

DC FOCUS

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Defined Contribution Plan Fees Deconstructed Impact of Investment Costs and Trading on Total Plan Cost

INCREASED SCRUTINY OF FEES

Scrutiny of the various fees and expenses incurred in administering and investing in defined contribution plans has increased significantly over the past few years. Several lawsuits have been filed against plan sponsors and service providers regarding the level of fees, revenue sharing practices, and fee disclosures. Congress and the Department of Labor continue to hold hearings and propose new legislation and regulations concerning DC plan fees and required fee disclosures.

Many different services and costs are involved in administering a defined contribution plan. Investment management, custodial and trustee services, recordkeeping and administration, investment consulting and advice, plan documents, plan testing and compliance, and communications and participant education are just some of the major services required by a typical DC plan. Payment for these services is usually made in one of three ways:

Itemized	A fee is charged for a specific service.
Participant-based	A fee is charged per participant.
Asset-based	Fees are calculated as a percentage of assets in a fund or plan.

These fees can be paid by the plan sponsor, plan participants, or by some combination of the two. Results of a 2007 survey of 401(k) plan sponsors conducted by the Investment Company Institute (ICI) reveal that plan administrative fees were most often paid by plan participants. When participants paid for these costs, the vast majority paid for them through fees and expenses included in the plan's investment options. Investment management fees are normally asset-based and paid by plan participants, while payments for plan administration costs vary.

Who Pays Annual 401(k) Recordkeeping or Administrative Fees?

Plan sponsor	26%
Plan participants via investment product fees and expenses	51%
Plan participants via direct charge	10%
Fees paid by both plan sponsor and participants; other	13%

FEES RELATED TO PLAN

INVESTMENTS ARE A PRIMARY EXPENSE

Firms that provide services to defined contribution plans must cover their costs by charging and collecting fees from plan sponsors and/or plan participants. Within a typical DC plan, a significant source of these fees is in the regulatory or stated expense ratios of the various investment options offered in the plan. These fees are direct or explicit costs, because the fund expense ratios are identifiable, documented, and measurable amounts that are paid from fund assets, which directly reduce fund returns and the investors' investment in the fund.

Fund expense ratios include investment advisory fees for portfolio management (normally the largest component of the stated expense ratio) and administrative fees (recordkeeping, transfer agency, custodial, legal, and accounting fees). Some funds offer share classes that include separate shareholder service fees that may be selected by DC plan sponsors to compensate plan service providers for the various services they deliver (such as recordkeeping and servicing accounts at the participant level); while others also charge 12b-1 fees, which pay for marketing, sales, and distribution of the funds to DC plans.

THE IMPORTANCE OF TRADING COSTS

Trading costs are another major expense that is difficult to identify and is often overlooked. These include brokerage commissions, bid/ask spreads, and market impact costs. Trading costs are sometimes called indirect or implicit costs, because they are not reflected in a fund's expense ratio and are not easily quantifiable.

Brokerage commissions are transaction fees paid to a broker for buying or selling securities. Brokerage commissions sometimes include soft dollar arrangements in which the fund manager may pay more than the lowest possible commission rate in exchange for brokerage research or other services utilized in managing the funds.

The bid/ask spread can be described as a commission to a market maker—an intermediary who connects a buyer with a seller of a particular security. There are actually two prices for a stock at any point in time: one for buying the stock and one for selling the stock. The difference between these two prices is the bid/ask spread.

Market impact costs refer to the change in price that can result from large trades in a particular stock. A large trade in a relatively illiquid security can have a significant impact on the price of that security. For example, if a fund manager sells a substantial stock holding and the trade causes the security's price to drop, the trade's market impact becomes a cost to the investors in the fund.

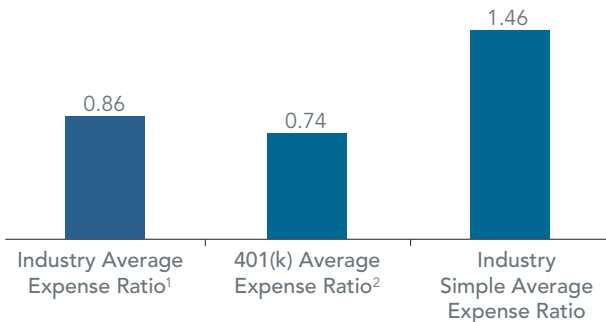
Trading costs impact fund returns and an investor's net investment in the fund. Brokerage commissions are paid from fund assets, while bid/ask spreads and market impact costs affect the value of fund assets as trades occur.

OBTAINING AND MEASURING INVESTMENT COSTS

Direct or explicit costs for mutual funds are readily available and documented in the fund prospectus and shareholder reports. Fund expense ratios for investment vehicles other than mutual funds, such as collective trust funds or separate accounts, are available in the legal documents provided by the investment manager or fund sponsor, and can typically be found in plan materials such as fund profiles.

Many 401(k) plan participants hold mutual funds with relatively low expense ratios. The ICI reports that the industry-wide simple average stock mutual fund expense ratio at the end of 2007 was 1.46%. The industry-wide asset-weighted average stock mutual fund expense ratio was 0.86% in 2007, while the 401(k) plan asset-weighted average stock mutual fund expense ratio was 0.74%.

STOCK MUTUAL FUND EXPENSE RATIOS 2007



1. The industry average expense ratio is measured as an asset-weighted average.

2. The 401(k) average expense ratio is measured as a 401(k) asset-weighted average.

Note: Figures exclude mutual funds available as investment choices in variable annuities and tax-exempt mutual funds.

Source: Investment Company Institute, "The Economics of Providing 401(k) Plans: Services, Fees, and Expenses, 2007," *Research Fundamentals* 17, no. 5 (December 2008).

Brokerage commissions paid by mutual funds can be obtained through Statements of Additional Information; or Form N-SAR, which is filed with the SEC (some funds also include in shareholder reports information on commissions paid). Compiling this data is a tedious process, and information is not always available at the individual fund level. For other investment vehicles, brokerage commissions are typically not provided through any standardized report but may be available from the investment manager upon request.

The effect of bid/ask spreads and market impact costs can be estimated, but this requires detailed trading information and/or the development and application of broad assumptions. The average plan sponsor or plan participant is not willing or prepared to undertake such a task, but several private companies are examining this issue closely.

BrightScope is one such firm that quantitatively rates 401(k) plans across a number of different metrics, including total plan cost. Their definition of total plan cost includes estimates of implicit costs for individual funds and is a key component in their ratings. According to Ryan Alfred, president of BrightScope, "Fees in 401(k) plans have a large impact on the retirement outcomes of plan participants. Understanding the nuances of how fees are charged and how they impact retirement outcomes is difficult, but plan fiduciaries need to be measuring and benchmarking their fees to ensure that they are providing a high-quality benefit to their employees."

Trading costs can be significant—they often equal or exceed a fund's stated total expense ratio. Trading costs for

actively managed funds are typically much higher than for passively managed funds. Such costs reduce fund returns realized by the investors in the fund, as fund assets are valued net of trading costs.

An investment manager that provides liquidity and successfully implements a patient and flexible trading strategy can reduce trading costs and improve portfolio performance, potentially adding significant value over time. Firms that focus on efficient execution rather than the timing of trades will take a longer-term view of achieving target positions within a portfolio. These liquidity providers are able to earn a market premium, since motivated counterparties must pay for liquidity through the prices they receive (or pay) for the specific securities and precise timing they demand.

RESEARCH ON MUTUAL FUND TRADING COSTS

In their 2004 study “Portfolio Transactions Costs at US Equity Mutual Funds,” Karceski, Livingston, and O’Neal estimated mean brokerage commissions paid at 0.38% of average net assets. Brokerage commissions were estimated at 0.39% for actively managed funds and 0.07% for index funds. Growth funds had the highest brokerage commission rates within each market capitalization range (large cap, mid cap, and small cap funds).

Their analysis of brokerage commissions as a percentage of average net assets revealed several interesting relationships:

- Portfolio turnover is positively related to commissions.
- Expense ratios are positively related to commissions.
- Non-US funds have higher commissions than US funds.
- Fund market capitalization is negatively related to commissions.
- Price/earnings ratios (higher in growth funds) are positively related to commissions.
- The number of stocks in a fund is negatively related to commissions.

Karceski, Livingston, and O’Neal also estimated implicit trading costs using the effective spread, a gauge of round-trip implicit trading costs, as their primary measure. For all equity mutual funds, they estimated mean implicit trading costs at 0.58% of average net assets. Implicit trading costs were estimated at 0.60% for actively managed funds and 0.07% for index funds. Again, growth funds had the highest implicit trading costs within each market capitalization range (large cap, mid cap, and small cap funds).

In their March 2007 paper “Scale Effects in Mutual Fund Performance: The Role of Trading Costs,” Edelen, Evans, and Kadlec found that estimated annual trading costs were comparable to fund expense ratios (1.44% versus 1.21%, respectively). Their analysis was based on a sample of 1,706

US equity funds during the period 1995 through 2005. Additionally, they found that for funds with a relatively small average trade size, trading was positively related to fund returns; and for funds with a relatively large trade size, trading was negatively related to fund returns.

LOW COSTS AND EFFICIENT TRADING CAN SIGNIFICANTLY IMPROVE LONG-TERM INVESTMENT RESULTS.

TRADING COSTS AND TURNOVER

Investment costs directly impact fund returns and represent an important factor for plan sponsors to evaluate when selecting funds for their plans. Research indicates trading costs can equal or exceed a fund’s stated expense ratio, so it is important for plan fiduciaries to consider all costs when evaluating funds.

While actual trading costs for a particular fund can be difficult or impossible to ascertain, basic data on trading activity is readily available. Portfolio turnover measures the trading activity in a fund’s portfolio, or how often the underlying securities are bought and sold. Mutual funds report portfolio turnover statistics in fund shareholder reports. Portfolio turnover can be used to assess the trading of securities by the fund manager and can serve as a proxy for trading costs. The ICI reports that the simple average turnover rate of stock mutual funds was 95% in 2007. All else being equal, a high-turnover strategy will generate higher trading costs compared to a low-turnover strategy.

When analyzing funds for a plan, portfolio turnover can be evaluated in conjunction with a fund’s stated expense ratio, and this information can be used to compare funds within an asset class to get an indication of a particular fund’s total investment costs relative to its peers.

IMPACT OF FEES AND TRADING COSTS ON RETURNS

To illustrate the importance of fees and trading costs and the long-term impact on investment results, consider the following example. Assume an investor contributes \$15,000 annually to a defined contribution plan, and the average annual market return is 8.00% (excluding investment management fees and transaction costs). Applying the average investment costs from the Edelen, Evans, and Kadlec research results in the following net return realized by our hypothetical investor:

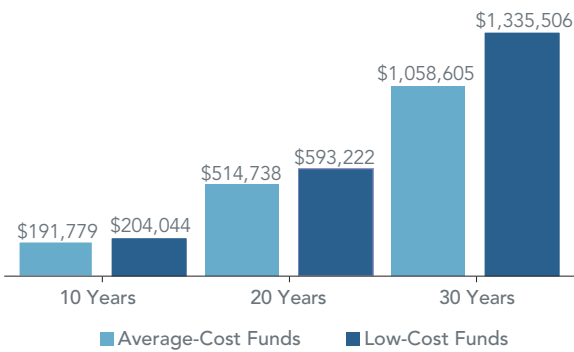
Gross market return	8.00%
Less: Fund expense ratio	1.21%
Less: Trading costs	1.44%
Net investment return	5.35%

AVERAGE-COST VS. LOW-COST FUNDS
 Retirement Savings after \$15,000 Annual Investment

Now, instead of incurring average investment costs, assume this investor has the opportunity to invest in low-cost funds that offer lower expense ratios and reduced trading costs. Assume these low-cost funds have expense ratios and trading costs that are 50% of the average costs from the Edelen, Evans, and Kadlec research. This is not an unreasonable assumption, considering there are many funds that incur significantly lower costs than average:

Gross market return	8.00%
Less: Fund expense ratio	0.61% (50% of 1.21%)
Less: Trading costs	0.72% (50% of 1.44%)
Net investment return	6.67%

Continuing our example, if the investor makes \$15,000 annual contributions over a 30-year period, he will have accumulated the following amounts over 10, 20, and 30 years:



By selecting the lower-cost funds, the investor achieves an accumulated balance at the end of 30 years that is 26% higher than the accumulated balance in the average-cost funds (\$1,335,506 versus \$1,058,605). This could make a critical difference in a person’s ability to retire, as well as their standard of living in retirement.

CONCLUSION

Plan fiduciaries have a duty to understand and monitor the costs incurred in their defined contribution plans. All plan expenses must be reasonable in light of the services received. Investment costs (explicit as well as implicit) are a principal source of total plan expenses and should be carefully evaluated when selecting funds for a DC plan.

Trading costs can be substantial—several studies report fund trading costs that approximate or exceed fund expense ratios. While information on trading costs can be difficult to obtain and frequently must be estimated, portfolio turnover can be used as a proxy for trading costs and evaluated along with fund expense ratios to get an indication of a fund’s total investment costs.

Relatively small differences in investment costs can result in significant differences in ending account values when compounded over long periods of time. Plan fiduciaries should seek funds that employ an efficient, cost-conscious approach to portfolio management. An investment manager that offers low fees and is able to provide liquidity and reduce trading costs through flexible and patient trading can improve relative performance, adding considerable value over time.

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Principal Risks of Investing

The principal risks of investing in these portfolios may include market risk, risks of concentrating in the real estate industry, real estate investment risk, small company risk, foreign securities and currencies risk, and emerging markets risk. These risks are fully described in the prospectus in the section called “Principal Risks.” Indices are not available for direct investment; their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is no guarantee of future results.

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