

Fund of Hedge Fund
Managers
Criteria Report

Reviewing and Rating Fund of Hedge Fund Managers

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Related Research

- [Reviewing and Rating Asset Managers \(June 2009\)](#)
- [State of the Fund of Hedge Fund Industry - Focus Europe \(March 2008\)](#)

Summary

- This report sets out Fitch Ratings' methodology for rating fund of hedge fund (FoHF) managers. The approach is founded on the general framework used by the agency to rate asset managers in various contexts (fixed income, equity, balanced, real estate, and so on) while also incorporating factors that reflect the specifics of hedge fund multi-management resulting from their heavy focus on due diligence conducted for the selection of less liquid assets.
- Fitch has unified its ratings scale for Asset Manager Ratings. All asset managers will now be rated on a scale of 'M1' to 'M5', with 'M1' indicating the highest rating. This unified scale emphasises the common general framework and creates greater consistency and comparability across the range of rated asset managers and underlying investment approaches.
- As with all its ratings on asset managers, Fitch issues Asset Manager Ratings for FoHF managers to provide investors with an independent assessment of an asset management organisation's investment management capacity and vulnerability to operational and investment management failures. While this assessment includes considerations on the current financial standing and near-term sustainability of rated asset managers, Asset Manager Ratings are not an explicit evaluation of their financial condition and should not be confused with Fitch's credit ratings.
- Fitch's Asset Manager Rating methodology, which was first developed in 1998, is designed to systematically capture, evaluate and report on an asset manager's key characteristics via a multi-faceted approach, which provides for the aggregation of the rating factors into five distinct groupings. This allows Fitch to achieve focused analysis, to clearly express rating conclusions and to profile rated asset managers. Qualitative inputs from analysts also serve as the defining input in the assignment of the final ratings, allowing for the consideration of individual asset managers' circumstances. The categories reviewed in the context of FoHF managers are as follows:
 - Company and staffing;
 - Fund/manager selection;
 - Portfolio and risk management;
 - Investment administration; and
 - Technology.
- Fitch's Asset Manager Ratings are announced via rating action commentaries and followed by rating reports published on the agency's website at www.fitchratings.com. All Asset Manager Ratings are updated at least annually; in the interim, these ratings are subject to ongoing monitoring and rating actions may be taken if deemed necessary by Fitch.

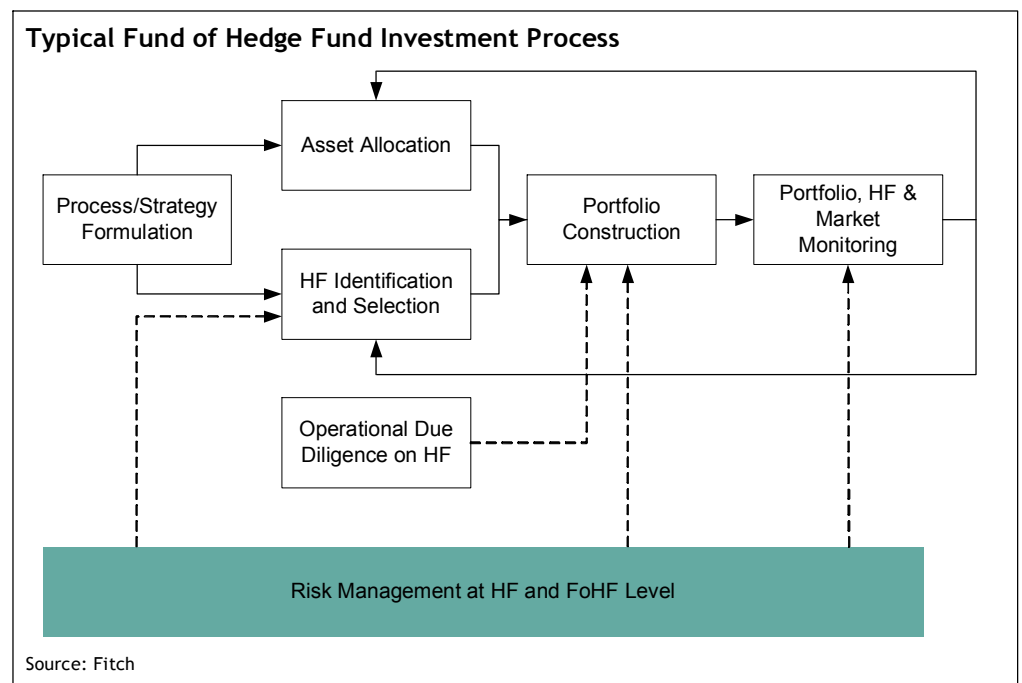
Asset Manager Rating Scale

Under the unified rating scale, definitions have also been amended to more accurately reflect the meaning, and therefore limitations, of the rating (see Appendix 2). Asset Manager Ratings constitute an assessment of an asset management organisation’s vulnerability to operational and investment management failures. Such failures can take the form of mismanaged risk budget, excessive counterparty risk taking, fund closure and/or fire sale due to miscalibrated liquidity or asset liability risks, miscommunication or business disruption, among others.

The ratings are issued on a five-tier scale of (‘M1’ - ‘M5’), with ‘M1’ being the highest rating, denoting the lowest vulnerability to operational and investment management failures, while ‘M5’ is assigned to managers demonstrating material vulnerability to such failures.

Rating Criteria Overview

The diagram below offers a conceptual view of a typical FoHF investment process. Each phase comprises sub-processes and tasks, and the process is executed in environments where differing levels of infrastructure support risk management and operational control objectives. The Fitch Manager rating criteria and scorecard for FoHF have been developed to mirror the fundamental aspects of the process and account for key indicators of the quality of the process as well as related infrastructure, risk management practices and operational controls.



As a company’s financial standing is a decisive factor in its ability to ensure business sustainability, an asset manager’s overall rating may be capped by its score in the shareholding and financial standing sub-category, should the financial condition of the rated manager or its parent company be of concern to Fitch’s analysts. The agency is working closely with its Financial Institutions group to update its financial analysis of asset managers and refine the relationship with the overall Asset Manager Rating. It should be noted, however, that in the context of a manager rating, financial condition is not assessed with the same perspective as that of a credit rating. Although a credit rating gives a good indication of the financial condition of a company, it is important to bear in mind that debt-holders and counterparties - excluding fund investors - may well suffer economic losses,

whose likelihood is measured by credit rating measures, while the company may still remain viable and continue to perform its asset management duties in the best interests of investors.

As investment managers are increasingly outsourcing certain functions, including operations, risk management or even hedge fund selection through advising servicers, as a means to gain operational efficiencies and maintain focus, such outsourced activities are also reviewed as part of the rating exercise through specific aspects. The argument often heard for the decision to outsource is that the managers are freed to focus on their core competencies. Outsourcing can deliver four significant benefits: lower overhead costs, access to well-established expertise, increased productivity and possible risk reduction through the use of providers with highly specialised business operations. However, for these potential benefits to materialise, third-party selection, management, oversight and the level of integration between the asset manager and the third-party are key determinants. Therefore, in evaluating investment processes, Fitch seeks to gain a full understanding of the functions and tasks that are outsourced, to whom they are outsourced, the nature of the contractual relationships and the controls in place to monitor performance and reliability.

The following sections describe the areas of focus for each of the five categories of the ratings analysis.

Company and Staffing

FoHF investment processes can be executed by independent organisations or autonomous groups within a larger organisational structure. The environment created by the organisation serves as the first area of assessment. Fitch therefore reviews the tenure of the fund management company generally and then specifically as it relates to the history of the FoHF activity within the organisation. This allows a differentiation between processes that benefit from market experience accumulated over the years, and those that are carried out by emerging investment management companies.

When FoHF management is part of a wider asset management company, Fitch will assess whether the process benefits from a clear commitment of its parent organisation as demonstrated notably by investment in required resources and from a true independence in investment decision-making. This last point is all the more important in cases where the company is also involved in the direct management of hedge funds, as the potential for conflicts of interest need to be assessed and efforts made to understand mitigating controls.

In a people-driven business such as investment management, the quality of an investment process and its capacity to consistently deliver the stated investment objectives first relies on the quality, proficiency and experience of the people involved in investment decision-making. Fitch therefore carefully examines the skills and experience of investment professionals dedicated to FoHF management, looking at their educational and professional backgrounds. In particular, it reviews the career path of portfolio managers and research analysts from their detailed résumés, paying particular attention to number of years of experience in the asset management industry and, more importantly, their direct experience within the hedge fund or capital market trading worlds.

By way of illustration, professionals who have experienced various market regimes, including crisis periods such as the 1994 interest rate shock, the 1997 devaluation of East Asian currencies, the 1998 Russian debt default, the 2002 corporate credit spread and the recent structured credit crisis, are likely to take a more mature view on the potential downsides of a hedge fund strategy. Such portfolio managers will also be able to understand, and even anticipate, funds' behaviour under changing market environment and stress situations; therefore contributing more

meaningfully to the asset allocation and selection processes. These qualifications are also critical for fund analysts during the limited period allowed for interviewing and challenging hedge fund portfolio managers. Fitch strongly believes a high degree of realism, pragmatism and challenging ability is very much required when conducting fund selection, and more particularly in the hedge fund space.

Hedge Fund Strategies

Strategies	Sub-strategies
Long/short equity	<ul style="list-style-type: none"> • Global vs. regional focus • Potentially with a style or sector focus
Equity market neutral	<ul style="list-style-type: none"> • Potentially with a style, sector or regional focus
Equity short bias	<ul style="list-style-type: none"> • Potentially with a style, sector or regional focus
Emerging market	<ul style="list-style-type: none"> • Long/short equity • Debt
Fixed income	<ul style="list-style-type: none"> • Curve arbitrage • Credit
Global macro	
CTA & managed futures	
Arbitrage	<ul style="list-style-type: none"> • Convertible arbitrage • Volatility arbitrage
Event driven	<ul style="list-style-type: none"> • M&A • Restructuring • Distressed
Multi-strategy	

Source: Fitch

In addition to the experience of individual members of the investment team, the agency assesses the adequacy of staffing resources, considering the organisational structure and the manner in which duties are distributed among team members. The objective is to evaluate individual focus and workload, also considering the investment style and the breadth of the targeted investment universe, bearing in mind that the potential universe of investment strategies for hedge funds is broad, heterogeneous and sometimes highly sophisticated. It ranges from widespread long/short strategies to global macro, with many other differing strategies in between such as event-driven, macro trading or emerging market debt arbitrage, to name but a few. As a result of this diversity, portfolio managers and analysts can not be experts in all areas and the investment team should include varied complementary profiles, in line with the targeted investment universe.

Fitch’s staff analysis is complemented by an assessment of the degree to which the respective responsibilities of each investment professional are clearly identified and facilitate the appropriate use of available resources. The agency places a high value on dedicated over shared resources (such as quantitative analysts, research and technology) as resource-sharing may imply lower levels of focus and priority positioning of the FoHF process under review.

The stability of the investment team, which can be a key determinant of how sustainable the quality of an investment process is, is also carefully looked at. Fitch believes an investment process is more than just a sum of procedures, people and tools and relies heavily on the interactions between those components. Such interactions are built over time in a long and continuous learning process, which requires continuity among the staff involved. Given the high degree of mobility among investment industry professionals, Fitch evaluates the turnover of staff, most specifically among the senior portfolio managers, to determine the stability of the investment teams, focussing on team tenure. Furthermore, the compensation and HR policies of the asset manager are reviewed to determine the organisation’s potential to retain staff. As between individual and group performance-based incentive schemes, Fitch favours the latter as these are regarded as a mitigating

control to excessive risk-taking by individuals within a team. The agency also evaluates the asset manager's strategies for hiring, retaining and developing personnel.

Investment risk management and operational due diligence on hedge funds also require adequately experienced and resourced teams and will therefore be assessed by Fitch. The agency considers the dedication of people involved in conducting operational due diligence and their independence from the investment decision-making process to be key differentiating factors for an autonomous, systematic and focused due diligence. When it comes to investment risk management, independence and dedication of staff is also preferred. Nevertheless, independence should never be at the expense of quality and technical aspects. That is the reason why Fitch always evaluates more positively a thorough and disciplined risk management done by portfolio managers themselves as opposed to a superficial, "tick the box"-kind of approach in an independent framework.

Some FoHF managers are increasingly elected to outsource all or part of their fund selection process to specialised sub-advisers, most often the operational due diligence activity. In such circumstances Fitch expects selected third-party providers to add seasoned and well-identified competences, while the contractual relationship and monitoring in place at the asset manager must provide enough comfort about the quality and reliability of service provided. This is assessed through a review of the provider selection process, the nature and depth of outputs provided, such as due diligence reports or investment recommendations, the nature of the relationship and the controls in place for monitoring purposes.

Fund/Managers Selection

Fitch seeks to understand asset managers' core investment strengths, sourcing capabilities, operational due diligence on hedge fund managers, decision-making processes with regard to hedge funds selection and their variations over time. Through discussions with investment professionals and senior management and a review of investment documentation, Fitch first evaluates the extent to which the FoHF sourcing process is properly formulated in terms of objectives, means, procedures and implementation and what is the degree of investment professionals' buy-in. The definition of the investment universe is a critical step, addressing fundamental questions such as the types of alternative strategies covered, the location of hedge fund managers, hedge funds' registration or minimum track record required.

Fitch examines hedge funds' selection processes step-by-step to evaluate the degree to which investment decisions are supported by thorough research and the consistency of implementation in an effort to understand, as well, the level of discipline in the selection process.

Hedge fund selection processes can typically be analysed as per three main component parts:

- Sourcing and access to hedge funds;
- Underlying hedge funds analysis and selection; and
- Operational due diligence.

Access to Hedge Funds

An important prerequisite for a manager of hedge funds' portfolios is (1) to have knowledge of funds' existence, (2) to have access to hedge funds and (3) to have the appropriate capacity to invest in. This is very specific to the hedge fund world, which is characterised by unique marketing venues (capital introduction by prime brokers, direct marketing and networking), the limited capacity of hedge funds, the small size of most asset management organisations, often at a start-up stage, the difficult identification of true alpha generation and a crowded universe of potential investors. As a result, the usual investor/asset manager relationship is inverted and

operating experience within the industry is essential for FoHF managers to be considered as trusted partners. A long track record and a reasonable size providing visibility help to build relationships and leads to good fund sourcing capacity, which smoothes access to most promising new hedge funds. Combined with an established network, these are, in Fitch's view, important requirements for a FoHF manager to be able to access the best investment opportunities and to be in a position to negotiate good investment, transparency and capacity conditions.

The relationship between a FoHF's size and its capacity to access hedge funds is all but straightforward: too small in terms of assets under management, the FoHF manager is not visible enough and cannot invest big tokens, which often puts it off the radar screen of hedge funds; too large, it needs to get overly diversified to avoid owning too large a portion of underlying funds, especially newly-launched ones. Fitch estimates therefore there is a range of optimal size for a FoHF company. Those with assets falling outside of this range level are faced with challenges relating to their ability to source new funds and manage investment capacities but mitigants do exist.

Fund Selection

Hedge fund investing characteristics are typical of an investment in illiquid instruments:

- Buying is more a matter of identifying the opportunities rather than market timing.
- Selling takes time and bears important costs.
- Market data are more difficult to find and less trustable than for liquid securities.
- Thus, hedge funds are more likely to be long-term investments and high turnover ratios in FoHF portfolios generally lead to poor performances.

The identification and selection of underlying hedge funds are therefore at the heart of FoHF processes and require the greatest attention. Fitch carefully assesses the quality, materiality and relevance of inputs and research produced at this stage, be it quantitative or qualitative, in light of the process' stated objectives and philosophy. This involves a detailed review of the manager's actual practices, with regard to the number of on-site visits to HF managers and people involved in the systematic recording of information, the materiality of information gathered, the relevance of topics covered and the analysis and research documents produced to assess their depth, accuracy and continuing timeliness.

In any case, Fitch assesses the extent to which funds' strategy and specific performance drivers are understood, clearly qualified and documented by fund analysts. Ultimately, the selection process must force analysts and portfolio managers to render clear opinions based on facts and not emotions. These opinions can take different forms such as ratings, scores, pros and cons, but, in any case, it should at least answer the following questions:

- Do portfolio managers/traders have compelling experience and skills?
- Do portfolio managers/traders have the right level of motivation and are their interests aligned with that of investors?
- What are the resources available to investment professionals? Does the risk management, operational and analytical environment provide relevant support?
- What is the fund's investment strategy or style? What kind of style deviation leeway is given to portfolio managers?
- Why does the portfolio manager/trader make money? In what market scenarios will it lose money? To what extent?

The agency strongly believes that the specifics of the underlying hedge fund strategy must be taken into account at this stage. For example, an investment case for a fundamental directional long/short equity fund has to scrutinise the depth of analysis on stocks within a generally more focused investment universe as well as the top-down process driving market exposure, which can vary from long net to short net positions and may include arbitrage strategies based on market capitalisation, cyclicity, sector or other specific investment themes. By contrast, research on a fund managed under a market-neutral long/short equity trading strategy must emphasise the quantitative resources with relevant trading market experience, modelling tools and extensive back-testing.

Quantitative tools are also often used by FoHF managers to scrutinise the hedge fund universe, filter it down or run statistically-driven analysis. In such cases, Fitch reviews the tools, data sources and statistical factors used to identify their degree of relevance and robustness. Particular care is required here, as it is not easy to isolate the alpha from the beta of a fund, especially as statistical models are difficult to run with weekly net asset values (NAV) of hedge funds and almost meaningless with monthly NAVs, which is often the case. Besides, hedge funds are characterised by non-linear behaviours (embedded convexity), which make them more attractive but result in quantitative analysis being even more complicated. Also, the lack of a track record may not allow any quantitative assessment.

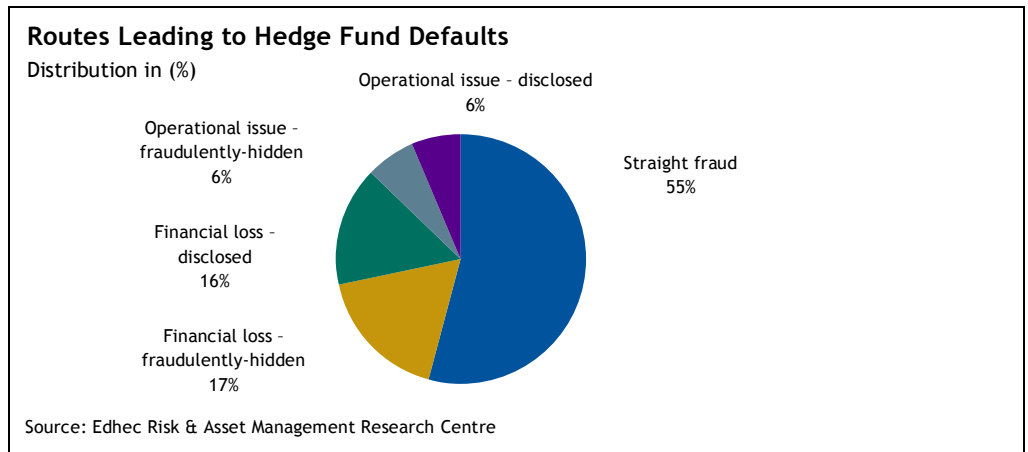
In addition, Fitch studies how actual selection decisions are made and expects such decisions to draw on the expertise and knowledge of several complementary resources, notably as analysts may on their own develop some bias. A committee-driven decision is preferred as it forces hedge fund analysts to express and formalise their views in a hopefully-structured manner. Fitch reviews the minutes of hedge fund selection committees to assess how investment decisions are formulated, reasoned and analysed.

Operational Due Diligence

Due to the nature of hedge funds' underlying instruments, trading activities, regulatory environment and business models, investing in hedge funds implies getting exposed to a variety of operational risks that can only be mitigated through a thorough and systematic operational, legal and administrative due diligence. Fitch expects FoHF managers to go far beyond a simple "tick box" procedure performed by junior or inexperienced staff.

This operational risk has been highlighted by some widely-publicised hedge fund failures such as the Manhattan funds in 1999/2000, the Beacon Hill/Bristol funds in 2002, Bayou in 2005 or Wood River Capital Management in 2005, to name but a few. Such hedge fund collapses can have large financial implications for investors. For example, as a result of the Manhattan collapse, investors lost about USD400m collectively. A study from the Edhec Risk and Asset Management Research Centre, published in January 2007, and entitled "Quantification of Hedge Fund Default Risk", analysed the primary drivers of hedge fund failures. It appears from this study that about 78% of defaults were linked to fraud, i.e. misappropriation of assets and/or misrepresentation of information, either directly or to mask a loss resulting from an operational or performance issue.

The risk of fraud is rising when there is a lack of independent oversight on the hedge fund management company. The oversight may stem from a regulatory body, a company board with independent directors or other independent supervisory frameworks. The "four eyes" principle can also serve as a strong mitigating factor against the risk of fraud, notably when it comes to trade settlement or cash transfer. Another situation favouring the emergence of fraud is the absence of an independent pricing provider and/or fund administrator for the production of hedge fund valuation. With regard to straight operational losses, their occurrence risk increases as instruments used gets more complex, hence requiring more advanced operational support and leading to a higher likelihood of trade processing errors.



Convinced of the strong role operational due diligence has to play in mitigating the risk of such frauds or operational risks occurring, Fitch evaluates the depth of the analysis performed pre-investment by the FoHF manager. Ideally conducted by staff independent from direct portfolio management, the due diligence is assessed with regard to the degree of comprehensiveness of topics covered, its level of discipline and the extent to which it is effectively and consistently playing a key role in the fund selection process. Since, as already highlighted, independent oversight over hedge funds and recourse to independent third-party providers offer a strong mitigating system against the risk of fraud, Fitch looks carefully at the depth of analysis on questions relating to regulation, fund administration, custody of assets, prime brokerage, auditors and, more generally, corporate governance practices. In particular, systematically requiring reference checks, letters of comfort, confirmation letters, certificates of incorporation with regulators and copies of agreements with third parties denote a high level of due diligence thoroughness.

Valuation procedures are an essential aspect of investigation for FoHF managers, notably as to the independence of pricing sources. It becomes especially critical for those hedge fund strategies dealing with complex and illiquid instruments such as arbitrage or small caps funds. In contrast, for other strategies, such as long/short funds investing in developed markets, valuation is less of a concern since underlying instruments are listed, benefiting from a liquid trading environment. In cases where valuation is performed by an independent pricing agent or administrator, Fitch expects the FoHF manager to have conducted thorough diligence on the third-party's pricing capabilities.

In addition, Fitch evaluates how the due diligence allows a comprehensive understanding of underlying funds' structures. Most of the relevant information is available in the fund offering documents, which require careful and regular dissection, as they tend to be evolving living documents. It includes a clear identification of various classes of shares, potential side letters, side pockets, subscription and redemption conditions, and fee arrangements.

The operational and legal due diligence should typically cover the following items, which are further detailed in *Appendix 3*:

- Asset management company organisation;
- Legal;
- Staffing;
- Procedures and control environment;
- Valuation and pricing; and
- Operations and technology.

The agency is also assessing how operational due diligences are documented, archived and easily accessible to various team members as well as regularly updated to ensure investment decisions are always based on the most up-to-date information, including documentation updates, changes in service providers, fund restructuring or even litigation. In particular, the following items should be followed as part of the ongoing due diligence:

- Any large change in assets under management;
- A change of portfolio manager, or of any other party involved; and
- Unexpected delays in communication of NAV, reporting or newsletter.

Portfolio and Risk Management

The definition of investment philosophy and portfolio construction process objectives is a critical step, addressing fundamental questions such as investment objectives, the benefit of strategy allocation versus hedge fund selection, why and how to achieve portfolio diversification, or the extent of quantitative and qualitative inputs in the decision-making process relating to FoHF portfolio construction.

The agency also assesses the consistency over time of investment style and philosophy, as reflected in marketing materials, answers to requests for proposal, reporting to investors and related documentation. When considering these documents, the agency investigates any recent drift in the investment style or approach as a check to ensure that the processes are the same as those that the company is intending to use. Fitch acknowledges that the need to respond to changing market conditions can necessitate modifications to strategy and focus. Nevertheless, when such changes occur, the agency assesses the degree to which they are the result of a reasoned consideration that forms part of the process rather than an ad-hoc reaction.

Consistent with the fundamental aspects of portfolio and risk management - know your risks, monitor those risks and use this knowledge in the implementation of investment management decision-making - Fitch assesses the essential aspects indicating the quality of risk management practices and the degree to which they are embedded within every identified step of the portfolio management process.

Portfolio Construction

Portfolio construction is a key step of a FoHF investment process, largely influencing portfolios' ultimate risk/return profile through diversification management. This entails diversification within strategies, through underlying hedge fund selection, and across strategies, or sub-groups within a strategy, through strategy allocation. For example, under long/short equity strategies, the following styles can be isolated, leading to a further refined portfolio construction process: fundamental stock pickers with net long bias, "flexible beta" or specialists (M&A, deep value, sector-focused).

Fitch thoroughly reviews how the portfolio construction process reflects the stated investment style and macro views while also effectively managing diversification and constraints. This is achieved through the analysis of investment committee memo and top-down inputs that serve as the basis for the construction of a macro view, such as economic and strategic research, reports on strategies and identification of strategy drivers. In particular, the agency assesses the efficiency of the allocation process in identifying strategies uncorrelated on the downside, which is the ultimate objective of strategy diversification, in evolving market environments. CTA (Commodity Trading Advisors) strategies, for example, have historically filled in this role relatively well, generally offering protection against market downturns while conversely, in the recent past at least, other strategies had been positively correlated. Fitch therefore expects asset managers to have a

clear understanding of the various market factors that can impact each strategy. House top-down macro views have other implications than just strategy allocation. It may also reflect on the hedge fund sourcing approach and, for some managers, drives strategic market positioning managed as an overlay through derivatives. Fitch seeks to understand how these derive from macro scenarios and strategy allocation, the discipline, rationale and drivers for such decisions.

Diversification within strategies through hedge fund allocation should aim at identifying underlying funds generating uncorrelated alpha while diversifying away downside risks. On top of the fund selection and operational due diligence issues already discussed, Fitch expects the portfolio construction process to offer a consistently-applied approach for the sizing of positions, the allocation arbitrage between hedge funds and the management of invested funds' capacity. Fitch would also like to stress that diversification per se is not good on its own. As evidenced by various studies (see Lhabitant and Learned's study entitled "*Finding the Sweet Spot of Hedge Fund Diversification*", in the Capco Journal of Financial Transformation, April 2004), when FoHF portfolio's granularity increases, hedge funds' specific risks are neutralised and market risks tend to prevail or, in other words, the portfolio's sensitivity and correlation to equity, interest rate and credit markets are becoming more prominent. As a result, the diversification benefit of hedge fund investing disappears, since its lack of correlation to markets, one of its main advantages, vanishes.

The agency studies the comprehensiveness and relevance of any quantitative tools employed in the allocation and portfolio construction process as a primary or supplementary input. These tools can, among others, be based on:

- Optimisation;
- Straight constraints on conditional and marginal value-at-risk; and
- Constraints on market sensitivities.

In particular, Fitch checks that quantitative tools have been back-tested, for sufficiently long periods, and that the parameters and assumptions used are appropriate and accurate.

Hedge Fund Monitoring and Disposal

Once a hedge fund has been selected for investment, the FoHF manager must be in a good position to monitor whether the hedge fund is behaving as expected as well as to identify, as early as possible, any "style drift". A style drift can be defined as the effect on the fund of a strategy change, an increased use of leverage, hence leading to a higher beta, or a shift in the investment universe without notice. This can have a considerable undesired impact on the portfolio of hedge funds, altering the portfolio's performance or distorting its market sensitivity profile. It may also create an imbalance in the asset allocation strategy initially implemented by the portfolio manager, thus altering the target risk profile of the FoHF. In addition, such a style drift can reflect a hazardous behaviour of the hedge fund manager who concentrates all its bets in one area. To prevent all these happening, a comprehensive fund monitoring procedure must be in place with the aim to detecting early warning signals of unexpected behaviours.

The collapse of Amaranth Advisors in September 2006 is a typical example of a style drift. The fund shifted from being a multi-strategy hedge fund to becoming a mono-strategy fund with one massive bet on natural gas prices. Most investors, including some FoHF managers, did not see this shift in strategy or did not react upon noticing it. In this case, a good monitoring of the fund risk profile and sensitivity exposure should have raised warning signals.

With all these in mind, Fitch carefully reviews whether the FoHF manager has the necessary tools, information flow and procedures to maintain a wise, reactive and

disciplined monitoring on all invested funds. This includes maintaining regular and documented contacts with hedge fund managers, performing statistical returned-based analysis on historical NAV to profile the fund and identify market factors impacting performance or conducting more detailed analysis based on information provided by the hedge fund manager.

The depth of such analysis can vary widely depending on the level of transparency conceded from underlying managers and on the nature of investment strategy. At best, it is based on underlying funds' holdings, allowing the FoHF manager to run tight monitoring and to compute relevant risk indicators for each fund and also for the portfolio of funds. While this type of approach can prove very useful for some strategies such as long/short equities, it may not add that much value when it comes to strategies involving large books of derivatives that are very actively traded. In any case, detailed sensitivities indicators provided by the fund manager can also be powerful monitoring tools if used wisely to estimate performance and run scenario or stress test analysis.

Risk Factors and Related Indicators

Risk factors	Indicators
Equities	<ul style="list-style-type: none"> • Beta: Sensitivity of returns to market equity returns. It is a fund's systematic equity risk • Exposures and Concentration (Net and Gross): Portfolio broken-down view highlighting market exposures by region, sector, style, market capitalisation, valuation ratios
Interest rates	<ul style="list-style-type: none"> • DV01 or PV01: Dollar value impact of a change in interest rates of 1bp. Measures the sensitivity to interest rate moves in price terms • Key Rate DV01 or PV01: Same as above but measured at some identified key rate points
Credits	<ul style="list-style-type: none"> • CD01 or CS01: Dollar value impact of a change in credit spread of 1bp. Measures the sensitivity to spread movements • Average Credit Quality: Portfolio weighted-average credit quality as measured by credit ratings • Exposures and Concentration: Portfolio broken-down view highlighting market exposures by region, sector, asset type, credit quality, issuer...
Option-based instruments, incl. convertible bonds	<ul style="list-style-type: none"> • Delta: Sensitivity to changes in the price of underlying assets • Vega: Sensitivity to volatility of underlying assets' price • Gamma: Rate of change in delta • Theta: Sensitivity to the passage of time
Commodities	<ul style="list-style-type: none"> • Sensitivity to commodities markets
Currencies	<ul style="list-style-type: none"> • Sensitivity to foreign exchange rates
Volatility	<ul style="list-style-type: none"> • Sensitivity to market volatility
M&A stages	<ul style="list-style-type: none"> • Stages Overview: Portfolio broken-down view based on various phases of M&A deals
Distressed status	<ul style="list-style-type: none"> • Status Overview: Portfolio broken-down view based on the status of distressed securities
Leverage	<ul style="list-style-type: none"> • Margin, net long and gross

Source: Fitch

Based on all these indicators, a style drift can be detected on the basis of:

- An analysis of actual returns' pattern vs. that of expected returns derived from the fund's market sensitivities;
- An analysis of recent actual returns' pattern vs. that of historical returns;
- An analysis of actual return pattern vs. that of peers' returns; and
- A monitoring of the level and evolution of risk indicators vs. identified objectives of the initial investment case.

Depending on the underlying hedge fund selection context, various levels of monitoring depth may be required. For example, funds with limited track record, or that have highly-flexible investment guidelines, or even those which, for some other reasons, did not provide full comfort to portfolio managers involved in the selection-making may deserve to be even more tightly followed. This can translate into more frequent contacts with the hedge fund manager, the involvement of more senior and/or additional staff at the FoHF, as well as more thorough or frequent analysis.

On top of an assessment of the procedures and tools driving hedge funds monitoring, Fitch seeks to understand how this translates in the sell discipline. The agency will analyse what triggers an investment case review and the procedures in place governing decisions of a partial position downsizing or a complete sell.

Portfolio Risk Management

Fitch analysis reviews procedures and controls with respect to investment risk management with a particular focus on the manager's capacity to evaluate investment risk at the FoHF level and its stress testing capabilities. This relates to the diversification benefit offered by FoHF already highlighted, which needs to be adequately measured, given the non-normal distribution of hedge funds' returns, and then stressed under extreme market scenarios. Fitch also evaluates the extent to which risk-monitoring is embedded in the investment decision-making process and what is the actual role played by the risk management function, which can vary from simple report-checking to a process of continuous, structured reporting with a real challenging capacity regarding investment decisions.

With regard to day-to-day monitoring, Fitch analyses the manager's capacity to capture recurring risks through appropriate indicators, such as value-at-risk (VaR), computed through the historical or Monte Carlo simulation methods, Conditional VaR and/or the Cornish-Fisher VaR, which better captures hedge funds' negative skewness¹ and kurtosis². In addition, Fitch reviews the extent to which the manager is able to effectively diversify sources of risk and to manage portfolios of hedge funds within targeted risk/return objectives. In doing so, the agency assesses whether risk tools and metrics allow the manager to measure individual hedge funds' contribution or marginal contribution to risk. This is an essential aspect of risk management to monitor whether hedge fund diversification is proving a true risk reducer and to control no single hedge fund or strategy is too largely contributing to the portfolio risk level.

Similarly, Fitch seeks to understand what are the tools, indicators and procedures in place for the monitoring of FoHF's sensitivities to risk factors and their behaviour in extreme market conditions. This is best achieved through the simulation of stress scenario, which can include historical financial crises such as those already mentioned when discussing Company & Staffing. For this purpose, various approaches are available to managers depending on the granularity and relevance of information on underlying hedge funds. Fitch recognises this is a strong challenge of FoHF management, especially when it comes to aggregating information at FoHF level, that needs to be tackled with care through hedge funds sensitivity analysis, including after leverage effect, strong interaction with hedge fund managers and/or FoHF own experience and market knowledge. Furthermore, risk indicators should be monitored over time, as trends and evolutions are sometimes more relevant than the actual metrics level. In any case, the agency focuses on assessing if metrics, methodologies and depth of data used are appropriate in light of strategies covered.

¹ A negative skewness reflects a negative asymmetry of the return distribution curve, thus highlighting a larger probability of returns falling below the mean

² A negative kurtosis reflects fat-tailed shaped distribution curve, thus highlighting a larger probability of extreme events occurring

Fitch evaluates positively managers that have a very good understanding of the underlying risks and their evolutions. However, the agency does not necessarily expect FoHF managers to manage around these indicators or even adjust them with an overlay, as hedge funds' risk sensitivities tend to exhibit high convexity, i.e. they are rather unstable.

As hedge fund's correlation can vary widely over time depending on market environment, Fitch expects FoHF managers to perform regular stress testing analysis on correlations and will assess methodologies used as well as assumptions used. The primary objective of such correlation stressing is to gauge the stability of diversification benefit resulting from strategy allocation under various market scenarios, especially as strategy correlation is often asymmetric, with a tendency to get a positive correlation in downward markets.

Liquidity Risk Management

Liquidity management and risk control thereof represent a major challenge for hedge fund multi-managers as, by construction, most FoHF are managed with an asset/liability mismatch. This stems from the fact that FoHF investors generally benefit from more frequent and flexible subscription/redemption opportunities than those typically offered to the FoHF itself for its investment in the underlying hedge funds. Fitch therefore evaluates on a case by case basis whether this liquidity mismatch does exist and, if so, how the FoHF manager ensures this is regularly monitored to avoid being faced with a difficult situation in this regard. The agency's assessment looks into the tools used by managers to get an understanding and prospective view on hedge funds' liquidity schedule for each of the portfolios they manage. This also includes stress scenario analysis, simulating situations of massive investor redemption. The variety and complexity of hedge funds' subscription/redemption conditions make liquidity management a difficult exercise where depth and comprehensiveness of parameters covered can vary widely from one multi-manager to another. Indeed, parameters that will affect the liquidity offered to FoHF managers include obviously trading frequency and notice periods, but also any potential lock-up periods³, gate provisions⁴, early redemption penalty fees, side pockets⁵ or other specific features, sometimes not very clearly stated.

Another aspect of liquidity management assessed by Fitch relates to the liquidity monitoring of underlying hedge funds themselves. History highlighted liquidity issues can lead to large financial losses for investors and even fund collapse. Two typical examples are the LTCM case in 1998 and, more recently, Amaranth Advisors, which alone ultimately led to an estimated USD6.6bn loss. Fitch believes FoHF portfolio managers must understand what drives liquidity in the funds they invest in, in light of the following four aspects:

- The kind of instruments traded, to estimate whether the hedge fund manager is able to sell without materially impacting market price. The fund size also needs to be considered here, as the larger the fund, the more difficult it may become to sell positions.
- The hedge fund redemption conditions, to assess the extent to which those conditions provide sufficient protection against sustained liability mismatch.
- The availability of external funding facilities when using leverage, which is largely a function of prime brokerage arrangements.

³ Lock-up period: An initial period upon investing in a fund during which the investor cannot redeem shares. It typically ranges from one to five years

⁴ Gate provision: A limit placed on the amount of withdrawals out of a fund allowed during a redemption period

⁵ Side pocket: A type of account used in hedge funds to separate illiquid assets from more liquid ones

- The nature⁶ and granularity of the hedge fund's investor base relative to the fund size, to ensure the percentage of the fund held by any investor, including the FoHF itself, is not too large so they can redeem without impacting the hedge fund's price and operations.

Investment Administration

The varying mandates of the funds under management require asset managers to maintain defined portfolio management objectives while meeting specialised operational and reporting requirements. Fitch reviews the methods, systems and controls surrounding the processes designed to ensure compliance with these requirements. Its assessment focuses on:

- Investor reporting;
- Cash and currency management;
- Subscription, redemption administration;
- Holdings administration;
- Fund administration and accounting; and
- Valuation.

Client communication and reporting forms an integral part of investment administration. Fitch evaluates the organisation's capacity and willingness to offer a high degree of transparency in all its communication to investors: prospectus, fund reports, fact sheets, newsletters and marketing materials. The agency expects formal communication in the event of changes to processes, portfolio managers or risk profile and a production procedure that is independent of investment management. Modern communication typically entails internet access for both retail and institutional investors. Portfolio reporting will be a key area of focus, and Fitch does not only assess scope, coverage, frequency, timeliness and accuracy, but also reviews the full portfolio allocation and position disclosure. Disclosure of the portfolio should also disclose risk parameters, such as a comprehensive set of appropriate market risk indicators depending on strategies covered, including risk factors such as those identified in the table in the previous section.

All reporting is expected to give a clear picture of the product's risk/return profile, downside risk, strategy allocation, market exposures and sensitivities, diversification features, underlying hedge funds invested, as well as fee structure and the basis for its calculation. It also includes a complete manager comment to offer investors a sound understanding of the performance achieved and the contributing factors.

Fitch's evaluation of the administrative and operating environment for the rated FoHF manager is twofold: it assesses both operational security and the extent to which the portfolio management staff can remain focused on their primary objective - effective investment management. Among others, the agency appraises the procedures and systems in place for cash management, investment guideline monitoring, NAV controlling, currency hedging, estimated prices and equalisation procedures, performance fees controlling and order management. More generally, Fitch looks for operational environments that streamline operating processes in an effective and secure manner.

Technology

Technological resources and the systems that are central to fund of hedge fund management, risk monitoring and administrative functions are assessed. Fitch examines an inventory of these systems, which details their primary functionality as

⁶ FoHF investors may typically include institutional investors, high net worth individuals, other FoHF and structured products with deleveraging risk

well as their coverage and automation, and benefits from on-site demonstrations of key applications. Fitch’s ultimate aim in assessing the organisation’s technology resources is to determine whether they match the company’s needs, as determined by its current and projected volumes in terms of number of hedge funds invested, investment universe and trading activity.

Targeted and efficient tools are central to investment management. In particular, the quality of portfolio monitoring and decision-making tools can significantly affect decision-making. Fitch therefore examines the breadth of the portfolio management tools, paying special attention to the way they are maintained and refreshed. In addition, the agency explores the functionalities and flexibility of these tools, with a strong focus on their capacity to adequately cover FoHF specificities with regard to portfolio modelling, performance and risk analytics. The agency also assesses the degree to which such tools provide coverage of the relevant asset types beyond hedge fund themselves (futures, options, currency forwards...) if relevant in the specific context of the FoHF manager being reviewed. Fitch focuses particularly on the efficiency of the position keeping and order management procedures offered by the applications in place, as hedge funds are administratively fairly complex vehicles due to their notice periods, partial reimbursement, equalisation factors or shares, and so on. In addition, Fitch evaluates whether investment professionals have access to all the market sources deemed necessary to reach well-informed investment decisions. This is particularly important for hedge fund selection and monitoring, which require access to fund and index databases, efficient data cleansing process and consistent classification rules for both invested funds and the wider investment universe.

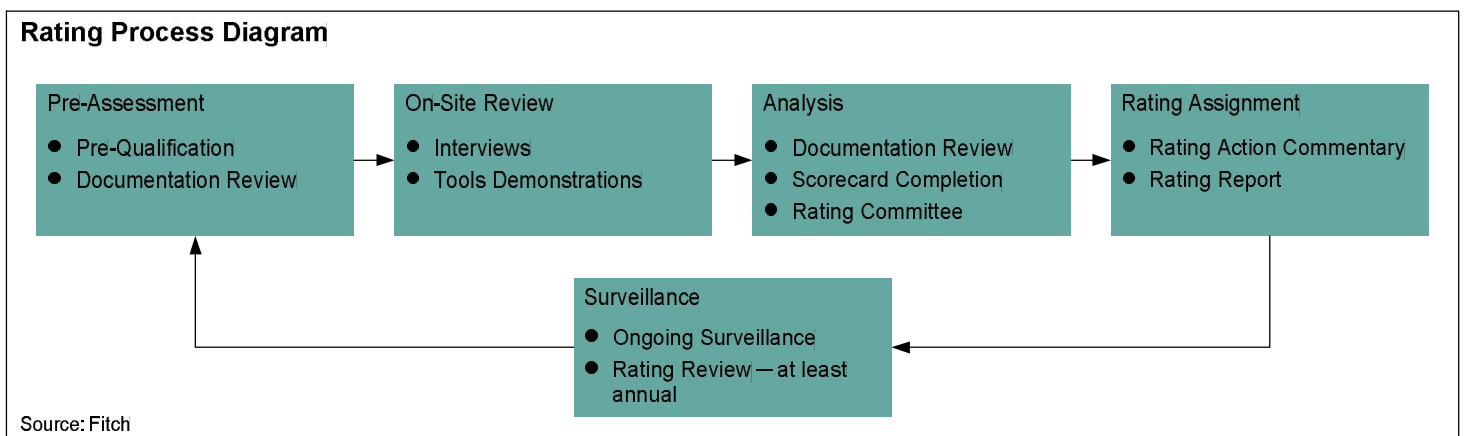
Beyond the quality of individual systems and databases, Fitch will also focus on the level of integration achieved between those components and external applications to achieve an acceptable level of efficiency, accuracy and, ultimately, scalability. Easy, secure and rapid access to data is becoming a competitive advantage. Data management and administration across the organisation will also be evaluated, with a particular focus on minimising operational risks while maximising efficiency.

Rating Process Overview

Fitch’s Asset Manager Rating review process is designed to assess relevant information, consistently apply criteria and uniformly disclose the agency’s rating rationale. The process incorporates five stages, as illustrated in the diagram below and described in the following section.

Pre-Assessment

Fitch utilises pre-assessment measures to determine whether it believes the asset manager can provide sufficient information on the following points to allow Fitch to proceed with the rating analysis:



- Can the asset manager demonstrate the sustainability of the investment services provided to investors, based on the following considerations: financial viability of the organisation; business model; asset- and product-related risks; experience of the organisation; level of external and internal oversight; and third-parties connectivity?
- Is the asset manager willing to disclose relevant non-public information to Fitch such as investment team background, research reports, meeting minutes, risk analysis and reports? It should be noted that the provision of non-public information to Fitch by the asset manager, as well as the use that Fitch may make of it, are covered by the agency's Code of Conduct and related policies, available at www.fitchratings.com.

In addition, prior to the on-site review, the asset manager being assessed is asked to provide a set of documents - as per the typical example in *Appendix 3* - designed to capture organisational, financial, operational and portfolio and personnel-related information. This information is reviewed to create a targeted agenda for the on-site review.

On-Site Review

The on-site review serves to assist Fitch in understanding the organisation's processes and controls.

It typically consists of interviews with executive management, the senior management of the different functional groups and their staff - typically in the areas of portfolio management, research, middle-office, back-office, IT, reporting, audit and risk control. In addition, the agency is given system demonstrations.

Analysis

Fitch uses an ordinal scoring approach to evaluate asset managers. This approach facilitates the consistent application of the methodology while minimising subjective variations in scoring qualitative characteristics. This is accomplished through the use of a scoring guide that defines all score levels for each factor within Fitch's analysis. Each factor is assigned a relative weight within the grouping of factors to generate group scores for all five main criteria, which are also assigned relative weights to determine the overall Asset Manager Rating, on a scale of 'M1' to 'M5', with 'M1' being the highest rating (see *Ratings Definitions* in *Appendix 2*).

Points awarded for most factors in Fitch's analysis are based on relative assessments considering standard and best practices, and comparison among rated asset managers. Some involve the awarding of points based on numerical measures or rank among peers, while others are based on the relative strength or merit of a quality or condition. The weighting of the factors represents Fitch's estimate of the relative importance of a factor within the related category based on the collective judgement of the agency's senior analysts. The factors, weightings and asset manager-specific analytical conclusions are aggregated by Fitch in an internal scorecard application. An abstract of this scorecard can be found in *Appendix 1*.

Together, the scorecards and scoring guides developed by Fitch serve as conceptual tools that ensure the consistent application of the rating methodology. However, like any tool with fixed parameters, scorecards are not perfect and Fitch does not, therefore, rely solely on a measurement on the scorecard; the circumstances of individual asset managers are also considered. Qualitative input from members of the rating committee will serve as the defining input in the assignment of the final ratings. Ultimately, rating decisions will be guided by the rating definitions in each of the five rating categories.

The rating committee, composed of on-site visit attendees and other senior analysts, validates the scorecard results and rating rationale, and determines the rating.

Ratings Assignment

Upon committee approval, the ratings will be issued via a rating action commentary - that includes the key elements of the rating rationale - followed by a rating report, all published on the agency website, www.fitchratings.com, which is freely available. The reports provide a profile of the company and personnel, processes, resources and operations and a summary of the scoring and rating rationale.

Surveillance

All Asset Manager Ratings are updated at least annually with ongoing monitoring and surveillance. Topics covered through this ongoing monitoring primarily include:

- corporate activity;
- staff evolution;
- assets under management; and
- major projects underway.

Appendix 1

Excerpts from FoHF Asset Manager Scorecard

Category	Score				
	1	2	3	4	5
Company & staffing					
Shareholding and financial standing					
Experience as FoHF manager and asset structure					
Corporate independence/governance					
Team structure and segregation of duties					
Executive management					
Investment professionals					
Risk and other supporting staff					
Weighted rating					
Fund/manager selection					
Hedge fund sourcing					
Hedge fund selection					
Operational due diligence					
Weighted rating					
Portfolio and risk management					
Portfolio construction					
Hedge fund monitoring and disposal process					
Portfolio risk monitoring					
Liquidity risk management					
Weighted rating					
Investment administration					
Reporting and communication					
Administration					
Weighted rating					
Technology					
Portfolio & risk management systems					
Middle- and back-office systems					
Data management and level of integration					
IT security					
Weighted rating					
Source: Fitch					

Appendix 2

Asset Manager Ratings - Definitions

Fitch Ratings' Fund and Asset Manager Rating Group publishes ratings of asset management activities for the use of institutional investors, all of which are internationally comparable. The agency issues Asset Manager Ratings to provide investors with an independent assessment of an asset management organisation's vulnerability to operational and investment management failures.

Among others, these failures can take the form of:

- mismanaged risk budget;
- excessive counterparty risk-taking;
- fund closure and/or fire sale due to miscalibrated liquidity or asset liability risks;
- illegal or unethical market practices (price manipulation, unfair dealing, insider trading);
- poor investment oversight leading to major style drift or run-off portfolios;
- inconsistency in investment decision-making leading to material financial losses;
- valuation, settlement/payment or subscription/redemption errors;
- miscommunication; and
- business disruption (for operational or financial reasons).

The ratings are issued on a five-tier scale of ('M1' - 'M5'), with 'M1' being the highest rating. The agency may further differentiate ratings with plus (+) and minus (-), as warranted by the scores achieved. The agency may change or withdraw a company's Asset Manager Ratings at any time based on information garnered from reliable sources, the agency's surveillance data and regular updates provided by the asset manager, or because of lack of information provided by the manager.

The agency assigns National Asset Manager Ratings to asset management companies operating in countries where, for some rating factors, a comparison with international standards is irrelevant. Those factors are evaluated taking into consideration local specificities. National Asset Manager Ratings, which display a special identifier for the country concerned, eg 'M3(mor)' for Morocco, are comparable only to National Asset Manager Ratings assigned in the same country.

Limitations of the Asset Manager Rating Scales

Specific limitations relevant to the rating scales applied to asset managers include the following:

- The Asset Manager Ratings relate to specific operational units and specific geographies within an asset manager – they do not necessarily relate to legal entities.
- The ratings do not predict a specific likelihood of asset manager failure over any given period.
- The ratings do not opine on the market value of any asset manager's investments, or that asset manager's own securities, or the likelihood that these values may change.
- The ratings do not opine on the liquidity of the asset manager's investments, or that asset manager's own securities.
- The ratings do not opine on the suitability or otherwise of an asset manager for investment or any other purposes.

- The ratings do not opine on any quality related to an asset manager's business, operational or financial profile other than an observational opinion on its operational strength in a limited number of areas.
- The ratings do not opine on the investment strategies implemented by the asset manager.

Ratings assigned by Fitch articulate an opinion on discrete and specific areas of risk. The above list is not exhaustive, and is provided for the reader's convenience.

Level 1 Rating - 'M1' - Superior

Asset manager operations demonstrating the lowest vulnerability to operational and investment management failure.

Level 2 Rating - 'M2' - Strong

Asset manager operations demonstrating low vulnerability to operational and investment management failure.

Level 3 Rating - 'M3' - Adequate

Asset manager operations demonstrating limited vulnerability to operational and investment management failure.

Level 4 Rating - 'M4' - Weak

Asset manager operations demonstrating elements of vulnerability to operational and investment management failure, including heightened risks regarding the match between the organisation's current and near-term competencies and its ability to adequately meet its business and investment management objectives.

Level 5 Rating - 'M5' - Deficient

Asset manager operations demonstrating material vulnerability to operational and investment management failure.

The organisation may, for example, have deficiencies in the infrastructure required to meet its business and investment management objectives; available financial information disclosed to Fitch may indicate uncertainty as to the organisation's ability to remain commercially viable over the following 12 months, or be insufficient to form a judgment on financial condition; or other management, risk control or operational practice deficiencies may be indicated.

Appendix 3

A typical Operational and Legal Due Diligence on Hedge Funds *Asset Management Company Organisation*

- Capital structure
- Business model and viability
- Development history: partners and portfolio managers' involvement, product launch, soft or hard closing of funds
- Investor base: diversification, stability, "hot money"
- Corporate governance

Legal

- Regulatory framework
- Third parties involved and nature of the relationship: prime brokers, administrators, custodians, auditors
- Fund structure analysis: fees, classes of shares, side letters, side pockets, subscription and redemption conditions

Staffing - Portfolio Management, Risks and Operations

- Experience
- Adequacy, any key-man risk
- Involvement in other commercial or business activities
- Segregation of duties, accountability and independence
- Historical changes
- Incentive policy

Procedures and Control Environment

- Compliance: conflicts of interests, insider trading
- Operational procedures and documentation
- Procedures and documentation on transactions
- Procedures and documentation on transfers: cash transfer, fees, investors' transactions
- Relationship with third parties: selection and monitoring
- Procedures and monitoring for counterparty selection
- Investment guidelines
- Funding policy

Valuation and Pricing

- Identification of "hard-to-value" instruments, pricing sources, pricing models, controls
- Independence and competency of decision-makers: pricing agent, valuation committee, counter-valuation
- Transparency on valuation

Operations and Technology

- Adequacy of tools used at the front, middle and back office given instruments covered and volumes
- Matching and reconciliation procedures with prime brokers and administrators
- IT security.

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