

High Transaction Costs from Portfolio Turnover Negatively Affect 401(k) Participants and Increase Plan Sponsor Fiduciary Liability

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BY GREGORY W. KASTEN

Plan fiduciaries are slowly learning that no matter how well the underlying 401(k) funds perform, fees and costs associated with their investments are key components in determining future return. Along these lines, Congress

recently held hearings concerning “excessive” 401(k) fees and costs. In addition, fee-related lawsuits directed at plan sponsors and vendors are increasing.

Some important 401(k) costs are turnover-related transaction costs from the portfolio manager’s trading. This poorly understood “invisible” cost can be several times higher than more “visible” asset management fees or 12b-1 fees. Because such costs are virtually never included in the prospectus, nor in the fund’s published expense ratio, most plan sponsors, plan advisers, and the vast majority of participants are unaware of the significant cost impact high portfolio turnover has on their future retirement benefit.

Unified Trust Company studied 2,431 fixed income funds and 10,922 equity funds for the one-year time period ended December 31, 2006. The average annual turnover of all fixed income funds was 159.8 percent, and the turnover among various fixed income asset classes ranged from 90.9 to 278.4 percent. The average turnover rate of all equity funds was 92.7 percent, and the turnover among various equity asset classes ranged from 58.0 to 182.2 percent. These data are shown in Exhibit 7.

Next, Unified Trust Company applied the turnover costs per 100 percent turnover based upon published studies it reviewed to the turnover rates of the mutual fund asset classes in the study. It measured an additional average cost of 0.23 percent for fixed income and 1.47 percent for equity funds. A number of equity asset classes experienced turnover-related costs greater than the average expense ratio for the group.

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The effective average annual cost (published expense ratio plus turnover costs) was 1.28 percent for fixed income funds and a whopping 3.09 percent for equity funds.

To improve plan participant outcomes, Unified Trust Company illustrates a straightforward method for plan fiduciaries to calculate, monitor, and control these turnover costs in order to fulfill their fiduciary duties.

Today most Americans are laying the groundwork for their future retirement through their 401(k) plan. Employees who participate in 401(k) plans assume responsibility, and the risk of failure, for their retirement income by contributing part of their salary and generally controlling their investments.

Recently plan sponsors have rediscovered a need to keep a closer eye on how their 401(k) plan investments perform. Plan fiduciaries are slowly learning that no matter how well the underlying investments perform, investments fees and costs continue to be important components in determining future return. Unless the plan fiduciaries that select the plan investment options are mindful of the various fees and costs, it is increasingly probable that they will face lawsuits by dissatisfied participants whose retirement benefits have been eroded by arguably excessive fees and hidden costs.

In terms of understanding all costs, most mutual funds and other investment vehicles contain a silent or “invisible” cost that can be several times higher than more “visible” asset management fees or 12b-1 fees. Among of the most important (generally the largest) and often overlooked retirement plan costs are the turnover-related transaction costs from the portfolio manager’s trading. Because these costs are virtually never included in the prospectus, nor in the fund’s published expense ratio, most plan sponsors, plan advisers, and the vast majority of participants are unaware of the significant cost impact high portfolio turnover has on their future retirement benefit.

Congressional Hearing Recently Focused Attention on 401k Fees and Costs

On Tuesday, March 6, 2007, the Honorable George Miller (D-CA) held a Congressional hearing on “Are Hidden 401(k) Fees Undermining Workers’ Retirement Security?”

In his opening remarks, Representative Miller stated:

This morning we will hear testimony about the services that are being provided and the fees that are being charged. Some of these fees are reasonable and necessary. But today, we will also hear a dizzying array of terminology: “Revenue sharing.” “Wrap fees.” “Finders’ fees.” “Shelf space.” “Surrender charges.” “Soft dollars.” “12(b)(1) fees.” We have to ask whether all these fees are necessary, and we have to examine whether they are undermining workers’ retirement security.

That’s because even a seemingly small difference in the fees that workers pay can make an enormous difference in the overall size of their 401(k) account balance. As we will hear today, a 1 percentage point difference in fees can reduce retirement benefits by nearly 20 percent.

Just think about that for a minute. If you have a 401(k) account with a balance of \$20,000, it will grow to about \$70,500 in 20 years if it has a net return of 6.5 percent each year. But with a net annual return of 5.5 percent—a difference of just one percentage point in fees—that \$20,000 balance would grow to just \$58,400 after 20 years.

Today, because of weak disclosure rules, most workers don’t even know how much they are paying in fees. They simply are not in a position to compare plans.

In the hearing, Mr. Matthew Hutcheson, an independent pension fiduciary, testified about various types of plan fees and costs. In his remarks concerning fund trading and turnover costs, Mr. Hutcheson stated:

Hidden Costs #1—Undisclosed Trading Costs

A major flaw in the 401(k) system, therefore, is allowing non-fiduciaries (in this instance, plan participants themselves) to control trust assets by choosing without skill from a large array of investment choices, carefully presented in such a way as to generate additional brokerage (trading) commissions by encouraging “active” trading within participant accounts. In other words, emotional reactions of participants who lack investment expertise trigger undisciplined and imprudent investment decisions in the trust, when a simple 60% stock, 40% bond portfolio described above is well within the reach of every single participant.

The brokerage and investment fund industries not only fully understand that participants are making imprudent investment decisions, *but are counting on participant ignorance to generate revenue.* This is a substantial and hidden cost that participants are almost universally unaware, and have no concept of how it is reducing the future retirement income

they would otherwise receive. This is the first hidden and unnecessary cost.

Congress is now aware that many plan participants will fail to accumulate a large enough ending account balance to provide for a safe and secure retirement income. It is also aware that portfolio turnover costs have something to do with the high failure rate. The fact that the turnover costs are “hard to find” does not give the plan fiduciary the leisure of deciding not to monitor them. Plan fiduciaries should therefore be “ahead of the curve” by understanding the magnitude of the turnover cost issues and institute fiduciary best practices as part of their duty to monitor and reduce the adverse impact of these costs.

Fee-Related Lawsuits Against Plan Sponsors and 401(k) Vendors Are Increasing

If more plan sponsors asked the question: “Does my adviser, portfolio manager, or vendor have a financial incentive to recommend this fund rather than others?” plan sponsors would better fulfill their fiduciary duties and plan participants would benefit.

Unfortunately, most never ask that question. In 2004, DOL regulators began auditing some large investment companies and interviewing company officials as part of a probe into whether fee arrangements and market-timing practices hurt participants of employee-benefit plans. Critics say because of these practices more expensive mutual funds are offered to 401(k) participants.

Recently a large number of class-action lawsuits have been filed against plan sponsors, and their officers, retirement committees, directors and HR employees, attacking investment-related fees paid to plan service providers. Specifically, the complaints target revenue-sharing arrangements between plans, mutual funds (and other investment providers), and plan service providers such as record keepers, trustees, and third-party administrators. The complaints also target the plan fiduciary’s lack of understanding of investment-related fees and lack of prudent process to monitor them.

Typically, the lawsuits allege that defendants have breached their fiduciary duties of loyalty and care to the 401(k) plan, and have failed to discharge their duties “in accordance with the documents and instruments governing the plan.” [ERISA §§ 404(a)(1)(A), 404(a)(1)(B), and 404(a)(1)(D)] Based on these alleged fiduciary breaches, plaintiffs have argued two claims for relief:

1. A cause of action under Section 502(a)(2) of ERISA, which permits a participant or a fiduciary

in an ERISA-covered plan to bring a civil action for relief under ERISA Section 409(a), “to make good to such plan any losses to the plan resulting from a breach of fiduciary duties. From this, plaintiffs claim that defendants are liable to restore to the 401(k) plan the “losses” that arose from the alleged excessive fees and portfolio costs.

2. A cause of action under ERISA Section 502(a)(3) for “appropriate equitable relief” to remedy the alleged ERISA violations. Plaintiffs assert that they are entitled to an equitable accounting of the profits from the “excess fees and expenses” that allegedly have been paid out to the 401(k) plan’s service providers. Plaintiffs further assert that a surcharge should be imposed on defendants for all amounts that cannot be properly accounted for by them.

In the litigation, the plaintiffs claim the defendants failed to offer institutional share classes of mutual funds as plan investment options when only offering retail share classes, which caused the plan and participants to pay excessive fees, violating the defendants’ fiduciary obligations. Another interesting (and frightening) claim of the plaintiffs is loss of ERISA Section 404(c) protection. By failing to disclose the revenue-sharing payments to participants and by distorting the actual amount of fees paid, the defendants could not receive the fiduciary liability protection contained in 404(c). The legal theory is that 404(c) requires plan participants to receive sufficient information to make their own investment decisions; therefore, because they lacked the fee information, they were not able to make informed choices.

[For recent fee-related litigation examples see *Kevin Beary v. ING Life Insurance and Annuity Co.*, *Lou Haddock v. Nationwide Financial Services, Inc.*, *Anthony Abbott v. Lockheed Martin Corp.*, *Kim Nolte v. Cigna Corporation*, *Pat Beesley v. International Paper Company*, *Beverly Kanawi v. Bechtel Corporation*, *Brian Loomis v. Exelon Corporation*, *Steve Martin v. Caterpillar, Inc.*, *Eric Will v. General Dynamics Corporation*, *David Taylor v. United Technologies*, *Gary Spano v. The Boeing Company*, *Gerald George v. Kraft Foods Global, Inc.*, *Dennis Hecker v. Deere & Company*, and *Kevin Beary v. Nationwide Life Insurance Co.*]

Fiduciary Best Practices Governing Portfolio Turnover Costs

The Foundation for Fiduciary Studies (www.FI360.com) is a not-for-profit organization established to develop and advance practice standards of care for investment fiduciaries, which includes trustees, investment committee members, brokers, bankers,

investment advisers, money managers, and others. It is independent of any ties to the investment community and therefore uniquely positioned for advancing the practices throughout the industry.

The Foundation publishes the “Prudent Practices for Investment Fiduciaries” handbook series. The “Investment Stewards” handbook highlights the 22 practices that form the process a trustee or investment committee should follow in managing its investment decisions. The “Investment Advisors” handbook features 23 practices that mirror the stewards process, yet are specifically formulated to an adviser’s unique role in the investment process. Two prudent practices that are most applicable with regard to the fiduciary due diligence process the plan sponsor, trustee, or investment adviser should follow to evaluate hidden portfolio turnover costs properly are Practices A-3.1 and A-4.4.

Practice A-3.1: Each client’s investment strategy is implemented in compliance with the required level of prudence.

Criteria 3.1.1 A due diligence procedure for selecting investment options exists.

Criteria 3.1.2 The due diligence process is consistently applied.

Practice A-4.4: Fees for investment management are consistent with agreements and with all applicable laws.

Criteria 4.4.1 A summary of all parties being compensated from each client’s portfolio has been documented, and the fees are reasonable given the level of services rendered.

Criteria 4.4.2 The fees paid to each party are periodically examined to determine whether they are consistent with service agreements.

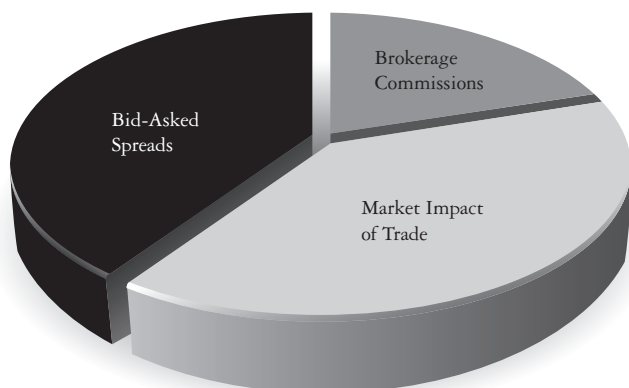
Criteria 4.4.3 The fees being paid for various services are periodically compared to industry benchmarks.

These practices indicate that the responsible plan fiduciaries should require plan providers to provide a detailed written analysis of all fees, costs, and compensation (whether directly or indirectly) to be received for its services to the plan prior to retention. Plan sponsors should obtain all information on fees and expenses as well as revenue sharing arrangements with each investment option. Plan sponsors should also determine the availability of other mutual funds or share classes within a mutual fund with lower turnover or revenue-sharing arrangements prior to selecting an investment option. They also have an ongoing duty to monitor these factors regularly.

All mutual funds must report their annual operating expenses in the fund prospectus. Mutual funds divide their annual operating costs by their average net assets to illustrate an operating cost. This is known as the “fund expense ratio,” or simply as the “expense ratio.” Most investors and plan sponsors (plan fiduciaries) are unaware that three other costs affect the portfolio. These costs *are not* reported in the prospectus and are not part of the expense ratio. In many cases these unreported costs are equal to or larger than the reported fund expense ratio.

The three major unreported trading costs consist of one smaller explicit cost and two larger implicit costs. The explicit cost is the brokerage commission cost of the trade. Explicit costs such as brokerage commission

Exhibit 1. Unpublished Trading Costs



Market Impact is the actual price movement caused by selling or buying large amounts of a security

Brokerage Commissions are the direct costs paid by the fund to trade their securities

Bid-Asked Spreads are the price variances between buying and selling at any point time

costs are generally fairly easy to quantify, which is not the case for the two major implicit costs.

The major implicit trading cost is the market impact of the trade, that is, the deviation of the transaction price from the undisturbed price that would prevail had the trade not occurred. The price impact of a trade will be negative, for example, when a trader sells at a price below the undisturbed price. The second implicit cost is the “bid-asked” spread. This is simply the difference between what a security can be bought for or sold for at the same point in time.

Portfolio Turnover Defined

Portfolio turnover is a measurement of how frequently assets within a fund are bought and sold by the managers. It is calculated by taking either the total amount of new securities purchased or the amount of securities sold, whichever is less, over a particular period (usually 12 months), divided by the total net asset value (NAV) of the fund. The amount of turnover is reported in the fund’s prospectus, but the costs related to the turnover are not listed in the prospectus.

The portfolio turnover measurement should be considered by an investor before deciding to purchase a given mutual fund or similar financial instrument. After all, it seems intuitive that a mutual fund with a high turnover rate will incur more transaction costs than a fund with a lower rate will.

Unless the superior asset selection offers benefits that offset the added transaction costs, a lower turnover fund may likely generate higher net returns. Some managers have been able to show beneficial results *before* fees and turnover rate costs, but their net performance becomes negative *after* fees and costs are added back to the account. For example, published studies by Day, *et al.*, indicate aggressive growth mutual fund managers with high turnover could generate gross monthly returns about 0.076 percent higher than low turnover managers could, or about 0.91 percent on an annual basis; however, the high turnover manager’s net returns were negative because the managers could not overcome the turnover-related costs and other fees. A published study by Blanchett found that both absolute net performance and risk-adjusted net performance fell as portfolio turnover increased. He also found that the decrease was greater for small cap, mid cap, and international equity asset classes; thus, in Blanchett’s study as well the managers were not able to overcome the higher turnover costs.

Under the standardized mutual fund industry calculation method, a fund that only had cash inflows and used the cash to buy more securities would report 0 percent portfolio turnover for the measurement period, regardless of the purchase amounts. Funds that are buying and selling securities, but enjoying positive cash flow, will report a significantly lower turnover rate than their actual buys and sells would otherwise

Exhibit 2. Published Portfolio Turnover Rates Are Often Too Low

Fund Cash Flow Compared to Beginning of Year	Buy Volume to Sell Volume	Published Turnover Rate	Published Turnover Rate Cost %	Actual Effective Turnover Rate	Actual Turnover Rate Cost %	Difference Between Published Turnover Cost % and Actual Cost %
-25%	1:2	29%	0.17%	43%	0.46%	0.29%
0%	1:1	50%	0.30%	50%	0.60%	0.30%
50%	2:1	40%	0.24%	60%	0.80%	0.56%
100%	3:1	33%	0.20%	67%	0.93%	0.73%
150%	4:1	29%	0.17%	71%	1.03%	0.86%
200%	5:1	25%	0.15%	75%	1.10%	0.95%
250%	6:1	22%	0.13%	78%	1.16%	1.02%
300%	7:1	20%	0.12%	80%	1.20%	1.08%
350%	8:1	18%	0.11%	82%	1.24%	1.13%
400%	9:1	17%	0.10%	83%	1.27%	1.17%
450%	10:1	15%	0.09%	85%	1.29%	1.20%

Cost data assume “buy side” transaction costs of 0.80% and “sell side” transaction costs of 0.40%.

indicate. As Exhibit 2 indicates, a fund with 200 percent positive cash flow over a given year will report a 25 percent turnover rate when the actual buying and selling amounted to a 75 percent turnover equivalent rate. This also understates the actual costs.

The Magnitude of Portfolio Turnover Trading Costs

Several studies have sought to quantify the explicit (brokerage commission) and implicit (bid-asked spreads and market impact) portfolio transaction costs. Keim and Madhavan report that trading costs are higher for the NASDAQ stocks as compared to NYSE stocks. They also report that value trades enjoy lower trading costs than technical (“growth”) trades or broad market index (“blend”) styles. In addition, they report that buy transactions are more expensive than sell transactions and trading costs go up as market capitalization decreases. Exhibits 3 and 4 illustrate one-way costs. For a completed “round-trip” buy-sell transaction the total costs would be double.

How Trade Direction Affects Trading Costs

As mentioned earlier, mutual funds report turnover rate as the *lower* of either the total amount of new securities purchased or the amount of securities sold, whichever is less, over a particular period. This has the effect of not counting net buy transactions from new cash flow in the turnover rate. A fund experiencing

fast growth from cash inflows will therefore dramatically understate the turnover rate and thus the fund’s true trading costs. Keim and Madhavan report that trading costs are higher for buy transactions as compared to sell transactions. Chan and Lakonishok have also found that buys are more expensive than sells for their sample of institutions.

The differences in the expense estimates for buys and sells illustrate that there are important differences in trading costs by trade direction. Exhibit 5 shows the one-way predicted trade costs for buys and sells as a function of market capitalization as researched by Keim and Madhavan. The predicted costs for both buys and sells decrease as market capitalization grows in size. Interestingly, in this example, the one-way costs for a buyer-initiated trade exceed those of a seller-initiated trade, even though the trades are identical in terms of order characteristics. They report that traders are more patient on the buy side than on the sell side, other things being equal. In turn, this behavior may arise because the “information content” of a large buy order is perceived to be greater than that of an equivalent sell order.

It is worthwhile to point out the 2000 to 2001 exchange switch from fractions (1/8, 1/16, etc.) to decimals has not been helpful. Bollen and Busse have recently reported that the switch to decimalization has not reduced portfolio transaction costs for mutual funds. They report that mutual fund portfolio trading

Exhibit 3. NYSE Trading Costs

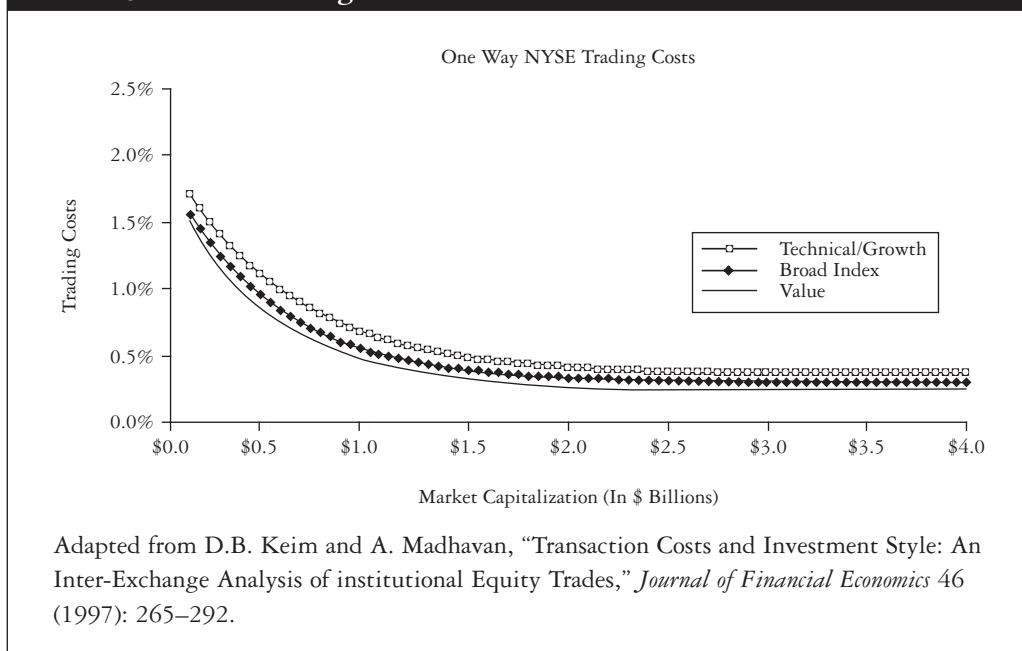


Exhibit 4. NASDAQ Trading Costs

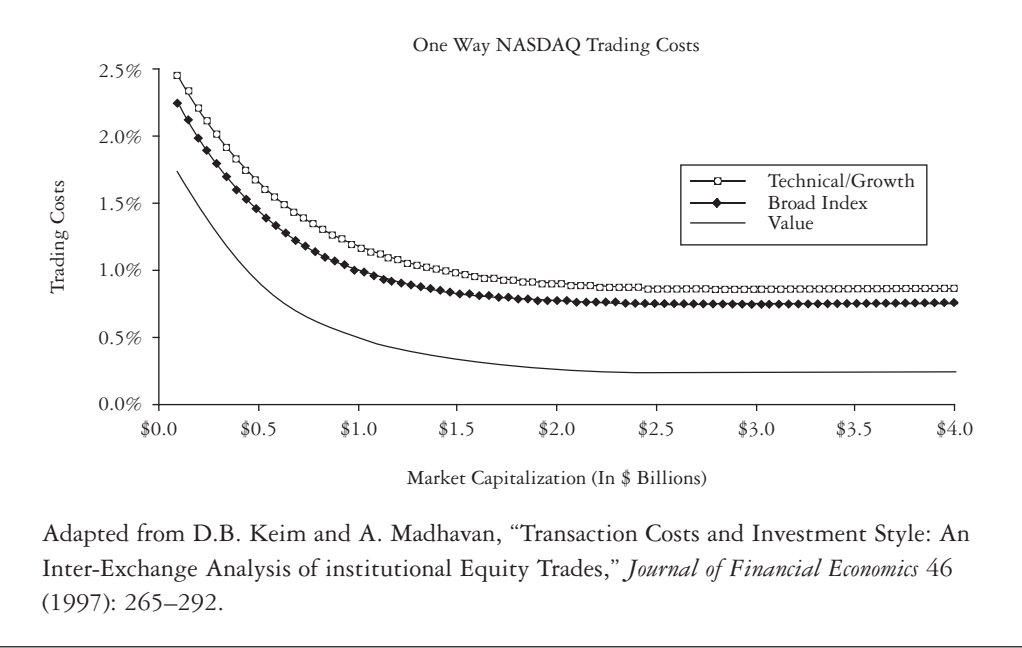
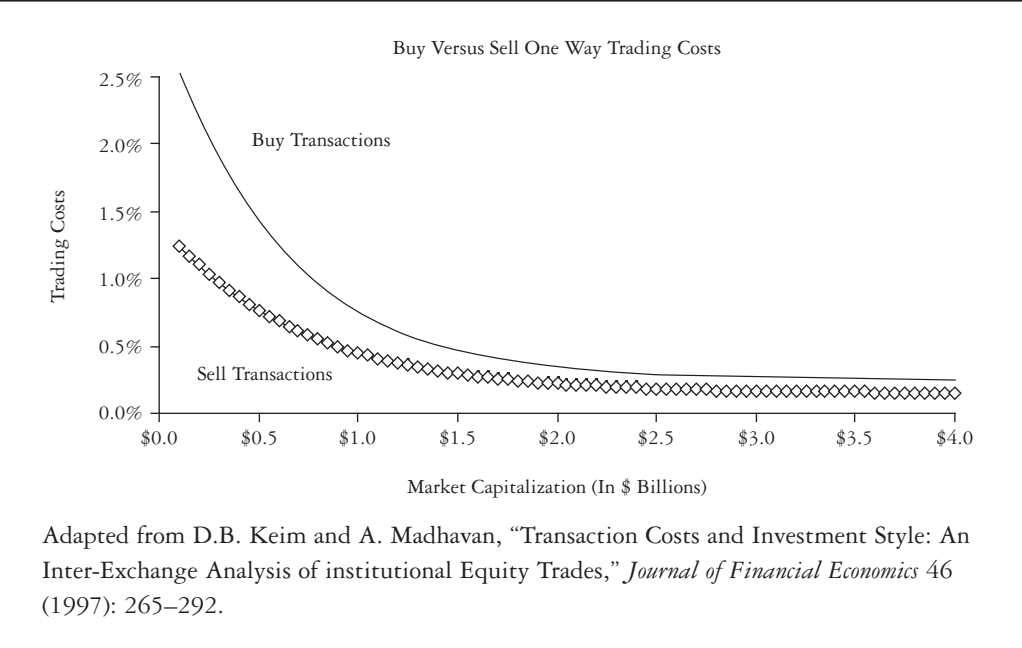


Exhibit 5. Trade Direction Cost Differences



costs actually increased 0.502 percent for each trade after the switch from sixteenths to decimals in 2001.

Summary of Published Studies Quantifying Asset Class Trading Costs

Two authors (Sharkansky and Chakravarty) report on the costs from trading fixed income securities (see

Exhibit 6). Keim, CEB Forum, and Karceski report on the trading costs across various equity asset classes. Domowitz and Sharkansky report on the costs of trading international equities. Not listed in Exhibit 6 are several studies that report "average" equity trading costs. These studies are not as useful as those that report costs of different market segments. In terms

Exhibit 6. Published Portfolio Costs per 100% Turnover							
Asset Class	Karceski	Sharkansky	CEB Forum	Keim	Chakravarty	Domowitz	Study Averages
US Govt Bond		0.09%			0.08%		0.09%
Corporate Bond					0.21%		0.21%
Municipal Bond		0.43%			0.23%		0.33%
Large Growth	0.50%			0.99%			0.75%
Large Blend	0.32%	1.24%	0.66%	0.83%			0.76%
Large Value	0.29%			0.38%			0.34%
Mid-Cap Growth	1.15%			1.58%			1.37%
Mid-Cap Blend	0.67%	2.55%	1.15%				1.46%
Mid-Cap Value	0.80%						0.80%
Small Growth	1.53%			3.07%			2.30%
Small Blend	1.62%	2.55%	3.59%	2.06%			2.46%
Small Value	1.34%						1.34%
International Equity		1.54%				1.41%	1.48%

of the average general studies, Carhart found that for every 100 percent portfolio turnover, the annual return dropped by -0.95 percent. In his book *Bogle on Mutual Funds*, John Bogle (1994), citing a variety of studies, estimated the cost of turnover to be approximately -1.20 percent for each 100 percent of turnover.

Unified Trust Company Study Results of Mutual Fund Turnover Cost versus Published Expense Ratio

Unified Trust Company studied 2,431 fixed income funds and 10,922 equity funds for the one-year time period ended December 31, 2006. It found the average annual turnover of all fixed income funds to be 159.8 percent. The turnover among various fixed income asset classes ranged from 90.9 percent to 278.4 percent. The average turnover rate of all equity

funds was 92.7 percent. The turnover among various equity asset classes ranged from 58.0 percent to 182.2 percent. Unified Trust Company next applied the turnover costs per 100 percent turnover of the various studies listed in Exhibit 6 to the turnover rates of the mutual fund asset classes in this study. It found an additional average cost of 0.23 percent for fixed income and 1.47 percent for equity funds. For several of the equity asset classes the turnover related costs were greater than the category average published expense ratio.

The effective average annual total cost (expense ratio plus turnover costs) was 1.28 percent for fixed income funds and a whopping 3.09 percent for equity funds. The full details are shown in Exhibit 7. Exhibits 8 and 9 show the effective total costs for each asset class and comparison of turnover cost to published expense ratio, respectively.

Exhibit 7. Equity and Fixed Income Funds Turnover and Portfolios Costs							
Asset Class	Number of Funds	Average Turnover	Turnover Cost per 100%	Turnover Cost%	Expense Ratio%	Effective Total Cost%	Turnover Cost/Expense Ratio
Fixed Income Funds							
Short-Term Bond	379	90.9%	0.21%	0.19%	0.94%	1.13%	20.2%
Short Government	142	120.2%	0.09%	0.11%	0.96%	1.07%	11.3%
Intermediate-Term Bond	855	202.7%	0.21%	0.43%	1.04%	1.46%	41.0%
Intermediate Government	397	233.8%	0.09%	0.21%	1.11%	1.32%	19.0%
Long-Term Bond	25	99.8%	0.21%	0.21%	1.02%	1.23%	20.6%
Long Government	131	278.4%	0.09%	0.25%	1.02%	1.27%	24.5%
High Yield Bond	502	93.0%	0.21%	0.20%	1.32%	1.51%	14.9%
Fixed Income Funds Average	2,431	159.8%	0.16%	0.23%	1.06%	1.28%	21.65%
Equity Funds							
Domestic Hybrid	1,749	61.7%	0.45%	0.28%	1.09%	1.37%	25.4%
Large Growth	1,389	89.9%	0.75%	0.67%	1.44%	2.11%	46.4%
Large Blend	1,253	72.4%	0.76%	0.55%	1.16%	1.71%	47.6%
Large Value	1,197	58.0%	0.34%	0.19%	1.36%	1.55%	14.3%
Mid-Cap Growth	814	107.3%	1.37%	1.46%	1.75%	3.21%	83.9%
Mid-Cap Blend	233	79.8%	1.46%	1.17%	1.32%	2.48%	88.6%
Mid-Cap Value	502	79.7%	0.80%	0.64%	1.47%	2.11%	43.2%
Small Growth	663	113.4%	2.30%	2.61%	1.69%	4.30%	154.0%
Small Blend	332	89.9%	2.46%	2.21%	1.48%	3.68%	149.5%
Small Value	576	71.3%	1.34%	0.96%	1.50%	2.45%	63.8%
Specialty-Technology	274	182.2%	1.46%	2.66%	1.84%	4.50%	144.6%
Specialty-Real Estate	230	85.0%	1.46%	1.24%	1.52%	2.76%	81.5%
Foreign Stock	1,072	73.7%	1.48%	1.09%	1.57%	2.66%	69.5%
World Stock	444	66.4%	1.48%	0.98%	1.57%	2.55%	62.7%

Exhibit 7. Continued

Asset Class	Number of Funds	Average Turnover	Turnover Cost per 100%	Turnover Cost%	Expense Ratio%	Effective Total Cost%	Turnover Cost/Expense Ratio
Diversified Emerging Markets	194	80.0%	1.48%	1.18%	1.87%	3.05%	63.4%
Equity Fund Average	10,922	92.7%	1.59%	1.47%	1.62%	3.09%	90.70%

Data obtained from Unified Trust Company, NA, mutual fund fiduciary database as of Dec. 31, 2006.
 Underlying raw data obtained from Standard & PoorsSM.
 Data believed to be reliable but not intended to imply future results. Past performance does not guarantee future performance.

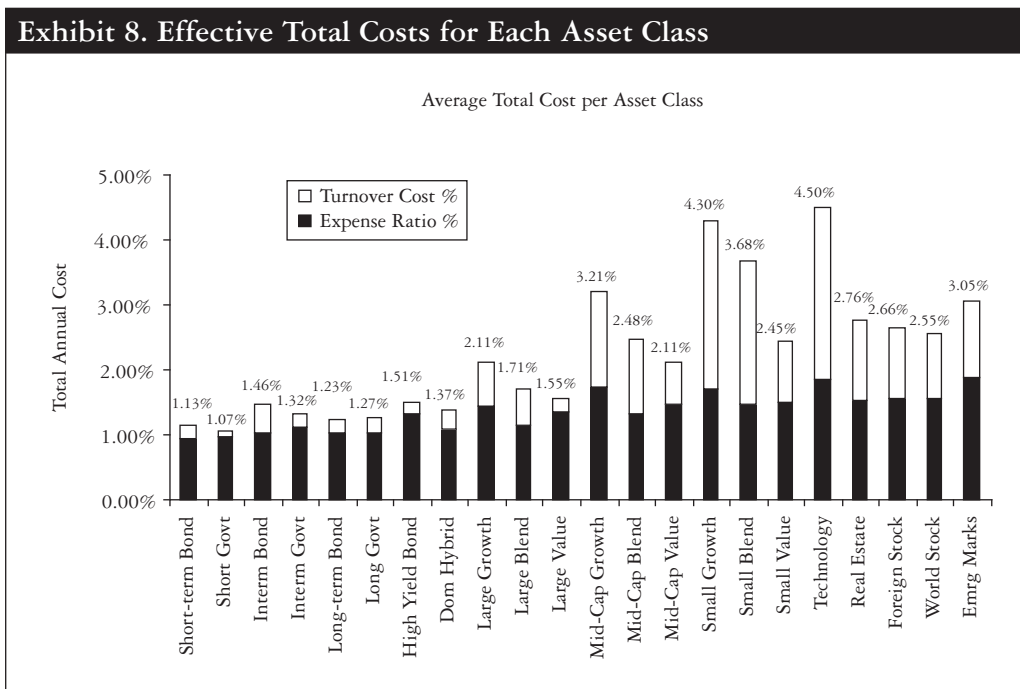


Exhibit 10 shows the costs a 401k manager must overcome to “add value” as the portfolio turnover rate increases. As turnover rates increase, the breakeven hurdle rate gets higher and higher.

How to Utilize the Data in This Article to improve Participant Outcomes

Today most plan sponsors and their advisers have started to focus on the true cost of running the 401(k) plan. In prior years the concern was generally more on “visible” costs. Also today there is a greater emphasis on revenue share, fee transparency, and

revenue neutrality under the DOL Frost Advisory Letter (DOL 97-15). It is short sighted, however, for the plan sponsor to focus on saving 0.10 percent from revenue share pass back and next miss 1 percent or more of additional turnover-related portfolio costs.

When standard costs are examined under the normal “fiduciary microscope,” both the Current and Alternative Plan appear to have a reasonable portfolio cost structure (see Exhibit 11). The Current Plan costs slightly less than the Alternative Plan when measured either by the gross fund weighted average expense

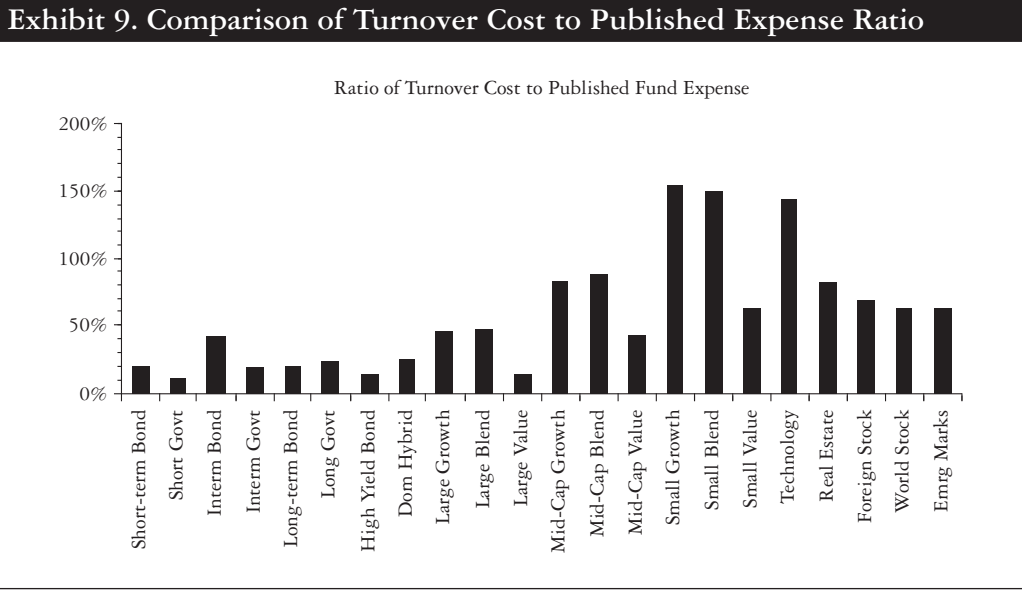
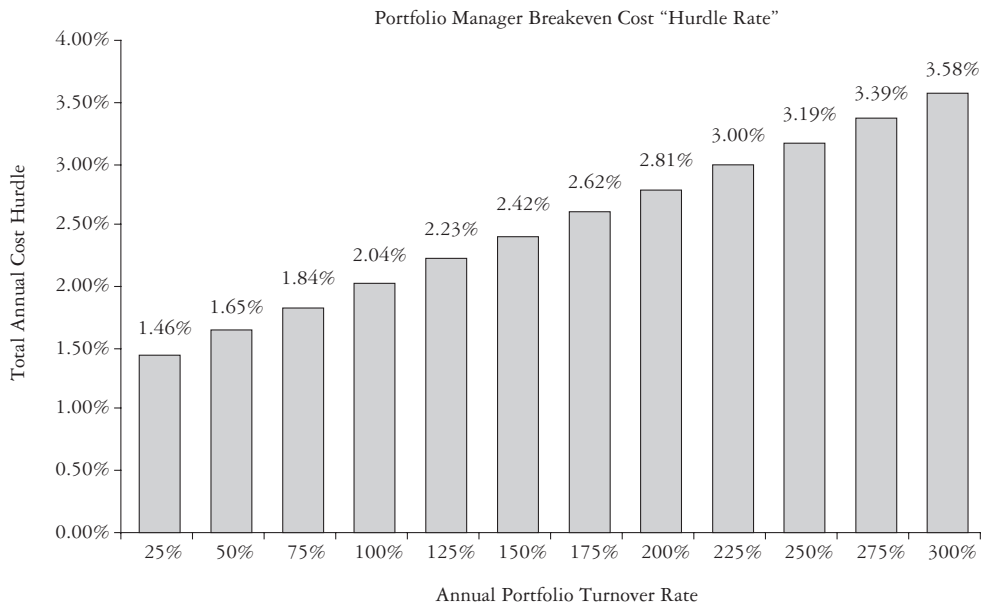


Exhibit 10. 401k Portfolio Manager "Cost Hurdle Rate"



Assumptions: Balanced portfolio consisting of 65% equities broken down as 15% large growth, 10% large blend, 10% large value, 10% mid-cap blend, 10% small growth, and 10% foreign stock, and 35% fixed income consisting of intermediate-term bonds.

Portfolio incurs average (mean) expense ratio for each mutual fund asset class and average (mean) turnover cost for each turnover rate.

Hurdle rate is the combination of weighted average expense ratio and the weighted average turnover rate multiplied by the turnover cost for each asset class. Data obtained from Unified Trust Company, NA, mutual fund fiduciary database as of Dec. 31, 2006.

Underlying raw data obtained from Standard & PoorsSM.

Data believed to be reliable but not intended to imply future results. Past performance does not guarantee future performance.

Exhibit 11. Comparative Plan Cost Summary			
Standard Cost Analysis	Current Plan	Alternative Plan	Difference
Assets	\$5,000,000	\$5,000,000	\$0
Weighted Average Fund Expense Ratio %	0.75%	0.78%	0.02%
Weighted Average Fund Expense \$	\$37,585	\$38,800	\$1,215
Estimated Revenue Share %	0.16%	0.14%	-0.02%
Estimated Revenue Share \$	\$7,920	\$7,135	-\$785
Net Cost of Portfolio After Rev Share \$	\$29,665	\$31,665	\$2,000
Net Cost of Portfolio After Rev Share %	0.59%	0.63%	0.04%
Turnover Related Cost Analysis	Current Plan	Alternative Plan	Difference
Weighted Average Portfolio Turnover Rate	92.7%	42.0%	-50.7%
Wt. Average Transaction Cost per 100% Turnover	0.90%	0.90%	0.00%
Turnover Related Plan Transaction Costs \$	\$50,444	\$21,931	-\$28,513
Turnover Related Plan Transaction Costs %	1.01%	0.44%	-0.57%
Total Portfolio Cost Before Revenue Share \$	\$88,029	\$60,731	-\$27,298
Total Portfolio Cost Before Revenue Share %	1.76%	1.21%	-0.55%
Total Portfolio Cost After Revenue Share \$	\$80,109	\$53,596	-\$26,513
Total Portfolio Cost After Revenue Share %	1.60%	1.07%	-0.53%
Ratio of Turnover Cost to Fund Expense Ratio	134.2%	56.5%	-77.7%

ratio (0.75% vs. 0.78%), or after revenue-sharing fees are paid the plan (0.59% vs. 0.63%). This example assumes the trustee and/or advisory fee is the same in both plans and is not included for comparison purposes.

When turnover-related costs are examined (see Exhibit 12), the Current Plan has a much higher portfolio turnover rate than the Alternative Plan does (92.7% vs. 42.0%). This produces an estimated additional \$28,513 in hidden plan transaction costs. By

switching to the Alternative Plan, the overall cost is reduced by \$26,513 or 0.53 percent. *This cost savings is more than triple the much ballyboomed “revenue sharing fees” of 0.16 percent.* The turnover portfolio cost in the Current Plan is 134.2 percent of the expense ratio cost as compared to 56.5 percent in the Alternative Plan. By reducing this hidden portfolio cost, both the outcome of the plan participant is markedly improved and the plan fiduciaries have fulfilled their fiduciary duties. ■

Exhibit 12. Comparative Plan Cost Detailed Evaluation

Estimate of All Portfolio Related Expenses—Current Plan

Current Investment Options	Asset Class	Average Assets	Estimated Revenue Share ⁵	Expense Ratio	Gross Expense	Net Expense After Deducting Revenue Share	Transaction Cost per 100% Turnover ⁶	Portfolio Annual Turnover Rate	Transaction Costs from Annual Turnover	Total Fund Portfolio Costs	Total Gross Portfolio Costs Net of Rev Share
Fund A	Stable Value	\$500,000	0.00%	0.00%	\$0	\$0	n/a	0%	\$0	\$0	\$0
Fund B	Intermediate-term Bond	\$500,000	0.15%	0.50%	\$2,500	\$1,750	0.21%	150%	\$1,575	\$4,075	\$3,325
Fund C	Intermediate-term Bond	\$300,000	0.14%	0.70%	\$2,100	\$1,680	0.21%	100%	\$630	\$2,730	\$2,310
Fund D	Domestic Hybrid	\$750,000	0.25%	0.70%	\$5,250	\$3,375	0.45%	50%	\$1,688	\$6,938	\$5,063
Fund F	Large Growth	\$400,000	0.20%	1.00%	\$4,000	\$3,200	0.75%	100%	\$2,980	\$6,980	\$6,180
Fund G	Large Blend	\$500,000	0.00%	0.25%	\$1,250	\$1,250	0.76%	50%	\$1,906	\$3,156	\$3,156
Fund H	Large Value	\$200,000	0.10%	0.70%	\$1,400	\$1,200	0.34%	110%	\$737	\$2,137	\$1,937
Fund I	Mid-Cap Growth	\$200,000	0.25%	1.10%	\$2,200	\$1,700	1.37%	150%	\$4,095	\$6,295	\$5,795
Fund J	Mid-Cap Blend	\$300,000	0.10%	1.12%	\$3,360	\$3,060	1.46%	120%	\$5,256	\$8,616	\$8,316
Fund K	Small Growth	\$200,000	0.20%	1.25%	\$2,500	\$2,100	2.30%	150%	\$6,900	\$9,400	\$9,000
Fund L	Small Blend	\$400,000	0.20%	1.10%	\$4,400	\$3,600	2.46%	110%	\$10,802	\$15,202	\$14,402
Fund M	Foreign Stock	\$750,000	0.25%	1.15%	\$8,625	\$6,750	1.48%	125%	\$13,875	\$22,500	\$20,625
Fund Totals		\$5,000,000			\$37,585	\$29,665			\$50,444	\$88,029	\$80,109
Weighted Average Percentages			Revenue Share	Expense Ratio	0.75%	Net Expense	Portfolio Transaction	Costs	1.01%	1.76%	1.60%

Estimate of All Portfolio Related Expenses—Alternative Plan

Alternative Investment Options	Asset Class	Average Assets	Estimated Revenue Share ⁵	Expense Ratio	Gross Expense	Net Expense After Deducting Revenue Share	Transaction Cost per 100% Turnover ⁶	Portfolio Annual Turnover Rate	Transaction Costs from Annual Turnover	Total Fund Portfolio Costs	Total Gross Portfolio Costs Net of Rev Share
Fund N	Stable Value	\$500,000	0.00%	0.00%	\$0	\$0	n/a	0%	\$0	\$0	\$0
Fund O	Intermediate-term Bond	\$500,000	0.10%	0.75%	\$3,750	\$3,250	0.21%	50%	\$525	\$4,275	\$3,775
Fund P	Intermediate-term Bond	\$300,000	0.20%	0.70%	\$2,100	\$1,500	0.21%	80%	\$504	\$2,604	\$2,004
Fund Q	Domestic Hybrid	\$750,000	0.15%	0.82%	\$6,150	\$5,025	0.45%	50%	\$1,688	\$7,838	\$6,713
Fund R	Large Growth	\$400,000	0.20%	0.95%	\$3,800	\$3,000	0.75%	40%	\$1,192	\$4,992	\$4,192
Fund S	Large Blend	\$500,000	0.00%	0.25%	\$1,250	\$1,250	0.76%	10%	\$381	\$1,631	\$1,631
Fund T	Large Value	\$200,000	0.20%	0.70%	\$1,400	\$1,000	0.34%	40%	\$268	\$1,668	\$1,268
Fund U	Mid-Cap Growth	\$200,000	0.20%	1.10%	\$2,200	\$1,800	1.37%	50%	\$1,365	\$3,565	\$3,165
Fund V	Mid-Cap Blend	\$300,000	0.15%	0.95%	\$2,850	\$2,400	1.46%	80%	\$3,504	\$6,354	\$5,904
Fund W	Small Growth	\$200,000	0.22%	1.25%	\$2,500	\$2,060	2.30%	50%	\$2,300	\$4,800	\$4,360
Fund X	Small Blend	\$400,000	0.23%	1.10%	\$4,400	\$3,480	2.46%	70%	\$6,874	\$11,274	\$10,354
Fund Y	Foreign Stock	\$750,000	0.20%	1.12%	\$8,400	\$6,900	1.48%	30%	\$3,330	\$11,730	\$10,230
Fund Totals		\$5,000,000			\$38,800	\$31,665			\$21,931	\$60,731	\$53,596
Weighted Average Percentages			Revenue Share	Expense Ratio	0.78%	Net Expense	Portfolio Transaction Costs		0.44%	1.21%	1.07%

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