

Hedge Fund Index Biases

A November 8th, 2004 article on Bloomberg.com by John Wasik titled “Malkiel says hedge fund index returns are inflated”[#] commented on recent research by Burton Malkiel and Atanu Saha on hedge fund performance reporting. The study concludes that hedge fund indexes are plagued by backfill bias and survivorship bias, which inflate index level returns. The study found that on average backfill bias overstates fund-level returns by 500 basis points while survivorship bias inflates index-level returns by 374 basis points.

The currently available IC&R position paper: *Understanding Alternative Investments: Hedge Funds*, released in March 2004, and forthcoming white paper, arrive at similar conclusions as the Malkiel-Saha study. Specifically IC&R has concluded that:

- Values reported from standard mean-variance analysis are likely unrepresentative of the average investor experience.
 1. Reliable data is available only since 1994 causing the analysis to be time period dependent.
 2. Failed hedge funds may be excluded from the index data series, particularly in early years. This "survivorship bias" causes certain index returns to be biased upwards while reducing overall volatility "smoothing" index returns and lowering correlations to other strategies or asset classes.
 - Estimates from Tremont place attrition rates at 50% over any given three-year period.
 3. Many of the worst performing-and sometimes best performing-funds choose not to report performance. Excluding funds at the tails of the index return distribution not only reduces the reported range of returns, but also compromises the evaluation of the probability of extreme negative outcomes.
 4. Returns may be overstated while volatility may be understated in cases where fund pricing is estimated when illiquid securities are involved. Managers may rely on appraisals that are not reflective of realistic market transaction prices. Appraisal pricing will lead to fund returns that may appear better than had that fund been marked to market on a daily basis.
 5. Returns are often reported on an infrequent basis, typically monthly or quarterly. Infrequent fund valuation masks the potential daily volatility of the fund's individual holdings.
 - The combination of appraised security values and infrequent fund valuations can result in return volatility and correlations that appear much better than traditional investments, but may simply be a product of opaque valuation practices.
 6. Methodological differences among index providers can complicate evaluations of hedge funds when different indexes are used. No common standard exists for categorizing hedge funds. Indexes differ on the number of funds covered, criteria for including a manager or fund, strategy definitions, history, and even index characteristics such as membership and survivorship bias.
 - While Tremont segments funds into 9 unique strategies, Hedge Fund Research uses 28 distinct strategies and Hennessee Hedge Fund indexes use 23 strategies.
 - Each index will not only use unique strategy definitions, but will also consist of unique funds and differing inclusion criteria-minimum assets or proof of an audited statement for example.
 - Such variability can understandably result in significant variation in performance statistics across indexes. As such, even simple comparisons among hedge funds can be misleading.

[#] To read John Wasik's article, please note the following PDF link will direct you to the Bloomberg.com website: http://www.bloomberg.com/apps/news?pid=10000039&sid=aj2goE2XBqrU&refer=columnist_wasik

- At the broadest level, these index data characteristics overstate return and understate risk measures and consideration of these issues should challenge the assumption that hedge funds, on average, enhance a portfolio's risk and return profile.

Table 1: Hedge Fund Return Comparison

	Average Annual Returns			
	1994-2003	1995-1999	2000-2002	2003
Tremont Hedge Fund Index: Returns without Malkiel-Saha adjustment.	11.11	18.16	4.09	15.47
Tremont Hedge Fund Index: Returns with Malkiel-Saha adjustment.	2.32	9.37	-4.66	6.72
50% Dow Jones Wilshire 5000; 50% Lehman Aggregate	9.30	17.41	-2.10	17.93

The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

- As demonstrated in Table 1, if you adjust the annual returns of the Tremont hedge fund index for the costs identified by the Malkiel-Saha study, hedge fund index returns decline dramatically. In fact, returns fall well short of a simple portfolio of 50% stocks, 50% bonds over the entire time period as well when segmented into bull and bear equity markets.
- While IC&R does not address the recently passed legislation, requiring the registration of funds with greater than \$25 mm in assets with the SEC, in the forthcoming white paper, IC&R does agree with the conclusion alluded to in the article. IC&R believes that the increased regulation should help prevent fraudulent practices, however, the new regulation will not address self-reported returns or survivorship bias.

The above commentary notes are produced by The Vanguard Group, Inc. Investment Counseling & Research team. Their notes comment on an article written by John Wasik called "Malkiel says hedge fund index returns are inflated" which appeared on Bloomberg.com on 8 November 2004.

John Wasik's article refers to research by Burton Malkiel (a director of The Vanguard Group, Inc.) and Atanu Saha on hedge fund performance reporting. The study concludes the hedge fund indexes are plagued by backfill bias and survivorship bias which artificially inflate index level returns.

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