

Performance Measurement of Hedge Funds Managers

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Abstract

This article summarizes criteria used to identify investment talent in (especially hedge fund) managers and stresses the importance of identifying criteria that are not primarily soft but whose validity can be back tested.

Keywords: *Performance; Determinants of performance; Hedge funds*

Introduction

The hedge fund industry increased tremendously in the past decade, seeing its assets under management doubling about every two years and the number of funds currently getting at about 8,500 (see Figure 1). This growth is accompanied by very low entry costs in the business: anyone with a computer connected to the Internet can start a hedge fund. By contrast, the fees charged typically by hedge funds are all by low: the typical hedge funds charges about 1.5% in management fees and about 20% in incentive fees.

Given such proliferation, it is increasingly challenging for investors to identify the funds that possess investment skill and that their investment process is not replicable. The definition of replicability itself became much more comprehensive, and hence it became considerably easier for a hedge fund manager to hide behind some combination of an easily available, replicable set of strategies.

In this paper we describe criteria that have been used traditionally to identify talent in the world of hedge funds and argue that it is quantitative criteria that are well understood, and that correlate with the investment process that must be the focus of investor's attention.

Traditionally, talent in investments was directly measured through the performance of the investment. As talent is innate and therefore persistent and since for hedge funds performance also appears to persist, it has been extrapolated traditionally that past performance is an indicative of talent.

However, past performance is highly specific to each fund. If a talented fund's past performance cannot be replicated, past performance is therefore not something readily understood.

Hence, attributing talent to good past performers comes in fact to associate talent with something not understood. Associating talent with something more obscure should help little in identifying who the talented managers are.

However, literature on hedge funds performance is centered onto determinants of performance. Some of these variables are well understood and related to the investment process, whereas others cannot be explained. This paper analyzes the level of understanding an investor may have about these variables, and underlines the ones that are better understood. Section 2 summarizes the literature on hedge funds performance, Section 3 looks at what variables are better understood and which ones are not, and Section 4 concludes.

1. Literature Survey

The fundamental question asked by the performance literature is which hedge funds are most likely to outperform. In contrast with the literature that addresses performance of mutual funds (e.g. Carhart (1997)), the literature analyzing the performance of hedge funds seems to be almost unified in the belief that hedge funds are capable to produce positive risk adjusted excess returns

(alpha). For example, Kazemi and Schneeweiss (2003) show that managers in the CIDR database add value. Liang (1998) argues that hedge funds offer better risk-return tradeoff than mutual funds. Novikov (2003) argues that the returns of hedge funds are persistent. Aggarwal and Naik (2004) find positive alphas on the hedge fund indices they study (except for the short-selling index). Malkiel and Saha (2006) take the opposite side on the hedge funds performance debate, arguing that various biases plague the performance studies and once they are taken into account hedge funds underperform their benchmarks. Getmansky, Lo and Makarov (2004) report Sharpe ratios above 1 across hedge funds, way in excess of the modest Sharpe ratio of around 0.35 of the US market, or the 0.4 of the mutual funds.

Authors such as Lo (2002), Getmansky, Makarov and Lo (2004) have argued that hedge funds exhibit smooth returns; after adjustment for serial autocorrelations the median Sharpe ratio of the hedge funds in the TASS database drops to a still impressive 0.69. Tied to this literature are the studies linking out performance to various fund characteristics, and in that respect this study belongs to that literature, in the sense that we argue that there is a positive relationship between the degree to which a fund does not bear systematic risk and the performance of the fund. Other characteristics than systematic risk have been studied previously. One of these characteristics is the fund size. Gregoriou and Rouah (2003) and Koh, Koh and Teo (2003) find no relationship. De Souza and Gokcan (2003) and Amenc, Curtis and Martellini (2003) find a positive relationship between size and performance. Getmansky (2004) finds a inverse quadratic relationship between size and funds returns, suggesting that funds have an optimal size. We find that there is a positive albeit weak relationship between fund size and performance, consistent with the earlier studies. Another fund characteristic is the age of the fund. Amenc, Curtis and Martellini (2003) find that younger funds outperform the older ones, although this relationship varies across their models. Koh, Koh and Teo (2003) find that age is unrelated to the performance of Asian hedge funds. De Souza and Gokcan (2003) find that older funds outperform younger funds. We find a positive relationship between the lack of idiosyncratic risk and the hedge funds age, siding therefore with the latter studies in this area. A third fund characteristic is the compensation structure. Koh, Koh and Teo (2003) find a negative relationship between incentive fees and net returns; Amenc, Curtis and Martellini (2003) find a positive relationship between

alphas and incentive fees. We find a positive link between the lack of idiosyncratic risk and both management and incentive fees - suggesting that better funds are the ones charging higher fees. One novel characteristic related to the funds performance is manager tenure. Boyson (2003) argues that older managers are more risk averse and end up underperforming the younger ones. Titman and Tiu (2007) find that the degree to which hedge funds are not exposed to systematic factors - or their ability to hedge - is related positively to performance. Another strand of the finance literature is concerned with the relationship between fund performance and a certain stability of the investment process. Studying mutual funds, Chan, Chen and Lakonishok (2002) find that following bad returns mutual funds change their style exposures. Brown and Harlow (2005) find that better performance is associated with more style stability. While styles are successful in explaining mutual funds returns (*R*-squares in Brown and Harlow (2005) are higher than 80%), the similar literature proposing more sophisticated risk factors for hedge funds (Agarwal and Naik (2004)) has a more limited success. Our study could be seen as a generalization of the stability - performance studies from mutual funds to hedge funds. We find that style analysis has a relatively small success when used out-of-sample and applied to individual funds (rather than to indices of funds like Agarwal and Naik (2004)); Titman and Tiu (2007) find that neither style stability nor instability is positively associated with performance, but rather that positive performance is associated with the failure of the style classification procedure altogether. In other words, maverick hedge funds who are not taking risks mapped and understood thrive. Lastly, we touch into a growing literature in investments that attempts to determine whether idiosyncratic risk is priced. Merton (1987) predicts that idiosyncratic risk should be priced when investors hold non-diversified portfolios, and that it should be positively related to returns. Miller (1977) argues that a negative relationship arises between idiosyncratic risk and returns in the presence of trading constraints. There is currently a vibrant debate in the empirical asset pricing literature siding with one side or another. For example, Ang, Hodrick and Zhang (2004) find evidence that idiosyncratic risk and returns are negatively related.

2. Legitimate performance determinants

In this section we shall develop on the nature of the performance determinants in the hedge funds literature and analyze their direct relationship with the returns generating process. More exactly, we should focus on whether the proposed determinants of performance are in fact linked to the investment process directly.

1. *Age of the fund.* As discussed below the age of the fund was linked to performance both positively and negatively. The age is not in fact linked to the investment process directly. Age of a fund, without the experience of its staff, does not necessarily help a fund to achieve returns. Hence, we should not expect age in itself to be a determinant of performance.

2. *Size of the fund.* The size of the fund is related to the fund's performance because the size may hinder some of the fund's trades. However, for very well diversified funds, acting in multiple markets, size is not necessarily associated with restrictions in liquidity; hence size maybe but universally is not related to the age of the fund.

3. *Share restrictions.* Share restrictions, typically manifested through lockup periods for the fund's investors, are associated with a certain level of illiquidity in the fund's investments. Illiquid assets however require a certain skill to trade, therefore, holding illiquid assets requires the talent to manage them. We see this talent to manage illiquidity as a useful skill for an investor; someone who masters this skill has a good potential as an investor. We therefore believe that liquidity of a fund should be directly related to performance.

4. *Past returns.* Past performance of a fund is not something readily understood. As hedge funds are not require to disclose all of their holding, very little light can be shed on what the funds did to achieve their performance. As whatever generated the past performance is not understood and hence not guaranteed to contribute to generating performance in the future.

5. *Past alpha.* Same considerations applied to performance can be applied to alphas as well. Whereas the definition of alpha is unambiguous, alphas itself is not. Hence we should expect past alpha to be directly related to future performance.

6. *Legal structure.* Organization of the hedge fund should not be related to investment skill. There exists only a few possible legal structures, and each is relatively easy to replicate. Therefore, no special skills are rejected in the way the legal structure of the fund is set. We therefore should not expect legal structure and performance to be directly related.

7. *Fees.* What the managers charge may be determined by past performance, and not the other way around. Hence we expect that fees are not direct determinants of performance. How much a manager is paid does not make her more or less talented.

8. *Manager's age.* If age can be credibly associated with experience, an older manager certainly has more skills than a younger one. Hence we expect the age of the manager to be a direct determinant of talent.

9. *Use of derivatives.* The use of derivatives denotes skill if and only if a certain goal associated with it is met. For example, if derivatives are explicitly used for hedging and we observe that this was effective in the past, then we can associate the use of derivative with skill. Hence the use of derivatives is only conditionally related to skill.

10. *Manager's pedigree.* Manager's college admission test scores as well as the ranking of the school the manager graduated from can also be associated with talent. Certain skills that are indispensable to the investment process should be taught in the better schools. The extent to which the manager was a student in these schools is an indicative of the manager's investment skill.

11. *Ability to hedge.* A hedge fund should generate returns from other sources than bearing factor risk. Hence past *R*-squares should be directly associated with investment skill.

Conclusions

We presented a set of factors that are traditionally linked to performance in the investment literature. We argue that few of these factors are actually directly related to investment skill. We identify in particular three factors, namely, share restrictions, managers' pedigree and ability to hedge, that are clearly delimited, well understood components of investment skill.

We make the point that all the other criteria traditionally studied are not part of a manager's skill set, and should not therefore be automatically associated with performance.

Finally, even though we identified components of the manager's talent, one of these components (namely, the manager's pedigree) is rather soft, making thus impossible to use it in order to separate under and out-performing funds.

Further research may be needed to dissect the components of investment skill that are accessible conceptually to an outside econometrician evaluating hedge funds.

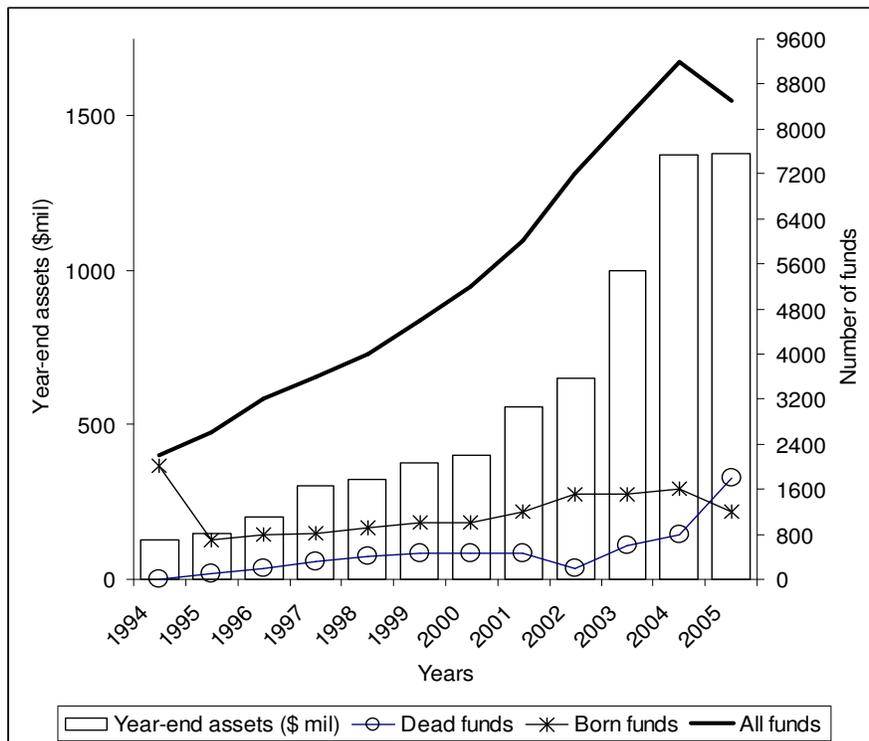


Figure 1. Number of funds and assets under management in the hedge funds industry

The figure represents the number of hedge funds across time, between 1994 and 2005, as estimated by Titman and Tiu (2007). The total number of funds

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is measured at the end of each year. The number of funds are on the right Y-axis and the number of funds are illustrated by the line plots. The bar plot represents the year-end assets under management in the industry. These amounts are on the left Y-axis and are in \$ mil.

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