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Torvald Bohlin assesses ways to save on brokerage p9



CASE STUDY
HFT exclusively details the IT deployment at Discovery p5

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INFORMATION TECHNOLOGY FOR THE ALTERNATIVE INVESTMENT MARKET TECHNOLOGY

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ADMINISTRATOR TAKES ON ITS COMPETITORS WITH EAGLE SOFTWARE IN TOW

Hemisphere planning outsourcing solution

Hedge fund administrator Hemisphere is adding a range of software applications to its technology platform, h-EDGE, allowing clients to effectively outsource their entire front to back-office IT capability. The company, which was acquired by Bisys in March 2002, has hired Eagle Investment Systems to provide its products; Pace, Star and PT-Plus, which will be implemented during the third quarter of 2003.

Stephen B. Hixon, managing director of Hemisphere Financial Services, said: “we have just reached agreement with Eagle Investment Systems to use their three software applications, and these will form a large part of our new hedge fund technology platform. In addition to this, we have also developed a number of applications in-house which will give existing and new clients a range of value added services.”



Hemisphere's Stephen Hixon

Hixon explained the enhanced platform will offer advanced capabilities that support straight through securities processing, reconciliation, pricing, daily P&L reporting and flexible web-based reporting. “Hemisphere’s securities processing capabilities were lacking, but we are greatly enhancing this so we can provide services to a much broader array of

strategies,” he said.

“On the reporting side, at the moment it is NAV calculations and no daily reporting. But we are finding that more and more funds are looking for their data to be aggregated and presented in a much better format.”

While potential clients of Hemisphere’s service can expect a complete technology package of trading, risk management, accounting and reporting, Hixon said those who are happy with their existing front-end will not be forced to adopt new technology. “Our take on the market was, did clients want us to force solutions on them? We wanted them to be able to use whatever front-end trading and risk management software they like, be it Beauchamp, Charles River or whatever. They can use a variety of solutions and our platform will integrate with them.

“We decided Eagle had the best products for a platform like this. They are browser-based and highly scalable so they can handle high volumes in trading and large numbers of users.”

h-EDGE comes on the heels of a similar development from one of Hemisphere’s main competitors, Citco Fund Services, which launched an outsourcing service in October, called Aexeo. Citco’s said its premium package “aims to virtually eliminate a hedge fund’s need to maintain expensive in-house service and technology infrastructures”.

FUND LAUNCH

First islamic fund built on in-house IT

A custom piece of back-office technology is at the core of the world’s first Islamic hedge fund, due for launch in the first quarter of this year.

The software will allow Shariah Fund Inc’s fund of hedge funds to ensure companies invested in are compliant with Shariah law, which until now has made shorting impossible in Islamic products. It will be used to analyse all securities invested in by

the underlying hedge fund managers, applying multiple financial and industry tests to ensure stocks do not break Islamic law.

It will also be capable of analysing tens of thousands of stocks a month if necessary, according to Dauvin Peterson, vice-president of Shariah Funds Inc and head of software development. “This is a huge departure from (continued on page two)

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▶ Management Quality (MQ) ratings of hedge fund administrators could become a fixture in the industry over the next two years, after the first report of its kind on such a firm sparked a wave of interest. Custom House Administration & Corporate Services received a Baa1 MQ rating from Moody's Investor Service in December and, according to Vania Schlees, a spokesperson for Moody's hedge fund administrators are starting to take them seriously.

"The reason for creating a procedure like this is people were often asking us for a qualitative rating of an asset manager, custodian bank or an administrator. Once we had carried out the first for Custom House, we had many more enquiries, including one from a hedge fund administrator in Ireland."

Schlees added the product is not specialised to hedge fund administrators, but it looks at the organisation of a company, its IT infrastructure, how departments work and what communication to management is like. The goal is to iron out any problems and ultimately improve the way the company operates.

MARKETING TOOLS | MULTI-NATIONAL MANAGER RAMP UP CRM CAPABILITY

Oaktree implements interaction software

Oaktree Capital Management, has selected the supplier Interface Software to support the firm's strategic CRM (Customer Relationship Management) initiative.

It will deploy Interface's InterAction 5 solution to provide sales support to its marketing and client relations efforts.

Oaktree is a US-based alternative investment manager, with \$25bn of AUM, in fund strategies as diverse as equities, high yield bonds, convertibles, distressed debt, opportunistic real estate and mezzanine debt. It has offices in LA, New York, Tokyo, London and Singapore.

The solution will be integrated into Oaktree's in-house developed accounting and portfolio management systems, to deliver a 360-degree view of client activities within the firm. Ossama Ghebrial, senior vice president of information systems at Oaktree, said having a single point of access to its relationship "intelligence" is critical to support marketing and client relations.

"When our marketing representatives call on clients, it is critical that they have the ability to view their clients' existing investments, as well as new opportunities that they might be interested in," he said. "It was difficult pulling this information together without a user-friendly system."

Oaktree chose the solution mainly because it is browser-based. Ghebrial said this enables executive-level staff among the firm's 255 employees to gain easy access to a repository of relationship information, "such as who knows whom and specific deals that clients have been involved with in the past," he said.

Secondly, the software has extensive integration with Microsoft Outlook, alongside which, InterAction 5 automatically synchronises outlook contacts with a centralised knowledge base.

A final point was the software's data change management tools and data quality, which allows dedicated staff to manage the process for keeping it clean and up to date.

CONTINUED FROM PAGE ONE...

First islamic fund built on in-house IT

previous Shariah compliance systems which have seen Islamic scholars looking over spread sheets on a quarterly basis," he said.

"In most cases Shariah compliance will be determined by the fully automated system, but where there is room for debate over a stock Shariah scholars will be asked to review the company and decide if it is compliant. This could occur for example if a hotel chain meets all the financial tests but fails industry tests because it serves pork on the menu."

The software has been developed by Carnegie Mellon PhD candidate Yuriy Nevmyvaka. He has worked on systems for financial markets with CSFB as well as in the field of artificial intelligence. It will be used exclusively by Shariah Fund Inc's fund of hedge funds initially and may be used on up to four more Islamic products the company

plans to launch – the first of which will be a venture capital fund.

In the future Shariah Funds Inc plans to offer the product to similar houses looking for customisable, automated back-office systems for a Shariah fund.

UPGRADE

Trema updates Finance KIT system with new version 6.0

Finnish software supplier Trema Group has launched an updated version of its Finance KIT solution. Version 6.0 incorporates a unique API and "plug and use" interfaces, enabling users to connect with external production and distribution systems providing more scalability while minimising maintenance and costs.

EDITOR'S NOTE

"A slow period over the festive season has been replaced by a rush of activity in the sector. The use of technology is becoming a key component among many new fund launches, which goes to show managers are viewing IT as a serious advantage."



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FUND LAUNCH | SUPPLIER SPILLS THE BEANS ON AXA'S CONVERT ARB PLANS

AXA IM hires Sophis

AXA Investment Managers' Structured Asset Management division (SAM) has opened a convertible arbitrage fund in Dublin, using technology from Paris-based Sophis.

The supplier announced the launch of AXA Vega in a release last December, however, *Hedge Fund Technology*, has discovered AXA IM planned against any publicity in anticipation of unveiling the product early this year.

A spokesperson at AXA IM played down the release, adding that AXA Vega has already begun trading, albeit with seed capital only.

Sophis' VALUE front and middle office software will cater for all of AXA Vega's front and middle office activities. Olivier De Lamotte, head of convertibles at AXA IM added plans are underway to extend the technology to all of SAM's businesses by Q1 2003, including index funds, structured funds and credit arbitrage.

"We needed sophisticated tools in order to comply with increasing demands from investors and regulators," he said. "When we started working with Sophis, we were looking for a reliable and secure system that would enable us to centralise all our data in an application providing a single database. VALUE offers real-time valuation of all risk indicators and Net Asset Value calculation, comprehensive risk reporting and flexibility

to integrate proprietary financial models, thanks to the financial toolkit. This is the most advanced product we have found both for alternative and traditional investment activities and we plan to extend it's use to all SAM's activities by Q1, 2003."

Hervé Vinciguerra, chairman of Sophis, added. "The relationship we have developed with them has enabled us to gain in-depth knowledge of the specific needs of investment management and to propose a very innovative and high-quality system, which has received very good feedback from the market."

Upgrade to convertibles database

Meanwhile, Sophis has released a new version of its pricing library for convertible bonds, Convertibles On-Line. The supplier said the upgraded version includes enhanced analytics, "as well as the latest novelties in convertibles pricing; Partial Differential Equations (PDE)". The database now covers over 2,000 international convertible bonds, from all European countries, USA, Japan and South-East Asia.

Sophis said the use of PDEs is a step forward in the convertibles market "as they provide higher flexibility to take into account all the events in the life of a derivatives underlying, and ensure more accurate pricing and Greek indicators."

► IFX Group is to launch a new back-office system aimed at small to medium-sized hedge fund managers. The technology has been described as a true 'click and deal' system enabling trades of forwards and options. The supplier is tight-lipped with regards to the launch, but said an official announcement will be made in early March. It is thought the launch will put IFX Group in direct competition with prime brokers.

► Lehman Brothers' Global Prime Brokerage is incorporating RiskMetrics' risk reporting tools into its technology platform. The software, RiskManager, will generate strategy-based end-of-day risk, exposure, stress test and liquidity reports that will be made available through LehmanLive, the bank's web portal. Also on offer will be access to the software's interactive intra-day functionalities on an independent web platform, to support hedge fund, fund of funds and investors' risk aggregation activities.

► Charles River Development and TradeWeb have joined forces to develop a front-to-back-office fixed income trading solution. The two firms are combining their software to produce a solution which will eliminate re-keying of data at various points in the order and execution cycle. An initial user of the solution will be Putnam Investments, whose managing director, William Sullivan said: "by linking their systems TradeWeb and Charles River are providing benefits in terms of time savings, error reduction and increased operational efficiency. Now, investment managers will be able to originate a fixed-income trade in an OMS, seamlessly route it electronically for execution, receive and electronic confirmation back in the OMS and conduct paperless trade allocations and settlement without re-keying data."

EXOTIC INSTRUMENTS

Suppliers release new futures tools

FutureFirst Software has upgraded its back-office hedge fund software to include support for single stock futures.

The supplier's suite of products; Trader's Accountant, Daily Tracker, Pool Accountant and Propogator have all received an upgrade to support the instruments, which only began trading on November 8, 2002.

"Single stock futures are an unusual product that combine the characteristics of both stocks and futures," said Terry Brennan, president of Future-First Software.

"A purchaser of one contract of a single stock future has purchased the right to receive 100 shares of that stock on a settlement date at the agreed contract price. They combine the efficiency of the futures market with the range of products available in equity markets. A single stock future behaves like a stock option when the stock splits; a single stock future becomes worth a different number of shares. All other kinds of futures contracts have a fixed multiplier, so this is completely new for futures."

Combined development

On the heels of FutureFirst are Future Dynamics

and onExchange who have launched a combined order management product called LINQX.

The suppliers said their offering is an intelligent order routing platform supporting best execution for single stock futures. They are trying to meet the execution challenges of prime brokers among others, who will need to trade these instruments across multiple exchanges at the same time. Anticipated benefits are liquidity enhancement, price improvement and offsetting for customers.

"We will use LINQX immediately to get best execution for proprietary trades and to consolidate liquidity", said Jon Peabody, president of Rock Island Index Trading. "it will enhance co-ordination of our arbitrage and in-house market-making activities on public markets."

The system facilitates price improvement and liquidity enhancement by dealers for the benefit of their customers on a fully documented basis. In addition to providing routing and execution capabilities, the system is designed to capture regulatory reporting data.

Marketing has begun, with the suppliers targeting prime brokers and firms seeking to expand their single stock futures volumes, especially those handling block trades and undirected order flow.

► Researchsummary.com has gone live with an enhanced version of its PDF-based broker research web service. RSPPro has added sources from new brokers, with the service now covering over 15,000 companies from 11 investment banks. Researchsummary is offering subscriptions to the research portal for typically \$1,000 per year for single use, with discounts for multi-users. John Thorne, chief executive officer of researchsummary.com, said, "with the implementation of new regulations like NASD 2711, we will see the acceleration across the investment industry of RIXML-based data production over 2003."

► Shore Capital, the London-based investment banking boutique, has gone live with its connection to DrKW's Bestconnect order execution system. Bestconnect has been designed to offer brokers, asset managers and institutions access to electronic execution as an alternative to telephone dealing. Shore Capital's introduction to the service will allow those groups to access its market-making capabilities in the small-cap sector. Shore Capital currently makes markets in approximately 450 smaller companies quoted on AIM and the Official List.

► Fund managers could be able to measure US-based companies' default probability more accurately after Kamakura Corporation produced a report on their predictive capabilities of models. The supplier's own probability model KDP-jc has a strong predictability, after the report found evidence garnered from 1.4 million monthly observations on 17,460 US companies over the period of 1963-1998. Kamakura is a provider of multiple default probability models which are derived on a common platform and distributed in a fully compatible and comparable way.

RISK MANAGEMENT | AUTOMATED STOP/LOSS HITS SNAG INVOLATILE MARKETS

Manual intervention needed to curb losses

Discretionary stop/loss procedures are increasingly being favoured over automated risk controls, as volatile markets have caused these strategies to get stopped out at a loss.

According to a number of fund managers, prices opening significantly lower than their previous day during October and November 2002 are highlighted as the main cause for managers to look for added flexibility.

Single strategy funds and funds of hedge funds are now being urged to view their risk on a portfolio basis and place their trust in measurements such as Value at Risk (VaR) during volatile periods.

Ted Wright, vice president of research and a senior analyst at LJH Global Investments, blames extreme intra-day volatility in markets which is continuing to some extent at present.

"Some managers have said in these types of market environment, you need to be a little more patient and either waive your stop/loss limit or be patient in investing in stocks you have a truly high conviction of. This is probably an extremely tricky

time for managers in the long/short area.

One such manager is Charles Tritton, head of alternative investment at New Star. However, he says he prefers to use manager discretion, rather than technology to manage automated stop/loss procedures. "We might use this at key chart levels, when a stock is about to break out. Of course, automatic stop/loss can be highly detrimental to a fund in a volatile market, but we use a subjective method."

VaR is becoming more widespread in the hedge fund market, with users of the measurement generally assumed at around 70-80% of funds.

But Mark Weller, head of international hedge fund sales at Reech Capital (*see viewpoint on page eight*), said it does have limitations which managers should be aware of. "Our software builds up a matrix of how instruments and markets correlate with one another. Nine times out of ten it works fine, but you can overlay that with a stress test so you can see how your portfolio will perform if that historical correlation breaks down."

SUPPLIER FOCUS

Supplier targets East Coast managers

US-based software provider, Random Walk Computing, is attempting to tap into the US hedge fund market with an expansion into new Boston offices. The firm has previously developed software for institutional traders and banks and says it now wants to help alternative investment houses catch up on their IT.

Joel Scotkin, CEO and co-founder of Random Walk Computing, said, "Most hedge funds start with a core group of very smart financial analysts and traders who set out to develop and execute advanced investment strategies. Their initial focus is almost exclusively on ROI and building their customer base.

"If they're successful, they often find that their growth rates in trading volume and accounts go way beyond their initial expectations and IT planning with all sorts of implications for systems capacity in risk management, trade flow, and client reporting. Random Walk comes to the table with the experience and the tools to help these organisations bring their systems up to the level where they can perform and grow to support the business instead of slowing it down."

Scotkin said that while clients mainly consist of mid-tier asset managers and prime brokers, the firm has customers in the alternative investment

market already, including, "one of the largest hedge funds in the US." Scotkin added, "we have completed projects for a number of others, ranging from data warehousing to risk arbitrage systems."

ONLINE FOREX

Currenex gets new CEO as competitors' sales rise up

Online foreign exchange platform Currenex has replaced outgoing CEO, Lori Mirek, with a new chief executive, Clifford Lewis.

Mirek's departure follows a wave of resignations in the past twelve months, including Roddy Boulton, Currenex's former European general manager and Karen Steele, who used to head up the firm's global marketing efforts.

Lewis joined Currenex in January and will be placed immediately in charge of the firm's aggressive growth targets in the increasingly competitive online FX marketplace.

Rivals FXall and State Street's FX Connect services have both announced large increases in trading volumes. UK research firm Client Knowledge has recently revised its estimate of FXall's daily average from \$3bn to \$4bn.

Single system to cope with fund launch aim

After breaking the news in August 2002 that Discovery Capital Management was overhauling its IT systems, *HFT* exclusively reveals details of the year-long project.

In late July 2002, \$900m hedge fund, Discovery Capital Management, decided to implement a new hedge fund risk and portfolio management system, to aid expansion of its emerging markets investment business.

After an exhaustive search, lasting almost six months and taking in nearly 70 separate software suppliers, Discovery finally selected Trema Group, and went fully live with the system, Finance KIT, just before Christmas.

Harry Krensky, Founding Partner at Discovery comments, "Discovery is a multi-asset class, multi-strategy fund, with investments in equity debt and currency markets in over 20 countries world-wide, so we needed a system with a flexible architecture to expand in line with our business.

"Our proprietary system didn't give us the flexibility to develop products with diverse strategies, and risk-return characteristics."

Preparation for expansion

Discovery's proprietary system had been developed in-house and lacked the depth of functionality and scalability the fund required as the business grew. The new solution had to be scalable enough to support the launch of new funds.

Discovery was also looking for something that could extend a standardised, more disciplined approach to risk management.

"By partnering a vendor with a good track record in the industry, as well as extensive domain expertise and experience, we were looking for both knowledge and technology," adds Krensky. "We needed to streamline our operations, simplify our systems environment and enhance functionality. It also had to be a single solution, encompassing front, middle and back office."

Extensive instrument coverage coupled with a scalable platform was the next requirement, enabling Discovery to launch new funds without continuously needing to re-engineer the infrastructure. Real-time profit and loss and risk management capabilities were of particular importance as Discovery's portfolio relies heavily on calculating its performance in a real-time environment. Similarly, limit and risk management monitoring were also critical considerations and had to be powered

by the same information flow.

While scanning dozens of software providers and evaluating each potential vendor on how closely their solution's functionality mirrored its requirements, Discovery finally opted for Trema.

According to Krensky, the choice was made in the most part for the extensive instrument coverage that it had. "It was particularly strong at processing exotic instruments such as exotic options, interest rate swaps, and structured products," he says.

"Secondly, the feature functionality of Finance KIT was more extensive than competing products and Trema is dedicated to accumulating knowledge and redistributing it to customers through its technology."

STP expectations

The entire implementation process was completed in less than four months. Trema's pre-configured database allowed rapid implementation by automatically rolling out the standard configuration work for workflows, settlement instructions and related functionality.

Discovery expects enhancements to straight-through processing, reduced need for manual intervention, simplified systems integration and access to real-time information. The new system will provide full front, middle and back-office functionality in one solution, facilitating STP and eliminating complicated interfacing. Similarly, users have only one point of information entry, so manual input is minimal. Finance KIT has real-time pricing and risk management capability, which sets it apart from many solutions on the market.

"Risk management is a core focus for our business and this new solution is perfect as it will allow us to integrate the entire investment process with our risk management strategy," adds Krensky.

Expanding its hedge fund customer base is also a core focus for Trema Group. Päivi Karesjoki, Head of the Asset Management Segment for the supplier, says, "this is a market where we see significant opportunity for growth over the next few years.

"We believe our solution, because of its focus on real-time information and seamless functionality, will capture a large portion of this market."



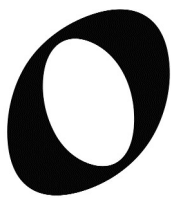
"We needed to streamline our operations, simplify our systems environment and enhance functionality. It also had to be a single solution, encompassing front, middle and back office."

Harry Krensky, Founding Partner, Discovery Capital Management



Trema Group's
Päivi Karesjoki

“Whether your fund managers decide to go to exotic island holiday locations, or just try and get a decent signal wherever they are, satellite phones solve problems and bridge communication gaps”



O N E G A

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If you can't leave the office, take it with you

Given the importance placed on mobile telecoms in modern business life, it's conceivable a cell phone failure could cost you money. Here are the failsafe options

While the red braces and fast living characterising the eighties trader may have been replaced by the more analytical and strategic execution of modern hedge fund management, it is true to say the hours and energy put in by the managers and supporting cast of successful funds is enormous. Consistent out performance does not happen by accident.

Access to information and the ability to keep abreast of the markets is paramount to being able to seize opportunities that might have small windows of opportunity. Communications technology is a key facilitator, and few funds will now be without essentials like broadband connections at home offices, allowing connection into the corporate VPN.

Besides broadband, there has been a quiet revolution going on lately in the field of satellite communications, which you may not know about. Like wealth, the gap in global telecoms between 'haves' and 'have nots' is becoming increasingly wide. While we enjoy ATM MANs powering megabit DSL connections to our homes, and resilient fibre fed leased lines, other parts of the world struggle to deliver basic PSTN infrastructures.

For example, most Nigerian business people each have three mobile phones, as their disparate networks have what can at best be described as patchy coverage, and are completely incompatible with one another.

Whether your fund managers decide to go to exotic island holiday locations, yachting beyond the comfort of the coastal waters, or just try and get a decent signal wherever they are, satellite phones solve problems and bridge communication gaps. If your only experience of sat phones is in the films, where they deploy a briefcase sized unit with a folding dish, only for the good guys to get cut off before they can say where the bomb is, then read on... you will be pleasantly surprised.

Price war is good news

You may recall last year's news, one item of which was the impending demise of the Iridium satellite network. It will come as no surprise that it costs a lot of money to launch and maintain a constellation of communications satellites and the company operating Iridium imploded given the weight of debt they were faced with.

The news was of dramatised plans to engage the

satellites in controlled re-entry, which would cause them to burn up in the upper atmosphere over the earth's oceans.

This all made a very newsworthy story, but less so was the step in by the US government, a heavy user of the network, to rescue the company and to sell it on debt free. In turn, this gave Iridium what some might see as an unfair advantage, and allowed it to profitably reduce pricing by significant amounts, much to the irritation of their equally debt laden competition, who have reluctantly been drawn into a price war. But the consumer is the winner, and satellite calls can now be made for less than the cost of a hotel phone call.

Compact solutions

The capabilities of the latest generation of satellite phones are impressive, and both voice and data services are available. Handsets are manufactured by companies such as Motorola, and while they are slightly larger than the average mobile handset, would still fit comfortably in a jacket pocket.

Units designed primarily for data use usually are of a similar size and proportion to a laptop computer, as the lid forms an integrated antenna, which allows for improved and uninterrupted communication.

As with regular mobile networks, there is a choice of data carriers. These choices include:

- ISDN services which offering a clear 64 kbps data stream.
- Mobile Packet Data Services, in which you only pay for the volume of data transferred, which are similar to the G3 GPRS networks. Bandwidth of 128/256 kbps is similar to ADSL speeds
- Analogue data service (modem) connections.

The main commercial networks are run by Inmarsat, Thuraya, and Iridium. Each has its own coverage, pricing and feature set, so the choice is dependant on your needs.

Inmarsat is one of the longest established satellite networks, having been formed as a government funded European consortium, which has now been privatised. Inmarsat's biggest user constituent is in shipping. Aboard a ship, a single satellite base can provide Internet connectivity for all the PCs aboard, as well as voice services. It can even be used to practically support video conferencing. Inmarsat supports voice (4.8kbps), ISDN (64 kbps), and MPDS (always on – up to 50 kbps, typically 17-20 kbps). Small ISDN data units are available, which provide corporate class communications on a global scale.

Betraying the military origins of the network, many terminals support encryption of the voice and data channels.

Inmarsat has just launched a new data service – Regional BGAN (Broadband Global Access Network), which provides data throughput similar to ISDN speeds, but through an always on connection, and charging just for bandwidth used. Currently the system only operates in Europe & Northern Africa, but global coverage should be achieved in approximately two years time.

The terminals are very compact, costing around £1000, and weighing in at 1.5 kgs. Data is not cheap (though it may be in comparison to a fund manager's time), typically costing £10/Mbyte, which is anticipated to drop over time.

All-in-one

Thuraya handsets offer the unique benefit of being both satellite phones, and GSM Triband sets. This way, when you are in civilisation, you can use the terrestrial mobile network – O2 (formerly BT Cellnet) in the UK, (Vodafone & T-Mobile are undergoing implementation). The switching from GSM to Satellite happens transparently, so if you move out of local cell range during a call, you will switch to the satellite automatically.

The handsets cost around £650, and you just insert your existing Sim card into the phone, and you are up and running. Pricing for Voice calls starts at around \$1 a minute.

Data is somewhat slower on the Thuraya network, being limited to 9.6kbs, which is usable, but you would want to think carefully about your strategy for minimising bandwidth use, in order to provide a rewarding user experience. Thuraya's satellites are in geostationary orbit at 45° East and currently cover over 100 countries. To conserve power, and provide good reception, the satellites dynamically focus spot beam radio beams as required, instead of providing a uniform single signal level across the satellite footprint. This innovative technique allows the same performance to be achieved as a significantly larger and more expensive system of the previous generation.

Thuraya handsets also offer GPS support, which can pinpoint your location on the planet to within 10 metres' accuracy, and this can be reported via SMS text messaging.

Abduction threat

It is a fact that, in many of the world's emerging economies, incidents of kidnap and ransom are at real and worrying levels. It gives great assurance, that in the event of a situation such as this arising, the Thuraya handset could be the difference between months of lost time and anguish; and your insurers being able to commission and coordinate an efficient extraction.

People pay a small fortune for 'tracker' systems for their cars, Thuraya allows you to protect your human assets in a similar way.

Iridium's constellation is one of the low earth orbiting satellites, which has coverage from pole to pole, and is very reasonably priced. With a simple to understand model – calls from an Iridium phone to any landline, or GSM mobile in the world are charged at \$1.50 per minute, on top of the \$15 per month standing charge, and the initial purchase of a handset at around £1250. Like Thuraya, the

handsets used by Iridium are small and very similar looking to normal mobiles, though they work exclusively with the Iridium network.

Data is supported on Iridium, either using a regular modem connection to an ISP or corporate network RAS Servers, at 2.4kbps, or via Iridium's Direct Data Connection, which runs at 10 kbps on the Internet and is therefore the preferable choice for data communications for Iridium users. The functionality of the phones and network is on a par with that of any mainstream GSM network, so you get voicemail, call forwarding etc.

If you are deploying remote, (or in some cases, very remote) data access solutions, then minimising bandwidth is an important priority. A number of technologies exist to reduce the bandwidth requirement for common applications:

- Windows Terminal Services & Citrix
- Remote Control Applications
- Web browser based software

Remote control applications vary widely in the bandwidth they require, and the native Windows RDP (Remote Desktop Protocol) used by both Terminal Services, and Windows Remote Desktop sharing are quite efficient due to Microsoft's unsurprising in depth knowledge of their own operating system.

Proprietary remote control systems such as NetSupport, or NetOps are designed to get the best possible use from your available bandwidth, and allow files to be transferred in a compressed form between local and remote machines as well as facilitating the support of remote users.

The exact choice of network will depend upon your requirements, and priority for voice and data. Each network has unique capabilities and pros as well as cons, but common to all are the benefits of having a single phone number around the world, and if you are using data, only one set of parameters for IT to set up globally. Most importantly, you will never need to worry about stocking local phone system socket adapters in the wall for each country any more!

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Offshore Telecom - www.offshoretele.com

COMMENTS & OPINION...

► If you any comments on the issues raised in this edition of HFT or the fortnightly bulletin, please contact, Ralph Savage on +44 (0) 20 7432 6948 or e-mail ralphs@incisive.co.uk.

► In next month's edition, we feature the exclusive Hedge Fund Software Systems Selection Survey. Dozens of IT solutions will be independently reviewed, giving you the most accurate break down of relevant software currently available.

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Assuming a greater understanding of risk

As hedge funds grow in popularity, managers should be mindful of the sophisticated demands of both private individuals and institutions.

By Mark Weller

“It is not the case that investors aren’t sophisticated enough to have a thorough analysis of their portfolio. Most of them are happy and comfortable enough to receive Value at Risk and often other measures, including Greeks.”

When considering the weighty demands of institutional investors, and Hedge Funds’ eccentric attitude towards transparency, a question now has to be answered; What sort of risk analysis do investors want and realistically how much of this can they obtain in the current hedge fund environment?

Investors want a thorough assessment of the risks taken which in many cases can be used with performance data to provide risk adjusted returns. To this end, Value at Risk (VaR) can be a very effective way of aggregating risks from different instruments into one single number.

VaR looks at how instruments correlate to each other and can therefore be very useful at determining how a portfolio of instruments will react, given a particular event.

It is crucial that the investor carries out a suitable approach for the strategies to which they are exposed.

For instance, there were many examples in the late 90s of fixed income arbitrage traders suffering extremely poor market liquidity with some of their positions. In many cases, they were buying an illiquid bond and shorting the liquid bond to pick up the basis points in the middle.

Many would argue that the basis points picked up are simply a reflection of the lack of liquidity of the one relative to the other. From a risk perspective, you need to look very specifically at what is going on in the portfolio, such as if a fund was running short of a five-year liquid treasury and long of an illiquid one. From purely a durational perspective, you would show them as running almost a flat position.

Increasingly, investors are placing particular reporting requirements upon funds prior to making an investment or subscription. This can go further than a weekly or monthly presentation of risk and in some cases a daily report is required that shows not only the positions that the fund is running but also how these compare to pre-defined risk limits. These limits will be either VaR-based or using Greeks such as Delta, Theta or Vega measurements, depending upon the strategy of the

fund and the investor’s individual requirements.

It is certainly right to recognise investors need somewhat different and perhaps less specific information on the funds themselves. However, it is not the case that investors aren’t sophisticated enough to have a thorough analysis of their portfolio. Most of them are happy and comfortable enough to receive Value at Risk and often other measures, including Greeks.

Position level data

Requirements certainly vary from one investor to another and the fund manager must be prepared to present data in a format that is acceptable to each investor. For instance some investors are aware that the strategy they have invested in can be damaged by too much transparency being provided and may ask instead for a summary of the highest risks within the portfolio on, say, a sector basis rather than asking the manager to reveal all of the underlying positions.

Many investors find stress testing can be a very powerful analytical tool but the user must not follow it blindly. Stress testing looks at the volatility experienced during a particular historical event and applies this to the current portfolio to measure the impact on the portfolio of a similar set of events unfolding once more.

However, one of the limitations if you use an historical event such like LTCM, is that the dynamics of each individual event can be very, very different. During the Russian debt and LTCM crises there was extreme volatility, equity markets fell dramatically and bond spreads widened. Then the Fed cut interest rates and the markets stabilised, recovering much of their initial losses.

If you looked at the markets currently and you predicted further interest rate cuts, you would not be able to assume that the markets would recover. Rates have been falling in the US for the last two years and yet this has not prevented the equity markets falling further.

We expect significantly more money to flow into alternatives over the next few years as the recent trend continues.

Although some believe the last five or so years manifests all the characteristics of a bubble, one must put this expansion into context. Hedge funds still only account for a tiny portion of the global investment pool (some estimate as little as one per cent). With this interest will come increasing demands for a higher quality of reporting from fund managers and for the investor this can only be a positive.



Mark Weller is head of international hedge fund sales for Reech Capital

Unravelling brokerage for a low priced service

ECNs, direct access brokers, whatever you want to call them; with the cost reductions possible through electronic trading, hedge funds are starting to take notice.

Some of the most powerful forces driving markets in both Europe and the U.S. are globalisation and technological development. With stocks of multinational corporations trading on several exchanges across two or more continents, cross-border trade execution possibilities are at the fingertips of the hedge fund community.

The growth of the hedge fund industry coupled with the downturn in the equity markets over the past few years have combined to draw attention to new uses of technology in the brokerage and asset management industries. With a focus on improving trading performance and enabling more advanced trading strategies, this has created a number of new players offering an execution-only service at a highly competitive price.

Hedge funds, generally having significantly higher turnover than traditional funds, have created a need for fast, efficient, and low-cost electronic trading capabilities with a global reach. Viewed as innovators in the asset management industry, hedge funds have been quick to embrace new uses of technology and direct market access as a way to lower total transaction costs and improve executions.

Focus on cost

An enduring 3-year bear market has intensified the focus on transaction costs and the quality of broker-provided analysis. This combined with the growing trend of reliance on in-house analysis by hedge funds, has decreased the rationale for a high-priced bundled execution and research service.

A recently released report from the U.S. consulting agency, Freeman & Co., supports this trend. According to Freeman & Co., hedge funds are increasingly looking for providers that are focused and specialised in one part of the previously bundled service.

On the execution side, the demand is for agency brokers who provide efficient electronic execution solutions with low commission schedules. On the analysis side, the demand has not gone unnoticed and one recent example is the announcement by Citigroup that it will break out its analysis to be independent of corporate and investment banking and underwriting.

Another sign of this development is the growing number of independent investment research com-

panies addressing the demand for objective analysis that is not influenced by the executing broker. This autumn, eleven US research firms joined forces under a common theme with the mission to “promote investor trust through the use of investment research that is financially aligned with investor interests”.

To stay competitive in tough markets, hedge funds are taking a less myopic view of trading and are evaluating the whole execution process – from the front to the back-office. Some immediate areas of attention are total transaction costs, execution quality and the direct market access technologies offered by their brokers. This also brings into focus speed of execution, commission rates, clearing and settlement, opportunity costs and market impact.

The price of failure

While reducing commissions can be an obvious first step in the direction of lowering total transaction costs, traders are becoming more aware of the significant hidden transaction costs suffered by missed and/or delayed trades.

The use of direct market access technology helps to significantly reduce the possibility of delays and missed trades and used in conjunction with the benefit of anonymity can also significantly reduce the negative effects of market impact.

To capture the full potential of electronic trading, such as reduced commission, lower opportunity costs and reduced market impact, hedge funds should ensure that their broker is offering true direct market access, rather than simply direct access to the broker’s trading desk.

With the latter approach, the order ends up with a trader who either sends it forward for execution on the exchange or executes it in the traditional fashion, limiting the real-time benefits of electronic trading in a similar way as voice-based trading.

Fragmentation of liquidity amongst exchanges and ECNs creates the need for single access points to multiple destinations. As hedge funds adopt increasingly complex and global trading strategies, the need to reach global liquidity directly and in real-time becomes more prevalent, but with a fast and reliable execution vehicle, hedge funds gain full control of orders and the ability to react immediately to market movements.

Capturing the full value of a trading strategy will always be challenging. However, with trading solutions that address market globalisation, the possibilities of technology and fragmentation of marketplaces, hedge fund managers and institutional investors are finding new ways to access all of the major points of liquidity and turn market volatility into a powerful new tactic in their trading strategies.



“To capture the full potential benefits of electronic trading, such as reduced commission, lower opportunity costs and reduced market impact, hedge funds should ensure that their broker is offering true direct market access.”

Torvald Bohlin is CEO of international agency brokerage, NeoNet

Collateral management keeps the wolves at bay

If a counterparty is downgraded you are going to want more collateral. But what if it's you who gets downgraded and everyone is knocking at your door? **By Alan Bright**

“What would an ideal system look like? To go back to the original comment, how easy is it to include future bid-offer behaviour and over what time period and under what scenarios?”

Banks hold instruments against credit events but it is important that they can be sold quickly with little market impact. However, during a time of market turbulence, when investors sell feverishly, only the first one gets a good price; the rest lose by having to pay a liquidity premium if they want a sale. Welcome to the world of liquidity risk. The question now is, should models include bid/offer behaviour to compensate?

One circumstance where liquidity risk appears is when a major derivative counterparty goes bankrupt – as was the case with Enron. All its counterparties must scramble simultaneously to replace their now liquidated positions. A bank might have to take a hit due to some market impact, but the effect is contained within a single relationship.

But there is a nastier strain of liquidity risk, related to a bank's ability to fund itself when it is downgraded. It is not the financial meltdown of bankruptcy, but a treasury or asset liability manager might suddenly have to raise cash to top up collateral with hundreds of counterparties.

The trading operation of a typical investment bank might have 6,000 counterparties and no risk manager would relish having to liquidate assets to meet the requirements of each of these. Any model encompassing liquidity risk should have to quantify the cost of putting up more collateral.

Banks don't seem worried by this sort of liquidity risk: “Going from AA to A wouldn't be that key” one head of credit risk measurement said.

A market risk manager at another major bank emphasised that all its main collateral agreements were bi-lateral, meaning that if there were a credit downgrade due to problems in the banking industry as a whole there would be no net effect. Trading thresholds might drop and no additional collateral would be required.

This assumes, of course, that collateral can be rehypothecated so that additional collateral received can be used to cover additional collateral required. It also assumes a roughly balanced net mark-to-market position across all counterparties with two-way collateral arrangements. Finally, it doesn't address a single bank being downgraded.

On top of that, the number of collateral agreements is increasing. One bank said that three years ago only five per cent of its trades were covered by collateral agreements while the current figure is nearly 70%. Newer agreements are more likely to contain explicit reference to credit downgrades.

The more immediate danger of funding liquidity risk is faced by hedge funds. A few have low credit



Alan Bright is mar/comms manager of Credent/Infinity

ratings, most have none. Banks therefore demand and receive collateral agreements with unilateral thresholds favouring the bank. These thresholds are usually raised after credit deterioration or other triggers such as declines in NAV per share, high redemption volumes or departure of key staff.

Of course, banks are being prudent in demanding credit sensitive unilateral collateral thresholds with hedge funds, but these could cause the very event they are trying to avoid. As a hedge fund gets hit with larger collateral calls, the prices it can get for liquidating assets drops, causing more collateral calls and so on.

Liquidity risk is therefore very important to hedge funds and they often have in-house systems in place to manage it, calling on skills from their own quantitative analysts. In addition, prime brokerage is one way hedge funds can avoid multiple collateral calls.

Funding liquidity risk arising from credit downgrades is already an issue for hedge funds and will become more important for banks. What would an ideal system look like? To go back to the original comment, how easy is it to include future bid-offer behaviour and over what time period and under what scenarios?

Any solution should have an analytics system that simulates future market movements. The system would also analyse each contract, giving the risk manager an aggregate position, showing which dates carry the greatest liquidity risk. This might, for example, show when it is most exposed.

There are systems that tackle this, but none do so on a specific date basis. They look at predetermined future dates, rather than specific maturity and payment dates from underlying contracts.

Funding liquidity risk due to credit downgrades has rarely been a problem for major banks. But with more collateral agreements and increasing volatility in financial markets, there is a growing need to track and quantify the potential funding impact of credit downgrades. Doing so requires technology reflecting the maturity and payment structure of actual trades in collateralised portfolios as well as the structure of the collateral agreements, including definition of thresholds as a function of credit standing.

The best solution at the right price? Not always

Leading up to our feature on sourcing technology for hedge funds, Ravi Jain says support and maintenance are the key to a fruitful relationship.

Most discussions on hedge fund technology tend to revolve around portfolio management, reporting and accounting systems. However, underpinning the vast majority of discussion is the fact that many hedge fund managers today face problems analysing, selecting, and ultimately buying such technology.

Obviously, most know they want the best possible system for the lowest price, but during their quest, many users forget to consider other crucial elements, including sophistication of the technology, its potential scalability, ease of implementation, and how good the support will be.

When most large institutions are presented with the dilemma of “buy vs build”, for hedge funds the more relevant and crucial question is “buy vs. outsource”.



Ravi Jain is CEO of EGAR Technology

Standardised requirements like position keeping, back-office operations, accounting and investor reporting can all be outsourced to service providers or pre-packaged systems can be purchased to do them in-house. An outsourcing company will typically have the same standard features as a purchased vendor system, with a

different cost.

For larger funds, bringing systems in-house will probably be more cost effective in the long run, but hedge funds must make sure they include costs like IT staff and hardware when comparing the two alternatives.

Pre-trade analytical systems

Technology decisions for the areas of analytics and risk are not so clear. Given the assumption hedge funds are becoming more analytical and quantitative in their approach, these systems are key to survival, but most of the time require significant proprietary information or models.

Many managers end up using internally built versions based on Excel spreadsheets, because they are looking for specific analytics which are

difficult to acquire from vendors. But spreadsheets can only go so far due to maintenance and development drawbacks.

There are other ways to achieve sophisticated analytical tools without building them from scratch. Typically, larger vendors are inflexible and will not customise their solutions. Pure consultants often reinvent the wheel at enormous cost.

Smaller technology vendors are increasingly willing to use their own software as platforms for building customised analytical applications.

For risk management, analysis and reporting needs, there is an option beyond build or buy, which is to use existing service providers. But this is a difficult area as hedge funds with multi-dimensional risk are under pressure to provide some standardised risk measurements and reporting to investors. They cannot justify expensive risk management systems nor do they have the IT and staff to run them. Several outsourced services for this have cropped up over the years, usually only providing limited solutions at best and failing to earn the confidence from the alternative investment community.

More recently, prime brokers, administrators and outsourced operations companies who already provide accounting and P&L for funds have begun to provide services. While they do not necessarily specialise in this area, hedge funds should continue to push them towards developing their services.

Administrators and prime brokers are independent and unbiased and already have the complete position of the fund, and thus are the natural place to get standardised risk analysis and reporting.

In both pre-trade analytics and risk management, many vendors do not have enough resources to provide customisation and enhancements to systems. If your needs are not totally covered by the features of the system and enhancements are required, make sure the vendor has the resources to deliver on its promises and has consulting staff that properly understand your needs.

Get clear pricing on enhancements upfront, as many vendors charge high rates for them.

Smart entrepreneurs will ensure that \$10,000 does not turn into \$100,000 and will insist vendors function within agreed parameters. But small firms rarely have the clout to demand the most attentive support. Therefore, make sure your expectations are spelt out clearly in the first contract. Once the deal is signed, you'll lose a lot of bargaining power, so leverage it while you can.

Funds of all sizes should now be able to acquire systems which are appropriate if they make good choices and explore all of their options. Investigating those options will result in finding technology to better meet their needs than ever before.

“small firms rarely have the clout to demand the most attentive support. Therefore, make sure your expectations are spelt out clearly in the first contract.”

Online forex platforms spread over the market

Deciding whether to pick up the phone and call your broker or take the plunge with electronic dealing for forex is far from a simple choice.

By Christopher Miller

“More and more fund managers are using electronic forex trading. The important thing to recognise is that whatever platform you choose, it should match the way you work, instead of the other way round.”

Foreign exchange trading platforms come in many shapes and sizes. How do you choose between broker platforms, platforms which deal directly with the market making counterparty, and liquidity aggregating platforms?

What you see may not be as direct as you think. It may be just another interface on someone else's direct trading system. As liquidity providers open up the application programming interfaces (API) of their systems, the definitions are getting blurred.

What's more, prime brokerage services add a new layer behind the platform, executing your trades with another liquidity provider for greater transparency and anonymity. That means the “direct” element is just one building block of a full straight through processing (STP) service.

Users of trading platforms are looking for many of the same things that they value in their traditional relationships: pricing speed and quality as well as efficient execution. Electronic platforms bring to the table a promise of full STP, but this is often unavailable or implemented inconsistently.

STP means different things to different users, so it is hardly surprising that it is implemented inconsistently. Upstream (client side) from the platform, an open API allows the rate feed and trading API to be integrated into any other platform, be it a broker's, a white label client's or as a participant in a multi-bank portal.

Downstream from the platform, on the execution side, the API can be used for efficient execution of prime brokerage trades. At this stage, other elements of STP start becoming important. The ability to download completed deal information totally automatically, without re-keying information, saves time and avoids errors. There's a big difference though, between an e-mailed deal confirmation that needs to be passed into the client's system, and an open interface, which responds to client requests, or pushes information directly into the client's system.

The gamut of STP functionality runs from position-keeping prior to a trade and pre-trade allocation, through execution, confirmation, settlement, and updating internal ledgers, to dissemination of statistical and other information to a wider audience within the company.

Autofill gives a lot of reassurance about consistency of pricing speed, and made all the difference when for example, Atrix had the first participants returning prices within a couple of seconds, but if the last manual prices come back after up to 20 seconds, the first ones out may have been withdrawn. FXall, in contrast, claims a 95% acceptance rate.

In the early days of the internet, some people were worried that the transmission would be unreliable, but the web has proven otherwise, compared to internal corporate networks or dedicated pipelines to individual banks. That resilience is due to the internet's ability to re-route a message if one route fails for any reason.

Multi-bank portals like FXall, FX Connect and Currenex will continue to be the main electronic trading tool for larger trading operations, especially as the choice between the portals has been simplified since Atrix and SunGard's STN Treasury closed down last year. In addition, as more trading APIs are opened up, the number of participants on multi-bank portals is growing.



Steve Pryor of IFX Markets

For the small to medium size trading operation, open and automated systems will set a new service standard, competing strongly with human relationships as a tool to gain and retain clients.

“We are not quite at the stage where even multi-bank portals can be sure of offering the best price in all markets all the time.” Says Steve Pryor of IFX Markets. “Voice is still a dependable and fast alternative, and I'm sure voice and automated trading will coexist for a long time to come. But when the API is opened up like ours, you can do things that are simply not possible with conventional platforms. Computerised systematic traders, who generate automatic trading signals, can plug into our API, and dedicate more of their time to research and development. It also makes the execution of Prime Brokerage deals much easier for us.”

More and more fund managers are using electronic forex trading either as a primary tool, or as a secondary means of communication with the bank dealer. The important thing to recognise is that whatever platform you choose, it should match the way you work, instead of the other way round. That means looking carefully at your existing operation, and examining critical factors, like the dealing relationships you already have. Will an electronic trading capacity disturb those relationships, or give them a well needed shake-up?

It is important to define your requirements, bearing in mind structure, resources and systems. In that process, one might stumble across bottlenecks that can help define objectives. It's always easier to upgrade to a system that does what you already do, but better, and also adds new benefits.



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