

Chapter Three:

Early Stage Investing: Why Emerging Hedge Funds Outperform in the Hedge Fund Life Cycle

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This chapter discusses the reasons why emerging funds tend to outperform longer-established and larger hedge funds engaged in similar strategies.

Supporting the case for emerging funds

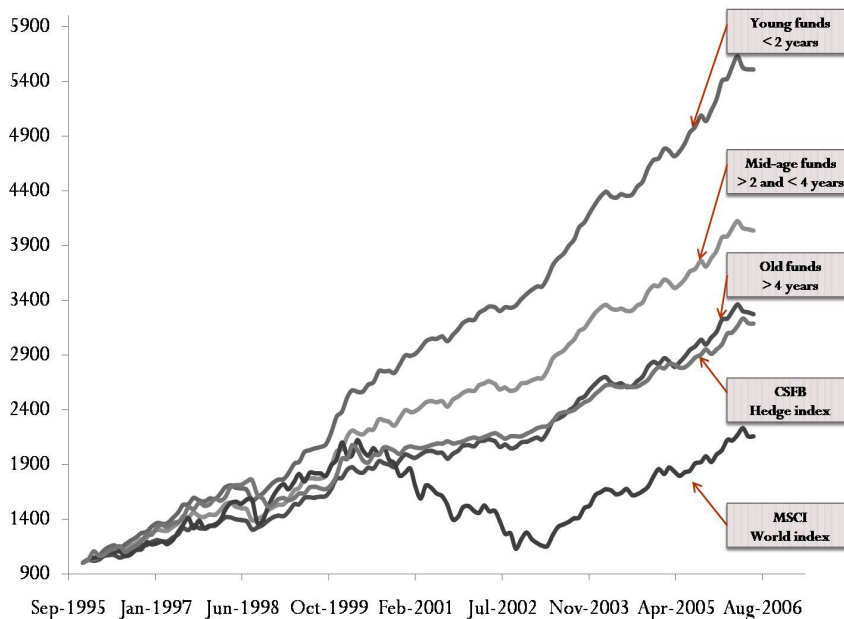
There are now various research studies indicating that emerging hedge funds tend to outperform their established peer groups and generate higher risk-adjusted returns. This out-performance characteristic was first popularised in a study by CrossBorder Capital, based on data from TASS and the TASS graveyard database. This study found that 'adjusted for survivorship bias, the youngest decile funds beat the oldest decile funds by 970 basis points per annum', a statement often repeated in the marketing documents of many funds of early-stage hedge funds. Morgan Stanley Quantitative Strategies Hedge Fund Group also similarly concluded that risk-adjusted returns, as measured by the Sharpe Ratio, tend to decline with fund age.

Recent research undertaken by PerTrac analysed the returns from hedge funds over 10 years between January 1996 and July 2006. They concluded that the younger funds outperformed the larger funds, and did so with lower risk. Meaning, those funds with a two-year track record or less, returned 17.5% with volatility of 5.97%, compared to returns of 11.84% with volatility of 6.32% for older funds, ie, those funds with a four-year track record or more. In addition, overall size and age groupings, the youngest funds had: (a) the highest absolute returns; (b) the best risk-adjusted returns; and (c) performed better on the downside, losing less than established funds.

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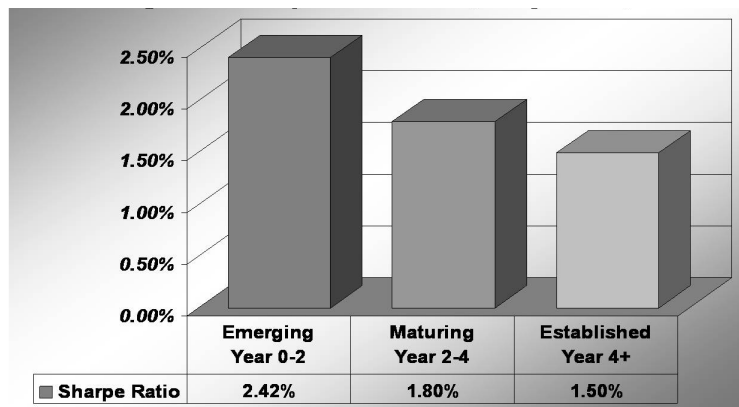
**Younger hedge funds outperform older hedge funds
April 1996–March 2006**



Source: HFIM: Data extracted from the article 'Examination of fund age and size and its impact on hedge fund performance, January 1996-July 2006' by Meredith Jones, PerTrac Financial Solutions, Journal of Derivative Use, Trading & Regulation, Volume 12, 2007.

Statistically, given that emerging and smaller funds outperform established and larger funds, one might be able to provide reasons why this should be the case, and perhaps identify the existence of a 'life cycle' by which the pattern of fund returns tends to follow the age and growth patterns of hedge funds and their managers. Although such sweeping generalisations may need to be interpreted with care from a forward-looking point of view, they can be of some explanatory value to industry practitioners involved in the hedge fund manager selection process, and to hedge fund or hedge fund of fund investors wanting to gain insight into return drivers in the industry. It is also important to take into account operational and business risk considerations when considering a hedge fund for investment, and the level of risk is linked to the stage of the fund in the hedge fund 'life cycle'.

Risk-adjusted returns (Sharpe) by Age



Source: Data extracted from the article 'Examination of fund age and size and its impact on hedge fund performance, January 1996-July 2006' by Meredith Jones, PerTrac Financial Solutions, Journal of Derivative Use, Trading & Regulation, Volume 12, 2007.

An emerging hedge fund defined

There is no generally-agreed industry definition of emerging hedge funds. They are characterised by Hedge Fund Investment Management (HFIM) as funds having less than a three-year track record and with assets of less than US\$500 million. Such funds can be frequently overlooked or under-researched by investors due to their insufficient track records or the smaller assets under management (AUM), making it difficult for investors to invest meaningful amounts; emerging funds do not readily appear on investors' radar screens, as they may not appear in the various fund databases that track funds. The managers of these funds can often be more flexible in their investment approaches and choice of instruments and markets, and are often characterised by their willingness and ability to employ new and innovative investment strategies exploiting new market inefficiencies. These factors can result in a competitive investment edge over their established peers, and be reflected in their relative out-performance. Academic and industry evidence tends to suggest that emerging hedge funds outperform more established ones, yet institutional investors and their advisers nonetheless prefer funds and managers with track records of over three years and more established operating infrastructures. Approximately over 40% of hedge funds have track records of less than three years.

Why emerging hedge funds outperform

Superior hedge fund returns are generated from a manager's skill, the nature of market opportunities available to them and the availability of financial instruments to invest, go short, to hedge or to successfully leverage. Hedge fund managers are in constant pursuit of high absolute and risk-adjusted returns via the exploitation of price inefficiencies resulting from the mis-valuation of securities.

The managers of emerging funds can often be more flexible in their investment approach and better at exploiting niche opportunities, especially in new under-developed and under-researched markets, and be quick to implement investment ideas. They also tend to have a greater ability at using new and innovative investments. In addition, emerging managers typically display strong motivation, and the knowledge that they stand to benefit from being an owner of the business.

One cannot say there are specific reasons which account for the observed out-performance of young hedge funds. Rather, a multitude of factors are at work. Elements that generally add value to early-stage funds, but which are often lacking in later-stage funds, are discussed below. Many of the points raised are quite self-evident and in themselves not fully explanatory, although when taken together, certainly offer a powerful investment paradigm in support of early-stage hedge fund investment.

Innovation and evolution: New sources of returns

Innovation and evolution has driven the development of the hedge fund industry in a constant search for new sources of alpha and higher risk-adjusted returns, via the application of new investment techniques and strategies in new and existing markets.

New investment talent has increasingly been attracted to the industry, as individuals seek out opportunities and are attracted by the success of their peers from investment banks and traditional asset management firms.

The premise behind setting up a new hedge fund is, hopefully, that there exists a genuine new 'edge' in their strategies, and that their approach will be better than the established competitors.

There have been significant changes in the hedge fund industry and, more generally, in the money management industry over the last 10 years. There have been great advances in money management technology — the development of electronic exchanges has allowed quicker dissemination of information, resulting in faster trading, development of new instruments to trade, greater efficiency in settlements and lower transaction costs. Emerging managers today have a growing number of global markets and investment instruments to choose from.

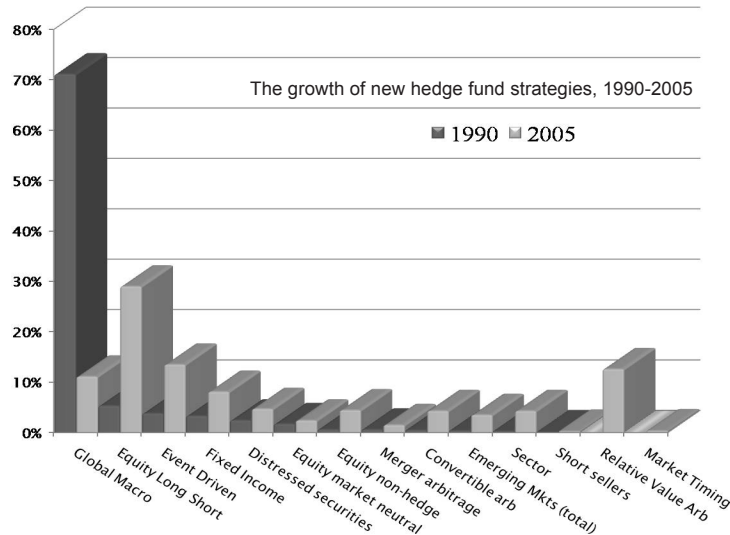
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Changing hedge fund strategy composition

During the last 17 years, the strategy makeup of the hedge fund industry has changed quite dramatically. Hedge fund strategies were originally dominated by global macro, which was approximately 71% of the total. Today, global macro represents only around 11%, while equity long/short strategies have risen from 5% to 30%; and event-driven has risen from 4% to 13%.

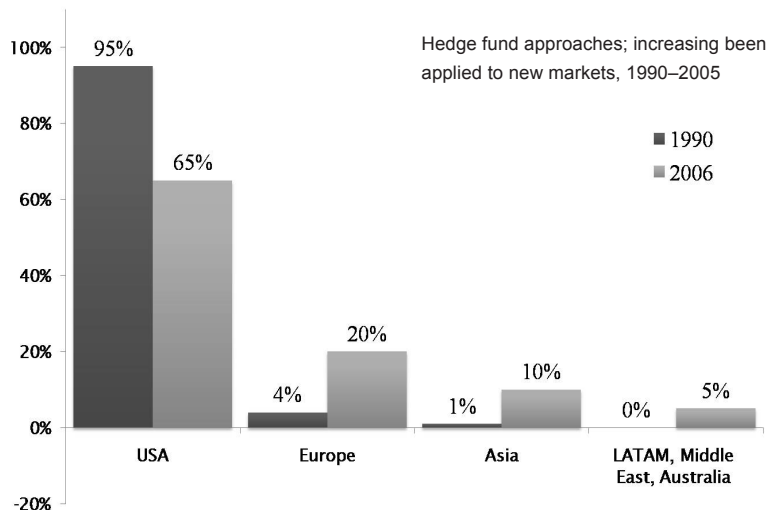
Changing hedge fund strategy universe



New markets: Europe, Asia and emerging markets

Previously, hedge fund techniques were applied mainly to US markets, but today, hedge fund investment approaches are widely applied to new markets in Europe, Asia, the Middle East and Latin America. This evolution is the result of financial innovation by way of new financial instruments to trade and hedge risk, but also the willingness of new managers to offer their services. The target markets have often tended to be some of the most inefficient, with few participants offering hedge funds, resulting in ideal environments for emerging hedge funds to generate high returns.

Hedge fund growth in new markets 1990–2006



Generating returns from unique opportunities

Due to the size of their AUM, larger funds often have little choice but to dilute their best smaller trading ideas. Emerging and smaller funds are better able to take advantage of opportunities in less efficient, smaller markets and sectors, and have greater freedom to invest in less scalable opportunities. Emerging managers are less constrained by liquidity and can access a wider range of opportunities without impacting market prices too much. Moreover, established managers may not be able to deploy a large proportion of their assets in niche opportunities, whereas a small fund is better able to. Additionally, smaller funds are not forced to concentrate in the larger traded securities, arguably the ones that have already been subject to the most research.

Rapid decision-making structures

Emerging fund managers typically have smaller, leaner and more nimble investment teams. Decision-making is, therefore, quicker, enhancing the ability to react to market conditions. Emerging managers typically have lower AUM and, as a result, have the ability to change their portfolio stance from high to low market exposure or to go net-short, taking advantage of market changes relatively quickly. In contrast, the time taken for large funds to change their portfolio stance can be rather longer, often days or weeks (or even months), depending on the liquidity of the underlying securities.

Unlocking new investment opportunities

The great majority of successful hedge funds begin by exploiting new market anomalies or markets not yet fully understood or correctly priced by other investors. This can be a major reason for early-stage fund out-performance. It takes a while (usually years) for competition and capacity to grow, so the first managers to address new market anomalies generally become dominant players. This is certainly true in many strategies: a good example of this would be the return series of convertible arbitrage funds during 2002 and 2003, before the space became more crowded.

Ability to generate returns from illiquidity

A number of the most interesting hedge fund managers began their trading careers at proprietary trading desks or other hedge funds, trading the smaller markets. Specialists in smaller markets almost always experience trading illiquid securities, and this trading paradigm — commonly referred to as ‘providing liquidity’ — is one of the most successful drivers behind a multitude of hedge fund strategies. Newer hedge funds are almost always set up to exploit perceived pricing inefficiencies in ‘newly popularised’, smaller markets. However, as time passes and competition makes these smaller markets more efficient, returns are eroded. Even with the academic evidence described earlier, some extremely good early-stage track records attest to the fact that it can still take a considerable amount of time (again, usually measured in years rather than months) before such inefficiencies disappear. This gives the best early-stage managers (in a variety of different strategies) sometimes several years to generate above-average returns before returns in the sector are driven down by greater players and competition.

Benefits of smaller assets under management

Early-stage hedge funds are smaller and can, therefore, be more nimble than larger funds. A common trend in the industry is for a mature hedge fund with between US\$2 billion plus in AUM running a couple of different strategies with large trading teams — and having brought in-house the administration department, risk management, compliance, investor relations, etc — to morph into an organisation which lacks an entrepreneurial edge. Some of these firms have in excess of 100 people (the majority of them being employees), whereas the average hedge fund start-up in its early growth years is quite streamlined and focused. In the early stage hedge fund space, where most primary services are outsourced, the average firm is more concentrated on its primary money management function, so investment results are often better. In such smaller firms, the decision-making and trade execution processes are usually more efficient.

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Investing in smaller positions

Large positions in less liquid markets can create higher 'slippage', due to wider bid/offer spreads for large positions, impacting returns. There may be markets that cannot accommodate the size of trades required by larger funds, whereas smaller funds can find it much easier to invest in those markets. Even if larger funds reduce their trading size, the attribution of returns from these investments to fund total return can be minimal, compared to a similar attribution to a smaller fund. This is particularly true of managers exploiting niches in some capacity-constrained strategies in less liquid securities. Clearly, some ideas are only profitable as small trades, despite the fact that market inefficiencies may remain for a long period of time. Hedge fund industry experience proves the maxim that one cannot easily cope with dealing in large positions in illiquid markets, but that one can earn a large liquidity premium by trading small positions in illiquid markets.

To put this point more practically, once a fund's assets reach a certain level, even if the fund continues to hire more and more traders and portfolio managers, there is a limit to the number of best 'undiscovered' trade ideas that a fund can find. Clearly, the edge of most good traders in illiquid markets is to discover information about infrequently followed opportunities, the large majority of which are small- and mid-cap stocks. However, as a manager's assets grow, and as his position sizes and number of positions grow, he is unable to put his money to work among less liquid securities and he becomes a large-cap investor. This phenomena is illustrated by looking at portfolios of typically small, 100 to 500 million, long/short portfolios, mainly invested in small-cap securities, and then looking at long/short portfolios of managers running several billions. Even by running positions equal to 20 days of trading volume, such large managers can still not buy mid-cap stocks. Larger hedge fund managers, particularly in the long/short sector have become large-cap funds, and for all intents and purposes can only buy the same stocks that Fidelity's Magellan fund holds. As a result, the returns of huge hedge funds are often similar to the returns of large mutual funds. Smaller funds can still buy stocks from undiscovered places like 'Kansas'¹ and make outsized returns by finding out something that other people do not know, because no one else has taken the trouble to find out. The only problem with this investment strategy is that you can only invest a relatively small amount of money in small companies.

Raw energy

Emerging managers are normally hungry for success and have a great incentive to demonstrate strong performance. They are able to seek out the smallest opportunities and inefficiencies in the market, and are less likely to demonstrate complacency from previously accumulated fees and/or wealth. Established managers generally need to place less reliance on generating a performance fee in order to operate their businesses profitably, whereas performance fees are vital for most emerging managers. Emerging managers typically invest a significant proportion of their net worth in the fund and/or the investment management firms, while at the same time suffering significant opportunity cost of often previously lucrative employment, therefore, providing a powerful incentive to perform.

Emerging managers' motivation

The psychological reason of 'making it' as a successful entrepreneurial investment manager may be a particular catalyst in the early years of a hedge fund. As assets grow and managers reach certain levels of wealth, their working days, as well as their effort per unit of AUM is reduced, so that returns are more likely to gravitate to a lower level. The returns of the average hedge fund often diminish with age and with growth in their AUM. Older and more established funds may be trading on old paradigms, in more perfect markets and in 'crowded' strategies with similar approaches, and for all these reasons may find it more difficult to generate abnormal profits than in the past. Young early stage hedge fund managers generally have more sweat per dollar of AUM, and work a lot harder to 'make it' as a successful hedge fund manager.

Fee structure explains large fund underperformance

The fee structure of the hedge fund industry and the relative massive amounts of revenue that a large fund can generate relative to its costs, goes a long way in explaining why larger funds often have lower returns. Large hedge

funds tend to be focused on simply preserving capital to maintain their assets and fees attached to those assets, a US\$10 billion fund with a 1% management fee and a 20% performance fee on 10% returns per year generates US\$300 million annually and, after paying a staff of 50 to 70 people, the principals are just not interested in doing anything which might jeopardise this amazing, extremely profitable, annuity-like return. Furthermore, the mass of money coming into the industry from larger institutional investors, (whom invest primarily in large established funds) is enormous, so just by keeping ‘moderate returns’, principals of large, established hedge funds feel assured that AUM will continue to grow and, as such, these managers are often reticent to trade aggressively. In stark contrast, smaller funds are constantly searching for higher performance, in order to attract larger amounts of capital.

A hedge fund life-cycle approach to hedge fund manager selection

It is helpful to look at the hedge fund industry through a classification that places managers along a ‘hedge fund life cycle’ continuum, by which the structures, return streams, motivations and the organisation of hedge fund management companies evolve over time and as fund assets grow. This ‘life cycle’ can be used to explain differences in the patterns of returns and the risk profiles in the hedge fund industry, and to understand the repeatability of early stage hedge fund returns, as well as their specific risk factors. The phases of the cycle can be generalised as the ‘emerging’ phase, ‘maturing’ phase and the ‘established’ stage.

As young funds continue to grow assets and as investment returns gain consistency, the middle years of a hedge fund life cycle for successful funds often represent a mature ‘sweet spot’ in their growth, during which successful managers are most likely to produce reliable, solid and quite attractive risk-adjusted returns. However, as funds age, special risks often appear, which account for the fact that returns of older, larger funds — often yesterday’s high performing managers — become tomorrow’s average-performing funds.

Hedge fund ‘life cycle’

Emerging stage 0–3.5 years	Maturing stage 3.5–5 years	Established or matured stage 5 years+
<i>New strategy or idea</i>	<i>Investors get interested, consider investing funds on watch list</i>	<i>Established strategy, investors invest</i>
New alpha generators: markets, strategies, invest approach	Funds generating absolute and risk-adjusted returns vs. peers, benchmarks and cash	Numerous strategy entrants; entrance barriers falling; returns compressing
Smaller AUM: building track record, highly incentivised	Fund growing, increased ‘soft closing’ seen	Becoming crowded space; fund differentiation difficult
Under-researched, not widely invested	Increasing research; broader investor base starting to invest	Funds actively researched and actively invested
Investors: Principals, seeders, family offices, niche HFoFs	Investor profile matures; some HFoFs and insitutional investors	Mainstream investors; HFoFs, pension funds, private banks



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Emerging stage

A new fund will typically have been set up to exploit specific investment opportunities, be they market anomalies or an edge over existing established funds, and may be run by highly capable and entrepreneurial traders already successfully exploiting a market niche.

Operational concerns and the quest for sufficient AUM to create a workable business are some of the major risks. Sometimes these risks can be compounded when a team works together for the first time or have insufficient skills across certain operating or investment areas. Although investment management risk can be small, the greatest risk can lie in failing to get sufficient AUM to create a workable business, or operation or risk management failures. Capital may end up being returned to investors and the traders attempting to join their previous or other firms.

A number of funds tend to close down at this stage. The investment strategy may not generate the high level of returns expected by investors, or there may be non-investment reasons for closure. AUM growth may have been sufficient to generate the fees to cover overheads including basic salaries, yet may be insufficient to pay bonuses to the investment professionals. The principals may fall out and be unable to work together, or working capital may be lacking.

At this stage, investment in the fund is usually supported through friends and family, ex-colleagues, high net worth individuals, family offices, seeders or funds of hedge funds. A great number of investors will prefer to 'wait and see' before considering investing, until AUM reaches a certain level and/or the fund achieves a minimum level of track record in terms of absolute return and/or alpha.

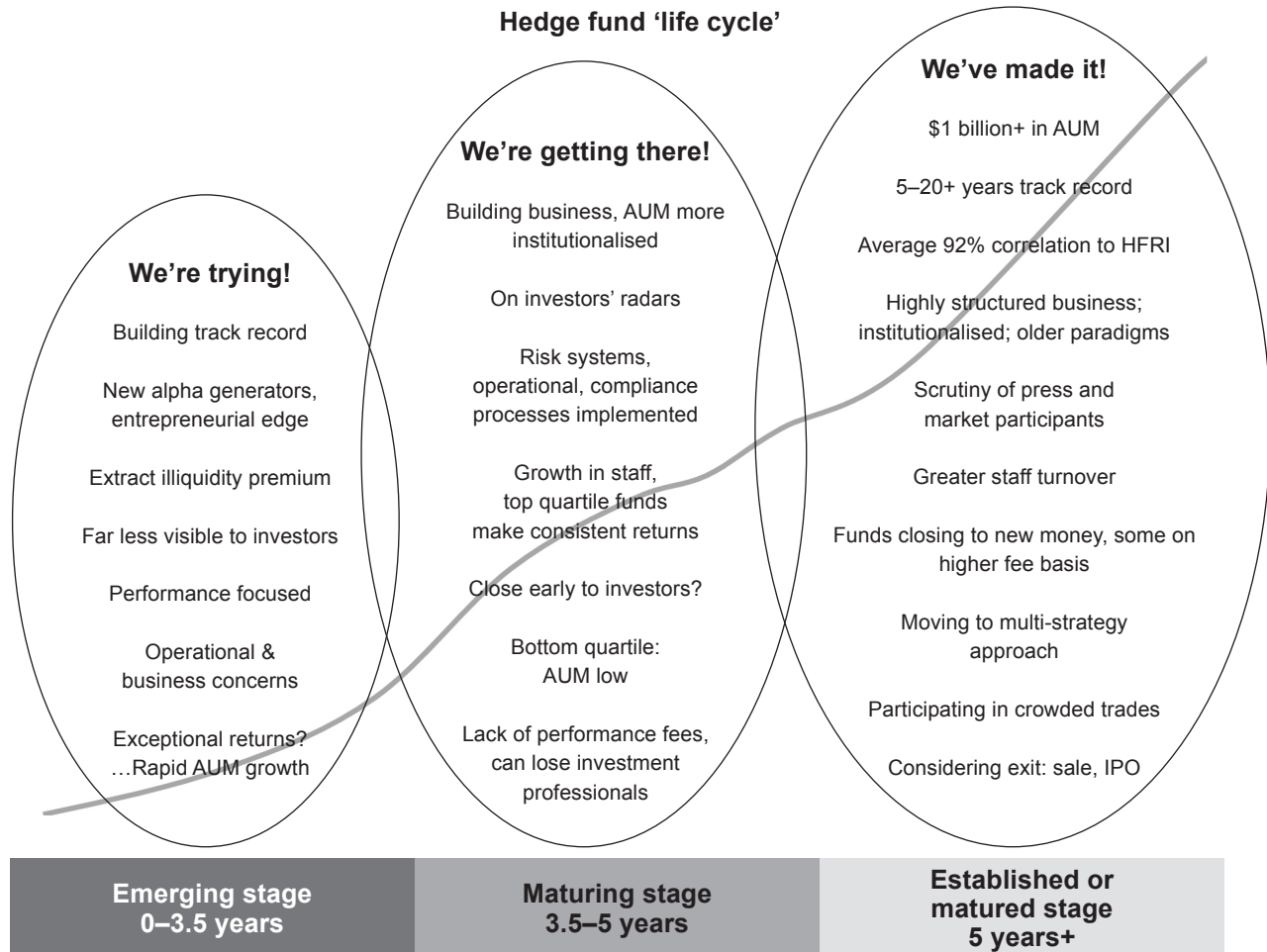
The maturing stage

This is the period between 36 and 42 months in the life of a fund, when the fund has achieved its three-year track record and may well be above US\$100 million (or, ideally, over US\$300 million). Hedge funds in the maturing or mid-life stage of their evolution are in the 'sweet spot' of the hedge fund life cycle.

At this stage, most operational business concerns should have all been properly addressed, business processes and risk management controls should be well established and all moved in-house with lower overall operational risk. The manager will have gone through a number of due diligence reviews to address outstanding operational issues. Top quartile funds in this stage of the life cycle are excellent potential hedge fund investments for institutional players. Managers here can certainly have an edge in extracting alpha, as well as beta, from whichever market paradigm is being exploited.

Funds in the bottom quartile during this stage tend to disappear, although usually not by way of 'blowing up'. Many funds keep trying and trying and never quite make it, often because AUM growth remains insufficient or performance is not good enough, and they finally throw in the towel. A clear pattern in this segment is that the top quartile early stage hedge funds, more often than not, evolve into the top quartile mid-life cycle funds in their respective strategies, which means that a manager able to add value in the early stages usually maintains this as the firm approaches its middle years.

The risk-return profile of the fund can start to change as the manager lowers the risk and volatility and starts to attract institutional investors such as pension funds. The types of investors who are attracted to the fund are looking for established track records of three years or more. With new money coming in, managers at this stage would often rather minimise losses than take the higher risks required to achieve enhanced performance. They also may consider diversifying business risk by starting new funds. The management firms begin to evolve, with increased staffing and new operational issues, as larger organisational structures are deemed necessary. As this happens, the decision-making process can start to become more institutionalised.



Established or matured stage

The 'established' stage in the previous diagram represents both yesterday's stars and emerging managers who have become today's institutionalised fund managers. Past performance is not necessarily an indicator of future success, but because past performance may have been extremely good, this may have resulted in AUM growth. Most of these funds start to limit inflows or become closed to new investments. Some, in fact, return assets to investors and possibly increase fees; in fact, it is a paradox that these funds become the most sought after. Larger AUM and a changing organisational structure can make it harder for these funds to generate above-average returns, particularly from less liquid securities, these being a major potential return stream that smaller funds can exploit successfully. The fact that these funds are usually closed, or only open to existing investors, can make transparency very low. This, in turn, makes risk management very difficult to monitor. Style 'drift' is also an important concern here, as many of these funds branch into new trading ideas, the trading niche they founded their business on gets more and more crowded, and returns are driven down in their mainline business.

Such alpha erosion among established funds will become more problematic as institutional investors continue to allocate to the hedge fund industry. Clearly, the comfort level of larger, fiduciary responsible investors is with larger funds with long track records, and the size of AUM breeds comfort for investors. Significantly, *Financial News* reported in July 2007 that two-fifths of Europe's US\$370 billion hedge fund industry (approximately 20% of the world total) is concentrated in the hands of its 10 largest firms, whose AUM rose by a third to US\$150 billion

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(€108 billion) by the end of June 2007. Despite the slowdown in the average rate of asset growth for these top 10 firms from 66% in 2006 to a more manageable 35% in the first half of 2007, it is expected that the largest will continue to have a higher growth rate than the industry average for the foreseeable future.

Major 'blow ups' can occur during this stage, and possibly with greater frequency than in the case of other stages of the life cycle, particularly if these managers become such a large part of the markets in which they trade in, such as in the case of Amaranth. Managers may become complacent, they may be trading an old paradigm, or there may be a sudden change in the investment environment. If these funds continue to function, they may become less attractive from a returns perspective. These funds can become so large that they have become 'the industry', from both a size and a return perspective. Alpha erosion, because these huge funds are all chasing the same and similar trades at the same time, slippage on entry and exit position building on even large-caps, and size constraints make it virtually impossible for such large funds to trade in smaller-cap illiquid securities where returns are higher, all argue that these funds' performance should remain 'complacent'. Secondly, and even more significantly, as hedge funds become larger, their correlations to other hedge funds and to the markets in general go much higher, so a lot of the diversification and non-correlation benefits of hedge fund investment is lost by investing in the largest funds.

Investors select hedge funds for a variety of reasons and may continue to avoid emerging hedge funds due to potential operational and business risk concerns, because they may continue to require a three-year track record, and/or a certain level of AUM. Early stage hedge fund investment, however, can be significantly more profitable than investing in older established funds, but it requires significantly more work from the investment and operational due diligence and manager monitoring process. Getting into a smaller, well-managed, early stage hedge fund before alpha erosion becomes problematic is potentially a very profitable exercise, but it requires substantially more work and cost than investing in 'Big Blue'².

There are a multitude of reasons why the costs for discovering, conducting due diligence and monitoring smaller funds are significantly larger than for larger funds. Operational concerns are, of course, paramount, as more funds blow up for operational reasons than for any other cause, and this is even more true for smaller funds. Of course, smaller funds have less operational experience and certainly less operational resources, even if backed by the best of prime brokers and administrators. Building relationships with smaller, lesser known managers also takes more time and screening thousands of new managers all with very good, but very short, track records is an enormous task. The difficulties lie in separating the wheat from the chaff, distinguishing those who are very skilled investment managers from those whose track records are just the result of surfing the capital markets during a favourable season. Even if the investment programme and process of an early stage manager appear world class, almost no early stage hedge fund investments are done without first having the fund implement significant risk management processes, administrative and operational procedures, and process guidelines. Importantly, early stage hedge fund investing has stronger parallels to venture capital investing than it does to later stage hedge fund investing,³ as all the operational concerns of running a successful small business are paramount. All this argues for a dedicated service specialising in only early stage investments and, in our experience, those who are the best investors in early stage hedge funds have enormous due diligence and manager monitoring processes and costs. As such, investors wishing to tap into the higher returns of early stage hedge fund investment would do well to hire specialist fund of fund or advisory services.

Conclusions

The emerging managers of today are likely to be the next generation of hedge funds that will become established and prominent over the next three to five years. As capital inflows continue into the hedge fund industry, allocations are unlikely to be concentrated in existing established funds. At some point, institutions will have to evaluate the actual diversification benefits against the return constraints inherent in a number of established hedge funds. The likely course of investors will be to allocate a proportion of their capital to 'best of breed' emerging funds, either directly, or through specialist funds of hedge funds that source, analyse and invest in emerging hedge funds.

Endnotes

1. Kansas refers to what I call the Kansas effect. This describes finding a small regional listed company that no one else has ever visited, and getting to know management and the investment story of that micro-cap. With less than one-third of US publicly-listed companies ever being the subject of a Wall Street investment report, there are still a lot of companies in 'Kansas' which have yet to be discovered by investment professionals. Most of the very successful hedge fund managers had their start as investors in smaller companies, and this 'illiquidity investment paradigm' is extremely important. One of my favourite questions when interviewing a new hedge fund manager is asking him about his most recent trips on deal discovery, and usually the best managers are those who go places that few others go. The only problem with a 'Kansas' investment is that your investments in small regional companies are, by nature, small and rule out large positions. No insult meant to anyone from that fair state.
2. 'Big Blue' of course refers to IBM and, of course, IBM is not a hedge fund; but, as an industry leader, no one has ever gotten fired by buying IBM.
3. Mark Anson has an interesting comment on this point. 'I must submit a note of caution here. Being good at analysing private equity deals does not assure an investor success in hedge funds. In a private equity investment, the key issues are the strength of the management team, the credibility of the business plan, the cash burn rate, the product niche that the company intends to fill, the strength of the company's competitors, the company's operating leverage and cost structure, and finally, the exit strategy for a private equity investor. Except for the exit strategy, all of these issues are operational issues, not investment issues. Private equity investing is the art and science of analysing operational risk. Conversely, the key issues for a hedge fund investment are the genesis of investment ideas, the trading ability to execute the investment strategy, the manner of risk management, the ability to cover short positions when they are called away, and the harvesting of profits while closing out losing positions. These are all investment issues, not operational issues. In sum, it takes a different skill set to analyse hedge fund investments than it does to analyse private equity investments.' Anson, Mark, 'Hedge FOF vs. Individual Hedge Funds', *A Guide to Fund of Hedge Fund Management and Investment*, AIMA, 2002. Anson's point on operational risk, particularly among early stage hedge funds, illustrates that we can take some of the due diligence practices and conventions used in analysing early-stage private equity deals and use them to good impact in analysing early stage hedge funds.

References:

Cross Border Capital. 'The Young Ones'. April 2001. At this point the TASS database had 3,733 funds included. This study also points out that the out-performance figures cited hold even after being adjusted for the risk of failure, (the study also included the TASS graveyard database of funds no longer reporting to adjust for survivorship bias), and the study simply concluded that 'investors should buy funds in the first three years of existence'.

Morgan Stanley, 'Quantitative Strategies Hedge Funds — Strategy and Portfolio Insights', December 2001.

'Examination of fund age and size and its impact on hedge fund performance, January 1996-July 2006' by Meredith Jones, PerTrac Financial Solutions, *Journal of Derivative Use, Trading & Regulation*, Volume 12, 2007.