Anatomy of an Investment Fund Selection

(July, 30, 2019)

Recently, in "Anatomy of Portfolio Trading," [http://schultzcollins.com/resource/anatomy-of-portfolio-trading/] we provided insight into the Schultz Collins trading process. In brief, we outlined the care, skill and caution required to assure an efficient buy/sell transaction. Above all, we emphasized that a hasty process is often imprudent; and we explained why rushed trades can produce poor outcomes.

As its title suggests, the present essay focuses on the question: how does Schultz Collins view the process of investment fund selection? How, in other words, do we decide which funds are appropriate for use in our client portfolios? It's not a simple matter. After all, there are thousands of investment products from which to choose, and many ways to evaluate them; how do we figure out which of them to use?

Selecting an investment can seem easy – just identify the subset of funds exhibiting superior returns, and pick from amongst this group the best performer over the last 3, 5, or 10 years. If you're a bit queasy about investing substantially in a single fund,[1] you can try to diversify by selecting several top-performing funds, or by picking top performers from several top-performing investment areas (sectors or asset classes).

Economists call this method "chasing returns." It generally works out poorly, because investors who use it end up buying high the funds that have lately performed well, and selling low the funds that have not: the opposite of investment success or canny trading. Nevertheless, and despite the problems inherent in such "treasure hunting," much of the investment advice industry remains focused on directing investor attention to the "five best funds to own NOW!" Indeed, many investors think the primary function of an advisor is to help them identify good funds – rather than helping them design, understand and implement a balanced and diversified portfolio appropriate to their needs and circumstances, and to their risk and reward preferences and constraints.

By contrast, *prudently* selecting an investment for use in such a diversified portfolio is not at all easy. In order to mitigate the tendency to succumb to treasure hunting, Schultz Collins operates within

[1] In the early 1990s many investors allocated lots of money to the Fidelity Magellan Fund because, for many years, it earned top-quartile returns; in the late 1990s many investors allocated a substantial part of their investment wealth to the QQQ fund, which owned a patch-work quilt of high-flying dot.com investments. While both funds are still around, their glory days are long past.

guidelines established by a written Investment Policy Statement [IPS] tailored for each client. In addition to assuring effective overall portfolio diversification, the IPS details criteria for the selection and retention of investment products. In most every circumstance, Schultz Collins eliminates investment products that pay sales commission or [12(B)(1)] "service fees."[2] Such loads are pure anti-performance factors; they enrich only fund manufacturers and the advisors/brokers who sell the funds. This still leaves a large collection of no-load funds from which to choose. The no-load funds fall into roughly three categories:

1. Passively Managed Index Funds;
2. Passively Managed Structured Funds; and,
3. Actively Managed Funds.

Although Schultz Collins is relatively indifferent as to which type of fund an investor chooses to own, we note that passively managed funds offer market-based returns at (generally) very low cost; actively managed funds offer the prospect of earning better (or worse) than market returns conditional on the skill of the fund manager. Actively managed funds suffer a further handicap because they must overcome much higher costs.

Schultz Collins works to assure that clients benefit from a credible and defensible fund selection process. Without elaborating on the full extent of this process, suffice it to say that when determining if an index fund is a suitable investment product, we want to ascertain, among other factors, that it has a low expense ratio and that it tracks its corresponding index closely. When determining if a structured fund is a suitable investment product, we look at its expense ratio and its ability to justify use of certain quantitative 'filter rules' that cause a fund to track away from its index.[3] When determining if an actively managed fund is a suitable investment product, we run several statistical tests to verify that the manager is adding value *vis-à-vis* a comparable indexed investment.[4]

In order to fulfill the IPS mandate to monitor and evaluate investment positions, Schultz Collins prepares and sends to each client an annual Fund Evaluation Report which provides detailed statistical analyses of

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[2] Sometimes, employer-sponsored retirement plans restrict choice to a menu of products some or all of which exhibit loads or high fees. See, Luke Bailey and Dale Schultz "How ERISA Section 404(c) Affects You and Your Firm's Retirement Savings Plan" [http://schultzcollins.com/resource/how-erisa-section-404c-affects-you-and-your-firms-retirement-savings-plan/]

[3] Some indices, for example, may include firms with only one or two 'market makers.' Such a restriction on liquidity makes it problematic for a fund to trade the securities of these firms. Structured funds tend to exclude low-liquidity investments.

[4] See, for example, Patrick J. Collins and Luther J. Avery "Managing Investment Expenses: Trustee Duty to Avoid Unreasonable or Inappropriate Costs," ACTEC Notes [http://schultzcollins.com/static/uploads/2016/02/Managing-Investment-Expenses-Trustee-Duty-to-Avoid-Unreasonable-or-Inappropriate-Costs.pdf]; Patrick J. Collins, "Monitoring Passively Managed Mutual Funds," The Journal of Investing [http://schultzcollins.com/static/uploads/2016/02/Monitoring-Passively-Managed-Mutual-Funds.pdf] ; Patrick J. Collins "Prudence" The Banking Law Journal [http://schultzcollins.com/static/uploads/2014/10/Prudence.pdf]. Patrick J. Collins and Mark C. Griffin, "The Lawyer as Trustee: Duty to Monitor and Review Investments," Maryland Bar Journal [http://schultzcollins.com/static/uploads/2016/02/The-Lawyer-as-Trustee-Duty-to-Monitor-and-Review-Investments-parts-1-2.pdf].

investments owned in the client's portfolio. The analysis is an independent and objective evaluation because Schultz Collins receives no compensation from any product manufacturer. Investments are accepted or rejected solely on their merit.

Here is an example of how Schultz Collins uses quantitative analysis to assess a particular transaction.

EXAMPLE: INVESTING WITHIN A TAXABLE ACCOUNT

Suppose you receive a bonus, and you wish to put it into your portfolio. A check of investment allocation indicates that the asset class of US Large Cap Value is currently underweighted relative to its long-term strategic asset allocation target as set forth in the IPS. You agree that it's a good idea to use the bonus to "true up" the portfolio. The following factors may come into play:

Size of the existing portfolio: Larger portfolios can more readily diversify within an asset class; smaller portfolios attempting a comparable level of diversification may end up with unwieldy collections of small investment positions.

Composition of existing portfolio: What are the current risk / reward exposures to which the portfolio is subject?

Taxable or Tax-Favored Investment: Is the bonus going into a taxable personal account like a living trust, or into a tax-favored account like an IRA or SEP?

Choice set: What funds are prudent and suitable?[5]

Here is a brief "profile" of approved funds:[6]

US Large Cap Value	Comparable Index	Type	Expense Ratio	Turnover	Notes
iShares S&P 500 Value	S&P 500 Value Stock Index	Passive	18bp	31%	
Vanguard Value Index	CRSP US Large Cap Value Index	Passive	17bp	8%	
DFA US Large Cap Value	FAMA/French US Large Company Value Index	Structured	27bp	15%	
Dodge & Cox Stock Fund	MSCI US Large-Cap Value Stock Index	Active	52bp	20%	Positive Information Ratio / Adds value at 80% Confidence Interval

There are four alternatives within this asset class: 2 passively managed funds, a structured fund, and an actively managed fund. What is the best choice?

In this example, you wish to own the investment in a taxable account. If you're subject to a high tax rate, the turnover column is an important decision factor: the higher the turnover rate, the greater the amount of gain recognition, all else held equal. If you have large loss-carryforward, the high turnover fund (iShares S&P 500 Value Fund) is an attractive choice; if you're subject to a high rate on recognized gain, the low turnover fund (Vanguard Value Index Fund) is an attractive choice under this decision metric.

[5] Schultz Collins is particularly leery of funds that use derivatives to enhance investment returns. Sometimes funds with "good" returns are highly-leveraged time bombs.
[6] The Annual Fund Evaluation Report presents a significantly greater range of evaluative data. The summary profile, based on end of 2018 data, is only meant to illustrate first-order fund selection criteria.

Under most every investment scenario, low cost funds are more attractive than high cost funds. Under this decision metric, the two most attractive choices are, again, the iShares S&P 500 Value Fund and the Vanguard Value Index Fund. However, the iShares S&P 500 Value Fund's 31% turnover rate may negate the benefit of low operating expenses. The DFA US Large Cap Value fund presents an interesting middle-ground alternative: its expense ratio is 27 basis points, but its turnover rate is only 15% – less than half the iShares turnover rate.

Fund costs, however, should be considered in *at least* two dimensions.[7] The first dimension is, of course, the fund's published expense ratio. An index is a purely paper portfolio with no associated operating costs. An index fund, by contrast, has a plethora of costs; and most index funds cannot track the paper index return exactly because they bear the burden of operating expenses. Thus, the investor should (1) look at the published expense ratio, and (2) check to see if the fund's return lags the paper index return by only a reasonably small amount. In the US Large Cap Value Index world, for example, a well-run index fund should only lag the paper index by a few basis points per month.[8]

The second dimension leads directly to evaluation of the DFA and Dodge & Cox investment alternatives. As it turns out, the iShares index fund lags the return of its index by only 2 basis points per month; the Vanguard index fund lags the return of its index by only 1 basis point per month. These are excellent results. What about the structured DFA fund and the actively managed Dodge & Cox fund? Remember, a structured fund deliberately veers away from strictly tracking an index by excluding securities that fail to meet certain pre-set "filter rules." It might be helpful to think of funds operating along the follow spectrum:

Index Funds own all the securities within an index.[9]

Structured Funds own most of the securities within an index; they eliminate stocks that do not meet certain threshold criteria (e.g., no bankrupt firms).

Actively Managed Funds own only a few stocks from the index because fund management believes that the selected stocks are attractive along one or more dimensions: valuation, M&A targets, etc.

The DFA US Large Cap Value Fund's filter rules have added an additional 44% return to every dollar invested from fund inception in March of 1993. Thus, investors have enjoyed a cumulative positive effect during the evaluation period. This excess return offsets operating expenses.[10] The Dodge & Cox actively managed fund does not attempt to track an index. Our analysis suggests that it most closely approximates the risk/return profile of the Morgan Stanley Capital International US Large Cap Value Index over the period April 2000 through December 2018. Quantitative analysis indicates that the fund

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[7] There is no standard industry or SEC-mandated method for calculating expense ratios. Funds often calculate their expense ratios using a variety different approaches and "philosophies." In almost every case, expense ratios do not include trading costs which, in some cases, are a major expense of running a fund.
[8] In the world of small-cap indexes or international stock indexes, even a well-run fund can lag the notional return of a corresponding paper index by double digit basis points per month. This is often surprising to investors who wonder why their index fund did not deliver the return of its index.
[9] Some index funds are not full-replication funds. This is yet a further issue to consider when selecting a fund.
[10] It is not a guaranteed outcome; and, in some periods, the fund's returns-to-filter-rules have been negative.

has generated "positive alpha" (i.e., beaten the index) at an 80% level of statistical confidence. This means that after expenses, fund owners have historically enjoyed returns in excess of the corresponding index.[11]

If the portfolio currently invests a large amount in only one of the four funds, it may be prudent to diversify further within the asset class. In this example, the investor may select funds that mirror (closely or loosely) four different indexes. Here is where things get complicated: indexes may exhibit significantly different risk/reward profiles. Without going too deeply into the weeds, it is important to recognize that indexes have different weightings to specific industries (e.g., financials, utilities, etc.), different numbers of securities included in the index, different capitalization weight requirements for including or excluding firms, and so forth.

Here's the point: not all indexes are created equal; and, investors may find it beneficial to diversify within an asset class by diversifying among the underlying indexes for that asset class.[12] Indeed, some financial economists argue that the choice of the underlying index is **the most important element in fund selection**. Although this element adds a daunting layer of complexity to the discussion, Schultz Collins is mindful of its importance in fund selection and retention decisions.[13] Counterintuitively, statistical analysis sometimes reveals that the fund which subtracts most value relative to its underlying index has the most favorable absolute returns over time!

CONCLUSION

Option One: fund selection is easy. Just pick a handful of 5-star funds and get on with your life.[14]

OR

Option Two: fund selection is difficult. Employ quantitative analysis techniques to a wide range of complex data with no guarantee that end results will be better than those achieved by following option one.

If you're a fiduciary who is responsible for investing other people's money, you should pick option two.[15] This option evidences that you employed an objective, credible, and defensible rationale for your

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[11] This observation is only valid for the entire historical period under evaluation. In some periods (e.g., 1994-1997) the fund's alpha was strongly negative.

[12] Diversification benefits may also extend to tax-basis diversification for taxable investors using average-cost basis calculation methodologies. This topic is well beyond the scope of this brief exposition.

[13] If you have time on your hands, you may want to read *Active Index Investing* by Steven Schoenfeld. Several sections of this 800+ page book discuss why selecting the underlying index, as opposed to selecting the corresponding fund, is of primary importance. From time-to-time, Schultz Collins has offered insights into this topic. See, for example, "Does Index Selection Matter?" IQ 2003 Vol. 9. No, 1; [http://schultzcollins.com/static/uploads/2016/08/IQ-2003-Q1.pdf] and, "Small Company Stock Indexes," IQ 2010 Vol. 16, No. 2 [http://schultzcollins.com/static/uploads/2016/08/IQ-2010-Q2.pdf]

[14] A method, in all likelihood, that will save time and energy; and, that will generate a poor outcome. See, for example, William F. Sharpe, "Morningstar's Risk-Adjusted Ratings," Financial Analysts Journal (July/August 1998); and, Matthew R. Morey, "Kiss of Death: A 5-Star Morningstar Mutual Fund Rating?" Journal of Investment Management (October, 2014).

[15] Schultz Collins acts as a fiduciary within the scope of all client engagements.

investment decision making. You can invest prudently, or you can hope to buy a winning lotto ticket. Schultz Collins cannot predict which path will have the best outcome. At least option two greatly reduces the probability that you will unwittingly stumble into a financial catastrophe.

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