

# KEY TECHNOLOGY CONSIDERATIONS FOR HEDGE FUNDS

Examining the business and technology issues facing a hedge fund when selecting their software solution.



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## KEY TECHNOLOGY CONSIDERATIONS FOR HEDGE FUNDS

### TAKE-AWAYS

In this document Linedata uses its experience in working with hedge funds of all sizes across the globe to establish the criteria to be used in assessing the suitability of a technology vendor and solution for their business. Key areas for consideration are:

- Does the product support for alternative strategies, including full asset class coverage, full product lifecycle support, real-time P&L, strategy attribution and trade allocation?
- Does it provide operational control over multi prime workflows, including an understanding of how the system consolidates and presents information and the provision of auditable data trails and consistent views?
- Can the vendor support your business: Are they financially stable? do they have the staff and operational infrastructure to provide a service which truly meets your current and future needs?

### INTRODUCTION

Selecting investment management software can be a confusing task and the importance to your business is often overlooked in the early days. The wrong decision can lead to increased costs in the medium term and, potentially, levels of operational risk that investors will find hard to swallow. This document aims to highlight the key areas of concern and provide a framework for selection due diligence for both start-ups and established hedge funds who are reassessing their software requirements.

Any selection process should start by mapping the workflow needs of the business; a good system should aid the desired workflow. All too often decision makers will have a particular focus, be it trading and front office needs or operational considerations. However, a balanced view is preferable to avoid unnecessary oversights which may hinder a business's ability to raise capital in today's climate.

This document considers the technology challenges facing a hedge fund in three different ways:

1. the technology requirements needed to support alternative strategies
2. the technology issues associated with operating in a multi-prime environment
3. the challenge of supporting your business.

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## SUPPORTING ALTERNATIVE STRATEGIES

### Asset Classes

For the hedge fund of today, assessing the suitability of a vendor and their software is more complex than ever before. One key area is how well the system supports alternative strategies.

Regardless of the strategy with which a fund is labelled, the asset types traded within it are many and varied. Long / short equity portfolios were once straightforward to support; they would trade listed equities, some index futures and options, and perhaps some CFDs or swaps for access to restricted markets or for tax efficiency. Nowadays, credit derivatives and CDS are often used as hedging tools within long / short equity funds. Systems need to have a full asset class coverage, as anything less will limit your strategies.

The multi prime arrangements commonplace today can lead to securities being traded or given up to multiple locations. The issues of allocations and financing methodologies then arise. There is little standardisation amongst derivative or synthetic products and each prime broker has a proprietary way of addressing resets, financing terms, dividends and realised gains / losses. In order for any system to report accurately on cash, counterparty exposure and financing costs, each of the available methodologies needs to be supported. Increasingly, portfolio managers need to assess the true cost of running strategies, and net the costs associated, be they stock borrowing charges or swap financing or rebate fees back to the P&L of the underlying positions. It should not be underestimated what a challenge this is for any hedge fund solution; few can support it and those who can have a real edge in today's market where transparency is paramount. Systems which are not able to truly support the product lifecycle, from initial trade capture through all the various events such as resets, assignments, partial unwinds and eventual closure, tracking the impact on cash and collateral at each

stage, will leave a manager with real issues understanding exactly where he stands on a day to day basis.

### Interrogating Profit & Loss in Real Time

Critical to any hedge fund is the flow of information between the front office and the back office. Hedge funds will invariably have an eager eye on costs, and will need to understand what goes on in the back office, as it can be a significant source of operational risk. This has to be looked at on a consistent basis across the business. Disparate systems for trading and accounting are a real source of such risk and platforms which reference a single book of records, for trading, positions and P&L can keep this risk to a minimum. Time consuming, onerous reconciliations between front office reports, and the numbers generated for the fund by the back office can and should be eliminated to optimise operational efficiency.

Understanding P&L is another key area where technology can help investment managers to maintain an overview of their activity. Visibility of the full break down, in real time, of the factors contributing to your P&L is essential. Whether returns are coming from intraday price or currency movements, associated income, or accruals should all be visible on the manager's desktop from the moment they pull the trigger.

In addition, the high levels of market volatility we have seen due to recent events has highlighted the need for real-time reporting. Attempting to maintain control through turbulent trading sessions with outdated views of your portfolio is simply not good enough and a lack of real-time transparency can no longer be justified. Systems must be able to support streaming data and the FIX protocol to display the impact of trade executions on a fund's risk and return profile the moment they happen.

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### Strategy Attribution and Trade Allocation

Alternative investment strategies are typically combinations of positions, from the simple pairs trade to more complex structured positions with various derivatives employed to strip out credit and interest rate risk; all have to be placed into buckets in order to monitor the net returns. Any hedge fund solution worth its place in today's market must provide a flexible business hierarchy for bucketing trades, related cash and therefore risk and returns. Historically, this was not such a challenge for a fund using the single prime model. The multi-prime fund, however, complicates matters considerably. Systems need to provide multiple views of the same funds. Take, for example, a large short position in a specific name; to facilitate the borrowing required to cover the short, several primes may have been used and the position constructed from allocations, both physical and synthetic, held in several locations. Once the position has been established, portfolio managers are concerned with the net portfolio position and the resultant returns. The back office, however, need to reconcile positions and P&L on a secondary basis. The "real world" view, or prime broker account level view may vary considerably from the net portfolio view. How systems treat this discrepancy must be understood. Contract-based instruments employing FIFO accounting methods will order trades differently at account levels to the net portfolio view. Reconciling the two can be extremely onerous and time-consuming.

A further complication is trade allocation. The multi-prime model requires a fund to decide how to allocate trades between its primes. When should it split a trade across its prime brokers? Which position should it unwind first? And on what grounds? Related borrowing or financing costs should be visible to the managers at all times in order to make decisions in the best interest of its investors. A platform which cannot offer this functionality should be questioned in today's increasingly transparent market.

### ACHIEVING OPERATIONAL CONTROL IN A MULTI-PRIME ENVIRONMENT

In the not-so-distant past, the typical hedge fund would probably have launched with and sustained a single brokerage relationship. The prime broker provided safe keeping of the fund's assets but also a range of services, including clearing, settlement and securities lending. The single prime would have complete oversight of the fund's trade and position data and therefore serve as the logical source for data on cash balances, risk exposures and financing charges against which to reconcile.

The collapse of Lehmans and Bear Stearns in 2008 meant that almost overnight, hedge funds could no longer entrust their assets to any one prime broker, no matter how big or well-established. Multiple prime broker relationships became the standard and investors focused their attention firmly on counterparty risk. Quantifying counterparty risk was made all the more tricky as many hedge funds had their assets re-hypothecated, where they would be loaned by the prime broker to other organizations whilst still serving as the funds collateral. Investors now demand funds diversify their counterparty risk and many gain transparency through separately managed accounts. The necessity to have an accurate understanding of the multiple relationships funds maintain is the key issue. There is a need to collect and aggregate position data, cash balances, financing accruals and trades in a timely manner.

An alternative source for consolidated information is the third party administrator. They are perfectly set up to consolidate multiple prime broker data as they are already required to do so as part of the regular end of month Net Asset Value reports. However the downside for the hedge fund manager is that these processes are not as quick or as timely as they may require. As institutional investors pay ever closer attention to the operational processes employed by a fund, any lack of timely process in aggregating position data is no

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longer acceptable to the due diligence expert and funds need clear visibility at all times.

In light of these issues, a good hedge fund platform operating in a multi-prime environment should perform the following:

- Trader position look-up for appropriate allocation of trades to multiple prime broker accounts.
- Consolidated reporting tools to present data from across the multiple prime brokers.
- Prime broker connectivity, a secure and encrypted process in which to transmit trade and position data in the format prescribed by each prime broker.
- Exception-based reconciliation of the fund's own records of trading activity with those kept by its multiple prime brokers and third party administrator. Without the use of specialized technology, the process of matching the fund and prime broker records and then identifying discrepancies - particularly in the multi-prime environment - can become a time-consuming and tedious task. Integrated exception processing is required.
- Ability to accrue for the various styles of product financing employed by the prime brokers. Products vary significantly in their lifecycle between prime brokers and as no standard exists, flexibility to cope with the differences falls upon the technology in place. Efficiencies can be gained where financing rates and charges are visible and transparent to the manager.

## SUPPORTING YOUR BUSINESS

Assessing the ability of a vendor to support your business is vital as this can also be a source of considerable operational risk. Funds should carefully consider who they are buying from and whether the vendor has the core competency to not only implement the system and support the needs of the

hedge fund, but to continue to invest in and release new functionality. Referrals are valuable but decisions should not be based on this alone.

Over the past three years we have seen a rash of acquisitions in the market that have impacted the support and focus of technology providers. You should consider whether your technology provider is likely to be in a position to continue to support your business and whether they have the financial stability to remain a viable solution provider in the years to come.

Funds need to ensure that their vendor has sufficient support and backing such that their considerable ongoing investment in the system is secure. The people behind the solution are also important. When hedge funds buy a solution they need to evaluate not only the system and its ability to operate efficiently according to their business model, but also the solution provider's people, their expertise in the hedge fund market and their ability to deliver.

This is increasingly important with respect to the level of support firms provide. Firms operating in a single geographic region often provide single region support. While that may be suitable for some, increasingly we are seeing demand for 24/6 support by local staff, deploying a 'follow the sun' approach.

A further consideration in selecting technology is the time available to manage the vendor relations and the sometimes complex integration of various systems. There are three schools of thought in the market space on this issue. One says that you should bring in and manage multiple vendors, each one the best possible fit for that part of your business. This option may deliver good solutions but at a price: a large vendor management commitment and increased overheads, repeated each time each system is upgraded and interfaces must be renewed. The second says it is best to manage this technology provider overhead by leveraging a single vendor that can provide a full service.

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This may offer solutions across all the business with hugely reduced vendor footprint and a relationship that can be sustained and built upon. The third option is to build in-house, which enables you to design a system to fit, but implies reliance on an increased development and IT resource and a time-lag for completion.

Whether selecting for the first time or reviewing your existing technology, unless your business has a clear and simple workflow model, whilst you may have a key technology partner in place for most systems, it is unlikely any single vendor can meet every one of your requirements. Your technology solution needs to allow easy and logical integration through an open and standard interface, particularly as multiple vendors and service providers and in-house application development may be deployed as your business becomes more sophisticated.

Until recently hedge funds have always shown a degree of reluctance in adopting outsourcing solutions, primarily due to concerns over privacy and flexibility. However, as solutions have advanced to meet the demands of managers using the multi-prime model and with transparency

high on the agenda, some compelling reasons for outsourcing now exist.

Outsourcing can take several forms, from the simple IT infrastructure hosting or ASP services available from the specialist vendors to a full business process model. Middle office platforms can offer a variety of business process workflows in addition to hosted technology. Many of the third party fund administrators looking to differentiate themselves are now offering some form of outsourcing, from straight technology hosting through to full post-trade business management.

A key consideration for any outsourced or hosted platform is the security and privacy offered. The physical security of the data centre, 24/7 monitoring, as well as CCTV and digital surveillance are all issues to be covered by both your and your investors' due diligence. Any complete offering should include full redundancy and high availability of the infrastructure for seamless business continuity and should cover back up power supplies and multiple network providers. Hedge funds whose very existence depends on managing risk in volatile markets need to know, in the event of disruption that it is business as usual.

## CONCLUSION

In conclusion, the choices for a hedge fund are endless and often confusing. Taking an analytical approach to ensure a solution meets the specific needs of your strategies and your funds will serve you well. The challenge for the vendors, service providers and hedge funds alike will be ensuring solutions are sufficiently flexible to deliver the functionality required while satisfying the future demands of both investors and the shifting regulatory landscape. Ad-hoc investor requests, overnight regulatory restrictions have to be considered.

The key to success is a concise mapping of your current workflow in conjunction with a clear view of your business direction. You will then be in a position to ask the right questions to ascertain how technology can best support you on your journey.

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### About the Author

Richard Pascoe is a Hedge Fund Product Specialist for Linedata Services, part of the team responsible for the formulation of product strategy. Richard has over 12 years experience in the alternative asset management industry, and as a hedge fund operations specialist, has spent the past 5 years at Linedata working closely with many of the leading hedge funds in Europe and Asia.

### About Linedata

Linedata is a global solutions provider with 700 clients operating in 50 countries. With more than 840 employees across the globe, Linedata is dedicated to the investment management and credit community. Linedata has been at the service of the financial industry from day one, and applies its market and client insight to provide innovative and tailored mission-critical software and services that help its clients grow. As a pioneer for over 10 years with the set up of ASP infrastructure for the financial industry, Linedata has preached and spread this model throughout the global financial community, for its full range of products. Headquartered in France, Linedata achieved revenues of EUR 144.5 million in 2009. This company is listed on Euronext Paris FR0004156297-LIN - Reuters LDSV.LN - Bloomberg LIN:FP.

### About Linedata's Hedge Fund Solution

Since Linedata acquired Beauchamp Financial Technology and its suite of hedge fund solutions in 2005, we have been committed to the hedge fund market and that commitment continues today. We invest in products and in people to ensure that we both meet and anticipate the technology demands of this market, working in partnership with our customers, industry bodies and other stakeholders to create innovative and cost effective hedge fund solutions.

Today, Linedata supports more than 300 hedge funds globally. Linedata's Hedge Fund Solution is a comprehensive offering catering to multi-currency, multi-asset class, multi-prime and multi-strategy investing. It encompasses order and portfolio management, industry-leading pre- and post-trade compliance monitoring and full reporting functionality. It comes with a comprehensive rules library and an intuitive rule-builder, full trade order management capabilities with portfolio modelling and advanced rebalancing. At the heart of this unique package is our award-winning portfolio management software, enabling sophisticated tracking of product and counterparty financing plus accurate NAV estimation to both reconcile with and monitor third party administrators.

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