Introduction

The benefits to consumers from competition are most apparent when competition is absent. As an example, there is a story told of men's shoe manufacturing during the 1950s in the Soviet Union.[1] Under the Soviet central planning authority, several plants manufactured identical style men's black shoes. Each plant was assigned a production quota, and each plant met its quota. There remained, however, a manufacturing problem that the central planners had not solved—the shoes tended to fall apart within a short time period. A young planner offered a bright idea—identify each pair of shoes by the plant of origin. Through this simple act, the plants were forced to compete on product quality. Each plant's reputation for shoe quality and its subsequent financial remuneration from the state were now at risk. Low-quality producers could easily be identified and their shoes shunned by consumers when making future purchases. Similarly, plants could be penalized for low quality by Soviet authorities. Introducing a way for consumers to choose between seemingly like products produced competition between shoe manufacturers, and shoe quality improved dramatically.

In countless other examples, the presence or absence of competition is of paramount importance to the well-being of consumers. Competition leads to lower prices, better product quality, more rapid technological improvements, lower firm costs, and greater consumer satisfaction.

In this book, we examine competition in the mutual fund industry.[2] For decades the mutual fund industry has been embroiled in controversy over the extent of price competition between fund investment advisers and the level of fees charged to fund investors. Critics contend that mutual fund investors are forced to pay excessive fees due to the absence of price competition between fund investment advisers.[3] A series of fund investor lawsuits have been filed asking for damages because of fee overcharges. In reaction to these claims, government and academic studies have examined the industry for the presence or absence of price competition since the 1960s, with conflicting empirical results.

Whether the mutual fund industry is price-competitive is of enormous importance to millions of Americans who depend on their mutual fund investments for retirement. It is no exaggeration to say that mutual funds are the bedrock foundation for retirement saving in the United States. Indeed, given the rapid historic growth of mutual funds in retirement investment accounts, this dependence on mutual funds will likely grow in coming years. If mutual fund advisers are free from the rigors of price competition and are able to set high fees with impunity, millions of investors will suffer relatively low returns and a poorer quality of life in retirement.

The Mutual Fund Industry and Its Critics

The mutual fund industry has received strong criticism for not sufficiently protecting the interests of fund investors from fund investment advisers intent on growing their profits by overcharging investors. According to John Bogle, founder of the Vanguard Group of mutual funds, over the 1983–2003 period, the stock market yielded an average return of 13.0 percent, but the average equity mutual fund investor earned only 7.9 percent, because of investment advisers' power to increase fund investors' fees.[4] A return differential of this magnitude, if valid, could have dire consequences for an investor's retirement years. Such a gap would suggest that fund investors suffered a substantial opportunity cost during this period. The main reason for excessive investor fees, according to fee critics, is a lack of price competition between equity mutual fund advisers.

The controversy over mutual funds and returns to fund investors has been ongoing since the 1930s. After a series of investor complaints in the 1930s, the U.S. Securities and Exchange Commission (SEC) collected evidence on fund investment managers exploiting shareholders, finding numerous incidences of fund managerial fraud. Government investigators found that investors were harmed, especially in closed-end funds, by managers engaging in such actions as embezzlement, granting low-interest loans to themselves and friends, and selling watered stock they owned to fund investors.[5] This record of investor abuses resulted in passing the Investment Company Act (ICA) of 1940 and the Investment Advisers Act (IAA) of 1940 to protect investors' assets from unlawful actions by investment advisers.

It is generally agreed that the ICA of 1940 achieved its goal of eliminating the gross abuses of investors taking place in the 1930s. However, the claim that price competition is absent has been leveled for over 50 years, with potentially long-term financial injury to fund shareholders. In the late 1950s, investors brought approximately 50 state-level lawsuits asserting that investment advisers charged excessive fees to mutual fund shareholders.[6] Twenty years after the ICA of 1940, studies commissioned by the SEC concluded that U.S. equity mutual fund advisers did not compete on price, leading to "excessive" fees and artificially reduced returns to mutual fund investors.[7] This finding, that the market for mutual funds was highly inefficient owing to the absence of price competition, informed the law from 1982 to the present, in litigation charging investment advisers with imposing excessive fees on mutual fund investors. A series of excessive investor fee cases were brought against money market fund advisers in the late 1970s and early 1980s. A similar wave of investor excessive fee lawsuits were filed following the market timing and investor favoritism scandals of 2003 and 2004.[8] Extending this line of attack, plaintiffs have brought a series of lawsuits against various administrators of employer-sponsored defined contribution retirement plans, asserting that they have charged excessive fees to administer 401(k) pension plans.

Mutual Funds and U.S. Retirement Assets

Open-end mutual funds were introduced in the United States in the mid-1920s, growing from one fund in 1924 to 19 funds in 1929, with approximately $140 million in assets.[9] Today the mutual fund industry is a colossus, with approximately $12 trillion in assets at the end of 2007.[10] Mutual funds have evolved into a crucially important investment product, owned by an estimated 55 million U.S. households and 96 million individuals.[11] The growth in mutual funds has been especially robust in tax-deferred retirement accounts since the 1970s introduction of Individual Retirement Accounts (IRAs) and employer-sponsored 401(k) defined contribution retirement plans. Mutual funds are the primary investment vehicle of choice in these types of retirement accounts, representing approximately 50 percent of total U.S. assets in self-directed retirement plans.[12]

Investing in mutual funds for retirement expanded greatly after the 1980s when traditional employer defined benefit plans started to be phased out in favor of defined contribution plans.[13] Defined benefit plans generally use investment advisers to actively manage portfolios of stocks, bonds, and other investments on behalf of a company-sponsor, while IRAs and defined contribution plans rely on self-directed investments by plan members. The rapid growth in mutual fund investing for retirement was likely accelerated by the baby boom generation's preparation for retirement and strong stock market performance in the 1980s and 1990s.

As the primary investment product in many retirement plans, the financial well-being of millions of retirees is dependent on the performance of mutual funds. The more competitive and therefore efficient the market for investing in mutual funds, the greater the benefits to investors. Inefficiencies and failures in the market for mutual funds can potentially cost retirees billions of dollars in foregone savings and diminish the quality of life in their retirement. Potential economic inefficiencies in mutual fund investing, such as relatively high costs to investors of switching between mutual funds, limited access to information on the costs of investing, or, more broadly, reduced price competition between mutual funds, raising investor costs above the competitive level, will decrease the value of retirement assets relative to the value in a more efficient, competitive market. Moreover, to the extent that inefficiencies in the mutual fund market disadvantage retirees, it will influence retirees' demands on government for future financial support, affecting society as a whole.

Mutual Fund Pricing

Studies on price competition in the mutual fund industry are often imprecise on how prices are determined, what constitutes price competition, how prices are changed, and what is meant by excessive prices. Some mutual fund studies address price competition in absolute terms: it is either present or absent, and when finding it absent, they conclude that prices must be excessive. Some studies accept that a degree of price competition exists, but argue that it is not sufficient to meaningfully affect mutual fund prices. Other mutual fund studies define price competition by the economic model of perfect competition, where competition results in a uniform price across all sellers. Any price above some competitive benchmark level is regarded as excessive and therefore illegitimate. Because of these disparate views and what constitutes a benchmark model of price competition, some background information on pricing in the mutual fund industry is useful.

As indicated, the nature of price competition, price setting, and what may constitute excessive prices in mutual funds is more complex than acknowledged in many studies. To illustrate, consider the creation and initial price setting by a new mutual fund. To create and market a new mutual fund, the organizing firm, typically an investment advisory firm, must fulfill all government-mandated legal requirements. Of more interest for our purposes, it must arrange to provide a multitude of services to the fund investors, including portfolio management, fund share transfers, share exchanges and redemptions, distribution networks, marketing, and legal and auditing services.

Adviser revenues are generated from fees, both as a percentage of total fund assets under management and from fixed periodic fees, in return for the adviser's services. As a new fund, the adviser announces a schedule of investor fees. The adviser's aim in selecting a fee schedule is to maximize the present value of its long-term profits. Establishing a schedule of investor fees requires consideration of a number of factors, including the amount of expected assets under management, operating costs, fund performance, rival funds' fee schedules, and the types and quality of services provided to the fund's investors.

Once marketing and distribution of the fund's shares begin, the investment adviser monitors the flow of investments to the fund. The fund's announced fee schedule may prove to be either too low or too high, depending on investor demand for the fund's product offering. If the announced fee schedule is too low, higher revenues have been foregone. If the announced price schedule is too high relative to the fund's attributes and investor demand, the adviser similarly incurs a loss in foregone revenues.

If the announced fee schedule is too low, given the fund's subsequent performance and quality of services provided to investors, the adviser's ability to raise prices is constrained. Raising announced fees in response to, for example, higher than expected demand is constrained by industry regulations. Mutual fund regulations require fee increases to be approved by the fund's shareholders, who are naturally loath to raise their own cost for fund ownership and thus lower their return on investment. Given the difficulty of gaining shareholder approval for higher fees, investment advisers must set their new fee schedules with care to obtain the highest possible present value of expected future profits.

An adviser operating under a performance contract provides a possible exception to the difficulty of raising fees. Under such a contract, fees can be adjusted up or down, within limits, depending on the fund's performance relative to the performance of some marketwide index of securities. If certain investor return targets are met, the investment adviser in some cases is allowed to raise fees a small amount in exchange for producing superior performance. Conversely, if performance targets are not met, the investment adviser must reduce investor fees a small, symmetrical amount.

In contrast to regulations hindering fee increases, if the announced fee schedule is too high, fees can be lowered without requiring shareholder approval. The principal methods of lowering fees are through fee waivers to investors, announcing a lower fee schedule, changes in product attributes, and in certain cases based on a fund's performance. Prices can be discounted from announced prices through fee waivers. Fee waivers are especially common in new, smaller size funds, to remain competitive with higher return funds, but large funds also lower fees at times through waivers. This results in a two-level pricing structure: the announced prices and actual or effective prices. It follows that announced and effective fund prices often differ, with higher announced than effective prices. As a consequence, examination of a fund's announced prices often does not reflect the influence of competition on mutual fund investor prices.

In contrast to more time-limited fee waivers, a reassessment of current and expected market conditions, fund costs, fund performance, and rivals' pricing may lead to a manager revising announced fees to a new, lower price schedule. However, this is a long-term commitment, given the difficulty of gaining shareholder approval to raise fund fees.

A further method for changing price is to change the attributes of the product purchased by fund investors. When purchasing a fund, investors purchase both the fund and the services of its investment adviser. For example, when investors purchase a Vanguard index fund, they are also selecting the Vanguard Group as the fund's investment adviser and administrator. Similarly in all other fund complexes,[14] investors purchase the fund jointly with the investment adviser. Continuing with Vanguard, the joint product of fund and investment adviser comes with a package of investor services (e.g., possibly 24-hour service, investment advice for an additional fee, and retirement planning), and attributes, such as Vanguard's experience and company reputation, past return performance, fee level, breadth of funds available from Vanguard, and available channels of distribution. Funds in each rival complex come with their own package of attributes. These attributes can be varied to change the effective price of owning the fund. For example, by increasing the number or quality of services to investors for a given price, investment advisers effectively reduce price by providing investors more value for the price. Similarly, by reducing services or the quality of services for a given price, price per unit of quality is increased. Thus, price per unit of quality can be changed by adding or subtracting product attributes for a given price. However, reducing product quality when rivals offer greater quality for the same price is a recipe for losses in sales and profits.

The "price competition" at issue in mutual funds is thus the effective price relative to the package of attributes provided by the fund's investment adviser.

Because different fund complexes provide different sets of product attributes, prices will vary across funds, both generally and within specific mutual fund investment style categories, such as growth, value, sector, and foreign stock funds. Higher prices may well reflect differences in demand and product differentiation across funds, rather than a fund adviser's ability to set excessive prices owing to an absence of price competition. However, for an equivalent set of product attributes (past performance, services to investors, fund and adviser reputations, etc.) within a specific investment style category—that is, for relatively substitutable funds—prices should be roughly comparable. Thus, claims of excessive investor prices in mutual funds due to a lack of price competition imply that a fund's investor fees, given the set of product attributes being purchased, are too high relative to the level they would be under competitive market conditions. Left unanswered is how an advisory firm is able to shield itself from price competition by other fund advisers and maintain excessive prices when investors are free to switch funds.

In summary, investment advisers negotiate a price schedule to maximize the present value of their profits, but that does not mean that advisers' prices are fixed and unresponsive to rivals' price levels. Price changes in the mutual fund industry can take various forms, such as waivers, cancelling waivers, lower fee schedules, performance-based price changes, and product attribute changes. Thus, the concepts of *price*, *price competition*, and *excessive fees* in the mutual fund industry are not as straightforward as some studies seem to imply. This ambiguity is important to keep in mind in succeeding chapters as we examine studies on mutual fund pricing, price trends, and price determination, as well as when we present our economic model of consumer choice and the demand for mutual funds and fund complexes.

Purpose of the Book

In this book we present a model of the supply and demand for mutual funds. Although various academic and government studies have examined the mutual fund industry for evidence of ineffective price competition, anticompetitive fees, and lower investor returns relative to competitive fee levels, models of the demand for and supply of mutual funds are largely missing. Instead, most empirical studies in this area, such as those estimating the demand for mutual funds, developed their statistical analyses without the benefit of an economic model, relying on intuitively plausible factors to explain the demand for mutual funds. Testable hypotheses based on an analytical model of mutual fund demand and supply have generally not been presented.[15] Our purpose is to provide more detailed and exacting tests for price competition between mutual fund investor advisers.

A further purpose is to use data from the contemporary mutual fund industry. Many previous studies are largely outdated. The pioneering studies on mutual fund fees of the 1960s, based on data from the 1950s and early 1960s (when there were about 100–150 mutual funds, and they were a minor segment of the securities investment industry) are clearly dated. The mutual fund industry is vastly different today from what it was in the 1950s and 1960s. Whatever the findings on price competition during that era, they cannot be credibly extrapolated to the present. To do so would make about as much sense as saying that competitive market conditions in the automobile industry today are little different from those in the 1950s. Competitive market conditions in the 1950s automobile or mutual fund industry have little relevance to each industry's present market conditions. Thus, given the critical role of mutual funds in retirement plans and individual retirement accounts in the United States, and the potential harm to fund shareholders from ineffective or an absence of price competition, mutual fund market efficiency deserves a new examination.

In addition, at the time of this writing, U.S. Appellate Courts that were addressing mutual fund excessive fee cases were in conflict over whether price competition prevailed between fund investment advisers. In the leading legal decision from 1982 onward, the *Gartenberg* case, the Second Circuit Court of Appeals concluded that effective price competition between investment advisers was absent in the mutual fund industry.[16] In 2008, the Seventh Circuit Court of Appeals concluded the opposite—that mutual fund pricing was guided by price competition.[17] Our analyses are intended to help resolve these contrary views of price competition in the mutual fund industry.

Organization of the Book

Chapter 1 describes growth in the mutual fund industry over the past 25 years or so, growth in investing for retirement, and the relative position of mutual fund assets among all retirement-directed assets. We show the increasing importance of mutual funds in investing for retirement and how the Pension Protection Act (PPA) of 2006 provides additional incentives for individuals to invest in mutual funds. Government pension plans, in which defined benefit plans continue to predominate, are shown to be increasingly subject to underfunding. If public defined benefit plans begin shifting to defined contribution plans to help solve the underfunding problem, it will lead to an additional large shift of retirement monies to mutual funds. The upshot is that returns on mutual funds and the competitive efficiency of the industry are vitally important to many types of retirement plans, and mutual funds will likely increase their presence in retirement plan investing.

Chapter 2 summarizes the debate and evidence on excessive fees and the absence of price competition among mutual funds. We place criticisms of investment adviser malfeasance in the mutual fund industry in historical perspective by describing the evolution of the mutual fund industry and federal regulations up to the ICA of 1940 and thereafter, especially in the 1950–1960s era, when the pioneering studies noted above concluded that fees were excessive owing to a lack of price competition. We conclude with a discussion of various regulatory proposals, starting in the 1960s, to restrain the setting of excessive fees.

Chapter 3 summarizes and discusses the *Gartenberg* decision, the historically major court case addressing excessive mutual fund fees. The district and appellate court decisions in this case provide a striking contrast in legal and economic analysis of excessive charges and help frame the debate over the extent of price competition in the mutual fund industry. The precedent-setting appellate decision concluded that there was no price competition in the industry, based on 1950s and 1960s studies and data, which begs the question of price competition in the industry both at the time of *Gartenberg* in the early 1980s and at present. Subsequent excessive fee cases deferred to *Gartenberg*, ruling out an inquiry on the extent of price competition, because the *Gartenberg* decision stated that investment advisers do not compete on price.[18] As mentioned, in 2008 the Seventh Circuit Court of Appeals rejected the reasoning in *Gartenberg*, concluding that price competition flourishes in the mutual fund industry.[19] Similarly, our analysis raises serious questions on the economic reasoning underlying the *Gartenberg* appellate court decision and how applicable that reasoning is to the present-day mutual fund industry.

Chapter 4 presents our economic model of the mutual fund industry. Technical details and results are presented in the Appendix to Chapter 4. We find that investors in U.S. equity mutual funds are highly sensitive to fee levels, with lower fees related to proportionately greater increases in the demand for mutual funds. And with investors sensitive to fees, investment advisers are compelled to compete on price and product attributes, resulting in competitive price levels.

Chapter 5 reviews mutual fund industry structure in terms of number of rivals, concentration levels, barriers to entry and firm expansion, and changes in market shares as indirect indicators of the presence or absence of price competition. All of the measures point to a highly competitive mutual fund industry. We also present direct evidence of competition, documenting the extent of annual price cutting by investment advisers and investor sensitivity to price based on the extent to which they concentrate their investments in the lowest priced funds.

Chapter 6 reviews and critiques fee critics' evidence in support of their claim of excessive pricing. These critics attempt to prove that mutual fund fees are excessive by arguing that (1) fees are substantially higher for retail compared to institutional investors, and competition exists in the market for institutional investors so the price difference represents the extent to which retail investors are overcharged; (2) mutual fund fees within an investment style vary widely, whereas in a competitive market, a large range in prices would not exist; and (3) there are large economies of scale in operating mutual funds, but cost savings are not passed on to investors in the form of lower fees, showing that competition is absent. We find serious errors in the fee critics' evidence and arguments.

Chapter 7 examines the governance structure of mutual funds and the extent to which this structure is associated with fund performance. Some critics argue that the unique governance structure of most mutual funds, with separation of ownership and control between a mutual fund and its investment adviser, allows advisers to dictate fees to funds' boards of directors, freeing investment advisers from having to compete on price. As examples of ideal mutual fund governance structures, free from the alleged tyranny of investment advisers, fee critics cite the organizational structures governing the Vanguard Group of mutual funds and the Teachers Insurance and Annuity Association—College Retirement Equities Fund (TIAA-CREF) complexes of mutual funds. They argue that the relatively low fees charged by each of these fund complexes are a result of their governance structures and nonprofit status. We test the fee critics' proposition that because these two complexes have relatively low investor fees, they provide higher investor returns than average, for-profit equity mutual funds charging higher fees. We find no evidence that these two complexes earn net returns persistently superior to complexes and funds with traditional mutual fund organizational structures.

Chapter 8 summarizes our findings and lessons learned. We find evidence of significant competition between mutual fund investment advisers. This finding is important. If competition is ineffective, allowing for shareholder fees above the competitive level, fund investors are harmed by lower returns, reducing their lifetime retirement savings. Alternatively, if effective price competition prevails, concerns over excessive investor fees artificially reducing returns are misguided, and regulations intended to control the level of investor fees cannot improve on competitive, market-determined fees.