PERSPECTIVES

The Importance of Asset Allocation

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How important is asset allocation policy in determining performance? In particular, what is the impact of the long-term asset allocation policy mix relative to the impact of active performance from timing, security selection, and fees?

The first attempt to answer these questions was made by Brinson, Hood, and Beebower (BHB 1986) more than two decades ago in their article "Determinants of Portfolio Performance." BHB regressed the time-series returns of each fund on a weighted combination of benchmark indices reflecting each fund's policy. They found that the policy mix explained 93.6 percent of the average fund's return variation over time (as measured by the R^2). Unfortunately, their time-series results were not very sensitive to each fund's asset allocation policy because most of the high R^2 came from aggregate market movement.

Ibbotson and Kaplan (2000) and Hensel, Ezra, and Ilkiw (HEI 1991) pointed out that most of the variation in a typical fund's return comes from market movement. The funds differ by asset allocation, but almost all of them participate in the general market instead of just holding cash.

The BHB (1986) study spawned a large literature, most of it published in this journal. Much of this literature points out that the BHB answer does not match up with investor questions. Nevertheless, the idea that asset allocation policy explains more than 90 percent of performance has become accepted folklore.

In "Does Asset Allocation Explain 40, 90, or 100 Percent of Performance?" (Ibbotson and Kaplan 2000), the 100 percent answer corresponds to the question that is most commonly asked by investors: What percentage of my *return* comes from my asset allocation policy? This question is very important, but it has a fairly trivial answer. Asset allocation

policy gives us the passive return (beta return), and the remainder of the return is the active return (alpha or excess return). The alpha sums to zero across all portfolios (before costs) because on average, managers do not beat the market. In aggregate, the gross active return is zero. Therefore, on average, the passive asset allocation policy determines 100 percent of the return before costs and somewhat more than 100 percent of the return after costs. The 100 percent answer pertains to the all-inclusive market portfolio and is a mathematical identity—at the aggregate level.

Surprisingly, many investors mistakenly believe that the BHB (1986) result (that asset allocation policy explains more than 90 percent of performance) applies to the return *level* (the 100 percent answer). BHB, however, wrote only about the *variation* of returns, so they likely never encouraged this misrepresentation.[1]

Many investors have a different question in mind: Why does your return differ from mine?—or more specifically, What portion of the variation in fund return differences is attributable to fund asset allocation policy differences? The answer to this question can come from either a cross-sectional comparison across funds or from a time-series performance for each fund in excess of the market. In either case, the answer is nowhere near 90 percent.

Ibbotson and Kaplan (2000) presented a cross-sectional regression on annualized cumulative returns across a large universe of balanced funds over a 10-year period and found that about 40 percent of the variation of returns *across* funds was explained by policy. Vardharaj and Fabozzi (2007) applied Ibbotson and Kaplan by using similar techniques for equity funds and found that the R^2s were time-period sensitive and that approximately 33 percent to 75 percent of the variance in fund returns *across* funds was attributable to differences in asset allocation policy.

As Xiong, Ibbotson, Idzorek, and Chen (forthcoming 2010) demonstrated, the actual percentage of the variation of returns among funds that is explained by policy is sample specific. It is not necessarily 40 percent, as in Ibbotson and Kaplan

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(2000), but has been measured across a wide range of values. All answers are empirical observations specific to the individual funds, the time period analyzed, and the method of estimation. For any given portfolio, the importance of asset allocation policy (the passive return) versus the active return (i.e., timing, security selection, and fees) depends on the preferences of the fund manager. For a true market-neutral hedge fund that has hedged away all possible beta risk exposures, the active performance dominates. For a long-only passive index product, asset allocation policy dominates.

Can we use time-series regressions to get a similar result? Several studies have correctly pointed out that market tide, or the collective movement of the asset classes, contributes to the high R^2 of BHB (1986). HEI (1991) demonstrated that an appropriate benchmark has to be chosen as a baseline in order to evaluate the importance of asset allocation policy (BHB implicitly assumed cash as the benchmark). If we want to measure the impact of a fund's specific asset allocation policy, we should compare it with the average asset allocation of the peer group universe. Both HEI and Ibbotson and Kaplan (2000) support this approach. In practice, any benchmark that includes the stock market will capture most of the market movement because stocks are much more volatile than other asset classes.

The total return of a fund can be split into three parts: (1) the return from the overall market move-ment, (2) the incremental return from the asset allocation policy of the specific fund, and (3) the active return (alpha) from timing, selection, and fees. BHB (1986) combined the first two parts and compared them with the third part. Ibbotson and Kaplan (2000) and HEI (1991) compared the second part with the third part.

Figure 1 plots the decomposition of *total* return variations on the basis of the Xiong, Ibbotson, Idzorek, and Chen (forthcoming 2010) dataset. It illustrates the contrasting interpretations of BHB (1986), HEI (1991), and Ibbotson and Kaplan (2000). The two bars on the left illustrate the BHB time-series regression analysis for both equity and balanced funds. In contrast, the two bars on the right illustrate the argument of both HEI and Ibbotson and Kaplan that market movement dominates time-series regressions on total returns. The two bars on the right allow for a more detailed decomposition of the passive return into two components—the specific fund's asset allocation policy return in excess of the market and the applicable market return. Note that BHB put the two components together and collectively labeled them asset allocation policy.

So how should we interpret BHB's 90+ percent? BHB captured the performance from both the market movement and the incremental impact of the asset allocation policy. The first part is the decision to be in the market instead of in cash. The market component (represented by the average

Figure 1. Decomposition of Time-Series Total Return Variations
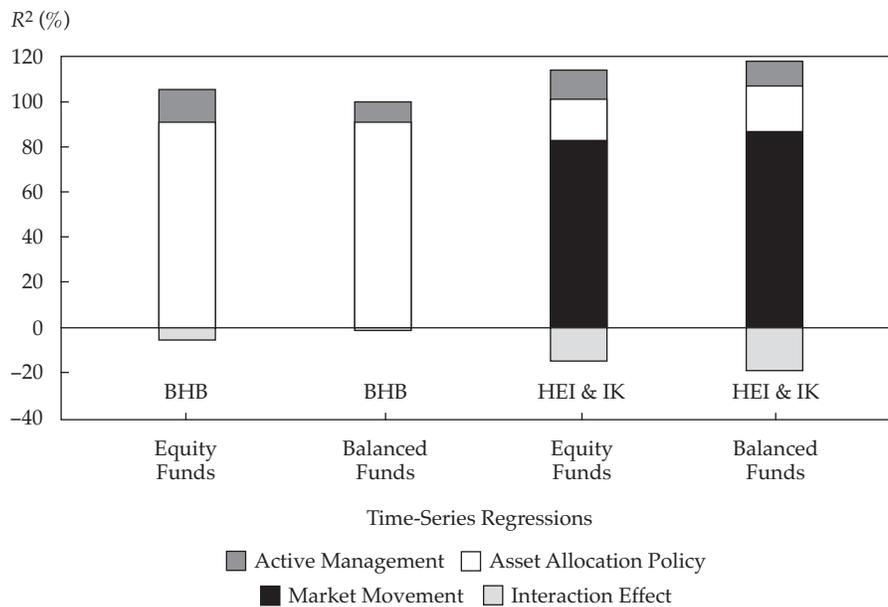
Note: IK stands for Ibbotson and Kaplan (2000).

Source: Based on the mutual fund data results in Xiong, Ibbotson, Idzorek, and Chen (forthcoming 2010).

peer group performance) makes up most of the variation in time-series returns. Only if we count that as part of asset allocation policy would BHB give us the appropriate answer.

In general (after controlling for interaction effects), about three-quarters of a typical fund's variation in time-series returns comes from general market movement, with the remaining portion split roughly evenly between the specific asset allocation and active management. In a year like 2008, almost all funds are down, whereas in a year like 2009, almost all funds are up, despite their specific asset allocation or active management activities.

Do the BHB (1986) time series have any meaning at all in explaining the incremental importance of a specific asset allocation policy? Not necessarily. Perhaps the simplest illustration was given by Mark Kritzman (2006) in a letter to the editor of this journal titled "'Determinants of Portfolio Performance—20 Years Later': A Comment." Kritzman constructed an example in which stock and bond returns moved up and down perfectly together (i.e., were equal to each other each year) while underlying securities did not. The BHB methodology incorrectly ascribed all 100 percent of the return variation to asset allocation, whereas, in fact, all the variation came from stock selection and general market movement.

The time has come for folklore to be replaced with reality. Asset allocation is very important, but nowhere near 90 percent of the variation in returns is caused by the specific asset allocation mix. Instead, most time-series variation comes from general market movement, and Xiong, Ibbotson, Idzorek, and Chen (forthcoming 2010) showed that active management has about the same impact on performance as a fund's specific asset allocation policy.

This article qualifies for 0.5 CE credit.

Notes

1. Nuttall and Nuttall (1998) surveyed BHB citations in the literature and found that most authors incorrectly thought that the result referred to the return level, not the variation in returns.

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