



Citisoft

Outlook

2019

Asset Management's Ascent:
The Trek Toward Transformation

The Immediate Horizon

With the advent of a new year, we all get flooded with outlook papers and prognostications as to what to expect in the coming months and years. While long term predictions are interesting, Citisoft prefers to focus on issues and challenges that our clients are likely to encounter in the near term. The asset management landscape, whether referring to the state of global markets, the institutions competing for investor assets or the technology and services that cater to it, is simply moving too fast to accurately forecast what our industry may look like in 2022 and beyond. Such forecasts are a fool's errand, so while some may throw out a tagline with their "Vision 202x," we tend to focus on what is right in front of us.

Read on for what Citisoft expects to emerge in asset management technology and operations over the coming year.

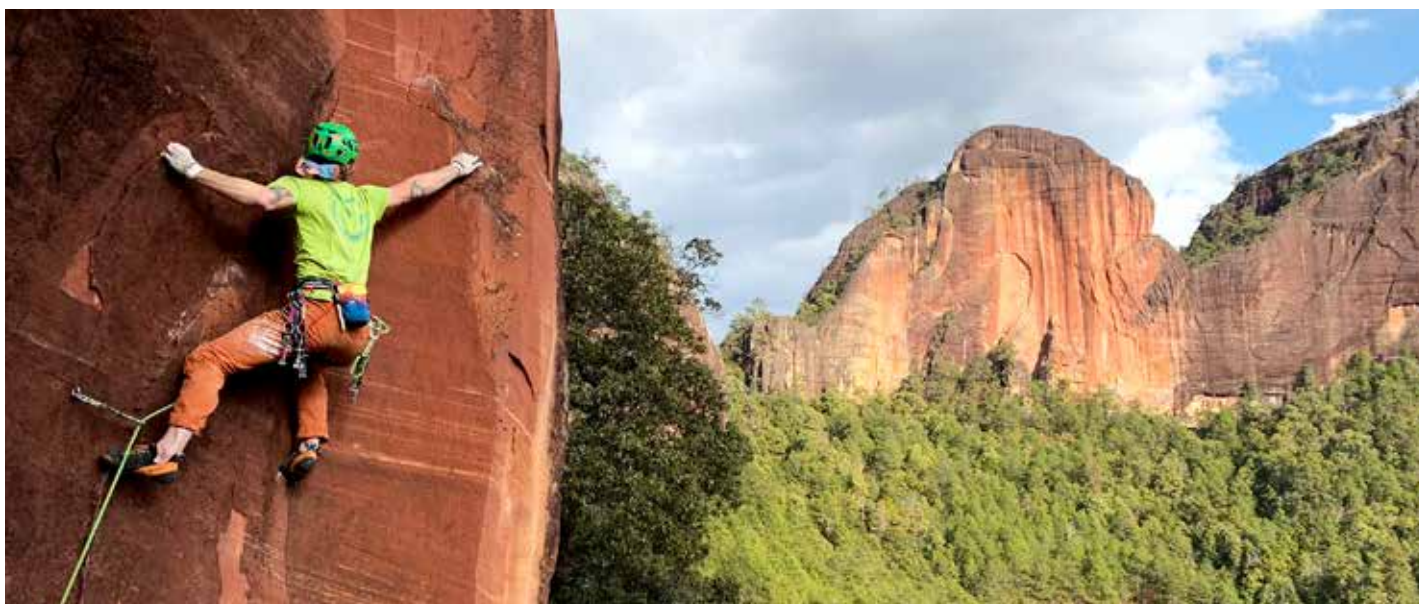
Reimagining the Front Office

At their core, asset managers are R&D machines constantly reimagining how to deliver investment results to clients in volatile markets. This entails the deployment of more complex investment strategies, necessitates near real-time access to data, and requires on demand support for new instruments. The value proposition of the active manager

is evolving, and the gap between front office needs and supporting technology and operations is widening. The operating model that supports the front office must be cost effective as managers vie for clients in an increasingly competitive market with thinning margins. We see these factors stressing operating models at an unprecedented level which will expose weakness in the vendor market, service provider market, and internal application and data architectures.

Three key gaps exposing weakness in today's front office support models include:

1. The inability to deliver accurate data supporting complex investment strategies on a near real-time basis inhibits the capacity to actively manage risk and performance. Further, operating models that cannot support the processing of accurate referential, portfolio, valuation, risk, and performance data as investment and market transactions occur leads to ungoverned and uncontrolled stopgaps supporting the investment decision process.
2. Gaps in derivative processing, cash management, and the modeling and estimation of thinly traded, private market, and hedge fund investments create chasms in the data sets required to evaluate the portfolio at an aggregate.



3. The inability to deliver data supporting complex data analytics inhibits the value proposition of the reimagined front office. This is true for the development of quant models, multi-factor models, correlated structured and unstructured data, ESG models, and smart beta strategies, to name a few.

The solution to closing these gaps is complex, and most vendors and service providers are not equipped to address them. The predominant architecture deployed in the industry is best-of-breed, with dedicated platforms servicing functions aligned to their strengths. This model limits the ability of managers to see and manage their investments in a single platform. Best-of-breed models demand a very complex, costly, and robust data architecture to facilitate processing between applications while offering facilities for storage and reporting. When integrating multiple platforms or services together, the ecosystem becomes constrained by the weakest link. This perpetuates custom or manual solutions and degrades the quality and timeliness of the front office support model. The alternative architecture is a single end-to-end platform which historically have been costly and time consuming to implement and have yet to offer depth of functionality on par with best-of-breed platforms. Counterintuitively, end-to-end platforms have also traditionally required higher levels of FTE support to operate and have greater technical debt.

In the end, technology is an enabler but not the end all solution for delivering complex front office support. Many managers believe technology can singularly solve for quality issues, processing gaps, inefficiencies, and manual processes, but they are mistaken. The pursuit of this falsity is time consuming and expensive, both in terms of capital expenditure and opportunity cost. A skilled workforce is going to be the primary driver behind the delivery of support models for the front office of tomorrow, until the predominant vendors or service providers in the market can close the gap. We are seeing new vendor entrants positioning themselves and predict they will be deployed in a best-of-breed model to close some of the gaps at certain managers, specifically around data aggregation and real-time event processing. Robotic process automation

(RPA) and artificial intelligence (AI) have the potential to reduce the reliance on humans who are focused on controlling data accuracy and modeling complex investment structures, but this will not be realized in the near term and possibly not even within the next five years.

Vendor Viewpoint

The Incredible Shrinking Vendor Market

2018 was marked by further consolidation of the software vendor market catering to the asset management industry. The back-to-back acquisitions of Charles River Development's (CRD) Charles River IMS (CRIMS) platform and Eze Software's Order Management System further reduced the universe of independent asset management software vendors. As a result of this recent acquisition activity, there are scant few vendors left to be scooped up within the larger core domain applications (i.e. order management and accounting). However, with asset managers looking to do more with less and vendors and service providers responding by focusing on expanding services within their client base and beyond, there is still potential for additional acquisitions on the horizon. These could occur in several different areas across the domain spectrum but more likely in performance attribution and risk analysis (a somewhat saturated market), data management, and within niche market vendors—specifically those focused on private markets, asset owners, and allocators.

In 2019 we will continue to closely watch what is likely the largest acquisition in asset management technology history (both in terms of price and client base)—State Street's acquisition of CRD's CRIMS platform. What makes this deal unique (apart from size) is that very rarely have we seen a strategy, inclusive of a promise of near-term benefits for clients, be communicated so quickly after the deal closed. Keep in mind that an acquisition does not immediately result in an integrated solution, and in some cases, integration may never be achieved.

While we have not seen a high demand for a single suite solution across all functions yet, the promise of one-stop

shopping for front-to-back solutions in the future becomes more appealing as firms look to simplify complicated, legacy operating models. One-stop shops could be especially appealing for firms with strong existing provider partnerships as these firms might be looking to get more value out of the solutions that they are already comfortable with. To gain cost efficiency, more cost-conscious firms will look to bundle services, which some service providers may already offer. But cost should not be the sole motivator as the savings may not be significant. While there are only a handful of vendors and service providers marketing a front-to-back solution, we are skeptical that a single provider can effectively deliver the required functionality across all asset classes and functions, especially for large, complex asset managers. Further, in our experience, many firms look at vendor concentration risk when designing their operating models and it would be unlikely that an all-inclusive solution would pass the due diligence review of their vendor management and/or procurement teams.

An area of expanded focus by service providers is the front office, with a recent push by several firms into offering outsourced trade execution. Historically, trade execution has been an integral part of the investment process, however, service providers are looking to commercialize this function by leveraging the work done to support the unbundling of commissions in response to MiFID II reporting requirements. Given the cost of talent and technology needed to support trade execution and the inherent risk in the function, service providers have become opportunistic—offering a value proposition to their clients that for some providers can be a more strategic offering which includes the option for FX execution, regulatory compliance (specifically MiFID II reporting), in addition to a traditional middle office function, trade matching and settlement, which could be especially appealing for asset managers not currently employing an outsourced middle office.

Continued Focus: Cloud and Blurring Lines Between Software Vendors and Service Providers

Beyond expansion of services in 2019, vendors and service providers continue to focus on digital transformation, predominantly through establishing their cloud strategy in the software vendor space. The shift from locally installed software to a cloud or hosted deployment is not a new concept for larger vendors who have already been offering what has traditionally been referred to as their “hosted solution.” At this point, most vendors and service providers have this deployment offering in place, but not everyone is quite there yet.

For those that have successfully executed on a private cloud, the next step is to move to the public cloud to achieve better economies of scale. It might not happen in 2019, but in coming years we expect to see a preponderance of vendors eliminating the option to locally install their software.

A natural extension of a hosted or cloud-based solution is the coupling of managed services by software vendors. Lines are beginning to blur between software vendors and service providers with vendors pushing into the service market by offering managed services built around their



platforms. “Managed services” by software vendors have existed for several years, but the term itself can still be a bit ambiguous. Software vendor managed service offerings range from technical platform management, to data stewardship, to full operations. A full operations managed service would be analogous with outsourcing to a service provider in terms of service; the difference being that the asset manager would license the software directly vs being serviced through the provider’s common platform. This service type is the newest and least common offering at this point, but could be where the market is headed given the interest level in existing managed services. With software vendors offering enhanced managed services and service providers acquiring software vendors to expand their reach, we expect to see lines blur even further between the two in 2019.

A View on Middle Office Outsourcing

Outsourcing momentum varies depending on the global market. Specific to North America, service providers are actively expanding offerings in Canada and gaining traction where middle office outsourcing is relatively non-existent due to embedded internal operating models and cultural barriers. Contrast that to the United States where we see a decelerating pace of first-generation outsourcing initiatives within the middle office, attributable to maturity of the market and a narrowing list of managers who are candidates to outsource. In Europe, we anticipate an increase in asset managers considering middle office outsourcing, however tempered by continued regulatory constraints and geopolitical risks.

One thing is evident: asset managers who have outsourced and are coming up on contract renewal will be exploring options for refining their partnerships and SLAs, potentially moving components of their business to other providers or even internalizing functions they have determined are substandard from a quality or control perspective. As a result, we see component outsourcing rising in popularity which is counter to the strategic one-stop shop roadmaps some service providers are pursuing. A few service providers have already been opportunistic in response to a growing demand for “best-of-breed” outsourcing.



Historically, the focus of component outsourcing was on select, more complex functions including trade matching and settlement, derivative or bank loan operations, and collateral management. Today, some providers are offering their middle office services as a single component which allows an asset manager to strategically pick and choose their services across providers.

Aging, legacy middle office platforms and consolidation resulting from M&A activity will be a primary driver for managers looking to outsource. The value proposition for managers replacing end of life platforms will not be realized in cost savings, as many already have favorable contract pricing and low-cost operating models given the simplicity of these platforms. For many asset managers looking to replace aging technology, the prospect of having to increase their operations personnel to support a new, in-house best-of-breed solution is the sole business case for outsourcing. Many outsourcing decisions will be predicated on determining a manager’s ability to execute a

complex transformation and stand up an operating model to support a more robust system internally or pay for a provider to take on the services. This also means a shift from traditionally on-demand and personalized catering to stakeholders, to a more structured but less personalized model. Service providers will distinguish themselves based on transparency into their operations, the managers ability to access data, and how customizable their offering is.

Asset managers cannot outsource regulatory obligations or risk, and they must have the appropriate oversight and controls over their outsourcing provider in place. Historically, the asset management industry's oversight and governance functions have been inadequate and closing this deficiency will come into focus as a strategic priority of outsourced asset managers. Additionally, the need for transparency as it relates to fees and services is quickly becoming one of the most important aspects of the relationship between asset managers and their service providers.

Globally, firms are shifting their expectations of the service provider. The demand for high-touch service, the ability to customize, and meeting the shifting requirements of

the front office are forcing the need for near real-time data and reporting, which is a complete shift from most current operating models built on standardization and predictable delivery cycles. This will change the face of the asset manager/service provider relationship and how providers are chosen.

Transformation: Trend or Timeless?

The term "transformation" certainly appears to be a popular buzzword in some of the early 2019 outlook papers that we have read. We can't disagree that asset managers are intent on transforming their businesses, however the drivers of this change are up for debate. Depending on what and who you read, you may be led to believe that this transformation is being driven by a thirst for digitalization—a need to improve the client experience, the elusive pursuit of alpha generation, taking advantage of the maturity of emerging technologies. The list goes on. We are not necessarily discounting any of these reported drivers of transformation, however our very recent experience tells a different story.

We have seen an unprecedented uptick in our strategic advisory services, which are a precursor for any firm considering a major upheaval of their technology and operations approach to their operating model. In the past 18 months alone, we have been engaged by no fewer than a dozen asset managers of varying shapes and sizes—from global asset managers with more than \$1 trillion AUM to regional equity-only firms with less than \$20 billion to asset owners and pension funds looking to overhaul their businesses. Taking a step back and evaluating the drivers that triggered these firms to engage our consultancy services, the similarity of their objectives is striking, especially given the disparity of our recent client list. What you will not see in their list of drivers are much in the way of "FinTech" buzzwords. Blockchain, artificial intelligence, machine learning, robotic process automation? Nary a mention in the RFPs that we've responded to. Contrast the relative sexiness of FinTech with more tangible drivers such as replacing legacy technology, scalable data



architectures, buy over build, operational consolidation, and application rationalization, and we can start to have a conversation specific to what is really steering these massive transformations and the budgets that are required to power them.

So while transformation may be written about as a “trend” to watch in 2019 and beyond, we disagree. Trends come and go—transforming your technology and operating model is not a trend. At most firms where Citisoft is engaged, transformation is indeed front and center, however these programs are not being launched to follow any particular trend. Most firms have actually been putting off these programs for years, and in some cases, for more than a decade. These types of initiatives are invasive and expensive and the longer firms kick the can down the road, the costs and risks will spiral. Asset management firms continue to be plagued by unwieldy operating models fraught with legacy technology, redundant applications and processes, and inefficient governance models. If you’re looking for a trend along these lines, we’ll offer that simplifying one’s application architecture and associated operating model is paramount. This “trend” has driven much of our business over the past 18-24 months and we do not see an end in sight.

The FinTech Effect

There is no debate that FinTech is driving revolutionary changes in wealth management, capital markets, and banking as large institutions fashion their products and user experience after digital technology pioneers such as Amazon, Airbnb, Lyft, and other disrupters who have changed the way people live. While we have yet to witness FinTech driving transformational change at buy-side asset managers and we do not foresee it in the near term, it is an increasingly crucial component of the broader industry’s agenda for change.

What we do foresee is more clarity around how the next generation of FinTech can be leveraged to increase scalability and reduce costs. Software vendors and service providers are exploring how FinTech can lower operating expenses, increase margins, lower technical debt, and

even automate technical and business processes related to platform management and data reconciliation. Larger institutions are embarking on exploratory journeys to determine how FinTech can benefit not only their bottom line, but their customer experience as well. And finally, FinTech is being deployed in the markets in areas such as alternatives trading and regulatory monitoring.

What this means is that deploying FinTech strategies is not a required course of action within the majority of asset managers, however they will begin to be touched by it through their trading activity, vendors, and service providers. Remember that FinTech is not new, but the bleeding edge capabilities defined at any given time largely define what it means at any given point.

At present, FinTech is dominated by individual capabilities running the spectrum of cloud enablement, RPA, machine learning, AI, distributed ledgers, among others. The skill gap with respect to these technologies in the industry is too great to believe there will be a rapid and material acceleration of adoption. Further, these capabilities must be packaged together to be truly impactful. Only the most sophisticated managers will figure this out, while the rest will wait for someone else to productize it and subsequently offer it to the rest of the market.

Conclusion

We know that operations and technology transformation is underway in the asset management space, and that this transformation presents challenges to firms of all sizes—from initiative outset to seeing a project across the finish line. As 2019 continues to unfold, the drivers for operational change will stem from the increasingly sophisticated front office, impacts from vendor consolidation, a maturing outsourcing market and heightened expectations of services, and the continuance of modernization-based transformation activities rather than bleeding edge evolution. Consider what we foresee taking shape in the asset management space and what it means for your own initiatives. Asset management’s technological and operational ascent will in the near term be a difficult and steep climb.

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About Citisoft

Since 1986, we've solved complex technology and operations challenges for the investment management industry. With a team of over 75 dedicated consultants in North America and the UK, we're committed to working with asset managers and asset servicers globally on projects of every scope. From guiding complete business transformation programs to on-the-ground delivery, our team is equipped to fulfill any strategic or tactical need.

To learn more about our Advisory and Delivery Services or to leverage the legacy scale in your organization, contact us at insights@citisoft.com or visit us at www.citisoft.com.

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