ADVISOR PERSPECTIVES

Using Trading Costs to Identify Better Mutual Funds

By Susan Weiner, CFA

Financial advisors like low-expense mutual funds. But funds' published expense ratios account for less than half of the average fund's expenses. Trading costs account for the remainder, according to "Scale effects in mutual fund performance: The role of trading costs" by Gregory Kadlec of the Pamplin College of Business, Virginia Tech; Richard Evans, Darden School of Business, University of Virginia; and Richard Evans, Carroll School of Management, Boston College. The co-authors conclude that trading costs detract from mutual fund performance, except when funds trade in smaller quantities for discretionary purposes. This academic research could have a real-life impact, by allowing advisors to take trading costs into account and find funds with expenses that are low by unpublished criteria.

How to measure fund costs, especially trading costs

Some mutual fund costs are published, while others are not disclosed. It's easy to figure out what fees a fund charges. That's expressed in its expense ratio. Just look at its fact sheet or prospectus to find a number out to two decimal places. But what about that fund's "invisible costs," as Vanguard founder John Bogle refers to trading costs? No hard numbers sum up the impact of brokerage commissions, bid-ask spreads and price impact. Price impact refers to how high volume affects market price (e.g., a fund selling a large block may drive down the market price of the security).

Many have adopted Bogle's turnover-based formula for inferring trading costs: Annual trading costs = 2 x annual turnover x 0.60%. Thus, a fund with 100% turnover would have estimated annual trading costs of 1.2%. This is a good starting point, which takes advantage of the fact that funds disclose turnover in their annual and semiannual reports. However, turnover-based calculations tell only half the story, say Kadlec and his co-authors. Turnover-based calculations assume that costs per trade are equal across all funds.

In fact, costs per trade vary dramatically by asset class and trade size. Kadlec puts average one-way trade costs for U.S. equities at 0.45% for large-cap stocks, 0.84% for mid-cap, and 1.46% for small-cap. Small-cap costs run three times the level of large-cap costs because small-cap stocks are less liquid. Kadlec illustrates the folly of relying solely on turnover to analyze trading costs by

comparing a small-cap fund with 100% annual turnover vs. a large-cap fund with 200% annual turnover. The turnover formula says the small-cap fund's trading costs are lower. In fact, the small-cap fund's costs at 2.92% (2 x 1 x 1.46%) are higher than the large-cap fund's at 1.80% (2 x 2 x 0.45%).

Accounting for asset class gets us one step closer to true trading costs. But there's still the issue of the costs of higher trade volume, which is the heart of the research by Kadlec and his co-authors. As a starting point, they estimated annual trading costs for more than 1,700 U.S. equity funds from 1995 to 2006. They used Morningstar's quarterly portfolio holdings data to infer each fund's trades on a stock. They estimated the cost of each trade (commissions + spread + price impact) using the funds' N-SAR semiannual filings with the SEC (which report total investor inflows/outflows and total security trading) and NYSE TAQ data giving historical trade and quotes. Their analysis of trade volume and unit trade cost showed that price impact is the biggest force in per-unit trading costs. Price impact, not surprisingly, is greatest when trade size is larger. As a result, mutual funds' mean annual trading cost runs 1.89% for large relative trade size vs. only 0.96% for small relative trade size. Funds with large relative trade size would need 108 basis points more alpha to match the returns of their counterparts with small relative trade size.

Higher trading expenses aren't necessarily bad. What matters is whether the portfolio managers use them to make money. The authors found that fund trading costs had more power than fund expense ratios to predict fund performance. Large trades, flow-induced trades, and soft-dollar trades—all of which can be identified using Form N-SAR—are particularly costly. On the other hand, when funds trade in smaller quantities, they more than recover their costs. In other words, active managers *do* add value but only when they make trades that are small and discretionary. They lose when they trade in large quantities and make trades that are forced by factors such as fund flows. Thus, this research shows higher risk-adjusted returns (alpha) are correlated with lower discretionary trading expenses.

How to select funds leveraging this academic research

Advisor Perspectives and Kadlec spoke about how advisors can get a better sense of these unpublished expense ratios for use in their fund selection. He suggests that they:

1) Look at turnover compared to the turnover for their asset class. But don't stop there.

2) Compare fund size vs. other funds in their asset class because his research shows trading expenses tend to be higher with greater fund size.

3) Look at whether trades were discretionary vs. whether they were forced by other factors such as fund flows. Shareholder fund flows are available in Form N-SAR available from the SEC, but currently require a lot of tedious work to get them ready for analysis. However, this could change if a major data provider such as Morningstar added these statistics to their data.

Steps 1 and 2 could easily be done using Morningstar data. By these criteria, the American Funds' Growth Fund of America, the most popular fund in the Advisor Perspectives universe, has a strike against it as the largest fund in the domestic large growth category. However, its turnover[1] is 22%, compared to an average of 92% for other funds in Morningstar's Large Growth equity style box that invest in domestic stocks (ex-specialty). Turnover certainly appears favorable by Kadlec's criteria, who says, "Given their low turnover, I'm not surprised that their size hasn't worked against them."

This research by Kadlec and his co-authors proves that nondiscretionary, large trades hurt performance. If easier access to Form N-SAR data can be achieved, it should be possible for advisors to turn these findings into better analysis and selection of individual mutual funds.

Notes:

[1] Turnover statistics are by fund, not by share class of fund.