

FOCUS ON

CLOUD COMPUTING

As technology has become integral to running hedge funds, *HFMWeek* talks to a range of industry experts about how cloud computing can open up a wealth of opportunities to managers and investors alike

Q **HFMWEEK (HFM): HOW DOES A CLOUD COMPUTING SERVICE BENEFIT A HEDGE FUND? HOW DO YOU DEFINE THE CLOUD AND CAN IT SAVE FUNDS MONEY?**

A **ROMIR BOSU (RB):** When people hear ‘cloud computing’, many initially think of public cloud providers. Public cloud providers are not appropriate for hedge funds simply because the two top priorities for funds are security and compliance. Public clouds are typically not designed with these priorities in mind, therefore a hedge fund needs to consider a special industry-specific cloud that provides enhanced security, greater compliance positioning and a controllable expense model. This is a technology solution that is completely scalable and able to grow and shrink with the fund.

A **JOE LEVATO (JL):** In many cases, emerging fund managers are capital-constrained and unable to allocate significant capital to their management company. Cloud computing provides a fund manager the ability to launch a new fund without significant cash outlay for IT infrastructure (equipment or staff), so IT spend is moved from CapEx to Opex and incurred as an annuity, resulting in a more manageable cash flow. As a result, the fund’s overheads are lower, returns are healthier, and more cash is available to invest in its strategy. As these funds grow, the cloud solution is scalable allowing the fund to expand without having to invest in additional IT infrastructure. The fund manager is placed in a Dodd-Frank compliant environment with a SAS70 Type II compliant technology service provider. All technology policies and procedures investors want to see in place, already exist with the cloud.

A **AMBASUTHAN JANANAYAGAM (AJ):** The cloud is the latest evolution of the model for the delivery of technology. There are three major sub-categories, each offering a greater degree of technology outsourcing. The mandates start with Infrastructure-as-a-Service (IaaS), which lets users outsource the management of their hardware and at the other end of the spectrum is Software-as-a-Service (SaaS), which manages the complete software delivery cycle. The result for the customer is a minimal internal technology footprint. A familiar example of a cloud based SaaS model would be Gmail. A firm may operate Gmail as its primary email platform. The result would be costs linked directly to the number of users, with no other IT overheads.

By contrast, the legacy technology model to deliver



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ROMIR BOSU, COMPUSHARE

the same product would have demanded a firm to license email software for each user (for example, Microsoft Outlook), maintain their own servers and databases, hire the necessary personnel to administer the hardware and software and numerous other direct and indirect overheads. The benefits of the cloud to hedge funds and the broader consumer universe are an exponential increase in productivity, resulting in lower costs, and/or a better product.

Q **HFM: WHY IS CLOUD COMPUTING BECOMING MORE POPULAR WITH HEDGE FUNDS?**

A **BILL NEVILLE (BN):** The availability of a properly designed cloud environment is still relatively new to the hedge fund market. As the fund managers are discovering the security and compliance benefits of the cloud, the interest has definitely increased. Today, by choosing the right provider focused on the financial industry, a hedge fund can operate in a cloud environment that meets or exceeds the Dodd-Frank requirements, is completely secure, can be accessed by any secure device (including tablets and smartphones), from anywhere and is completely affordable with little or no capital investment.

A **AJ:** The cloud is pervading all aspects of life and while the finance community is no exception, it is playing catch up. Ordinary consumers likely utilise a vast variety of cloud-driven SaaS services, but many financial institutions still manage their entire technology infrastructure in-house. The increased utilisation of the cloud by hedge funds is an indirect consequence of shrinking margins. Cloud-based SaaS providers also address many costly regulatory and security requirements. Cloud providers deliver global monitoring of servers, snap-shots the entire data universe for audit purposes and report on and attempted breaches of security.

Q **HFM: HOW CAN INVESTORS BENEFIT FROM A HEDGE FUND'S CLOUD COMPUTING SERVICE?**

A **BN:** I see three primary benefits. Firstly, the enhanced security attributes of the cloud. Secondly the instant access to data from anywhere and from any secure device. Thirdly, it alleviates the need for managers to invest their time and capital in technology and provides the benefits and protections at a reasonable price. Most hedge fund managers aren't interested in the headaches

that come along with building and maintaining a secure, compliant and redundant technology infrastructure, so by accessing the cloud, it alleviates the challenges that come along with building this environment in-house.

A **AJ:** Cloud technology, along with advancing browser capabilities and high-speed internet, has broken through legacy technology-based barriers to transparency and oversight. Legacy infrastructure resulted in investors receiving periodic, superficial statements. Funds operating on web-delivered infrastructure have the capacity to deliver live reporting, with a granular detail of holdings. Essentially, a decade ago a fund needed a small army of IT personnel to run its infrastructure and security. Today, as a result of the cloud, a newly launched fund may not need much more than a full time COO.

Q **HFM: ARE REGULATORS INTERESTED IN HOW A HEDGE FUND USES A CLOUD COMPUTING SERVICE?**

A **BN:** Regulators are definitely interested in the cloud as they would be with any new technology. In Compushare's case, we originally developed our cloud offering to support the security and compliance requirements of US banks. The regulatory requirements for banks pre-dated the requirements now coming to the hedge fund industry, i.e. Dodd Frank, and since the banking industry has traditionally been the most heavily regulated, we are uniquely positioned with a compliant cloud offering to support hedge funds.

A **AJ:** Regulatory focus is locked on reforms directly related to the ongoing crisis. Investors, however, have paid attention in the due diligence questionnaires to infrastructure-related items, such as disaster recovery and audit trails. Perhaps given how pervasive the cloud is becoming as a mode of delivery for society as a whole, its oversight isn't purely the remit of financial regulators.

Q **HFM: IS THERE A DOWNSIDE? ARE THERE SECURITY/COUNTERPARTY RISKS AND WHAT WOULD HAPPEN IF THE CLOUD PROVIDER COLLAPSED?**

A **RB:** Ironically, the cloud environment itself solves many of the usual risks associated with a typical technology infrastructure. The very nature of the cloud lends itself very well to Business Continuity Planning (BCP), as well as to implementing security controls as all



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of the information and assets are centrally located. As with any outsourced technology, the risk is in the execution, so due diligence on the firm and platform are critical and should always be performed, not only up-front but also periodically.

A **AJ:** The risks to the virtual world are most likely not a failure of balance sheet but a shift in the power balance between incumbent technology giants and their foes in the virtual space: hackers and net-crime. Undoubtedly some attention is required. While the internet giants are far more suited to the task, a systemic breach of a single large provider of cloud services would potentially cast a shadow over every aspect of modern life. The investor community is also evolving fast. Perhaps spurred on by losses linked to technological infrastructure. Investors are demanding detailed information about the platform and its disaster recovery contingencies. Local downloads of data and back-up cloud providers are some of the many means of mitigating these risks.

Q **HFM: WHAT CAN YOU SEE THE NEXT 12 MONTHS HOLDING FOR CLOUD COMPUTING IN THE HEDGE FUND SPACE?**

A **BN:** We are witnessing a great deal of interest in, and subsequent movement to, cloud computing. I believe it is absolutely the only way to go for a start-up manager. Compushare works very closely with Advanced Fund Administration in this area and we are seeing a high level of interest. Additionally, the compliance and security aspects of a financial industry specific cloud platform are of great interest currently to funds of all sizes and we expect many to move in this direction.

A **AJ:** The greatest divide in the fund industry may be technology. And surprisingly the newcomers have the edge. Large incumbents are burdened with legacy systems and spreadsheets to bridge deficiencies. New entrants can pick from a range of cloud-based, web-delivered, SaaS providers with the funds potentially managing no technology.

Like all exponential trends, the ratio of funds using on the cloud via their respective providers will grow at a respectable rate in the next 12 months, but in a decade it could be universal. ■

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