ensuring that brokers and investment advisers serve, and therefore receive income from, only one princi-

18. The new rules have already created a wave of lawsuits regarding conflicts of interest and opacity in defined contribution plans. See Anne Tergesen, *Neuberger Berman Latest Financial Firm to Be Hit With 401(k) Suit*, WALL ST. J., Aug. 5, 2016; Anne Tergesen, *MIT, NYU, Yale Sued Over Retirement-Plan Fees*, WALL ST. J., Aug. 10, 2016; see also, Jean Eaglesham, Sarah Krouse & Ben Eisen, *Wall Street Re-Engineers the CD—and Returns Suffer*, WALL ST. J., Sept. 6, 2016. Furthermore, the U.S. Supreme Court recently ruled in favor of the plaintiffs in 401(k) plans and rejected a strict six-year statute of limitations for bringing a lawsuit. See Jess Bravin & Liz Moyer, *High Court Ruling Adds Protections for Investors in 401(k) Plans*, WALL ST. J., May 18, 2015.

pal. Unfortunately, the current advisory rules and the associated exemptions simply fail to address what can be called the multiple-principals problem.

Second, any serious reform must prohibit non-traded alternative investments and proprietary investment vehicles from the menu of investments in retirement plans because their lack of transparency impedes informed decision-making by beneficiaries. As we show, these non-traded investment vehicles are likely to provide lower returns, thereby reducing the retirement savings of beneficiaries. Furthermore, we show that by using non-traded products in retirement accounts, certain wealthy taxpayers can avoid paying any taxes on their income. Thus, allowing alternative and proprietary investment products into retirement accounts does not make any sense either from the average beneficiary's perspective or a public policy perspective. We recommend a very strict transparency rule for any investment to qualify as a retirement asset for both defined benefit and defined contribution plans: All qualified retirement equity securities must be publicly traded in U.S. public exchanges or, in the case of notes and bonds, over-the-counter markets.

Our final recommendation is that only passive index funds or well-diversified exchange traded funds (ETFs) consisting of broadly diversified portfolios, such as ETFs that track the S&P 500 Index, be allowed the tax exemption as retirement accounts. It is our view that simply requiring a fiduciary standard by itself is not going to solve retirement savings problems. Instead, it is likely to lead to additional problems by creating an inconsistent set of rules. Our recommendation of limiting retirement accounts to index funds will prevent conflicts of interests and lack of transparency from creeping back into the retirement-advice business. To this end, we further recommend the establishment of broad age-based minimum, maximum, and target percentages of common stocks, corporate and government bonds, and real-estate securities that can be held in defined contribution plans. Anyone requiring an exception to the well-diversified ETF rule would need to be qualified on the basis of financial education or size of retirement assets. Limiting investment choices to passive funds will also increase investor returns by reducing the fees charged by financial institutions.

The remainder of this Article is organized as follows: Part I provides a historical account of the shift from defined benefit to defined contribution plans and a comparison of the two types of plans. Part II describes the fiduciary standard and analyzes the conflict of interest problem in the context of corporate-sponsored pension funds. Part III uses evidence of conflicts of interest in defined benefit plans to provide insight into the likely effect of continued conflicts of interest in defined contribution plans. Part IV explains the problems with allowing proprietary products in pension funds and provides evidence of the harm it can cause investors. We then present the Article's conclusions and policy recommendations.

I.

THE SHIFT FROM DEFINED BENEFIT TO DEFINED CONTRIBUTION PLANS

In this Part we review the factors that caused the shift from defined benefit to defined contribution plans, as well as the advantages and disadvantages of both.

A. *Historical Background*

For decades, Americans saved for their retirement using employer-sponsored pension plans.¹⁹ Under this system, employers bore the burden of managing the assets prudently, because they promised specific benefits to their employees.²⁰ The beneficiaries did not need to be financially savvy, and yet, they enjoyed the stability and security of a guaranteed retirement income.

After World War II, most employers began to offer pension plans to their employees, and companies used these benefits to compete for the best employees.²¹ Americans began to expect these benefits as they became increasingly popular.²² Older Americans may remember the once-common form of

19. See Zelinsky, *supra* note 3, at 3.

20. *Id.*

21. See Dennis Triplett, *The Great Shift: Moving from Defined Benefit to Defined Contribution*, UMB HEALTHCARE SERVICES (July 24, 2014), https://hsa.umb.com/wps/wcm/connect/hsa/753af08b-25a5-466a-b88e-f9793fd300e6/061653.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_9QH8H9K0L07P00AL8BTF3J0024753af08b-25a5-466a-b88e-f9793fd300e6.

22. *Id.*

retirement plan, in which an employee received a fixed income after retirement, but only if he or she stayed with an employer for many decades.²³ This arrangement, used by the majority of Americans in previous generations, is a defined-benefit plan in which the money paid out of the pension is set by a calculation involving tenure and salary.

While secure and convenient, that system eventually came under pressure. Employers were burdened with future retirement liabilities that were beyond their control and that created significant uncertainty in the marketplace.²⁴ Some firms deliberately underfunded their pension plans or went bankrupt.²⁵ To deal with firms that failed, the federal government created the Pension Benefit Guaranty Corporation (PBGC) that took over the pension liabilities of failed firms,²⁶ thus transferring the risk and responsibility of the retirement plans to taxpayers. Additionally, Americans began changing jobs more frequently.²⁷ Shorter work tenure often meant that an employee would not qualify for any retirement benefits at all.²⁸ Finally, shorter tenures also meant that Americans were burdened with the task of having to keep track of multiple streams of benefits.²⁹

23. See, e.g., Leora Friedberg & Michael T. Owyang, *Not Your Father's Pension Plan: The Rise of 401(k) and Other Defined Contribution Plans*, FED. RES. BANK OF ST. LOUIS REV., Jan.–Feb. 2002, at 23.

24. Retirement benefits under the defined benefit plans basically amounted to a fixed obligation similar to debt. As such, these obligations raised the risk to the firm and created additional uncertainty similar to debt about the future health of the firm.

25. See, e.g., PATRICK PURCELL & JENNIFER STAMAN, CONG. RESEARCH SERV., RL34443, SUMMARY OF EMPLOYEE RETIREMENT INCOME SECURITY ACT (ERISA) 20 *et seq.*, (2008), <http://www.nccmp.org/resources/pdfs/other/Summary%20of%20ERISA.pdf>; see also Mark Miller, *American Airlines Pension Default Q&A*, REUTERS (Feb. 8, 2012), <http://www.reuters.com/article/us-column-miller-idUSTRE81718S20120208>.

26. *Who We Are*, PUBLIC BENEFIT GUARANTY CORPORATION, <http://www.pbgc.gov/about/who-we-are.html> (last visited Jan. 23, 2017).

27. See, e.g., Quentin Fottrell, *Typical U.S. Worker Now Lasts 4.6 Years on Job*, MARKETWATCH (Jan. 12, 2014, 7:58 AM), <http://www.marketwatch.com/story/americans-less-likely-to-change-jobs-now-than-in-1980s-2014-01-10> (arguing that Americans are no longer tied to a single employer for long periods of time).

28. Friedberg & Owyang, *supra* note 23, at 23.

29. Cf. Fottrell, *supra* note 27.

To deal with these problems, the Employee Retirement Income Security Act (ERISA), enacted in 1974, popularized defined contribution pension plans and changed the American retirement system permanently.³⁰ Following the passage of ERISA, employers shifted employees from the traditional defined benefit plans to employer-sponsored 401(k) and 403(b) plans³¹ (both forms of defined contribution plans), in which the contributions to the retirement plan were determined in advance of distribution, with the ultimate value at the time of retirement dependent upon the performance of the assets held in the plan. Therein lay the danger of defined contribution plans. Unless the retirement savings and investments were managed competently, most Americans could end up in their old age with little savings and at the mercy of various social safety net programs, such as Social Security or Medicaid, which are only meant to be supplementary retirement vehicles.

Several components within ERISA increased the popularity, from the perspective of both employers and beneficiaries, of the defined contribution plans. ERISA imposed an increased regulatory burden on defined benefit plans, making the defined contribution option more appealing to employers: they simply shifted the fiduciary burden to the employees.³² ERISA permitted defined contribution plans to hold more of an employer's stock than defined benefit plans, if desired by employees, which made contribution plans attractive to management trying to ward off hostile takeovers.³³ The creation of the modern Individual Retirement Account (IRA) by ERISA allowed beneficiaries to roll over the amounts in their defined contribution plans to tax-deferred IRAs when they changed

30. See Monique Morrissey, *Private-sector Pension Coverage Fell by Half Over Two Decades*, ECON. POL'Y INST. WORKING ECON. BLOG (Jan. 11, 2013, 9:27 AM), <http://www.epi.org/blog/private-sector-pension-coverage-decline/> (describing the decline of private-sector pension plans).

31. A 401(k) plan is an employer-sponsored, defined-contribution plan that allows employees to save for retirement as a deduction from their paychecks before taxation. Sometimes employees' contributions are matched by the employer. As of 2017, the maximum pre-tax contribution is \$18,000. 403(b) plans are available for employees of certain tax exempt institutions such as public schools.

32. For defined benefit plans, investment advisers are subject to the fiduciary standard, meaning that any investment decisions must be in the "best interest" of the plan beneficiaries.

33. See, e.g., Zelinsky, *supra* note 3, at 479–80.

employers or retired.³⁴ Therefore, once defined contribution plans became available, more assets shifted to these vehicles.³⁵ Following ERISA, the total value of assets in private defined contribution plans jumped from \$104 billion in 1978 to \$6.7 trillion in 2015, according to the Investment Company Institute.³⁶ Evidence shows that Americans have increasingly accepted defined contribution plans, which gave them more control over their retirement assets.³⁷ While trade unions have favored defined benefit plans (especially when managed by the unions), the erosion of unions' power and membership has also contributed to the decline of defined benefit plans.³⁸ It is still important to note that some Americans, notably federal and state government employees, are still defined benefit plan participants.³⁹ Nevertheless, over 100,000 defined benefit plans, with over 7 million total plan participants, have terminated since the early 1980s.⁴⁰ Moreover, the shift from defined benefit pension plans to defined contribution plans appears to be accelerating.⁴¹

The boom in assets in defined contribution plans is also closely linked to the explosion in IRA assets, because a significant majority of the flows into IRAs is a result of rollovers from defined contribution plans, rather than direct IRA contributions.⁴² At the end of 2015, IRA assets totaled \$7.3 trillion.⁴³

34. An IRA account allows an individual to save for retirement on a tax-free or tax-deferred basis to supplement employer sponsored plans. There are limits to how much individuals can save to take advantage of tax benefits.

35. Zelinsky, *supra* note 3, at 474.

36. See Jack L. Vanderhei, *Retirement Security and Defined Contribution Plans: The Role of Company Stock in 401(k) Plans*, EMPLOYEE BENEFIT RESEARCH INSTITUTE 2 (Feb. 27, 2002), <https://www.ebri.org/pdf/publications/testimony/t135.pdf> (noting that pension plan assets totaled \$377 Billion in 1978, 28% of which represented defined-contribution plans); see also INVESTMENT COMPANY INSTITUTE, *supra* note 4.

37. Friedberg & Owyang, *supra* note 23, at 1.

38. Daniel Beller & Helen Lawrence, *Trends in Private Pension Plan Coverage*, in U.S. DEP'T OF LABOR, TRENDS IN PENSIONS 59, 60 (John A. Turner & Daniel J. Beller eds., 1992). Part of the decline of trade unions can be attributed to a shift in employment from manufacturing to the service sectors. *Id.*

39. Zelinsky, *supra* note 3, at 504–06.

40. *Funding Challenge: Keeping Defined Benefit Plan Pension Plans Afloat: Hearing Before the Senate Comm. On Fin.*, 108th Cong. 57–58 (2003).

41. See Triplett, *supra* note 21.

42. See Furman & Stevenson, *supra* note 15.

43. See INV. CO. INST., *supra* note 4.

B. *Investors' Financial Sophistication*

While defined contribution plans provide investors control over their retirement portfolio in terms of its risk profile, timing of trades, etc., they also impose on investors the responsibility of managing the portfolio. Therefore, a key question is whether investors have the education, skills, and self-discipline to manage their own financial assets. According to an Obama-administration White House report, many defined contribution plan participants struggle to understand basic financial concepts such as costs, risks and reward, and diversification.⁴⁴ Many individuals also do not understand the most fundamental concepts and terminology in investing.⁴⁵ The report additionally documents cognitive biases such as over-confidence, over-optimism, and loss aversion.⁴⁶ These deficiencies often lead to lower investment returns, because they lead households to: (1) trade too much by seeking active management or chasing returns; (2) sell sound investments and hold risky, undiversified, underperforming assets based on recent performance; (3) overweight past returns; or (4) under-diversify.⁴⁷ Jill Fisch and Tess Wilkinson-Ryan document that the majority of American investors do not understand basic ideas like diversification, investment costs, inflation, and compound interest.⁴⁸ They conclude that most Americans lack the requisite knowledge to protect them from outright financial fraud.⁴⁹ Further evidence of investors' lack of financial literacy comes from the study undertaken by the SEC at the directive of Congress as part of the Dodd–Frank Act. The study finds that investors hold many fundamental financial misconceptions that lead to

44. COUNCIL OF ECON. ADVISERS, THE EFFECTS OF CONFLICTED INVESTMENT ADVICE ON RETIREMENT SAVINGS 8 (Feb. 2015), https://obamawhitehouse.archives.gov/sites/default/files/docs/cea_coi_report_final.pdf; see Furman & Stevenson, *supra* note 15.

45. COUNCIL OF ECON. ADVISERS, *supra* note 44.

46. *Id.* at 23.

47. *Id.*

48. Jill E. Fisch, & Tess Wilkinson-Ryan, *Why Do Retail Investors Make Costly Mistakes? An Experiment on Mutual Fund Choice*, 162 U. PA. L. REV. 605, 606 (2014).

49. *Id.*

investment mistakes.⁵⁰ Further, most Americans are not even aware of how much they pay in fees and other costs.⁵¹

C. *Relative Performance of Defined Contribution and Defined Benefit Plans*

Given the lack of appropriate education, financial skills, and self-discipline to manage their financial assets, coupled with the inability to evaluate conflicted advice, one would expect defined contribution plans to underperform in comparison to defined benefit plans. Defined benefit plans spell out what benefit the enrollee will get upon retirement age, which is often calculated using a set formula and does not depend on the skill of the beneficiary. By contrast, the value of the defined contribution plans at the time of retirement depends on how those assets are managed by beneficiaries.

Conceptually, traditional defined benefit pension plans provide not only more professional management but also a better balance of risks and rewards.⁵² This is because the defined benefit plans place almost all of the risk of performance on the shoulders of the employers. If the defined benefit assets outperform, the employer is able to reduce its contributions. If the plan underperforms, the employer has to increase its contributions to the plan. Because the employer has the ability to hire competent professional staff to assist with employee benefits planning, the system works reasonably well, achieving cost efficiencies, economies of scale, and diversification over generational cohorts.⁵³ Nevertheless, it is conceptually possible that for financially-educated beneficiaries, defined contribution plans can be used to better control for risk.⁵⁴ Additionally, some beneficiaries can custom tailor risk–reward tradeoffs to their own particular needs.⁵⁵

Evidence shows that defined benefit plans significantly outperform defined contribution plans. By design, defined benefit plans handle inflation risk by computing benefits as a fraction of the beneficiaries' salaries during the last few years

50. *Id.* at 608.

51. *Id.* at 622.

52. Zelinsky, *supra* note 3, at 468.

53. *See id.*

54. *Id.* at 458–59.

55. *Id.* at 460.

of their working years.⁵⁶ In contrast, in defined contribution plans the employees are expected to make financial decisions that help protect against inflation risk. In one study, defined benefit plans outperformed defined contribution plans by 76 basis points annually between 1995 and 2011.⁵⁷ Another study found that defined benefit plans outperformed defined contribution plans during 1990–2012 by about 70 basis points annually.⁵⁸ Given that there was over \$6.7 trillion invested in defined contribution plans accounts alone in 2015, underperformance of 70 basis points implies a cost of about \$50 billion per year. Once again, the lagging performance of the defined contribution plans adds an additional burden on the American worker to increase her future contributions as well as to take higher levels of risk.

D. *Conflicts of Interest in Investment Advice*

Because of their lack of financial education or even basic familiarity of investments, the American public needs professional investment advice.⁵⁹ For investors who seek professional advice, there are additional hurdles. Since most investors cannot evaluate the appropriateness of the investment advice, they may receive conflicted advice. In its most basic form, conflicted advice promotes investment options that are profitable for the advisers and their firms but disadvantageous to the investor; these investments tend to underperform, impose higher transaction fees, and result in under-diversification. Hence, it should come as no surprise that conflicted advice

56. NAT'L BUREAU OF ECON. RESEARCH, PENSIONS IN THE U.S. ECONOMY 158 (Zvi Bodie, John B. Shoven & David A. Wise, eds., 1988), <http://www.nber.org/chapters/c6047.pdf>.

57. *Defined Benefit Plans Outperform Defined Contribution Plans Again*, WILLIS TOWERS WATSON (2013), <https://www.towerswatson.com/en-US/Insights/Newsletters/Americas/us-finance-matters/2013/Defined-Benefit-Plans-Outperform-Defined-Contribution-Plans-Again>.

58. See Munnell, Aubry & Crawford, *supra* note 5 (finding that defined benefit plans did better by 0.7%).

59. One may ask whether the average American can even afford a financial advisor given their meager savings. If implemented, our policy recommendations in this article reduce and even eliminate the need for extensive financial advice.

should result in a negative effect on the performance of retirement assets.⁶⁰

Estimates indicate that the aggregate annual cost of conflicted advice in IRA assets is about \$17 billion each year.⁶¹ Retirees who received conflicted advice when rolling over their 401(k) balance to an IRA retirement will lose approximately 12% of the value of his or her savings if drawn down over thirty years.⁶² The average IRA rollover for those aged 55–64 in 2012 was \$100,000,⁶³ so losing 12% to fees is the equivalent to losing \$12,000. This is a significant sum, especially given that the median retirement savings of households in the 55–64 age group is only about \$104,000.⁶⁴ This evidence corroborates the initiative promoted by the DOL, which asserts that reducing conflicted advice will improve the retirement of savings of typical Americans.

II.

INVESTMENT ADVISORY STANDARDS

A. *Evolution Towards the Fiduciary Standard*

The DOL has the authority to set rules and standards under both ERISA and the Internal Revenue Code governing fiduciaries of retirement plans and IRAs, but the DOL has not substantially altered the rules applicable to retirement savings since 1975.⁶⁵ Separately, SEC rules govern the conduct of registered investment advisers and broker-dealers who advise re-

60. As discussed earlier, many alternative and proprietary investments constitute a zero-sum game, pitting the retiree against the sponsor of the investment. Higher investment returns necessarily mean lower profits for the investment sponsor. Consequently, when the interests of the investment sponsor and the retiree are directly opposed, we would expect more conflicted advice that benefits the investment sponsor at the expense of the retiree. See Eaglesham, Krouse & Eisen, *supra* note 18.

61. See, e.g., Furman & Stevenson, *supra* note 15.

62. *Id.*

63. *Id.*

64. U.S. GOV'T ACCOUNTABILITY OFF., GAO-15-419, RETIREMENT SECURITY: MOST HOUSEHOLDS APPROACHING RETIREMENT HAVE LOW SAVINGS (2016).

65. See U.S. DEP'T OF LABOR, FACT SHEET: DEPARTMENT OF LABOR FINALIZES RULE TO ADDRESS CONFLICTS OF INTEREST IN RETIREMENT ADVICE, SAVING MIDDLE CLASS FAMILIES BILLIONS OF DOLLARS EVERY YEAR, <https://web.archive.org/web/20170128162839/https://www.dol.gov/agencies/ebsa/about-ebsa/our-activities/resource-center/fact-sheets/dol-final-rule-to-address-con>

tail investors, under the provisions of federal securities laws (the Securities and Exchange Act of 1934 and the Investment Advisers Act of 1940).⁶⁶ The current system, established in the 1940s, left it to states to develop separate definitions of what the fiduciary standard should be, which often leads to confusion.⁶⁷

In response to the increased significance of the conflict of interest issue due to the change in the retirement savings environment from defined benefit to defined contribution plans, various government agencies have been floating the idea of a new fiduciary standard for years. The Dodd–Frank Act directed the SEC to consider a uniform standard for investment advisers and broker-dealers, in part to standardize the care that investors get across jurisdictions.⁶⁸ As of the time this Article went to print, the SEC had not released any proposals regarding a uniform fiduciary standard.

A concrete step towards addressing the conflicts of interest inherent in defined contribution plans and IRAs was taken in October 2010, when the DOL proposed amendments to the 1975 regulation. The proposed fiduciary standard included both a duty of care and a duty of loyalty. These duties require the fiduciary to act in the best interest of the consumer and to provide full and fair disclosure of material facts and conflicts of interest.⁶⁹ The proposals prompted an intense debate, with opponents claiming that existing conflicts of interest were not material and that the rule would have an adverse impact on small IRA accounts.⁷⁰ In response, the DOL announced in

flicts-of-interest [hereinafter FACT SHEET] (noting that the rules have not been meaningfully changed since 1975) (last visited Jan. 28, 2017).

66. U.S. DEP'T OF LABOR, REGULATING ADVICE MARKETS 2 (2016).

67. SEC. INDUS. & FIN. MKT. ASS'N., *DOL Fiduciary Standard Resource Center*, <http://www.sifma.org/issues/savings-and-retirement/dol-fiduciary-standard/overview/> (last visited May 3, 2016).

68. *Id.*

69. See FACT SHEET, *supra* note 65.

70. *Redefining Fiduciary: Assessing the Impact of the Labor Department's Proposal on Workers and Retirees: Hearing Before the Subcomm. on Health, Emp't, Labor and Pensions of the H. Comm. on Educ. and the Workforce*, 112th Cong. 1, 14–15 (2011) (statement of Hon. David P. Roe, Chairman, Subcomm. on Health, Emp't, Labor and Pensions); *id.* (testimony of Hon. Phyllis C. Borzi, Assistant Secretary, Employee Benefits Security Administration, U.S. Department of Labor).

September 2011 its intention to develop a more robust proposal with extensive analysis of the economic impact.⁷¹

In April 2015, the DOL announced its withdrawal of the 2010 proposal and issued a new proposal in its place. After an extensive comment period, the Office of Management and Budget received the DOL's final rule on January 28, 2016.⁷² By broadening the definition of fiduciary investment advice, the rule would subject brokers, among others, to the fiduciary standard, thereby requiring them to put client interests ahead of their own when offering investment advice for retirement plans.⁷³ The rule includes changes to the definition of fiduciary investment advice for purposes of ERISA's standards of fiduciary conduct and the prohibited transaction rules of section 4975 of the Internal Revenue Code.⁷⁴ The new rules include the best interest contract exemption (BICE), which the DOL indicated was intended to preserve common compensation practices while requiring those who provide fiduciary investment advice to adhere to the "best interest" standard of care.⁷⁵ The BICE requires that investment advisers: (1) provide advice in the client's best interest; (2) create policies that deal with any potential conflict of interest; (3) clearly disclose any conflict of interest (an example of this would be hidden fees); and (4) enter into a written agreement contractually committed to these requirements.

While the "final" proposal itself went through multiple iterations, there are two critical changes in the rule that are important for this Article and understanding embedded conflicts of interest:⁷⁶

- Advisers can receive certain forms of compensation that are not based upon assets under management or a set fee structure, such as brokerage or insurance

71. See U.S. DEP'T OF LABOR, *supra* note 59.

72. Daniel R. Kleinman et al., *Department of Labor Sends Fiduciary Rule to OMB for Review*, THE NAT'L LAW REVIEW (Jan. 29, 2016), <http://www.natlawreview.com/article/departments-labor-sends-fiduciary-rule-to-omb-review>.

73. See FACT SHEET, *supra* note 65.

74. *Id.*

75. *Id.* at VII.

76. See, e.g., Jason Furman, *The Obama Fiduciary Rule is Helping American Savers*, WALL ST. J. (February 20, 2017), <https://www.wsj.com/articles/the-obama-fiduciary-rule-is-helping-american-savers-1487635348>.

commissions, 12b-1 fees, and revenue-sharing payments.

- Advisers can include proprietary products in retirement plans.

Unfortunately for retirement beneficiaries, these two exemptions provided in response to last minute industry pressure recreate the preexisting problems—that of multiple-principals and opacity—and can undermine the entire intent of the new rule. If the rule is not implemented at all, even these modest benefits of the current rule, such as disclosure of the potential conflicts, hidden fees, and written contracts would be lost, thus worsening the bargaining position of the retirement beneficiaries.

B. *Commentary on the Advantages and Disadvantages of the Fiduciary Standard*

Some commentators have argued that there is a moral case for the fiduciary standard.⁷⁷ People who are investing other people's money should be providing advice and guidance that are in the best interest of the clients, who might not have the necessary expertise to evaluate such services. The fiduciary standard is in line with this moral view because it requires financial professionals to make decisions based on the question: "Is this really in the client's best interests?" Clearly, the suitability standard falls short of this requirement because it (1) creates conflicts of interest and (2) leads to more expensive and less appropriate services.⁷⁸

Others have pointed to the potential adverse impact of the new rule.⁷⁹ One potential disadvantage is that the fiduciary

77. See Barry Ritholtz, *Find a Financial Adviser Who Will Put Your Interests First*, WASH. POST (Oct. 25, 2014), https://www.washingtonpost.com/business/get-there/find-a-financial-adviser-who-will-put-your-interests-first/2014/10/23/21f3a898-596f-11e4-bd61-346ace66ba29_story.html.

78. The suitability standard requires that a broker make recommendations that are suitable based on a client's personal situation, but the standard does not require the advice to be in the client's best interest. See Peter Lazaroff, *The Difference Between Fiduciary and Suitability Standards*, FORBES (Apr. 6, 2016), <http://www.forbes.com/sites/peterlazaroff/2016/04/06/the-difference-between-fiduciary-and-suitability-standards/#1997640c35bf>.

79. *Inside the Pros and Cons of a New Fiduciary Rule*, BLOOMBERG (Apr. 7, 2016, 2:43 PM), <http://www.bloomberg.com/news/videos/2016-04-07/inside-the-pros-and-cons-of-a-new-fiduciary-rule>.

rule will be costly for financial firms to implement. Stephen Ellis has stated:

We think that the investors and analysts looking at the more studied implementation costs of the rule are vastly underestimating the rule's potential impact on the financial sector. Current government and financial industry reports have a high-end annual cost of \$1.1 billion, but even our low-end prohibited transaction revenue estimate is \$2.4 billion.⁸⁰

Clearly, higher costs of implementation of the new rule for financial firms are an undesirable burden on the entire economy.

Some commentators have argued that the rule may also lead to political fallout for the government and a decline in trust of government agencies by increasing costs and reducing investors' choices. Recently, House Speaker Paul Ryan has become one of the most vocal opponents of the new fiduciary rule.⁸¹ Mr. Ryan has called the rule "Obamacare for financial planning."⁸² His main contention is that the rule will lead to higher costs for the beneficiaries as well as financial firms.⁸³

Mr. Ryan's concerns are also shared by the financial services industry. Some are concerned that the fiduciary rule could increase litigation costs for financial firms,⁸⁴ Some argue that the rule will encourage clients to sue and that the threat of litigation may lead advisers to leave the business.⁸⁵ Some

80. Sheyna Steiner, *DOL to Continue Fiduciary Fight in 2016*, BANKRATE INVESTING BLOG (Jan. 12, 2016, 12:00 PM), <http://www.bankrate.com/financing/investing/dol-to-continue-fiduciary-fight-in-2016/>.

81. Mark Schoeff Jr., *House Speaker Paul Ryan Becomes Leading Opponent of DOL Fiduciary Rule*, INVESTMENT NEWS (Mar. 8, 2016, 1:46 PM), <http://www.investmentnews.com/article/20160308/FREE/160309931/house-speaker-paul-ryan-becomes-leading-opponent-of-dol-fiduciary>.

82. *Id.*

83. *Id.*

84. Several lawsuits have been filed on behalf of fiduciaries against the new rules. See Mark Schoeff Jr., *Thrivent Financial Files Sixth Lawsuit Against DOL Fiduciary Rule*, INVESTMENT NEWS (Sept. 30, 2016, 1:25 PM), <http://www.investmentnews.com/article/20160930/FREE/160939992/thrivent-financial-files-sixth-lawsuit-against-dol-fiduciary-rule>.

85. Andrew Welsch, *Will Fiduciary Rule Spur New Lawsuits Against Advisors?*, ON WALL STREET (Apr. 19, 2016, 6:22 PM), <http://www.onwallstreet.com/news/will-fiduciary-rule-spur-new-lawsuits-against-advisors-1AG2696400>.

experts predict that financial services firms will move more assets to fee-based performance, limiting investors' choices.⁸⁶

As a result of this opposition from the financial services industry, the final version of the rule, currently under review by the Trump administration, has been watered down significantly.⁸⁷ It does not include some previously proposed regulatory requirements, including annual investment projections and disclosures, and 401(k) plan contract requirements. The rule also contains exceptions that allow financial firms and advisers to market themselves to consumers. For example, advisers can engage in marketing and public relations without violating the new rule because public comments, press releases, and marketing materials are exempt.⁸⁸ Though the Obama administration discussed the urgent need for the new rule,⁸⁹ the delay in implementation resulting from President Trump's executive order suggests that the rule will be further modified or even nullified through the political process.⁹⁰

In this Article, we argue that the two most important deficiencies of the fiduciary rule, allowed by the DOL in response to industry pressure, are the exemptions for multiple sources of income for advisers, and for alternative and proprietary investments. These two provisions together can undermine the foundation of the rule by preventing retirement beneficiaries from receiving the best investment advice. Consequently, without transparency and single-principal requirements, we do not expect investors to be the main beneficiaries of the new fiduciary rule because investors will continue to receive conflicted advice.⁹¹ If the fiduciary standard is not implemented or further limited, these conflicts could be exacerbated.

86. *Id.* A fixed fee such as a \$50 per year management or consultation fee may be too heavy a burden for many small investors.

87. Ashlea Ebeling, *DOL Issues Final Fiduciary Rule, Does it Fall Short?*, FORBES (Apr. 7, 2016, 4:28 PM), <http://www.forbes.com/sites/ashleaebeling/2016/04/07/dol-issues-final-fiduciary-rule-does-it-fall-short/#3664cd75548e>.

88. *Id.*

89. *See id.*

90. Critics argue that the fixed costs imposed by the new rules would be hard to cover, especially for those retirees with a small amount of assets, thereby forcing the investment sponsors to cancel these investments.

91. For a more optimistic view see Lisa Kiplinger, *What it Means for Investors: Rules for Financial Advisers are Changing*, USA TODAY (Apr. 6, 2016, 11:41 AM), <http://www.usatoday.com/story/money/personalfinance/2016/04/>

C. *Multiple-Principals Problem*

The first major problem with the new DOL rule is the BICE, which allows investment advisers to receive income from both investors as well as financial institutions such as brokerage firms whose products the adviser may recommend.⁹² This exemption has created potential conflicts of interest when an agent (investment adviser) attempts to serve multiple principals (both investors and financial institutions) whose interests diverge. Benefiting one principal necessarily means hurting the other principal. In effect, the potential conflict of interest caused by this exemption may undermine the entire basis of the fiduciary rule and sets the stage to continued potential conflicts of interest. The conflict of interest caused by this exemption is exacerbated by the exemption for alternative and proprietary investments as explained below.

D. *Problems with Alternative and Proprietary Investments*

Alternative and proprietary investment products refer to specialized investments portfolios created by the brokerage firms. These products can include combinations of stocks, bonds, and derivative assets. They can also include investments in start-ups and other private investment vehicles, or claims on other non-publicly traded assets such as forests, mines, or works of art. The key feature of alternative and proprietary investments is that they are unique to the financial institution offering them. Consequently, there is little or no historical

05/fiduciary-ruling-investor-adviser-adviser/82655312/ (arguing that the rule will require financial advisers to act in investors' best interest).

92. Best Interest Contract Exemption, 81 Fed. Reg. 68 (Apr. 8, 2016) ("The provisions at issue generally prohibit fiduciaries with respect to employee benefit plans and individual retirement accounts (IRAs) from engaging in self-dealing and receiving compensation from third parties in connection with transactions involving the plans and IRAs. The exemption allows entities such as registered investment advisers, broker-dealers and insurance companies, and their agents and representatives, that are ERISA or Code fiduciaries by reason of the provision of investment advice, to receive compensation that may otherwise give rise to prohibited transactions as a result of their advice to plan participants and beneficiaries, IRA owners and certain plan fiduciaries (including small plan sponsors). The exemption is subject to protective conditions to safeguard the interests of the plans, participants and beneficiaries and IRA owners. The exemption affects participants and beneficiaries of plans, IRA owners and fiduciaries with respect to such plans and IRAs.").

performance or risk data and the information about them is limited to what the sponsor provides.⁹³ Valuations are often private.⁹⁴ In addition, fees and expenses can be built into the product parameters and are typically much higher than that of mutual funds and other publicly listed securities.⁹⁵ Given the lack of historical data, public trading records, or an easy way of valuing these assets, brokerage firms typically advertise hypothetical returns for these products rather than actual historical performance.⁹⁶ Because of the lack of full information and hidden fees, it is very likely that these products are highly profitable to the financial institutions offering them. Since financial products are a zero-sum game, any excessive profits for financial institutions and brokers will come at the expense of retirement investors. Given the exemption about receiving compensation from third parties, the sponsoring brokers and financial institutions can share some of these excess profits with investment advisers. As a result, investment advisers are more likely to recommend alternative and proprietary investments over publicly available mutual funds, to the detriment of investors.⁹⁷

Structured products are a common type of proprietary products; they provide investors with modified income streams using options, leverage, and other derivatives. For instance, a structured product can increase in value when the overall market goes down, volatility or interest rates increase, or oil prices decline. By their very nature, structured products constitute a

93. VANGUARD, ALTERNATIVE STRATEGIES: WHAT YOU DON'T KNOW CAN HURT YOU (2013), <https://personal.vanguard.com/pdf/a143.pdf>.

94. See Susanne Craig & Jessica Silver-Greenberg, *Former Brokers Say JPMorgan Favored Selling Bank's Own Funds Over Others*, N.Y. TIMES (Jul. 2, 2012, 9:06 PM), <http://dealbook.nytimes.com/2012/07/02/ex-brokers-say-jpmorgan-favored-selling-banks-own-funds-over-others/?ref=susannecraig> ("The bank said it did not provide actual results for the investment models in the Chase Strategic Portfolio because it was standard practice in the industry to wait until all the parts of the portfolio had a three-year return before citing performance in marketing materials.").

95. See, e.g., MORGAN STANLEY, ALTERNATIVE INVESTMENTS: INNOVATIVE STRATEGIES FOR ASSET ALLOCATION (2014), <https://www.morganstanley.com/wealth/investmentsolutions/pdfs/altscapabilitiesbrochure.pdf>.

96. See, e.g., Craig & Silver-Greenberg, *supra* note 94; see also Eaglesham et al., *supra* note 18.

97. See Eaglesham et al., *supra* note 18.

black box.⁹⁸ One can observe the investment returns they generate without allowing investors a full and complete picture of how they work, what the costs and fees are, and what the future returns may be.⁹⁹ As a result, structured products may be characterized as offering poor transparency.

An extreme example of an inappropriate proprietary product is a dominated asset. A dominated asset is one that offers lower returns for the same level of risk or higher risk for the same level of return as another asset (typically publicly traded funds). Therefore, investing in a dominated asset is not in the best interest of any rational investor—i.e., one who prefers higher returns and lower risk. The most common reason a particular proprietary product would be dominated is the high expense, which is simply income for the financial institution that created the proprietary product.

Evidence shows that, on average, dominated proprietary products had returns over 60 basis points worse than other similar risk funds.¹⁰⁰ Furthermore, dominated assets are recommended even though they are not in the best interest of the retirement beneficiaries. Given the lack of transparency about the proprietary investment products, investors are unable to judge what product is being recommended, what the risks and expected returns are, whether the product is dominated, and sometimes even what the fees are.

Dominated assets can exist in employer-sponsored defined contribution plans as well. Employers may insert high-fee assets into retirement plan menus presumably to increase employees' choices. In return, employers may receive direct and

98. Typical proprietary products specify what investors will receive as a function of market conditions (say, the future returns on the S&P 500 Index). What is not clarified is the expected returns on the underlying assets, and what proportion of these total returns accrue to the retiree and what proportion accrue to the investment sponsor. Therefore, these products constitute a black box as far as the retiree is concerned.

99. Katrina Lamb, *An Introduction to Structured Products*, INVESTOPEDIA (Jan. 30, 2017, 6:00 AM), http://www.investopedia.com/articles/optioninvestor/07/structured_products.asp; John F. Wasik, *Is a Structured Product Good for Retirement Income*, MORNINGSTAR (Jan. 27, 2011, 6:00 AM), <http://news.morningstar.com/articlenet/article.aspx?id=367646>; see also Eaglesham et al., *supra* note 18.

100. Ian Ayres, *The Problem of Dominated Funds*, FREAKONOMICS (March 13, 2014, 12:56 PM), <http://freakonomics.com/2014/03/13/the-problem-of-dominated-funds/>.

indirect benefits from financial institutions sponsoring these products. In extreme cases, some of these high-cost products can become dominated assets. Over half of these plans have menus with at least one dominated fund.¹⁰¹ For such plans, dominated funds contain over ten percent of total plan assets.¹⁰² While it is up to employees to choose what they believe is the best product for them, their choice is influenced by the options presented in the retirement plan. Financial advisers have an incentive to advise clients to invest more in dominated assets in return for payments from the sponsoring institutions. As discussed earlier, investors' relative lack of financial sophistication combined with the opacity of proprietary products makes it difficult for them to critically evaluate the advice they receive from their financial advisers.

Unfortunately, regulations tend to be weaker when the issue is the cost of the investment products. ERISA focuses mainly on diversification, and regulators have sidestepped their obligation to make sure that fund costs are appropriate. DOL guidelines do not explicitly deal with dominated assets if the availability of these funds can be argued to be in a client's "best interest."¹⁰³ In the case of *Hecker vs. Deere & Co.*, the Seventh Circuit held it "untenable to suggest that all of the more than 2500 publicly available investment options had excessive expense ratios."¹⁰⁴ Thus, courts have granted legal immunity to providers that offer investors the choice of dominated funds that are bad for investors.

III.

EVIDENCE OF CONFLICTS OF INTEREST

A. *Fiduciary Standard and Performance of Corporate Pension Funds*

As we have argued in the previous Part, the problem of multiple principals and the opacity of allowed investment

101. *Id.* ("52% of plans have menus offering at least one dominated fund.").

102. *Id.* ("Dominated funds hold 11.5% of plan assets.").

103. See Ian Ayres, *The Problem of 401(k) Mapping to Dominated Funds*, FORBES (Mar. 29, 2014, 10:48 AM), <http://www.forbes.com/sites/whynot/2014/03/29/the-problem-of-401k-mapping-to-dominated-funds/#5a3595cc7702>.

104. *Hecker v. Deere & Co.*, 556 F.3d 575, 581 (7th Cir. 2009).

products have the potential to create conflicts of interest between the fiduciary and the beneficiaries of defined contribution plans. The relevant policy issue, however, is the extent of harm that can result. We can gain insights into the likely effects of the conflict of interest built into the new fiduciary standard on the performance of defined contribution retirement accounts by examining the performance of defined benefit corporate pension funds. Defined benefit funds are already subject to the fiduciary standard yet attempt to serve two principals. Conflicts of interest arise in the case of defined benefit pension funds whenever corporate executives serve as pension fund fiduciaries (fiduciary–executives). These fiduciary–executives are subject to potential conflicts of interest since they also attempt to serve two principals: their shareholders and their beneficiaries. Such conflicts of interest may, in turn, affect the performance of defined benefit pension funds. Drawing lessons from the impact of conflicts of interest on the performance of defined benefit pension funds is useful for the following reasons. The incentives that create conflicts of interest in defined contribution plans are similar to that in defined benefit plans. Similar to fiduciary–executives, financial advisers are favoring their own pecuniary gain over their fiduciary responsibilities to the pension beneficiaries while choosing what assets to invest in, when to invest, and how much to invest. In addition, studying defined benefit plans will not only prove the presence or absence of conflicts of interest but, more importantly, also enable estimation of the magnitude and economic significance of the adverse effects, if such conflicts of interest do exist. We could, of course, wait to learn the existence and significance of these effects from future experience with defined contribution plans. But from a policy perspective, it clearly makes more sense to learn from past experience and take preemptive action if necessary.

The performance of defined benefit corporate pension funds has also been of great concern to fund beneficiaries, corporate management, and regulatory agencies.¹⁰⁵ These

105. See PENSION BENEFIT GUARANTEE CORPORATION, 2015 ANNUAL REPORT 13 (2015), <http://www.pbgc.gov/Documents/2015-annual-report.pdf> [hereinafter PBGC 2015]; PENSION BENEFIT GUARANTEE CORPORATION, EXCELLENCE IN CUSTOMER SERVICE: 2012 ANNUAL REPORT 8 (2012) <http://www.pbgc.gov/Documents/2012-annual-report.pdf#page=8> [hereinafter PBGC 2012].

concerns have been triggered by the record aggregate deficit of private pension plans, almost tripling from \$26.1 billion in 2011 to \$76.4 billion in 2015.¹⁰⁶ Moreover, the benefits paid, participants receiving benefits, and number of pension plans that are under the trusteeship of the Pension Benefit Guarantee Corporation have also increased dramatically between 2003 and 2012.¹⁰⁷

While part of this problem can be traced to the dismal stock market performance during the post-2000 period,¹⁰⁸ it has brought to the forefront the concern that corporate managers may also be responsible for the deficits of their companies' pension funds. The popular press has been rife with accusations of corporate theft of pension funds.¹⁰⁹ Some of the wealth transfer tactics that corporations are accused of are: (1) projecting an unrealistically high return and claiming the pension plan is overfunded, while reducing contributions to the plan and diverting them to other uses; (2) converting from conventional plans to cash balance plans, which reduces payouts but does not trigger a tax for termination;¹¹⁰ (3) declaring bankruptcy, which typically entails losses to employee pension plans while simultaneously setting up bankruptcy-protected pension plans for senior management that are protected (examples include Enron¹¹¹ and American Airlines¹¹²);

106. See PBGC 2015, *supra* note 105, at 9; PBGC 2012, *supra* note 105, at 13.

107. See PBGC 2012, *supra* note 105, at 22.

108. See Aswath Damodaran, *Annual Returns on Stock, T.Bonds and T.Bills: 1928—Current*, NEW YORK UNIVERSITY, http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html (last visited Dec. 17, 2016) (reporting annual S&P 500 returns of -9.03%, -11.85%, and -21.97% for years 2000, 2001, and 2002, respectively).

109. See, e.g., Robert Kuttner, *The Great American Pension-Fund Robbery*, BLOOMBERG (Sept. 8, 2003, 12:00 AM), <http://www.bloomberg.com/news/articles/2003-09-07/the-great-american-pension-fund-robbery>.

110. This tactic was pioneered by Bank of America in 1985. Nevertheless, on July 31, 2003, in response to a lawsuit by IBM workers, a federal judge ruled that such conversions are illegal.

111. PATRICK J. PURCELL, CONG. RESEARCH SERV., RS21115, *THE ENRON BANKRUPTCY AND EMPLOYER STOCK IN RETIREMENT PLANS* (2002), <http://www.ieceusa.org/policy/issues/reports/enronpension.pdf>.

112. Miller, *supra* note 25.

and (4) siphoning pension plan surpluses to pay termination benefits and retirees' medical benefits.¹¹³

We can assess the likely effects of the conflicts of interest on fiduciary-executives of defined benefit pension funds by examining the performance of the fund trading decisions involving their own companies' stock since such decisions often involve balancing the interests of shareholders against that of pension beneficiaries. Consider for instance, the private, confidential corporate information that fiduciary-executives possess as part of their routine managerial engagement with the firm. If they ignore this confidential information, or use it to trade shares in pension funds to benefit their shareholders (for example, to temporarily influence the stock price in order to obtain a favorable price in an acquisition), then they fail in their fiduciary responsibility to the pension beneficiaries. If they use this information to benefit their pensioners, then they violate insider trading laws and fail in their fiduciary responsibility to their own shareholders.¹¹⁴ This is the conundrum that fiduciary-executives face when they serve two principals.

To provide a concrete example, assume that the fiduciary-executives possess some positive, non-public information regarding a possible takeover of their own firm. Based on this positive, non-public information, should the fiduciary-executives buy shares from the marketplace for the pension fund, do nothing, or sell shares from the pension fund to favored third parties? If they buy shares in the marketplace, they would be acting in the best interest of the pension beneficiaries but clearly against the best interest of their shareholders. If they do nothing, they are not actively helping either of their principals. If they sell shares out of the pension assets, they are clearly acting against the best interest of the pension beneficiaries.

Evidence indicates that such potential conflicts are real and not just of academic interest. For example, pension plan beneficiaries have filed several lawsuits accusing fiduci-

113. Lucent Technologies, Inc., Dupont Co., and SBC Communications, Inc. are some of the companies that used this tactic. See Ellen Schultz, *Firms Had a Hand In Pension Plight*, WALL ST. J., Jul. 10, 2003, at A1.

114. Interestingly, the recent fair disclosure regulation (Regulation FD) has exacerbated this conflict of interest. While ERISA requires fiduciary-executive to act in the best interests of pension fund beneficiaries, Regulation FD forbids them from favoring one investor over another.

ary—executives of breaching their fiduciary duty by failing to sell the company stock held by their pension plans before the stock price dropped.¹¹⁵ Critics have pointed to evidence of sub-optimal diversification: more than twenty-seven percent of all employees hold at least half of their 401(k) balances in company stock and nearly seven percent have their entire account in company stock.¹¹⁶ In response to the concern that fiduciary—executives may not always act in the interest of fund beneficiaries, some corporations have hired independent fiduciaries to handle the trading of company stock in their own employee pension funds.¹¹⁷

In order to provide formal evidence regarding conflict of interest issues facing fiduciary—executives of defined benefit pension funds, this Article analyzes the performance of pension fund trades in which the fund attains insider status. A pension fund attains insider status either by acquiring more than ten percent of the outstanding shares in a given firm (typically this is the sponsoring firm's shares), or by appointing a top level executive (an insider) as the fiduciary.¹¹⁸ In these instances, the pension fund acquires a legal-insider status and must report all subsequent transactions to the SEC.¹¹⁹

It is well-documented that insiders, as a group, earn abnormal positive returns from trading in their own companies' stocks, presumably taking advantage of their privileged access to information.¹²⁰ Top executives typically earn a higher rate of return than other officers and directors, who, in turn, earn

115. See Jeff D. Opdyke, *Retirement Plans Get New Safeguards*, WALL ST. J. (Jun. 21, 2005, 12:01 AM), <http://www.wsj.com/articles/SB111930752257264546>. Some of the companies against whom lawsuits were filed in 2005 are American Insurance Group, Delphi, General Motors, Krispy Kreme Doughnuts, and Merck.

116. *Id.*

117. *Id.*

118. DAVID A. COHEN ET AL., *EMPLOYER SECURITIES IN QUALIFIED PLANS* 7 (2009), <http://www.evercoretrustcompany.com/etc-cms.com/wp-content/uploads/2013/08/3c-Employer-Securities-in-Qualified-Plans-20131.pdf>.

119. Legal-insider status ends if the fiduciary is a lower-level executive or a non-executive and/or the pension fund reduces its equity investment to 10% or under.

120. See, e.g., H. NEJAT SEYHUN, *INVESTMENT INTELLIGENCE FROM INSIDER TRADING* (1998).

a higher rate of return than large outside shareholders.¹²¹ Another strand of literature ties the profitability of insider trading to corporate governance and internal control mechanisms.¹²² In the case of insider-pension funds, however, the presence of conflicts of interest can result in positive or negative abnormal returns. If the concerns of the proponents of fiduciary independence are valid, insider trades by pension funds will favor shareholders and executives at the expense of beneficiaries, resulting in negative abnormal returns.

B. Data and Performance Measures

The insider trading data in this study is obtained from a compilation by the SEC, which is then made available for sale.¹²³ The data contains all open market insider trading in publicly traded firms between January 1975 and December

121. See, e.g., H. Nejat Seyhun, *Insiders' Profits, Costs of Trading, and Market Efficiency*, 16 J. FIN. ECON. 189, 210 (1986); Arturo Bris, *Do Insider Trading Laws Work?* 23 (Yale ICF, Working Paper No. 00-19, 2010), http://papers.ssrn.com/paper.taf?abstract_id=248417; H. Nejat Seyhun, *Why Does Aggregate Insider Trading Predict Future Stock Returns?* 107 Q.J. ECON. 1303, 1329 (1992); Bin Ke et al., *What Insiders Know About Future Earnings and How They Use It: Evidence from Insider Trades*, 35 J. ACCT. & ECON. 315, 315 (2003); John E. Core et al., *Stock Market Anomalies: What Can We Learn from Repurchases and Insider Trading?* 11 REV. ACCT. STUD. 49, 68 (2006); Albert S. Kyle, *Continuous Auctions and Insider Trading*, 53 ECONOMETRICA 1315, 1315 (1985); H. Nejat Seyhun & Michael Bradley, *Corporate Bankruptcy and Insider Trading*, 70 J. BUS. 189, 203, 214 (1997).

122. Taylan Mavruk & H. Nejat Seyhun, *Do SEC's 10b5-1 Safe Harbor Rules Need to Be Rewritten?*, 2016 COLUM. BUS. L. REV. 133, 154 (2016); Cindy A. Schipani & H. Nejat Seyhun, *Defining "Material, Nonpublic": What Should Constitute Illegal Insider Information?*, 21 FORDHAM J. CORP. & FIN. L. 327 (2016); S. Burcu Avci, Cindy A. Schipani & H. Nejat Seyhun, *Ending Executive Manipulations of Incentive Compensation*, 42 J. CORP. L. 277 (2016); S. Burcu Avci, Cindy A. Schipani & H. Nejat Seyhun, *Manipulative Games of Gifts by Corporate Executives*, 18 U. PA. J. BUS. L. 1131 (2016); Hollis A. Skaife et al., *Internal Control over Financial Reporting and Managerial Rent Extraction: Evidence from the Profitability of Insider Trading*, 55 J. ACCT. & ECON. 91, 107 (2013); Anup Agrawal & Sahiba Chadha, *Corporate Governance and Accounting Scandals*, 68 J.L. & ECON. 371, 403 (2005); Scott L. Summers & John T. Sweeney, *Fraudulently Misstated Financial Statements and Insider Trading: An Empirical Analysis*, 73 ACCT. REV. 131, 144 (1998); Enrichetta Ravina & Paola Sapienza, *What Do Independent Directors Know? Evidence from Their Trading*, 23 REV. FIN. STUD. 962, 1001 (2010).

123. Thomson Reuters is the vendor for the Insider Trading Data.

2014.¹²⁴ For the purposes of this study, only open market purchases and sales are included. Private transactions, shares acquired through exercise of options, and trades with corporations are excluded. The data on stock market returns is obtained from the Center for Research in Securities Prices (CRSP). The final sample contains all insider trades between January 1975 and December 2014 in firms for which stock return data is available by CRSP.

From this sample, we extract trades by insiders identified as pension funds. To be included in this sample, an insider's name (name of trader) in the database must contain the word "pension." As mentioned earlier, for a pension fund to be classified as an insider to a company, either it must hold more than ten percent of any equity class of security of the firm, or the fiduciary of the pension fund must be a top-level executive.¹²⁵ An insider relation code indicates whether the insider status for the pension fund arises as a result of the large shareholdings or interlocking executives.

Table 1 provides the summary statistics of insider trades by pension funds. Panel A provides the statistics by insider type: whether the trade was classified as an insider trade because of ten-percent equity ownership (Shareholder) or fiduciary-executive (Officer). The sample contains 1661 purchases transactions and 1339 sale transactions. The number of shares purchased is about 132 million, while the average purchase size is about 79,000 shares. The total number of shares sold is about 103 million, while the average sale size is about 77,000 shares. The bulk of the trades are by Shareholders (about 121

124. For most of the sample period analyzed here, section 16(a) of the Securities Exchange Act of 1934 requires that insider transactions be disclosed within the first ten days of the month following the month of the trade. section 16(b) prohibits insiders from profiting from short-term price movements defined as profitable offsetting pairs of transactions within six months of each other, while section 16(c) prohibits profiting from short-sales. The Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley) has modified insider trading regulations in many significant ways. First, the new reporting requirement states that insider transactions must be reported electronically by the end of the second business day following the day on which the transaction is executed, both through EDGAR and corporate public websites. Sarbanes-Oxley also prohibits the purchase and sale of securities during black-out periods. Any profit made from these prohibited transactions shall inure to and is recoverable by the corporation.

125. See *supra* Section III.A.

TABLE 1

SUMMARY STATISTICS OF INSIDER TRADES BY PENSION FUNDS						
<p>This table provides the summary statistics of trades by pension funds that are classified as insider trades. Panel A provides sample statistics on insiders' trades, classified by insider type: Shareholders and Officers. The fund can be classified as an insider if it holds 10% or greater stake in the sponsoring firm (Shareholder) or if an officer of the sponsoring firm serves as a fiduciary of the fund (Officer). Panel B provides the breakdown of pension fund insider trades by separate accounts (a pension fund held for employees of a single firm) and commingled funds (a fund that holds the pension investments of employees of multiple firms).</p>						
PANEL A. INSIDERS' TRADES IN PENSION FUNDS BY INSIDER RELATIONSHIP						
			Purchases	Sales		
Number of trades			1661	1339		
Shares traded (millions)			131.5	102.6		
Average trade size (millions)			0.079	0.077		
Total shares traded by Shareholders (millions)			121.1	89.4		
Total shares traded by Officers (millions)			10.5	13.2		
PANEL B. INSIDERS' TRADES IN PENSION FUNDS BY FUND TYPE						
Fund type	Number of firms	Number of trades	Number of shares traded (millions)		Average number of shares traded (millions)	
			Purchases	Sales	Purchases	Sales
Separate account	69	2220	63.1	35.0	0.030	0.059
Commingled fund	89	780	68.4	67.6	0.135	0.247

million shares purchased and 89 million shares sold) while the trades by the Officers are relatively smaller (about 11 million shares purchased and 13 million shares sold).

Panel *B* of Table 1 classifies pension fund insider transactions based on whether the fund assets are managed in separate accounts or commingled with pension assets of other firms.¹²⁶ A separate account is a pension fund held for employees of a single firm. A commingled fund, on the other hand, holds the pension investments of two or more firms' employees. We use two criteria to identify separate accounts and commingled funds. First, if a pension fund traded in shares of more than one firm with insider status, we identified this fund as a commingled fund. Second, if the pension fund's name contained only the name of a fund management firm and did not include the name of the client firm whose pension money is being managed (e.g. Morgan Guarantee Trust Pension Fund), we classified the fund as a commingled fund.¹²⁷ Panel *B* indicates that separate account transactions involve 2220 transactions in 69 firms with about 98 million shares traded compared with 780 transactions in 89 firms and 136 million shares traded for the commingled accounts.

For all our reported results, we measure market-adjusted abnormal profits computed in the following manner:

$$MAR_{i,T} = \sum_{t=1}^T H \times (r_{i,t} - r_{m,t})$$

where $r_{i,t}$ is the with-dividend return to stock i on day t and $r_{m,t}$ is the with-dividend return to an equally weighted portfolio of all New York Stock Exchange, American Stock Exchange, and NASDAQ stocks on day t .¹²⁸ The parameter H is equal to 1 if the insider trade is a purchase and -1 if it is a sale. Therefore, a negative reported market-adjusted abnormal profit implies that the return following a purchase is negative or the return following a sale is positive. The market-adjusted abnormal returns are computed over the horizon of T trading days, starting from the day following the insider trade date. We report results for four different horizons, measured in calendar days:

126. As described later, these two types of funds differ in the extent of conflicts of interest.

127. To the extent our classification is not perfect, we would tend to blur the distinction between separate and commingled categories, and we would bias our results toward the inability to distinguish between these two.

128. We measured abnormal return using the cumulative abnormal return measure and obtained similar results.

six months, twelve months, eighteen months, and twenty-four months.

C. *Performance of Defined Benefit Funds when Trading as Insiders*

In this Section we report the performance of the trades of defined benefit pension funds as insiders and then compare it to the performance of all insiders. Given the potential conflict of interest in pension funds, arising from the attempt to serve two principals (shareholders and fund beneficiaries), we would expect the returns of pension fund trades to be lower.

TABLE 2

PERFORMANCE OF PENSION FUND INSIDER TRADES					
The table provides the average abnormal market-adjusted returns (MAR) of pension fund trades in which the fund is classified as an insider for different horizons. The fund can be classified as an insider if it holds 10% or greater stake in the sponsoring firm (Shareholder) or if an officer of the sponsoring firm serves as a fiduciary of the fund (Officer). The abnormal return for each trade is computed as					
$MAR_{i,T} = \sum_{t=1}^T H \times (r_{i,t} - r_{m,t})$					
where $r_{i,t}$ is the with-dividend return to stock i on day t and $r_{m,t}$ is the with-dividend return to an equally weighted portfolio of all New York Stock Exchange, American Stock Exchange, and NASDAQ stocks on day t . The parameter H is equal to one if the insider trade is a purchase and negative one if it is a sale. The abnormal returns are computed for 6, 12, 18, and 24 calendar months following the trade date. The t -statistics are in parentheses. Estimates that are statistically significant at the 1% level or better are in bold.					
	Number of Observations	6 months	12 months	18 months	24 months
All trades	3000	-0.80% (-0.25)	-0.85% (-0.97)	-4.85% (-0.99)	-10.54% (-4.55)
Shareholders	1521	-1.29% (-0.82)	-5.57% (-2.64)	-9.89% (-4.90)	-15.03% (-7.10)
Officers	1479	-0.29% (0.50)	3.95% (1.31)	0.28% (3.15)	-5.92% (0.18)

Table 2 reports the market adjusted returns of pension funds insider trades. The mean market-adjusted return (MAR) is reported for all pension fund insider trades as well as for the two classes of insider relationship of the funds (Shareholders and Officers). In the full sample, we see returns statistically insignificant from zero for three of the four horizons with a significantly (at the 1% significance level) negative return of -10.54% in the twenty-four-month sample. When we split the sample into the two classes of insider relationship, we see that the results are driven by the subsample where the insider relationship arises because of the shareholding in excess of ten percent (i.e., Shareholders). In this subsample, the returns are negative and significant at the 1% level for all but the shortest horizon, with the returns ranging from -5.57% to -15.03%.

The implications of these results become more noteworthy when we compare the returns reported in Table 2 with that of all insiders (not just pension funds). These results are reported in the first row of Table 4, *infra*. It can be seen that insiders as a group earn a significantly positive mean MAR over all horizons with returns ranging from 2.40% for the six-month horizon to 6.35% for the twenty-four-month horizon. When we compare these returns with that of pension fund trades of either the Shareholder subsample (negative for most horizons) or the Officer subsample (not different from zero for all horizons), it can be seen that the returns of both these subsamples are significantly lower; the Shareholder subsample performs worse. These results are consistent with the presence of conflicts of interest in defined benefit pension funds. More importantly, the impact of the conflict of interest is significant. For example, over a twelve-month horizon the return of pension trades in the Shareholder subsample is lower than that of all insiders by 9.47%!

As Table 2 shows, the returns are significantly negative when the pension fund acquires a large equity stake in the sponsoring firm. It is possible to argue that holding a large equity stake in the sponsoring firm could never be optimal for the pensioners in the first place. Given that their human capital is already tied up in the fortunes of the sponsor, the optimal holding in their own company stock should be very small or nil. Consequently, acquiring these large equity stakes serves as a clear signal of the potential conflicts of interest, which is confirmed by the evidence.

The conclusion from the above results is that pension funds earn negative market-adjusted returns when they acquire a large equity stake in the underlying firms. Thus, it is clear that the poor performance of pension fund trades when they trade as insiders is an exception to the performance of overall insider trades. This result is consistent with the finding of noted academics that defined-benefit pension funds that invest in equity underperform the S&P 500 Index.¹²⁹

D. *Comparison of Separate Accounts and Commingled Funds*

While the poor performance of insider trades of pension funds as a whole provides preliminary support for the proponents of independent pension fund fiduciaries, the case for independent fiduciaries will be stronger if we find that the degree of independence is positively related to fund performance. We propose the following methodology to test this relationship. As noted earlier, pension funds can be categorized as separate accounts or commingled funds with the former created exclusively for a sponsoring company's employees, while the later commingles the pension investments of multiple companies.¹³⁰ If one is concerned about the conflicts of interest of a fiduciary-executive, an argument can be made that the conflicts of interest are even worse in the case of separate accounts.

In separate accounts, insiders can use pension fund assets either to benefit themselves or their shareholders, at the expense of beneficiaries, without having to coordinate their decisions with anyone else. They can do so by using the pension funds' assets to prop up their stock prices temporarily (by directing the pension fund to buy the shares of their firm prior to the exercise of their executive stock options or prior to an acquisition), or to push stock prices down temporarily (by directing the pension fund to sell shares of their firm prior to granting of executive stock options).

In commingled funds, however, such actions require coordination and collusion with the outside managers of the funds, which is likely to be difficult to achieve and costly for

129. Josef Lakonishok et al., *The Structure and Performance of the Money Management Industry*, BROOKINGS PAPERS ON ECON. ACTIVITY: MICROECONOMICS 339, 339-91 (1992).

130. See *supra* Section III.B.

several reasons. First, the interests of the commingled pension fund manager and an individual firm's executives and/or shareholders may not be congruent. For instance, the timing of key events relating to the compensation contracts of firms' executives (granting and exercise of executive stock options) and that of pension fund managers (evaluation dates of pension fund performance) need not be the same. Second, for commingled fund managers, the performance of a single stock in their portfolio is less critical than for the firm's executives and shareholders. Third, benefiting the insiders might require a quid pro quo payment arrangement with the pension fund manager, which would increase the likelihood of detection. And finally, outside professional pension fund managers have more to lose in terms of their reputation by engaging in these types of manipulations. Consequently, we expect conflicts of interest to be less prevalent in outside-managed commingled funds. Therefore, if conflicts of interest are present, we expect insider trades of commingled funds to outperform that of separate accounts.

Since the results from Table 2 show that the conflict of interest issue is significant in the Shareholder subsample, we investigate whether the returns of comingled funds are greater than that of separate accounts in this subsample. Table 3 presents the results. There are about 817 and 704 trades by separate accounts and commingled funds, respectively. The mean MAR of separate accounts is negative and statistically significant at the 1% level for all but the shortest horizon, with the returns ranging from -7.98% to -19.69%. The mean MAR of commingled funds on the other hand is not significantly different from zero for all but the longest horizon. For the twenty-four month horizon, the mean MAR for commingled funds is -9.08% and significant; however, it is greater than the mean MAR of the separate accounts for the same horizon (and the difference is significantly different from zero). Thus, the evidence is consistent with the hypothesis that there is a conflict of interest between fund managers and fund beneficiaries, and that fund managers act in the interest of the firm's shareholders or themselves at the expense of fund beneficiaries.

TABLE 3

PERFORMANCE OF PENSION FUND INSIDER TRADES GROUPED BY TYPE OF FUND					
<p>The table provides the average abnormal market-adjusted returns (MAR) of pension fund trades by shareholders for two different types of pension funds. A separate account is a pension fund held for employees of a single firm while a commingled fund holds the pension investments of two or more firms' employees. The abnormal return for each trade is computed as</p> $MAR_{i,T} = \sum_{t=1}^T H \times (r_{i,t} - r_{m,t})$ <p>where $r_{i,t}$ is the with-dividend return to stock i on day t and $r_{m,t}$ is the with-dividend return to an equally weighted portfolio of all New York Stock Exchange, American Stock Exchange, and NASDAQ stocks on day t. The parameter H is equal to one if the insider trade is a purchase and negative one if it is a sale. The abnormal returns are computed for 6, 12, 18, and 24 calendar months following the trade date. The t-statistics are in parentheses. Estimates that are statistically significant at the 1% level or better are in bold.</p>					
Type of fund	Number of Observations	6 months	12 months	18 months	24 months
Separate account	817	-2.65% (-0.97)	-7.98% (-4.27)	-12.40% (-5.68)	-19.69% (-7.22)
Commingled fund	704	0.39% (-0.09)	-2.76% (0.24)	-7.03% (-1.56)	-9.08% (-3.25)

E. Investigation of Alternative Explanations for the Results

In this Section, we investigate three alternative explanations for the poor performance of insider trades of pension funds relative to insider trades as a whole. Specifically, we investigate if the performance is the result of some unknown bias in the subsample of firms in our data; if the performance is due to liquidity constraints resulting from unexpected outflows; and finally, if the performance is due to the difference in trading strategies of pension funds. The tests that follow rule out all three alternative explanations for the poor relative performance of pension fund insider trades.

TABLE 4

PERFORMANCE OF TRADES BY INSIDERS OTHER THAN PENSION FUNDS

The table provides the average abnormal market-adjusted returns (MAR) of trades of all insiders, insiders in firms with pension fund trades, and insider trades of mutual funds and ESOPs for different horizons. The abnormal return for each trade is computed as

$$MAR_{i,T} = \sum_{t=1}^T H \times (r_{i,t} - r_{m,t})$$

where $r_{i,t}$ is the with-dividend return to stock i on day t and $r_{m,t}$ is the with-dividend return to an equally weighted portfolio of all New York Stock Exchange, American Stock Exchange, and NASDAQ stocks on day t . The parameter H is equal to one if the insider trade is a purchase and negative one if it is a sale. The abnormal returns are computed for 6, 12, 18, and 24 calendar months following the trade date. N indicates the sample size. The p -values are in parentheses. Estimates that are statistically significant at the 1% level or better are in bold.

Type of insider	6 months	12 months	18 months	24 months
All insiders	2.40% (0.00)	3.90% (0.00)	6.09% (0.00)	6.35% (0.00)
N	2,205,681	2,133,895	1,913,550	1,779,879
Insiders in firms with pension fund trades	3.61% (0.00)	4.62% (0.00)	6.08% (0.00)	7.06% (0.00)
N	30,488	29,901	258,586	27,313
Mutual funds	3.42% (0.00)	4.72% (0.00)	5.78% (0.00)	8.14% (0.00)
N	63,298	68,870	55,627	51,746
ESOPs	1.27% (0.00)	2.65% (0.00)	4.04% (0.00)	7.36% (0.00)
N	5,907	5,832	5,702	5,619

1. *Sample Bias*

To test if the subsample of firms with pension fund insider trades has any special characteristics that result in the poor performance of these trades, we analyze the trading performance of other insiders in the same subsample of firms with pension fund insider trades. These tests help us check the possibility that there is something unique about this particular set of firms that leads to trading losses. Perhaps, all other insiders (in addition to pension funds) suffer trading losses in this set of firms due to some unspecified chain of events.

It can be seen from the second row of Table 4 that the mean MAR for all other insiders is positive and significant at the 1% level for all horizons. Hence, while pension funds suffer trading losses, the other insiders in the same set of firms are trading profitably. These results contrast sharply with the performance of pension fund insider trades reported in Table 2. In summary, we find that pension funds do systematically worse than other insiders in the same firms, thus providing no evidence of any bias in the sample of firms with pension fund insider trades.

2. *Liquidity Constraints*

It is possible that the relatively poor performance of pension fund insider trades is due to forced liquidation of assets to meet pension payments to beneficiaries. Open-end mutual funds and employee stock ownership plans (ESOPs) face similar liquidity constraints. One can reasonably argue that mutual funds face greater liquidity constraints than pension funds because flows in and out of mutual funds are less predictable. To test this hypothesis, we compared the performance of pension fund insider trades with that of mutual fund and ESOP insider trades.¹³¹

To identify mutual fund trades we searched the names of traders in our database for words that identify them as a mu-

131. Similar to pension funds, fiduciaries of ESOPs also face conflict of interest situations. They might trade-off private benefits of employees against stock price performance. ESOPs are strong deterrents to takeovers and changes in ownership due to the fact that ESOPs are associated with negative stock price reactions. See Susan Chaplinsky & Greg Niehaus, *The Role of ESOPs in Takeover Contests*, 49 J. FIN. 1451, 1451–70 (1994).

tual fund.¹³² Our algorithm searched for the following specific words: Fund, Principal, Venture Capital, Euroventure, Capital Corporation, Partner, Trust, Investment, and Asset Management. We also ensured that the name of the insider did not contain the word “Pension.” ESOP firms were identified by searching for “employee stock ownership” and “ESOP.”

The performance of mutual fund insider trades is reported in the third row of Table 4. The mean MAR is positive and significant at the 1% level for all horizons. In addition, the monotonic relation between the mean MAR and the horizon indicates that mutual fund insider trades yield positive returns in each of the periods.

A similar result holds for ESOP insider trades as shown in the last row of Table 4. The mean MAR is also positive and significant at the 1% level for all horizons and monotonically increasing with the horizon. Thus, our evidence indicates that liquidity constraints are unlikely to explain the poor relative performance of pension fund insider trades. Trades by mutual funds (which face potentially even greater liquidity constraints) and ESOPs profit from insider trades just like other insiders.

3. *Trading Strategies*

We also investigate whether the differences between the performance of pension fund insider trades and that of all insider trades can be explained by differences in investment styles. We analyze two investment styles: momentum and mean-reversion.¹³³ A trade is classified as a momentum trade if a purchase [sale] is made after a positive [negative] MAR over

132. See *supra* Section III.B.

133. Momentum refers to the finding that a stock's recent performance continues in the same direction for about twelve months. Mean-reversion refers to the reversal of these patterns over the next three- to five-year horizons. Jegadeesh and Titman report that past six-month winners on NYSE-AMEX continue to outperform past six-month losers by about 1% per month over the next six months. See Narasimhan Jegadeesh & Sheridan Titman, *Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency*, 48 J. FIN. 65, 65–91 (1993). DeBondt and Thaler document mean-reversions over longer holding periods. They show that a strategy of buying long-term losers and selling long-term winners would have earned about 25% over the subsequent three-year period. See Werner F. M. De Bondt & Richard Thaler, *Further Evidence on Investor Overreaction and Stock Market Seasonality*, 42 J. FIN. 557, 557–81 (1987).

the six-month period ending in the month preceding the trade date.¹³⁴ A trade is classified as a mean-reversion trade if a purchase [sale] is made after a negative [positive] MAR over the six-month period ending in the month preceding the trade date.¹³⁵ Seyhun finds that insiders tend to follow a mean-reversion strategy for both short horizons of up to one year as well as long horizons up to five years.¹³⁶ While the details are not shown, for the entire sample of insider trades, about 63% of the trades are consistent with a mean-reversion strategy (selling winners and buying losers).¹³⁷ Similarly, when we limit the sample to insider trades in firms in which pension fund insider trades occur, about 60% of the trades are consistent with a mean-reversion strategy. By contrast, the percentage of pension funds trades that can be classified as mean-reversion is much lower—just 50% to 52%.¹³⁸

While there appears to be some evidence that pension fund insider trades follow, on average, a different trading strategy than other insider trades, the difference in performance cannot be explained by the difference in trading strategy. To demonstrate this, we compare the performance of pension fund insider trades that follow a mean-reversion strategy with trades of non-pension fund insiders in firms traded by pension funds, since both groups seem to follow the same pattern in their investment style. The mean abnormal returns for pension fund trades are significantly negative for mean-reversion trades for all horizons. By contrast, the mean-reversion trades of other insiders in the same firms earn a significant positive return for all horizons except the twelve-month horizon, in which they earn returns not significantly different from zero.¹³⁹ Therefore, this evidence does not provide support to

134. See *Momentum vs. Mean Reversion Trading Strategies*, SMART STOCK CHARTS, <http://smartstockcharts.com/momentum-vs-mean-reversion/> (last visited Dec. 18, 2016).

135. See SEYHUN, *supra* note 120, at 293–316.

136. *Id.*

137. *Id.*

138. For the sake of brevity, we do not show these results.

139. For the sake of brevity, we do not show these results.

the hypothesis that the differences in trading strategies are the cause of the lower profit of pension fund insider trades.¹⁴⁰

140. We also ran the various tests we conducted to check the robustness of our results. For the sake of brevity, we summarize the results of our tests, rather than provide detailed tables.

a. *Performance measured by style adjusted returns*

Style adjusted returns are computed by taking into account size and book-to-market ratios. First, at the beginning of each year, we classified all firms in the CRSP universe into ten size groups (using NYSE market capitalization decile cutoffs) and five book-to-market groups (using book-to-market values computed at the beginning of the preceding July). For each month between January 1975 and December 2003, we compute the equally-weighted average returns for each of these fifty benchmark portfolios. We then assign the firms in our sample into one of these fifty portfolios based on their size and book-to-market ratios. Abnormal returns are computed as the difference in returns between the firms in our sample and the matched size and book-to-market benchmark groups.

Using this approach, we find that the mean AR of pension fund insider trades is still negative and significant for the two longer horizons (mean AR of 7.2% and 11.9% with *p*-values less than or equal to 0.002). The mean AR for the twelve-month horizon is not significantly different from zero while the mean six-month AR is positive and significant (mean AR of 3% with *p*-value of 0.000). This is in contrast to the performance of all insiders in the same firms with pension fund insider trades; the trades of these insiders still earn significant positive AR consistently over all four horizons.

The results using the style-adjusted model for the trades of separate accounts and commingled funds are qualitatively similar to the results reported earlier. The mean AR for the trades of separate accounts are significantly negative for all four horizons and monotonically increasing with the horizon; they vary from 3.2% for the six-month horizon to 23.9% for the twenty-four-month horizon. By contrast, the mean AR for the trades of commingled funds are significantly positive for all four horizons (*p* < 0.0001); they vary from 15.6% for the six-month horizon to 17.1% for the twenty-four-month horizon. Thus, using the style-adjusted model confirms our finding that the conflict of interest hurts the beneficiaries of pension funds.

b. *Performance measured using cumulative abnormal returns*

In addition to $MAR_{i,t}$, we also used cumulative market-adjusted abnormal monthly returns of the stock (CAR) starting from the month that follows the trade computed as:

$$CAR_{i,T} = \sum_{t=1}^T (r_{i,t} - r_{m,t})h$$

where $r_{i,t}$ is the with-dividend return to stock *i* for month *t*, and $r_{m,t}$ is the with-dividend return to equally weighted portfolio of all New York Stock Exchange, American Stock Exchange and NASDAQ stocks for month *t*. The parameter *h* is defined as before as equal to 1 if the insider trade is a purchase and -1 if it is a sale.

IV.
ALTERNATIVE AND PROPRIETARY INVESTMENTS
IN RETIREMENT ACCOUNTS

Alternative and proprietary products can be any investment vehicle that the investment sponsor creates. They can include a bundle of securities that already trade on public exchanges.¹⁴¹ They can also include structured products whose payoffs are modified using leverage, option, futures, and other derivative products.¹⁴² Finally, they can include investments in start-ups and other private investment vehicles, shopping malls, residential and commercial real estate, and works of art.¹⁴³ The key feature of these products is that they do not trade on any public exchanges and the information about them is limited to what the sponsor provides.¹⁴⁴

There are multiple problems with allowing alternative and proprietary investment products in retirement accounts. One important problem is valuation. Since these products are unique and do not trade publicly in exchanges, it is not possible to observe a market-determined price or value for them.

The results using CAR are qualitatively similar to those obtained using AR. The CAR of overall pension fund insider trades is negative and significant for all horizons. In addition, CAR of insider trades by separate accounts are negative and significant while that by commingled funds are positive and significant.

c. *Volume of trades and performance*

In order to check if the performance of pension fund insider trades is related to the volume of trade, the sample was divided into four volume groups based on the number of shares traded: less than 100 shares (sample size = 3 trades), 100 to 1000 shares (224 trades), 1000 to 10,000 (1028 trades) shares, and greater than 10,000 shares (794 trades). The mean AR for the top three volume sub-groups are negative (and significant at the 5% level or better) for the eighteen and twenty-four month horizons. There was no clear relationship between the trade volume and the AR.

141. *What is An Alternative Investment*, CNL SECURITIES, <http://www.cnl-securities.com/education/what-is-an-alternative-investment.stml> (last visited Mar. 3, 2017).

142. *Proprietary Trading*, INVESTOPEDIA, <http://www.investopedia.com/terms/p/proprietarytrading.asp> (last visited Mar. 3, 2017).

143. CNL SECURITIES, *supra* note 140; *Alternative Investment*, INVESTOPEDIA, http://www.investopedia.com/terms/a/alternative_investment.asp (last visited Mar. 3, 2017); John Greenwood, *First Class Returns for Alternative Investments*, THE TELEGRAPH (Oct. 6, 2008), <http://www.telegraph.co.uk/finance/personalfinance/investing/3144943/First-class-returns-for-alternative-investments.html>.

144. CNL SECURITIES, *supra* note 140.

Instead, the valuation is made privately by the owner of the product.¹⁴⁵ This private valuation creates problems both for taxpayers as well as retirement investors. From the taxpayers' perspective, these products can be used to create unfair tax shelters. For the small investor, these products constitute black boxes with no way to peer inside and understand the structure, costs, risks, or expected returns.

Some examples would be helpful to illustrate the problems associated with the alternative investment products in retirement accounts. First, we illustrate the conflicts created for taxpayers. Suppose that an entrepreneur creates a start-up with an expected market value of \$20 million. A proprietary investment vehicle is then created using all of the start-up assets and 20 billion shares are issued against it. Consequently, the fair market value of these private shares would be \$0.001. However, since there is no market for this product, the entrepreneur can attach any private valuation on this investment. Assume that the entrepreneur makes a small valuation error (in absolute value) and privately values each proprietary share at \$0.0000001 instead of \$0.001. At this price, the entire start-up is now valued at \$2000. The entrepreneur then simply uses \$2000 to put all 20 billion shares into his IRA account.

At a later date, say three to five years later, when some or all the proprietary investment is offered to the public at the fair market price of \$0.001 per share, the IRA account balance will suddenly grow from \$2000 to \$20 million. In effect, the value increase has taken place in a tax-sheltered account, thereby free from taxation. This tax-free wealth can now be consumed or passed to future generations.¹⁴⁶ If sufficient time passes between when the investment was purchased by the IRA

145. See generally *Valuation Best Practices for Alternative Investment Funds*, MERCER CAPITAL (Feb. 21, 2014), <http://mercercapital.com/financial-reporting-blog/valuation-best-practices-for-alternative-investment-funds/>.

146. See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-15-16, *INDIVIDUAL RETIREMENT ACCOUNTS: IRS COULD BOLSTER ENFORCEMENT ON MULTIMILLION DOLLAR ACCOUNTS, BUT MORE DIRECTION FROM CONGRESS IS NEEDED* (2014), <http://www.gao.gov/products/GAO-15-16>. In 2011 there were more than 600,000 individuals with estimated IRA balances over \$1 million, more than 1000 individuals with estimated IRA balances over \$10 million and more than 300 individuals with estimated IRA balances over \$25 million. The aggregate estimated dollar balance of the \$25 million+ group is \$81 billion, which means this group could be generating significant tax loss for the U.S. Government. *Id.*

account and when the initial public offering took place, it would be difficult if not impossible to determine whether the value increase is due to subsequent improvements in the start-up or the initial misevaluation.¹⁴⁷

A recent Government Accountability Office (GAO) study has found that there are more than 300 taxpayers who own IRA accounts with an aggregate value of about \$81 billion.¹⁴⁸ Thus, the average balance in these accounts is over \$250 million each. While all of the IRA balances are fully taxed as ordinary income when distributed to the taxpayer, there is an easy way of avoiding this taxation as well. After contributing \$5000 to an ordinary IRA account and purchasing privately-valued proprietary products, the taxpayer can simply convert this IRA into a Roth-IRA, pay taxes on the extra \$5000 of income, and, after the valuation step-up, enjoy the \$20 million wealth increase completely tax-free.¹⁴⁹

Another problem with the alternative and proprietary products arising from private valuation is the lack of information regarding the products' risks and expected returns for the retirement beneficiary. While a complete analysis of the various types of proprietary products is beyond the scope of this Article, we examine the potential performance of a representative sample of these products. A common feature of these products is that they limit downside risk and retain upside po-

147. *See id.*, stating:

A small number of taxpayers has accumulated larger IRA balances, likely by investing in assets unavailable to most investors—initially valued very low and offering disproportionately high potential investment returns if successful. Individuals who invest in these assets using certain types of IRAs can escape taxation on investment gains. For example, founders of companies who use IRAs to invest in privately traded shares of their newly formed companies can realize many millions of dollars in tax-favored gains on their investment if the company is successful. With no total limit on IRA accumulations, the government forgoes millions in tax revenue. The accumulation of these large IRA balances by a small number of investors stands in contrast to Congress's aim to prevent the tax-favored accumulation of balances exceeding what is needed for retirement.

148. *See id.*

149. An ordinary IRA account allows the taxpayer to contribute using pre-tax dollars but pay full income taxes upon distribution. In contrast, a Roth IRA allows the taxpayer to contribute from after-tax income, but then enjoy all distributions without taxation upon reaching retirement age.

tential. One representative retirement investment vehicle we analyze,¹⁵⁰ offers the following features:

- Protects the principal from market downturns;
- Limits the upside gains to the investor;
- Grows retirement assets;
- Guarantees rising income for the first ten years of the contract; and
- Doubles retirement income potential if no withdrawals are taken for the first ten years.

Sometimes these products explicitly state that there are no fees or commissions charged.¹⁵¹ In this case, the benefits to the brokerage firm are not zero, but they are hidden in the products' terms which specify how much the investors participate in the upside. While the details of how these objectives are achieved are not disclosed to the investor, the payout structure is disclosed:¹⁵²

- a. Annual accounting: Interest is earned based on annual changes in the S&P 500 Index. If S&P is up at the end of the year, interest is credited up to a four percent cap. If the S&P 500 index is down for the year, no interest is earned.
- b. Monthly accounting: Interest is based on monthly changes in the the S&P 500 Index. If the Index is up at the end of the month, interest is credited up to a two percent cap. If the S&P 500 Index is down for the month, negative interest is earned with no cap. Interest earned at the end of the year is the sum of twelve monthly interest credits with a floor of zero.

A typical investor is completely unprepared to evaluate such a complex financial investment. It is not at all obvious whether these are good or bad investments; nor is it obvious whether annual or monthly accounting is better.

To analyze the potential performance of these structured products, we ran a simulation analysis with one million repeated experiments. We simulate the S&P 500 returns using a normal distribution with an annual arithmetic mean of 8%

150. This is a confidential investment product. Consequently, we are not able to divulge the source for this information.

151. The prospectus for this confidential product, *see supra* note 149, also mentioned that there is no commission.

152. These specific parameter values are taken from the confidential product cited *supra*, note 149.

and annual standard deviation of 16%, in line with observed characteristics of S&P 500 returns. In the case of the monthly accounting product, we use the corresponding monthly arithmetic mean of 0.67% and monthly standard deviation of 4.7%. We analyze the performance of these structured products over a ten-year investment horizon.

The simulated performance of both these products is shown in Table 5. An investment of \$100,000 in the S&P 500 Index grew to a mean value of \$215,113 in ten years, thus producing a mean geometric return of 6.92% per year. The same amount invested in the structured product grew to \$129,114 in ten years, corresponding to a mean geometric return of 2.57% per year. In other words, investors who put their money in the structured product for ten years will, on average, end up with 25% of the dollar return compared to what they would have had if they had invested in the S&P 500 Index (i.e., a return of \$29,114 instead of \$115,113). They are, of course, sacrificing the 75% upside in order to buy downside protection; recall that the structured product guarantees the principal amount. The question, therefore, is whether investors are paying a fair premium for the insurance of downside protection. In this case, they are giving up, on average, 3.35% return per year in exchange for downside protection.

One way to answer this question is to compare the average annual return of the structured product to that of the ten-year Treasury bond. Both the structured product and the bond guarantee the principal amount. The buy and hold return of the bond is fixed, while that of the structured product is variable as it depends on the return of the S&P 500 Index. Given that the structured product is risky (in some years the returns can be less than the risk-free rate), its expected return should be greater than that of the bond. Between 1962 and 2015, only during the last four years of that period has the ten-year Treasury bond yield been lower than 2.57%, the average return of the structured product.¹⁵³ Therefore, it is difficult to make the case that the investor is better off with the structured product.

153. Treasury yields are obtained from Federal Reserve website. *Data Download Program*, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, <https://www.federalreserve.gov/datadownload/Build.aspx?rel=H15> (last visited December 6, 2016).

TABLE 5

SIMULATED PERFORMANCE OF STRUCTURED PRODUCTS				
<p>The table provides the simulated results of two structured products described in the paper. We ran a simulation analysis with one million repeated experiments. We simulate the S&P 500 returns using a normal distribution with an annual arithmetic mean of 8% and annual standard deviation of 16%, in line with the observed characteristics of S&P 500 returns. In the case of the monthly accounting product, we use the corresponding monthly arithmetic mean of 0.67% and monthly standard deviation of 4.7%. We analyze the performance of these structured products over a ten-year investment horizon for an investment of \$100,000. We report the mean, maximum, and minimum terminal values of each product and its annual mean geometric return.</p>				
PANEL A: ANNUAL ACCOUNTING				
Invest \$100,000 in	Terminal value			Annual mean geometric return
	Mean	Min.	Max.	
S&P 500 index	\$215,113	\$13,178	\$1,630,151	6.92%
Structured product	\$129,114	\$100,000	\$148,024	2.57%
PANEL B: MONTHLY ACCOUNTING				
Invest \$100,000 in	Terminal value			Annual mean geometric return
	Mean	Min.	Max.	
S&P 500 index	\$227,716	\$17,476	\$2,287,489	7.02%
Structured product	\$115,993	\$100,000	\$264,421	1.44%

The sub-optimality of the structured product is starker when we considered the monthly accounting case. With monthly accounting, an investment of \$100,000 in the S&P 500 Index grew to a mean value of \$221,716 in ten years, producing a mean geometric return of 7.02% per year. The same

amount invested in the structured product grew to \$115,993 in ten years, corresponding to a mean geometric return of 1.44% per year. In other words, investors who invested in the structured product for ten years will, on average, end up with 13% of the dollar return compared to what they would have had if they had invested in the S&P 500 Index (i.e., a return of \$15,993 instead of \$121,716).

The average annual return of the structured product is lower than the Treasury bond yield in each of the years from 1962 to 2015. In other words, the monthly accounting structured product is a dominated asset; the Treasury bond dominates it by providing better returns with lower risk. Thus, investors would have been better off investing in Treasury bonds, which are much simpler investments, than being induced to purchase the complicated structured product they do not fully understand. It is important to note that the superiority of the bond over the structured product is true before we take into account transaction costs. The buying and selling of Treasury bonds involves minimal transaction costs in contrast to the fees and commissions normally associated with the structured proprietary product.

Overall, when all of the facts have been considered, it would be difficult to argue that such a product would be in the best interest of any retiree. Yet, the current rules would continue to allow these types of alternative investment products in being offered as suitable retirement investments. What is never reported is the expected annual returns and risks from this products; this is an important piece of information that can help investors in deciding whether to invest in this structured product. However, under the current rules, such disclosures are not mandated.

CONCLUSION

As this Article outlines, the DOL regulation—the implementation of which had been delayed by the Trump administration as this Article went to print—regarding the fiduciary standard for pension plans and IRAs contains two provisions that are potentially adverse to the best interests of beneficiaries. First, it requires that investment advisers act in the best interest of the beneficiaries, while simultaneously allowing them to receive income from third parties. Second, it permits

opaque, non-publicly-traded alternative investments and proprietary products, which lead to costly and uninformed investment decisions.

This Article provides direct empirical evidence that these two provisions are indeed not in the best interests of plan beneficiaries. These findings support the recommendation that brokers and other fiduciaries must serve only one principal. The evidence supporting the case for independent fiduciaries that serve only one principal is based on the abnormal profitability of company-supported pension fund transactions in firms in which they acquire insider status. Pension funds are considered insiders if the pension fund holds more than ten percent of the shares of the underlying firm or if there is an overlap among the executives of the underlying firm and the pension fund.¹⁵⁴ The fact that a pension fund acquires such a large stake in the company of the retirement investors itself signals a potential conflict of interest.

Our findings indicate that, when the pension fund acquires an insider status, beneficiaries of the pension funds suffer. In fact, pension fund managers exhibit bad timing in the trades of the underlying firm's shares. Stocks tend to underperform after being purchased by the pension fund, and outperform after being sold. The magnitude of the abnormal losses for the beneficiaries of the pension funds is large: for pension funds which have insider status (triggered by greater than ten percent shareholding), the loss is 5.57% after one year and 15.03% after two years.¹⁵⁵ These losses are both statistically and economically significant and support the case for unconflicted, independent fiduciaries. The key to unconflicted advice is to ensure that the investment advisers receive income from only one principal, and thus serve only that principal.

Using simulation, we also show that proprietary investment vehicles are likely to provide lower returns, thus reducing the retirement savings of beneficiaries. We offer three policy recommendations to remedy these serious problems.

Our first policy recommendation addresses the income exemption that would allow fiduciaries to receive income from third parties. We recommend that any regulations which are

154. See *supra* Section III.A.

155. See *supra* Table 2 in Section III.C.

ultimately adopted ensure that investment advisers serve only one principal and therefore receive income only from one principal. With multiple principals, investors' advisers will be tempted to recommend products that are most profitable for themselves, as well as the investment sponsors, instead of those products that are best suited to the beneficiaries. This likely outcome would be higher risk, and lead to higher fees and lower returns to beneficiaries. One consequence would be vastly expanded litigation to sort out the conflicts within the fiduciary standard. Unfortunately, this standard and the associated exemptions completely fail to address the multiple-principles problem.

Our second recommendation addresses the transparency issue regarding investment products, in particular, in alternative and proprietary investment products. It is our opinion, based on the evidence presented here, that only publicly traded assets should be allowed in either defined benefit or defined contribution plans to address the transparency issue. By their very nature, alternative and proprietary products do not trade in public markets and thus require private valuation. Private valuation in turn creates multiple problems both for the taxpayers and for the retirement beneficiaries. From the taxpayers' perspective, private valuation creates potential conflicts. It is easy to undervalue these products, include them in tax-sheltered IRA accounts, and then enjoy the capital gains without taxation after market values are established. These potential conflicts can and should be avoided by banning alternative investments and proprietary products in retirement accounts and requiring that all investments trade on U.S. exchanges or similarly-qualified exchanges.

From retirement beneficiaries' perspective, private valuation of non-publicly traded assets also creates potential conflicts. When it comes to alternative and proprietary products, retirement investors are simply pitted against financially sophisticated investment advisers and brokers, and they are at a significant informational disadvantage. These investment products are complex, yet there is insufficient information to evaluate them. Furthermore, the fiduciary rule does not even require the disclosure of basic information such as hidden fees, or comparison to publicly-available alternatives or simulated expected returns. Without such basic information, informed investment decisions are almost impossible. Second,

even if some information is provided, the average investor is not financially savvy enough to properly evaluate these products. Instead, if only publicly traded investments are allowed, investors would be protected, to some extent through their reliance on the relative informational efficiency of public markets.¹⁵⁶ Consequently, we propose that only publicly-traded securities on public-exchanges should be allowed in either defined benefit or defined contribution retirement accounts.

Our final policy recommendation is to restrict the retirement savings to low-cost, well-diversified funds such as index funds and exchange-traded funds (ETFs). To ensure that risk level of the plan is consistent with the risk-tolerance levels of the beneficiaries, we further recommend that broad age-specific minimums, maximums, and target proportions on large-cap equity, small-cap equity, international equities, fixed-income, consisting of corporate bonds and government bonds, and publicly-traded real-estate securities should be specified. The target proportions of riskier assets should be reduced as the investor gets closer to the retirement age, similar to target-date investments.¹⁵⁷ International equities should be restricted American Depository Receipts (ADRs) only.

156. Market efficiency means that price of publicly traded assets fully reflects all available information. The evidence in the finance literature generally supports the concept of the semi-strong form of market efficiency. Eugene Fama, who won the 2013 Nobel Prize in Economics for his path-breaking work on market efficiency and who is often regarded as the father of the efficient market hypothesis, wrote in 1970, "We shall conclude that, with but a few exceptions, the efficient markets model stands up well," and "[i]n short, the evidence in support of the efficient markets model is extensive, and (somewhat uniquely in economics) contradictory evidence is sparse." See Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 383-417 (1970). In 1991, Fama updated his analysis and wrote, "The empirical literature on efficiency and asset-pricing models passes the acid test of scientific usefulness." Eugene F. Fama, *Efficient Capital Markets: II*, 46 J. FIN. 1575, 1576 (1991). Although some recent studies have uncovered some evidence of anomalous price behavior, numerous peer-reviewed academic studies by leading financial economists have largely concluded that these anomalies have alternative explanations that are consistent with and support market efficiency. There are a number of such surveys. See Eugene F. Fama, *Market Efficiency, Long-Term Returns, and Behavioral Finance*, 49 J. FIN. ECON. 283 (1998); G. William Schwert, *Anomalies and Market Efficiency*, in HANDBOOK OF THE ECONOMICS OF FINANCE 937 (G.M. Constantinides et al., eds., 2003).

157. Most defined benefit plans have similar restrictions on asset mix.

The restriction to low-cost well-diversified ETFs would achieve multiple objectives all in line with welfare of the retiree in mind. First, there is no cost to such restrictions. In fact, by only investing in well-diversified funds or ETFs, investors get lower trading costs, as well as better risk–return tradeoffs.¹⁵⁸ Evidence from practice side also shows that low-cost passive index funds in fact beat a large majority of the actively-managed funds year in and year out.¹⁵⁹ Second, the requirement that investors only invest in a select number of well-diversified low-cost index funds or ETFs also eliminates the temptation to

158. Sharpe demonstrates why passive funds should outperform actively managed funds after expenses. William Sharpe, *The Arithmetic of Active Management*, 47 FIN. ANALYSTS J. 7, 7–9 (1991). Market return is the weighted average return of active and passive funds. However, by definition the return of a passive fund that tracks the market must equal the market return. Hence, average return of active funds must also equal the market return. However, since passive funds have lower fees, they outperform active funds. There is considerable empirical support for this argument. See Burton G. Malkiel, *Returns from Investing in Mutual Funds 1971 to 1991*, 50 J. FIN. 549, 549–72 (1995); Burton G. Malkiel, *Passive Investment Strategies and Efficient Markets*, 9 EURO. FIN. MGMT. 1, 1–10 (2003); Alex Frino & David R. Gallagher, *Tracking S&P 500 Index Funds*, 28 J. PORTFOLIO MGMT. 44 (2001) (providing evidence for passive funds' outperformance); see also Lu Zheng, *Is Money Smart?*, 54 J. FIN. 901, 901–32 (1999) (providing evidence that active funds cannot perform the market in the long-run).

159. Standard and Poor's SPIVA U.S. Mid-Year 2016 report states: "During the one-year period, 84.62% of large-cap managers, 87.89% of mid-cap managers, and 88.77% of small-cap managers underperformed the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600, respectively. The figures are equally unfavorable when viewed over longer-term investment horizons. Over the five-year period, 91.91% of large-cap managers, 87.87% of mid-cap managers, and 97.58% of small-cap managers lagged their respective benchmarks. Similarly, over the 10-year investment horizon, 85.36% of large-cap managers, 91.27% of mid-cap managers, and 90.75% of small-cap managers failed to outperform on a relative basis. Over the 10-year investment horizon, managers across all international equity categories underperformed their benchmarks. The hunt for yield has become increasingly challenging for fixed income managers. During the one-year period studied, the majority of managers investing in government and corporate credit bond categories underperformed their benchmarks, with the exception of those managing intermediate-term corporate credit funds. Funds disappear at a meaningful rate. Over the five-year period, nearly 21% of domestic equity funds, 21% of global/international equity funds, and 14% of fixed income funds were merged or liquidated. This finding highlights the importance of addressing survivorship bias in mutual fund analysis." AYE M. SOE & RYAN POIRIER, SPIVA U.S. SCORECARD MID-YEAR 2016 (Sept. 15, 2016), <https://us.spindices.com/search/?ContentType=SPIVA>.

seek recently hot funds, active money managers, or complex alternative investments and proprietary products, thus reducing potential conflicts of interest. With a restricted choice set, the role of the financial adviser is limited. This further reduces the incentives and the ability of the financial advisers to offer conflicted advice. Finally, some exceptions to such a low-cost ETF rule can be considered in special circumstances. One such circumstance is to allow financially savvy investors to invest in any publicly-traded security. Retirement investors can qualify as financially savvy in a number of ways, including formal education in finance or the size of their investment portfolio which would allow them to obtain unconflicted advice from multiple sources.

In summary, the evidence presented in this Article makes a strong case for tightening the current fiduciary rule in order to improve the transparency of financial products offered by retirement plans and reduce fiduciaries' conflicts of interest. By requiring that retirement plans be structured as suggested, policy makers can ensure that these issues are addressed and beneficiaries' interests are served.