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## Trusts Versus Corporations: An Empirical Analysis of Competing Organizational Forms

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# **Trusts Versus Corporations: An Empirical Analysis of Competing Organizational Forms\***

A. Joseph Warburton\*\*

July, 2010

## **ABSTRACT**

This paper studies the effects of organizational form on managerial behavior and firm performance, from an empirical perspective. Managers of trusts are subject to stricter fiduciary responsibilities than managers of corporations. This paper examines the ramifications empirically, by exploiting data generated by a change in British regulations in the 1990s that allowed mutual funds to organize as either a trust or a corporation. I find evidence that trust law is effective in curtailing opportunistic behavior, as trust managers charge significantly lower fees than their observationally equivalent corporate counterparts. Trust managers also incur lower risk. However, evidence suggests that trust managers tend to underperform their corporate counterparts, even after adjusting for the differences in risk. These results show that the business flexibility granted by corporations leads to greater agency conflict and risk taking, but also to potentially superior risk-adjusted performance. An investor who invests \$100,000 in a trust, instead of an equivalent corporation, would save about \$100 per year in agency costs, but would forgo about \$1,300 per year in gross risk-adjusted performance. The results have implications for corporate governance design, suggesting that heightened fiduciary duties can enhance investor protection by mitigating agency conflict and lessening managerial risk taking, but at the possible cost of inferior risk-adjusted performance.

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## ABSTRACT

This paper studies the effects of organizational form on managerial behavior and firm performance, from an empirical perspective. Managers of trusts are subject to stricter fiduciary responsibilities than managers of corporations. This paper examines the ramifications empirically, by exploiting data generated by a change in British regulations in the 1990s that allowed mutual funds to organize as either a trust or a corporation. I find evidence that trust law is effective in curtailing opportunistic behavior, as trust managers charge significantly lower fees than their observationally equivalent corporate counterparts. Trust managers also incur lower risk. However, evidence suggests that trust managers tend to underperform their corporate counterparts, even after adjusting for the differences in risk. These results show that the business flexibility granted by corporations leads to greater agency conflict and risk taking, but also to potentially superior risk-adjusted performance. An investor who invests \$100,000 in a trust, instead of an equivalent corporation, would save about \$100 per year in agency costs, but would forgo about \$1,300 per year in gross risk-adjusted performance. The results have implications for corporate governance design, suggesting that heightened fiduciary duties can enhance investor protection by mitigating agency conflict and lessening managerial risk taking, but at the possible cost of inferior risk-adjusted performance.

# **Trusts Versus Corporations: An Empirical Analysis of Competing Organizational Forms**

## **I. Introduction**

We have witnessed the worst capital markets meltdown since the Great Depression. One cause of the financial crisis was a cavalier attitude toward risk and responsibility that led to major mistakes in judgments by firm managers and, in some cases, to outright expropriation of investors. The ensuing economic turmoil has led to a popular recommendation: expose firm insiders to greater fiduciary liability for their decisions.<sup>1</sup>

This paper explores the ramifications of altering fiduciary standards by studying how two different business organizations, trusts and corporations, regulate their insiders, and the consequences. Trust law imposes stricter fiduciary obligations on insiders than corporate law does. Might insiders be less likely to misbehave in a trust as opposed to a corporation? Does the difference in organizational form influence management's performance or risk tolerance? By leaving less flexibility for management, strict fiduciary responsibilities can limit opportunistic behavior. But that strictness can also constrain business decision making. In other words, trusts and corporations strike different tradeoffs between agency conflict and flexibility in decision making. This paper quantifies the effects on managerial behavior and firm performance of the different standards of conduct required by these two organizational forms.

This paper exploits a variation generated by a change in British regulations in the 1990s that allowed mutual funds to organize as either a trust or a corporation. The parallel existence of alternative types of organizational forms within one industry provides the key design feature of this study. The existence of the two types of funds offers a unique laboratory for the study of the effect of organizational form on agency conflict and firm performance. This paper is among the first to take an empirical approach to the subject and, hence, it fills a crucial gap in the literature.

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<sup>1</sup> See, e.g., Dominick T. Gattuso and Vernon R. Proctor, "Reining in Directors and Officers in Corporate America," *Business Law Today* (Jan./Feb. 2010) at 46; and James K. Glassman and William T. Nolan, "Bankers Need More Skin in the Game," *Wall St. J.*

This paper examines governance at a more fundamental level than does the existing literature. A large literature in corporate law and finance studies the effectiveness of governance mechanisms and investor protections on managerial behavior and firm performance.<sup>2</sup> While there is a large empirical literature, most of that literature focuses on the corporation and, hence, takes organizational form as given. One strand of that literature examines the impact on firm performance and firm value of the many governance devices and concessions corporations can make to investors, such as covenants, control rights, voting rules, board composition, and takeover defenses, within the corporation.<sup>3</sup> However, these arrangements do not occur in an institutional vacuum, but rather within an environment of laws and regulations. These laws and regulations may vary across organizational forms. For instance, the fiduciary responsibilities imposed upon decision makers in corporations are not the same as those imposed upon decision makers in trusts. Yet, the existing literature largely neglects study of non-corporate organizations. A second strand of literature examines differences in corporate governance structures across countries.<sup>4</sup> Such research focuses on exploiting variation in governance environments across countries, but within the corporate form. In contrast, this study exploits variation across organizational forms. This approach offers sharper variation at a fundamental level of governance, and can help shed light on whether governance matters at all.

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<sup>2</sup> See, e.g., Jean Tirole, *THE THEORY OF CORPORATE FINANCE* (Princeton University Press, 2006).

<sup>3</sup> E.g., Audra Boone et al., *The Determinants of Corporate Board Size and Composition: An Empirical Analysis*, 85 J. Fin. Econ. 66 (2007); N.K Chidambaram et al., *Does Better Corporate Governance 'Cause' Better Firm Performance?* (2006) (available at <http://ssrn.com/abstract=891556>); John E. Core et al., *Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations*, 61 J. Fin. 655 (2006); Paul Gompers et al., *Corporate Governance and Equity Prices*, 118 Q. J. Econ 107 (2003); Charles P. Himmelberg et al., *Understanding the Determinants of Managerial Ownership and the Link Between Ownership and Performance*, 53 J. Fin. Econ. 353 (1999); David Yermack, *Higher Market Valuations of Companies with a Small Board of Directors*, 40 J. Fin. Econ. 185 (1996); Randall Morck, *Management Ownership and Market Valuation: An Empirical Analysis*, 20 J. Fin. Econ. 293 (1988); and Harold Demsetz and Kenneth Lehn, *The Structure of Corporate Ownership: Causes and Consequences*, 93 J. Pol. Econ. 1155 (1985).

<sup>4</sup> E.g., Simeon Djankov et al., *The Law and Economics of Self-Dealing*, 88 J. Fin. Econ. 430 (2008); Rafael La Porta et al., *Legal Determinants of External Finance*, 52 J. Fin. 1131 (1997); Rafael La Porta et al., *Law and Finance*, 106 J. Pol. Econ. 1113 (1998); Rafael LaPorta et al., *Corporate Ownership Around the World*, 54 J. Fin. 471 (1999); Rafael La Porta et al., *Investor Protection and Corporate Governance*, 58 J. Fin. Econ. 3 (2000).

The traditional (Miller-Modigliani) view of corporate finance assigns organizational form no role.<sup>5</sup> It is irrelevant in a frictionless environment. But in a world with agency conflict, fiduciary duties are important and organizational form might have implications. In business organizations, a crucial task is to minimize the agency costs that arise from separation of ownership and control. In the corporation, ownership is vested in the shareholders and control is exercised by management. Similarly, in the trust, ownership is vested in the beneficiaries and control is exercised by the trustee. In the absence of complete information about managerial activities, owners/beneficiaries cannot design and enforce a contract specifying the managerial actions to be taken in each state of the world. Fiduciary duties provide a set of standards which the law applies to restrain insiders from exercising their discretionary power in contingencies not specifically foreseeable and over which the parties could not contract. Corporate law resolves agency conflict by imposing on corporate officers and directors a duty of loyalty in pursuit of the corporation's objectives and a duty of care in performance. Trust law, likewise, resolves the conflict between beneficiaries and trustees by imposing on the trustee a duty of loyalty and a duty of care.

While similar, the fiduciary duties supplied by trust law and corporate law are not the same. The duty of loyalty and the duty of care under trust law are stricter than those under corporate law.<sup>6</sup> For instance, under both corporate law and trust law, the duty of care requires that decision makers discharge their duties with such care and skill as a person of ordinary prudence would exercise. However, the courts, understanding that excessive liability can deter economically desirable business activity, apply the duty of care in a way that defers to officers and directors of corporations. That deference is embodied in the business judgment rule, which presumes that, in making business

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<sup>5</sup> F. Modigliani and M. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 Amer. Econ. Rev. 261 (1958).

<sup>6</sup> Note that trust fiduciary duties are default rules which the parties can vary by mutual consent. However, some (e.g., Melanie B. Leslie, *Trusting Trustees: Fiduciary Duties and the Limits of Default Rules*, 94 Geo. L.J. 67 (2005)) object to the characterization of trust's fiduciary rules as true default rules, and Professors Schanzenbach and Sitkoff demonstrate empirically that changes in trust fiduciary laws impact the behavior of trustees of non-commercial trusts. Max M. Schanzenbach & Robert H. Sitkoff, *Did Reform of Prudent Trust Investment Laws Change Trust Portfolio Allocation?*, 50 J. L. & Econ. 681 (2007). Also note that, while U.S. business trust statutes could have invoked different fiduciary duties, most such statutes instead incorporate the strict fiduciary standards of the common law of trusts.

decisions, corporate officers and directors complied with the duty of care. The business judgment rule places on a plaintiff challenging a business decision within a corporation the burden of rebutting the presumption, as the rule recognizes that reasonable decisions can sometimes result in unfavorable outcomes.<sup>7</sup> In contrast, trust law applies no business judgment rule in reviewing managerial actions, even when trusts are used in a commercial context. In effect, the burden is placed upon trust management to show that their business decisions were prudent despite the unfavorable outcome.<sup>8</sup> The end result is that it is easier to hold decision makers personally accountable for their business decisions in trusts than in corporations. The other fiduciary duty, the duty of loyalty, requires that decision makers act without any conflict of interest. However, corporate law interprets the duty loosely, so as to permit conflict of interest transactions so long as they are “fair” to the corporation. In contrast, trust law prohibits all such transactions, even if they would benefit the trust. In short, due to the different fiduciary standards, decision makers are exposed to greater personal liability in trusts than in corporations. Tight fiduciary duties might impact a lot within a business organization. They might lower agency conflict and reduce opportunistic behavior by insiders, but by leaving less flexibility for management, they might also impact performance and risk taking.

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<sup>7</sup> The English courts have not in terms developed a business judgment rule in the way that U.S. state courts have done, but “the same function is performed, perhaps more effectively, by formulating the directors’ duties subjectively.” Paul L. Davies, *Directors’ Fiduciary Duties and Individual Shareholders*, in *Commercial Aspects of Trusts and Fiduciary Obligations* (Oxford University Press, 1992) at 85n6. The classic statement is that directors “exercise their discretion bona fide in what they may consider - not what a court may consider - in the interests of the company.” *Re Smith & Fawcett Ltd.* [1942] Ch. 304 (CA) at 306, cited in Davies at 85. In other words, while there is no express business judgment rule, English courts are reluctant to second guess corporate decisions and have refrained from holding directors liable for mere errors of judgment.

<sup>8</sup> While the corporate duty of care, along with the business judgment rule, require deference to ordinary business decisions absent gross negligence or conflict of interest, the trust duty of care is set at the more restrictive “reasonable person” standard. The general principle followed by English courts since 1883 is stated: “As a general rule, a trustee sufficiently discharges his duty if he takes, in managing trust affairs, all those precautions which an ordinary prudent man of business would take in managing similar affairs of his own.” *Speight v. Gaunt* [1883] 9 App. Cas. 1 at 19 cited in John Mowbray et al., *Lewin on Trusts* (Sweet & Maxwell, 2000) at 842. The standard requires trustees to take “objectively reasonable care in the context of the particular trusteeship, including due professional care where appropriate.” Joshua Getzler, *Duty of Care, in Breach of Trust* (Peter Birks & Arianna Pretto eds., Hart Publishing 2002) at 42. This standard has been reflected in the Trust Act 2000, which supplies a high objective standard, measuring trustee conduct against the conduct to be expected of a reasonable person with the trustee’s knowledge, skills and characteristics. Getzler at 42. Further, the Trust Act imposes an even higher standard of care on trustees who are professionals or who hold themselves out as having special skill. Trust Act 2000 Sec. 1(1). Notwithstanding the foregoing, there is some authority for deferential review of trustee decision making. See Restatement (Third) of Trusts 87.

This paper examines mutual funds in the United Kingdom, where funds can organize in either corporate or trust form. The paper identifies, empirically, costs and benefits associated with these competing organizational forms. The results suggest that trusts are more effective than corporations in curtailing opportunistic behavior by managers. Managers of trusts charge significantly lower fees than their corporate counterparts, even after controlling for potential differences in managerial ability and job complexity. I confirm that these results are driven by differences in organizational form and not by self-selection. I employ both matched samples analysis and sample selection models to reach this conclusion. One technique addresses selection on observables and the other selection on unobservables. Both techniques support the conclusion that the difference in fees is a treatment effect of organizational form, not a selection bias. The results suggest that trust law's strict fiduciary duties are a superior mechanism for mitigating managerial opportunism and agency conflict within business organizations.

While strict fiduciary responsibilities limit opportunistic behavior, they might also constrain managerial flexibility in business decision making. Indeed, I find that trusts exhibit greater risk aversion than corporations. Evidence also suggests that trusts generate lower returns than corporations, even after adjusting for the difference in risk.

In an equilibrium context, the trust's underperformance would more than offset its agency cost savings. A hypothetical investor with \$100,000 to invest would save, on average, about \$100 per year in management fees by investing in a trust instead of an equivalent corporation. But on average, that investor would earn about \$1,300 per year less in gross risk-adjusted returns. On a net basis, the investor is worse off having invested in a trust instead of an equivalent corporation. The business flexibility granted to the corporate funds leads to greater risk-taking behavior and agency costs, but also sufficiently superior risk-adjusted performance to more than compensate for those costs. The results have implications for corporate governance design, suggesting that heightened fiduciary duties can enhance investor protection by mitigating agency conflict and reducing managerial risk taking, but at the potential cost of inferior risk-adjusted performance.

One caveat is that, due to data limitations, the risk-adjusted performance tests do not have sufficient power to conclusively establish the statistical significance of certain



results. In spite of that limitation of the time series, the evidence does indicate that the difference in performance is quite sizeable in economic terms.

The next section of the paper describes the change in the British mutual fund industry that generated a unique laboratory for the study of the effect of organizational form. Section III discusses related literature, and Section IV describes the data. Section V presents the results with respect to fund expenses. Section VI presents the results with respect to fund performance. Section VII addresses endogeneity concerns. Section VIII assesses the overall results and concludes.

## **II. The British Mutual Fund Industry**

The mutual fund industry is a useful setting for analyzing the extent to which organizational form impacts managerial behavior and firm performance. With mutual funds, it is easy to measure and compare the fund's performance, as net asset values are computed daily. Moreover, so long as they satisfy income distribution requirements, mutual funds receive flow-through tax treatment, regardless of organizational form. Thus, there are no differential tax effects. Furthermore, by focusing on one industry, we minimize the concern that results are driven by differences in operating characteristics of firms rather than by differences in governance. Finally, the fees charged to fund investors are computed regularly and on a standardized basis, and can be used to measure agency costs. The mutual fund literature interprets management fees as a measure of agency conflict between fund managers and investors.<sup>9</sup> Investors want to maximize their expected returns, net of fees, while fund managers want to maximize their own profits. Since studies find that management fees are not positively related to performance,<sup>10</sup> higher fees benefit fund managers while reducing net returns for fund investors. Because the parties' incentives differ and managerial actions are not fully observable by investors,

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<sup>9</sup> E.g., Diane Guercio et al., *Governance and Boards of Directors in Closed-End Investment Companies*, 69 J. Fin. Econ. 111 (2003); Peter Tufano & Matthew Sevick, *Board Structure and Fee-Setting in the U.S. Mutual Fund Industry*, 46 J. Fin. Econ. 321 (1997); Judith Chevalier and Glenn Ellison, *Risk Taking by Mutual Funds as a Response to Incentives*, 105 J. Pol. Econ. 1167 (1997).

<sup>10</sup> E.g., Peter Tufano & Matthew Sevick, *Board Structure and Fee-Setting in the U.S. Mutual Fund Industry*, 46 J. Fin. Econ. 321 (1997); Mark Carhart, *On Persistence in Mutual Fund Performance*, 57 J. Fin. 57 (1997) Martin Gruber, *Another Puzzle: The Growth in Actively Managed Mutual Funds*, 51 J. Fin. 783 (1996).

the levying of management fees on fund investors is a classic example of an agency conflict. In sum, mutual funds provide outcomes that are directly observable and measurable, and that reflect the agency conflict between investors and managers.

This study focuses on mutual funds in the United Kingdom. Prior to 1997, British open-end mutual funds were organized exclusively as trusts, not corporations. These British mutual funds are called “unit trusts.” Unit trusts are created under British trust law and have been in existence for over a century.<sup>11</sup> Mutual funds in the U.K. evolved as unit trusts under trust law, as opposed to corporations under English company law, in order to avoid certain restrictions of English company law, which does not apply to trusts.<sup>12</sup> In a unit trust, the fund manager establishes the trust by entering into a trust agreement with a trustee. Investors purchase beneficial interests in the trust pursuant to a contract between the investors and the manager. The trustee takes ownership of the investment pool on behalf of investors, and the manager manages it. The contract pursuant to which the investors purchased their beneficial interests incorporates the terms of the trust agreement, which is binding upon and enforceable by the investors. The rights and remedies of the investors are thus governed by trust (and contract) law.

A major change to the British mutual fund market occurred in 1997. In 1997, British regulators permitted a new kind of open-end mutual fund, the Open-Ended Investment Company (OEIC). OEICs are corporations organized under The Open-Ended Investment Companies (Investment Companies with Variable Capital) Regulations 1996, which came into effect on January 6, 1997. As corporations, OEICs are independent legal entities with a board of directors, managed by a manager appointed by the fund’s board.<sup>13</sup> Investors invest in an OEIC by purchasing shares in the fund.<sup>14</sup>

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<sup>11</sup> Kam Fan Sin, *The Legal Nature of the Unit Trust* (Oxford University Press, 1997) at 23.

<sup>12</sup> English company law prevented companies from repurchasing their own shares. Thus, under English company law, mutual fund investors would not be able to liquidate their investments by demanding that the fund repurchase their shares; they would only be able to liquidate by selling the shares in a secondary market. However, since trusts are not subject to company law, nothing prohibited unit trusts from repurchasing investors’ interests. This flexibility accounts for the development of open-end mutual funds as unit trusts rather than as corporations. Sin, at 42-43. That open-end funds organize as trusts subsequently became a requirement codified in the regulations.

<sup>13</sup> INV. MGMT. ASS’N, *REVIEW OF THE GOVERNANCE ARRANGEMENTS OF UNITED KINGDOM AUTHORIZED COLLECTIVE INVESTMENT SCHEMES* 15 (2005).

<sup>14</sup> The Open-Ended Investment Companies Regulations 2001, Section 46(1); and The Open-Ended Investment Companies Regulations 1996, Section 40(1).

The governance apparatus of OEICs, in practice, does not differ much from that of unit trusts. While OEICs have a board of directors and the trusts do not, that difference is not substantive. OEIC directors are not required to be independent.<sup>15</sup> Moreover, no minimum number of directors is specified for OEIC boards.<sup>16</sup> The only requirement of the OEIC board is that the fund's manager must serve as a director.<sup>17</sup> In practice, therefore, virtually all OEIC boards consist solely of the fund's manager.<sup>18</sup> In other words, the board of an OEIC is not an active monitor comprised of independent directors, as the board is in the U.S. fund industry. They exist merely on paper.

In a British fund organized in trust form, the trustee performs essentially a custodial role.<sup>19</sup> The equivalent custodial role is performed in an OEIC by the "depository."<sup>20</sup> Both the trustee and the depository must be independent entities and are responsible for the safe keeping of investor assets.<sup>21</sup> The trustee and the depository are also responsible for overseeing fund activities and protecting investor interests.<sup>22</sup>

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<sup>15</sup> John Gapper, "Open End Funds May Face Tight Controls," *Financial Times* (May 3, 1995) at 11. Instead, U.K. authorities have looked to an independent depository for protection of shareholder interests. INV. MGMT. ASS'N, REVIEW OF THE GOVERNANCE ARRANGEMENTS OF UNITED KINGDOM AUTHORIZED COLLECTIVE INVESTMENT SCHEMES 21-22 (2005) [hereinafter REVIEW OF U.K. GOVERNANCE ARRANGEMENTS]; The Open-Ended Investment Companies Regulations 2001, Section 15(8)(f); and The Open-Ended Investment Companies Regulations 1996, Section 10(8)(f).

<sup>16</sup> The Open-Ended Investment Companies Regulations 2001, Section 15(4); The Open-Ended Investment Companies Regulations 1996, Section 10(4); and U.K. Financial Services Authority, *Collective Investment Scheme Sourcebook* (2001) 7.1.4(1)(a).

<sup>17</sup> HM TREASURY, *Open-Ended Investment Companies*, 1999, at 3-4.

<sup>18</sup> INV. MGMT. ASS'N, REVIEW OF THE GOVERNANCE ARRANGEMENTS OF UNITED KINGDOM AUTHORIZED COLLECTIVE INVESTMENT SCHEMES Sec. 6.5 (2005); The Open-Ended Investment Companies Regulations 2001, Section 34(4); The Open-Ended Investment Companies Regulations 1996, Section 28(4); U.K. Securities and Investments Board, *Open Ended Investment Companies Consultative Paper* 93, 8 (1995); and FINANCIAL TIMES, UNIT TRUST YEARBOOK 1996, at 53 (1996) (stating "the role [of the director] will be virtually the same as is currently performed by a unit trust management company").

<sup>19</sup> INV. MGMT. ASS'N, REVIEW OF THE GOVERNANCE ARRANGEMENTS OF UNITED KINGDOM AUTHORIZED COLLECTIVE INVESTMENT SCHEMES 18 (2005).

<sup>20</sup> INV. MGMT. ASS'N, REVIEW OF THE GOVERNANCE ARRANGEMENTS OF UNITED KINGDOM AUTHORIZED COLLECTIVE INVESTMENT SCHEMES 15 (2005); HM TREASURY, *OEICS MADE EASY*, 1999, at 6; FINANCIAL TIMES, UNIT TRUST & OEICS YEARBOOK 1997, at A14 (1999); FINANCIAL TIMES, UNIT TRUST & OEICS YEARBOOK 1998, at A38 (2000).

<sup>21</sup> The Open-Ended Investment Companies Regulations 2001, Sections 5, 15(8)(f); and The Open-Ended Investment Companies Regulations 1996, Sections 5, 10(8)(f); Financial Services and Markets Act 2000 Section 243(4); U.K. Financial Services Authority, *Collective Investment Scheme Sourcebook* (2001) Sections 7.4 and 7.9.4.

<sup>22</sup> U.K. Financial Services Authority, *Collective Investment Scheme Sourcebook* (2001) Sections 7.4, 7.7.1(3), 7.9.1, INV. MGMT. ASS'N, REVIEW OF THE GOVERNANCE ARRANGEMENTS OF UNITED KINGDOM AUTHORIZED COLLECTIVE INVESTMENT SCHEMES 16 (2005);

The primary reason for the U.K.'s adoption of the OEIC was marketability. The OEICs were to be marketable in the European Union, unlike the unit trusts.<sup>23</sup> In the 1980s, the European Union set forth a framework for promoting cross-border flow of mutual funds among its members. Known as the UCITS Directive,<sup>24</sup> this framework imposed minimum standards regulating open-end mutual funds within the European Union. The UCITS Directive set forth minimum standards with respect to *fund organizational form*, diversification, authorization, permissible activities, and disclosure, allowing mutual funds organized under the laws of one member nation to comply with only the marketing, advertising, and tax laws of another nation in which they do business. In other words, the Directive allowed mutual funds to operate under a "passport" system, where they could be offered for sale throughout Europe once they were authorized in one member state, and so long as they met the minimum standards set forth in the Directive. The Directive adopted the corporation as the required organizational form. Thus, unlike unit trusts, which did not initially meet the requirements of the Directive in terms of organizational form, OEICs could be sold throughout Europe. Moreover, the law of trusts, which governs unit trusts, grew out of English common law and is peculiar to that heritage.<sup>25</sup> While trusts are common to those parts of the world with a strong British heritage, they are a foreign concept in European continental countries, where the Napoleonic and Roman legal heritage dominates.<sup>26</sup> Thus, European investors were not likely to be familiar with the technical legal structure of unit trusts.<sup>27</sup> OEICs, therefore, were anticipated to be more marketable outside the United Kingdom.<sup>28</sup> Note, however,

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FINANCIAL TIMES, UNIT TRUST & OEICS YEARBOOK 1997 at A6 (1999); and U.K. Securities and Investments Board, Open Ended Investment Companies Consultative Paper 93, 13 [3.10] (1995).

<sup>23</sup> HM TREASURY, Open-Ended Investment Companies, 1999, at 1; and U.K. Securities and Investments Board, Open Ended Investment Companies Consultative Paper 93, 7 (1995). Besides cross-border marketability, a second difference is that, unlike unit trusts, OEICs can organize in umbrella form, with multiple sub-funds. HM TREASURY, Open-Ended Investment Companies, 1999, at 4; and U.K. Securities and Investments Board, Open Ended Investment Companies Consultative Paper 93, 7-8 (1995).

<sup>24</sup> Formally, Council Directive 85/611/EEC of December 20, 1985 on the coordination of laws, regulations, and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS Directive). Council Directive 85/611, 1985 O.J. (L 375) 3, 4 (EC).

<sup>25</sup> FINANCIAL TIMES, UNIT TRUST & OEICS YEARBOOK 1998, at A9 (2000).

<sup>26</sup> FINANCIAL TIMES, UNIT TRUST & OEICS YEARBOOK 1998, at A9 (2000).

<sup>27</sup> FINANCIAL TIMES, UNIT TRUST & OEICS YEARBOOK 1998, at A9 (2000).

<sup>28</sup> OEICs, however, were unsuccessful in penetrating European markets during the initial time period (1997-2001) analyzed in this paper. OEICs lacked the tax advantages of funds organized offshore. Jean Eaglesham, "New Type of Fund Poised for Launch," Financial Times (Apr. 28, 1997) at 10. Moreover, OEIC sponsors lacked the distribution channels (sales forces) and culture needed to sell funds on the

that OEICs did not displace unit trusts within the U.K. Rather, since 1997, investment advisors have been allowed to organize and market both forms of mutual funds (the OEIC and the unit trust) in the U.K. Thus, the change in law has produced a useful set of data for assessing the impact of different organizational forms.

In the U.K., regulatory authority over unit trusts is delegated to the Financial Services Authority (the FSA) and regulatory authority over OEICs is delegated to the Treasury.<sup>29</sup> However, both authorities have adopted a common set of rules and guidance (the FSA's "Sourcebook") related to the operation of funds and the activities of their managers.<sup>30</sup> Thus, the regulatory regime governing unit trusts and OEICs is essentially the same,<sup>31</sup> with a notable exception. With respect to governance, unit trusts are subject to trust law while OEICs are subject to corporate law.<sup>32</sup>

First, the regulations are clear that unit trusts are governed by trust law. The Sourcebook defines a unit trust as "a collective investment scheme under which the

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continent. FINANCIAL TIMES, UNIT TRUST YEARBOOK 1996, at 54 (1996) (stating "only a small number of U.K. investment groups have distribution capability in Europe."); Jean Eaglesham, "First Steps toward a Pan-European Fund Industry?" Financial Times (Jan. 28, 1999) at 33. In addition, the Directive initially only permitted cross-border sales of funds that invest in "transferrable" securities. This restriction excluded many types of OEICs from the passport system, including real estate funds, commodities funds, and funds of funds. Finally, many fund sponsors were preoccupied with the more immediate challenges of Year 2000 compliance and European monetary union. Jean Eaglesham, "First Steps toward a Pan-European Fund Industry?" Financial Times (Jan. 28, 1999) at 33; FINANCIAL TIMES, UNIT TRUST YEARBOOK 1996, at 54 (1996) (emphasizing the need for administrative and technological capabilities). For these reasons, analyzing data from the 1997-2001 time period is convenient, as both types of funds were essentially selling only within the U.K.

<sup>29</sup> See, respectively, Sections 247(1) and 262(1) of the Financial Services and Markets Act, 2000, ch. 8.

<sup>30</sup> The Sourcebook (1.1.8) states that "together, this material forms a major part of the product regulation regime for ICVCs [Investment Companies with Variable Capital, also known as Open-Ended Investment Companies] and AUTs [Authorized Unit Trusts], complementing material in the ICVC regulations [The Open-Ended Investment Companies Regulations 2001, replacing The Open-Ended Investment Companies Regulations 1996, both issued by the Treasury] and Chapter III of Part XVII of the Financial Services and Markets Act 2000 (for authorized unit trust schemes)." U.K. Financial Services Authority, *Collective Investment Scheme Sourcebook* (2001).

<sup>31</sup> U.K. Securities and Investments Board, Open Ended Investment Companies Consultative Paper 93, 11 [sec. 1.7] (1995) (stating that OEIC regulations track unit trust regulations and "where practicable use similar language. This is to enable regulatory concepts and procedures which are already familiar ... to operate in a similar manner for open-ended investment companies"); INV. MGMT. ASS'N, REVIEW OF THE GOVERNANCE ARRANGEMENTS OF UNITED KINGDOM AUTHORIZED COLLECTIVE INVESTMENT SCHEMES 18 (2005) (stating that "the governance and regulatory principles applicable to [unit trusts] have also been applied to the OEIC"); FINANCIAL TIMES, UNIT TRUST YEARBOOK 1996, at 54 (1996) (stating that "levels of investor protection between a U.K. OEIC and a unit trust are very similar").

<sup>32</sup> See U.K. Securities and Investments Board, Open Ended Investment Companies Consultative Paper 93, 7 (1995).

property is held *in trust* for the participants by the trustee.”<sup>33</sup> In addition, the Sourcebook states that, with respect to unit trusts, “both the manager and the trustee have fiduciary duties under the general law relating to trusts.”<sup>34</sup> The Sourcebook reiterates that:

The duties of the manager and the trustee imposed upon them by the rules in this sourcebook and by the trust deed are in addition to, and not in derogation from, the duties which are otherwise imposed upon them by law. The manager and the trustee are required to fulfill those other duties by this rule.<sup>35</sup>

In contrast, OEICs are governed by corporate law. The regulations are clear that the “provisions of the Companies Act will apply to [OEICs] as if they are incorporated bodies.”<sup>36</sup> The Open-Ended Investment Companies Regulations, which are issued by the Treasury and govern OEICs exclusively, state that OEIC directors are subject to fiduciary duties that are “enforceable in the same way as any other fiduciary duty owed to a company by its directors.”<sup>37</sup> The Regulations further state that the court may relieve any officer of an OEIC from liability if he or she “acted honestly and reasonably”<sup>38</sup>, a lower standard than the “objectively prudent” standard applied to trustees under trust law.<sup>39</sup>

In sum, while much of the regulatory apparatus applicable to unit trusts and OEICs is the same, the fiduciary laws differ, depending upon the fund’s organizational form. That is, the main palpable difference between unit trusts and OEICs is the difference in fiduciary laws. Neither trusts nor OEICs are overseen by an active monitor, and both are taxed and regulated similarly, making the difference in fiduciary laws the prime difference. In other words, the British mutual fund market contains two parallel organizations essentially identical in almost every respect except for the fiduciary laws that are applied to the fund managers. This difference in fiduciary standards is a fundamental distinction between trusts and corporations.

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<sup>33</sup> Sourcebook at 1.1.6. The Sourcebook also requires that this language appear in the trust’s trust deed. Sourcebook at 2.2.6(7)(a).

<sup>34</sup> Sourcebook at 7.7.1.

<sup>35</sup> Sourcebook at 7.10.1(1), (2).

<sup>36</sup> U.K. Financial Services Authority, *The FSA’s Responsibilities Under the OEIC Regulations: The Collective Investment Scheme Information Guide* 4.1.6(1) (2004).

<sup>37</sup> The Open-Ended Investment Companies Regulations 2001, Section 35(2).

<sup>38</sup> The Open-Ended Investment Companies Regulations 2001, Section 63(2) and The Open-Ended Investment Companies Regulations 1996, Section 57(2).

<sup>39</sup> See *supra* note 8.

And it is a distinction with teeth. Although public corporations in the U.K. face few lawsuits alleging breach of fiduciary duty,<sup>40</sup> it takes only one suit to get the attention of officers and directors. Moreover, trusts have a long history of such suits, including in the fund context.<sup>41</sup> In one instance, for example, Baring Asset Management (BAM) was required to account for losses in connection with its management of a fund that was organized as a trust. The fund managed by BAM lost \$32 million over the 2000-2001 period, considerably underperforming its benchmark over that time. The court stated that the facts constitute “a breach of duty” and “a credible case against BAM for damages for professional negligence.”<sup>42</sup> In the fund context, fiduciary laws are litigated and enforced in the courts. In addition, the supervisory authorities may also act on behalf of investors.<sup>43</sup>

### III. Related Literature

While the empirical finance literature has not focused on the competition between the corporation and alternative organizational forms,<sup>44</sup> the law literature has given it recent attention, from a theoretical perspective.<sup>45</sup> The literature notes that, on the one

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<sup>40</sup> See Armour, John, Bernard Black, Brian Cheffins and Richard Nolan. 2009. “Private Enforcement of Corporate Law: A Comparative Empirical Analysis of the UK and the US,” 6 *Journal of Empirical Legal Studies* (forthcoming).

<sup>41</sup> See, generally, Kam Fan Sin, *The Legal Nature of the Unit Trust* (Oxford University Press, 1997).

<sup>42</sup> *Steamship Mutual Underwriting Assn. Trustees (Bermuda Ltd.) and others v. Baring Asset Management Ltd.* [2004] EWHC 202, Q.B.

<sup>43</sup> To protect the interests of investors, the applicable supervisory authority may take enforcement actions against the managers, including issuing orders (The Open-Ended Investment Companies Regulations 2001, Section 25(1)(c); The Open-Ended Investment Companies Regulations 1996, Section 18(1)(b); and Financial Services and Markets Act 2000 Section 257(1)(d)) and initiating investigations (The Open-Ended Investment Companies Regulations 2001, Section 30(1); The Open-Ended Investment Companies Regulations 1996, Section 22(1); and Financial Services and Markets Act 2000 Section 284).

<sup>44</sup> See discussion accompanying *supra* notes 2 through 4.

<sup>45</sup> See Robert H. Sitkoff, *Trust as ‘Uncorporation’: A Research Agenda*, 2005 U. Ill. L. Rev. 31 (2005); Robert H. Sitkoff, *An Agency Costs Theory of Trust Law*, 89 Cornell L. Rev. 621 (2004); Robert H. Sitkoff, *Trust Law, Corporate Law and Capital Market Efficiency*, 28 J. Corp. L. 565 (2003); Steven L. Schwarcz, *Commercial Trusts as Business Organizations: An Invitation to Comparatists*, 13 Duke J. Comp. & Int’l L. 321 (2003); Steven L. Schwarcz, *Commercial Trusts as Business Organizations: Unraveling the Mystery*, 58 The Business Lawyer 559 (2003); Henry Hansmann & Ugo Mattei, *The Functions of Trust Law: A Comparative Legal and Economic Analysis*, 73 N.Y.U. L. Rev. 434 (1998); John H. Langbein, *Why Did Trust Law Become Statute Law in the United States*, 58 Ala. L. Rev. 1069 (2007); John H. Langbein, *Questioning the Trust Law Duty of Loyalty: Sole Interest or Best Interest?*, 114 Yale L.J. 929 (2005); John H. Langbein, *The Secret Life of the Trust: The Trust as an Instrument of Commerce*, 107 Yale L.J. 165 (1997); Leslie, Melanie B. 2005. “Trusting Trustees: Fiduciary Duties and the Limits of Default Rules,” 94 *Georgetown Law Journal* 67-119.

hand, the stricter fiduciary duties of trust law might lead to overdeterrence of trust management, while on the other hand, those same strict fiduciary duties might leave less discretion for trust management and, hence, lower the potential for agency conflict. The literature is unable to reach a conclusion about whether, on a net basis, trust law maximizes investor welfare relative to the corporation. For example, Professor Schwarcz states that “there are not ... clear answers to the fundamental question of whether trusts are a better form of business organization than corporations.”<sup>46</sup> As a result, the scholarship contains explicit calls for empirical work on the subject. For instance, Sitkoff (2005), in outlining a research agenda for future study of the trust, states that “a third line of suggested inquiry is empirical.... Data should facilitate basic comparative study of the statutory business trust and other forms of business association.”<sup>47</sup> This paper seeks to fill that crucial gap in the literature by undertaking such a comparative treatment of the commercial trust and the corporation from an empirical perspective.

This study’s hypothesis is that the different fiduciary obligations applicable to mutual funds organized as trusts (unit trusts) and as corporations (OEICs) matter with respect to agency and performance. This contrasts with empirical studies in the finance literature on the British mutual fund market, which ignore the difference between these two types of funds. For instance, studies examine abnormal returns and persistence in British mutual funds,<sup>48</sup> management fees and performance of British and European funds,<sup>49</sup> tournaments in the British fund industry,<sup>50</sup> and ethical mutual funds in the U.K.<sup>51</sup> But these studies all neglect the fact that, since 1997, some mutual funds are organized as corporations and others as trusts, and are thus subject to different fiduciary standards. While most studies do not acknowledge that two forms of open-end funds exist in the

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<sup>46</sup> Steven L. Schwarcz, *Commercial Trusts as Business Organizations: Unraveling the Mystery*, 58 *The Business Lawyer* 559 at \_\_\_ (2003).

<sup>47</sup> Robert H. Sitkoff, *Trust as ‘Uncorporation’: A Research Agenda*, 2005 *U. Ill. L. Rev.* 31 at \_\_\_ (2005).

<sup>48</sup> Roger Otten & Dennis Bams, *European Mutual Fund Performance*, 8 *European Fin. Management* 75 (2002); Garrett Quigley & Rex A. Siquefield, *Performance of UK Equity Unit Trusts*, 1 *J. Asset Management* 72 (2000); and M. Rhodes, *Past Imperfect? The Performance of UK Equity Managed Funds*, 9 *FSA Occasional Paper* 1 (2000).

<sup>49</sup> Roger Otten & Mark Schweitzer, *A Comparison Between the European and the U.S. Mutual Fund Industry* (Working Paper Series, 2001), available at <http://www.ssrn.com/abstract=164108>.

<sup>50</sup> Rob Jans & Roger Otten, *Tournaments in the UK Mutual Fund Industry* (Maastricht University, Working Paper, 2005).

<sup>51</sup> Rob Bauer et al., *International Evidence on Ethical Mutual Fund Performance and Investment Style*, 29 *J. Banking & Fin.* 1751 (2005).



U.K., those that do acknowledge the two forms proceed to treat them as the same. For instance, Professors Keswani and Stolin, in examining whether the “smart money effect” exists in the U.K., acknowledge that OEICs entered the market in the 1990s, but they assume that “differences between unit trusts and OEICs are unimportant and [they] refer to both types of funds as mutual funds.”<sup>52</sup> In contrast to those studies, this paper analyzes the impact of the difference in organizational form. The only other study to examine structural differences between OEICs and unit trusts is my earlier paper.<sup>53</sup> That paper finds that mutual fund organizational form has a statistically significant impact on management fees and loads. The empirical analysis in that paper, however, is conducted on a limited data set, consisting of a cross-section and allowing for limited control variables. This paper exploits a richer set of data, allowing for such factors as time-varying effects and family-level characteristics in the regression models. The different model specifications yield different results.<sup>54</sup>

Although mutual funds are organized in a variety of forms around the world, studies have not focused on such differences. The few comparative studies that exist explore differences in mutual funds at the industry or national levels only; none highlight differences in mutual fund organizational form. One comparative study, by Professors Khorana, Servaes and Tufano, examines 56 countries in an attempt to identify those factors that determine the size of national mutual fund industries.<sup>55</sup> The authors find that strong legal and regulatory factors, such as disclosure laws, positively impact the size of mutual fund industries. The study, however, does not consider differences in mutual fund organizational form as one of those factors. Similarly, Klapper, Sulla and Vittas examine growth patterns of mutual fund industries around the world and the determinants of mutual fund development.<sup>56</sup> Analyzing data on 40 countries, the authors find that mutual funds are more advanced in countries with better developed capital markets and market-

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<sup>52</sup> Aneel Keswani & David Stolin, *Which Money is Smart? Mutual Fund Buys and Sells of Individual and Institutional Investors*, 63 J. Fin. 85 at \_\_ (2008).

<sup>53</sup> A. Joseph Warburton, *Should Mutual Funds Be Corporations? A Legal & Econometric Analysis*, 33 J. Corp. L. 745 (2008).

<sup>54</sup> See discussion accompanying infra notes \_\_ to \_\_.

<sup>55</sup> Ajay Khorana et al., *Explaining the Size of the Mutual Fund Industry Around the World*, 78 J. Fin.Econ. 145 (2005).

<sup>56</sup> Leora Klapper et al., *The Development of Mutual Funds Around the World*, 5 Emerging Markets Review (2004).

based financial systems. They do not, however, consider differences in mutual fund organizational form. Along the same lines, Khorana, Servaes and Tufano study factors that determine national differences in fund fee levels.<sup>57</sup> Taking a cross-sectional approach, they examine differences at the fund, complex and national level. While their study is comparative, and includes fund-level data, their analysis does not account explicitly for differences in fund organizational form. In fact, none of the above studies discuss the fact that open-end funds around the world are organized in corporate and non-corporate forms. Unlike those studies, this paper focuses on heterogeneity in organizational form.

While there has been much empirical research on mutual fund governance in the U.S., that research takes organizational form as fixed. The reason is not surprising. While U.S. law (the Investment Company Act of 1940) does not *expressly* require that mutual funds be organized as corporations, it does impose the corporate paraphernalia of boards of directors and shareholder voting rights on all mutual funds, whether organized as a corporation or in some other form, such as a business trust, a limited partnership, or simply a pool of investment funds. It also imposes the same fiduciary standards upon directors regardless of the fund's formal organizational form.<sup>58</sup> Hence, studies on U.S. mutual funds, taking the corporate paradigm as a given, have examined how board structure and board composition, but not fiduciary standards, impact fund expenses. For instance, Tufano and Sevick find that expenses are lower in funds governed by smaller boards, and by boards containing a greater percentage of independent directors.<sup>59</sup> Del Guercio, Dann and Partch find that expenses are lower in funds with more independent directors and in funds with more independent directors serving since fund inception.<sup>60</sup> In addition to expenses, studies have examined how board structure and composition impact the likelihood that a board will act in the interests of mutual fund investors generally. For example, Del Guercio, Dann and Partch find that fund boards are more likely to act in

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<sup>57</sup> Ajay Khorana et al., *Mutual Fund Fees Around the World* (Harvard Business School, Working Paper Series, 2006).

<sup>58</sup> See Sheldon A. Jones., *The Massachusetts Business Trust and Registered Investment Companies*, 13 Del. J. Corp. L. 421, 434-39 (1988).

<sup>59</sup> Peter Tufano & Matthew Sevick, *Board Structure and Fee-Setting in the U.S. Mutual Fund Industry*, 46 J. Fin. Econ. 321 (1997).

<sup>60</sup> Diane Guercio et al., *Governance and Boards of Directors in Closed-End Investment Companies*, 69 J. Fin. Econ. 111 (2003).

investors' interests the greater the proportion of independent directors on the board. They also find that fund boards are more likely to act in investors' interests when all directors are elected annually. In a similar manner, Khorana, Tufano and Wedge examine how board structure and composition impact the likelihood of the board acting in the interests of investors in the specific context of mutual fund mergers.<sup>61</sup> They find that boards of underperforming funds are more likely to approve mergers the greater the proportion of independent directors on the board and the lower the compensation of directors. Other studies have approached mutual fund structure from a different angle. For instance, Kong and Tang analyze factors that determine board structures.<sup>62</sup> Ferris and Yan study the ownership structure (public or private) of the fund's management company.<sup>63</sup> Ferris and Yan find that, after controlling for board governance variables and other fund characteristics, funds managed by publicly-traded management companies suffer from greater agency costs than those managed by private companies. While Ferris and Yan find evidence that agency costs vary across two categories of funds, their focus is on the ownership structure of the management company, not the organizational form of the fund.

That is, despite this volume of work analyzing U.S. mutual funds, no studies examine the more antecedent and fundamental question of whether investors are better served by mutual funds organized in corporate versus non-corporate form. This paper's approach, therefore, is to look not at one aspect of corporate governance, but rather at the foundation upon which governance is based, organizational form. Specifically, this study explores whether British mutual funds organized in corporate form (the OEICs) charge different expenses than British mutual funds organized in trust form (the unit trusts), or generate different risk-taking behavior and performance.

#### IV. Data

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<sup>61</sup> Ajay Khorana et al., *Board Structure, Mergers and Shareholder Wealth: A Study of the Mutual Fund Industry*, 85 J. Fin. Econ. 571 (2007).

<sup>62</sup> Sophie Xiaofei Kong & Dragon Yongjun Tang, *Mutual Fund Governance: What Works and What Doesn't?* (Kansas State University, Working Paper, 2006).

<sup>63</sup> Stephen Ferris, *Agency Costs, Governance, and Organizational Form: Evidence from the Mutual Fund Industry* (University of Kansas, Working Paper Series, 2007), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=970547](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=970547).

There is no survivorship bias-free electronic database of British mutual funds that is widely available. Consequently, I created my own such database by collecting and manually inputting fund-level data from consecutive print editions of the *Unit Trust and OEICs Yearbook*, which is published annually by the Financial Times. The Yearbooks contain data on management fees, front-end loads, fund and family size, date of inception, fund style, fund family, and whether the fund is organized as a corporation (OEIC) or a trust (unit trust), for all funds in the United Kingdom. Data is obtained on an annual basis for the years 1996 through 2001, inclusive.<sup>64</sup> Returns data is obtained on a monthly basis from Datastream and manually linked to funds in the data set. For funds which change organizational form, observations in the year of conversion are dropped. The Yearbook did not report organizational form in year 2000. For that year, I classify a fund as an OEIC if it reported itself as an OEIC in both (i) year 2001 and (ii) year 1999 (or 1998 if the fund or its organizational status was missing in year 1999). I use the same approach to classify funds as unit trusts in year 2000.

Table 1 reports the age, size and number of funds organized as corporations and unit trusts, by year. Overall, corporate funds are younger than unit trusts. The median age of corporate funds drops over time, as more such funds are created *de novo*, or anew (as opposed to conversion from a unit trust). In terms of total net assets, the median corporate fund is initially smaller than the median unit trust, but quickly equals or surpasses the median unit trust. The number of corporate funds increases over time. While only 45 exist in 1997, almost 600 exist in 2001. Corporate funds steadily gain market share each year, constituting approximately 40% of the market by 2001 (the last year of the data set). Figures 1 and 2 illustrate graphically the consistent market share gains of corporations (by number of funds in the case of Figure 1, and by assets under management in the case of Figure 2). Although corporate funds gain market share steadily, do they behave differently from trusts?

## V. Expenses

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<sup>64</sup> The Financial Times ceased publication of the Yearbook in 2001.

This section presents empirical results with respect to fund expenses. Since it is generally argued that lower expenses reflect better governance,<sup>65</sup> lower expenses should also reflect a superior organizational form. Thus, this section examines the relationship between expenses and organizational form in the British mutual fund industry. The hypothesis is that, due to the different fiduciary obligations, unit trusts and corporations will charge significantly different expenses. This section analyzes two types of expenses, annual management fees and front-end loads.<sup>66</sup>

Summary statistics for annual management fees appear in Panel A of Table 2. The average management fee for unit trusts is 1.21%, while the average management fee for corporate funds is 1.27%. The difference is statistically significant at the 1% level. Thus, the trust form, on average, charges lower annual management fees than the corporate form.

Summary statistics for front-end loads appear in Panel B of Table 2. The average front-end load for unit trusts is 4.25%, while the average front-end load for corporate funds is 4.01%. The difference is significant at the 1% level. Thus, the trust form appears to be associated with higher front-end loads. Funds charge front-end loads primarily to cover the cost of distributing the fund.<sup>67</sup> The difference in front-end loads may indicate that corporate funds are sold and distributed through different channels than unit trusts. With lower front-end loads on average, the typical corporate fund is likely relying more on direct sales and other no-load channels, while the typical unit trust is likely relying more on brokers and other intermediaries. Recent research shows that differences in distribution channels have ramifications for investors as well as funds and

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<sup>65</sup> E.g., Diane Guercio et al., *Governance and Boards of Directors in Closed-End Investment Companies*, 69 J. Fin. Econ. 111 (2003).

<sup>66</sup> This study analyzes management fees, not expense ratios. An expense ratio combines a fund's management fee with other operating fees of the fund. Studies of U.S. mutual funds typically examine expense ratios because by law each mutual fund must contract separately with various service providers (administrator, custodian, distributor, etc.) in addition to the entity that manages the fund. In the U.K., however, the fund's management company is responsible for providing all services to the fund, except for custodial services, which must be provided by an independent custodian. Funds may charge a separate custodial fee, but few funds do and the custodial fees are very low. The use of management fees to proxy for fund expenses is consistent with other studies of British mutual funds. Aneel Keswani & David Stolin, *Which Money is Smart? Mutual Fund Buys and Sells of Individual and Institutional Investors*, 63 J. Fin. 85 (2008); and Roger Otten & Dennis Bams, *European Mutual Fund Performance*, 8 European Fin. Management 75 (2002).

<sup>67</sup> There is no British equivalent of the U.S.'s 12b-1 fee, which U.S. funds may periodically charge to cover distribution costs. Hence, loads must perform that role in the U.K.

their managers.<sup>68</sup> In addition, it is important to also consider loads net of any waivers. Funds in the U.K. often waive some or all of the front-end load for investors. Analyzing loads net of waivers is important because it captures what investors actually pay. Summary statistics for net loads appear in Panel C of Table 2. The average net load for unit trusts is 1.86%, while the average net load for corporate funds is 1.95%. The difference is significant at the 10% level. Thus, the average trust charges significantly lower net loads. Overall, on average, unit trusts charge lower management fees and lower net loads than corporate funds.<sup>69,70</sup>

To understand if and how organizational form is responsible for the differences in management fees and front-end loads, I regress fees and loads, in turn, on a corporate dummy variable, with control variables. The hypothesis is that a fund's choice of organizational form will have a statistically significant impact on its management fees and/or front-end loads. To test the impact of organizational form on fund expenses, I estimate the following:

$$y_{i,t} = \alpha + \beta_1 I_{i,t} + \beta_2 X_{i,t-1} + \delta_j + \gamma_f + \varepsilon_{i,t}. \quad (1)$$

Here,  $i$  indexes fund,  $t$  indexes time (year),  $j$  indexes investment style,  $f$  indexes fund family, and  $\alpha$  is a constant term.  $I_{i,t}$  is the variable of interest and takes a value of one if a fund is a corporation and zero if it is a unit trust.  $X_{i,t-1}$  represents a set of control variables.  $\delta_j$  represents fund investment style (such as International Equity or Domestic Money Market) and captures the different operating costs associated with different

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<sup>68</sup> See Susan Christoffersen et al., *The Economics of Mutual-Fund Brokerage: Evidence from the Cross Section of Investment Channels* (American Finance Association of Boston, Working Paper, 2006); Steven Gallaher, *Madison Avenue Meets Wall Street: Mutual Fund Families, Competition and Advertising* (University of Texas, Working Paper Series, 2006), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=879775](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=879775); and Daniel Bergstresser, John Chalmers & Peter Tufano, *Assessing the Costs and Benefits of Brokers: A Preliminary Analysis of the Mutual Fund Industry* (Harvard Business School and University of Oregon, Working Paper, 200?), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=616981](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=616981).

<sup>69</sup> The reported results were obtained by equal-weighting. Similar results were obtained by value-weighting.

<sup>70</sup> The two types of funds have equal ability to change their fees and loads. The procedure for changing fees and loads is the same for both types of funds: management companies can change fees or loads at any time, but must give investors at least 90 days notice prior to the effectiveness of any change.

investment styles.<sup>71</sup>  $\gamma_f$  represents family affiliation, and  $\varepsilon_{i,t}$  is the error term. The dependent variable,  $y_{i,t}$ , is fund expenses, represented by annual management fees (in percent) in the first set of regressions, and front-end loads (in percent) in the second.

Fund expenses should reflect the ability of the fund's managers (the value they add) as well as the difficulty of their job (the skill required of them). We can control for each such factor using available data. Prior performance reflects managerial ability;<sup>72</sup> hence, I include as a control variable the prior 12-month total return of the fund.<sup>73</sup> Fund investment style proxies for job complexity; hence, I include as a control variable the fund's style.<sup>74</sup> Control variables also include other factors that, according to the literature, tend to affect fund expenses: fund size (in log form),<sup>75</sup> family size (in log form), fund age (in log form), an index fund dummy, and the front-end load (in the management fee regressions) or the management fee (in the load regression) charged by the fund. All control variables are lagged by one year, to lessen potential endogeneity. I report results using multiple regression specifications. One is an OLS regression with robust standard errors that treats each observation as independent. Second, I employ clustered regressions where each fund is treated as a cluster. Clustering by fund adjusts standard errors to control for potential lack of independence in fee decisions made by a

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<sup>71</sup> In the United Kingdom, each fund is assigned to an official style category, based on the type of securities it holds, by the Investment Management Association, the industry association for the U.K. investment management industry.

<sup>72</sup> While it is common in the literature to use performance to proxy for managerial ability, it should be noted that ability is not easy to capture. Some studies argue that superior security-selection skill can be dissipated by transaction costs and other expenses, or by inflows, making ability difficult to measure. Russ Wermers, "Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transactions Costs, and Expenses," *J. Fin.* 1655(2000); Russ Wermers, "Is Money Really 'Smart'? New Evidence on the Relation Between Mutual Fund Flows, Manager Behavior, and Performance Persistence," Working Paper, Robert H. Smith School of Business, University of Maryland (2003); Jonathan B. Berk and Richard C. Green, "Mutual Fund Flows and Performance in Rational Markets," 112 *Journal of Political Economy* 1269 (2004); and Horan, Steven M. and D. Bruce Johnsen. 1999. "Portfolio Management, Private Information, and Soft-Dollar Brokerage: Agency Theory and Evidence," Working Paper, GMU School of Law.

<sup>73</sup> I have also employed, as an alternative performance measure, annualized risk-adjusted returns (alphas) computed as described in Section VI. The results are similar to the reported results using annualized total returns.

<sup>74</sup> To fully control for job complexity, I have tried incorporating measures of fund risk, including idiosyncratic risk as well as total return volatility. The results are similar to the reported results using only investment style.

<sup>75</sup> Due to the potential for reporting errors, fund size has been winsorized at the 1% level.

fund.<sup>76</sup> Third, I control for family affiliation by including family dummies. This specification is appropriate if there are factors common to funds within a family, but heterogenous across families, that influence the fees funds charge (for instance, management company reputation and skill).<sup>77</sup>

Results using management fees as the dependent variable appear in Table 3. According to Table 3, the corporate dummy has a statistically significant impact on management fees. The coefficient on the corporate dummy takes a positive value, indicating that the corporate form has a positive (i.e., upward) impact on management fees. The magnitude of the difference in fees is approximately 7 to 12 basis points per year (or 0.07% to 0.12% annually). The upward impact of the corporate form on management fees is consistent with the different fiduciary duties applicable to the two organizational forms. Managers of corporate funds are subject to looser fiduciary obligations than managers of unit trusts. With looser fiduciary obligations should come greater agency costs and, presumably, greater fund fees. This is, in fact, what we observe. Exposure to stricter fiduciary liability induces trust managers to behave more conservatively in setting management fees. If one believes that organizational law should minimize agency costs, the trust is a superior organizational form from an investor's perspective relative to the corporation.

One caveat, however, is required. Corporate funds could be charging higher management fees because they are more expensive to operate than trusts (perhaps, for instance, they offer a greater quality or quantity of services to investors). But that does not seem likely, as corporate funds are supposed to be cheaper to run than trusts. Corporate funds can organize in umbrella form, with multiple sub-funds.<sup>78</sup> That is, a single corporate fund can be established, with various sub-funds each pursuing a different investment style. Different series of shares are issued by the corporation, depending on

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<sup>76</sup> I have also estimated regression (1) clustering by family affiliation instead of by fund. The results are not qualitatively different from the reported results.

<sup>77</sup> I have also estimated regression (1) annually and observed the time-series average of the coefficient estimates, using Fama and MacBeth to assess statistical significance (see E. Fama and J. MacBeth, *Risk, Return, and Equilibrium: Empirical Tests*, 81 J. Pol. Economy. 607 (1973)). The results are not qualitatively different from the reported results.

<sup>78</sup> HM TREASURY, *Open-Ended Investment Companies*, 1999, at 4; U.K. Securities and Investments Board, *Open Ended Investment Companies Consultative Paper 93*, 8 (1995); and FINANCIAL TIMES, *UNIT TRUST YEARBOOK 1996*, at 52 (1996).



which particular sub-fund the investor selects. Funds organized in trust form cannot do this. A separate trust must be formed for each investment style. Such duplication should make trusts more expensive to operate.<sup>79</sup> Yet, the trusts charge lower management fees. In other words, the analysis is likely biased in favor of finding lower fees in corporations, due to the operational efficiencies of corporate funds under the British regulatory structure. Instead, the evidence reveals that the corporations do not pass their cost efficiencies on to investors.

Note the economic significance of organizational form. Its impact on fund fees is about one-quarter (in absolute value) that of the variable with the largest impact on fees, the index fund dummy. The economic significance of passive versus active management on fees and performance is well-documented in the academic literature and popular media (index funds do not require the same degree of managerial effort or expense as actively managed funds). It is noteworthy that a variable so innocuous as choice of organizational form (in fact, so seemingly innocuous that the literature has overlooked it) has an impact of about a quarter the impact of a variable known to be so important, active versus passive management. Looking at it another way, the impact of organizational form amounts to nearly 10% of the average management fee. In dollar terms, an investor with \$100,000 would pay \$1,270 on average in annual management fees when investing in a corporation, but would save about \$100 per year by investing in an equivalent trust instead of a corporation. Or, look at it from a fund manager's perspective. Holding everything else constant, a manager of a trust of average size (£37 million) receives an extra £37,000 per year simply by organizing it as a corporation instead of a trust.

Regarding the other variables, note that fund size is either not significant (specifications (1) and (2)) or significant and positive (specification (3)), indicating that any economies of scale at the fund level are not being shared with investors. Family size is significant and negative in specifications (1) and (2), however, indicating that economies of scale at the family level are shared with investors. Fund age is significant in specification (3), with older funds associated with higher fees. The fact that age and

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<sup>79</sup> Standard Life Investments, which converted its funds from trusts to corporations, did so because it believed "it was cheaper to run them because there was only one authorized product to administer." Clare Gascoigne, "Unit Trust 'Cheaper than OEICs,'" *Financial Times* (Aug. 21, 1999) at 18. The umbrella structure "has proved economical ... overseas." HM TREASURY, *Open-Ended Investment Companies*, 1999, at 4.

size are significant only in the presence of family controls indicates that variation in age and size within a family matters. It may be that management companies use their older and larger funds to subsidize their younger and smaller funds.<sup>80</sup> Finally, in accordance with the literature,<sup>81</sup> prior fund performance does not impact fees significantly.<sup>82</sup>

The finding that organizational form impacts management fees is consistent with Warburton (2008).<sup>83</sup> That paper finds that the corporate form has a significant but negative impact on management fees and loads. That paper, however, was confined to a limited data set which did not allow the model to control for time-varying effects and family-level characteristics.<sup>84</sup> When I supplement that paper's data set to allow for a model specification more similar to the specification used in this paper, namely by controlling for family affiliation, family size, and loads, the sign on the corporate dummy becomes positive while remaining significant. In other words, when I apply the model used in this paper to the supplemented Warburton (2008) data, I obtain consistent results.

Results with respect to front-end loads appear in Table 4 (columns (1), (2), and (3)). Unlike the case with management fees, the coefficient on the corporate dummy is negative and significant, indicating that the corporate form has a negative (i.e., downward) impact on front-end loads. The negative impact of the corporate form on loads is surprising given that corporate funds, in theory, can be distributed to an international clientele while unit trusts cannot. Front-end loads are charged in large part to cover distribution costs. Funds distributed internationally might be expected to have greater distribution costs and hence greater loads. However, the corporation's downward impact on loads is consistent with anecdotal evidence that fund sponsors did not penetrate the continent in these initial years.<sup>85</sup>

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<sup>80</sup> See Peter Tufano & Matthew Sevick, *Board Structure and Fee-Setting in the U.S. Mutual Fund Industry*, 46 J. Fin. Econ. 321 (1997); Diane Guercio et al., *Governance and Boards of Directors in Closed-End Investment Companies*, 69 J. Fin. Econ. 111 (2003).

<sup>81</sup> E.g., Tufano and Sevick.

<sup>82</sup> In addition to 12-month total return, I have also estimated regression (1) using other measures of fund performance and riskiness, including risk-adjusted returns and volatility of returns. However, the estimated coefficient on the corporate dummy does not qualitatively differ from the reported results.

<sup>83</sup> A. Joseph Warburton, *Should Mutual Funds Be Corporations? A Legal & Econometric Analysis*, 33 J. Corp. L. 745 (2008).

<sup>84</sup> The Warburton (2008) paper employs a cross-sectional data set derived electronically from Morningstar.

<sup>85</sup> See supra note 28.

The corporate form's relative advantage with respect to front-end loads disappears, however, when loads are netted against waivers. As Table 4 shows, the corporate dummy has an upward and significant impact on net loads in (4) and (5). Everything else equal, corporate managers charge greater net loads than trust managers. Net loads are a more accurate measure than the stated loads of what investors pay in upfront fees. By incorporating waivers into the analysis, we see that unit trusts provide greater discounts on stated loads than corporate funds provide.

Since loads are primarily intended to cover distribution costs, management fees are a cleaner measure of agency costs and, consequently, I have regressed loads and fees separately. Some studies attempt to combine loads and fees by amortizing loads over an assumed holding period for a hypothetical investor, and adding that amount to the annual fees (yielding a "total expense"). I have performed such an analysis by assuming a five year holding period and employing net loads (following the approach taken by Tufano and Sevick).<sup>86</sup> Regression results (not reported) are substantially similar to those in Table 3. That is, the corporate form has an upward impact on total expenses, significant at the 1% level in specifications (1) and (2).

In summary, the management fee regressions generate a statistically significant result: the corporate form has a positive (i.e., upward) impact on management fees. The result is economically significant, with an impact of approximately 7 to 12 basis points per year in magnitude. The corporate form also has an upward impact on net loads. Further, the corporate form has an upward impact on total expenses (combining management fees with net loads). In other words, the trust is an organization where management works for you at a lower cost than in a corporation, even after controlling for potential differences in ability, job complexity, and other characteristics. All else equal, corporate managers charge you more for doing essentially the same job. If fund fees are interpreted as a signal of the quality of the governance arrangement, then the trust is a superior form from an investor's perspective relative to the corporation.<sup>87</sup>

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<sup>86</sup> Peter Tufano & Matthew Sevick, *Board Structure and Fee-Setting in the U.S. Mutual Fund Industry*, 46 J. Fin. Econ. 321 (1997).

<sup>87</sup> I have assumed that differences in organizational form cause the differences in fees. I have assumed, in other words, that there is no self-selection with respect to organizational form. I show that this assumption is valid in Section VII.

If trusts are truly superior, shareholders of corporate funds should force the corporation to switch to a trust, and corporate funds should disappear over time. However, no funds in the data set have switched from a corporation to a trust (though 59 funds have switched from a trust to a corporation). Given the trust's superiority with respect to management fees, how does one explain the absence of corporation-to-trust conversions? Mutual fund shareholders, in practice, may lack the incentives to force the corporation to convert. Shareholder voting is not an effective governance mechanism in mutual funds due to collective action problems (mutual fund shares are dispersed widely) as well as the diversification and liquidity mutual funds offer. Of course, if governance mechanisms are ineffective, assets could simply flow out of corporate funds and into trusts. However, Figure 2 shows industry assets shifting in favor of corporations, not trusts. Despite the upward impact of the corporate form on management fees, the industry is shifting toward, not away from, corporate funds over time. Why do industry assets not shift towards trusts? One explanation is that disincentives deter the switch between funds. Such disincentives include loads, redemption fees and adverse tax consequences. It is not costless to switch between funds. Another explanation for the industry's failure to shift towards trusts may be investors' lack of awareness of the relative advantages of trusts<sup>88</sup> and the responsiveness of fund flows to advertising by management companies.<sup>89</sup> Since management companies benefit from looser corporate fiduciary duties, management companies have reason to favor corporate funds. A third explanation for the failure of assets to shift toward the cheaper form is that the two types of funds might perform differently. While trusts may be cheaper than corporations, perhaps they also underperform.

## VI. Performance

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<sup>88</sup> Lack of awareness is also seen in the insensitivity of fund flows to management fees (results are on file with the author).

<sup>89</sup> e.g., Steven Gallaher, *Madison Avenue Meets Wall Street: Mutual Fund Families, Competition and Advertising* (University of Texas, Working Paper Series, 2006), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=879775](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=879775); and Prem C. Jain & Johanna S. Wu, *Trust in Mutual Fund Advertising: Evidence on Fund Performance and Fund Flows*, 55 J. Fin. 937 (2000).

The cost of investing in a fund is not the only consideration for investors. Investors ultimately care about fund performance.<sup>90</sup> Thus, this section will examine the relationship between performance and organizational form. Trust law's strict, bright-line rules may encourage trust managers to incur sub-optimal levels of risk, hurting investor welfare in the commercial context. In other words, while trust law may be superior to corporate law in controlling value-destroying agency conflict, it may do so by curtailing risk-taking behavior as well (which may or may not be value destroying). This section, therefore, tests the "overdeterrence hypothesis" that the stricter fiduciary duties of trust law lead to excessive risk aversion.

First, I examine how funds perform relative to their peers. That is, I measure fund performance relative to the mean return of the fund's investment style category. This style-adjusted, or benchmark, return is computed by subtracting from each fund's return the mean return of the relevant style category. Style-adjusted returns are computed for each fund on a monthly basis and assume the reinvestment of dividends. Summary statistics appear in Table 5 by organizational form. Means are computed on a time-series basis for each organizational form, by averaging the style-adjusted returns in each month on an equal-weight basis, and then by averaging across months (Panel A). The average one-month return (style-adjusted) is 0.023% for corporate funds and 0.005% for unit trusts. The average style-adjusted return for corporations is greater than that of unit trusts, but not statistically so. This is the case regardless of whether the fund returns are computed before fees or after fees. In addition to the time-series approach, I have also taken a cross-sectional approach to computing style-adjusted returns, by computing an average style-adjusted return for each fund over the period, and then by computing the equal-weight average style-adjusted return for each type of organizational form (Panel

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<sup>90</sup> There are, however, valid reasons to give less attention to fund performance than to fund expenses. Fund expenses have been the primary focus of regulatory scrutiny and investor lawsuits. Moreover, fund expenses are less noisy than returns and have been shown to predict returns. For evidence on the inverse relationship between fund returns and expenses, see Marcin Kacperczyk et al., *Unobserved Actions of Mutual Funds*, in Review of Financial Studies (National Bureau of Economic Research, Working Paper No. 11766) (forthcoming); Edwin J. Elton, *Are Investors Rational? Choices Among Index Funds*, 59 J. Fin. 261 (2004); John M.R. Chalmers et al., *An Analysis of Mutual Fund Trading Costs* (Nov. 23, 1999) (available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=%20195849](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=%20195849)); Mark Carhart, *On Persistence in Mutual Fund Performance*, 57 J. Fin. 57 (1997); and Michael C. Jensen, *The Performance of Mutual Funds in the Period 1945-1964*, 23 J. Fin. 389 (1968).

B). The cross-sectional approach yields results similar to those generated by the time-series approach.

Since performance might be driven by factors other than organizational form, I regress monthly style-adjusted returns on a corporate dummy variable with control variables. Similar to equation (1), the model is:

$$y_{i,t} = \alpha + \beta_1 I_{i,t} + \beta_2 X_{i,t-1} + \lambda_k + \varepsilon_{i,t}. \quad (2)$$

Here, the dependent variable,  $y_{i,t}$ , is fund returns, defined as the one-month adjusted return for fund  $i$  in month  $t$ .  $I_{i,t}$  is the variable of interest,  $X_{i,t-1}$  is a set of control variables, and  $\lambda_k$  represents time (month) effects. Control variables include fund size (in log form), family size (in log form), fund age (in log form), an index fund dummy, the fund's front-end load and management fee, and the fund's prior performance. Prior performance is lagged by one month; all other controls are as of the last day of the preceding year. I measure prior performance using, alternatively, 1-month returns and 12-month returns. The 12-month returns have greater economic content than the 1-month returns, but they potentially introduce greater bias. Consequently, I report one specification with the 1-month returns, one with the 12-month returns, and one without returns.

According to Table 6, the corporate dummy has a statistically significant impact on returns. Holding everything else constant, the corporate form improves performance by 12 to 14 basis points per month relative to the trust form (or by 1.45% to 1.69% per year). This evidence supports the "overdeterrence hypothesis" that the stricter fiduciary duties of trust law lead to more conservative trust management and lower performance. In other words, although the corporate form is associated with higher management fees (7 to 12 basis points per year), the corporate form offers investors significantly superior fund performance on a gross basis (145 to 169 basis points per year) to compensate for charging those higher fees. This result implies that corporate funds are generating superior returns, on a net basis, relative to unit trusts. Investors in corporate funds are paying higher fees for that choice of organizational form but, since the corporate form

positively impacts gross style-adjusted returns by a greater amount, they receive greater net returns.<sup>91</sup>

The statistically significant control variables include fund size (negative coefficient), fund age (positive coefficient), and prior performance (positive coefficient on both one-month and one-year lagged returns, indicating momentum in fund returns). The management fee variable is not statistically significant, indicating that higher fees do not translate into significantly higher style-adjusted performance.

Style-adjusted returns alone, however, do not reveal much information about the value managers add. Corporate funds may be generating higher returns either because of superior security-selection skill or because they are simply incurring more risk than the trusts. There is evidence that corporate funds incur greater risk than the trusts. Corporate funds exhibit a greater dispersion of style-adjusted returns than unit trusts, evidenced by the difference in the standard deviation of returns in Table 5. The higher style-adjusted returns of corporate funds, therefore, may simply reflect a premium for higher risk. In other words, while style-adjusted returns control for differences in risk across investment styles, they do not control for such differences within investment styles. Thus, in addition to style-adjusted returns, I also examine risk-adjusted abnormal returns (or alphas).

First, I compute a single-factor alpha, the intercept in a regression of fund returns (in excess of the risk-free rate) on the return on a market proxy (in excess of the risk-free rate). The alpha in a single-factor model gives the over- or under-performance of funds relative to the market proxy. Alphas are calculated separately for each type of organization, on a cross-sectional basis, using the following single-index model:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i(R_{ALL,t} - R_{f,t}) + \varepsilon_{i,t} \quad (3)$$

where  $R_{i,t}$  is the one-month return of fund  $i$  in month  $t$ ,  $R_{f,t}$  is the return on British treasury bills in month  $t$ ,  $R_{ALL,t}$  is the one-month return on the market index in month  $t$ , and  $\alpha_i$  is the risk-adjusted abnormal return of fund  $i$ . The analysis is restricted to U.K. domestic equity funds. The average (equal-weight) risk-adjusted abnormal return (alpha) and

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<sup>91</sup> The results should not be interpreted as forecasting future returns, but rather as an evaluation of past performance.

factor loadings appear in Panel A of Table 7, for each type of organization. This risk-adjusted approach reveals a divergence in the performance of corporations and trusts. On a gross (before fee) basis, corporations generate alphas of 16 basis points per month, while trusts generate alphas of -12 basis points per month. Corporate managers are able to create positive value while trust managers destroy value. Moreover, the difference in performance between corporations and trusts is economically substantial, amounting to over 28 basis points per month, or approximately 3.36% per year. That is, corporations generate economically meaningful gains relative to trusts. After management fees are deducted, corporations continue to create value, while trusts continue to destroy value. Corporations generate net (after fee) alphas of 6 basis points, while trusts generate net alphas of -22 basis points. This difference in after-fee performance between trusts and corporations is, again, 28 basis points per month, or approximately 3.36% per year. In sum, whether alphas are measured before or after fees, corporations outperform trusts by about 3.36% annually.

The above single-factor model assumes a fund's investment behavior can be approximated using a single market index. Because of the variety of mutual fund investment styles, it is preferable to use a multi-factor model to account for such diversity of investment strategies. Hence, I also compute risk-adjusted abnormal returns from a multi-factor model.<sup>92</sup> In addition to a market proxy, the model includes factors for size, book-to-market, and momentum. Formally, alphas are calculated from the following model:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i(R_{ALL,t} - R_{f,t}) + s_iSMB_t + h_iHML_t + m_iMOM_t + \varepsilon_{i,t} \quad (4)$$

where  $SMB_t$  is the difference in one-month returns in month  $t$  between a portfolio of small cap stocks and a portfolio of large cap stocks;  $HML_t$  is the difference in one-month returns in month  $t$  between a portfolio containing "value" stocks (with a high book-to-market ratio) and one containing "growth" stocks (with a low book-to-market ratio); and  $MOM_t$  is the difference in one-month returns in month  $t$  between a portfolio of past winners and a portfolio of past losers. The other variables,  $R_{f,t}$ ,  $R_{ALL,t}$ , and  $\alpha_i$ , are as defined previously. As before, I compute risk-adjusted abnormal returns (alphas) on a

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<sup>92</sup> Mark Carhart, *On Persistence in Mutual Fund Performance*, 57 J. Fin. 57 (1997).



cross-sectional basis. To compute the size factor ( $SMB_t$ ), I rank all stocks in the United Kingdom based on market capitalization as of the last day of December each year, with the bottom 30% assigned to the small cap portfolio and the top 30% assigned to the large cap portfolio. The difference in returns between the small cap portfolio and the large cap portfolio over the subsequent months provides the size factor returns. Similarly, to compute the momentum factor ( $MOM_t$ ), I rank all stocks in the United Kingdom based on their prior 12-month return as of the last day of December each year, with the bottom 30% assigned to a portfolio of contrarian stocks and the top 30% assigned to a portfolio of momentum stocks. The difference in returns between the contrarian portfolio and the momentum portfolio over the subsequent months provides the momentum factor returns. All portfolios are value-weighted. SBM and MOM are computed using all British equities contained in Datastream. HML is taken from the international returns data library compiled by Kenneth French.<sup>93</sup>

Four-factor alphas are computed separately for each organizational form. Four-factor alphas and factor loadings appear in Panel B of Table 7. Corporations generate statistically significant positive alphas (before fees) while trusts do not. In other words, corporate managers are able to create statistically significant positive value, while trust managers are not. Moreover, the difference in performance between corporations and trusts is economically significant, amounting to over 11 basis points per month, or approximately 1.32% per year. That is, corporations generate economically meaningful gains relative to trusts. After management fees are deducted, corporations continue to create value, but trusts destroy value. Corporations generate net (after fee) alphas of 5 basis points, while trusts generate net alphas of -6 basis points. This difference in after-fee performance between trusts and corporations is, again, over 11 basis points per month, or approximately 1.32% per year. In sum, whether alphas are measured before or after fees, corporations outperform trusts by over 1.32% annually.<sup>94</sup>

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<sup>93</sup> Available at [http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library.html#International](http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html#International).

<sup>94</sup> In addition to the cross-sectional approach, I have also taken a time-series approach to computing alphas, by computing on each month the average return for each type of organizational form, and then computing a risk-adjusted return over the period for each form. Unlike the cross-sectional approach, the time-series approach does not produce an economically meaningful difference in alphas because, most likely, differences in performance are washed out in averaging the monthly returns.

We can also look at the percent of funds of each type that generate statistically significant positive (or negative) alphas. Using the four-factor model, we see that 7.6% of corporate funds generate significant positive alphas while 7.3% of unit trusts do so (last column of Table 7, Panel B). In other words, the probability of an investor selecting a corporate fund that generates a statistically significant positive alpha is a little better than the probability of an investor selecting a unit trust that does so. There is only a 3.1% chance that an investor will select a corporate fund that generates significant negative alphas, but a 4.7% chance that an investor will select a trust that does so. These results provide additional evidence that, on an individual fund basis, corporations outperform trusts after accounting for risk. That is, when selecting an individual fund, an investor has a greater probability of receiving positive risk-adjusted returns when he or she invests in a corporation as opposed to a trust, and a lower probability of receiving negative risk-adjusted returns.

In sum, the evidence suggests that corporations outperform trusts on a risk-adjusted basis. One caveat, however, is required. The tests do not have sufficient power to conclusively establish the statistical significance of certain results. Alphas are hard to detect due to their size. Moreover, with open-end mutual funds, inflows can quickly dissipate any positive alphas.<sup>95</sup> To detect statistical differences in such small and short-lived phenomena with confidence, we would need a long time series of returns. The data set, however, is limited to only 48 months of returns. But while we cannot say conclusively that corporations outperform trusts on a risk-adjusted basis, the evidence does suggest that result. Moreover, the evidence suggests that this difference in risk-adjusted performance is quite large economically, amounting to approximately 1.32% per year.

Although I do not observe the actual portfolio holdings of the funds, I can infer their holdings by examining the factor loadings reported in Table 7. The results reveal substantial differences in the holdings of trusts versus corporations. First, for both types of funds, the loading on the market factor is close to one. Since the data is limited to a

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<sup>95</sup> Jonathan B. Berk and Richard C. Green, "Mutual Fund Flows and Performance in Rational Markets," 112 *Journal of Political Economy* 1269 (2004); and Horan, Steven M. and D. Bruce Johnsen. 1999. "Portfolio Management, Private Information, and Soft-Dollar Brokerage: Agency Theory and Evidence," Working Paper, GMU School of Law.

subset of domestic equity funds, both types of funds are basically doing what they are supposed to, investing in domestic stocks. But the corporations have significantly higher loadings than the trusts on the market factor. Corporations, hence, are taking on significantly greater market risk than the trusts. Second, with respect to size, both corporations and trusts exhibit a tilt towards small cap stocks. However, corporations show a significantly greater tilt towards small cap stocks than trusts do. In sum, corporations and trusts follow different investment strategies, with corporations taking on more market risk and greater exposure to small cap stocks.<sup>96</sup> In other words, the factor loadings indicate that corporations take on more systematic risk than the trusts. In addition to their higher systematic risk, corporate funds also exhibit higher idiosyncratic (non-systematic) risk than trusts. The standard deviation of the idiosyncratic component of monthly fund returns (not shown) is 2.0839 for corporate funds and 1.8905 for unit trusts (using a single-factor model) and 1.7751 for corporate funds and 1.5728 for unit trusts (using a four-factor model). In other words, corporations choose portfolios with greater risk than those that trusts choose. That is, the difference in fiduciary standards translates into a difference in willingness to incur risk.

Overall, the evidence suggests that corporations incur greater risk than trusts, but that they also outperform trusts even after adjusting for the difference in risk. This evidence supports the hypothesis that trust law induces excessive risk aversion. Trust law's strict fiduciary duties induce fund managers to choose portfolios with lower risk than those of corporate managers and, after we adjust for this difference in risk, trust managers under-perform corporate managers. Hence, the evidence suggests that trust law's strict fiduciary duties are value destroying in the commercial context.

Finally, Figure 3 suggests a reason why corporations can outperform trusts: they are more nimble. Since the data set encompasses the stock market bubble period (1998-1999) as well as the crash and immediate aftermath (2000-2001), we can examine whether one organizational form performed better than the other in one of these market environments.

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<sup>96</sup> In addition, corporations follow a contrarian strategy while trusts follow a momentum strategy.

Figure 3 shows each form's relative monthly performance over 1998-2001. The Figure plots the alpha generated by corporations minus the alpha generated by trusts ( $\alpha_t^C - \alpha_t^T$ ) each month over the time period. During the bubble years (1998-1999), neither form appears to perform better than the other, as  $\alpha_t^C - \alpha_t^T$  oscillates rapidly between positive and negative. In this period, neither form is able to outperform the other for more than two consecutive months. During the crash, however, a pattern emerges. Corporate funds put together a string of months in which they outperform trusts, beginning in the spring of 2000 (as the stock market bubble began to burst). It appears that corporate funds were more nimble in navigating the market crash. In other words, the greater flexibility of the corporate form enables corporate funds to react more quickly to abrupt market movements and to more nimbly navigate within fast-changing market environments.

## VII. Endogeneity Concerns

This paper has assumed that organizational form is exogenous or, in other words, that organizational form causes the difference in the outcome variables (fund expenses and performance). However, organizational form might be endogenously determined. That is, some unobserved factor may be influencing, for instance, both management fees and choice of organizational form, making it mistakenly appear as if there is a direct causal connection between fees and organizational form. If so, it would be deceptive to say that the corporate form is causing higher management fees. Or, causation may run in the opposite direction, with management fees influencing the choice of organizational form. In other words, it may be that expensive funds are attracted to the corporate form. The underlying problem is that a fund is not assigned its organizational form randomly; rather, its organizational form is chosen by the fund (or by its management company on the fund's behalf). If expensive funds are self-selecting into the corporate form, this selection bias may be driving the results instead of the treatment effect of organizational form. If this is the case, the least squares estimate of the impact of the corporate form overstates its true effect. The literature has used matched samples approaches, sample selection model approaches, and fixed effects approaches to address these endogeneity

concerns. In this section, I examine each method, as each has its own assumptions and tradeoffs.

*(i) Matched Samples Approach*

I first use matching methods to balance the sample along observable dimensions that might influence the outcome variables. The idea behind matching is that, for any fund, we observe an outcome (e.g., the management fee it charges) when it is either (i) a corporation (exposed to the “treatment”) or (ii) a trust (not exposed to the “treatment”). That is, for any fund, we observe only one of the two possible outcomes. To estimate the impact of organizational form on that fund, we would like to know the outcome (the fee it charges) both when it is a corporation and when it is a trust. Although we only observe the fund when it is organized as one or the other, we can impute the missing outcome by finding other funds in the data whose covariates are similar to those of the particular fund, but which are organized in the other form (not exposed to the “treatment”). The general approach is to find corporation-trust pairs where the funds are identical along observable dimensions except for organizational form. Matching thus approximates random assignment; when you match, any difference between the two groups may be deemed to be random. Under that condition, matching isolates the impact of organizational form on the outcome variable (management fees). The advantage of the matched samples approach is that it removes potential bias from model misspecification. And it does so under less restrictive assumptions than other approaches, which require, for instance, the specification of exclusion criteria (i.e., instrumental variables) and assumptions about the distribution of the error terms.

I match each corporate fund with the ten closest trusts. Since matching with instruments (that is, variables that affect selection but not outcomes) does not help address selection bias and may worsen support problems, I match using only variables correlated with both the selection variable and the outcome variable. That means, for management fees, I match on the basis of fund age, family size, loads, passive versus active management and investment style. I do not match using fund size, as it is correlated with organizational form but not with fees, or using prior performance, as it is correlated with fees but not with organizational form. Using the nearest neighbor

matching method,<sup>97</sup> I find that the average treatment effect of the corporate form on fees is 0.071%, and that the effect is significant at the 1% level (Table 8). This 7.1 basis point effect is roughly similar to the 7 to 12 basis point effect found in the OLS regressions in Table 3. Thus, the matched samples analysis confirms the significant and upward impact of the corporate form on fund fees.

Matched samples analysis requires trading off similarity of matched units with sample size. This, in effect, involves trading off bias and efficiency. I have required that each corporate fund be matched with ten trusts. In the present setting, where we have many more trusts than corporations, requiring ten matches for each corporate fund seems reasonable to maximize efficiency without introducing significant bias concerns. However, to lower the bias potential, I also require that each corporate fund match with only four trusts (to ensure a more precise match on observable dimensions). Despite the resulting drop in efficiency, I get similar results. The coefficient increases slightly to 0.072% and, although the standard error increases slightly, the effect remains significant at the 1% level. Thus, the results are robust to a change in the number of matches. In summary, after establishing the equivalence of corporations and trusts along observable dimensions, I find that the corporations charge significantly greater fees.

#### *(ii) Sample Selection Model Approach*

Matching handles selection on observables. But what if unobservable factors drive both the outcomes (e.g., management fees) and the choice of organizational form? One response is to first endogenously model the choice of organizational form as the first step of a two-step procedure using a bivariate normal selection (Heckman) model. The first step of the two-step procedure is to estimate a probit model of selection. Since funds choose how to organize, we model that choice explicitly. Estimates from this probit model are then used to construct consistent estimates of the inverse Mills ratio. In the second stage, the outcome equation is estimated by ordinary least squares, and includes the original independent variables from the main regression augmented by the

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<sup>97</sup> Alberto Abadie et al., *Implementing Matching Estimators for Average Treatment Effect in Stata*, 4 The Stata Journal 290 (2004).

constructed value of the inverse Mills ratio, which controls for omitted variable bias due to self-selection.

Specifying a proper “exclusion restriction” is crucial. The exclusion restriction is the specification of a variable that “belongs” in the selection equation but not in the outcome equation. In other words, it is an instrument. The model is formally identified without an exclusion restriction (the identification comes from the non-linearity of the inverse Mills ratio), but this often produces substantial colinearity between the predicted inverse Mills ratio term and the remaining covariates in the outcome equation. This colinearity will lead to large standard errors. A proper exclusion restriction requires us to identify a variable associated with organizational form but not the outcome (i.e., management fees). An ideal instrument is whether the fund receives flows from foreign investors. Since corporate funds can be marketed abroad and trusts cannot, such a variable is associated with organizational form but likely does not have a direct impact on management fees. However, data on foreign flows is not available. Instead, I use fund size to proxy for foreign flows. Funds choose the corporate form in order to have access to foreign markets and a greater pool of investors. In other words, they choose the corporate form because they want to grow in size. Size, therefore, should be a good substitute for foreign flows. In the data, size in fact is highly correlated with the corporate form, but uncorrelated with fees. Hence, specifying size as the exclusion restriction should give us confidence that the identification structure will work.

Estimates from the selection and outcome equations are reported in Table 9. First note the significant positive impact of size in the probit regression (column (1)), confirming the theory that size predicts corporate form. In the ordinary least squares regression (column (2)), the coefficient on the corporate dummy is positive and significant at the 1% level despite the inclusion of  $\lambda$  (the inverse Mills ratio). That is, after controlling for potential selection bias, the corporate form has an upward impact on fees, and its magnitude (16 basis points) is even larger than in the main results (7 to 12 basis points). Moreover, the coefficient on  $\lambda$  is not significant, indicating no substantial selection effect. We cannot reject the null hypothesis that there is no selection bias in the outcome equation. In other words, it appears likely that our main results are not driven

by selection bias.<sup>98</sup> In all, the sample selection model indicates that the corporate form's impact on fees is being driven by the treatment effect, not the selection effect.

### *(iii) Fund Fixed Effects Approach*

The idea behind a fixed effects specification is to use the repeated observations on funds in the panel to control for those unobserved and unchanging characteristics related to both outcomes and causing variables. In other words, it exploits repeated observations on funds to control for unobserved fund characteristics that are time-invariant. The fund fixed effects approach, however, is a simple and extreme approach to addressing endogeneity. Fixed effects estimators estimate the effects of only the time-varying regressors. That is, the fixed effects approach ignores cross-sectional variation in organizational form, exploiting only its time-series variation. However, our regressor of interest, the corporate dummy, does not have much time-series variation. Only 59 funds have been conclusively identified as having changed organizational form, and I lack complete data on all of those 59 funds. Thus, the fixed effects approach has fewer than 59 funds to work with. With insufficient time variation in organizational form, it would be difficult to distinguish the impact of organizational form from the impact of the time-invariant unobservables. If the corporate dummy is, in effect, not time-varying, its effect cannot be conclusively determined using fixed effects. The data set is simply not rich enough for a fund fixed effects model to isolate the impact of organizational form. The other two approaches employed in the section, which handle endogeneity through different means, are more informative.

### *(iv) Evaluation*

The impact of the corporate form on fees is most likely due to organizational form and not selection bias. Multiple regression methodologies for handling endogeneity concerns point to this conclusion. Using matched samples, I find that the corporate form has a significant upward impact on fees, similar in magnitude to the impact in my main

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<sup>98</sup> Note that when no exclusion restriction is specified, the significance of the corporate dummy disappears. However, it appears that this result is driven by the large standard errors that are generated by removing the exclusion restriction. Of course, it is unnecessary to endure the inefficiency and restrictive assumptions of this specification, as we have a compelling exclusion restriction (size) to help with identification.



results. This result is robust to changes in the number of matches. In addition, using a sample selection model, I reach the same conclusion. The corporate form has a significant upward impact on fees, again similar in magnitude to the impact in my main results. The sample selection model also sheds light on why funds choose the corporate form. The stage I probit model, and correlations in the data, indicate that funds become corporations in order to grow in size. After controlling for that motivation for choosing the corporate form, as well as other potential motivations, I find that organizational form has a significant impact. In conclusion, my earlier results appear to be driven not by endogeneity but by the effect of organizational form.

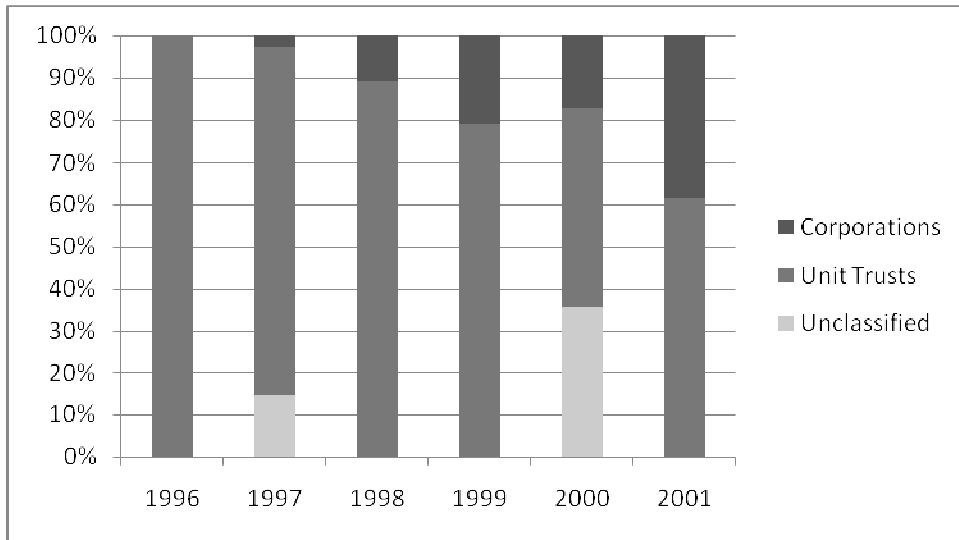
### **VIII. Conclusion**

This paper identifies, empirically, costs and benefits associated with competing organizational forms. The paper does so by exploiting a change in British regulations in the 1990s that allowed mutual funds to organize as either a trust or a corporation. Trust law imposes stricter fiduciary responsibilities on managers than corporate law does. I find evidence suggesting that trust law is more effective in curtailing opportunistic behavior, as trust managers charge significantly lower fees than their corporate counterparts, even after accounting for potential differences in managerial ability and job complexity. I confirm that these results are driven by differences in organizational form and not by self-selection. The results suggest that trust law's strict fiduciary duties are a superior mechanism for mitigating agency conflict within business organizations. While strict fiduciary responsibilities limit opportunistic behavior, they also constrain managerial flexibility in business decision making. I find that trust managers exhibit greater risk aversion than their corporate counterparts. Evidence suggests that, even after this difference in risk taking is accommodated, the trusts underperform the corporations. The business flexibility granted to the corporate funds leads to greater risk-taking behavior and greater agency costs, but also to potentially superior risk-adjusted performance as well. Overall, this paper finds that fiduciary rules which curtail managerial discretion reduce agency costs and risk taking within the firm, but at the possible cost of sacrificing risk-adjusted performance.

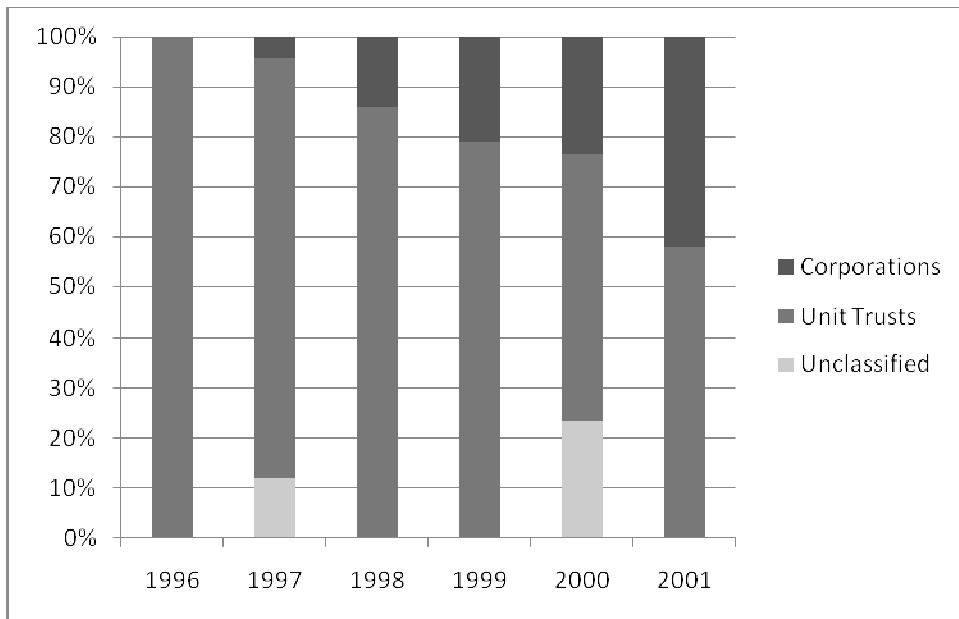
The results have implications for investors. In equilibrium, investors should prefer to invest via the corporate structure. All else equal, on average, the trust form saves investors about 10 basis points (or 0.10%) per year in agency costs, but costs investors about 132 basis points (or 1.32%) per year in performance. In other words, while trust law's strict fiduciary duties are a superior mechanism for mitigating agency conflict, the economic significance of the agency cost savings are overwhelmed by the economic significance of the negative performance impact. To see this more clearly, consider a hypothetical investor with \$100,000 to invest. The investor can choose one of two investments, identical in every respect, except one is structured as a trust and the other as a corporation. That investor would save about \$100 per year in fees, on average, by investing in the trust instead of the corporation. However, that investment would earn the investor about \$1,300 per year less, on average, in gross returns. On a net basis, the investor is worse off having invested in the trust. In other words, the trust's underperformance more than offsets its cost savings. Trust law mitigates agency conflict, but it does so by "overdeterring" trust management.

The results also have implications for corporate governance design. The results suggest that strengthening fiduciary responsibilities by moving corporate law closer to trust law can lessen the potential for expropriation, fraud, and opportunistic behavior by corporate managers. Heightened fiduciary duties can also reduce managerial risk-taking behavior. While these concepts are intuitive, this paper has been able to demonstrate them empirically and to quantify their effects. Moreover, this paper suggests that such results are achieved at the cost of lower risk-adjusted performance. While trust law may be superior at controlling value-destroying agency conflict, it appears to do so by curtailing desirable risk-taking behavior to an extent that is value-destroying in the commercial context.

**Figure 1**  
**Composition of Fund Market by Number of Funds**

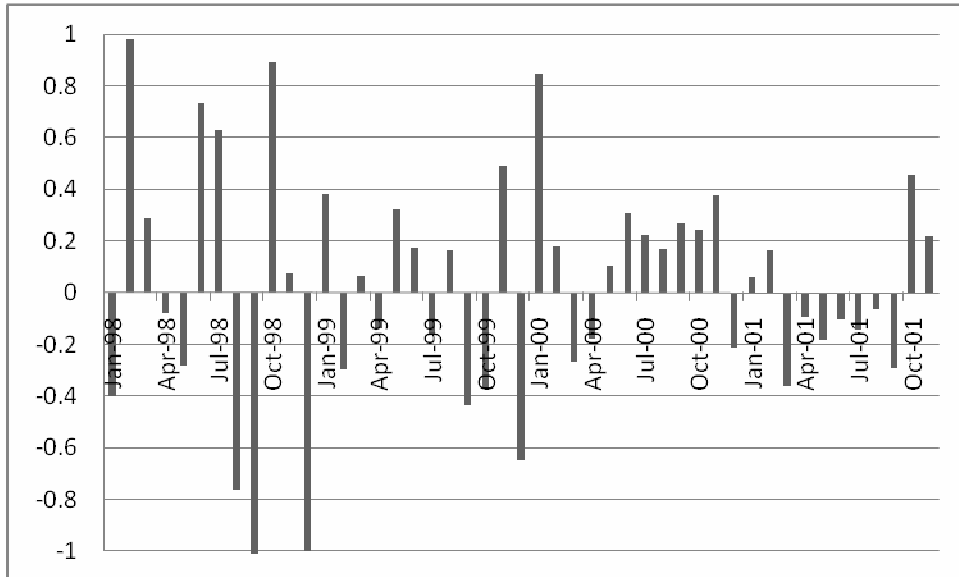


**Figure 2**  
**Composition of Fund Market by Assets under Management**



**Figure 3**  
**Relative Risk-Adjusted Performance**

The Figure plots the alpha generated by corporate funds minus the alpha generated by trusts ( $\alpha^C - \alpha^T$ ) in each month.



**Table 1**  
**Age, Size and Number of Funds**

Age, size and number of funds in the data set. Mutual funds are grouped according to organizational form (corporation versus unit trust) and by year. Median figures are provided for size and age.

	1996	1997	1998	1999	2000	2001	Overall
<i>(A) Age (years)</i>							
Corporations	n.a.	10.13	8.13	5.00	5.42	6.89	6.17
Unit Trusts	9.09	8.59	9.17	8.84	10.29	9.02	9.09
<i>(B) Size (£ millions)</i>							
Corporations	n.a.	22.10	54.50	45.20	70.30	51.50	53.30
Unit Trusts	29.10	32.30	34.00	47.30	60.60	51.80	37.40
<i>(C) Number</i>							
Corporations	n.a.	45	174	364	259	579	701
Unit Trusts	1,592	1,317	1,427	1,377	709	925	2,419
Unclassified	0	231	0	0	531	0	748
Total	1,592	1,593	1,601	1,741	1,499	1,504	3,868

**Table 2**  
**Summary Statistics on Expenses**

Summary statistics for mutual funds in the data set, on an equal-weight basis. Mutual funds are grouped according to organizational form (corporation versus unit trust). Panel A presents summary statistics on annual management fees (in percent). Panel B presents summary statistics on front-end loads (in percent). Panel C presents summary statistics on front-end loads netted against waivers (in percent).

	Obs.	Mean	Median	Std. Dev.	Min.	Max.
<i>(A) Management Fees</i>						
Corporations	1,403	1.27	1.30	0.33	0.00	3.00
Unit Trusts	7,277	1.21	1.25	0.40	0.00	8.75
Difference (Corporation-Unit Trust)		0.06 <sup>***</sup>				
<i>(B) Front-End Loads</i>						
Corporations	1,406	4.01	4.50	1.60	0.00	9.00
Unit Trusts	7,323	4.25	5.00	1.90	0.00	10.00
Difference (Corporation-Unit Trust)		-0.24 <sup>***</sup>				
<i>(C) Front-End Loads Net of Waivers</i>						
Corporations	1,164	1.95	2.00	1.74	0.00	6.00
Unit Trusts	6,192	1.86	1.25	1.70	0.00	10.00
Difference (Corporation-Unit Trust)		0.09 <sup>*</sup>				

\*\*\* 1% significance; \*\* 5% significance; \* 10% significance

**Table 3****Regression Results for Management Fees**

Ordinary least squares regressions of annual management fees (in percent) on a corporate dummy (equal to 1 for a corporation and 0 for a unit trust), with control variables as shown. All observations are annual. All independent variables (except the corporate dummy) are lagged by one year. Observations in the year in which a fund changes organizational form are dropped. Robust standard errors are shown in parenthesis. Columns (2) and (3) adjust standard errors for clustering by fund.

	Dependent Variable: Management Fees		
	(1)	(2)	(3)
Corporate Dummy	0.067 (0.015) <sup>***</sup>	0.067 (0.021) <sup>***</sup>	0.117 (0.044) <sup>***</sup>
Size (log)	0.002 (0.005)	0.002 (0.008)	0.012 (0.007) <sup>*</sup>
Age (log)	0.012 (0.007)	0.012 (0.011)	0.026 (0.011) <sup>**</sup>
Family Size (log)	-0.022 (0.005) <sup>***</sup>	-0.022 (0.007) <sup>***</sup>	-0.003 (0.008)
Load	0.043 (0.004) <sup>***</sup>	0.043 (0.008) <sup>***</sup>	0.069 (0.009) <sup>***</sup>
Index Fund Dummy	-0.357 (0.046) <sup>***</sup>	-0.357 (0.063) <sup>***</sup>	-0.406 (0.066) <sup>***</sup>
12-Month Return	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Constant	1.064 (0.372) <sup>***</sup>	1.064 (0.388) <sup>***</sup>	0.735 (0.212) <sup>***</sup>
Style Controls	Yes	Yes	Yes
Family Controls	No	No	Yes
Fund Clusters	No	Yes	Yes
Observations	3,142	3,142	3,142
Adjusted R <sup>2</sup>	0.26	0.26	0.50

<sup>\*\*\*</sup> 1% significance; <sup>\*\*</sup> 5% significance; <sup>\*</sup> 10% significance

**Table 4****Regression Results for Loads**

Ordinary least squares regressions of front-end loads (in percent) on a corporate dummy (equal to 1 for a corporation and 0 for a unit trust), with control variables as shown. Loads are before waivers in columns (1) through (3), and after waivers in columns (4) through (6). All observations are annual. All independent variables (except the corporate dummy) are lagged by one year. Observations in the year in which a fund changes organizational form are dropped. Robust standard errors are shown in parenthesis. Columns (2), (3), (5) and (6) adjust standard errors for clustering by fund.

Dependent Variable:	Front-End Loads (Before Waivers)			Front-End Loads (After Waivers)		
	(1)	(2)	(3)	(4)	(5)	(6)
Corporate Dummy	-0.339 (0.071)***	-0.339 (0.102)***	-0.661 (0.150)***	0.253 (0.090)***	0.253 (0.119)**	-0.057 (0.198)
Size (log)	-0.024 (0.023)	-0.024 (0.036)	-0.019 (0.029)	-0.015 (0.029)	-0.015 (0.040)	-0.045 (0.031)
Age (log)	0.172 (0.040)***	0.172 (0.054)***	0.100 (0.044)**	-0.057 (0.047)	-0.057 (0.061)	-0.111 (0.052)**
Family Size (log)	-0.044 (0.022)**	-0.044 (0.037)	-0.155 (0.035)***	-0.086 (0.028)***	-0.086 (0.043)**	0.103 (0.059)*
Management Fee	0.915 (0.113)***	0.915 (0.174)***	1.081 (0.167)***	0.131 (0.105)	0.131 (0.149)	0.264 (0.141)*
Index Fund Dummy	-2.309 (0.261)***	-2.309 (0.411)***	-0.808 (0.320)**	-1.557 (0.144)***	-1.557 (0.175)***	-0.599 (0.230)***
12-Month Return	0.002 (0.001)**	0.002 (0.001)***	0.002 (0.001)**	-0.001 (0.002)	-0.001 (0.002)	-0.000 (0.001)
Constant	3.888 (0.509)***	3.888 (0.768)***	5.342 (0.997)***	2.408 (0.615)***	2.408 (0.868)***	-1.125 (1.547)
Style Controls	Yes	Yes	Yes	Yes	Yes	Yes
Family Controls	No	No	Yes	No	No	Yes
Fund Clusters	No	Yes	Yes	No	Yes	Yes
Observations	3,143	3,143	3,143	2,549	2,549	2,549
Adjusted R <sup>2</sup>	0.25	0.25	0.63	0.07	0.07	0.49

\*\*\* 1% significance; \*\* 5% significance; \* 10% significance



**Table 5**

**Summary Statistics on Style-Adjusted Returns**

Summary statistics on one-month style-adjusted returns (in percent) on an equal-weight basis for all funds in the data set. Returns are computed monthly on a gross (before management fee) basis, assume re-investment of dividends and are adjusted by subtracting the mean return of the applicable style. In Panel A, style-adjusted returns are computed on a time-series basis (by computing on each month an average style-adjusted return for each type of organizational form, and then computing the average style-adjusted return over the period for each type of organizational form). In Panel B, style-adjusted returns are computed on a cross-sectional basis (by computing the average style-adjusted return for each fund over the period, and then computing the average style-adjusted return for each type of organizational form).

	Obs.	---- Mean ----		----- Before Fees -----			
		Before Fees	After Fees	Median	Std. Dev.	Min.	Max.
<i>(A) Time-Series</i>							
Corporations	58	0.023	0.018	-0.018	0.526	-1.323	1.967
Unit Trusts	58	<u>0.005</u>	<u>0.006</u>	0.014	0.102	-0.337	0.303
Difference (Corporation-Unit Trust)		0.018	0.012				
<i>(B) Cross-Sectional</i>							
Corporations	123	-0.054	-0.053	-0.050	0.488	-1.348	1.813
Unit Trusts	969	<u>0.021</u>	<u>0.020</u>	0.005	0.476	-6.028	2.963
Difference (Corporation-Unit Trust)		-0.075	-0.073				

\*\*\* 1% significance; \*\* 5% significance; \* 10% significance

**Table 6****Regression Results for Style-Adjusted Returns**

Ordinary least squares regressions of one-month style-adjusted returns (in percent) on a corporate dummy (equal to 1 for a corporation and 0 for a unit trust), with control variables as shown. Returns are computed monthly on a gross (pre-expense) basis, assume reinvestment of dividends, and are adjusted by subtracting the mean return of the applicable style. Regressions correct for time effects. The independent return variables are lagged by one month. All other control variables are as of the end of the prior year. Observations in the year in which a fund changes organizational form are dropped. Robust standard errors based on fund clusters are shown in parenthesis.

Dependent Variable: Style-Adjusted Returns			
	(1)	(2)	(3)
Corporate Dummy	0.142 (0.055) ***	0.132 (0.049) ***	0.123 (0.049) **
Size (log)	-0.035 (0.012) ***	-0.033 (0.011) ***	-0.033 (0.011) ***
Age (log)	0.054 (0.026) **	0.050 (0.023) **	0.054 (0.027) **
Family Size (log)	0.000 (0.013)	-0.000 (0.012)	0.001 (0.012)
Management Fee	0.048 (0.046)	0.042 (0.043)	0.019 (0.042)
Front-End Load	-0.004 (0.007)	-0.004 (0.007)	-0.005 (0.006)
Index Fund Dummy	-0.030 (0.052)	-0.031 (0.048)	-0.020 (0.045)
One-Month Return		0.071 (0.025) ***	
One-Year Return			0.015 (0.002) ***
Constant	0.053 (0.245)	0.056 (0.229)	0.027 (0.223)
Time Controls	Yes	Yes	Yes
Observations	39,626	39,612	39,312
Adjusted R <sup>2</sup>	0.00	0.01	0.01

\*\*\* 1% significance; \*\* 5% significance; \* 10% significance

**Table 7****Risk-Adjusted Returns and Factor Loadings**

One-month risk-adjusted returns and factor loadings (in percent), computed on an equal-weight basis. Risk-adjusted returns (alphas) are computed on both a gross (before management fee) and a net (after management fee) basis. The data set consists of 48 months of data and is restricted to U.K. domestic equity funds. Risk-adjusted returns are computed on a cross-sectional basis (by computing the risk-adjusted return for each fund, and then computing an average risk-adjusted return for each type of organizational form). Factor loadings are computed similarly. Standard errors are shown in parenthesis. The last column gives percent of funds with significant positive/negative risk-adjusted returns.

	-- Return (Alpha) --		----- Factor Loadings (Before Fees)-----				Percent
	Before Fee	After Fee	Market	Size	Value	Momentum	pos/neg
<i>(A) Single-Factor Model</i>							
Corporations	0.1605 (0.0980)	0.0567 (0.0982)	1.1194 (0.0353)***				6.6/ 2.2
Unit Trusts	-0.1238 (0.2324)	-0.2231 (0.2314)	1.0323 (0.0517)***				6.8/ 5.0
Difference (Corp-Trust)	0.2843 (0.3606)	0.2798 (0.3602)	0.0871 (0.0823)				-0.2/-2.8
<i>(B) Four-Factor Model</i>							
Corporations	0.1582 (0.0933)*	0.0541 (0.0932)	1.1041 (0.0325)***	0.1418 (0.0177)***	-0.0646 (0.0120)***	-0.0157 (0.0063)**	7.6/ 3.1
Unit Trusts	0.0443 (0.1079)	-0.0596 (0.1076)	0.9876 (0.0205)***	0.0963 (0.0135)***	-0.0455 (0.0140)***	0.0099 (0.0056)*	7.3/ 4.7
Difference (Corp-Trust)	0.1139 (0.1757)	0.1137 (0.1756)	0.1165 (0.0378)***	0.0455 (0.0237)*	-0.0191 (0.0228)	-0.0256 (0.0095)***	0.3/-1.6

\*\*\* 1% significance; \*\* 5% significance; \* 10% significance

**Table 8**

**Matched Sample Analysis:  
Management Fees**

Treatment (corporation) and control (unit trust) groups are based on fund age, family size, loads, passive versus active management and investment style. The mean difference between the management fees of these two groups is presented. Control groups are formed using 1 to 10 matching (column 1) or 1 to 4 matching (column 2). Standard errors are shown in parenthesis.

	(1)	(2)
	1 to 10 Matching	1 to 4 Matching
Treatment - Control	0.071 (0.015)***	0.072 (0.016)***

\*\*\* 1% significance; \*\* 5% significance; \* 10% significance

**Table 9****Sample Selection Model:  
Management Fees**

Heckman regressions of annual management fees (in percent) on a corporate dummy (equal to 1 for a corporation and 0 for a unit trust), with control variables as shown. Stage I probit results appear in column (1). Stage II ordinary least squares results appear in column (2). Robust standard errors are shown in parenthesis.

	(1)	(2)
Dependent Variable:	Corporate Dummy	Management Fees
Exclusion Restriction:		Size
Corporate Dummy		0.161 (0.047) <sup>***</sup>
Lambda		-0.030 (0.029)
Size (log)	0.149 (0.056) <sup>***</sup>	
Age (log)	-0.028 (0.076)	0.030 (0.007) <sup>***</sup>
Family Size (log)	0.910 (0.149) <sup>***</sup>	-0.000 (0.009)
Load	-0.263 (0.058) <sup>***</sup>	0.070 (0.004) <sup>***</sup>
Index Fund Dummy	-0.822 (0.383) <sup>**</sup>	-0.401 (0.033) <sup>***</sup>
12-Month Return	0.001 (0.003)	-0.000 (0.000)
Constant	-19.548 (3.627) <sup>***</sup>	0.807 (0.407) <sup>**</sup>
Style Controls	Yes	Yes
Family Controls	Yes	Yes
Rho		-0.119
Sigma		0.254
Observations	3,142	3,142

<sup>\*\*\*</sup> 1% significance; <sup>\*\*</sup> 5% significance; <sup>\*</sup> 10% significance