



THE VAN COMPANIES

Hedge Fund Commentary From VAN

December 2004

A Commentary by George P. Van, Chairman, with Zhiyi Song, PhD, CFA, Vice President

# Malkiel–Saha Hedge Fund Paper Flawed

Aggregate Hedge Fund Indices Fairly Represent Performance

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### 1. Background

Recently, a paper on hedge fund (“HF”) databases and indices, entitled “Hedge Funds: Risk and Return” (“paper”) was released to the major media. Its authors were Burton Malkiel and Atanu Saha, both economists.

Malkiel and Saha use an unrepresentative sample and then generalize that other HF indexes are similarly flawed.

Mr. Malkiel is associated with the mutual fund industry. He has been a director of Vanguard since 1977. Vanguard is the largest mutual fund provider of index funds and the third largest mutual fund company. He also has been a director of another index provider, Active Index Advisors. Evidence shows the mutual fund industry is becoming increasingly concerned about the rise of HFs. Malkiel also is a proponent of the proposition that you can’t beat general market indexes – which HFs have. In fact, he has built his career on this proposition.

His co-author, Mr. Saha, is billed on his company website as “an expert in damage analysis” and “litigation”.

***The Malkiel–Saha paper, with its numerous flaws, does a disservice to both investors and the media.***

This paper was introduced in *The New York Times* by a fellow Princeton economist of Malkiel’s, Alan B. Krueger, who specializes in labor economics, education, social insurance and industrial relations. His short New York Times article takes a harsh swipe at HFs and ends with a significant mistake. He says that, *“Most hedge funds will be required to register and provide data to the Securities and Exchange Commission beginning in February 2006. While some people have argued that the S.E.C. already has too much to do, it would seem that collecting and disclosing information on performance is a small burden for the commission, and a great potential benefit to investors.”*

Contrary to Mr. Krueger’s statements, some HF **managers, not HFs**, will be required to register with the S.E.C. They will **not** have to provide performance data. Further, the S.E.C. does **not** intend to disclose it; it will not have it.

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Note: VAN refers to Van HF Advisors, LLC and its affiliates, while VMRR refers specifically to Van Money Manager Research, LLC.

## **2. Malkiel–Saha Paper Flaws and Our Comments on Potential Biases**

The study appears to betray a lack of understanding of the basic differences between HF databases and HF indices and their uses. It also seems to point out a general lack of knowledge of the procedures HF index providers use in maintaining their indices.

Finally, the authors choose a *database* apparently replete with backfilling throughout its history and then make the incredible and incorrect leap, without further investigation, that all HF *indexes* include similar backfilling and biases.

This is the biggest flaw of the paper. Throughout, the authors seem to believe that HF returns, as reported in the indices, are inflated by the inclusion of earlier track records of new funds added. This is incorrect regarding the VAN database and, we would hope, others. VAN demands, and we believe all serious database sponsors demand, inclusion of the earlier records of any HF wishing to be in the *database*, in order to have available the complete track record of that fund. However, *index* returns are calculated contemporaneously with reporting of the data. For a given month or year, these returns do not change, regardless of the previous records of new funds added to the database. This is the distinction between databases and indexes. The exception, at least in the case of VAN, is the first year inception of an index when prior year returns of funds are used to create prior years' indexes.

For instance, VAN began its HF index in 1994. Funds collected in 1994 were required to provide their total records since inception. They were told that if they did not, they would not be accepted. There was no selection by VAN of parts of records, as the authors, apparently with no evidence, suggest is done throughout the industry. We cannot recall a single instance of any fund's refusal to provide a complete record. This protocol was established to ensure that bad performance was not hidden. So, from 1988 through 1994 (six years), there was not a backfilling bias, as it is described by the authors, but we believe there undoubtedly was some survivorship bias. Between 1994 and 2004 (ten years), the VAN Index data contains neither backfilling bias (as described by the authors) nor survivorship bias (also described below).

*Survivorship bias* simply means that on the day an index is established, it will have access only to funds in existence at that time. The index will not be able to include, in its pre-inception history, funds that previously closed for any reason; e.g., the fund failed; the manager, awash in cash after good performance, or "stressed out", decided to retire or take time off; the fund was bought out by a financial services company or merged with another fund.

While survivorship bias can depress or inflate returns, in fairness, failed funds probably represent the single largest group of funds missing from the VAN index in the years 1988–1994.

While the other circumstances listed above tend to unfavorably lower the pre-inception index returns, the omission of failed funds, in this same pre-inception period, would have the contrary effect. The net effect probably would be that returns would tend to be slightly inflated in the pre-inception period by survivorship bias, but not, at least in the case of VAN, by “backfill bias”.

*Backfill bias* appears to be defined by the authors primarily as the raising of HF index returns by (selectively) including the better previous returns of new funds coming into the database. Again, the authors appear confused between the returns of the *database* (which does not report returns), and the returns of the *index* which does report returns but does not, in a serious index like VAN’s, accept backfilling. Therefore, the authors’ claims that HF index returns (including those of the VAN Index and other indexes) are inflated is, at least in the case of VAN, erroneous from 1994 to the present.

It is important to note that their generalizations on HF indices, at least in the case of VAN, were arrived at without any contact whatsoever with VAN (other than downloading only basic information from our website) or any attempt to understand VAN’s database maintenance and index protocols. The Malkiel–Saha research paper makes similar giant leaps of logic elsewhere as well, without evidence.

Based on information produced by Schneeweis<sup>1</sup>, at least one other HF industry index like VAN’s does “not contain either survivorship bias or backfill bias” for the last ten years or so.

Also based on Schneeweis, it is possible that a major mistake made by the authors was to use an unrepresentative sample. While VAN has no independent knowledge of the CSFB database, Professor Schneeweis states that using the CSFB database “most likely grossly overestimates the potential backfill bias...”. “Of the various databases, the CSFB–Tass database is largely affected by backfill. The Tass database was expanded in the late 1990’s when it was purchased by CSFB. At that time, it is reasonable to assume that many funds were added to their database...”.

The authors then create their own index with and without old (“backfilled”) CSFB/Tass returns from 1994–2003. They conclude that the reported HF index returns were unjustifiably high because of the backfilled returns from 1994–2004.

Although this study does show that backfilling does exist in the CSFB/Tass *database*, there were no backfilled returns from 1994–2004 in the VAN *Index*, nor do we believe that backfilling indices has been the case, post-inception, for any major index provider.

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<sup>1</sup> Schneeweis, A Check On “A Reality Check on HFs”, cisdm@som.umass.edu

A HF database is simply a repository of HF records to be used as an aid in assisting investors, creating portfolios, etc. When current HF returns arrive monthly, whether from new funds discovered, or existing funds, only that month's returns are used in the index. As stated above, prior records of new HFs (new to the company) go with the fund into the database as a record for future use *but do not affect the index*. Again, in the case of VAN, the full past records that go into the database do not go into the index.

Part of the difficulty in interpreting this paper is that, if one is familiar with HFs and the HF industry, it is difficult to see through the eyes of authors who lack familiarity with the industry. The conclusion that overall "HF [returns] are substantially upward biased" due to backfilling, based on data observed in one database does not follow. One should not confuse returns in a *database* with returns from an index with contemporaneously reported returns. Aggregate returns from a database are not provided the public or investors, at least not by serious database sponsors.

Unfortunately, Malkiel and Saha then go on to impugn the integrity of all index providers. They state that when HF managers begin reporting to databases, "the *most favorable* of the early results are then (backfilled) into the database along with reports of contemporaneous results." The authors conclude this after study of one database and make the leap, apparently without evidence, that this practice is followed by other *index* sponsors.

Further, no mention or consideration is given to the fact that some of us have been Registered Investment Advisors for many years. As such, our activities are examined by the S.E.C. In these circumstances, there can be no room for shenanigans.

They all appear to be fine fellows with whom one would enjoy a cookout. But why this generalized attack on the HF industry? Perhaps there is more "bad data" out there than some of us believed. However, it seems unlikely that this is the case for long-standing HF indices, managed by leading companies with the same management over time and by the same sponsors since inception.

*End-of-Life Reporting Bias*: this occurs, they say, when funds "stop reporting their results during the last several months of their lives." In reality, this does occur, but it is so inconsequential compared to other factors that it isn't worth the effort to study it. They use Long-Term-Capital-Management ("LTCM"), picking the ultimate extreme example, and describe it as losing 92% of its capital between October 1997 and October 1998. They add: "*none of these negative returns were reported to the database providers.*"

They neglect to say that LTCM stopped reporting to virtually all database providers in its early years when they became Masters of the Universe, racking up eye-popping returns. Databases (and Indexes), therefore, did not receive the benefits of their high returns.

Almost all index providers are equal-weighted rather than asset-weighted. We estimate that had LTCM been in the VAN database in October 2004 for example and reported a

total loss of their capital in this one month, as -100%, it would have had an effect on October's index return of 0.08%; i.e., the index return would have dropped from 0.64% to 0.56%. Since we round the VAN index to the nearest tenth of a percent, it would have remained at 0.6%. It therefore hardly seems worth getting into a snit over this end-of-life bias, even over LTCM as an example.

(There is a certain irony that this may be the first time in years that I have seen LTCM mentioned without the accompanying descriptor that its senior team included prominently two economists – who were Nobel laureates...)

In emphasizing the importance of End-of-Life Reporting Bias, the authors then quote a study by Posthuma and Van der Sluis, which puts HF returns in a bad light. This last study made the outrageous assumption that, in the last month after ceasing reporting to a database, *all* such funds had negative returns of 50%! As my friends in the Toronto garment district would say, "For this I need a Ph.D.?"

As it happens, the Posthuma and Van der Sluis assumption mentioned above generally appears not to have been accepted by most academics.

As described elsewhere, there are reasons for a HF to stop reporting that could slightly elevate indices as well as reasons that could slightly depress an index – causing it to understate the returns of the HF universe.

VAN retains all funds in its database, dead, dying or alive, as well as in the index. We also record all reported losses in the database (and in the index should that fund be in the index). Should a fund become terminal, we seek to obtain the magnitude of the loss. As the LTCM example above shows, the end-of-life reporting bias is hardly worth spending much time on.

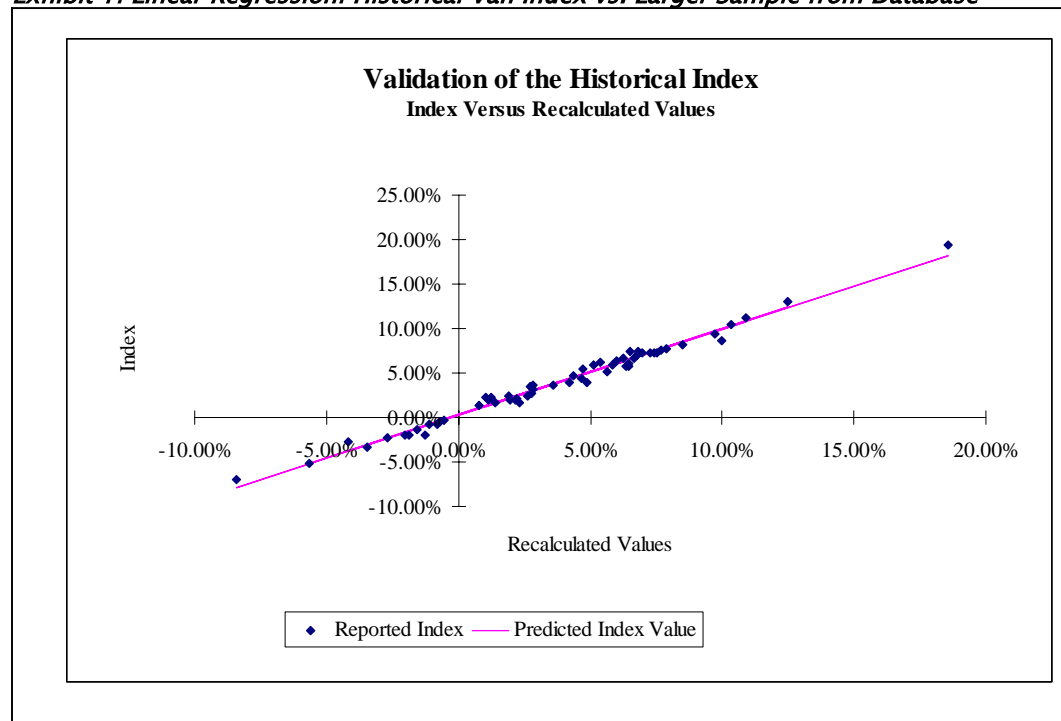
### 3. Validation Studies of the Van Global Hedge Fund Index

VAN has performed subsequent testing of the previously reported VAN Indices to monitor for various biases and to determine if larger sample sizes from the VAN database would yield significantly different results.

The larger sample from the database included several different components: first, returns for HFs that reported to the database prior to the time of the Index; second, those that were entered into the database as they were contemporaneously reported in the Index; third, funds that were not included in the Index because they reported late; fourth, funds that were added to the database subsequent to the date of the Index, not included in the Index, and whose prior returns were backfilled in the *database*, but not the *index*.

These samples, on average, were three times the size of the Index.

#### Exhibit 1: Linear Regression: Historical Van Index vs. Larger Sample from Database



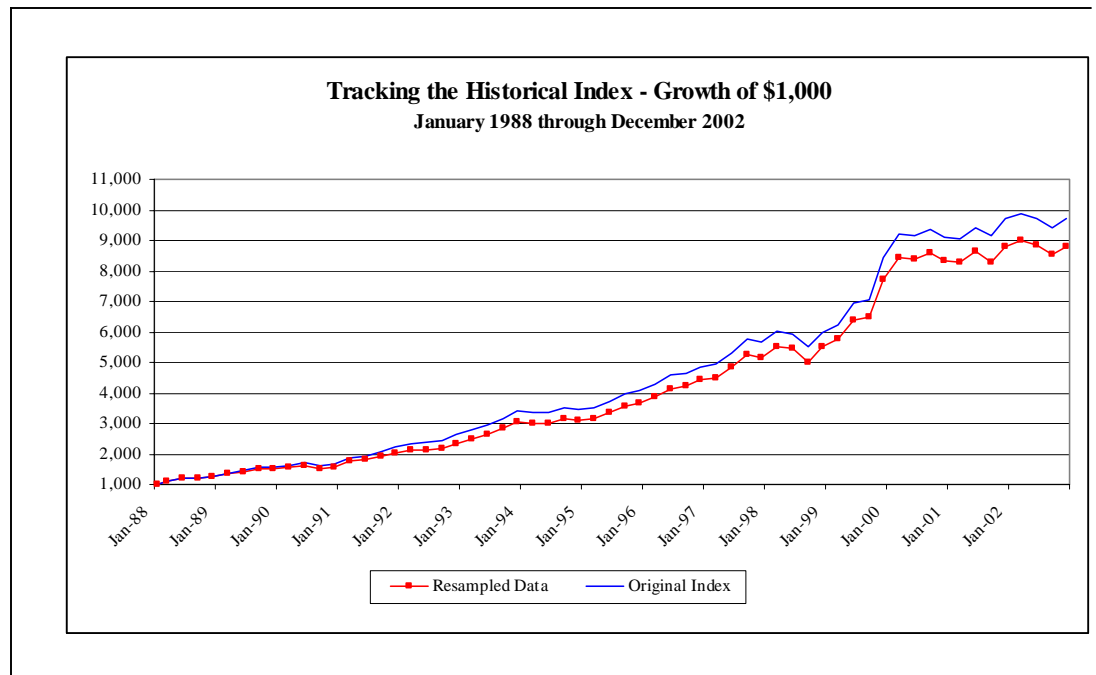
A linear regression study establishes how well-correlated the published Index is with a computation made by re-sampling all the funds in the database that have reported in the same periods. This re-sampling process yields sample sizes averaging more than three times the number of funds used in the contemporaneous computations previously released. The study determines whether the larger, more robust sample of funds would provide a different measurement of the historical returns of the HF industry. The results of this study indicate that the previous sample sizes were adequate to produce valid results.

The published Index shows a .99 correlation to the re-sampled data. Additionally, the beta exceeds .96. A small quarterly alpha of .29% indicates the existence of, what we believe to be a limited degree of early reporting bias in the population.

Conclusions to be drawn from this study are as follows: first, the Index fairly tracks the HF universe based on comparison to an unbiased, fairly reported sample and second, the presence of legitimately (unbiased) backfilled data in the database does not noticeably affect database returns; third, if biased backfilled data had been present in the database (which was not the case) the larger database sample would have produced significantly higher returns than the VAN Index. It did not. (As noted elsewhere, the VAN Index included only contemporaneously reported returns for each period, beginning in 1994, was fixed as of a given date for that period, and was not changed subsequently.)

The aggregate growth of a \$1,000 investment was graphed to review the extent of tracking error. Due to the high correlation and high beta of the data, tracking error was minimized. However, the hypothetical investment compounded to a greater value using the published Index due to the alpha produced by the data.

**Exhibit 2: Growth of \$1,000: Historical Van Index vs. Larger Sample from Database**



Based on the close statistical relationship between the published Index and the average historical returns of a significantly larger sample of funds, the Index reflects the larger HF universe.

#### 4. A Helping Hand

It is interesting that, with virtually no exceptions, the paper in question discusses only factors that allegedly increase HF index returns, thus permitting the authors to claim that HF returns are overstated.

Why do they not consider some very important factors that cause HF returns to be understated? We'd like to help them out here and put forth a few factors that cause HF index returns to be lower than they should be.

First, let's talk about funds which stop reporting. After over twelve years of closely observing HFs worldwide, we are seeing a higher percentage of funds closing to new money than ever before. This is due to an unprecedented amount of money seeking the best-performing funds. In the 1990's, most fund managers were geniuses. Now, there aren't so many. When we now do screens of HFs, up to 50% of the top quartile funds<sup>2</sup> are closed. Most continue reporting to us. Some do not if we have no money with them. And they won't bother reporting to many database sponsors who publish indices. So - this causes HF returns to be understated.

Let's now look at HFs that never report in the first place. Some are doing very well, thank you. Their returns have been very high for years. They do not need new investors. In fact, many periodically return money to their investors, to keep from being overloaded. Here is a very small sample.<sup>3</sup>:

***Exhibit 3: Leading Hedge Funds: Several Are Not Represented in Hedge Fund Indices***

Fund	Assets Managed	CAR <sup>4</sup>
Caxton Associates (Bruce Kovner)	\$11.5 billion	30%
GLG Partners London	\$11 billion	n/a
Farallon Capital Management	\$9.9 billion	22%
Citadel Investment Group	\$9.5 billion	28%
Och-Ziff Capital Management	\$8 billion	18%
Tudor	\$7.8 billion	26%
Cerberus Capital Management	\$7.5 billion	n/a

<sup>2</sup> Selected by a proprietary VAN algorithm.

<sup>3</sup> Various public sources including Institutional Investor

<sup>4</sup> Compound Annual Return

*Selected Others*<sup>5, 6</sup>:

Fund	Size	CAR
Highbridge Capital Management	\$6 billion	16%
Medallion Fund	\$5 billion	38%
Moore Global Investments	\$4 billion	n/a
SAC Capital	\$4 billion	48%
Kingdon Capital Management	\$3.5	21%
Tewkesbury Investment Fund	> \$3 billion	n/a
Raptor Global Fund	\$3 billion	n/a
Tudor BVI Global Fund	\$3 billion	n/a
Perry Partners	\$3 billion	16%
Appaloosa	\$2.8 billion	34%
Omega Advisors	\$2.8 billion	n/a

Of the above funds, Caxton, Moore, SAC, Perry and Appaloosa are funds that ceased reporting to us, and to our knowledge, to everyone else.

Their returns would have added to HF index returns.

***According to an Institutional Investor report, assets for the 100 largest managers totaled \$339 billion at the end of 2003. This represents over a third of HF assets worldwide. Many of these 100 largest are closed to new money and unlikely to be included in HF indices. They got big and stayed big by posting strong returns.***

Obviously indices reporting HF returns are lower than they would be if they included the above funds mentioned above. Even more compelling is the fact that many of the funds representing one third of the industry (asset-weighted) are not in HF indices. Even on an equal-weighted basis, the omission of the high returns of these funds has a depressive effect on index returns. We believe this effect counteracts the factors which (Malkiel and Saha state) increase HF index returns.

We contend, for all the reasons stated in this paper, that HF index returns fairly represent the performance of the HF universe and, in the case of asset-weighted indices, may understate that performance.

<sup>5</sup> Assets approximate; returns shown where available and are net of all fees

<sup>6</sup> Various public sources including Institutional Investor

Let's now deal briefly with a few residual issues of the Malkiel-Saha paper.

- ***“A typical fee ... [is] 2% of the assets under management plus 20% of ... profits.”***  
 (Page 5)

A more typical arrangement, based on VMMR data, is 1% and 20%.

- ***“ ... there is a tendency in our data set for larger funds to outperform smaller ones.”***  
 (Page 10)

If one can accept the reasonable proposition that younger funds tend to be smaller, our data set provides contrary results, as shown below.

***Exhibit 4: Hedge Fund Performance as Funds Age***

Fund Year	1	2	3	4	5	6	7
Average Net Return	27.29%	18.35%	16.37%	12.74%	12.34%	11.84%	11.39%
Number of Funds Counted	1,282	1,083	856	653	478	342	239

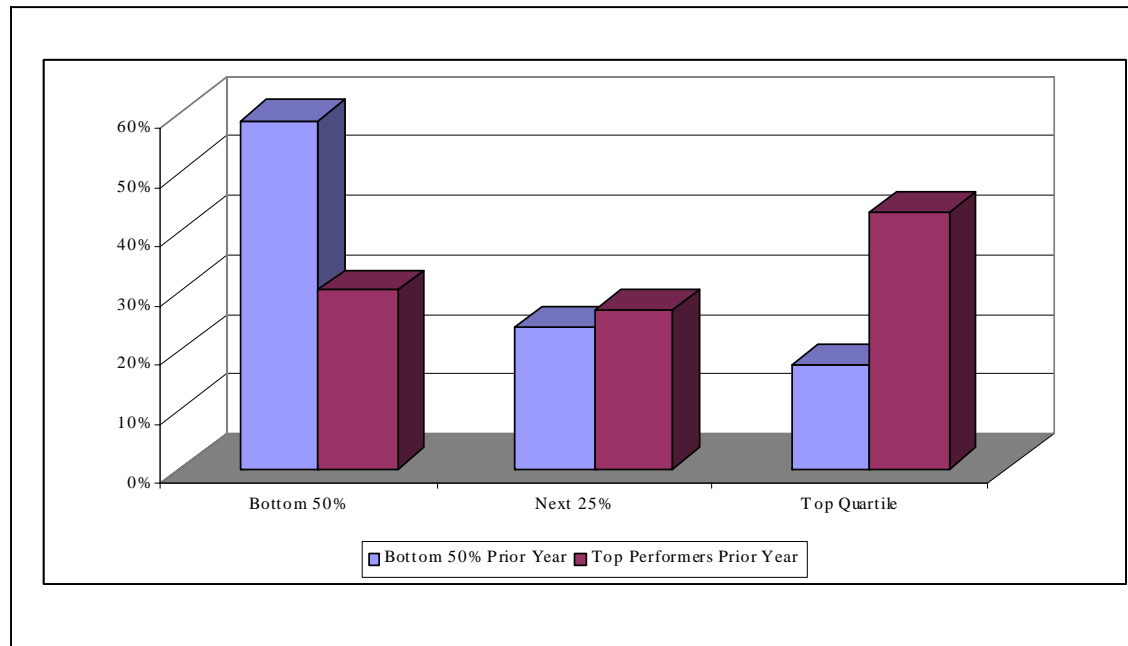
Fund Year	8	9	10	11	12	13	14
Average Net Return	8.14%	10.34%	11.54%	5.99%	11.33%	3.16%	9.75%
Number of Funds Counted	168	116	72	49	30	19	10

- ***“Indeed, the probability of observing repeat winners over the entire period is basically 50–50.”***  
 (Page 13)

If an IQ-challenged investor used no selection criteria whatsoever in selecting funds, this might be the case.

However, in testing the viability of constructing the Van Investable Index Fund to track the 16+ year track record of the VAN HF Indices, VAN examined HF returns from 1996 through 2002 and ranked funds with a proprietary scoring system based on several quantitative factors. The ranked funds were divided into four quartiles, from highest to lowest rank. If persistence of performance did not exist, one would expect an equal percentage of funds from the highest ranked first-year category to end up in each of the quartiles for the following year. The study found that top-ranked funds, chosen with VAN's proprietary scoring system, in a given year, generate performance in the top 25% for the subsequent year approximately 40% of the time. (This finding was statistically significant). Furthermore, these top ranked funds end up in the bottom 50% of funds the following year only 30% of the time. The study found that negative performance persists as well. It is important to note that we believe a qualitative overlay needed to be used, for factors not covered by a purely mathematical model, e.g., ethics of the manager, capacity of the fund, etc.

**Exhibit 5: Persistence of Hedge Fund Performance**



VAN conducted several variations on this study, examining HFs overall as well as by individual strategy.

Our conclusion is that the persistence of HF returns is statistically robust. Based on the performance criteria and ranking system developed in the course of our studies, VAN believes that it is possible to identify funds that have a higher-than-average probability of generating superior returns.

- ***“The practice of ... backfilling only favorable past results causes some reported HF indexes to be substantially upward biased.”***  
(Page 24)

We find it inconceivable that a major HF index producer would do this. VAN does not. The authors make the assumption that it is widespread industry practice, apparently with no evidence. They certainly gathered no such evidence on VAN's indices.

What is the authors' evidence that some index sponsor engaged in “backfilling only favorable past results”? Who does?

- ***“... these diversified [FOFs] ... performed much less well than the industry as a whole.”***  
(Page 25)

While VMMR research also shows that HF FOFs obtain lower returns than the HF index, we find it unusual that, throughout the study, primarily returns, and not risk, are taken into account. FOFs may have lower returns, but they also have lower risk.

The HF industry is about risk control. Any study of HF's should emphasize risk/volatility as well as returns.

### 5. Some Interesting Ironies

This overall situation is replete with ironies. Let's set the stage with a brief discussion of the current status of the mutual fund industry.

The Investment Company Institute (ICI) represents mutual funds. Reading recent pronouncements by its Presidents, you can hear their concern.

In April 2003, the Investment Company Institute made a presentation on HFs to the S.E.C. Roundtable on HFs. Along with numerous restrictions on HFs they urged the S.E.C. to impose, they stated:

*"The Institute believes it is very timely for the Commission to consider whether this historical "hands off" approach remains appropriate or should be modified in some fashion. This is because of the significant increase in the number of HFs, the number of entities sponsoring HFs and the number of individuals investing in or otherwise having exposure to HF investments. In light of the importance that mutual funds and other registered investment companies have assumed as financial intermediaries, the extensive regulation to which they are subject, and the far less risky investment strategies that they typically pursue, the Institute believes that it is critically important that the Commission's regulations insure that no investor confuses a HF with one of these highly regulated investment vehicles. Equally importantly, no investor should inadvertently be drawn to investing in HFs."*<sup>7</sup>

This statement that mutual funds are "far less risky" is ironic; during the recent bear market, from April 2000 to September 2002, mutual funds lost -41.3% while HFs gained 2.1%.

It is significant that the heretofore sovereign and self-assured mutual fund industry would even acknowledge the possibility of a threat from hfs.

The mutual fund industry concern goes back a number of years but has intensified as HFs have burgeoned. In 2001, David Jones of Fidelity told members of the ICI:

*"Stock baskets, exchange-traded funds, HFs and other new products are not going to eclipse the conventional mutual fund industry..."*

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<sup>7</sup> Investment Company Institute, "Statement of the Investment Company Institute", Securities and Exchange Commission Roundtable on HFs, April 30, 2003

Jones of Fidelity went on to wonder:

*"... whether it was good policy to offer HFs to investors. 'What you are really offering', he said, 'is higher fees, less liquidity, less disclosure – saying you are so rich and sophisticated you deserve to pay more for less.'"<sup>8</sup>*

More recently, in August 2004, the Chicago Tribune quoted mutual fund industry members as intimating the brain drain to HFs could intensify.

*"I think we're going to have some talented investment people who say, 'There's got to be a better way', Charles Haldeman, the chief executive of Putnam Investments, said in a recent visit to Chicago."<sup>9</sup>*

And in June 2004:

Paul Stevens, who succeeded Matt Fink as the ICI's president June 1, also pointed a finger at HFs. *"Unregistered HF advisers oppose even a modicum of regulation because, well, it might screw up their business mode",* he said.<sup>10</sup>

***The mutual fund industry is seriously concerned about HFs for at least three reasons:***

***The first reason*** is the continual brain drain from mutual fund companies to HFs. It started in the late '90's, perhaps inspired by (ex-Fidelity Magellan) Jeff Vinik's incredible HF record.

After leaving Fidelity under pressure in the mid '90's, Jeff quickly rounded up over \$800 million, stopped raising money and began investing. Four years later, at the tender age of 41, he returned \$4 billion to his original investors and retired. Notwithstanding the professional skepticism about HFs exhibited by mutual fund industry participants, most would agree that Jeff Vinik's HF beat the indexes!

Jeff's example inspired a continuing stream of wannabe hedgies to leave their mutual fund trading jobs. The defections continue apace today. And why not? As a successful HF manager, they can earn fortunes – with little bureaucracy. The average take-home pay for the top 25 HF managers in 2003 was \$207 million – cash; for the top 5, \$506 million – cash!<sup>11</sup>

***The second reason*** for the ICI's concern about HFs is the accelerating growth of the HF industry. HF assets are now at \$1 trillion for the first time, while mutual funds are at \$7.6 trillion. It seems reasonable to assume that many of the dollars going into HFs are coming from mutual fund investments.

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<sup>8</sup> Fund Action, "Threat From New Products May Be Less Than Feared, ICI Members Told", April 2, 2001

<sup>9</sup> Countryman, Andrew, Chicago Tribune, "SEC set for vote on fund proposal; Disclosure plan draws objections", August 18, 2004

<sup>10</sup> Wiant, Jessica, American Banker, "ICI Chief Plenty to Blame for Fund Scandal", June 16, 2004

<sup>11</sup> Institutional Investor, August 1, 2004, Stephen Taub.

*The third reason* is that the mutual fund industry generally feels vulnerable. HFs traditionally have been the bad boys, the punching bags for the media. On September 3, 2003, the world shifted. The avenging dragon's name was Eliot (Spitzer). He showed the spotless mutual fund industry to be riddled with illegal practices and started a storm that brought in the SEC, caused \$2.7 million in fines<sup>12</sup> and restitutions, the firing of numerous managers, and the jailing of one. The media had a field day and investor confidence was seriously shaken.

The drama continues to unfold. Regulators apparently are now combing through the personal financial records of mutual fund managers.<sup>13</sup>

To add to the bouillabaisse, as mentioned earlier, Mr. Malkiel is a Director of two companies specializing in indexes: of the Vanguard Group, the third largest mutual fund company, since 1977; and of Active Index Advisors.

Burton Malkiel has built his career on the efficient-market hypothesis; i.e., you cannot beat the indexes. After he published his famous book on this theory, "A Random Walk Down Wall Street" in 1973, the Malkiel church filled. Virtually all academics came to worship and stayed for years. Ultimately though, apostasy began to set in. The new saint was Nobel Prize winner Daniel Kahneman. His church was that of Behavioral Finance which was, in effect, a competing theory. It drew more faithful from the Random-Walk church. With the growth of HFs in the '90's, their performance provided more empirical evidence against the random-walk theory. Index beaters like HFs definitely were not consistent with Malkiel's theory.

The conclusions that Malkiel draws from his paper should be questioned not only due to the flaws raised herein but also in light of Malkiel's established views. As a professional associated with the mutual fund industry and an advocate of passive, index-based investing, it comes as no surprise that his latest paper portrays HFs and HF indices unfavorably.

We believe the evidence shows that the VAN Indices and several other HF indices fairly illustrate the reason that the HF industry continues to experience dramatic growth: over the years HF investors have often received better returns with HFs than they could have obtained elsewhere.

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<sup>12</sup> The Atlanta Journal – Constitution, "Mutual Fund Clean Up Gets Good Reviews", August 29, 2004, Hank Ezell

<sup>12</sup> Minnesota Public Radio, "Mutual Fund Scandal Not Over Yet", September 28, 2004

**Appendix A: Van Index Methodology**

**Description and History**

The Van Global HF Index is one of the world's longest running and most widely followed benchmarks for HF performance. The Index aims to measure the average performance, net of fees, of both the overall HF universe as well as of various constituent groups of HFs as defined by their investment strategies. The Index is used by HF managers, HF investors, and the broader public as a gauge of general HF performance as well as a tool for comparing individual HFs to their peers.

**Exhibit A1: Historical Quarterly Index Returns**

<b>Van Global Hedge Fund Index</b>					
<b>1988 – 2004</b>					
<b>Year</b>	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>	<b>Calendar Year</b>
<b>1988</b>	10.5%	7.6%	2.2%	3.6%	25.9%
<b>1989</b>	7.3%	6.7%	7.4%	1.9%	25.3%
<b>1990</b>	2.2%	5.9%	-5.1%	3.6%	6.4%
<b>1991</b>	13.0%	2.4%	7.4%	6.2%	32.0%
<b>1992</b>	5.4%	1.3%	3.5%	7.0%	18.2%
<b>1993</b>	6.3%	5.9%	7.2%	7.7%	30.0%
<b>1994</b>	-0.8%	-0.3%	4.4%	-2.0%	1.2%
<b>1995</b>	2.5%	5.7%	6.7%	2.8%	18.8%
<b>1996</b>	5.1%	6.1%	1.9%	4.7%	19.0%
<b>1997</b>	1.9%	7.2%	8.2%	-2.0%	15.8%
<b>1998</b>	7.2%	-1.9%	-6.9%	8.6%	6.3%
<b>1999</b>	3.9%	11.2%	1.7%	19.4%	40.3%
<b>2000</b>	9.4%	-0.7%	2.1%	-2.3%	8.4%
<b>2001</b>	-0.5%	3.9%	-2.7%	5.7%	6.3%
<b>2002</b>	1.6%	-1.3%	-3.3%	3.2%	0.1%
<b>2003</b>	0.8%	7.7%	3.5%	5.5%	18.6%
<b>2004</b>	3.2%	-1.1%	0.6%		2.7%*

\*Calendar Year 2004 return is YTD through 3rd Qtr.

The Van Global HF Index was initiated in 1994. At that time, the financial media reported that there were 800 HFs in the world. VAN accumulated information on approximately 1,000 HFs, many with data streams dating back prior to 1988. (This number, by design, excluded futures funds/commodity pools and certain other types of pooled vehicles.) January 1988 was chosen as the origination point for the Index because the Company found that earlier time periods contained too few HFs for robust data. The Company then

proceeded to perform the world's first HF reward/risk quantification using a large HF sample.

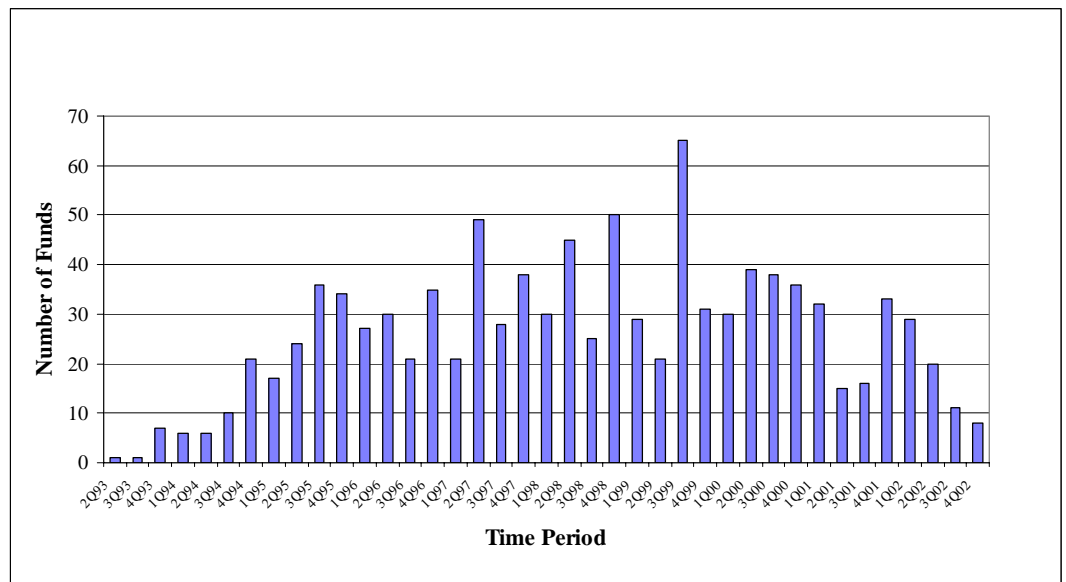
VAN began publishing the Index in 1995. Index returns from 1988 through 1994 were calculated only on a quarterly basis because many funds reported their returns, during that time period, only in a quarterly format. From 1995 through 2002, Index returns were calculated both on a quarterly basis and a monthly basis as monthly reporting of returns became more common among HFs. VAN continued to calculate the quarterly version of the Index because a number of funds still reported their returns only on a quarterly basis; therefore, the quarterly Index was based on a larger, more robust sample of funds than the monthly Index. However, by 2003, the number of funds that reported only on a quarterly basis had become small, allowing VAN to dispense with a separate quarterly calculation of the Index and only calculate the Index on a monthly basis. Prior to 2003, annual returns for the Index were calculated by compounding the four underlying quarterly returns for the year rather than the twelve underlying monthly returns since the quarterly version of the Index was based on larger samples of funds. From 2003 forward, annual returns are calculated by compounding the twelve underlying monthly returns.

As a result of VAN's initiation of data collection in the early 1990s, survivor bias in the Van Global HF Index has been controlled. Index returns for periods since that time include the returns of managers who were operating even if they subsequently ceased trading and became defunct. The following chart illustrates the number of defunct managers included in the database from which the Index is derived, summarized by the quarter the fund ceased reporting returns and either then, or shortly thereafter, became defunct.

A significant number of funds that have ceased trading for any number of reasons have been kept in the database. Their returns are included in the database up to the time they stopped reporting performance to VAN. Due to the fact that the database was robust and reflective of the universe since at least 1994, survivorship bias has been eliminated since that time.

While its extent cannot be measured, self-selection bias may be a factor, as in all HF indices made up of a large sample. However, self-selection bias probably depresses returns. It is VAN's experience that managers who are performing poorly lose clients and use all means available to gain them, including reporting to databases. By contrast, managers who are performing extremely well conclude they don't need marketing aids and often cease reporting, as do many who close to new funds.

***Exhibit A2: Number of Newly Defunct Funds by Quarter***



**The Van Hedge Fund Database**

The VAN Global HF Index is calculated from HFs that report to the VAN database. As of December 2004 there were approximately 5,300 funds in the VAN database, including about 1,350 funds known to be defunct but kept in the database to mitigate survivor bias and for research purposes. This number includes only HFs, as they are generally defined, and excludes funds of funds as well as certain other types of investments such as private equity funds, venture capital funds, separately managed account strategy composites, etc. Both quantitative and qualitative information is included for each fund in the database.

In addition to the Index, the database is used to conduct general research on the HF industry, such as studies on the size and characteristics of the HF universe. The quality of VAN's HF information is well recognized and widely used in business and academic papers as well as in the general international media and financial publications. Through the years the database has been used for various studies published by third parties and as a frequent source of information.

#### **Database Construction and Maintenance**

VAN uses various sources in the industry to identify established and newly formed HFs for inclusion in the database. Due to its industry recognition, VAN also is actively contacted either directly or via the company's website by HF managers who wish to be included in the database and tracked by VAN. Any and all legitimate HFs are eligible for inclusion in the database regardless of size, domicile, performance history or other characteristics. The database is intended to be truly representative of the HF universe. VAN does not charge a fee to HFs to be included in the database.

For quality control, VAN requests receipt of primary source documentation directly from the fund manager or the appointed representative (e.g. administrator, third-party marketer, sub-advisor, etc.). Funds are asked to provide their offering memoranda, net performance history since inception, and marketing materials. VAN creates a record for the fund based on the supplied information; VAN contacts the fund to obtain any necessary information which cannot be ascertained from the aforementioned documents. Upon their entry into the VAN database, funds are carefully categorized by investment strategy based on the information supplied by the fund and according to VAN's HF strategy definitions. VAN formulated its definitions prior to launching the Index and has adjusted them over time to best fit the range of trading strategies as expressed by HF managers. VAN currently classifies managers in four broad strategy groups, 14 primary strategies, and 4 sub-strategies. There are no restrictions for inclusion in the database based on the trading strategy of a HF. Although funds of funds are included in the VAN database, they are not included in the Van Global HF Index. The strategy composition

percentages of the database and the Index change over time to reflect the actual composition of the universe which changes due to altering market conditions.

Funds are first assigned to one of the four broad strategy groups: Market Neutral Group, Long/Short Equity Group, Directional Trading Group, or Specialty Strategies Group. All funds are then assigned a primary strategy within their Group. Some funds are further assigned a sub-strategy within their primary strategy.

The primary strategies within the Market Neutral Group are Distressed Securities, Market Neutral Arbitrage, and Special Situations. The Market Neutral Arbitrage strategy contains four sub-strategies: Convertible Arbitrage, Fixed Income Arbitrage, Merger Arbitrage, and Statistical Arbitrage.

The primary strategies within the Long/Short Equity Group are Aggressive Growth, Market Neutral Securities Hedging, Opportunistic, and Value.

The primary strategies within the Directional Trading Group are Macro, Market Timing, and Futures.

The primary strategies within the Specialty Strategies Group are Emerging Markets, Income, Multi-Strategy, and Short Selling.

VAN's strategy and sub-strategy definitions are as follows:

**Aggressive Growth:** A primarily equity-based strategy whereby the manager invests in companies experiencing or expected to experience strong growth in earnings per share. The manager may consider a company's business fundamentals when investing and/or may invest in stocks on the basis of technical factors, such as stock price momentum. Companies in which the manager invests tend to be micro, small, or mid-capitalization in size rather than mature large-capitalization companies. These companies are often listed

on (but are not limited to) the NASDAQ. Managers employing this strategy generally utilize short selling to some degree, although a substantial long bias is common.

**Distressed Securities:** The manager invests in the debt and/or equity of companies having financial difficulty. Such companies are generally in bankruptcy reorganization or are emerging from bankruptcy or appear likely to declare bankruptcy in the near future. Because of their distressed situations, the manager can buy such companies' securities at deeply discounted prices. The manager stands to make money on such a position should the company successfully reorganize and return to profitability. Also, the manager could realize a profit if the company is liquidated, provided that the manager had bought senior debt in the company for less than its liquidation value. "Orphan equity" issued by newly reorganized companies emerging from bankruptcy may be included in the manager's portfolio. The manager may take short positions in companies whose situations he deems will worsen, rather than improve, in the short term.

**Emerging Markets:** The manager invests in securities issued by businesses and/or governments of countries with less developed economies (as measured by per capita Gross National Product) that have the potential for significant future growth. Examples include Brazil, China, India, and Russia. Most emerging market countries are located in Latin America, Eastern Europe, Asia, or the Middle East. This strategy is defined purely by geography; the manager may invest in any asset class (e.g., equities, bonds, currencies) and may construct his portfolio on any basis (e.g. value, growth, arbitrage).

**Income:** The manager invests primarily in yield-producing securities, such as bonds, with a focus on current income. Other strategies (e.g. distressed securities, market neutral arbitrage, macro) may heavily involve fixed-income securities trading as well; this category does not include those managers whose portfolios are best described by one of those other strategies.

**Macro:** The manager constructs his portfolio based on a top-down view of global economic trends, considering factors such as interest rates, economic policies, inflation,

etc. Rather than considering how individual corporate securities may fare, the manager seeks to profit from changes in the value of entire asset classes. For example, the manager may hold long positions in the U.S. dollar and Japanese equity indices while shorting the euro and U.S. treasury bills.

**Market Neutral Arbitrage:** The manager seeks to exploit specific inefficiencies in the market by trading a carefully hedged portfolio of offsetting long and short positions. By pairing individual long positions with related short positions, market-level risk is greatly reduced, resulting in a portfolio that bears a low correlation and low beta to the market. The manager may focus on one or several kinds of arbitrage, such as convertible arbitrage, risk (merger) arbitrage, capital structure arbitrage or statistical arbitrage. The paired long and short securities are related in different ways in each of these different kinds of arbitrage but in each case, the manager attempts to take advantage of pricing discrepancies and/or projected price volatility involving the paired long and short security.

**Convertible Arbitrage:** This strategy typically involves buying and selling different securities of the same issuer (e.g. the common stock and convertibles) and “working the spread” between them. The manager buys one form of security he believes to be undervalued (usually the convertible bond) and sells short another security (usually the stock) of the same company.

**Fixed Income Arbitrage:** The manager takes offsetting positions in fixed income securities and their derivatives in order to exploit interest rate-related opportunities. These fixed income securities are often backed by residential mortgages; i.e., mortgage-backed securities.

**Merger Arbitrage:** The manager will take positions in companies undergoing “special situations”; for example, when one firm is to be acquired by another, or is preparing for a reorganization or spin-off. A frequent trade is “long the acquiree, short the acquirer.”

**Statistical Arbitrage:** The manager uses quantitative criteria to choose a long portfolio of temporarily undervalued stocks and a roughly equal-sized short portfolio of temporarily overvalued stocks. Trades tend to be short-term and the overall portfolio is usually neutral in terms of various risk characteristics (beta, sector exposure, etc.). “Pairs trading” is a common form of statistical arbitrage.

**Market Neutral Securities Hedging:** The manager invests similar amounts of capital in securities both long and short, maintaining a portfolio with low net market exposure. Long positions are taken in securities expected to rise in value while short positions are taken in securities expected to fall in value. These securities may be identified on various bases, such as the underlying company's fundamental value, its rate of growth, or the security's pattern of price movement. Due to the portfolio's low net market exposure, performance is insulated from market volatility.

**Market Timing:** The manager attempts to predict the short-term movements of various markets (or market segments) and, based on those predictions, moves capital from one segment to another in order to capture market gains and avoid market losses. While a variety of investment categories may be used, the most typical ones are various mutual funds and money market funds. Market timing managers focusing on these mutual funds are sometimes referred to as mutual fund switchers.

**Multi-Strategy:** The manager typically utilizes two or three specific, pre-determined investment strategies, e.g., Value, Aggressive Growth, and Special Situations. Although the relative weighting of the chosen strategies may vary over time, each strategy plays a significant role in portfolio construction. Managers may choose to employ Multi-Strategy approach in order to better diversify their portfolios and/or to more fully use their range of portfolio management skills and philosophies.

**Opportunistic:** Rather than consistently selecting securities according to the same strategy, the manager's investment approach changes over time to better take advantage of current market conditions and investment opportunities. Characteristics of the

portfolio, such as asset classes, market capitalization, etc., are likely to vary significantly from time to time. The manager may also employ a combination of different approaches at a given time.

**Short Selling:** The manager maintains a consistent net short exposure in his portfolio, meaning that significantly more capital supports short positions than is invested in long positions (if any is invested in long positions at all). Unlike long positions, which one expects to increase in value, short positions are taken in those securities the manager anticipates will decrease in value. In order to short sell, the manager borrows securities from a prime broker and immediately sells them on the market. The manager later repurchases these securities, ideally at a lower price than he sold them for, and returns them to the broker. In this way, the manager is able to profit from a fall in a security's value. Short selling managers typically target overvalued stocks, characterized by prices they believe are too high given the fundamentals of the underlying companies.

**Special Situations:** The manager invests, both long and short, in stocks and/or bonds which are expected to change in price over a short period of time due to an unusual event. Such events include corporate restructurings (e.g. spin-offs, acquisitions), stock buybacks, bond upgrades, and earnings surprises. This strategy is also known as event-driven investing.

**Value:** A primarily equity-based strategy whereby the manager focuses on the price of a security relative to the intrinsic worth of the underlying business. The manager takes long positions in stocks that he believes are undervalued, i.e. the stock price is low given company fundamentals such as high earnings per share, good cash flow, strong management, etc. Possible reasons that a stock may sell at a perceived discount could be that the company is out of favor with investors or that its future prospects are not correctly judged by Wall Street analysts. The manager takes short positions in stocks he believes are overvalued, i.e. the stock price is too high given the level of the company's fundamentals. As the market comes to better understand the true value of these companies, the manager anticipates the prices of undervalued stocks in his portfolio will

rise while the prices of overvalued stocks will fall. The manager often selects stocks for which he can identify a potential upcoming event that will result in the stock price changing to more accurately reflect the company's intrinsic worth.

VAN added the Futures strategy Index in January 2004, although historical data for it was calculated back to 1988. In order to remain consistent with the way the overall Van Global HF Index had been calculated in the past, Futures strategy funds are not included in the overall Index as all other strategies are.

#### **Proportionality of Strategy Representation**

Based on research on outside information conducted by VAN, VAN believes that the database has grown in proportion to the growth of funds in the universe and the strategy composition of the database has evolved as the industry and market conditions have dictated. Based on comparisons to the sizes of other published and quoted databases and numerous published estimates of the size of the HF universe, VAN believes that the database is adequately broad and deep to serve as a proxy for the HF universe. Managers continue to self-report on a voluntary basis subsequent to their initial inclusion in the database. Should managers lapse in their reporting, VAN expends certain efforts to bring fund performance history current.

#### **Index Construction and Maintenance**

The Van Index is constructed from funds reporting performance to VAN by the deadlines necessary to publish the three intra-month Index measurements.

- The first is a preliminary report to provide an early indicator of overall HF performance. This information is provided only for the overall Van Global HF Index and not by strategy. It is usually published on the fifth business day of the month. The minimum number of funds required for this computation is 100 reporting funds. The number included recently is typically over 300.

- The second index report is usually published on the tenth business day of the month. It provides returns for the overall Index as well as for all strategy groups, strategies, and sub-strategies. It typically is based on a total of 700 to 800 funds (800 to 900 including Futures strategy funds), but in no event fewer than 600 funds, with a minimum acceptable number of returns to be received, by strategy, before publication.
- The final official Van Index, by strategy and in aggregate, is based on the total number of fund returns received by the last day of the month. It typically will include at least 1,200 funds (1,300 including Futures strategy funds). It is published on the VAN Web site at [www.hedgefund.com](http://www.hedgefund.com). The minimum number of funds for this computation is 1,000. The final returns for the Index supersede those published mid-month.

A table of the index composition and number of funds for one month included is as follows:

*Exhibit A3: Strategy Composition of the Index*

<b>Van Global Hedge Fund Index</b>				
<b>September 2004</b>				
Strategy	Mid-Month		Final	
	Number of Funds	%	Number of Funds	%
Aggressive Growth	81	10.3%	124	8.9%
Distressed Securities	31	4.0%	57	4.1%
Emerging Markets	52	6.6%	108	7.8%
Income	14	1.8%	33	2.4%
Macro	30	3.8%	66	4.8%
Market Neutral Arbitrage	168	21.4%	266	19.2%
Market Neutral Securities Hedging	38	4.8%	79	5.7%
Market Timing	18	2.3%	24	1.7%
Multi-Strategy	36	4.6%	81	5.8%
Opportunistic	58	7.4%	113	8.1%
Short Selling	14	1.8%	22	1.6%
Special Situations	74	9.4%	107	7.7%
Value	170	21.7%	307	22.1%
Total	784	100.0%	1,387	100.0%

### **Consistency of Process**

With few exceptions, consistent methodology has been employed since VAN began publishing the indices in 1995. The minimum number of required funds has grown over time as the number of funds in the HF universe have grown. The Index is reported net of all underlying manager fees and expenses and is based on equal weighting given to returns of all funds. Each Index return is a simple arithmetic mean of the net returns of the underlying funds. The strategies are proportionately weighted since more funds report from the strategies that have larger representation in the HF universe. The Van Indices are not asset-weighted, so as to avoid skewing the results based on the performance of a few large funds.

The Van Index does not adhere to a fixed set of constituent funds. Instead, VAN seeks to base its Index on samples of funds that, in size and in strategy composition, are as representative as possible of the HF universe. Therefore, all funds in the VAN database that have reported their prior month's return in time are included in the three monthly calculations of the Index (as explained above), as long as the fund has at least a three-month track record. Funds are not excluded from the Index on the basis of size, location, or other factors (with the exceptions that funds of funds are not included and Futures strategy funds are not included in the overall Index, as explained above).

### ***Time-Varying Composition of the Van Global HF Index***

By not using a fixed set of HFs, the Index is able to evolve organically over time. Thus it reflects changes in the composition of the broader HF universe that occur as managers react to changing market conditions which increase opportunities for some trading strategies and decrease opportunities for others. The following table illustrates the changing strategy composition of the Van Index at various points in recent market cycles.

*Exhibit A4: Index Strategy Composition at Various Historical Points*

<b>Composition of Van Global Hedge Fund Index</b>					
<b>Strategy</b>	<b>1Q 1990</b>	<b>1Q 1995</b>	<b>3Q 1998</b>	<b>1Q 2000</b>	<b>3Q 2002</b>
Aggressive Growth	16.4%	16.5%	9.7%	7.2%	11.5%
Distressed Securities	4.2%	3.4%	4.4%	3.9%	3.4%
Emerging Markets	7.5%	10.8%	10.8%	13.1%	7.5%
Income	2.5%	3.6%	4.0%	3.4%	2.6%
Macro	4.4%	4.0%	4.0%	2.9%	3.1%
Market Neutral Arbitrage	8.1%	9.3%	8.0%	12.6%	18.8%
Market Neutral Securities Hedging	4.4%	5.0%	8.1%	6.5%	7.6%
Market Timing	2.5%	2.7%	3.8%	4.4%	3.7%
Multi-Strategy	2.8%	3.1%	8.1%	8.3%	6.5%
Opportunistic	10.3%	12.8%	12.5%	11.9%	11.6%
Short Selling	3.9%	2.9%	3.2%	2.9%	2.6%
Special Situations	9.2%	7.3%	2.8%	2.3%	2.4%
Value	23.9%	18.5%	20.6%	20.6%	18.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

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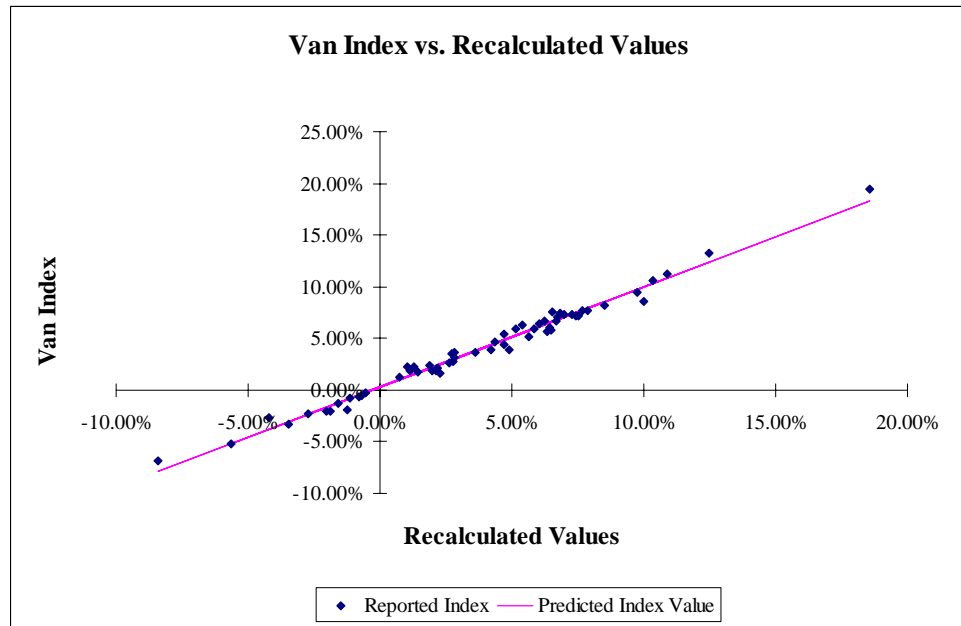
It is interesting to note – and intuitively “correct” – that Market Neutral Strategies composed more of the Index in the bear market of 2000–2002 than they had previously. Also, conversely, that Aggressive Growth composed less of the Index in the bear markets. An index with a fixed set of HFs would not change organically with the HF universe and therefore tend to be unrepresentative.

It is important that any index respond to changes in HF universe composition in order to properly reflect and measure the underlying population. As noted above, VAN maintains its database in an unbiased manner to be reflective of the HF universe and the Van Index is constructed from its constituents.

**Validation of the Van Global Hedge Fund Index**

VAN has performed subsequent testing of the previously reported indices to test for early self-reporting bias and to determine if larger sample sizes from the database would yield significantly different results. These samples, on average, were three times the size of the Index.

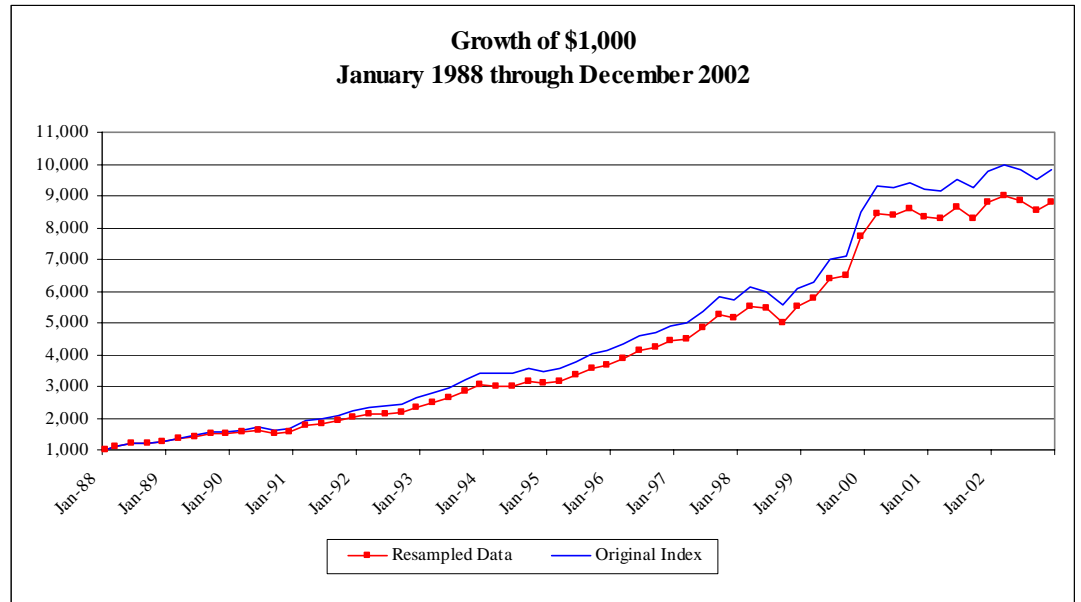
*Exhibit A5: Validation of the Historical Van Index*



A linear regression study was run to determine how well correlated the published Van Indices are with a computation made by re-sampling all the funds in the database that have reported in the same periods. This re-sampling process yielded sample sizes averaging more than three times the number of funds used in the contemporaneous computations previously reported. The study was designed to determine whether the larger, more robust sample of funds would provide a different measurement of the historical returns of the HF industry. The results of this study indicate that the previous sample sizes were adequate to produce valid results. The published Van Indices show a .99 correlation to the re-sampled data. Additionally, the beta exceeded .97. A small quarterly alpha of .29% was observed indicating the existence of a small degree of early reporting bias in the population.

The aggregate growth of a \$1,000 investment was graphed to review the extent of tracking error. Due to the high correlation and high beta of the data, tracking error was minimized. However, the hypothetical investment compounded to a slightly greater value using the published Van Indices due to the alpha produced by the data.

*Exhibit A6: Tracking of the Historical Van Index*



Based on the close statistical relationship between the published Van Index and the average historical returns of a significantly larger sample of funds, the Van Index has been demonstrated to reflect accurately the larger HF universe.

**Appendix B: List of Exhibits**

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### *Explanatory Notes*

- All information provided for various managers or indices is from sources believed to be reliable. Data are not necessarily audited or independently verified.
- All statistics, unless otherwise specified, are for the period January 1, 1988 to September 30, 2004.
- As with any investment, investors are subject to a risk of loss.
- Past results are not necessarily indicative of future performance.
- Compound annual returns are calculated using geometrically-linked quarterly average returns by strategy and in aggregate.
- S&P 500 returns reflect the reinvestment of dividends; "World Equity Index" returns do not reflect the reinvestment of dividends. As of December 2001, the methodology for calculating quarterly and annual returns for the Average Equity Mutual Fund and Average Bond Mutual Fund has been changed retroactively. Rather than using quarterly samples to produce quarterly returns and compounding quarterly returns to produce annual returns, all returns are now based on monthly samples. Quarterly and annual returns are derived by compounding the underlying monthly returns.
- Information on HFs is based on a sample of funds in Van Money Manager Research, LLC's ("VMMR") database and may not be representative of all HFs. Van HF Advisors International, LLC ("VAN") and VMMR attempt to provide accurate information on HFs but do not warrant its completeness or accuracy.
- All information provided is accurate to the best of VAN's and VMMR's knowledge and belief. Opinions and estimates constitute our judgment and are subject to change without notice. The information herein should not be construed as investment or legal advice. Neither VAN nor VMMR assume responsibility for the interpretation, accuracy or completeness of the information. Each reader is solely liable for any use such reader may make of this information.
- Different statistics may be based on different numbers of funds, for technical reasons. Some numbers may have been adjusted due to the effects of rounding. If a manager's performance history began at any time other than the beginning of a quarter, that manager's statistics were calculated assuming the manager's performance history began at the beginning of the quarter.
- Van Global HF Index returns are based on the performance of funds reporting returns by a given time and represent a subset of the VMMR database. As a result, funds becoming defunct in that reporting period are unlikely to be included in the Index for that period. The sample of managers will differ from period to period. 1995 Index numbers were adjusted as of January 2000.
- HF averages are not dollar-weighted.
- HF returns reported are net of fees and performance allocations. The timing of the deduction of such fees and performance allocations may affect the reported performance.
- This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument.
- In some cases, predecessor portfolios have been included in performance numbers.
- Neither VAN nor VMMR assume responsibility for investments in HFs by investors who review this document. Investors are urged to seek professional advice in selecting individual HFs and to perform extensive due diligence on funds prior to investing.

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