# The Effect of Organizational Form on Firm Performance

by

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Chapter I

Introduction

While much empirical literature studies agency conflict and firm performance within the corporate form of legal organization, this dissertation studies agency conflict and firm performance across two organizational forms, corporations and trusts. Trust law imposes higher fiduciary responsibilities on managers than corporate law, which is likely to limit opportunistic behavior by trust managers. At the same time, they can also constrain managerial flexibility in decision making. To analyze the effect of this trade-off, this dissertation exploits variation generated by a change in British regulations in 1997 that removed a requirement that mutual funds organize as trusts, allowing them to organize as either trusts or corporations. This regulatory shock offers a natural laboratory to study of the effect of organizational form on firms' performance.

Three chapters explore different aspects of this issue. Chapter II examines whether funds behave differently when organized as trusts versus corporations. The results demonstrate that trust law is more effective than corporate law in curtailing opportunistic behavior, as trust managers charge significantly lower fees than their observationally equivalent corporate counterparts. Trusts also incur lower risk than corporations. While the business flexibility of corporate funds leads to greater agency costs and risk taking, it also leads to greater risk-adjusted performance.

Given these results, a natural question is whether organizational competition can impact the performance of the financial services industry as a whole. Chapter III analyzes this issue for the British fund industry. Increased competition led to an increase in risk taking and risk-adjusted performance within the industry, though it also resulted in higher direct costs for consumers.

Chapter IV critiques efforts by U.S. lawmakers to mitigate agency conflict inherent in mutual fund operations. The U.S. follows a corporate model, requiring that all funds have boards of directors and grant voting rights to investors. Chapter IV outlines shortcomings of the corporate model and contrasts the alternative trust model pursued by other countries, notably the U.K. This dissertation shows that agency costs, risk taking behavior, and managerial performance are impacted by the different fiduciary duties inherent in trusts and corporations, making different organizational forms appealing to different investor clienteles.

Chapter II

Commercial Trusts Versus Corporations

Abstract

This chapter studies the effect of organizational form on managerial behavior and firm performance. It does so by exploiting variation generated by 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 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 choose portfolios with lower risk. However, evidence suggests that trust managers underperform their corporate counterparts, even after differences in risk are accommodated. These results show that the business flexibility granted to the corporate funds leads to greater agency costs and greater risk-taking behavior, but also to superior risk-adjusted performance. An investor who invests $100,000 in a mutual fund organized as a trust, instead of an equivalent corporate fund, would save about $100 per year in management expenses, but would forgo about $1,300 per year in gross risk-adjusted performance. The results have implications for corporate governance design, suggesting that enhancing investor protection through heightened fiduciary duties can mitigate agency costs and managerial risk-taking behavior, but at the cost of lower risk-adjusted performance.

I. Introduction

Are insiders more likely to misbehave in a corporation as opposed to a trust? Does the way a business is legally organized influence management's performance or risk tolerance? A large literature in corporate finance and law studies the effectiveness of various forms of investor protection on managerial behavior and firm performance (see, e.g., Tirole 2006). While the overwhelming majority of literature focuses on the corporate form of business organization, this chapter studies agency conflict and firm performance across corporations and trusts within the British mutual fund industry. Trust law imposes higher fiduciary responsibilities on firm managers than corporate law does. While strict fiduciary responsibilities can limit opportunistic behavior, they can also

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constrain managerial flexibility in business decision making. This trade-off between agency conflict and flexibility in decision making presents an interesting setting in which to analyze the effect of organizational form on managerial behavior and firm performance.

To analyze the effect of organizational form, this chapter 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 and firm performance.

This chapter examines governance at a more fundamental level than does the existing literature. While there is a large empirical literature on firm governance, 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 concessions corporations can make to investors, such as covenants, control rights, board composition, takeover defenses, and other governance mechanisms within the corporation (e.g., Boone et al. 2007; Chidambaran et al. 2006; Core et al. 2006; Gompers et al. 2003; Himmelberg et al. 1999; Yermack 1996; Morck et al. 1988; and Demsetz and Lehn 1985). 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. A second strand of literature attempts to study the impact of different governance environments by examining differences in corporate governance structures across countries (e.g., Djankov et al. 2008 and LaPorta et al. 1997, 1998, 1999, 2000). While current empirical research focuses on exploiting variation in governance environments across countries (but within the corporate form), 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.

The traditional (Miller-Modigliani) view of corporate finance assigns organizational form no role. 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.[1] 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 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

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[1] Note that trust fiduciary duties are default rules which the parties can vary by mutual consent (though some (e.g., Leslie 2005) object to the characterization of trust's fiduciary rules as true default rules, and Schanzenbach and Sitkoff (2007) demonstrate empirically that changes in trust fiduciary laws impact the behavior of trustees of non-commercial trusts). 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.

can sometimes result in unfavorable outcomes.[2] 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.[3] 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.

     This chapter examines mutual funds in the United Kingdom, where funds can organize in either corporate or trust form. The chapter identifies, empirically, clear costs and benefits associated with these competing organizational forms. I find that trusts are more effective than corporations in curtailing opportunistic behavior by fund managers.

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[2] 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" (Davies 1992, 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 1992, 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.

[3] 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 Mowbray, Tucker and Simpson 2000, 842). The standard requires trustees to take "objectively reasonable care in the context of the particular trusteeship, including due professional care where appropriate" (Getzler 2002, 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 2002, 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).

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 indicate that trust law's strict fiduciary duties are a superior mechanism for mitigating opportunistic behavior and agency conflict within business organizations. While strict fiduciary responsibilities limit opportunistic behavior, they might also constrain managerial flexibility in business decision making. 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 results show that 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 enhancing investor protection through heightened fiduciary duties can mitigate agency costs and reduce managerial risk-taking behavior, but at the cost of lower risk-adjusted performance.

One caveat is that, due to data limitations, there is insufficient power to determine the statistical significance of the risk-adjusted performance results with confidence. 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 chapter 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 describes the data. Section IV presents the results with respect to fund expenses. Section V presents the results with respect to fund performance. Section VI addresses endogeneity concerns. Section VII 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 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 (e.g., Del Guercio, Dann and Partch 2003; Tufano and Sevick 1997; Chevalier and Ellison, 1997). Investors want to maximize their expected returns, net of fees, while fund managers want to maximize their own profits. Studies find that management fees are not positively related to performance (e.g., Tufano and Sevick 1997; Carhart 1997; Gruber 1996); hence, higher fees benefit fund managers while reducing net returns for fund investors. Since incentives differ and managerial actions are not fully observable by investors, 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. Mutual funds in the U.K. evolved as unit trusts under trust law, as opposed to corporations under English company law, in

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order to avoid certain restrictions of English company law, which does not apply to trusts.[4] 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. Investors invest in an OEIC by purchasing shares in the fund.

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. Moreover, no minimum number of directors is specified for OEIC boards. The only requirement is that the fund's manager must serve as a director. In practice, therefore, most OEIC boards consist solely of the fund's manager. 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. Furthermore, in a British fund organized in trust form, the trustee performs essentially a custodial role, unlike the active boards of trustees in U.S. trusts. The custodial role is performed in an OEIC by the

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[4] 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, 1997, 42-43). That open-end funds organize as trusts subsequently became a requirement codified in the regulations.

"depository."[5] Both the trustee and the depository must be independent entities and are responsible for the safe keeping of investor assets. Neither the trustee nor the depository performs active monitoring functions.

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.[6] 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,[7] 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 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. 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. Thus, European investors were not likely to be familiar with the technical legal structure of unit trusts. OEICs, therefore,

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[5] Investment Management Association, *Review of the Governance Arrangements of United Kingdom Authorized Collective Investment Schemes* 21-22 (2005).

[6] Besides cross-border marketability, a second difference is that, unlike unit trusts, OEICs can organize in umbrella form, with multiple sub-funds. U.K. Securities and Investments Board, Open Ended Investment Companies Consultative Paper 93, 7-8 (1995).

[7] 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).

were anticipated to be more marketable outside the United Kingdom.[8] Note, however,

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.[9] 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.[10] Thus, the regulatory regime governing unit trusts and OEICs is essentially

the same, with a notable exception. With respect to governance, unit trusts are subject to

trust law while OEICs are subject to corporate law.

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

property is held *in trust* for the participants by the trustee" (1.1.6). 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" (7.7.1). 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

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[8] OEICs, however, were unsuccessful in penetrating European markets during the initial time period (1997-2001) analyzed in this chapter. OEIC sponsors lacked the infrastructure (i.e., distribution channels, or sales forces) on the continent. 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.   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.

[9] See, respectively, Sections 247(1) and 262(1) of the Financial Services and Markets Act, 2000, ch. 8.

[10] 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).

imposed upon them by law. The manager and the trustee are required to fulfill those other duties by this rule. (7.10.1(1), (2))

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."[11] 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."[12] The Regulations further state that the court may relieve any officer of an OEIC from liability if he or she "acted honestly and reasonably"[13], a lower standard than the "objectively prudent" standard applied to trustees under trust law.

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 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. And it is a distinction with teeth. Although public corporations in the U.K. face few lawsuits alleging breach of fiduciary duty (Armour et al., 2009), it takes only one suit to get the attention of officers and directors. Moreover, trusts have a long history of such suits (Sin, 1997), including in the fund context. 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

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[11] U.K. Financial Services Authority, *The FSA's Responsibilities Under the OEIC Regulations: The Collective Investment Scheme Information Guide* 4.1.6(1) (2004).

[12] The Open-Ended Investment Companies Regulations 2001, Section 35(2).

[13] The Open-Ended Investment Companies Regulations 2001, Section 63 and The Open-Ended Investment Companies Regulations 1996, Section 57.

the facts constitute "a breach of duty" and "a credible case against BAM for damages for professional negligence."[14] In the mutual fund context, the fiduciary laws are litigated and enforced in the courts.

While the empirical finance literature has not focused on the competition between the corporation and alternative organizational forms, the law literature has given it recent attention, from a theoretical perspective (Sitkoff 2005, 2004 and 2003; Schwarcz 2003a and 2003b; Hansmann and Mattei 1998; Langbein 2007, 2005 and 1997; Leslie 2005). The literature notes that, on the one 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, Schwarcz (2003b) states that "there are not … clear answers to the fundamental question of whether trusts are a better form of business organization than corporations." 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." This chapter 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 (Otten and Bams 2002; Quigley and Sinquefield 2000; Rhodes 2000; Allen and Tan 1999; Blake and Timmerman 1998; and Lunde, Blake and Timmerman 1998), management fees and performance of British and European funds

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[14] Steamship Mutual Underwriting Assn. Trustees (Bermuda Ltd.) and others v. Baring Asset Management Ltd. [2004] EWHC 202, Q.B.

(Otten and Schweitzer 2001), tournaments in the British fund industry (Jans and Otten 2005), and ethical mutual funds in the U.K. (Bauer, Koedijk and Otten 2005). 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 U.K., those that do acknowledge the two forms proceed to treat them as the same. For instance, Keswani and Stolin (2008), 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." In contrast to those studies, this chapter analyzes the impact of the difference in organizational form. The only other study to examine structural differences between OEICs and unit trusts is Warburton (2008). 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, was conducted on a limited data set, consisting of a cross-section and allowing for limited control variables. This chapter 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 (discussed in Section IV).

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 Khorana, Servaes and Tufano (2005), examines 56 countries in an attempt to identify those factors that determine the size of national mutual fund industries. 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 (2004) examine growth patterns of mutual fund industries around the world and the determinants of mutual fund development. Analyzing data on 40 countries, the authors find that mutual funds are more advanced in countries with better developed capital markets and market-based financial systems. They do not, however, consider differences in mutual

fund organizational form. Along the same lines, Khorana, Servaes and Tufano (2006) study factors that determine national differences in fund fee levels. 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 chapter 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 (Jones 1988, 434-39). 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 fees and expenses. For instance, Tufano and Sevick (1997) find that expenses are lower in funds governed by smaller boards, and by boards containing a greater percentage of independent directors. Del Guercio, Dann and Partch (2003) find that expenses are lower in funds with more independent directors and in funds with more independent directors serving since fund inception. In addition to fees and 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 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 (2007) examine how board structure and composition impact the likelihood of acting in the interests of investors in the specific context of mutual fund mergers. 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 (2006) analyze factors that determine board structures. Ferris and Yan (2007) study the ownership structure (public or private) of the fund's management company. 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 chapter'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.

III. Data

There is no survivorship bias-free electronic database of British mutual funds that is widely available. Consequently, I collected and manually input 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.[15] Returns data is obtained on a monthly basis from Datastream and

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[15] The Financial Times ceased publication of the Yearbook in 2001.

manually linked to funds in the data set. For funds which change organizational form, observations in the year of conversion are dropped. Funds did not report their 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 2-1 reports the age, size and number of funds organized as corporations and unit trusts, by year. Overall, corporate funds are younger than unit trusts. Although the median corporate fund is initially older than the median unit trust (because most corporations were initially formed by converting unit trusts), the median age of corporate funds drops over time, as more such funds are created *de novo* (or anew). 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 2-1 and 2-2 illustrate graphically the consistent market share gains of corporations (by number of funds in the case of Figure 2-1, and by assets under management in the case of Figure 2-2). Although corporate funds gain market share steadily, do they behave differently from trusts?

IV. Expenses

This section presents empirical results with respect to fund expenses. In order to compare the two organizational forms, measures of organizational effectiveness are required. A common measure is mutual fund expenses. Since it is generally argued that lower expenses reflect better governance (e.g., Del Guercio, Dann and Partch 2003), 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.[16]

Summary statistics for annual management fees appear in Panel A of Table 2-2. 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 2-2. 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.[17] 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 their managers (see Christoffersen, Evans, and Musto 2006; Gallaher, Kaniel, and Starks 2006; and Bergstresser, Chalmers, and Tufano 2006). 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

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[16] 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. Hence, a U.S. fund charges multiple fees, not just a management fee, making the expense ratio a better measure of fund expenses. 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. In other words, in the U.K., the management fee is effectively the same as the expense ratio. The use of management fees to proxy for fund expenses is consistent with other studies of British mutual funds (Keswani and Stolin 2008 and Otten and Bams 2002).

[17] There is no British equivalent of the U.S.'s 12b-1 fee, which U.S. funds may charge specifically to cover distribution costs. Hence, loads must perform that role in the U.K.

2-2. 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.[18,19]

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:

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

Here, i indexes fund, t indexes time (year), j indexes investment style, f indexes fund family, and α 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. δ_j represents fund investment style (such as International Equity or Domestic Money Market) and captures the different operating costs associated with different investment styles.[20] γ_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 captures managerial ability, and fund investment style captures job complexity. Hence, control variables include the prior 12-month total return of the fund and the fund's style. Control variables also include other

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[18] The reported results were obtained by equal-weighting. Similar results were obtained by value-weighting.

[19] 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.

[20] 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.

factors that, according to the literature, tend to affect fund expenses: fund size (in log form),[21] 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 fund. 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).[22]

Results using management fees as the dependent variable appear in Table 2-3. According to Table 2-3, 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 increase in fees is approximately 7 to 12 basis points per year (or 0.07% to 0.12% per annum). 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.

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[21] Due to the potential for reporting errors, fund size has been winsorized at the 1% level.

[22] I also estimate regression (1) annually and observe the time-series average of the coefficient estimates, using Fama and MacBeth (1973) to assess statistical significance. The results are not qualitatively different from the reported results. I also estimate regression (1) clustering by family affiliation instead of by fund. The results are not qualitatively different from the reported results.

The economic significance of organizational form is surprising. Its impact 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 surprising 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 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 (see Tufano and Sevick 1997; Del Guercio, Dann and Partch 2003). Finally, in accordance with the literature (e.g., Tufano and Sevick), prior fund performance does not impact fees significantly.

Note that the upward impact of the corporate form on fees is inconsistent with the finding of Warburton (2008). 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.[23] When I supplement the Warburton (2008) data set to allow for a model specification more similar to the specification used in this chapter, 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 chapter to the supplemented Warburton (2008) data, I obtain consistent results.

Results with respect to front-end loads appear in Table 2-4 (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.

The corporate form's relative advantage with respect to loads disappears, however, when loads are netted against waivers. As Table 2-4 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 seven year holding period and employing net loads. Regression results (not reported) are

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[23] Warburton (2008) employs a 2006 cross-sectional data set derived electronically from Morningstar.

substantially similar to those in Table 2-3. 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 differences in ability, job complexity, and other characteristics. All else equal,

corporate managers charge you more for doing essentially the same job.[24] 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.

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 2-2 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

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[24] 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 VI.

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[25] and the responsiveness of fund flows to advertising by management companies (e.g., Gallaher, Kaniel and Starks 2006; Jain and Wu 2002). 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.

V. Performance

The cost of investing in a fund is not the only consideration for investors. Investors ultimately care about fund performance.[26] 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 (i.e., trust law may over-deter managers), 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). That is, superior governance might be achieved at the expense of excessive risk aversion. This section, therefore, tests the "overdeterrence hypothesis" that the stricter fiduciary duties of trust law lead trusts to behave differently from corporations.

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 return is computed by subtracting from each fund's return the mean return

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[25] Lack of awareness is also seen in the insensitivity of fund flows to management fees (results are on file with the author).

[26] 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 Kacperczyk, Sialm and Zheng (2006); Elton, Gruber and Busse (2004); Chalmers, Edelen and Kadlec (1999); Carhart (1997); and Jensen (1968).

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 2-5 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 0.02% for corporate funds and 0.01% for unit trusts. This is the case regardless of whether the fund returns are computed before fees or after fees. The average style-adjusted return for corporations is not significantly different from that of unit trusts. 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 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:

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

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 λ_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 2-6, 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.[27]

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 2-5. 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

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[27] The results should not be interpreted as forecasting future returns, but rather as an evaluation of past performance.

relative to the market proxy. Alphas are calculated separately for each type of organization, on a time-series basis, using the following single-index model:

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

where $R_{i,t}$ is the average (equal-weight) one-month return of funds of type 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 α_i is the risk-adjusted excess return of type i. The analysis is restricted to U.K. domestic equity funds. Risk-adjusted abnormal returns (alphas) and factor loadings appear in Panel A of Table 2-7 for each type of organization. Neither type of organization generates an alpha significantly different from zero. The result is consistent with the mutual fund literature, which generally finds that fund managers lack security-selection skill. Moreover, each organizational form generates alphas that are not significantly different from the alphas generated by the other. That is, neither form outperforms the other to a significant degree, either statistically or economically. In addition to the time-series approach, I also take a cross-sectional approach to computing average alphas, by computing an alpha for each fund, and then by computing the equal-weight average alpha for each type of organizational form (Panel B of Table 2-7). The cross-sectional approach shows a divergence in the performance of corporations and trusts. 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, over 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 over 3.36% annually.[28]

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 (Carhart 1997). 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:

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

where SBM_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 α_i, are as defined previously. As before, I compute risk-adjusted abnormal returns (alphas) on both a time-series and a 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

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[28] 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.

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computed using all British equities contained in Datastream. HML is taken from the international returns data library compiled by Kenneth French.

Four-factor alphas are computed separately for each organizational form. Four-factor alphas and factor loadings appear in Table 2-7. Using the cross-sectional method, corporations generate statistically significant positive alphas (before fees) while trusts do not. In other words, corporate managers are able to create 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.[29]

We can also look at the percent of funds of each type that generate statistically significant positive (or negative) alphas. Using the cross-sectional results from 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 2-7, 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.

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[29] 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.

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 the results. The data set is limited to only 48 months of returns. A firm conclusion would require a longer time series 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 2-7. The cross-sectional results reveal substantial differences in the holdings of trusts versus corporations.[30] First, for both types of funds, the loading on the market factor is close to one. Since the data is limited to a 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. Third, both types of funds favor growth stocks over value stocks. However, corporations show a significantly greater tilt towards growth stocks than the trusts do. That is, corporations take on more market risk, and greater exposure to small cap and growth stocks, than trusts do.[31] 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. That is, the standard deviation of the idiosyncratic component of monthly fund returns 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

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[30] Unlike the cross-sectional approach, the time-series approach does not produce a significant difference in factor loadings because, most likely, differences in performance are washed out in averaging the monthly returns.

[31] Corporations, however, appear to follow a contrarian strategy, in contrast to the trusts' momentum strategy.

model). In other words, corporations choose portfolios with greater risk than those that trusts choose. The difference in fiduciary standards translates into a difference in willingness to incur risk.

In sum, the evidence suggests that corporations incur greater risk than trusts, but 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 2-3 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.

Figure 2-3 shows each form's relative monthly performance over 1998-2001. The Figure plots the alpha generated by corporations minus the alpha generated by trusts (α_t^C - α_t^T) each month over the time period. During the bubble years (1998-1999), neither form appears to perform better than the other, as α_t^C - α_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). Corporate funds were more nimble in navigating the market crash. In other words, it appears that 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.

VI. Endogeneity Concerns

This chapter 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

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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 following Abadie et. al. (2001), 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 2-8). This 7.1 basis point effect is roughly similar to the 7 to 12 basis point effect found in the OLS regressions in Table 2-3. 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 organanize, 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 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 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 2-9. 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 λ (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 λ 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.[32] 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

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[32] 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.

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 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 (likely by reaching a foreign clientele). 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.

VII. Conclusion

This chapter identifies, empirically, clear costs and benefits associated with competing organizational forms. The chapter 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 that trust law is 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 results indicate that the business flexibility granted to the corporate funds leads to greater risk-taking behavior and greater agency costs, but also to superior risk-adjusted performance. Overall, this chapter finds that fiduciary rules which curtail managerial discretion are effective in reducing agency costs and risk taking within the firm, but at the 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, by $1,200, 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 chapter has been able to demonstrate them empirically and to quantify their effects. Moreover, this chapter 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 does so by curtailing desirable risk-taking behavior to an extent that is value-destroying in the commercial context.

Figure 2-1
Composition of Fund Market by Number of Funds
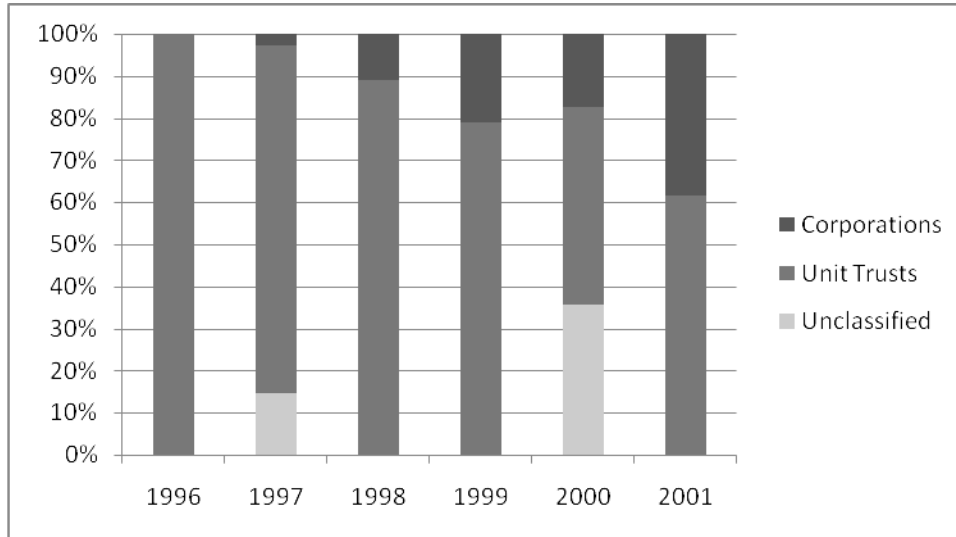
Figure 2-2
Composition of Fund Market by Assets under Management
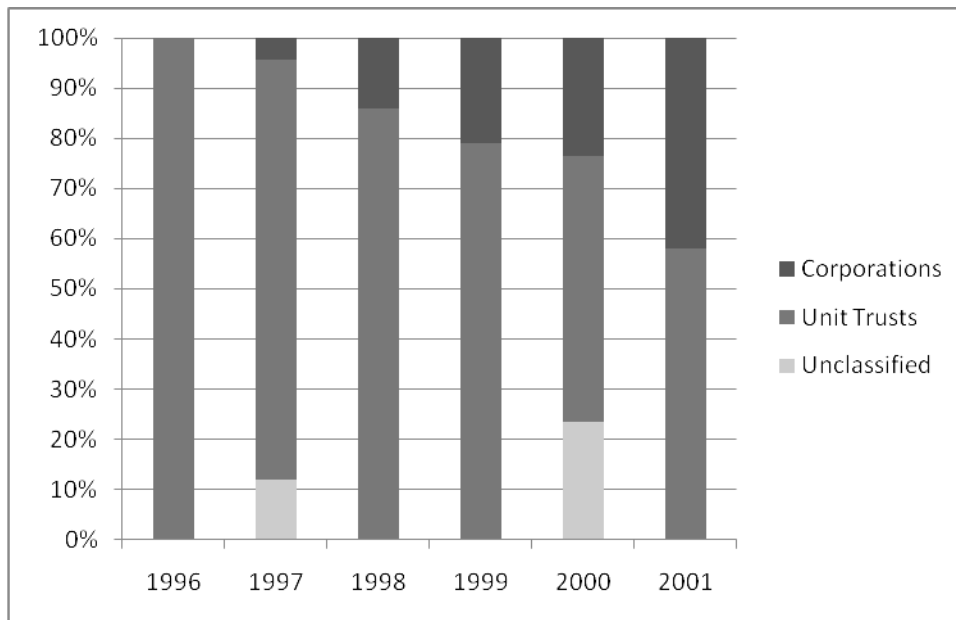
Figure 2-3
Relative Risk-Adjusted Performance

The Figure plots the alpha generated by corporate funds minus the alpha generated by trusts ($\alpha^C - \alpha^T$) in each month.
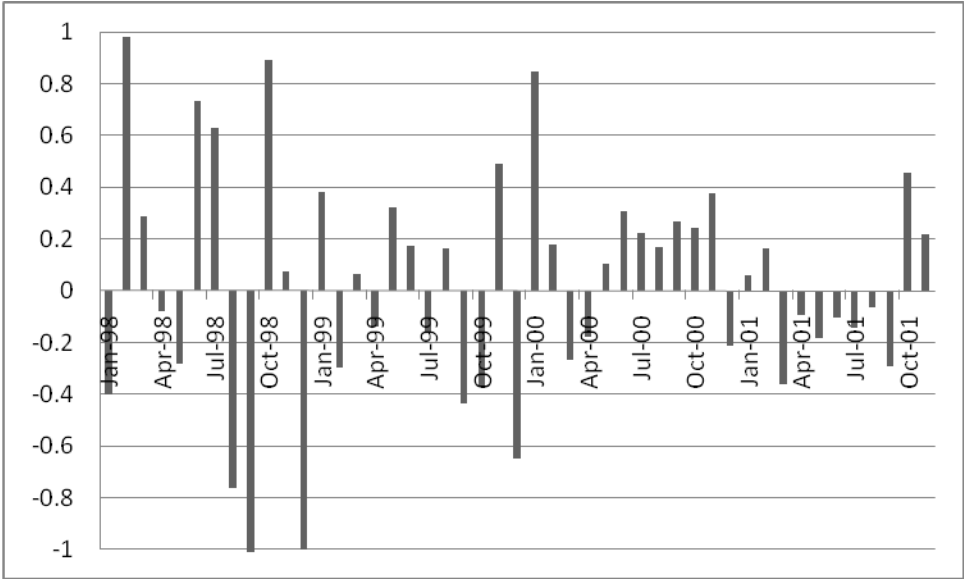
Table 2-1

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
(A) Age (years)							
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
(B) Size (£ millions)							
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
(C) Number							
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 2-2

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.
(A) Management Fees						
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***				
(B) Front-End Loads						
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***				
(C) Front-End Loads Net of Waivers						
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*				

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

Table 2-3

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	0.067	0.117
	$(0.015)^{***}$	$(0.021)^{***}$	$(0.044)^{***}$
Size (log)	0.002	0.002	0.012
	(0.005)	(0.008)	$(0.007)^{*}$
Age (log)	0.012	0.012	0.026
	(0.007)	(0.011)	$(0.011)^{**}$
Family Size (log)	-0.022	-0.022	-0.003
	$(0.005)^{***}$	$(0.007)^{***}$	(0.008)
Load	0.043	0.043	0.069
	$(0.004)^{***}$	$(0.008)^{***}$	$(0.009)^{***}$
Index Fund Dummy	-0.357	-0.357	-0.406
	$(0.046)^{***}$	$(0.063)^{***}$	$(0.066)^{***}$
12-Month Return	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)
Constant	1.064	1.064	0.735
	$(0.372)^{***}$	$(0.388)^{***}$	$(0.212)^{***}$
Style Controls	Yes	Yes	Yes
Family Controls	No	No	Yes
Fund Clusters	No	Yes	Yes
Observations	3,142	3,142	3,142
Adjusted R^2	0.26	0.26	0.50

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

Table 2-4

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	-0.339	-0.661	0.253	0.253	-0.057
	$(0.071)^{***}$	$(0.102)^{***}$	$(0.150)^{***}$	$(0.090)^{***}$	$(0.119)^{**}$	(0.198)
Size (log)	-0.024	-0.024	-0.019	-0.015	-0.015	-0.045
	(0.023)	(0.036)	(0.029)	(0.029)	(0.040)	(0.031)
Age (log)	0.172	0.172	0.100	-0.057	-0.057	-0.111
	$(0.040)^{***}$	$(0.054)^{***}$	$(0.044)^{**}$	(0.047)	(0.061)	$(0.052)^{**}$
Family Size (log)	-0.044	-0.044	-0.155	-0.086	-0.086	0.103
	$(0.022)^{**}$	(0.037)	$(0.035)^{***}$	$(0.028)^{***}$	$(0.043)^{**}$	$(0.059)^{*}$
Management Fee	0.915	0.915	1.081	0.131	0.131	0.264
	$(0.113)^{***}$	$(0.174)^{***}$	$(0.167)^{***}$	(0.105)	(0.149)	$(0.141)^{*}$
Index Fund Dummy	-2.309	-2.309	-0.808	-1.557	-1.557	-0.599
	$(0.261)^{***}$	$(0.411)^{***}$	$(0.320)^{**}$	$(0.144)^{***}$	$(0.175)^{***}$	$(0.230)^{***}$
12-Month Return	0.002	0.002	0.002	-0.001	-0.001	-0.000
	$(0.001)^{**}$	$(0.001)^{***}$	$(0.001)^{**}$	(0.002)	(0.002)	(0.001)
Constant	3.888	3.888	5.342	2.408	2.408	-1.125
	$(0.509)^{***}$	$(0.768)^{***}$	$(0.997)^{***}$	$(0.615)^{***}$	$(0.868)^{***}$	(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^2	0.25	0.25	0.63	0.07	0.07	0.49

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

Table 2-5

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).

| | | - - - - Mean - - - - | | | | | |
| | | Before | After | - - - - - - - - - Before Fees - - - - - - - - - - - | | | |
	Obs.	Fees	Fees	Median	Std. Dev.	Min.	Max.
		(A) Time-Series					
Corporations	58	0.02	0.02	-0.02	0.53	-1.32	1.97
Unit Trusts	58	0.01	0.01	0.01	0.10	-0.34	0.30
Difference (Corporation-Unit Trust)		0.02	0.01				
		(B) Cross-Sectional					
Corporations	123	-0.05	-0.05	-0.05	0.49	-1.35	1.81
Unit Trusts	969	0.02	0.02	0.01	0.48	-6.03	2.96
Difference (Corporation-Unit Trust)		-0.07	-0.07				

[***]1% significance; [**]5% significance; [*]10% significance

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Table 2-6

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^2	0.00	0.01	0.01

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

Table 2-7

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. In Panel A, risk-adjusted returns are computed on a time-series basis (by computing on each month an average one-month return for each type of organizational form, and then computing a risk-adjusted return over the period for each type of organizational form). In Panel B, 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). 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
			(A) Time-Series				
Single-Factor Model							
Corporations	0.0994	-0.0125	0.9927				
	(0.3041)	(0.3021)	(0.0724)***				
Unit Trusts	0.1127	0.0111	0.9809				
	(0.2759)	(0.2755)	(0.0657)***				
Difference	-0.0133	-0.0236	0.0118				
(Corp-Trust)	(0.0742)	(0.0739)	(0.0177)				
Four-Factor Model							
Corporations	0.0605	-0.0511	1.0524	0.1299	-0.0413	-0.0030	
	(0.2700)	(0.2684)	(0.0664)***	(0.0353)***	(0.0569)	(0.0239)	
Unit Trusts	0.0804	-0.0211	1.0367	0.1228	-0.0450	0.0002	
	(0.2392)	(0.2388)	(0.0588)***	(0.0313)***	(0.0504)	(0.0212)	
Difference	-0.0199	-0.0300	0.0157	0.0071	0.0037	-0.0032	
(Corp-Trust)	(0.0768)	(0.0765)	(0.0189)	(0.0100)	(0.0162)	(0.0068)	
			(B) Cross-Sectional				
Single-Factor Model							
Corporations	0.1605	0.0567	1.1194				6.6/ 2.2
	(0.0980)	(0.0982)	(0.0353)***				
Unit Trusts	-0.1238	-0.2231	1.0323				6.8/ 5.0
	(0.2324)	(0.2314)	(0.0517)***				
Difference	0.2843	0.2798	0.0871				-0.2/-2.8
(Corp-Trust)	(0.3606)	(0.3602)	(0.0823)				
Four-Factor Model							
Corporations	0.1582	0.0541	1.1041	0.1418	-0.0646	-0.0157	7.6/ 3.1
	(0.0933)*	(0.0932)	(0.0325)***	(0.0177)***	(0.0120)***	(0.0063)**	
Unit Trusts	0.0443	-0.0596	0.9876	0.0963	-0.0455	0.0099	7.3/ 4.7
	(0.1079)	(0.1076)	(0.0205)***	(0.0135)***	(0.0140)***	(0.0056)*	
Difference	0.1139	0.1137	0.1165	0.0455	-0.0191	-0.0256	0.3/-1.6
(Corp-Trust)	(0.1757)	(0.1756)	(0.0378)***	(0.0237)*	(0.0228)	(0.0095)***	

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

Table 2-8

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 (first row) or 1 to 4 matching (second row). 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 2-9

**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)***
Lambda		-0.030 (0.029)
Size (log)	0.149 (0.056)***	
Age (log)	-0.028 (0.076)	0.030 (0.007)***
Family Size (log)	0.910 (0.149)***	-0.000 (0.009)
Load	-0.263 (0.058)***	0.070 (0.004)***
Index Fund Dummy	-0.822 (0.383)**	-0.401 (0.033)***
12-Month Return	0.001 (0.003)	-0.000 (0.000)
Constant	-19.548 (3.627)***	0.807 (0.407)**
Style Controls	Yes	Yes
Family Controls	Yes	Yes
Rho		-0.119
Sigma		0.254
Observations	3,142	3,142

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

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Chapter III

The Effects of Competition in the Financial Services Industry

Abstract

This chapter analyzes the effects of competition in the financial services industry by exploiting a change in British mutual fund regulations in the 1990s. In 1997, British regulators removed a requirement that mutual funds organize as trusts, freeing them to organize as either trusts or corporations (trust law subjects fund managers to stricter fiduciary responsibilities than corporate law does). Exploiting this regulatory shock, I trace non-trivial linkages among organizational form, industry competition, risk taking, and performance. After the removal of this entry barrier, the industry experienced an increase in competition. Increased competition led to a significant increase in the risk-taking behavior of funds. Results suggest that increased competition generated an improvement in risk-adjusted performance. However, competition did not produce tangible cost savings for consumers, though it did mitigate certain harmful investor behaviors, such as chasing past performance. These results indicate that deregulation of the financial services industry facilitates risk-seeking behavior within the industry and improves its performance (even after adjusting for the increased risk taking), though it does not lower the direct costs of financial services for consumers.

I. Introduction

It is widely assumed that deregulation of the U.S. financial services industry generated excessive risk taking, which ultimately increased systemic fragility, culminating in the current financial crisis. Today's events underscore the importance of determining empirically the consequences of financial deregulation on the behavior of financial services firms. This chapter analyzes deregulation's effects on the financial services industry by studying a change in British regulations in the 1990s that opened the mutual fund industry in the U.K. to organizational competition. This study finds that the change in the British regulatory regime had tangible effects on behavior within the industry.

While studies have analyzed the deregulation of the U.S. banking system that has taken place since the late 1970s, the limited and gradual nature of that deregulation makes its effect on the U.S. financial services industry difficult to identify. U.S. states deregulated their banking systems individually and in piecemeal fashion. Federal regulations were repealed gradually. This slow and fragmented deregulation of the U.S. banking sector makes it difficult to determine whether and how the industry systematically changed following deregulation.

This chapter, in contrast, analyzes the effect of an abrupt regulatory change that applied at once to an entire financial sector, the British mutual fund industry. Prior to 1997, British regulations required that all mutual funds be legally organized as trusts. In 1997, this regulatory restriction was loosened, and funds were permitted to organize as either trusts or corporations. The main difference between the two types of funds is that trust law subjects fund managers to stricter fiduciary responsibilities than corporate law does. The regulatory change thus permitted entrants (corporations) into the sector with lower fiduciary standards than those of incumbents (trusts). The primary motivation of this chapter, therefore, is to determine whether the elimination of that entry barrier impacted the behavior of mutual funds within the British fund industry and/or their customers.

The British experience is a useful one to study, as it provides an example of a regulatory shock that applied abruptly to an entire financial sector, not gradually or in piecemeal fashion. Moreover, mutual funds are clear and transparent organizations that generate abundant data on firm performance, risk taking and costs to consumers. Finally, mutual funds are important savings and investment vehicles for individual investors, rivaling the importance of depository institutions. Hence, regulatory changes in the mutual fund industry have direct and significant ramifications for consumers.

The results indicate that, after the restriction on organizational form was lifted in 1997, organizational competition ensued, and funds became more willing to incur risk. Following the deregulation, the industry experienced an overall increase in competition. Increased competition within the industry led to a significant increase in the risk-taking behavior of funds. Moreover, the evidence suggests that competition also generated an improvement in risk-adjusted performance. That is, this chapter traces a non-trivial link

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among organizational form, the degree of industry competition, and the risk taking behavior and performance of the industry. Finally, I do not find evidence that competition resulted in tangible cost savings for consumers, as the cost to consumers of investment services significantly increased with the onset of organizational competition. However, competition appears to have mitigated certain harmful investor behaviors, such as chasing past performance and neglecting fund expenses. These results indicate that deregulation facilitates risk-seeking within the financial services industry and improves its performance (even after adjusting for the increased risk taking), though it does not lower the direct costs of financial services for consumers.

One caveat is that this analysis examines only the direct effect of competition on the consumer. Deregulation of the mutual fund industry and the resulting increase in competition can have certain indirect benefits for consumers. For example, deregulation may result in a greater number of funds entering the market, which in turn may increase the price efficiency of the financial markets. Or, deregulation may attract more assets under management by the industry and, hence, increase the liquidity of the stock market, generating greater price efficiency. The data analyzed in this chapter is not rich enough to quantify any such indirect effects. However, the analysis does reveal that no direct, tangible cost savings from deregulation were passed on to consumers. A second caveat is that, due to data limitations, we do not have sufficient power to determine the statistical significance of the performance results. In spite of that limitation of the time series, the evidence does suggest that the difference in performance is rather sizeable in economic terms.

The next section of the chapter reviews the related literature and sets forth the hypotheses to be tested. Section III describes why the British mutual fund industry is a unique laboratory for the study of the effects of competition on the financial services industry, and describes the data to be analyzed. Section IV establishes the link between the regulatory change in the U.K. and the subsequent increase in competition in the British mutual fund industry. Section V presents the main empirical results. Section VI concludes.

II. Related Literature and Hypotheses

There is a wide literature in industrial economics exploring the relationship between industry structure and firm behavior. The industrial economics literature has observed that, following deregulation, the reallocation of market share among heterogeneous firms or plants is a substantial factor in the success and structure of an industry. By increasing competitive pressure, deregulation forces inefficient firms to improve performance, shut down, or merge (Winston, 1998). The literature concludes that reallocation of market share toward better, more efficient firms produces productivity gains within an industry or economy (Haltiwanger, 1997; Forster, Haltiwanger, and Krizan, 1998). Despite this literature's extensive exploration of the relationship between industrial structure and firm behavior, the role of firm organizational form in this relationship remains largely unexplored. In contrast, this chapter examines how industry structure and firm behavior are impacted by the removal of restrictions on the way firms may formally organize themselves.

The conclusions reached by the literature on the industrial organization of non-financial firms echo those reached by the literature on the industrial organization of the banking industry. The banking literature has examined how the industry and bank behavior are impacted by regulatory changes. Much of this literature on the banking industry, however, focuses on the effects of deregulation beginning in the late 1970s in the U.S. (in particular, the removal of restrictions on interstate banking, intrastate branching, interest rates on time deposits, and business activities). See, for instance, Jayaratne and Strahan (1998), Stiroh and Strahan (2003) and Stiroh (2000). Despite the banking literature's focus on how the banking industry and bank behavior are impacted by deregulation, little is known about how they are impacted by the removal of restrictions on bank organizational form. One of the few studies to investigate the impact of bank organizational form on bank conduct and the banking industry is Mehran and Suher (2009). That study examines the effect at the bank and industry level of S-corporation versus C-corporation status of banks. However, S-corporations and C-corporations are both corporations, and hence the study does not fully capture differences across organizational forms (rather, it captures differences in tax treatment). Other studies investigate bank organizational structure (i.e., the size or hierarchy of the bank)

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instead of bank organizational form (i.e., how the firm is legally organized) (Berger, Miller, Peterson, Rajan, and Stein, 2005; Liberti, 2004; Liberti, 2005; Canales and Nanda, 2008; and Degryse, Laeven, and Ongena, 2009).

This chapter also contributes to the corporate finance literature that relates managerial incentives to corporate decisions. Empirical work has investigated the effect of managerial incentives on policies such as capital structure, risk management, and investments (see, for example, Bertrand and Schoar, 2003; Graham, Harvey, and Puri, 2008; and Chava and Purnanandam, 2009). While the current literature has focused on the role of managerial incentives, this chapter suggests that firm organizational form also plays an important role in managerial decisions. Since managers want to avoid personal liability, this chapter extends the current literature on managerial incentives to encompass organizational form and fiduciary responsibilities.

The mutual fund literature also has overlooked the impact of organizational form on the fund industry and fund behavior. Empirical studies of mutual funds have mostly focused on the ability of mutual funds to beat the market (e.g., Brown and Goetzmann, 1995,1997; Grinblatt and Titman, 1994; Elton, Gruber and Blake, 1996; Ferson and Schadt, 1996; Wermers, 2000), the relationship between fund performance and fund flows from investors (e.g., Sirri and Tufano, 1998; Zheng, 1999), the relationship between fund manager compensation and risk taking (e.g., Chevalier and Ellison, 1997; Brown, Harlow and Starks, 1996), and the relationship between fees and performance (e.g., Ippolito, 1989). Only recently have funds been studied as an industry. Studies have examined the determinants of mutual fund starts (Khorana and Servaes, 1999, 2007), exits (Zhao, 2005), and mergers (Khorana, Tufano, and Wedge, 2007). Massa (2003) analyzes the relationship between performance and the degree of product differentiation in the mutual fund industry. However, the link between industry structure and fund organizational form remains largely unexplored. The literature assumes that, with respect to legal form, funds are perfect substitutes regardless of how they are organized.

An exception is Warburton (2009). Warburton (2009) examines cross-sectional variation in British mutual funds during the period of organizational competition (1997-2001), to identify whether funds behave differently when organized as trusts versus

corporations. That study finds that funds organized as corporations, as opposed to trusts, charge significantly greater management fees and incur significantly greater risk, while generating similar risk-adjusted performance. But Warburton (2009) essentially exploits only cross-sectional variation in organizational form, unlike this study which exploits time variation within the industry. This chapter examines a longer time series, including the period before organizational competition (1994-1996), in order to assess the impact of increased competition on the fund industry. That is, while Warburton (2009) explores the impact of organizational form on fund behavior and performance, this chapter examines the impact of deregulation on the industry, an important consideration for today's policy makers focusing on financial sector stability. As a consequence, this chapter is also able to capture how trusts *respond* to increased competition, by comparing how trusts behave in a less competitive environment to how they behave in a more competitive environment. That issue is unaddressed by Warburton (2009).

This chapter hypothesizes that many aspects of the financial services industry may be impacted by the increased competition that followed the lifting of restrictions on firm organizational form. The study's first hypothesis is that increased competition in the British mutual fund industry will significantly increase the degree of risk-taking within the industry. The mutual fund literature has shown that fund managers sometimes have an incentive to manipulate their risk taking in order to get ahead in the "tournament" among fund managers for additional fund flows. (Brown, Harlow and Starks, 1996; Chevalier and Ellison, 1997; and Goetzmann, Ingersoll, Spielgel and Welch, 2007). Facing greater competition, fund managers may focus more on short-term gains. And one way to achieve greater short-term gains is to make riskier bets. Hence, the increased competition in the British fund industry may be expected to produce greater risk-seeking behavior.

Second, the study also examines whether deregulation has an impact on performance. That is, the study explores whether increased competition within the industry adds value for investors by comparing abnormal returns from the period before organizational deregulation to those from the period after.

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The study's third hypothesis is that organizational competition has a positive impact on the link between performance and market share. The industrial organization and banking literatures have established that deregulation of an industry produces substantial reallocation of market share toward the better firms. This study examines whether that result holds with respect to deregulation of organizational form in the British fund industry. The study tests whether we see a strengthening of the link between performance and market share in the fund industry following the regulatory change that permitted organizational competition. If so, we have evidence that organizational competition generates tangible, positive effects which were previously hindered by regulatory restrictions.

The changing composition of the industry may impact not just managerial behavior but investor behavior as well. Greater competition may alter investor sensitivities to fund performance and expenses, as greater competition may provide investors with greater choice and greater information. The study will thus explore whether there was a change in the sensitivity of fund flows to prior fund performance and to fund expenses.

The study's final hypothesis is that permitting competition within the financial services industry impacts the direct costs consumers must bear. The study compares the unexplained components of fund expenses in the years prior to deregulation of the British fund industry to the unexplained components in the following years.

III. The British Fund Industry and the Data

This study focuses on mutual funds in the United Kingdom. Prior to 1997, British open-end mutual funds were required to organize exclusively as trusts. 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.[1] In 1997, British regulators, for the first time,

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[1] 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. 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

permitted open-end mutual funds to organize as corporations.[2] Since 1997, open-end

mutual funds have been allowed to freely choose how to organize: as either a trust or a

corporation.

British mutual funds are governed by the same set of regulations, regardless of

how they are organized, with one notable exception. With respect to governance, unit

trusts are subject to trust law while corporate funds are subject to corporate law. Trust

law subjects fund managers to stricter fiduciary responsibilities than corporate law does.

This difference in fiduciary standards is a fundamental distinction between trusts and

corporations.[3]

Corporate officers and directors owe their institutions fiduciary duties of care and

loyalty. Similarly, managers of trusts also owe fiduciary duties of care and loyalty.

While similar, the fiduciary duties under trust law are stricter than those under corporate

law. For instance, under both corporate law and trust law, the duty of care requires that

officers and directors 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 is, corporate law

recognizes that reasonable decisions can sometimes result in unfavorable outcomes. That

deference is embodied in the business judgment rule, which presumes that, in making

as trusts rather than as corporations (Sin, 1997). That open-end funds organize as trusts subsequently
became a requirement codified in the regulations.

[2] The U.K. permitted funds to organize in corporate form to move their fund industry toward the more
international corporate standard and to facilitate cross-border marketability. See Warburton (2009).

[3] In the British fund industry, trusts and corporations are taxed, regulated and structured in a similar
manner. While the corporate funds have a board of directors and the trusts do not, that difference is not
substantive. Boards of corporate funds are required to have the fund's manager as a member, but no
minimum board size is specified and no independent directors are required to sit on the board. Hence,
these boards predominately consist of only one director, the fund's manager. In other words, the board of a
corporate fund in the U.K. is not an active monitor comprised of independent directors, as the board is in
the U.S. fund industry. They exist merely on paper.
  Furthermore, in a British fund organized in trust form, the trustee performs essentially a custodial role,
unlike the active boards of trustees in U.S. trusts. The trustee's custodial role is performed in a corporate
fund by the "depository." Both the trustee and the depository must be independent entities and are
responsible for the safe keeping of investor assets. Neither the trustee nor the depository performs active
monitoring functions. Because of these structural parallels, the primary palpable difference between trusts
and corporations in the British fund industry is the difference in fiduciary laws.

business decisions, corporate officers and directors complied with the duty of care. The business judgment rule places on a plaintiff challenging a business decision in a corporation the burden of rebutting the presumption. In contrast, trust law applies no business judgment rule in reviewing managerial actions within trusts. In effect, the burden is placed upon trust management to show that their business decisions were prudent despite the unfavorable outcome. 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, is also stricter under trust law than under corporate law. 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. Consequently, a requirement that funds organize in trust form functions as an entry barrier.

This difference in fiduciary standards applicable to trusts and corporations in the British fund industry is not merely a hypothetical distinction. It is a distinction with teeth. The fiduciary laws are litigated and enforced in the courts. 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. Citing BAM's fiduciary responsibilities under trust law, the court stated that the facts constitute "a breach of duty" and "a credible case against BAM for damages for professional negligence."[4] As a result, the 1997 regulatory change allowing funds to choose their organizational form has generated a rich set of data.

There is no survivorship bias-free electronic database of British mutual funds that is widely available. Consequently, I collect and manually input fund-level data from consecutive print editions of the *Unit Trust and OEICs Yearbook*, which is published

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[4] Steamship Mutual Underwriting Assn. Trustees (Bermuda Ltd.) and others v. Baring Asset Management Ltd. [2004] EWHC 202, Q.B.

annually by the Financial Times. The Yearbooks contain data on fund characteristics, such as 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 or a trust, for all funds in the United Kingdom. Data is obtained on an annual basis for the years 1994 through 2001, inclusive. Returns data is obtained on a monthly basis from Datastream and manually linked to funds in the data set.

Table 3-1 provides statistics on the British fund industry. The average fund has £75.5 million under management in the three year period before deregulation, and £126 million in the three year period after. The industry consists of £317 billion in assets under management in the three years before deregulation, and £565 billion in the three years after. The total number of funds in the industry grows from 1,698 before deregulation to 2,453 after. The number of trusts declines, however, from 1,698 before to 1,574 after.

IV. Industry Competitiveness

This section establishes the link between organizational deregulation in the U.K. and increased competition within the British fund industry. This section shows that the regulatory change allowing greater flexibility in organizational form resulted in a more competitive industry. Allowing greater choice in how firms organize resulted in more players within the industry, generating greater competition within the industry and more choices for consumers.

Table 3-1 shows that, following organizational deregulation, the number of fund entrants increases. In the three years prior to organizational deregulation, 282 new funds are formed, while in the three years following deregulation, 405 new funds are formed. By allowing fund sponsors to, in effect, choose the applicable fiduciary standard, British regulators appear to have lowered entry barriers within the fund industry. Table 3-1 also shows that the number of exits increased following organizational deregulation. While 71 funds were dissolved in the three years before deregulation, 167 were dissolved in the three years following deregulation.

Not surprisingly, the dissolved funds were poor performers, underperforming their benchmarks both before and after deregulation. Panel (D)(2) shows that the average

style-adjusted return of funds dissolved before deregulation was -3.88% (in the year prior to their dissolution), while for funds dissolved after deregulation, it was -1.40%. This change reflects an increase in the exit rate of the relatively "better" underperformers. In other words, after organizational deregulation, fund dissolution becomes more sensitive to prior performance. There is greater pressure on underperforming funds to dissolve after deregulation than before. It appears that the restriction on organizational form shielded the market somewhat from competitive pressure. The lifting of the regulatory restriction increased competitive pressure, bringing better governance to the industry.

In addition, following deregulation, investors had a greater range of investment styles from which to choose. Panel (E) of Table 3-1 shows the number of broad investment style categories, the number of styles within each category, and the number of funds within each category. While a total of 27 different investment styles exist in the period before organizational deregulation, 46 investment styles exist in the period after. Moreover, following deregulation, the number of styles within each style category increases for most style categories. The number of styles in the Domestic Balanced category increases from 7 to 9, the number of styles in the Domestic Bond/Money Market category increases from 3 to 7, the number of styles in the Domestic Specialist category increases from 4 to 7, and the number of styles in the International Equity category increases from 7 to 17. There is no change in the number of styles within the Domestic Equity, International Balanced or International Bond categories. And in no instance does the number of funds within a category decrease following deregulation. Thus, following deregulation, within any style category, investors have more styles from which to choose and more funds from which to choose.

The link between organizational deregulation and increased competition can also be established by computing the Herfindahl index for the industry. The Herfindahl index measures the degree of competition within an industry (the lower the index, the greater the competitiveness). Table 3-2 shows the Herfindahl index for the entire British fund market, and for the entire U.S. fund market. The index is computed for each market on both (i) an annual basis and (ii) a time period basis (by taking a weighted average of the annual index values in the three years before deregulation, and in the three years after deregulation). The U.S. experiences no change in its average index from the three years

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before deregulation to the three years after. In contrast, the UK experiences a significant decline in its average index. The UK experiences a 22% decline (significant at 5%) in its index from the period before deregulation to the period after. This trend can also be seen in the below regression results:

$$H_{c,t} = 22.49 - 0.07\ PostDummy_{c,t} + 10.52\ BritishDummy_{c,t} - 6.91\ (PostDummy * BritishDummy)_{c,t}$$
$$\quad\ (1.26)^{***}\ (1.67) \qquad\qquad (1.78)^{***} \qquad\qquad\qquad (2.36)^{**}$$

where H is the Herfindahl index for country c in year t, PostDummy is an indicator valuable indicating that year t occurs after deregulation, BritishDummy is an indicator variable for the U.K. as opposed to the U.S., and PostDummy * BritishDummy is an interaction term. The significant negative coefficient on the interaction term shows that competition increased disproportionately more in the U.K. as compared to the U.S. after 1997. This trend can also be seen in Figure 3-1. The Figure plots the Herfindahl index for each country over time. The Figure shows that, before the regulatory change in 1997, the U.S. was more competitive than the U.K. After the regulatory change, the U.K. converges towards the U.S. standard. The common conclusion is that, following the regulatory change in 1997, competition increased disproportionately more in the U.K. than in the U.S.. The evidence thus shows that increased competition in the British market followed the loosening of the restriction on organizational form.

V. Empirical Analysis

This section examines empirically the impact of increased competition on the industry. Specifically, this section looks at the impact of increased competition on risk taking, performance, market share, consumer behavior and consumer costs.

(a) Managerial Risk Taking

The subsection examines whether competition impacts risk-taking behavior within the financial services industry. Specifically, as the industry becomes more competitive, might firms become more inclined to incur risk? This subsection thus explores whether the removal of the entry barrier in the British fund industry had an impact on managerial risk-seeking behavior within the industry.

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The results indicate that the liberalization generated an increase in risk taking within the industry. Table 3-3 shows the standard deviation of monthly returns in the period before organizational competition and in the period after. Panel A computes the standard deviation of returns on a time-series basis in each period, using an equal-weight average of all fund returns in each month. Panel B computes the standard deviation of returns on a cross-sectional basis, by calculating a standard deviation for each fund in each period, and then averaging over all funds in the period on an equal-weight or value-weight basis. Four measures of fund returns are used: (i) raw returns, (ii) market-adjusted returns (wherein the total market return is subtracted from the fund's raw return), (iii) style-adjusted (median) returns (wherein the median return of the applicable style is subtracted from the fund's raw return), and (iv) style-adjusted (mean) returns (wherein the mean return of the applicable style is subtracted from the fund's raw return). Returns are computed before management fees, and the data set is restricted to U.K. domestic equity mutual funds.   The results reveal that the industry's degree of risk taking increases across the board following deregulation. That is, volatility increases following deregulation on both a time-series basis and a cross-sectional basis, and regardless of how returns are computed (raw, market-adjusted, or style-adjusted). Similar results are obtained for the subset of the industry consisting of only trusts. That is, the increased risk taking is not driven entirely by the entry of the corporations. Rather, the trusts respond to the removal of the entry barrier by increasing their own risk-taking behavior.

In addition to revealing an increase in risk taking, Table 3-3 also reveals the manner in which risk taking increases. The last columns of the Table present measures of idiosyncratic risk. Both single-factor and four-factor models indicate that the idiosyncratic component of monthly returns increases following organizational deregulation.   This is true under both the time-series and the cross-sectional approaches.[5] And idiosyncratic risk increases for both the entire industry and for the subset of trusts. The results indicate that funds respond to deregulation not simply by taking on more systemic risk, but also by taking on more idiosyncratic risk. That is, the evidence

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[5] An exception is the result from the single-factor model computed using the value-weighted cross-sectional method. That aberrant result, however, may be due to the fact that the value-weighting must be done with annual, not monthly, weights.

suggests that fund managers increasingly invest in high idiosyncratic-risk investments following deregulation.

One explanation for the increase in idiosyncratic risk might be that, as more competitors enter the industry, funds increasingly try to compete along new or more narrowly-defined attributes in an effort to distinguish themselves from the rest. For instance, funds may cater to narrower clienteles by adopting more exotic specializations. This interpretation is supported by the increasing number of investment styles subsequent to deregulation (Table 3-1). In other words, as more funds enter the industry, funds respond by increasingly catering to the specific needs of a segment of investors and, by doing so, increase idiosyncratic volatility. However, this is not a likely explanation of the results in Table 3-3, as that table is restricted to domestic equity funds. That is, funds that follow the same style are exhibiting this risk-shifting behavior. An alternative explanation is that increased competition has lead fund managers to *actively* increase idiosyncratic risk. This behavior is consistent with the tournament literature, in which fund managers manipulate their risk taking in order to get ahead in the tournament with other fund managers for additional flows.

In sum, increased competition in the British fund industry has produced greater risk-seeking behavior. In part, this is a product of the nature of the new organizational form. With looser fiduciary responsibilities, corporate funds should be expected to incur greater risk than the incumbent trusts. But the results reveal that the trusts *respond* to the increased competition from the corporations by increasing their own risk-seeking behavior. Matching the risks the corporations are incurring, the trusts exhibit herding behavior. Thus, the greater risk-seeking is not merely an effect of organizational form, but also of greater market competition.

(b) Performance

Although fund managers take on more risk following deregulation, do they generate superior performance after adjusting for the increase in risk? This subsection examines whether the loosening of the entry barrier has added value for investors by comparing risk-adjusted performance in the period before deregulation to that after

deregulation. Table 3-4 shows the risk-adjusted abnormal returns and factor loadings from a single-factor model and a four-factor model.

The single-factor model is a regression of monthly fund returns (in excess of the risk-free rate) on the return on a market proxy (in excess of the risk-free rate). The intercept (or alpha) in a single-factor model gives the over- or under-performance of funds relative to the market proxy. In Panel A, a time-series approach is used to compute an alpha in each period using the following single-index model:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i(R_{ALL,t} - R_{f,t}) + \varepsilon_{i,t} \qquad (1)$$

where $R_{i,t}$ is the average (equal-weight) one-month return for all funds in the industry 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 in month t, and α_i is the risk-adjusted excess return. In Panel B, a cross-sectional approach is used to compute the single-factor alpha in each period by computing a single-factor alpha for each fund individually, and then computing the average alpha in each period on an equal weight basis.

The four-factor model (following Carhart 1997) includes, in addition to the market return, factors for size, book-to-market, and momentum. Formally, four-factor alphas are calculated from the following model:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i(R_{ALL,t} - R_{f,t}) + s_iSMB_t + h_iHML_t + m_iMOM_t + \varepsilon_{i,t} \qquad (2)$$

where SBM_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. As with the single-factor model, monthly fund returns, $R_{i,t}$, are computed using both a time-series approach (Panel A) and a cross-sectional approach (Panel B). The variables $R_{ALL,t}$, $R_{f,t}$ and α_i are as defined previously. To compute the size factor (SBM_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. The analysis is restricted to U.K. domestic equity funds.

Risk-adjusted returns (alphas) and factor loadings in each period appear in Table 3-4. Prior to deregulation, the industry is generating four-factor alphas of about zero, before fees. Following deregulation, the industry's performance improves to about 10 basis points per month, before fees. On an after-fee basis, the industry generates abnormally low performance prior to deregulation, with a four-factor alpha of about -10 basis points per month. The industry is destroying value prior to deregulation. The industry's value-destruction, however, is eliminated after deregulation. In other words, the entry barrier had a real bite on the industry's net performance. In all, we see that deregulation results in improved performance on both a before-fee and an after-fee basis. The effect is economically significant, equal to 8 to 10 basis points per month (in the cross-sectional and time-series approaches, respectively). A similar pattern exists for the subset of the industry composed of trusts. The trusts improve their performance by 6 to 12 basis points per month. That is, there is evidence that deregulation has generated economically meaningful gains for the industry as a whole and for the subset of trusts.

The last column of Panel A gives the percent of funds that generate significant positive or negative alphas in each period. While only 4.8 percent of funds in the industry generate significant positive four-factor alphas before deregulation, after deregulation 6.6 percent of the industry and 7.3 percent of trusts generate positive alphas. Again, the evidence points to improved performance for both trusts and the overall industry following deregulation. Moreover, 5.6 percent of funds destroy value before deregulation, while only 3.2 percent of the industry and 3.5 percent of trusts do so after

deregulation. Thus, the evidence again points to improved performance following deregulation. (The one-factor model produces similar results).

In sum, the evidence suggests that deregulation improves performance. One caveat, however, is required. The tests do not have sufficient power to persuasively establish the statistical significance of the results. The data set is limited to only three years of monthly returns before deregulation and four years after. A firm conclusion would require a longer time series of returns. But while we cannot say conclusively that deregulation improves performance, the evidence does suggest that result. Moreover, the evidence suggests that this difference in performance is quite large economically, amounting to approximately 0.72% to 1.44% per year.

The factor loadings in Table 3-4 indicate that funds take on more systematic risk following deregulation. First, funds take on significantly greater market risk following deregulation. Second, with respect to size, funds exhibit a tilt towards small cap stocks in both periods. However, funds show a significantly greater tilt towards small cap stocks following deregulation. Third, while funds show a significant value tilt before deregulation, they switch to a significant growth tilt following deregulation. Finally, funds switch from a contrarian strategy before deregulation to a momentum strategy following deregulation. That is, following organizational deregulation, funds become more risky than the market index, and take on greater exposure to small cap, growth, and momentum stocks.[6] We also saw in Table 3-3 that, in addition to taking on greater systematic risk, funds also take on more idiosyncratic risk following deregulation. That is, organizational competition introduces greater risk into the market, both idiosyncratic and systematic. This result holds for both the entire industry and for the subset of trusts.

(c) Market Share

This subsection analyzes whether organizational competition has had dynamic reallocation effects within the industry. The industrial organization and banking literatures have established that deregulation of an industry produces efficiencies through

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[6]The time-series approach does not produce the significant difference in factor loadings seen in the cross-sectional approach, possibly because differences wash out in the aggregation process used in the time-series approach.

a substantial reallocation of market share toward the better firms over time (e.g., Stiroh and Strahan 2003; Stiroh 2000; Winston 1998; Haltiwanger 1997; Forster, Haltiwanger, and Krizan 1998). Does that result holds with respect to deregulation of organizational form? We can test whether we see a strengthening of the link between performance and market share in the fund industry following the regulatory change that permitted organizational competition. If we see such an effect, we have evidence that organizational competition generates positive effects which were previously hindered by regulatory restrictions.

Market share is computed for each fund by dividing fund assets by industry assets. Changes in market share are then computed from t-1 to t ($\Delta MS_{t-1, t}$) and from t to t+1 ($\Delta MS_{t, t+1}$). To understand how organizational deregulation impacts the relationship between market share and performance, each change in market share variable is regressed, in turn, on Post 1997 (a time period dummy equal to 1 for an observation after 1997 and 0 for an observation before 1997), the one-year return from t-1 to 1, an interaction term, and control variables, as follows:

$$\Delta MS_{t-1, t} = \alpha + \beta_1 \, Post1997_t + \beta_2 \, R_{t-1, t} + \beta_3 \, Post1997_t \, R_{t-1, t} + \beta_4 X_{t-1} + \delta_j + \varepsilon_t \quad (3)$$

$$\Delta MS_{t, t+1} = \alpha + \beta_1 \, Post1997_t + \beta_2 \, R_{t-1, t} + \beta_3 \, Post1997_t \, R_{t-1, t} + \beta_4 X_{t-1} + \delta_j + \varepsilon_t \quad (4)$$

Here, t indexes time, j indexes investment style, and α is a constant term. Individual fund subscripts have been omitted. $Post1997_t$ is the time period dummy. $R_{t-1, t}$ is the one-year return variable (expressed in decimal format). X_t represents a set of control variables. δ_j represents fund investment style, and ε_t is the error term. The dependent variables are the change in market share from t-1 to t and from t to t+1. The dependent variables ($\Delta MS_{t-1, t}$ and $\Delta MS_{t, t+1}$) are expressed in percent and then multiplied by 100 (to scale up the coefficient estimates). Control variables include family size (in log form), fund age (in log form), management fees, front-end loads, and an index fund dummy. All control variables are lagged by one year, to lessen potential endogeneity.

Panel A of Table 3-5 indicates that performance over t-1 to t has no impact on the change in market share over that same period, $\Delta MS_{t-1, t}$ (equation (3) above). However, outliers might be responsible for the lack of statistical significance. Panels B and C show results using robust regressions and median regressions. Those approaches show a

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significant positive relationship between performance and current market share (column 1).

Column 2 shows a strong relationship between performance and market share over the subsequent period, $\Delta MS_{t, t+1}$ (equation (4) above). The coefficient on the one-year performance variable is significant and positive, indicating that performance has a positive effect on the change in market share in the subsequent period. In other words, a fund that performs well gains market share in the next year. More importantly, however, the coefficient on the interaction term, $Post1997_t * R_{t-1, t}$, is significant and negative. That is, organizational deregulation has had a negative impact on the relationship between performance and subsequent market share. Good prior performance does not yield as much of a market-share benefit in the post-1997 period as it did in the pre-1997 period. This result may be consistent with the idea of greater market competition post 1997. After deregulation, to gain market share, a fund must have something more than just good prior performance. This result suggests that, after 1997, investors consider prior performance as well as some other signal. That other signal has gained importance in the post-1997 period.

Do winning and losing funds exhibit the same patterns? That is, might the behavior of the poor-performing funds be diluting the behavior of the high-performing funds in the overall sample, or vice versa? Thus, as a robustness check, I also estimate equations (3) and (4) for only funds that outperform the mean fund in their style, and then for only funds that underperform the mean fund in their style. The advantage of this specification is that we can observe the behavior of the winners undiluted by the behavior of the losers, and vice versa. Results appear in Table 3-5.1. The results, however, reveal that both winners and losers follow the same pattern. For both winners and losers, performance has a positive impact on subsequent market share (i.e., the coefficient on performance is significant and positive), but the relationship weakens after deregulation (i.e., the coefficient on the interaction term is significant and negative). For both winning and losing funds, investors consider prior performance as well as some other signal after 1997, consistent with the earlier results.

(d) Consumer Behavior

The changing composition of the industry may impact not only managerial behavior, but also consumer behavior. This subsection thus explores whether consumers of financial services (fund investors) change their sensitivity to prior fund performance or to fund expenses.

Studies of British and U.S. investors indicate that fund investors chase past performance (Keswani and Stolin 2008; Sirri and Tufano 1998; Chevalier and Ellison 1997; Gruber 1996; and Ippolito 1992). Or, from a managerial perspective, flows function as a proxy for reward, since managers are compensated on the basis of the percentage of assets under management. How does deregulation impact the sensitivities of these relationships?

The literature analyzes the behavior of fund investors by studying fund flows. The most simple measure of flows is the change in total net assets minus the appreciation in the fund assets or, equivalently, as follows:

$$CF_{i,t} = TNA_{i,t} - (1 + R_{i,t})\, TNA_{i,t-1}$$

where $TNA_{i,t}$ is fund i's total net assets at time t, and $R_{i,t}$ is fund i's return at time t. This definition of flows is equivalent to defining it as the flow that is not due to dividends and capital gains. In other words, it assumes all dividends and capital gains are reinvested, and measures flows into and out of the fund above that amount. The measure is an absolute one, capturing the sterling amount of new flows. The problem with the absolute measure, however, is that large funds tend to have larger absolute flows regardless of performance. In addition to this absolute (i.e., pound sterling) measure, flows can also be defined on a relative (i.e., normalized) basis. The relative measure divides flows by total net assets at the beginning of the period, or

$$cf_{i,t} = CF_{i,t} / TNA_{i,t-1}.$$

The relative measure presents flows as a growth rate, giving greater weight to small funds than the absolute measure does.

Studies tend to examine fund flows by regressing them on past performance measures and certain other control variables. The literature regresses flows on prior fund performance (using risk-adjusted returns) as well as fund characteristics such as size and expenses (e.g., Gallaher, Kaniel and Starks 2006; Barber, Odean and Zheng 2005; Gruber

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1996). In Table 3-6, annual fund flows are regressed on Post 1997 (a time period dummy equal to 1 for an observation after 1997 and 0 for an observation before 1997), as well as risk-adjusted returns (alphas from a four-factor model using a rolling 12 month window) annualized over the prior year. Following Barber, Odean and Zheng (2005), a squared performance variable is also included to control for the non-linear relationship between flows and performance (Sirri and Tufano 1998; Chevalier and Ellison 1997). In addition, the past performance measures are interacted with the time period dummy, Post 1997, to determine whether the impact of past performance on flows changes between time periods. Management fees and front-end loads (in percent) are included to measure investor sensitivity to these fund expenses. The regressions also control for other fund characteristics. Fund age (in log form) is included as a control to address the possibility that flows are sensitive to the age of the fund. Fund and family size (in log form) are included to ensure results are not driven by small funds or small families. The final control is an index fund dummy. The value of each such fund characteristic is its value as of the end of the year preceding the year of the flow. Finally, management fees and front-end loads are interacted with Post 1997 to determine whether the sensitivity of flows to fund expenses changes between time periods. The data set is restricted to domestic equity funds. To ensure that highly unusual flows do not drive the results, flows are winsorized at the 1% level. Flows are calculated over annual intervals.

The significant positive coefficient on Alpha in Table 3-6 indicates that flows increase following good fund performance. In other words, British investors, like their American counterparts, chase prior performance. Or, equivalently, those managers that perform well are subsequently rewarded through greater inflows and ultimately greater fee revenue. Also note the significant positive coefficient on the Alpha-squared term. That result suggests non-linearity in the relationship between flows and performance in the U.K. In other words, the very best performing funds receive additional inflows. This non-linearity is consistent with other studies of the U.K. market (Keswani and Stolin 2008) as well as the U.S. market (Sirri and Tufano 1998; Chevalier and Ellison 1997; Gruber 1996; and Ippolito 1992), which find a convex relationship between performance and fund flows from American investors.

The results suggest, however, that deregulation in the U.K. has altered this relationship between flows and performance. The coefficient on the interaction term, (Post 1997 * Alpha), is negative and similar in magnitude to the coefficient on Alpha (although it is not statistically significant). In other words, while the coefficient on Alpha before 1997 was sizeable and positive, the coefficient in Alpha after 1997 is equal to about zero. Similarly, the coefficient on (Post 1997 * Alpha-squared) is negative and similar in magnitude to the coefficient on Alpha-squared (although it is not statistically significant). While sizeable and positive before 1997, the coefficient on Alpha-squared after 1997 is equal to about zero. This is the case for both the industry as a whole (column 1) and for only the trusts (column 3). Although the coefficients on the two interaction terms lack significance, that absence of power appears to be driven by a few outliers. When I correct for those outliers by using a median regression (Panel B), the coefficients on the two interaction terms become statistically significant. And as before, the coefficients on the interaction terms offset those on Alpha and Alpha-squared, yielding coefficients for Alpha and Alpha-squared of about zero in the post-1997 period. These results indicate that flows become insensitive to performance after 1997. The convex relationship before 1997 becomes a flat relationship after 1997. The lack of convexity between flows and performance after 1997 is surprising, as convexity in this relationship is routinely documented in the literature. Competition in the UK market has eliminated investors' penchant to chase prior performance. This result suggests that deregulation benefits consumers, as studies show that chasing prior performance is not a long-term winning strategy.

Note the insignificance of the coefficients on management fees and front-end loads. This result suggests that British investors disregard expenses when selecting a fund. The insensitivity of fund flows to expenses is consistent with Barber, Odean and Zheng (2005), who find no relationship between fund flows and operating expenses in the U.S. However, deregulation has made investors sensitive to management fees. The coefficient on the interaction term, (Post 1997 * Management Fee), is significant and negative in both the OLS and median regressions. That is, competition has made investors more sensitive to management fees. Thus, we have another result suggesting that deregulation benefits consumers, as studies show that net returns are negatively

correlated with expenses (e.g., Carhart, 1997; and Wermers, 2000). This result may not extend to the subset of trusts. While the coefficient on the interaction term is negative, it is not statistically significant, even in the median regression. A similar result is seen for loads charged by trusts. The interaction term, (Post 1997 * Load), is significant and positive (in the median regression), offsetting the significant negative coefficient before deregulation. Trust investors thus appear to become insensitive to loads after deregulation.

(e) Consumer Costs

The chapter's final hypothesis is that competition impacts the cost of financial services for consumers. This subsection looks at the direct expenses fund investors incur, by comparing the unexplained components of annual fund expenses in the years prior to organizational competition to the unexplained components in the years following.

Summary statistics for annual management fees appear in Panel B of Table 3-7. The average management fee before deregulation is 1.21%, while the average management fee after deregulation is 1.22% for the industry and 1.21% for the subset of trusts. Management fees for the industry are statistically greater following deregulation than they were before. Summary statistics for front-end loads appear in Panel C. The average front-end load before deregulation is 4.59%, while the average front-end load after deregulation is 4.16% for the industry and 4.15% for the trusts. Front-end loads are statistically lower for both the industry and the trusts following deregulation than they were before. However, it is important to consider loads net of any waivers, as British funds often waive some or all of the front-end load. Analyzing loads net of waivers is important because it is a more accurate measure of what investors are actually paying than the fund's stated load. Summary statistics for net loads appear in Panel D. The average net load before deregulation is 1.82%, while the average net load after deregulation is 2.00% for the industry and 1.91% for the trusts. In other words, we find that deregulation resulted in significantly higher net loads, in contrast to significantly lower stated loads. Some studies attempt to combine loads and fees into a "total expense." I compute total expenses for each fund by amortizing its net load over an assumed sever-year holding period, and adding that amount to the fund's annual fee.

Summary statistics for total expenses appear in Panel A. The average total expense before deregulation is 1.47%, while the average total expense after deregulation is 1.52% for the industry and 1.49% for the trusts. Total expenses for the industry are statistically greater following deregulation than before deregulation. Total expenses for the trusts are statistically unchanged. Overall, on average, the fund industry charges significantly greater management fees, front-end loads (net of waivers) and total expenses following deregulation. The trusts do not significantly change their management fees or total expenses following deregulation. Although the trusts charge greater net loads after deregulation, the average net load for trusts is less than the average net load of the industry.[7]

To understand if deregulation is responsible for the change in expenses, I regress total fund expenses on Post 1997 (a time period dummy equal to 1 for an observation after 1997 and 0 for an observation before 1997), with control variables. The hypothesis is that deregulation has had a statistically significant impact on the direct costs consumers must bear within the industry. I regress total fund expenses on Post 1997 with control variables as follows:

$$y_{i,t} = \alpha + \beta_1 \, \text{Post1997}_{i,t} + \beta_2 X_{i,t} + \delta_j + \gamma_f + \varepsilon_{i,t} \tag{5}$$

Here, i indexes fund, t indexes time, j indexes investment style, f indexes fund family, and α is a constant term. $\text{Post1997}_{i,t}$ is the variable of interest. $X_{i,t}$ represents a set of control variables. δ_j represents fund investment style and captures the different operating costs associated with different investment styles and objectives.[8] γ_f represents family affiliation, and $\varepsilon_{i,t}$ is the error term. The dependent variable, $y_{i,t}$, is total fund expenses (in percent). Control variables include those factors that tend to affect fund expenses: fund size (in log form),[9] family size (in log form), fund age (in log form), the total return of the fund over the prior 12 months, the total return of the fund over the prior 36 months minus the total return over the prior 12 months, and an index fund dummy. All control variables are lagged by one year, to lessen potential endogeneity. I report results using multiple

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[7] The reported results were obtained by equal-weighting. Similar results were obtained by value-weighting.

[8] In the United Kingdom, each fund is assigned to an official style category by the Investment Management Association, the industry association for the U.K. investment management industry.

[9] Due to the potential for reporting errors, fund size has been winsorized at the 1% level.

regression specifications. One is an OLS regression with robust standard errors that treats each observation as independent. Next, I employ clustered regressions where each family is treated as a cluster, and then each fund is treated as a cluster. Clustering adjusts standard errors to control for potential lack of independence in fee decisions made within a family or a fund. Finally, 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).

Results appear in Table 3-8. Panel A shows results for the entire industry. The variable Post 1997 has a statistically significant impact on total fund expenses in each regression specification. The coefficient on Post 1997 takes a positive value, indicating that organizational deregulation has a positive (i.e., upward) impact on fund expenses. The magnitude of the increase in expenses is approximately 4 to 5 basis points per year. Competition has thus resulted in an increase in the overall expenses consumers must bear. Regarding the other variables, the index fund dummy has a large and significant negative impact on expenses. The magnitude and significance of passive versus active management on expenses is consistent with the academic literature and popular media (index funds do not require the same degree of managerial effort or expense as actively managed funds). Note that fund size is not significant, indicating that any economies of scale at the fund level are not being shared with investors. However, family size is significant and negative, indicating that economies of scale at the family level are shared with investors. In contrast, fund age and prior fund performance do not have a significant impact on expenses.

Panel B shows results for the subset of trusts. The coefficient on Post 1997 is not significant (except it is weakly significant in column 1). Competition thus has not had a significant impact on the total expenses charged by trusts. The results from Panels A and B together reveal that the new entrants, the corporations, charged significantly greater expenses than the trusts were charging. However, the trusts did not respond by increasing their overall expenses. The trusts did not attempt to mimic their new competitors in this respect.

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Results with respect to the individual components of total fund expenses appear in Table 3-9.[10] Panel A shows results for the entire industry. When management fees are used as the dependent variable (column 1), the coefficient on the time period dummy, Post 1997, is significant and positive. Deregulation has thus had a positive (i.e., upward) impact on management fees, approximately 7 basis points per year in magnitude. When front-end loads (before waivers) are used as the dependent variable (column 2), the coefficient on the time period dummy takes a significant negative value, indicating that deregulation has had a downward impact on front-end loads. The significance of the downward impact, however, disappears when loads are netted against waivers (column 3). Panel B shows results for the subset of trusts. Although the trusts did not change their total expenses, Panel B reveals that the trusts did increase their management fees. However, the increase was not as large as that of the overall market (5.5 bps versus 6.6 bps, respectively). On the one hand, trusts are facing increasing competition from new funds, which should restrain the trusts' ability to increase fees. On the other hand, those new competitors, the corporations, are subject to looser fiduciary responsibilities, allowing corporations to more confidently increase their fees. Trusts, in turn, can feel more confident that their fees will appear reasonable, hence trusts respond by raising their fees, but not as high as the corporations'. Note also that the trusts did not change their net loads, while the overall market experienced a 5 bps increase in net loads.

Nevertheless, when we employ the most comprehensive measure of expenses (total expenses), which combines net loads with management fees, we see that competition has resulted in an increase in the expenses charged by the industry, but no change in the expenses charged by the trusts. In sum, the unexplained component of total fund expenses indicates that organizational competition has failed to generate tangible benefits for consumers in terms of the direct costs they must bear.

VI. Conclusion

It is widely assumed that deregulation of the financial services industry in the U.S. led to an increase in risk taking within the industry. This chapter supports that

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[10] Table 3-9 employs fund clusters, but similar results are obtained when family clusters or family controls are employed instead.

assumption empirically, by analyzing a regulatory change in the British mutual fund industry that loosened restrictions on fund organizational forms. Previously confined to the trust form, British funds after 1997 were free to organize as either trusts or corporations, and thus to subject themselves to their preferred set of fiduciary obligations to investors. Once the fund industry was freed from organizational restrictions, competition intensified and risk taking significantly increased. Both systemic and idiosyncratic risk increased. The new entrants, the corporations, are responsible for part of the increase in risk taking, an intuitive result given their looser fiduciary responsibilities. But the trusts responded to the competition from the corporations by increasing their own risk-seeking behavior. Hence, greater risk seeking is not merely an effect of organizational form, but also an effect of greater market competition. An analysis of organizational deregulation in the British fund industry thus confirms the intuitive link between deregulation and greater risk taking.

Deregulation, however, appears to generate an improvement in risk-adjusted performance. After adjusting for the greater risk taking, both the overall fund industry and the subset of trusts exhibit improved performance. Competition was able to stop the value destruction the industry was producing on an after-fee basis. Although power issues inhibit a determination of statistical significance, the economic magnitude of the improvement in performance is significant, amounting to about 0.72% to 1.44% per year. The evidence thus appears to support the notion that competition improves the performance of financial services firms.

It is also widely assumed that deregulation of the financial services industry in the U.S. generated lower out-of-pocket costs for consumers. British deregulation with respect to fund organizational form, however, appears to have generated the opposite effects. Deregulation appears to have had a negative impact on the direct costs paid by consumers, reflected in an increase in the unexplained component of fund expenses following deregulation. That is, the cost to consumers of investment services significantly increased following deregulation, after accounting for potential differences in performance, investment style, and other characteristics. Trusts, however, did not change the total expenses they charge. The industry's increase in total expenses was driven by the new entrants, the corporations. Nevertheless, the greater competition did

not induce the trusts to lower their expenses. Since consumers experience no tangible reduction in direct costs, the evidence generated by the British fund industry contradicts with the widely held assumption that financial deregulation generates lower out-of-pocket costs for consumers.

Deregulation, however, did benefit consumers in other respects. Deregulation eliminated investors' destructive habit of chasing prior performance, as competition eroded the sensitivity of flows to performance. Competition also made investors more sensitive to the expenses they are charged. These benefits from competition should be taken into account when assessing competition's impact on the direct costs consumers bear.

As policy makers today search for ways to foster the stability of the financial system, important insights can be gained from the study of regulatory shocks in the mutual fund industry. This chapter traces non-trivial linkages among deregulation, industry competition, risk taking, and performance of the British mutual fund industry. By exploiting a change in British fund regulations in the 1990s that loosened restrictions on organizational form, this chapter finds that deregulation of the financial services industry facilitates risk-seeking behavior within the industry. Preliminary evidence suggests that deregulation also improves performance (after adjusting for the increased risk taking). While deregulation of the British fund industry did not generate direct cost savings for consumers, it did mitigate certain harmful investor behaviors typically seen in the mutual fund industry. Because of differences in how mutual funds and banks are operated and regulated, the results may not extend clearly to depository institutions. However, the results should be of relevance to policy makers contemplating reform of the U.S. asset management industry or other non-bank financial services sectors.

Figure 3-1
Herfindahl Index

The Herfindahl Index (H) is shown for the US and UK mutual fund industries on an annual basis, using all US and UK mutual funds. H is calculated annually by squaring the market share (in percent) of each fund in the applicable market, and then summing the resulting numbers for all funds in such market in such year.
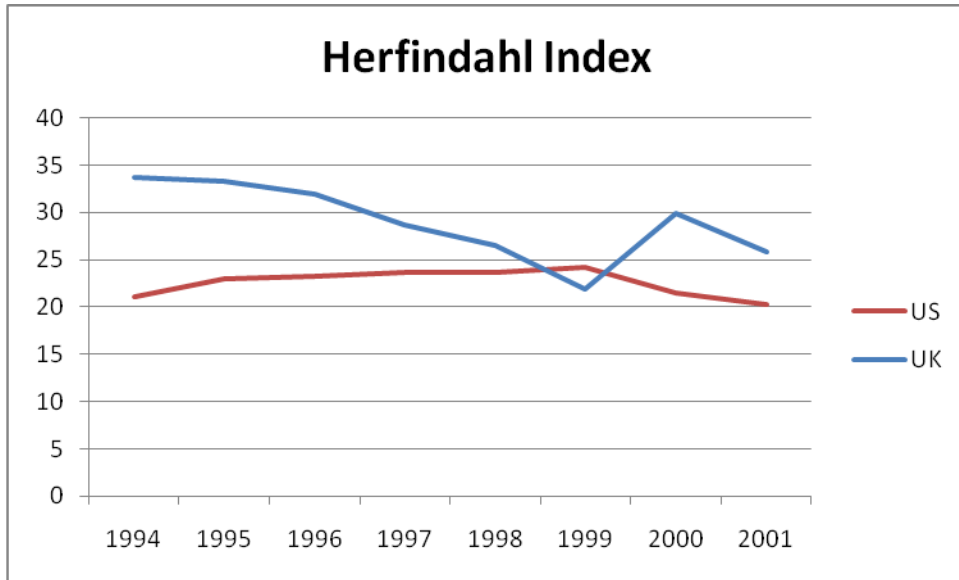
Table 3-1
Evolution of the British Fund Industry

Panel A gives the size of the mean and median fund (in £ million), and the size of the total fund industry (in £ billion). Panel B gives the number of funds. Panel C gives the number of entrants (newly formed funds). Panel D gives the number and percentage of exiting funds (by dissolution and by acquisition) and the performance of the dissolved funds (one-year style-adjusted return, in percent) in the year before dissolution. Panel E classifies funds according to their general category of investment style. "Number of Funds" gives the number of funds following the applicable investment style category. "Number of Styles" gives the number of specific styles that constitute the general investment style category. Figures are given for all funds (All) and, from 1997 forward, for trusts only (Trusts).

(A) Size

	1994	1995	1996	1997	1998	1999	2000	2001	94-96	98-00	Diff
Mean Fund											
All	67.6	75.3	81.3	93.3	107.0	136.0	137.0	132.0	75.5	126.0	50.5
Trusts				94.4	103.0	135.0	144.0	129.0	75.5	123.0	47.5
Median Fund											
All	24.8	27.7	29.1	31.8	34.8	46.3	52.4	51.6	27.3	43.6	16.3
Trusts				32.0	34.0	47.3	60.6	51.6	27.3	43.2	15.9
Industry Total											
All	77.3	110.0	129.0	148.0	169.0	236.0	161.0	183.0	317.0	565.0	248.0
Trusts				124.0	145.0	185.0	85.2	106.0	317.0	415.0	98.0

(B) Number of Funds

	1994	1995	1996	1997	1998	1999	2000	2001	94-96	98-00	Diff
All	1,208	1,478	1,592	1,593	1,601	1,741	1,499	1,504	1,698	2,453	755
Trusts				1,317	1,427	1,377	707	925	1,698	1,574	-124

(C) Entrants (Newly Formed Funds)

	1994	1995	1996	1997	1998	1999	2000	2001	94-96	98-00	Diff
Number											
All	71	122	89	87	112	194	99	94	282	405	123
Trusts				71	77	119	13	46	282	209	-73
Percent											
All	6.25	10.10	6.02	5.47	7.03	12.12	5.69	6.27	16.61	16.51	-0.10
Trusts				4.46	5.85	8.34	0.95	6.51	16.61	13.28	-3.33

(D)(1) Exits: Dissolved Funds

	1994	1995	1996	1997	1998	1999	2000	2001	94-96	98-00	Diff
Number											
All	25	27	19	33	30	22	115	52	71	167	96
Trusts				33	30	22	99	36	71	151	80
Percent											
All	2.07	2.24	1.29	2.07	1.88	1.37	6.61	3.47	4.18	6.81	2.63
Trusts				2.07	2.28	1.54	7.19	5.09	4.18	9.60	5.42

(D)(2) Exits: Performance of Dissolved Funds

	1995	1996	1997	1998	1999		94-96	98-00
All	-1.92	-6.11	-5.30	-2.19	2.93		-3.80	-1.34
	(1.48)	(1.33)***	(2.69)*	(2.08)	(6.65)		(1.07)***	(2.03)

(D)(3) Exits: Acquired Funds

	1994	1995	1996	1997	1998	1999	2000	2001	94-96	98-00	Diff
Number											
All	39	26	66	66	145	na	na	na	131	n.a.	
Trusts				4	139				131	n.a.	

(E) Investment Styles

	1994	1995	1996	1997	1998	1999	2000	2001	94-96	98-00	Diff
Domestic Equity[11]											
Number of Funds											
All	244	220	241	230	225	382	318	318	347	616	269
Trusts				190	204	307	160	193	347	480	133
Number of Styles											
All	3	3	2	2	2	2	2	3	3	3	0
Trusts				2	2	2	2	3	3	3	0
Domestic Balanced[12]											
Number of Funds											
All	138	288	316	340	337	284	255	257	409	622	213
Trusts				283	302	233	125	174	409	501	92
Number of Styles											
All	3	5	6	5	5	7	7	7	7	9	2
Trusts				5	5	7	7	7	7	9	2
Domestic Bond/Money Market[13]											
Number of Funds											
All	103	118	126	137	146	202	179	198	177	398	221
Trusts				111	129	162	97	123	177	287	110
Number of Styles											
All	3	3	2	3	3	4	5	6	3	7	4
Trusts				3	3	4	5	5	3	7	4

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[11] All Companies, Equity Growth, Smaller Companies, General.

[12] Balanced, Equity & Bond, Equity & Bond Income, Equity Income, Growth & Income, Convertibles, Active Managed, Balanced Managed, Cautious Managed, Managed Funds, Managed Income.

[13] Corporate Bond, Fixed Interest, General Bonds, Gilt, Gilt & Fixed Interest, Other Bond, Exempt, Money Market, Guaranteed/Protected.

Domestic Specialist[14]

Number of Funds

All	69	125	138	113	110	23	54	70	152	183	31
Trusts				101	108	16	28	44	152	148	-4

Number of Styles

All	3	4	4	3	3	3	4	3	4	7	3
Trusts				3	3	3	2	3	4	7	3

International Equity[15]

Number of Funds

All	520	633	663	669	671	737	587	550	740	1,237	497
Trusts				540	582	567	262	321	740	941	201

Number of Styles

All	7	7	7	7	7	14	11	12	7	17	10
Trusts				7	7	14	11	11	7	17	10

International Balanced[16]

Number of Funds

All	37	42	50	42	44	49	37	20	57	84	27
Trusts				36	43	43	12	15	57	65	8

Number of Styles

All	2	2	2	2	2	2	2	2	2	2	0
Trusts				2	2	2	2	2	2	2	0

International Bond

Number of Funds

All	29	37	37	39	41	50	48	45	38	79	41
Trusts				33	33	38	19	25	38	53	15

Number of Styles

All	1	1	1	1	1	1	1	1	1	1	0
Trusts				1	1	1	1	1	1	1	0

Total Number of Styles

All	22	25	24	23	23	33	32	34	27	46	19
Trusts				23	23	33	30	32	27	44	17

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[14] Commodity & Energy, Financial & Property, Fund of Funds, Futures & Options, Property, Securities Fund, Specialist, Tech & Telecom, UK Specialist.

[15] Australasia, Europe, Europe ex. UK, Europe inc. UK, European Small Cos., European Specialist, Far East Specialist, Far East ex. Japan, Far East inc. Japan, Japan, Japanese Small Cos., Japanese Specialist, Latin America, No. America, No. America Small Cos., No. America Specialist, Global Emerging Markets, Global Growth, Global Specialist.

[16] Global Equity & Bond, Global Equity Income.

Table 3-2
Herfindahl Index

The Herfindahl Index (H) is shown for the US and UK mutual fund industries on an annual basis, using all US and UK mutual funds. H is calculated annually by squaring the market share (in percent) of each fund in the applicable market, and then summing the resulting numbers for all funds in such market in such year. The weighted average H of the applicable industry over the relevant period (94-96 and 98-00) is computed using annual industry size as the weight. The last two columns give the change in weighted H from 94-96 to 98-00.

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | - - - - -Weighted Average - - - - - - | | | |
									94-96	98-00	Diff	Pct
UK	33.68	33.35	32.00	28.74	26.58	21.84	29.89	25.77	32.92	25.60	-7.32 (2.01)[**]	-22.24
US	21.12	23.03	23.30	23.66	23.61	24.25	21.56	20.23	22.64	22.33	-0.31 (1.24)	-1.37

Table 3-3

Volatility of Returns

Standard deviation of monthly returns (in percent) according to period (1994-1996 versus 1998-2001). In Panel A, standard deviation of returns is computed on a time-series basis in each period, using an equal-weight average of all fund returns in each month. In Panel B, standard deviations of returns is computed on a cross-sectional basis, by calculating each fund's standard deviation of returns in each period, and then averaging over all funds in the period. Value-weight results are computed by weighting funds by their size as of the end of the prior year. Four measures of fund returns are used: (i) raw returns, (ii) market-adjusted returns (wherein the total market return is subtracted from the fund's raw return), (iii) style-adjusted (median) returns (wherein the median return of the applicable style is subtracted from the fund's raw return), and (iv) style-adjusted (mean) returns (wherein the mean return of the applicable style is subtracted from the fund's raw return). The last two columns give idiosyncratic risk computed from a 4-factor and a 1-factor model. Returns are computed before management fees. The data set is restricted to U.K. domestic equity mutual funds. Figures are given for all funds (All) and for trusts only (Trusts).

	Obs.	Raw	Market Adjusted	- Style-Adjusted - Median	Mean	Idiosyncratic Risk 4-Factor	1-Factor
				(A) Time-Series Approach			
BEFORE (1994-1996)							
All	36	2.913	1.061	0.159	.	0.8683	0.9798
AFTER (1998-2001)							
All	48	4.623	1.924	0.394	.	1.5968	1.9244
Trusts	48	4.587	1.892	0.390	.	1.5709	1.8920
				(B) Cross-Sectional Approach			
				Equal Weight			
BEFORE (1994-1996)							
All	279	3.021	1.680	1.253	1.271	0.3508	0.3874
AFTER (1998-2001)							
All	454	5.298	3.177	2.289	2.310	0.5692	0.5080
Trusts	326	5.244	3.078	2.264	2.278	0.7430	0.7609
				Value Weight			
BEFORE (1994-1996)							
All	278	2.981	1.363	0.952	0.990	0.2642	0.3458
AFTER (1998-2001)							
All	426	4.977	2.561	1.699	1.787	0.3294	0.2973
Trusts	314	4.939	2.433	1.669	1.761	0.4180	0.3802

Table 3-4

Risk-Adjusted Returns and Factor Loadings

One-month risk-adjusted returns (alphas) and factor loadings (in percent) computed on an equal-weight basis from a single-factor model and a four-factor model. A cross-section approach is used in Panel A by computing an alpha for each fund in each period, and then computing the average alpha in each period on an equal weight basis. A time-series approach is used in Panel B by computing the average monthly return of funds in month t on an equal-weight basis, and then computing an alpha in each period. Alphas are computed on both a gross (before management fee) basis and a net (after management fee) basis. The data set is restricted to U.K. domestic equity funds. Standard errors are shown in parenthesis. The "percent pos/neg" column gives the percent of funds with significant positive or negative risk-adjusted returns. Figures are given for all funds (All) and for trusts only (Trusts).

| | - - - Return - - - | | - - - - - - - Factor Loadings (Before Fees)- - - - - - | | | | Percent |
	Before Fees	After Fees	Market	Size	Value	Momentum	pos/neg
(A) Cross-Sectional Approach							
Before (1994-1996)							
All	0.0492	-0.0525	0.9190				5.1/6.5
	(0.0445)	(0.0444)	(0.0631)***				
After (1998-2001)							
All	-0.0240	-0.1254	1.0288				7.1/3.6
	(0.1684)	(0.1680)	(0.0371)***				
Difference	-0.0732	-0.0729	0.1098				2.0/-2.9*
	(0.2177)	(0.2176)	(0.0684)				
Trusts	-0.0969	-0.1965	1.0417				7.1/4.6
	(0.2330)	(0.2320)	(0.0518)***				
Difference	-0.1461	-0.1440	0.1227				2.0/-1.9
	(0.2553)	(0.2549)	(0.0809)				
Before (1994-1996)							
All	0.0114	-0.0904	0.8532	0.0331	0.0819	-0.0588	4.8/5.6
	(0.0379)	(0.0376)**	(0.0159)***	(0.0134)**	(0.0122)***	(0.0082)***	
After (1998-2001)							
All	0.0954	-0.0102	1.0238	0.1291	-0.0549	0.0072	6.6/3.2
	(0.0798)	(0.0797)	(0.0196)***	(0.0119)***	(0.0112)***	(0.0040)*	
Difference	0.0840	0.0802	0.1706	0.0960	-0.1368	0.0660	1.8/-2.4
	(0.1061)	(0.1060)	(0.0268)***	(0.0185)***	(0.0172)***	(0.0082)***	
Trusts	0.0765	-0.0284	0.9959	0.0944	-0.0508	0.0101	7.3/3.5
	(0.1098)	(0.1094)	(0.0207)***	(0.0134)***	(0.0140)***	(0.0057)*	
Difference	0.0651	0.0620	0.1427	0.0613	0.1327	-0.0689	2.5/-2.1
	(0.1237)	(0.1236)	(0.0268)***	(0.0190)**	(0.0188)***	(0.0098)***	

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

(B) Time-Series Approach

BEFORE (1994-1996)

All	0.0462	-0.0558	0.8703
	(0.1673)	(0.1673)	(0.0536)***

AFTER (1998-2001)

All	0.1431	0.0392	0.9987
	(0.2838)	(0.2832)	(0.0681)***
Difference	0.0969	0.0950	0.1284
	(0.3578)	(0.3572)	(0.1034)
Trusts	0.1508	0.0492	0.9929
	(0.2790)	(0.2786)	(0.0670)***
Difference	0.1046	0.1050	0.1226
	(0.3528)	(0.3524)	(0.1019)

BEFORE (1994-1996)

All	0.0012	-0.1008	0.8820	0.0647	0.0876	-0.0532
	(0.1633)	(0.1633)	(0.0506)***	(0.0305)**	(0.0905)	(0.0381)

AFTER (1998-2001)

All	0.1079	0.0042	1.0543	0.1224	-0.0540	-0.0006
	(0.2457)	(0.2451)	(0.0608)***	(0.0319)***	(0.0516)	(0.0215)
Difference	0.1067	0.1050	0.1723	0.0577	-0.1416	0.0526
	(0.3228)	(0.3221)	(0.0923)*	(0.0535)	(0.1443)	(0.0607)
Trusts	0.1158	0.0143	1.0475	0.1206	-0.0515	-0.0006
	(0.2418)	(0.2413)	(0.0598)***	(0.0314)***	(0.0508)	(0.0212)
Difference	0.1146	0.1151	0.1655	0.0559	-0.1391	0.0526
	(0.0758)	(0.3180)	(0.0910)*	(0.0528)	(0.1424)	(0.0599)

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

Table 3-5

The Link Between Market Share and Performance

Regressions of change in fund market share (fund assets as a percent of industry assets, times 100) on a time period dummy, Post 1997 (equal to 1 for an observation after 1997 and 0 for an observation before 1997), one-year net returns (in decimal format), an interaction term, and control variables as shown. All observations are annual. All control variables are lagged by one year. Regressions are run separately for all funds and for trusts only. Robust standard errors based on fund clusters are shown in parenthesis.

	Dependent Variable: Change in Fund Market Share (% * 100)			
	- - - - All Funds - - - -		- - - - Trusts Only - - - -	
	(1)	(2)	(1)	(2)
	$\Delta MS_{t-1, t}$	$\Delta MS_{t, t+1}$	$\Delta MS_{t-1, t}$	$\Delta MS_{t, t+1}$
(A) Ordinary Least Squares				
Post 1997 * One-Year Return [$R_{t-1, t}$]	-0.050	-0.535	-0.113	-0.595
	(0.201)	(0.183)***	(0.205)	(0.180)***
Post 1997	0.145	-0.028	0.129	-0.036
	(0.028)***	(0.030)	(0.029)***	(0.031)
One-Year Return [$R_{t-1, t}$]	0.315	0.910	0.343	0.867
	(0.194)	(0.169)***	(0.196)*	(0.168)***
Age (log)	-0.051	-0.038	-0.053	-0.036
	(0.009)***	(0.011)***	(0.011)***	(0.012)***
Family Size (log)	-0.011	-0.032	-0.021	-0.037
	(0.005)**	(0.007)***	(0.005)***	(0.007)***
Management Fee	0.063	-0.011	0.062	-0.016
	(0.032)*	(0.044)	(0.035)*	(0.045)
Load	-0.010	0.002	0.001	0.008
	(0.007)	(0.008)	(0.006)	(0.007)
Index Fund Dummy	0.088	0.053	0.153	0.107
	(0.045)*	(0.073)	(0.053)***	(0.084)
Constant	0.377	1.038	0.500	1.169
	(0.123)***	(0.178)***	(0.135)***	(0.196)***
Style Control	Yes	Yes	Yes	Yes
Fund Clusters	Yes	Yes	Yes	Yes
Observations	4,209	2,909	3,407	2,520
Adjusted R^2	0.02	0.03	0.02	0.04
(B) Robust Regression				
Post 1997 * One-Year Return [$R_{t-1, t}$]	0.089	-0.092	0.090	-0.094
	(0.039)**	(0.041)**	(0.037)**	(0.039)**
Post 1997	0.046	0.004	0.040	0.004
	(0.007)***	(0.008)	(0.007)***	(0.008)
One-Year Return [$R_{t-1, t}$]	0.064	0.172	0.049	0.168
	(0.037)*	(0.038)***	(0.035)	(0.036)***

Age (log)	-0.017 (0.002)***	-0.012 (0.003)***	-0.017 (0.002)***	-0.013 (0.003)***
Family Size (log)	-0.004 (0.001)***	-0.010 (0.002)***	-0.006 (0.001)***	-0.009 (0.002)***
Management Fee	0.019 (0.007)***	0.005 (0.008)	0.011 (0.007)	0.001 (0.008)
Load	-0.002 (0.002)	0.004 (0.002)**	-0.000 (0.002)	0.003 (0.002)*
Index Fund Dummy	0.017 (0.014)	-0.007 (0.017)	0.013 (0.015)	0.000 (0.018)
Constant	0.143 (0.037)***	0.278 (0.045)***	0.180 (0.038)***	0.254 (0.046)***
Style Control	Yes	Yes	Yes	Yes
Observations	4,209	2,909	3,407	2,520

(C) Quantile (Median) Regression

Post 1997 * One-Year Return [$R_{t-1, t}$]	0.054 (0.034)	-0.051 (0.029)*	0.054 (0.033)	-0.023 (0.032)
Post 1997	0.040 (0.006)***	-0.005 (0.005)	0.037 (0.006)***	-0.012 (0.006)*
One-Year Return [$R_{t-1, t}$]	0.061 (0.033)*	0.155 (0.027)***	0.055 (0.031)*	0.139 (0.030)***
Age (log)	-0.014 (0.002)***	-0.010 (0.002)***	-0.013 (0.002)***	-0.012 (0.002)***
Family Size (log)	-0.004 (0.001)***	-0.008 (0.001)***	-0.007 (0.001)***	-0.008 (0.001)***
Management Fee	0.010 (0.006)	-0.006 (0.006)	0.007 (0.006)	-0.004 (0.006)
Load	-0.002 (0.001)	0.001 (0.001)	-0.000 (0.001)	0.001 (0.001)
Index Fund Dummy	0.011 (0.012)	0.003 (0.012)	0.010 (0.013)	0.010 (0.014)
Constant	0.129 (0.032)***	0.235 (0.031)***	0.173 (0.034)***	0.259 (0.037)***
Style Control	Yes	Yes	Yes	Yes
Observations	4,209	2,909	3,407	2,520

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

Table 3-5.1

The Link Between Market Share and Performance:
Winners and Losers

Regressions of change in fund market share (fund assets as a percent of industry assets, times 100) on a time period dummy, Post 1997 (equal to 1 for an observation after 1997 and 0 for an observation before 1997), one-year net returns (in decimal format), an interaction term, and control variables as shown. All observations are annual. All control variables are lagged by one year. Regressions are run separately for funds that outperform the mean fund in their style, and for funds that underperform the mean fund in their style. Robust standard errors based on fund clusters are shown in parenthesis.

Dependent Variable: Change in Fund Market Share (% * 100)				
	- - - - - Winners - - - - -		- - - - - Losers - - - - -	
	(1)	(2)	(1)	(2)
	$\Delta MS_{t-1,\ t}$	$\Delta MS_{t,\ t+1}$	$\Delta MS_{t-1,\ t}$	$\Delta MS_{t,\ t+1}$
Ordinary Least Squares				
Post 1997 * One-Year Return [$R_{t-1,\ t}$]	0.549	-0.580	-0.348	-0.423
	$(0.215)^{**}$	$(0.312)^{*}$	(0.385)	$(0.254)^{*}$
Post 1997	0.046	-0.031	0.167	-0.039
	(0.034)	(0.060)	$(0.037)^{***}$	(0.036)
One-Year Return [$R_{t-1,\ t}$]	-0.234	1.058	0.371	0.796
	(0.216)	$(0.296)^{***}$	(0.379)	$(0.231)^{***}$
Age (log)	-0.056	-0.046	-0.045	-0.034
	$(0.013)^{***}$	$(0.017)^{***}$	$(0.013)^{***}$	$(0.016)^{**}$
Family Size (log)	0.002	-0.029	-0.025	-0.033
	(0.008)	$(0.013)^{**}$	$(0.008)^{***}$	$(0.009)^{***}$
Management Fee	0.102	0.051	0.022	-0.077
	$(0.049)^{**}$	(0.074)	(0.054)	(0.059)
Load	-0.016	0.002	-0.004	0.002
	(0.012)	(0.014)	(0.010)	(0.011)
Index Fund Dummy	0.036	0.259	0.145	-0.117
	(0.098)	(0.253)	$(0.086)^{*}$	(0.168)
Constant	0.347	0.941	0.480	1.148
	$(0.183)^{*}$	$(0.312)^{***}$	$(0.180)^{***}$	$(0.229)^{***}$
Style Control	Yes	Yes	Yes	Yes
Fund Clusters	Yes	Yes	Yes	Yes
Observations	2,009	1,437	2,195	1,469
Adjusted R^2	0.02	0.03	0.01	0.02

[***] 1% significance; [**] 5% significance; [*] 10% significance

Table 3-6

Regression Results for Fund Flows

Regressions of annual fund flows (in percent) on a time period dummy, Post 1997 (equal to 1 for an observation after 1997 and 0 for an observation before 1997), prior performance (alpha and alpha-squared), interaction terms, and control variables as shown. Flows have been winsorized at the 1% level. Control variables are as of the end of the prior year. Alpha is the average of the fund's monthly alphas (from a four-factor model using a rolling 12 month window) over the prior year. The data set is limited to U.K. domestic equity funds. Regressions are run separately for all funds and for trusts only. Robust standard errors based on fund clusters are shown in parenthesis.

	Dependent Variable: Annual Fund Flows			
	- - - All Funds - - -		- - - Trusts Only - - -	
	(1)	(2)	(3)	(4)
(A) Ordinary Least Squares				
Post 1997	-4.11	25.71	-4.27	12.17
	(7.24)	(19.16)	(7.34)	(23.39)
Size (log)	-10.72	-10.76	-10.97	-11.00
	(4.25)**	(4.22)**	(4.60)**	(4.58)**
Age (log)	0.07	-0.26	1.65	1.13
	(4.05)	(3.96)	(4.61)	(4.50)
Family Size (log)	3.51	3.31	2.81	2.68
	(3.72)	(3.69)	(4.27)	(4.26)
Management Fee	-11.78	10.53	-9.78	8.17
	(10.46)	(10.55)	(11.55)	(11.29)
Front-End Load	1.11	-0.05	1.78	-0.60
	(1.52)	(1.49)	(1.82)	(2.33)
Index Fund Dummy	-12.92	-14.05	-10.44	-10.95
	(12.86)	(13.75)	(17.77)	(18.76)
Alpha	52.69	11.25	51.96	9.60
	(29.02)*	(4.86)**	(29.04)*	(5.19)*
(Alpha)^2	21.56	-1.03	21.62	-0.72
	(12.66)*	(0.83)	(12.78)*	(0.79)
Post 97 * Alpha	-42.15		-43.46	
	(29.26)		(29.38)	
Post 97 * (Alpha)^2	-22.57		-22.29	
	(12.79)*		(12.93)*	
Post 97 * Management Fee		-27.50		-21.68
		(14.77)*		(16.88)
Post 97 * Front-End Load		1.56		2.86
		(1.70)		(2.75)
Constant	161.34	143.92	166.93	160.53
	(51.98)***	(52.78)***	(59.62)***	(63.08)**
Style Controls	Yes	Yes	Yes	Yes
Observations	771	771	640	640
Adjusted R^2	0.04	0.04	0.04	0.04

Post 1997	-4.12	10.23	-3.77	-9.65
	(2.58)	(7.44)	(2.49)	(8.32)
Size (log)	0.23	-0.08	0.48	0.30
	(0.60)	(0.59)	(0.60)	(0.59)
Age (log)	-4.75	-4.40	-4.90	-4.94
	(1.13)***	(1.11)***	(1.19)***	(1.17)***
Family Size (log)	0.21	0.34	-0.03	0.06
	(0.57)	(0.56)	(0.58)	(0.57)
Management Fee	-4.41	2.40	-2.10	-0.62
	(2.67)*	(4.95)	(2.73)	(5.13)
Front-End Load	0.36	0.66	0.54	-1.22
	(0.50)	(0.83)	(0.53)	(1.07)
Index Fund Dummy	-0.83	-1.32	0.69	1.39
	(4.78)	(4.78)	(5.45)	(5.43)
Alpha	22.94	2.56	22.29	2.87
	(6.54)***	(1.16)**	(6.23)***	(1.22)**
$(\text{Alpha})^2$	15.66	0.59	15.85	0.56
	(9.13)*	(0.29)**	(8.69)*	(0.32)*
Post 97 * Alpha	-21.14		-21.02	
	(6.66)***		(6.36)***	
Post 97 * $(\text{Alpha})^2$	-15.00		-15.13	
	(9.12)		(8.69)*	
Post 97 * Management Fee		-8.24		-1.67
		(5.40)		(5.65)
Post 97 * Front-End Load		-0.32		2.05
		(0.91)		(1.18)*
Constant	41.45	28.69	38.73	45.63
	(13.34)***	(14.11)**	(14.05)***	(15.17)***
Style Controls	Yes	Yes	Yes	Yes
Observations	770	771	639	640

Post 1997	-2.28	16.94	-2.72	-7.97
	(2.15)	(7.90)**	(2.02)	(8.15)
Size (log)	0.04	-0.38	-0.00	-0.26
	(0.54)	(0.63)	(0.52)	(0.60)
Age (log)	-5.43	-5.19	-5.91	-6.21
	(1.01)***	(1.18)***	(1.04)***	(1.18)***
Family Size (log)	0.41	0.52	0.19	0.09
	(0.50)	(0.59)	(0.49)	(0.58)
Management Fee	-3.83	7.05	-2.38	3.07
	(2.38)	(5.26)	(2.34)	(5.07)

Front-End Load	0.38	1.01	0.59	-1.97
	(0.44)	(0.85)	(0.45)	(1.07)*
Index Fund Dummy	-2.27	-2.02	0.47	-0.34
	(4.16)	(5.00)	(4.66)	(5.41)
Alpha	18.65	3.02	14.74	3.82
	(5.30)***	(1.22)**	(4.88)***	(1.18)***
(Alpha)^2	5.70	0.44	4.04	0.27
	(1.90)***	(0.27)	(1.75)**	(0.24)
Post 97 * Alpha	-15.97		-12.00	
	(5.41)***		(5.00)**	
Post 97 * (Alpha)^2	-5.28		-3.52	
	(1.91)***		(1.77)**	
Post 97 * Management Fee		-12.42		-6.58
		(5.75)**		(5.62)
Post 97 * Front-End Load		-0.64		2.87
		(0.93)		(1.19)**
Constant	44.77	30.37	52.08	67.20
	(11.86)***	(15.00)**	(12.10)***	(15.20)***
Style Controls	Yes	Yes	Yes	Yes
Observations	771	771	640	640

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

Table 3-7

Summary Statistics on Expenses

Summary statistics for mutual funds in the data set, on an equal-weight basis. Mutual funds are grouped according to period (1994-1996 versus 1998-2001). Panel A presents summary statistics on total expense ratios, computed as front-end loads netted against waivers and amortized over a seven year holding period, plus annual management fees. Panel B presents summary statistics on annual management fees (in percent). Panel C presents summary statistics on front-end loads (in percent). Panel D presents summary statistics on front-end loads netted against waivers (in percent). Figures are given for all funds (All) and for trusts only (Trusts).

	Obs.	Mean	Median	Std. Dev.	Min.	Max.
(A) Total Expense Ratios						
BEFORE (1994-1996)						
All	3,926	1.47	1.55	0.44	0.00	4.50
AFTER (1998-2001)						
All	5,070	1.52	1.57	0.50	0.00	9.07
Difference (After-Before)		0.05***				
Trusts	3,532	1.49	1.54	0.52	0.00	9.07
Difference (After-Before)		0.02				
(B) Management Fees						
BEFORE (1994-1996)						
All	4,215	1.21	1.25	0.37	0.00	4.50
AFTER (1998-2001)						
All	6,249	1.22	1.25	0.39	0.00	8.75
Difference (After-Before)		0.01*				
Trusts	4,375	1.21	1.25	0.41	0.00	8.75
Difference (After-Before)		0.01				
(C) Front-End Loads						
BEFORE (1994-1996)						
All	4,217	4.59	5.25	1.66	0.00	7.50
AFTER (1998-2001)						
All	6,295	4.16	5.00	1.87	0.00	10.00
Difference (After-Before)		-0.43***				
Trusts	4,413	4.15	5.00	1.96	0.00	10.00
Difference (After-Before)		-0.44***				
(D) Front-End Loads Net of Waivers						
BEFORE (1994-1996)						
All	3,929	1.82	2.00	1.35	0.00	7.50
AFTER (1998-2001)						
All	5,124	2.00	1.25	1.89	0.00	10.00
Difference (After-Before)		0.18***				
Trusts	3,574	1.91	1.00	1.88	0.00	10.00
Difference (After-Before)		0.09**				

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

Table 3-8

Regression Results for Total Expense Ratio

Ordinary least squares regressions of total expense ratio (equal to front-end load (net of waivers) amortized over seven years plus annual management fee) (in percent) on a time period dummy, Post 1997 (equal to 1 for an observation after 1997 and 0 for an observation before 1997), with control variables as shown. All observations are annual. All independent variables (except for Post 1997) are lagged by one year. Regressions are run for all funds (Panel A) and for trusts only (Panel B). Robust standard errors are shown in parenthesis. Columns (2) and (3) adjust standard errors for clustering by family affiliation and by fund, respectively.

	Dependent Variable: Total Expense Ratios			
	(1)	(2)	(3)	(4)
	(A) All Funds			
Post 1997	0.049 $(0.018)^{***}$	0.049 $(0.030)^{*}$	0.049 $(0.018)^{***}$	0.036 $(0.019)^{*}$
Size (log)	0.006 (0.007)	0.006 (0.014)	0.006 (0.011)	0.005 (0.007)
Age (log)	0.003 (0.013)	0.003 (0.024)	0.003 (0.017)	0.026 $(0.013)^{*}$
Family Size (log)	-0.022 $(0.006)^{***}$	-0.022 $(0.013)^{*}$	-0.022 $(0.009)^{**}$	-0.025 $(0.012)^{**}$
Index Fund Dummy	-0.844 $(0.036)^{***}$	-0.844 $(0.045)^{***}$	-0.844 $(0.043)^{***}$	-0.775 $(0.060)^{***}$
One-Year Return $[R_{t-12,\ t}]$	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Three-Year Return $[R_{t-36,\ t-12}]$	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Constant	1.763 $(0.159)^{***}$	1.763 $(0.366)^{***}$	1.763 $(0.224)^{***}$	1.548 $(0.299)^{***}$
Style Control	Yes	Yes	Yes	Yes
Family Controls	No	No	No	Yes
Family Clusters	No	Yes	No	No
Fund Clusters	No	No	Yes	No
Observations	2,616	2,616	2,616	2,616
Adjusted R^2	0.22	0.22	0.22	0.50
	(B) Trusts Only			
Post 1997	0.031 $(0.019)^{*}$	0.031 (0.030)	0.031 (0.019)	0.029 (0.021)
Size (log)	0.014 $(0.008)^{*}$	0.014 (0.015)	0.014 (0.011)	0.012 $(0.008)^{*}$
Age (log)	-0.013 (0.014)	-0.013 (0.025)	-0.013 (0.019)	0.011 (0.014)
Family Size (log)	-0.023 $(0.007)^{***}$	-0.023 (0.014)	-0.023 $(0.010)^{**}$	-0.016 (0.013)

Index Fund Dummy	-0.797 (0.036)***	-0.797 (0.047)***	-0.797 (0.039)***	-0.722 (0.071)***
One-Year Return [$R_{t-12, t}$]	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.001 (0.000)
Three-Year Return [$R_{t-36, t-12}$]	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Constant	1.747 (0.177)***	1.747 (0.412)***	1.747 (0.248)***	1.344 (0.329)***
Style Control	Yes	Yes	Yes	Yes
Family Controls	No	No	No	Yes
Family Clusters	No	Yes	No	No
Fund Clusters	No	No	Yes	No
Observations	2,223	2,223	2,223	2,223
Adjusted R^2	0.22	0.22	0.22	0.52

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

Table 3-9

Regression Results for Management Fees and Loads

Ordinary least squares regressions of annual management fees, front-end loads (before waivers) and front-end loads (after waivers) (each in percent) on a time period dummy, Post 1997 (equal to 1 for an observation after 1997 and 0 for an observation before 1997), with control variables as shown. All observations are annual. All independent variables (except for Post 1997) are lagged by one year. Regressions are run for all funds (Panel A) and for trusts only (Panel B). Robust standard errors based on fund clusters are shown in parenthesis.

	Dependent Variable:		
	Management Fees	- - - - Front-End Loads - - - -	
		(before waivers)	(after waivers)
	(1)	(2)	(3)
	(A) All Funds		
Post 1997	0.066	-0.334	0.050
	$(0.015)^{***}$	$(0.064)^{***}$	(0.074)
Size (log)	-0.004	-0.016	0.025
	(0.008)	(0.034)	(0.036)
Age (log)	-0.014	0.186	0.153
	(0.014)	$(0.067)^{***}$	$(0.074)^{**}$
Family Size (log)	-0.013	-0.016	-0.120
	$(0.008)^{*}$	(0.033)	$(0.038)^{***}$
Load or Fee	0.036	0.678	0.259
	$(0.009)^{***}$	$(0.173)^{***}$	$(0.148)^{*}$
Index Fund Dummy	-0.479	-2.503	-1.329
	$(0.056)^{***}$	$(0.441)^{***}$	$(0.153)^{***}$
One-Year Return $[R_{t-12,\ t}]$	0.000	0.001	-0.004
	$(0.000)^{**}$	(0.001)	$(0.002)^{**}$
Three-Year Return $[R_{t-36,\ t-12}]$	0.000	0.001	-0.001
	$(0.000)^{**}$	(0.001)	(0.001)
Constant	1.373	3.009	3.092
	$(0.185)^{***}$	$(0.824)^{***}$	$(0.913)^{***}$
Style Control	Yes	Yes	Yes
Fund Clusters	Yes	Yes	Yes
Observations	3,158	3,156	2,615
Adjusted R^2	0.26	0.28	0.07
	(B) Trusts Only		
Post 1997	0.055	-0.291	-0.000
	$(0.015)^{***}$	$(0.069)^{***}$	(0.076)
Size (log)	0.001	-0.006	0.035
	(0.009)	(0.037)	(0.038)
Age (log)	-0.038	0.229	0.163
	$(0.016)^{**}$	$(0.077)^{***}$	$(0.083)^{**}$
Family Size (log)	-0.011	-0.014	-0.133

	(0.008)	(0.036)	(0.039)***
Load or Fee	0.037	0.638	0.193
	(0.010)***	(0.189)***	(0.155)
Index Fund Dummy	-0.459	-2.766	-1.326
	(0.061)***	(0.461)***	(0.160)***
One-Year Return	0.000	0.001	-0.006
$[R_{t-12,\ t}]$	(0.000)*	(0.001)	(0.002)***
Three-Year Return	0.000	0.002	-0.002
$[R_{t-36,\ t-12}]$	(0.000)*	(0.001)	(0.001)
Constant	1.421	2.464	3.371
	(0.206)***	(0.920)***	(0.959)***
Style Control	Yes	Yes	Yes
Fund Clusters	Yes	Yes	Yes
Observations	2,675	2,672	2,222
Adjusted R^2	0.26	0.31	0.08

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

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Chapter IV

Should Mutual Funds Be Corporations?

I. Introduction

Since the inception of the Investment Company Act of 1940 (the "Investment Company Act"), the U.S. Securities and Exchange Commission (SEC) has sought to enhance the independence and effectiveness of mutual fund boards of directors and to improve their ability to protect the interests of the funds and fund shareholders they serve. Most recently, in 2004, after discovering that a number of mutual fund complexes had been engaging in late trading, inappropriate market timing activities, and misuse of nonpublic information about fund portfolios, the SEC proposed numerous changes pertaining to fund governance, including requirements that independent directors comprise at least 75% of each mutual fund's board, and that an independent director chair each fund's board.[1] These changes followed the SEC's adoption, in 2001, of rules that required independent directors to comprise at least a majority of each mutual fund's board (the previous requirement had been 40%), and that required independent directors to be selected and nominated only by other independent directors.[2] In fact, the SEC has

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1. Investment Company Governance, Investment Company Act Release No. 26,520, 83 SEC Docket 1384 (July 27, 2004) [hereinafter Release No. 26,520]. The rule has been challenged in the courts and is currently being reconsidered by the SEC. *See* Chamber of Commerce v. SEC, 412 F.3d 133, 136–37 (D.C. Cir. 2005); Chamber of Commerce v. SEC, 443 F.3d 890, 893–94 (D.C. Cir. 2006) (stating that the SEC failed to seek comment on the data used in estimating the cost and competitive impact of the rule and ordering the SEC to request further comment). Separately, in 2004, the SEC required fund shareholder reports to include a discussion of why the board chose the particular investment adviser and how the advisory fee was decided. Disclosure Regarding Approval of Investment Advisory Contracts by Directors of Investment Companies, Securities Act Release No. 8433, Exchange Act Release No. 49,909, Investment Company Act Release No. 26,486, 83 SEC Docket 261 (June 30, 2004) (codified at 17 C.F.R. pts. 239–40, 274).

2. Role of Independent Directors of Investment Companies, Securities Act Release No. 7932, Exchange Act Release No. 43,786, Investment Company Act Release No. 24,816, 66 Fed. Reg. 3734 (Jan. 16, 2001) (codified at 17 C.F.R. pts. 239-40, 270, 274). The SEC does not impose such requirements directly, but instead ties them to a fund's use of important exemptions from certain provisions of the

been reviewing, revising, and adopting rules and regulations pertaining to fund governance throughout the more than six decade existence of the Investment Company Act.[3]

This continuing need to revisit fund governance issues raises the possibility that the SEC is not asking the correct questions.[4] Instead of asking how to enhance the effectiveness of mutual fund boards, perhaps the SEC should consider whether mutual funds should have boards at all. Similar consideration might also be given to the requirement that mutual fund investors be shareholders in the fund with full voting rights. That is, perhaps the SEC should question, more broadly, the assumption that mutual funds must be organized in accordance with a corporate model. This reevaluation is particularly important as mutual funds increasingly compete with collective investment arrangements, such as hedge funds, that have freedom in their choice of organizational form. If mutual funds in the United States are organized in corporate form simply to satisfy legal requirements, those requirements represent a deadweight cost to mutual funds and their investors. This Chapter analyzes whether mutual fund investors in the United States could be better served by mutual funds organized according to an alternative, non-corporate governance structure.

Part II of this chapter explores the corporate model required in the U.S. mutual fund industry. Part III examines the contractual model that characterizes many mutual fund industries outside the United States. Chapters II and III of this dissertation suggest

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Investment Company Act. *Id*. at 3734.

3. For instance, in the 1990s, the SEC's Division of Investment Management recommended raising the minimum percentage of independent directors of a fund's board from 40% to a majority, and modifying the list of issues that should require shareholder vote to better comport with market realities. The Division's objective was to "increase the effectiveness of boards of directors in monitoring conflicts of interest [and] provide shareholders with more meaningful voting opportunities[.]" DIV. OF INV. MGMT., SEC, PROTECTING INVESTORS: A HALF-CENTURY OF INVESTMENT COMPANY REGULATION 253 (1992) [hereinafter 1992 SEC REPORT]. Before that, the SEC commenced a four-year legislative program in 1966 to address what it perceived as excessive sales loads and management fees stemming from an apparent lack of price competition and economies of scale in the industry. The SEC's efforts resulted in the 1970 amendments to the Investment Company Act, which strengthened independent director requirements and imposed a fiduciary duty with respect to management compensation.

4. When the SEC requested comments on its recent proposal to require at least 75% of the board of directors be independent, it asked the following:

Is any change from the current requirement necessary? Should the requirement be higher? Should it be lower? Should it be phrased in terms other than a fraction or percentage, e.g., that all directors, or all directors but one, must be independent?

See Release No. 26,520, *supra* note 1. But it did not ask the more fundamental and antecedent question of whether mutual funds should have boards of directors at all.

that a change in U.S. regulatory policy allowing the trust model to compete alongside the corporate model would likely have implications for fund investors. Hence, Part IV of this chapter argues that organizational competition may benefit investors by offering them greater choice. Investors could chose to invest in funds that subject themselves to stricter fiduciary obligations in place of boards and voting rights, or funds that subject themselves to weaker fiduciary obligations with boards and voting rights to supplement those obligations. Different governance structures would appeal to different investor clienteles. Part V concludes.

II. Mutual Funds in the United States

This Part details the corporate paradigm that governs mutual fund regulation in the United States, and a critique of that paradigm.

A. Organization of Mutual Funds

Mutual funds in the United States, or "investment companies" as they are referred to in the statutes, are organized pursuant to a corporate model. In the United States, the mutual fund is an independent legal entity, owned by shareholders, with a board of directors. It has full corporate powers, including the capacity to enter into contracts, to sue, and to be sued. The mutual fund raises money by issuing shares and invests the pooled proceeds in securities. The shares entitle their owners to a pro rata interest in the pooled assets. Investors in mutual funds are shareholders in the fund, with voting rights.

Virtually all mutual funds are externally managed. That is, they do not have their own employees, other than a few officers. Instead, each fund contracts with an entity, the investment adviser, which manages the fund's investments for a fee, which is typically a percentage of assets under management. The investment adviser, from a legal perspective, is an entity that is separate and distinct from the mutual fund. The investment adviser, or its affiliate, is usually the entity that created the fund and promoted its sale to investors.[5] Acting through its board, the mutual fund enters into contracts with

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5. Often, the investment adviser, or an affiliate, organizes a variety of funds and distributes their shares through a common, wholly owned distributor. The group of such funds is often referred to as a mutual fund family or complex. The best known examples of fund families or complexes are Fidelity,

not only an investment adviser, but various other service providers as well, including an administrator, a distributor (or principal underwriter), a custodian, and a transfer agent. Each mutual fund, and its relationships with these outside service providers, is overseen by a board of directors (or trustees) elected by the fund's shareholders.

While the law does not expressly require that mutual funds be organized as corporations, it does impose requirements that assume a typical corporate form: a board of directors (whose function is to oversee the operations of the mutual fund and review contracts with service providers, such as those with the investment adviser) and shareholder voting (to elect directors, accept or reject fee arrangement, and approve fundamental changes). These requirements equally apply to investment companies that are not corporations but are organized in some other form, such as business trusts or limited partnerships. That is, the Investment Company Act, which regulates mutual funds in the United States, imposes the corporate paraphernalia of boards of directors and shareholder voting on all mutual funds, whether they are organized as corporations, trusts, limited partnerships, or simply pools of investment funds.[6]

The reason the Investment Company Act takes this approach is straightforward when one considers the state of the industry in 1940. At the end of 1940, mutual fund industry assets totaled $2.1 billion.[7] Of that amount, only $450 million were in open-end mutual funds (which were then commonly organized as trusts).[8] The remaining $1.65 billion were in closed-end investment companies.[9] Closed-end investment companies were (and are) organized in traditional corporate form. Given the dominance of investment companies organized on a corporate basis, it is understandable that, in 1940, Congress and the SEC would apply to investment companies the corporate mechanisms

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Vanguard, and T. Rowe Price.

6. Notably, the corporate paraphernalia that is required of mutual funds is not required of other collective investment arrangements, such as bank common trust funds, commodity pools, separately managed accounts, and hedge funds.

7. Richard M. Phillips, *Deregulation Under the Investment Company Act—A Reevaluation of the Corporate Paraphernalia of Shareholder Voting and Boards of Directors*, 37 BUS. LAW. 903, 905 (1982).

8. *Id*.

9. Investors buy and sell shares of closed-end funds in the public markets, in the same manner they buy and sell shares of public companies. Investors invest in open-end funds by going directly to the fund to buy or redeem shares. *See* 15 U.S.C. § 80a-5(a) (2000). It is estimated that closed-end funds were formed in greater number before 1940 because more money was made distributing their shares than managing their portfolios. PETER J. WALLISON & ROBERT E. LITAN, COMPETITIVE EQUITY: A BETTER WAY TO ORGANIZE MUTUAL FUNDS 25 (2007).

of boards of directors and shareholder voting. And it is equally understandable why the industry accepted this form. In short, the Investment Company Act was crafted to regulate an industry that was dominated by closed-end funds organized along corporate lines.[10] Moreover, given that shares of closed-end mutual funds trade in secondary markets which, in 1940, were thin and not very liquid, investors were deemed vulnerable to expropriation by fund managers and in need of safeguards that boards of directors and voting rights were to provide.[11] Today, however, the investment company industry is dominated by open-end funds, not closed-end ones. In 2004, open-end funds managed $8.1 trillion, or 95% of total investment company assets.[12] In contrast, closed-end funds held only $254 billion.[13] Furthermore, closed-end mutual fund shares today are highly liquid. Notwithstanding the shift from closed-end funds to open-end funds, and the increased liquidity of the markets, the corporate paradigm continues.

B. Pros and Cons of the Corporate Model

This subsection examines the arguments for and against the corporate paradigm, namely, the requirements that mutual funds have boards of directors and that mutual funds grant shareholder voting rights to investors.

1. Mutual Fund Boards: Watchdogs or Sleeping Dogs

Mutual funds must have a board of directors, according to advocates, to police potential conflicts of interest inherent in mutual fund creation and operation. A typical mutual fund is organized by its investment adviser, which provides the fund with its management services. Because the adviser is a legally distinct entity from the fund and must seek higher profits for its owners, it has objectives that differ from those of mutual fund investors, who seek the highest possible return on their investment, after fees and expenses. The investment adviser thus serves two masters.[14] The investment adviser's

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10. Phillips, *supra* note 7, at 905.
11. *Id.*
12. INV. CO. INST., 2005 INVESTMENT COMPANY FACT BOOK 3 (2005) [hereinafter 2005 ICI FACT BOOK], *available at* http://www.ici.org/pdf/2005_factbook.pdf.
13. *Id.*
14. One exception is the mutual form of ownership adopted by the Vanguard Group, where investors in Vanguard funds are also shareholders of the investment adviser.

interest "in maximizing its own profits for the benefit of its owners may conflict with its paramount duty to act solely in the best interests of the fund and its shareholders."[15] While fund investors have the legal authority to remove the investment adviser, it is not realistic to expect fund investors to sever that special relationship between the fund and its adviser. Consequently, a conflict arises. In response, the Investment Company Act requires that a board of directors oversee fund operations. The board of directors is intended to be a monitor, protecting the interests of mutual fund investors in situations where the investment adviser could exploit them. Under the Investment Company Act, the board is responsible for selecting the fund's investment adviser and other service providers, evaluating fees for services provided to the fund, policing operational conflicts, permitting certain transactions in the absence of SEC review, and establishing the fund's investment objective and policy.[16] Moreover, the Investment Company Act requires that a percentage of the fund's directors be independent of the fund's investment adviser.[17] The independent directors, in particular, are expected to look after the interests of investors, and the Investment Company Act assigns additional responsibilities to these independent directors.[18] Because of the independence requirement and the mandated responsibilities, some claim that independent directors are "watchdogs" of shareholder interests.[19] The SEC has sought (and continues to seek) to enhance the bargaining power of mutual fund boards by strengthening the influence of the independent directors.[20]

The corporate paradigm has its critics. Critics observe that a board of directors imposes costs on mutual funds. Direct costs include compensation of directors,

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15. Interpretive Matters Concerning Independent Directors of Investment Companies, Investment Company Act Release No. 24,083, 70 SEC Docket 2017 (Oct. 14, 1999) (codified at 17 C.F.R. pt. 271).

16. The duties imposed on directors by the Investment Company Act are in addition to those imposed by state law.

17. The SEC has stated that mutual funds are unique in that they are "organized and operated by people whose primary loyalty and pecuniary interest lie outside the enterprise." 1992 SEC REPORT, *supra* note 3, at 251.

18. For instance, independent directors vote separately from the board on certain matters, review and approve the fund's contracts with the investment adviser and principal underwriter, select the fund's independent public accountants, oversee certain securities transactions involving affiliates, and review and approve fidelity bonds.

19. Burks v. Lasker, 441 U.S. 471, 484 (1979) (quoting District Judge Frederick van Pelt Bryan in *Tannenbaum v. Zeller*, 552 F.2d 402, 406 (2d Cir. 1977)); *Investment Trusts and Investment Companies: Hearings on S. 3580 Before the Subcomm. On Interstate and Foreign Commerce of the S. Comm. on Banking and Currency*, 76th Cong. (1940) (statement of David Schenker, Chief Counsel, Investment Trust Study, SEC).

20. *See supra* notes 1–3.

reimbursement of travel expenses for board meetings, costs of counsel for the

independent directors, and expenses of keeping directors informed.[21] There are indirect

costs as well. Fund management must reallocate considerable time and resources away

from portfolio management to preparing for board meetings and tending to director

requests.

Critics also argue that boards do not fulfill their intended function. These critics

argue that, despite their "watchdog" role, mutual fund boards are ineffective in policing

conflicts between the adviser and investors.[22] Directors do not have much more

information than investors, critics point out. Directors are typically generalists with only

limited resources. Boards lack a full-time professional staff, and directors are dependent

upon the investment adviser to keep them informed. Moreover, boards meet only

quarterly or bimonthly, not daily. Further, fund directors typically lack the subject-matter

expertise in portfolio management that the adviser possesses. While corporate boards

outside the mutual fund context perform two functions, monitoring of management and

providing strategic expertise, mutual fund boards typically perform only the monitoring

function. If directors do not possess full information or expertise, critics argue that it is

not realistic to expect them to strike the best deal for investors. This lack of information

and expertise is compounded by the compensation scheme for directors. Directors are

typically paid an annual retainer fee and a separate fee for each meeting attended.

Payment is not tied to fund performance. The compensation scheme thus does not align

director interests with shareholder interests.

Other critics argue that the independent director requirement that underpins mutual

fund corporate governance rests on a faulty definition of independence.[23] The Investment

Company Act views independence in a relational context. Under the Act, a director is

deemed independent if he or she does not have a close relational nexus with the

21. For a quantification of direct costs, see Letter from Lipper Analytical Services, Inc., to Jonathan G. Katz, Sec'y, SEC (Oct. 9, 1990), cited in 1992 SEC REPORT, *supra* note 3, at 274 n.85, 286; Letter from Leslie L. Ogg, Vice President and Gen. Counsel, IDS Mutual Fund Group, to Jonathan G. Katz, Sec'y, SEC (Sept. 26, 1990) (on file with author); Letter from Non-Interested Trustees of Scudder Funds, to Jonathan G. Katz, Sec'y, SEC (Oct. 9, 1990) (on file with author) [hereinafter Cost Letters].
22. *See, e.g.*, WALLISON & LITAN, *supra* note 9.
23. Jeffrey J. Haas & Steven R. Howard, *The Heartland Funds' Receivership and Its Implications for Independent Mutual Fund Directors*, 51 EMORY L.J. 153, 183–191 (2002).

investment adviser, underwriter, or administrator.[24] The Investment Company Act assumes that every director who meets the relational distance test from the fund adviser will look out for the best interests of fund shareholders. However, critics argue that this assumption is flawed for three reasons.[25] The first reason is that, over time, the distance between the independent directors and the fund adviser narrows considerably. Independent directors may become "house directors," serving on the boards of many funds within a fund family, and receive considerable compensation as a result of maintaining friendly relations with a particular investment adviser. Yet, under the Investment Company Act, this compensation is irrelevant, due to the relational standard.[26] The second reason is directorial incompetence. Directors may stand the requisite distance away from the fund adviser to qualify as independent, but if they lack the necessary knowledge and skill, then they cannot be an effective watchdog. Third, funds are typically formed by an investment adviser, who is the fund's initial shareholder. Given this special relationship between an adviser and its fund, it is unrealistic to expect an independent director to sever that relationship, particularly since most directors are initially selected by the adviser. And, indeed, instances of a board choosing to replace the fund's adviser are rare.[27]

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24. The Investment Company Act disqualifies "persons who are investment advisers of, affiliated persons of an investment adviser of, or officers or employees of" a registered investment company. Investment Company Act of 1940, ch. 686, § 10(a), 54 Stat. 789, 806 (1940) (current version at 15 U.S.C. § 80a-10 (2000)). Congress expanded the scope of the relational nexus in 1970 to include the term "interested persons," the effect of which was to widen the relational nexus and permit fewer individuals to qualify as independent. Investment Company Amendments Act of 1970, Pub. L. No. 91-547, 84 Stat. 1413, 1416 (1970). Simply put, interested persons are defined to include a long list of persons who have some business or professional relationship with the investment company or are affiliated with the adviser, underwriter, or broker for the investment company.

25. *See, e.g.*, Haas & Howard, *supra* note 23, at 186–190.

26. One Maryland case, *Strougo v. Scudder, Stevens & Clark, Inc.*, 964 F. Supp. 783 (S.D.N.Y. 1997), may be read "as implying that the court [involved in that case] would be sympathetic to the argument that clustered boards whose members receive 'substantial remuneration' [would] violate section 10(a) of the Investment Company Act." David J. Carter, *Mutual Fund Boards and Shareholder Action*, 3 VILL. J. L. & INV. MGMT. 6, 33 (2001). Section 10(a) mandates that a certain percentage of a fund's board be independent. However, in no subsequent case has a court taken this approach, and both Maryland and Massachusetts have since adopted statutes effectively overruling the holding. *See id* at 34.

27. In 2007, the board of the Korea Fund replaced its adviser, Deutsche Asset Management, with RCM Capital Management. Press Release, The Korea Fund, Inc., The Korea Fund Under New Management (April 2, 2007) [hereinafter Korea Fund Press Release], *available at* http://www.thekoreafund.com/documentLibrary/ koreaFund/supportingLiterature/newsPressReleases/kf_press_release_04_02_07.pdf. In 2005, the board of the Clipper Fund voted to replace its adviser, Pacific Financial Research, with Davis Selected Advisors. Douglas Appell, *What Are the Odds? Twice in 10 Years, and Davis is There*, PENSIONS & INV. (New York, N.Y.), Jan. 9, 2006, at 8. In 2002, the Japan Fund chose to replace its adviser, Deutsche Asset Management, with Fidelity. Chuck Jaffe, *Japan Fund Shift Shows Who's Boss*, STAR-LEDGER (Newark, N.J.), Nov. 27,

Besides the fact that the statutory regime does not capture a meaningful notion of independence, critics find other shortcomings with the reliance upon independent directors. Critics often cite the process by which mutual funds select independent directors as creating an inherent conflict of interest. Often independent directors are selected as a reward for being a friend or colleague of the person or entity that started the mutual fund. This results in boards composed of independent directors who are anything but independent. Other critics point out that the statutory regime does not allow shareholders to pursue private enforcement of a break-down in the arm's length relationship between directors and advisers.[28] Finally, critics have observed that, until recently, errors and omissions insurance did not cover litigation between independent directors and fund advisers. A director would have had to know to ask for it, and would have had to be willing to ask the fund to pay the cost.[29]

The system of mutual fund directors has faced mounting criticisms over the years, leading to claims that they are not "watchdogs" but rather "sleeping dogs." As tangible evidence, critics typically point to directors' failure to keep management fees low, to terminate management contracts with poorly performing investment advisers, and to effectively challenge practices of investment advisers. For instance, consider board performance in terms of fees and expenses. Critics who argue that boards have not been

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2003, Bus., at 66. In 1993, the board of the Selected Funds chose to replace Kemper with Venture Advisers L.P. Appell, *supra*.

The unusual situation surrounding the Japan Fund illustrates the kind of circumstances that prompt a board to act. To begin, the Japan Fund's long-time adviser, Zurich Scudder, was acquired by Deutsche Bank only months earlier. Shortly thereafter, the fund's portfolio manager resigned. Because the directors of the Japan Fund were not sitting on the boards of other funds in the Zurich Scudder/Deutsche Bank family they opted to change advisers. Jaffe, *supra*.

28. Shareholders do have an express cause of action with respect to compensation, pursuant to section 36(b) of the Investment Company Act, which imposes a fiduciary duty on the adviser. 15 U.S.C. § 80a-35(b) (2000). However, section 36(b) is limited to fee-related conflicts of interest only. *Id.* Further limitations include the following: (1) plaintiffs are not entitled to a jury trial, (2) only shareholders or the SEC have standing (not the fund, as with a derivative suit), (3) the burden of proof is on the plaintiffs, (4) damages are not recoverable for any period prior to one year before the start of the suit, (5) damages are limited to actual damages resulting from breach of fiduciary duty and may not exceed the amount of payments received from the investment company or its shareholders, and (6) federal courts have exclusive jurisdiction. *Id.* Section 36(b) was interpreted by the Second Circuit in *Gartenberg v. Merrill Lynch Asset Mgmt., Inc.*, 694 F.2d 923 (2d Cir. 1982), which held that for a management fee to violate section 36(b) it must be so disproportionately large that it bears no reasonable relationship to the services rendered, and could not have been the product of arms-length bargaining. *Id.* at 928. Moreover, the court rejected comparisons with the fees and expenses of advisers to other funds. *Id.* at 929. No plaintiff has met the standards set forth in *Gartenberg*. Note that one case, *Strougo v. Scudder, Stevens & Clark, Inc.*, may have opened the door to derivative litigation whereby shareholders on behalf of the fund could challenge the independence of putatively independent directors. Strougo v. Scudder, Stevens & Clark, Inc., 964 F. Supp 783 (S.D.N.Y. 1997); *see also* Carter, *supra* note 26, at 33.

29. *See* Haas & Howard, *supra* note 23, at 189.

effective in negotiating fees and expenses cite escalating fund expense ratios. The SEC estimates that mutual fund expense ratios have risen from an average of 1.14% in 1979 to 1.36% in 1999.[30] One study calculates that average expense ratios for U.S. funds increased from 0.96% in 1971 to 1.44% in 1990.[31] Another study claims that expense ratios have, on average, doubled over four decades.[32] Critics note that this escalation in expense ratios has occurred simultaneously with the growth of the fund industry, which should permit large economies of scale and hence declining expense ratios for investors.[33] Critics thus argue that these increasing fees and expenses reveal that boards have not been effective in negotiating on behalf of investors. In fact, boards rarely re-negotiate management fees over time and advisers are rarely fired; one study shows that, on average over the 1993-2002 period, only about 10% of all U.S. mutual funds renegotiated their management fees or changed their subadvisers.[34] Certain critics go further, arguing that escalating funds fees are not just a reflection of ineffective boards. Rather, these critics assert that escalating fees are caused by the corporate paradigm that requires mutual funds to have boards and empowers them to review and approve fund fees. For instance, Wallison and Litan analogize the way adviser fees and expenses are approved by fund boards to the way rates are established by public utility commissions.[35] Observing that mutual fund boards often set fund fees on the basis of reported costs plus a reasonable profit, they believe the corporate paradigm eliminates the incentive of investment advisers to cut costs and compete on the basis of price. Wallison and Litan state the following:

> [I]n the mutual fund world where virtually all advisers must receive

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30. DIV. OF INV. MGMT., SEC, REPORT ON MUTUAL FUND FEES AND EXPENSES (2000), *available at* http://www.sec.gov/news/studies/feestudy.htm [hereinafter THE FEE REPORT].

31. Erik Sirri & Peter Tufano, *Costly Search and Mutual Fund Flows*, 53 J. FIN. 1589, 1593 (1998).

32. Roger Klein, *Who Will Manage the Managers?: The Investment Company Act's Antipyramiding Provision and Its Effect on the Mutual Fund Industry*, 59 OHIO ST. L.J. 507, 611 n.20 (1998).

33. Economies of scale result from the fact that the expenses associated with mutual fund management increase more slowly than the size of assets under management, and the fact that most funds are offered as part of a larger fund family (as the net asset values of families grow larger, they can spread fixed costs, such as research costs, or expenses for bank lines of credit, over a larger base). Sources of economies of scale also include savings from larger securities trades and from more efficient utilization of investment analysis; computers; shareholder servicing, accounting, record-keeping and reporting systems; and legal services.

34. Camelia M. Kuhnen, Social Networks, Corporate Governance and Contracting in the Mutual Fund Industry 3 (Mar. 1, 2007) (unpublished manuscript), *available at* http://ssrn.com/abstract=849705. The author focuses on subadvisers because primary advisers are rarely replaced by boards.

35. WALLISON & LITAN, *supra* note 9, at 77–78.

approval of their fees and expenses from a board of directors, there is, as noted, no incentive for them to discover all the innovations and efficiencies that would reduce their costs. If they did, the board, adding a 'reasonable' profit to the lower cost figures presented to them, would simply reduce the adviser's fee accordingly.[36]

Recently, a number of counter arguments have arisen in response to the critics. One counter argument notes that mutual fund shares, which are redeemable upon demand in open-end funds, put competitive checks on advisers. That is, while boards may not often fire advisers, investors can effectively fire an investment adviser on their own by redeeming their shares and investing elsewhere.[37] If advisers charge excessive fees, in the long run they will lose out as investors shift to lower fee funds. A related counter argument points to the number of funds competing in the market, and the lack of substantial barriers to entry and expansion in the mutual fund market.[38] Such factors make it hard to argue that the mutual fund market suffers from lack of price competition. Since investors can move in and out of funds with little cost or frictions, and funds can enter, exit and expand with few obstacles, competition in the market place should be an effective regulator. Hence, boards are not needed.

Some recent studies find that mutual fund expenses have been declining over time, contradicting studies cited by critics.[39] Studies of trends in mutual fund expenses produce contradictory results depending upon the time period analyzed, how expense ratios are computed,[40] and the sample of funds analyzed.[41] A further complicating factor

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36. *Id*. at 6.
37. There can be, however, disincentives to redemption, including loads, redemption fees, and adverse tax consequences.
38. *See* John C. Coates & R. Glenn Hubbard, *Competition and Shareholder Fees in the Mutual Fund Industry: Evidence and Implications for Policy*, 33 J. CORP. L. 151, 167–70 (2007).
39. Studies by the U.S. General Accounting Office find that average expense ratios were 0.74% in 1990, 0.65% in 1998, and 0.70% in 2001. U.S. GEN. ACCOUNTING OFFICE, MUTUAL FUNDS: INFORMATION ON TRENDS IN FEES AND THEIR RELATED DISCLOSURE 6 (2003), *available at* http://www.gao.gov/new.items/d03551t.pdf; U.S. GEN. ACCOUNTING OFFICE, MUTUAL FUND FEES: ADDITIONAL DISCLOSURE COULD ENCOURAGE PRICE COMPETITION (2000), *available at* http://www.gao.gov/archive/2000/gg00126.pdf. The Investment Company Institute estimates that average equity mutual fund fees and expenses in 2005 were at their lowest level in 25 years. *See* 2005 ICI FACT BOOK, *supra* note 12.
40. Although it found that the average expense ratio had risen from 1979 to 1999, the SEC Division of Investment Management cautioned that the overall cost of owning fund shares may not have risen if changes in sales loads are taken into consideration. THE FEE REPORT, *supra* note 30. (Sales loads are not taken into consideration when calculating expense ratios and have generally decreased during the period. *Id*.) According to the Division,

> the increase in mutual fund expense ratios since the 1970s can be attributed primarily to changes in the manner that distribution and marketing charges are paid by mutual funds and their

is that, while funds may not often change their stated fees, they do frequently offer to waive some of those fees. One study finds that almost half of money market fund expenses were being waived, and that 37% of equity funds were offering fee waivers.[42] Moreover, the study found that these fee waivers changed frequently throughout the year.[43] Thus, it might be that price competition gets reflected in fee waivers instead of in fees themselves.

With compelling arguments made by proponents and critics of fund boards, the question remains: Do the advantages of boards of directors in mutual funds outweigh their disadvantages? Before answering that question, however, we must first examine the other element of the corporate paradigm: shareholder voting.

2. Shareholder Voting

In the United States, a mutual fund, as a corporation organized under state law, must grant voting rights to its shareholders in accordance with state corporate law.[44] Moreover, the Investment Company Act reinforces and extends these shareholder voting rights. Section 18(i) of the Investment Company Act requires, with a few exceptions, that every share of stock issued by an investment company "shall be a voting stock and have equal voting rights with every other outstanding voting stock."[45] Further, the Investment Company Act grants additional voting rights to shareholders, beyond those

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shareholders. Many funds have decreased or replaced front-end loads, which *are not* included in a fund's expense ratio, with ongoing Rule 12b-1 fees, which *are* included in a fund's expense ratio. This change complicates the comparison of current expense ratios with expense ratios from earlier periods.

Id. Studies have addressed this complication by analyzing "total fees" instead of expense ratios. Total fees attempt to incorporate loads into a fund's expense ratio by amortizing any load over an assumed holding period for a hypothetical investor, and adding that amount to the annual expense ratio. Such studies tend to find that total fees are declining notwithstanding increasing expense ratios. *See* Erik R. Sirri & Peter Tufano, *Costly Search and Mutual Fund Flows*, 53 J. FIN. 1589 (1998); Ajay Khorana & Henri Servaes, Conflicts of Interest and Competition in the Mutual Fund Industry (July 2004) (unpublished manuscript), *available at* http://ssrn.com/abstract=240596; THE FEE REPORT, *supra* note 30; *The Cost of Buying and Owning Mutual Funds*, FUNDAMENTALS (Inv. Co. Inst., Washington, D.C.), Feb. 2004, at 1, *available at* http://www.ici.org/pdf/fm-v13n1.pdf.

41. *See* Coates & Hubbard, *supra* note 38, at 175–77 (discussing varying study results across several samples of funds).

42. Susan E.K. Christoffersen, *Why Do Money Fund Managers Voluntarily Waive Their Fees?*, 56 J. FIN. 1117, 1138-39 (2001).

43. *Id*.

44. The Investment Company Act also mandates these rights for funds of non-corporate form, such as trusts.

45. 15 U.S.C. § 80a-18(i) (2000). There is an exception for investment companies organized as series, where each series represents interests in a single portfolio of securities. *Id*. § 80a-18(f)(2).

given by state corporate law. Such shareholder voting rights include the right to elect directors,[46] to approve changes to fundamental policies with respect to key investment activities,[47] to approve Rule 12b-1 plans,[48] and to approve the initial management contract, subsequent changes to the management contract, assignments of the management contract, and any new management contract.[49] Over the years, these shareholder voting rights have been emphasized and expanded by the SEC. For instance, in administrative proceedings, the SEC staff has often taken broad positions on classifying investment policies as fundamental investment policies that cannot be changed without shareholder approval.[50] Also, the SEC staff has interpreted the notion of "assignment" of management contracts broadly to require shareholder approval following minor changes in ownership or control of the investment adviser.[51] Advocates argue that shareholder voting is necessary to ensure the accountability of fund management to investors. Shareholder voting is also necessary to elect directors to the fund's boards, and to preserve the independence of the independent directors. Advocates also cite the informational advantages that accompany the proxy process.

Notwithstanding the foregoing, critics argue that voting rights have been of limited value in governing the relationship between the fund and its investment advisers, underwriters, and others. These critics argue that, in the more than six decade history of the Investment Company Act, there have been few instances where shareholders appear to have had a significant impact on the management of the fund. There have been almost no reported instances of successful shareholder opposition to any management proposal for advisory contracts, change in investment policies, or selection of accountants, which are issues that expressly require shareholder approval. There have been three instances in recent years where shareholders have been involved in a proxy fight between the investment adviser and independent directors. The three instances involve the Navalier

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46. *Id*. § 80a-16(a).
47. *Id*. § 80a-13(a). Activities that must be governed by fundamental investment policies are capital structure, permissible investments and investment strategies that significantly affect the investment characteristics, and risk-reward profile of the shares issued by the mutual fund. *See* 1992 SEC REPORT, *supra* note 3.
48. 17 C.F.R. § 270.12b-1(b)(1) (2007).
49. 15 U.S.C. § 80a-15(a); *id*. § 80a-15(f). Either the shareholders or the board must approve multi-year contracts. *Id*. § 80a-15(a)(2).
50. Phillips, *supra* note 7, at 907 (describing how the Commission has expanded voting requirements).
51. *Id*.

funds in 1997, the Yacktman funds in 1998, and the Japan Fund in 2002. In those cases, the independent directors refused to approve management contracts and the issue subsequently fell to shareholders. In the first two cases, the shareholders actually defeated the independent directors and voted to retain the investment adviser. Only in the last case did the shareholders support the independent directors. Nevertheless, in cases such as these, most shareholders choose to sell their shares rather than vote.[52] Consequently, critics conclude that shareholder voting is generally not a viable mechanism for ensuring accountability or even for meaningful expression of opposition to management.

Critics also argue that shareholder voting is ineffective in preserving the independence of directors. Independent directors are initially selected by the fund sponsor or adviser, in most cases. Thereafter, vacancies are typically filled by nominating committees composed of the independent directors. While shareholders in theory have the power to reject candidates nominated by the nominating committee, it is rarely exercised. Shareholders overwhelmingly approve the proposed slate of directors.[53] Critics conclude that shareholder voting tends to be a "ritualistic ratification" of nominees already selected pursuant to this process.[54] In the history of the Investment Company Act, critics observe that there have been virtually no shareholder attempts to elect nominees to the board in opposition to management nominees, or to ouster an incumbent director through a proxy fight. Furthermore, critics argue that proxy materials do not serve a useful communication function for shareholders. Fund investors already receive, in addition to the proxy materials, annual statutory prospectuses and periodic shareholder reports. Proxy materials are likely the least read and least understood of all communications investors receive.

Critics offer several reasons for the ineffectiveness of shareholder voting. First, mutual fund shares are typically dispersed widely. There are no large blocks of shares in the hands of individual investors or management and, hence, collective action problems

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52. *See* David A. Sturms, *Enhancing the Effectiveness of Independent Directors: Is the System Broken, Creaking or Working?*, 1 VILL. J.L. & INV. MGMT. 103, 111 (1999) ("Approximately 69% of the mutual funds shares had 'voted with their feet' by redeeming their investments in the fund.").

53. *See* Carter, *supra* note 26, at 25 (stating that shareholders typically approve the proposed slate without objection).

54. Phillips, *supra* note 7, at 909-10.

prevail. Second is the nature of an investment in a mutual fund. The instant diversification provided by a mutual fund obviates the incentive to follow fund management decisions closely or to expend the energy necessary to participate in the voting process. Mutual fund investors "hire" the fund's investment adviser precisely because they wish to avoid such involvement. Third, the liquidity offered by mutual funds means investors can redeem their shares ("vote with their feet") rather than bother to vote.[55] As a result, mutual fund shareholders participate in the voting process even less often than shareholders of traditional corporations.[56]

Nevertheless, providing for shareholder voting is costly for mutual funds. Critics note that voting has direct costs. These costs include the expenses of proxy solicitations, including legal and accounting fees in connection with the preparation and distribution of proxy materials, as well as the costs of holding annual or special meetings of shareholders. Attendance of investors at shareholder meetings and the number of proxies actually returned is sparse, making it difficult to achieve a quorum.[57] Two and three adjournments of shareholder meetings for lack of response to proxy solicitations are not uncommon, causing delay and increased costs for re-solicitations. The expenses associated with shareholder voting are typically paid by the fund (and thus the investors), and not by the investment adviser.[58] Although there are no published figures that isolate these costs from other funds expenses, they likely are not negligible.[59] There are more indirect costs as well. In order to comply with shareholder voting requirements, fund management must reallocate considerable time and resources away from portfolio management to shareholder solicitations. Moreover, collective decision making by shareholders can result in decisions that are different from those that would have been reached if shareholders each contracted individually. In other words, the collective decision making of shareholder voting may be inefficient in that it does not maximize

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55. There are nevertheless disincentives to redemption, including loads, redemption fees, and adverse tax consequences.
56. *See* Carter, *supra* note 26, at 26 (comparing mutual fund shareholders to shareholders of traditional corporations), WHARTON SCH. OF FIN. & COMMERCE, A STUDY OF MUTUAL FUNDS, H.R. REP. 87-2274, at 68 (1962) [hereinafter WHARTON REPORT].
57. WHARTON REPORT, *supra* note 56.
58. Phillips, *supra* note 7, at 908 (discussing responses to proxy solicitation).
59. *See* Cost Letters, *supra* note 21.

shareholder welfare.[60] Consequently, critics have often called for the SEC to permit funds to issue non-voting securities and to convert outstanding voting securities to non-voting securities.[61]

We are left with the question: Do the advantages of shareholder voting in mutual funds outweigh the disadvantages? Similarly, do the advantages of boards outweigh their disadvantages? More generally, do corporate mutual funds represent an optimal market solution to the agency problems that characterize mutual funds? If so, the corporate model should, in total, benefit funds and their investors. But if mutual funds in the United States are organized along corporate lines solely to satisfy legal requirements, those requirements represent a deadweight cost to mutual funds and their investors. The next Part of this chapter explores the primary alternative to the corporate model, namely, the trust model.

III. Mutual Funds Outside the United States (The Trust Model)

With respect to fund structure and governance, two dominant types of mutual funds have arisen in the world: the "corporate fund" (the U.S. model) and the "trust or contractual fund" (the German, Japanese, and traditional British models). In the United States, mutual funds have been required to take the corporate form. However, in much of Europe, in Japan, and in many other countries, funds have arisen under contract or trust law, as opposed to corporate law. Investors in these funds contribute money to a pool of funds, in which contribution is governed by a contract between the investors and the manager of the pool and by a trust deed between the manager and a custodian/trustee (which incorporates the terms of the contract by reference). The manager then manages the portfolio. Unlike funds organized pursuant to the corporate model, funds organized pursuant to this trust/contractual model do not empower a monitor (such as a board of directors) with discretion to oversee the fund and provide little, if any, shareholder voting. The fact that mutual funds have arisen in many countries pursuant to a trust/contractual model raises the possibility that the corporate model is not a market

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60. *See* HENRY HANSMANN, THE OWNERSHIP OF ENTERPRISE 39-44 (1996).
61. *See* Phillips, *supra* note 7, at 910 (stating one critic's view on nonvoting securities).

solution to the organizational design problem.

A. Differences Between the Corporate Model and the Trust Model

The two models differ in how they allocate decision-making power and control among the three primary actors (the investment adviser, the monitor, and the investors).

1. Fund Versus Adviser as the Focal Point

The corporate model places the mutual fund at the center of the model. In the corporate model, the fund is an independent legal entity with the capacity, for instance, to enter into contracts and to sue and be sued. The laws and regulations governing mutual funds focus on the operation and structure of the fund. The fund offers shares in itself to the investors. It is the proceeds from the issuance of its shares that form the investment pool of the fund. The investment pool may not be commingled with the assets of the investment adviser or any other entity, or paid out to any other entity except pursuant to contracts approved by the fund's board. The fund has a board of directors, with ultimate responsibility for coordinating and managing the fund. With board approval, the fund contracts with legally independent third party service providers, such as the investment adviser, the distributor, and the administrator.

In contrast, the trust model places the investment adviser (or its equivalent, the "investment manager") at the center, instead of the fund. The fund in the trust model is a contractual entity which is not independent of its investment manager or sponsor. Rather, the design and operation of the fund, and its success or failure, are the responsibility of the manager. In this sense, the contractual fund is "more like a proprietary financial product."[62] For instance, the Financial Services Regulation of the United Kingdom states the following:

> It is the duty of the manager to manage the property of the [fund], and it is his right and duty to make decisions as to the constituents of that property from time to time in accordance with . . . the trust deed, [laws and regulations] and the most recently published [prospectus].[63]

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62. Wallace Wen Yeu Wang, *Corporate Versus Contractual Mutual Funds: An Evaluation of Structure and Governance*, 69 WASH. L. REV. 927, 957 (1994).

63. Financial Services (Authorised Unit Trust Schemes) Regulation, 1988, S.I. 1988/284, § 4.01 (U.K.), *reprinted in* JOHN W. VAUGHAN, THE REGULATION OF UNIT TRUSTS 34 (1990). The regulation is also reprinted in Wang, *supra* note 62, at 957 n.123.

Consequently, in the trust model, the investment manager is not subject to the control of a board or any other organizational superior. The investment manager is responsible for all services necessary for the operation of the fund (except for custodial services)[64] and all costs involved in operating the fund and distributing its shares (though the manager may recoup all or some of such costs through pre-set fees).

2. Rules Versus Discretion

In the corporate model, the fund's board of directors is granted considerable discretionary authority and is responsible for making business judgments. For instance, the board must approve the contracts with the fund's adviser, distributor, and administrator, and review them annually. The board is provided with no guidance or decision rules; rather, these are decisions for the board in its sole discretion.[65]

In contrast, funds following the trust model rely more on rules than discretion. In the trust model, the typical fund contract is composed of "standard terms or rules, with allowances for variations (i.e., discretion) in only exceptional cases."[66] To ensure that contract terms are fulfilled, a passive monitor (typically, a custodian or trustee) is employed to "ensure that the [fund] is administered by the managers in accordance with the [management contract, regulations and prospectus]."[67] Thus, instead of imposing a board of directors, the trust model relies on a passive monitor to oversee the manager's compliance with pre-established rules and, in carrying out the function, the monitor is

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64. Because fund assets are mostly held in liquid form, the potential for insider misconduct is high. It is therefore important that fund assets are held by custodians. The custodian typically safeguards fund assets, makes payments for purchases of securities in a fund's portfolio, and receives payments from sales of portfolio securities. In the United Kingdom, the manager must be independent from the custodian (whose function is performed by the trustee). The trustee (1) carries out the instructions of the manager (subject to laws and regulations), (2) takes reasonable care to ensure that the manager accurately calculates issue and redemption prices, and (3) takes custody of assets and holds them in trust for investors. The trustee may delegate its custodial function to a separate custodian. If it does so, the trustee must make reasonable inquiry to ensure that the custodian is fit and proper and that arrangements have been made to protect the trustee's priority over other creditors of the custodian. Financial Services (Authorised Unit Trust Schemes) Regulation, 1988, S.I. 1988/284, § 4.05 (U.K.), *reprinted in* VAUGHAN, *supra* note 63, at 38.

65. For instance, Congress amended the Investment Company Act in 1970 to impose, in section 36(b), a fiduciary duty with respect to payments from the fund to the investment adviser. Investment Company Amendments Act of 1970, Pub. L. No. 91-547, 84 Stat. 1413 (1970) (codified as amended at 15 U.S.C. § 80a-35 (2000)). Yet no guidance was provided as to what the term "fiduciary duty" would allow.

66. Wang, *supra* note 62, at 959.

67. Financial Services (Authorised Unit Trust Schemes) Regulation, 1988, S.I. 1988/284, § 4.01 (U.K.), *reprinted in* VAUGHAN, *supra* note 63, at 34.

given little discretion. In the United Kingdom, for example, if a trustee of a unit trust desires to remove a fund manager, the trustee can only do so in one of six events that are specified in the regulations. Such events include the liquidation of the manager or the appointment of a receiver for any part of the manager's activities. In another example, instead of requiring the trustee to be a watchdog over potential conflicts, as boards are required in corporate funds, the laws and regulations of trust fund jurisdictions explicitly set forth which transactions are permitted and prohibited for managers.

3. Shareholder Voting

Voting occurs when decisions are not already decided by contract. Thus, not surprisingly, corporate funds typically provide for greater shareholder voting than trust-type funds. In the United States, a mutual fund, as a corporation organized under state law, must grant voting rights to its shareholders in accordance with state corporate law.[68] Moreover, the Investment Company Act grants additional voting rights to shareholders, beyond those given by state corporate law. Such shareholder voting rights include election of directors, changes to fundamental policies with respect to key investment activities, approval of the initial management contract, subsequent changes to the management contract, assignments of the management contract, and any new management contract.[69]

In contrast, trust-type funds provide few voting rights to investors. In the United Kingdom, for example, unit trust investors may vote on only four issues: (1) amendment of the trust deed, if the trustee and manager consent, (2) approval of a manager to depart from a policy set forth in the prospectus, (3) removal of the manager, and (4) merger of the fund with another fund or other body.[70] In many other countries following the trust model, such as Germany and Japan, investors have no voting rights at all.[71]

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68. The Investment Company Act also mandates these rights for funds of non-corporate form, such as trusts.
69. *See* discussion *supra* Part II.B.2.
70. *See* VAUGHAN, *supra* note 63, at 76 (discussing voting rights in the United Kingdom).
71. *See Managing Money: A Legal Guide to the World's Investment Fund Markets*, INT'L. FIN. L. REV. (Mar. 1990), at 101-02; The Inv. Trust Ass'n of Japan, *Investment Trusts in Japan* 6 (1990), *cited in* Wang, *supra* note 62, at 962.

B. Purported Advantages of the Trust Model

As noted above, the trust model places the investment adviser (or its equivalent, the investment manager) at the center. That is, the investment manager provides and coordinates all fund operations. It is not solely one of several outside service providers. While the corporate model assigns legally separate roles to the sponsor, the investment adviser, the distributor, and the administrator, in the trust model, these functions are all performed by the investment manager.

Advocates of the trust model cite efficiency as a justification for combining these functions. Running a mutual fund involves coordinated execution of multiple tasks. Since the functions are complimentary activities, advocates argue that they can be performed more efficiently by a single entity.

It is not only more efficient, but also easier to assess performance if those tasks are accomplished by a single entity. Combining functions makes it easier to evaluate performance and provide incentives. In a trust-type fund, the investment manager can set a *single, fixed fee* in exchange for *all services* necessary for a fund's operation. All fund expenses are paid out of that single fee or from the investment manager's own resources. This unitary, or bundled, fee structure greatly simplifies the investors' ability to evaluate bottom-line fund expenses as well as net mutual fund performance. In contrast, corporate funds have much more complex fee structures. Corporate funds, acting through their boards of directors, enter into *multiple* service contracts with separate service providers, *each with its own* fee and expense provisions. But this approach produces, in the aggregate, a complex fee structure. The problem is compounded by the fact that, in corporate funds, the allocation of costs among service providers is somewhat arbitrary.[72]

Combining functions may benefit investors in other ways, according to advocates. As the provider of all services, the investment manager becomes fully responsible for the design and operation, and success and failure, of the fund. The fund is not independent of the investment manager, but rather part of it, just as any financial product the investment manager offers. A trust mutual fund is, in a sense, a proprietary product whose success or failure directly impacts the reputation of the investment manager.

Another advantage of the trust model is that it likely reflects investor perceptions

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72. *See* WALLISON & LITAN, *supra* note 9, at 82-83 (discussing problems in allocating costs).

of their relationship to their fund, even in the United States. Typical investors in U.S. mutual funds do not think of themselves as owners of the fund, though legally they are. More likely they view themselves as customers of the investment adviser. For instance, investors in the Fidelity Magellan Fund most likely view it as Fidelity's fund, not a fund that they own as shareholders, and they likely view themselves as contracting with Fidelity to be provided with Fidelity's service, investment management.[73]

C. SEC Consideration of Trust Proposals

The SEC's Division of Investment Management considered permitting mutual funds to organize pursuant to an alternative governance structure in the early 1990s, and rejected the idea.[74] Two alternatives to a corporate model were considered: the Unitary Investment Fund and the Unified Fee Investment Company.

In concept, the Unitary Investment Fund (UIF) follows the trust model closely. Specifically, the UIF would be a mutual fund organized in trust form and would be operated under the management of a sponsor, without the provision for a board of trustees elected by shareholders.[75] Instead, the sponsor/manager would act as the fund's trustee. A trust indenture would spell out fundamental investment policies and the management fee. Investors would hold non-voting interests in the trust. In return for the elimination of shareholder voting and fund boards, the UIF would be required to operate in accordance with its trust indenture, and the UIF's manager would limit itself to a single management fee to cover all operating expenses (except extraordinary expenses and shareholder account services). The fee would be set forth in the trust indenture and be subject to a statutory maximum, which the SEC could adjust. The trust indenture could not be amended for a certain period (perhaps five years) without an SEC exemptive order. Thereafter, it could be amended upon adequate prior notice to investors, who could respond by redeeming.

The advantage of the UIF is its simplified governance structure, with neither voting

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73. Paula A. Tkac, *Mutual Funds: Temporary Problem or Permanent Morass?*, ECON. REV. (Federal Reserve Bank of Atlanta, Atlanta, Ga.), Fourth Quarter 2004, at 1, 2, *available at* http://frbatlanta.org/filelegacydocs/erq404_tkac.pdf.
74. *See* 1992 SEC REPORT, *supra* note 3, at 253 (deciding that the current model should be retained). The SEC first floated the idea in a concept paper in 1982. Advance Notice and Request for Comment, Investment Company Act Release No. 12,888, 26 SEC Docket 1367 (Dec. 10, 1982).
75. 1992 SEC REPORT, *supra* note 3, at 282-88.

shareholders nor a board of directors, and a simple fee arrangement. However, the UIF was criticized by the Division along several lines.[76] The Division first pointed out that boards in the corporate model do more than police fees. They also police potential transactions that would transfer value from investors to the adviser or its affiliates. The Division, consequently, called for an independent monitor to accompany the UIF proposal, which role might be performed by either an independent trustee or the SEC through oversight and examination. However, in the end, the Division felt that the added cost of an independent monitor would undermine the initial rationale for the trust/contractual model.[77] Second, the Division took the position that shareholder voting rights "serve an important communicative and deterrent function, particularly in circumstances where there are impediments to redemption."[78] Thus, although the Division acknowledged that "the current voting structure is a 'ritualistic anachronism,'" it chose to retain the traditional corporate model and eliminate certain shareholder voting requirements that did not have any bearing on investor protection concerns.[79] Consequently, the Division "concluded that a contractual or UIF structure is fundamentally incompatible with the regulatory philosophy of the Act, which relies on boards of directors to monitor investment company operations and resolve conflicts of interest."[80] The Division stated that "implementation of the UIF concept would require a wholesale restructuring of existing regulatory arrangements, with . . . no apparent benefit for investors."[81]

Having rejected the UIF proposal, the Division considered a compromise: the Unified Fee Investment Company (UFIC), which retained the board of directors feature of the corporate model, retained some shareholder voting rights and eliminated others, and added the single fee aspect of the trust model.[82] Under the UFIC proposal, two-thirds of the board would be independent. The board, including the independent directors

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76. *Id.*
77. *See id.* at 285 (explaining that without demonstrable savings there is no reason to replace the current model).
78. *Id.* at 276.
79. *Id.*
80. 1992 SEC REPORT, *supra* note 3, at 254.
81. *Id.* at 254–55. Note that another criticism of the UIF was that it would have a "relatively inflexible and static trust structure that quickly could become anachronistic and unresponsive to investor needs." Phillips, *supra* note 7, at 904.
82. 1992 SEC REPORT, *supra* note 3, at 332–45.

voting separately, would review and approve all material contracts, including the management contract, and would have the right to terminate any contract at any time. However, the board would have no role with respect to fund fees. Instead, the UFIC would have a single, unified fee which would cover all operating expenses (except extraordinary expenses and shareholder account services). The fee would be displayed prominently in the prospectus, sales materials, and advertisements, and would be set by competitive pressures in the marketplace. Shareholders would no longer have the right to vote with respect to the fund's advisory contract. Instead, they would receive 90 days notice of any management or advisory fee changes, and would be expected to redeem their shares if they disagreed with the changes (there would be no sales charges or redemption fees). Shareholders would retain all other voting rights that they had.[83]

However, the Division downplayed the importance of the UFIC proposal, placing a discussion of it in Chapter 8 of its report ("The Sale of Open-End Investment Company Shares") instead of in Chapter 7 ("Investment Company Governance"), with a discussion of the UIF. The Division appeared to consider the UFIC to be merely a modified version of the corporate model, rather than an alternative to it.[84]

An important factor in the Division's rejection of these proposals was an estimate of the cost of corporate governance structures. The Division rejected the idea that the corporate governance structure is more costly than a trust structure. The Division determined that the elimination of the corporate structure "would result in only minimal cost savings."[85] However, in reaching this conclusion, the Division did not make a fully informed decision. First, it did not conduct its own study or rely upon an independent study. Instead, it based its decision on estimates provided by three mutual fund complexes.[86] The authors of these submissions would have had a vested interest in continuing the current system.[87] Moreover, one can question whether three estimates are sufficient. Further, the three estimates had very narrow scopes, looking at direct costs only, such as fees and expenses of independent directors, the cost of proxy solicitations,

83. *Id.*, at 337–45.
84. Wang, *supra* note 62, at 1028–29.
85. 1992 SEC REPORT, *supra* note 3, at 286.
86. *See* Cost Letters, *supra* note 21.
87. One of the three estimates was submitted by the independent directors of a fund complex.

the cost of counsel for the independent directors, and the cost to prepare materials and reports to directors. These estimates did not address the potentially greater costs of a corporate governance structure that diverts resources away from fund management in order to comply with corporate governance requirements and that empowers boards of directors whose interests are not aligned with shareholders. In contrast to these direct cost, industry-sponsored studies considered by the SEC, this dissertation takes a more comprehensive approach, using regression analysis, to empirically assess the impact of corporate fiduciary duties versus trust fiduciary duties.

IV. Recommendation

This chapter has described the efforts by U.S. lawmakers and regulators to mitigate the principal-agent conflict inherent in mutual fund creation and operation. The U.S. approach, requiring that all mutual funds have boards of directors and grant shareholder voting rights to their investors, is characterized as a corporate model. Both Congress and the SEC, however, implicitly believe that the corporate model has not been sufficiently effective. Since the inception of the Investment Company Act, the SEC has sought to enhance the independence and effectiveness of mutual fund boards of directors. Most recently, in 2001, the SEC adopted rules that required independent directors to comprise at least a majority of each mutual fund's board (the previous requirement had been 40%), and that required independent directors to be selected and nominated only by other independent directors.[88] Since 2004, the SEC has pursued numerous additional changes pertaining to fund governance, including requirements that independent directors comprise at least 75% of each mutual fund's board, and that an independent director chair each fund's board.[89] The SEC has been reviewing, revising, and adopting rules and regulations pertaining to fund governance throughout the more than six decade existence of the Investment Company Act.[90]

If the corporate model has not been sufficiently effective at mitigating principal-

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[88] *See supra* note 2.
[89] *See supra* note 1.
[90] *See supra* note 3. Over the years, shareholder voting rights have also been emphasized and expanded by the SEC. *See* discussion accompanying *supra* notes 50 and 51.

agent conflict in mutual funds, perhaps Congress and the SEC should look to the United Kingdom. British authorities have historically relied upon the strict fiduciary duties of trust law to mitigate principal-agent conflict within mutual funds. However, since 1997, British regulators have allowed investors to choose whether to invest in funds organized as trusts or as corporations. The British experiment with organizational competition has produced a useful set of data, analyzed in chapters II and III, regarding the effects of organizational form. The empirical evidence from chapter II and III reveals that differences in fiduciary rules across organizational forms have non-trivial implications for investors. This dissertation finds that fiduciary rules have implications for investors in terms of expenses, risk taking, and performance. One caveat, however, is that this dissertation has not analyzed other potential differences between trusts and corporations, such as different reliance on rules versus discretion. Nevertheless, the fiduciary obligation is the heart of organizational law. And the empirical evidence indicates that the difference in underlying fiduciary obligations exerts significant effects, all else being equal.

The evidence from the British fund industry suggests that regulatory change in the U.S. could benefit American investors. Permitting a trust alternative to the U.S. corporate governance model may benefit American investors by offering them greater choice. Organizational competition in the U.S. fund industry would enable American investors to choose to invest in funds that subject themselves to the stricter fiduciary rules of trust law, or to opt for funds that subject themselves to the looser fiduciary rules of corporate law backed by boards and voting rights. Different organizational structures would appeal to different investor clienteles. Some clienteles would prefer the trust-type funds, with their relatively cheap and low risk-return profile, while other clienteles would prefer the corporate-type funds, with their relatively more expensive and more aggressive profile. With organizational competition, American investors could decide the tradeoff themselves, a decision now made for them by regulators under the current one-size-fits-all governance model. Moreover, chapter III shows that a loosening of restrictions on organizational form fosters competition within the fund industry, resulting in an improvement in risk-adjusted performance (at the cost, however, of greater risk-taking behavior and direct costs for consumers).

V. Conclusion

Overall, the evidence analyzed in this dissertation suggests that a business's legal form of organization has a non-trivial impact on managerial behavior, risk taking, and performance. The results have implications for corporate governance design, suggesting that enhancing investor protection through heightened fiduciary duties can reduce agency costs and managerial risk-taking behavior, but at the expense of lower risk-adjusted performance. The results, therefore, suggest that fiduciary liability can be a policy tool to lower the direct costs of financial services and risk–seeking behavior within the industry. These benefits, however, must be exchanged for diminished risk-adjusted performance.