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THE DEFINITIVE GUIDE TO HEDGE FUND TECHNOLOGY



A NEW INDUSTRY UTILITY?

HFMTechology hears why former DE Shaw Group CTO Gaurav Suri thinks the hedge fund sector is due for a shake-up

BY PAUL MCMILLAN

“I really believe a technology solution like ours will be the wave of the future for the industry, so our goal is to have Arcesium’s software solution become the gold standard that any firm can use to manage its post-trade activities,” says Arcesium’s CEO Gaurav Suri.

He has big plans for the company he created when the \$40bn global investment and technology development firm the DE Shaw Group spun out certain middle- and back-office functions as an independent business last year. The aim is to bring to a wider array of firms in the industry the operational efficiencies created after the group overhauled its own operational infrastructure.

“When we did the buy-versus-build comparison at the DE Shaw Group, we saw that no service provider could supply the array of post-trade services we needed. We would have

had to string together several different services and it would have required so much reinventing of the wheel,” says Suri, who sits in jeans and a t-shirt in a meeting room at Arcesium’s New York City headquarters. “Now that we can leverage a single platform to handle everything, we believe that other firms will want the benefits of having [that].”

The office has a pleasant tech start up feel to it; various winners of a staff painting competition hang on the wall, an enticing keg of cold brew coffee is at the ready, and a humorous wall of photos catalogue staff members who inadvertently come to work in similar outfits.

The company has quickly outgrown its surroundings and is set to expand to another floor in the building. At launch last year, Arcesium had 300 employees globally, with 20% in New York and 80% in Hyderabad, India. It has since doubled to 600 with a similar geographical split.

Suri had been with the DE Shaw Group for 19 years, most recently as its CTO, before leaving to lead Arcesium. He says the journey to create Arcesium began in 2009 when

DE Shaw's CFO Chris Zaback, then recently hired, and its operations team decided to embark on a "bottom up" review of the group's entire operations and accounting processes.

"By 2009, the DE Shaw Group had morphed into a firm with over 20 years in existence investing in a wide array of strategies and securities. The group wanted to optimise its staff's time by making sure the firm's entire middle and back office was exception-based," says Suri. "The focus then – and now – is that machines will manage almost all middle- and back-office operations, and humans will intervene when there are exceptions, or to focus on higher level functions like analytics, risk management, and controls."

As part of this project, the DE Shaw group decided to rebuild its entire technology platform, a mammoth task that took more than four years and "more than a thousand man years" involving 200 employees, mostly engineers and software developers. The results of the development project went live at the DE Shaw group in 2012 and the costs savings were immediate. Suri says the group has been able to cut operating costs significantly and reduce the time it took to close its books by more than half.

"Since then the DE Shaw group has expanded, launched new businesses, and explored new geographies and strategies, and we at Arcesium have been able to do that without having to add any headcount," says Suri.

In embarking on the project, Suri says that his team scoured the market to see if a viable service or technology existed. They found the approach most people used was to take seven or eight systems that were best in class and then glue them together.

In such a scenario, Suri says a firm spends an inordinate amount of time and technology talent maintaining this glue and shipping data between systems.

Suri says: "The DE Shaw Group needed what we call a 'single source of truth' – in other words, one set of data across the operating platform that could be accessed and used by anyone in the firm, whether it's the front-office, the operations team, the treasury department, the risk group, or the investor allocation function.

"The key is having the ability to absorb all the data that is coming in: clean it, manage it, be able to disseminate it, and give transparency to everybody every step of the way that the data is transformed."

After deciding this infrastructure could be commercialised across other asset managers, the group embarked on an 18-month exploration process, speaking to hedge fund CFOs, COOs, and CTOs, as well as software vendors and fund administrators.

"With investors asking for more transparency, regulatory complexity increasing, asset class complexity increasing, and investor mandates becoming more complex, we became convinced that this was the way the sector would evolve," he says.

One hurdle to the wider take-up of Arcesium could be a reticence from rival managers to use a platform majority-owned by a rival. The DE Shaw Group owns a majority stake in the firm and fellow anchor client Blackstone Alternative

Asset Management owns a minority stake. In the past, ventures such as Citadel's attempt to sell its fund admin services to rivals under a rebranded Omnium label have failed to gain traction due to manager concerns about it being owned by a rival. Suri says he is cognizant of the challenge but hopes the DE Shaw Group relationship is also seen as a strength, with Arcesium thought of as "a platform built by a hedge fund for a hedge fund".

Cloud decisions

Another important early decision was whether Arcesium should create its own private cloud platform or outsource to an established player. In the end, it opted for Amazon Web Services, a move that Suri describes as a wise decision.

"We feel very smart now but at that point it was quite risky. A few years ago, there was less acceptance of the cloud." Suri says the need for scalability, reliability, and security pushed the company towards a hosted solution. "The cloud is truly scalable," he says. "There have been times that we've been able to upsize a database within minutes due to high trading."

Arcesium's growth plans mean scalability is a central concern. The company is looking to add a number of multi-billion dollar funds as clients over the next few years, across all asset classes, with a particular focus on complex areas of the market.

"In many ways, the more complex the business the better as we like to solve really difficult problems," says Suri. "Our goal is to get a small number of strategic complex clients, rather than sell to a mass market."

Suri adds that experience dealing with more complex strategies, such as illiquid credit, should help Arcesium when it looks to expand further down the line.

Chicago-headquartered \$12bn multi-strategy hedge fund Balyasny Asset Management has recently gone live with Arcesium and the company is looking

to add a number of similarly sized managers over the next couple of years.

Arcesium's head of sales, David Nable, adds: "Complexity comes in different flavours. For some clients it is low levels of transaction, but in very complex investments, and for others it is straightforward asset classes but being traded at very high volumes. We have developed experience serving all client models expertly."

For many COOs and technology heads at large hedge funds, back- and middle-office infrastructure is something they have carefully built, grown and nurtured over the years. Has Arcesium faced a reluctance to hand over ownership of this part of the manager's ecosystem, especially where individuals have invested so much personal capital building internal structures? Suri says they considered this could be a hurdle but in reality, COOs and CTOs tend to view Arcesium as a partner. Especially at large complex asset managers, the pace of trading is evolving so quickly, with cost pressures and technology advances pushing firms to look for



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outside partners for back- and middle-office functions.

He says: "Given how rapidly the technology is changing and how hard it is to find tech talent, CTOs want to focus that talent on the front-office and alpha generation."

Even for firms that can successfully source talent, Suri adds that cost pressures on COOs are making it difficult to justify the additions. He believes the Arcesium platform can allow firms to re-orient existing staff towards "high value-add" activities.

He says the firms they have been speaking to about potentially taking on Arcesium are less focused on cutting existing staff numbers and more motivated to better leverage existing staff to higher value-add activities such as dealing with the increasing complexities of investors and regulators.

Suri says he spoke to one large group who said that for every two separately managed accounts (SMAs) added they had to hire another operations analyst. By using a platform solution like Arcesium, the firm said it could add 10 SMAs with no increase in headcount.

"For the COO and the CTO, we are giving them a platform which is their own, which they control, and there is complete transparency," he says. "They can focus their people and their dollars on risk management and making money instead."

Treasury function

Suri and Nable say treasury management efficiency is one particular area where Arcesium has been focused on providing cost savings and delivering operational alpha. Nable says proprietary functionality offers comprehensive analysis into capital cost and allocation, which more easily allows the manager to keep track of how cost is attributed internally and externally.

"If you are a very complex manager with diverse strategies, funding your business in complicated ways through repo financing, portfolio margin agreements, and bespoke loans, you can create and maintain very accurate models that capture all of this information," Nable says, adding the head of treasury at a large complex manager has a mountainous number of cost and risk considerations to monitor.

"There are several buckets within the treasury function: one, portfolio margin optimisation; two, ISDA and repo-financing; three, securities lending and borrowing; and four, revenue-tracking, aka 'broker wallet share'."

On top of ROA-type analysis, Nable says monitoring counterparty exposure is also getting more complex, especially when relationships include a range of onshore and offshore parties.

Suri believes a particular challenge for managers is taking all of their data on the cost of capital and financing and being able to allocate that back accurately to the portfolio manager. Expense allocation is also an area where the SEC is continuing to keep a close eye on due to concerns about insufficient recordkeeping. Nable says another benefit from managers controlling and understanding treasury data on the Arcesium platform is that they feel more empowered to approach prime brokers over certain terms received, such as

those for swap financing.

"Broadly in the market, funds will take the swap financing terms a counterparty reports and that is the number," he says. "The platform is designed to independently replicate those figures and frequently highlights some meaningful differences."

Nable notes as asset-based financing fee models have become increasingly bespoke and complex, many funds have taken what prime brokers have been charging at face value.

"In reality, we have found mistakes in the market in these complex financing calculations," he adds. Suri suggests that the differences in fees that the platform exposes could on their own pay for what Arcesium charges clients for its platform.

Admin evolution

Given its position in the hedge fund back- and middle-office sector, Arcesium works closely with administrators and provides an oversight service to firms which may often have a range of administrator relationships.

There have been a number of big administrator M&A deals in recent times and Nable forecasts more to come as firms are forced to deal with increased market complexity alongside pricing pressures. A number of fund administrators have also

been broadening their service offering with certain administrators contemplating adding a number of back- and middle-office functions with acquisitions.

Is the expansion of administrator functionality a threat to Arcesium? Nable sees their natural competition as hedge funds looking to build something themselves, rather than other outside servicers.

He adds that an administrator's business model is designed to service many clients on a single, shared instance of technology, organised around striking a fund's NAV. In contrast, Arcesium offers each manager their own unique instance of the technology platform, which is designed to support a wide array of typical hedge fund activities and priorities – not just the striking of a NAV.

Future strategy

With the firm looking to take on a few select large managers over the next few years, Suri says taking 10%-15% of the \$3trn hedge fund pie would represent significant growth.

But he adds the company is also in talks with other types of firms, including private equity managers, traditional asset managers and global custodians who he says could benefit from a similar type of platform, as well as big allocators who are having to deal with a huge increase in the data they are monitoring.

He concludes: "Allocators used to just write a ticket. Now they have multiple SMAs with daily transparency – from 10, 20, 100 managers. What do they do with that data? How do they deal with it, transform it and normalise it? These are not firms used to dealing with this information." ■



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