The Active Management Value Ratio™

The Active Management Value Ratio™:
Quantifying Prudence to Protect Investors and Fiduciaries

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Facts do not cease to exist because they are ignored.
Aldous Huxley

You are given two investment options. Fund A charges an annual management fee of $18 with an annual return of 10 percent. Fund B charges an annual management fee of $82 with an annual return of 0.6%. Seems obvious, right? Yet everyday millions of investors choose a variation of Fund B by investing in actively-managed mutual funds.

Ever since the introduction of index mutual funds, there has been an ongoing debate as to which are better for investors, actively-managed mutual funds or passively managed index mutual funds. Most comparisons of index mutual funds and actively-managed mutual funds are based on returns, with the argument being that actively-managed mutual funds can provide better returns in both bull and bear markets.

Contrary to popular belief, actively-managed funds, on average, have actually tended to underperform a broad market benchmark in bear as well as bull markets.(1) Various studies have concluded that

• Approximately eighty-five percent of actively-managed mutual funds underperform their relevant index over the long-term;(2)
• Contrary to popular belief, actively-managed funds, on average, have tended to underperform a broad market benchmark in bear as well as bull markets. Despite the opportunity for active managers to add value during bear markets, they have done so only inconsistently, at best.(3)
• A similar study by Standard & Poor's analyzing two recent five-year market cycles, 1999 to 2003 and 2004 to 2008, found that a majority of actively-managed funds in all nine domestic equity style boxes were outperformed by corresponding S&P indices.(4)
• A study by the Schwab Center for Investment Research reported that:
(1) Index funds outperformed actively-managed funds in 55% of the down markets
(2) In the worst downturns, defined as declines of 10% or more, index funds outperformed actively-managed funds 75% of the time.

(3) In the longest downturns, defined as declines of 5 consecutive months or longer, index funds outperformed actively-managed funds 100% of the time.(5)

Furthermore, even when actively-managed funds outperform index funds, such performance is inconsistent and only by a slim margin on an after-tax basis. According to David Swensen, the highly respected Chief Investment Officer at Yale University, "[a] miniscule 4 percent of funds produce market-beating after-tax results with a scant 0.6 percent (annual) margin of gain. The 96 percent of funds that fail to meet or beat the Vanguard 500 Index Fund lose by a wealth-destroying margin of 4.8 percent per annum."(6)

So studies have consistently concluded that index funds generally outperform actively-managed funds in both bull and bear markets. One factor that should be considered is the prevailing management style used by many actively-managed fund managers and the impact of overall market trends on such management styles.

In order to avoid large outflows of funds from their funds, many managers of actively-managed funds try to avoid a significant "tracking error" in their fund's returns. Tracking error is the deviation in a fund's return from its appropriate benchmark index. Funds whose returns vary too much on the downside from a stock index, such as the S&P 500, run the risk of losing money to less expensive index funds offering comparable, or even better, returns.

The impact of fees and other costs is another factor in the under-performance of actively-managed mutual funds. Higher fees and higher trading costs reduce a fund's return.

In comparing the value of index mutual funds to actively-managed mutual funds, the issue of cost is often dismissed with a statement to the effect that actively-managed funds are more expensive that index funds due to the benefits received from the active management. However, as we have shown, there are serious questions regarding the "benefits" of active management.

Most index funds charge stated annual expenses less than 0.20 percent, while actively-managed mutual funds' stated annual expenses are generally five to six times higher. However, in truth, an actively-managed mutual fund's effective annual fee can be even higher if you break the fund's annual fee into its passive and active components and perform a basic cost-benefit analysis on the active component.

But that's not the end of the impact of mutual fund fees on investors. Professor Ross M. Miller created the Active Expense Ratio to give investors a means of calculating the true cost of the actively-managed portion of a fund.(7) In essence, the active expense ratio compares the fees for a relevant index fund and the fees of the actively-managed fund being considered, and then factors in the impact of the actively-managed fund's R-squared ratio.

A fund's R-squared ratio measures the extent to which the fund's performance tracks its appropriate benchmark index. Funds with a high R-squared ratio are often referred to as "closet index" funds since their high R-squared ratio indicates that their performance is attributable more to the performance of their underlying benchmark index rather than the fund's active management team.

The relevance of a fund's active expense ratio is that mutual fund investors are often paying considerably more than they are led to believe for the purported benefits of active management. If a fund fails to outperform its benchmark index, an investor has paid good money for nothing, since an investor could have received a higher

performance with less cost simply by investing in an index fund. Professor Miller's study found that an actively-managed fund's active expense ratio is typically 5-7 percent times higher than the fund's advertised expense ratio.

While Professor Miller's concepts are valid and provide valuable information to investors and fiduciaries, some have criticized Professor Miller's study on the grounds that it does not represent actual costs since investors only pays the stated annual fee. Those same critics basically argue that if someone were to perform a cost-benefit analysis based on the actual cost relationships associated with actively-managed mutual funds, the analysis would show that investors do receive value for the additional costs.

That's exactly what InvestSense has done in creating the Active Management Value Ratio™ ("AMVR"), a proprietary formula that allows InvestSense to measure the cost effectiveness of an investment. However, the AMVR often shows that investors do not receive commensurate value for the additional costs of active management. In fact, the AMVR often shows that the active management component of actively-managed funds actually reduces an investor's return.

The AMVR is one of the components of the InvestSense Ratio™, a proprietary formula which allows InvestSense to analyze an investment on both a risk and cost efficient basis. To calculate an investment's AMVR, we need the following information for both the actively-managed mutual fund under consideration and an appropriate index fund: the actively-managed fund's R-squared rating, the five-year annualized returns for both funds, and the annual expense ratio for both funds.

Let's start with a simple cost-benefit analysis. Let's assume that we have two mutual funds. Fund A is an index fund that tracks the S&P 500 Index. Fund A does not impose a load, or upfront fee, to purchase the fund and has an annual expense fee of 0.15 percent. Fund B is a load fund that charges a purchase fee, or load, of 3.5 percent and an annual expense fee of 1.50 percent. Fund B's purchase fee is immediately deducted from an investor's initial investment, meaning the investor starts off at a loss.

Fund B has an R-squared rating of 90, meaning that ninety percent of the fund's performance can be attributed to the performance of the underlying index, in this case the S&P 500 Index, rather than the contributions of the fund's management. So an investor could have received ninety percent of Fund B's performance for essentially ten percent of Fund B's annual fee. In other words, an investor is paying ninety percent of the amount of Fund B's fees for whatever returns Fund B earns in excess of the S&P 500's return. If Fund B does not outperform the S&P 500 Index, the investor receives nothing for the excess annual fees they paid for Fund B.

Many investors may look at one percent and dismiss it as an insignificant amount of money. However, a study done by the General Accounting Office estimated that every one percent of fees and expenses reduces an investor's end return by 17 percent over a twenty year period.(8) Based upon the GAO's calculations, Fund B's annual fee of 1.5 percent would reduce our end return by approximately 25 percent, or by one-fourth, over a twenty year period. Throw in an additional 1 percent for an advisor's annual management fee and you are looking at a 42 percent reduction in our end return over twenty years! As Warren Buffett once said, "why pay people to gamble with your money?"

The AMVR provides an even more useful analysis. For our analysis we will compare two popular actively-managed, domestic equity mutual funds, two funds that are often included in 401(k) plans. Popularity aside, when we perform an AMVR analysis on these two funds, we get drastically different findings.

Fund #1

- Fund's Five-Year Annualized Return – 4.88%
- Fund Expense Ratio – 0.69%
- Index Fund's Five-Year Annualized Return – 2.29%
- Index Fund's Expense Ratio – 0.17%

The first step in computing the AMVR is to compute the difference between the funds' expense ratios and the difference between the funds' five-year annualized returns.

- Actively-Managed Fund's Expense Ratio – Index Fund's Expense Ratio = Active Cost
- Actively-Managed Fund's Five-Year Annualized Return – Index Fund's Five-Year Annualized Return = Active Contribution

In our example, the Active Cost would be 0.52 (0.69 – 0.17) and the Active Contribution would be 2.59 (4.88 – 2.29)

The next step in calculating the AMVR is to compute both the Active Cost and the Active Contribution as a percentage of the actively-managed fund's expense ratio and five-year annualized return, respectively.

- Active Cost/Actively-Managed Fund's Expense Ratio = Relative Active Cost
- Active Contribution/Actively-Managed Fund's Five-Year Annualized Return = Relative Active Contribution

In our example, the Relative Active Cost would be approximately 0.75, or 75% (0.52/0.69), and the Relative Active Contribution would be approximately 0.53, or 53% (2.59/4.88), resulting in an AMVR of 1.41. The AMVR can actually be viewed in three ways with regard to the cost/benefit of a fund's active management component.

- 75% of the fund's cost is producing only 53% of the fund's return.
- The effective cost of the fund's active management component would be 20% (52/259)
- By analogy, would you prefer to pay$17 for a annual return of 22.9% or $69, or three times more, for an annual return of 25.9%. In many cases the incremental return is much less, further exaggerating the cost differential.

Fund #2

- Fund's Five-Year Annualized Return – (3.30%)
- Fund Expense Ratio – 0.52%
- Index Fund's Five-Year Annualized Return – 3.69%
- Index Fund's Expense Ratio – 0.17%

Performing the same steps as before for Fund #2 produces a Relative Active Cost of 0.67, or 67 percent (0.35/0.52). Since Fund #2's annual return is less than the index fund's return, the actively-managed fund has a negative Relative Active Contribution and, therefore, no AMVR rating.

For our purposes, we have found that it works best to calculate active cost as a percentage of active return, with an AMVR score of 0.75 or lower as a goal. An AMVR score of 1.00 or higher would indicate that an investor did not receive a commensurate return on the additional expense fees incurred on the actively-managed mutual fund.

In our example, Fund #1's AMVR score of 1.41, indicates that our investor paid 75 percent more in fees than the index mutual fund's total fee in order to receive the actively-managed portion of the fund, yet only received 53 percent more in returns. This disparity raises potential questions regarding the prudence of investing in the fund.

Each year "Pensions and Investments" magazine compiles a list of the top fifty defined contribution mutual funds. We calculated the AMVR for the top twenty funds on the 2012 list on both a five-year and a ten-year basis, using the Vanguard 500 Index fund for comparative purposes. Four of the funds on the list had various fee levels for retirement class funds, so we calculated two AMVR ratings for those funds, one based on the lowest annual fee and one based on the highest annual fee.

The results of our analyses were very informative. The five-year analysis showed fifteen of the funds failing to outperform the index fund. Of the nine funds that did achieve a positive AMVR score, the average AMVR score was 1.65, with 1.02 being the lowest AMVR score and 3.40 being the highest AMVR score.

The ten-year analysis showed eleven of the funds failing to outperform the index fund. Of the thirteen funds that did achieve a positive AMVR rating, the average AMVR score was 3.48, with 1.29 being the lowest AMVR score and 12.50 being the highest AMVR score.

Now for the disclaimer: "Past performance does not guarantee future results." The AMVR is based on past returns, so there is no guarantee that the relative fee and performance numbers used will not change. When I perform a fiduciary audit or an investment analysis, I like to use five sets of five-year rolling returns in order to assess a fund's consistency of performance. Even though that does not guarantee the same performance in the future, it does help to detect any relevant patterns or aberrations that need to be studied further in order to meet fiduciary due diligence requirements.

Implications for Investors

If you currently have a financial adviser, ask them to perform this type of analysis on the products they sold you and/or the investments in your portfolio. If your adviser sells actively-managed products, they are most likely going to be hesitant to disclose this information to you, as it may expose legitimate questions involving the true value of such products and possible legal liability regarding the quality of advice you received.

If your adviser is a registered investment adviser, they have a fiduciary duty to disclose such information to you and to only act in your best interests, as they are required to always put their clients' interests ahead of their own. If your current financial adviser is a stockbroker, they may not have an obligation to provide such information to you. In fact, under current legal standards, in most cases stockbrokers have a right to put their financial interests ahead of their customer's interest. Congress and the regulatory bodies have discussed changing this inequitable situation, but so far nothing has been done.

If you are a participant in a 401(k) or similar retirement plan, it is crucial that you either calculate the AMVR scores yourself or have them done for you. As I wrote in a white paper on my other blog, The Prudent Investment Adviser Rules (iainsight.wordpress. com), there is a curious paradox between the announced need for pension plan participants to have "sufficient information to make informed decisions," as required under pension plan laws, and the Department of Labor's information disclosure requirements vis-à-vis plan participants.

Both the Department of Labor and the courts have publicly stated that the financial theory known as Modern Portfolio Theory ("MPT") is the applicable standard in assessing the legal sufficiency of a pension plan fiduciary's actions.(9) Prior to the introduction of MPT, portfolios were constructed using only an investment's rate of return and standard deviation.

The cornerstone concept of MPT is the importance of the correlation of returns between investment options in order to ensure a truly diversified portfolio in order to reduce the risk of large losses. Yet the Department of Labor does not require that plan participants be provided with any information regarding the correlation of returns between a pension plan's available investment options, leaving plan participants potentially exposed to unnecessary investment risk.

The Department of Labor recently enacted a new rule that requires greater disclosure of the fees and other costs associated with a pension plan's investment options. However, there is no express requirement for the disclosure of information regarding the cost efficiency of a plan's investment such as the information provided by the AMVR.

Bottom line, the AMVR calculations are easy to perform, so ask your financial adviser to do the AMVR calculations for each investment in your portfolio. Based on my experience, they will not agree to do the calculations.

Even if they agree to do so, I would strongly recommend that you still do them yourself to verify their work and to determine whether you need to make changes to your portfolio to protect your financial security. While gathering the data and performing the calculations required to determine the AMVR may take a little time, usually less than an hour, the calculations can be easily performed on a calculator and the potential rewards are well worth the effort.

Implications for Plan Sponsors

Most pension plans are covered by the Employees' Retirement Income Security Act ("ERISA"). Pension plan sponsors and administrators are fiduciaries. Under ERISA, pension plan fiduciaries have various legal obligations, including the duty to act solely in the plan participants' best interests in selecting investment options for the pension plan and in avoiding any unnecessary costs and expenses within the plan.

Pension plan fiduciaries may seek assistance from third-parties. In fact, they are encouraged to do so if they lack the experience, skill or education to properly carry out their fiduciary duties. However, the law is very clear that pension plan fiduciaries cannot blindly rely on the advice of third-parties.(10) The law requires that pension plan fiduciaries conduct their own personal investigation and evaluation of all investment alternatives being considered or adopted by the pension plan.(11) A failure to do so constitutes a breach of fiduciary duty.

Based upon my experience, many plan fiduciaries fail to comply with this requirement. Too many pension fiduciaries blindly accept whatever package of investment options is presented to them by mutual fund wholesalers and/or insurance representatives, with either little or no independent investigation or evaluation of the investment options.

Whenever I perform a fiduciary audit for a pension plan or take the deposition of a plan fiduciary, I always inquire about the due diligence process they used in investigating and evaluating the plan's investment options. When I

mention analyses such as a correlation of returns matrix, stress testing, and the AMVR, the response I often get is a blank stare or an admission that they do not know how to perform those types of analyses.

These types of responses from plan fiduciaries expose the plan and the plan fiduciaries to unnecessary liability exposure. Most plan fiduciaries do not understand that they face personal liability for any failure to properly carry out their fiduciary duties.

The AMVR provides plan sponsors with a relatively easy method of addressing the cost efficiency aspect of their fiduciary duties. As mentioned earlier, the calculations can be performed on a calculator and the potential rewards are well worth the effort. Given the ease in performing the AMVR calculations and the value of the information derived from such calculations, both for plan participants and themselves, it is difficult for plan fiduciaries to justify their failure to make a cost-effectiveness analysis using either the AMVR or a similar formula.

The AMVR and Special Situations

Some of the most rewarding uses of the AMVR have been in connection with special situations such as estates and trusts. These situations often involve people with little or no investment experience, making them prime targets for financial scams. In many cases they may feel that they have no choice but to blindly rely on the advice of the fiduciary involved, e.g., executor, trustee, often with disastrous results.

The AMVR comes into play in detecting potential legal claims that the estate, heirs, and/or beneficiaries may have against those who have managed or otherwise been involved with the deceased's or the trust's assets, such as brokerage accounts, investment adviser accounts, 401(k) and other retirement accounts, and trust accounts. Legal claims are considered property rights and must be accounted for and protected by a fiduciary. I continually see situations where executors and trustees are unaware of this fact and fail to properly review the estate or trust for such potential claims, potentially depriving the estate or trust of important assets and exposing the executor or trustee to potential liability for breach of their fiduciary duties.

The legal claim issue becomes a potentially bigger issue when a commercial fiduciary such as a bank serves as both the executor of an estate and the trustee of a trust related to the deceased. Obviously, in such cases, the commercial fiduciary is not going to alert the heirs and/or beneficiaries to acts which could result in legal liability for the commercial fiduciary. In such cases it is imperative that the heirs and beneficiaries either conduct their own fiduciary review and calculate the AMVR for all assets that are in or have been in the estate and the trust, or have a review conducted by an independent third-party.

The potential liability impact of legal claims should not be overlooked. I have been involved in cases where significant wrongdoing has been revealed through the use of the AMVR and significant sums recovered. Many executors and trustees, especially commercial executors and trustee, often ask estates, heirs and beneficiaries to sign a form releasing the executor and/or the trustee and their company from liability for any actions taken in their role as executor and/or trustee. Some even try to sneak in language releasing their company from liability for any actions ever taken in connection with the deceased's assets.

It is crucial that all estates, trusts, heirs and beneficiaries always refuse to sign such releases. There is no legal requirement that estates, trusts, heirs and beneficiaries sign such forms. Fiduciaries are held to a very high legal standard, and any attempt to avoid their legal duties is blatantly unethical.

Conclusion

All truths are easy to understand once they are
discovered; the point is to discover them.
Galileo

Men occasionally stumble over the truth, but most of them
pick themselves up and hurry off as if nothing had happened.
Winston Churchill

When I first told some of my colleagues and friends that I was going to disclose the procedure for calculating the AMVR, they questioned my decision, asking why I would disclose a proprietary secret. First of all, the AMVR is only one of the components of the InvestSense Ratio, which is the cornerstone of my fiduciary audit practice.

More importantly, I had a large number of readers from my two blogs ask me for the details on calculating the AMVR. I realized that this simple calculation might help a lot of investors and fiduciaries make better investment decisions and avoid unnecessary losses. As I mentioned earlier, there just seems to be too many instances where it would be easy to provide investors and fiduciaries with helpful information to help them effectively manage their investments, yet various entities have refused to do so.

Time and time again I see investors with their colorful little pie charts and various spreadsheets, all recommending that they divide their investments among a lot of differently named investments (e.g., large cap growth, small cap value, mid cap blend, international, etc.) with the promise of improved portfolio returns. Far too often the pie charts and spreadsheets offer investors little more than "pseudo" diversification and a dangerous false sense of security.

What most investors do not realize is that most of their pie charts do nothing more than diversify their assets only among equity-based investments, and that equity-based investments have shown a trend of increased correlation in their returns, effectively denying investors the true diversification they need to provide downside protection against large losses that destroy financial security. What most investors have not been told or do not understand is that successful investing is properly a defensive process whose goal should be to protect against large financial losses, to provide upside potential while minimizing downside risk. Furthermore, investors, and even plan sponsors, often do not realize the true impact of high fees on investment returns.

The Active Management Value Ratio is not, and is not intended to be, the Holy Grail, an end-all for investors and fiduciaries. It is, however, a simple, straightforward tool offered to investors and fiduciaries to help identify and avoid actively-managed mutual fund fees that are shown to be unjustified in terms of cost-benefit efficiency, fees that unnecessarily reduce investors' returns and may expose fiduciaries to unwanted liability exposure. Hopefully, this white paper will provide information that helps investors, pension plan fiduciaries and other types of financial fiduciaries to avoid such problems and to promote and protect their respective financial security.

This article is for informational purposes only, and is not designed or intended to provide legal, investment, or other professional advice since such advice always requires consideration of

individual circumstances. If legal, investment, or other professional assistance is needed, the services of an attorney or other professional advisor should be sought.

Notes

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