

## OUTSOURCING TRENDS IN THE HEDGE FUND INDUSTRY

The global financial crisis of 2008 topped off an already difficult year for alternative investment managers. Turbulent markets severely impacted both fund performance and investor confidence, and forced regulators to scrutinize the industry more than ever before. For fund managers, client retention has been the main focus, but with continued market volatility, massive redemptions became inevitable as investors sought to minimize losses and hold cash.

Looking to 2009 and beyond, the industry will face significant change in the form of regulation, consolidation, fund closures, reduced asset allocation, and revised fee structures. With the view that investor confidence will slowly improve, historical track records, transparency reporting, operational and risk management processes, and fees will be the major determinants in a fund manager's ability to attract investors. Those managers who are able to meet these stricter demands will be forced to negotiate lower performance and management fees, even at a time when many funds are well below their performance fee water marks. According to a recent industry report, an estimated 20% of managers reportedly did not generate performance fees in 2008.<sup>1</sup>

How will hedge funds deal with intensifying operational demands under these difficult market conditions? In the past, fund managers would hire more people and implement in-house technology in an effort to demonstrate tight operational control. Given the intense cost pressure facing today's fund managers, we predict that 2009 will mark a major change in the way hedge funds approach their IT and operational requirements. We expect hedge fund managers to shift away from building technology and staffing infrastructure, and instead, move aggressively toward outsourced solutions in the areas of IT, software and services. Hedge funds will establish a network of relationships including multiple prime brokers, fund administrators, and trusted outsourcing providers, with the goal of improving their systems and operations at a substantially lower cost.

As the outsourcing trend gains momentum, software companies and fund administrators will be forced to adapt. Fund administrators will require expanded service offerings including client-facing technology, intra-day reporting, and middle office processing in order to stay competitive. Software providers will be forced to provide Application Service Provider ("ASP") solutions with bundled IT services in order to keep pace with the outsourcing trend.

This paper discusses a new "outsourced-based" operational model for hedge funds and identifies a number of solutions currently available in the marketplace. We conclude that the right combination of outsourced solutions will enable fund managers to significantly reduce their expenses, improve their technology, and effectively meet investor demands.

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<sup>1</sup> Hedge fund cost survey, KPMG, September 2008.

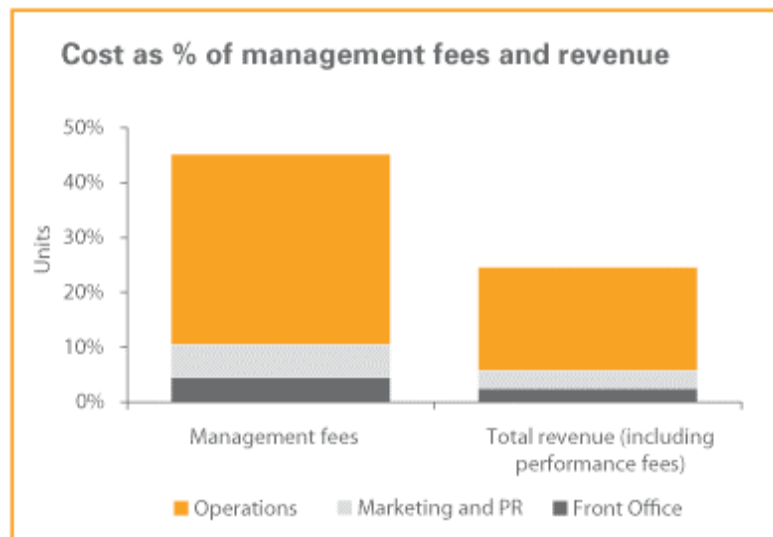
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## Operational Models in Transition

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The current financial crisis has sparked a realization that cost-cutting measures may not only be a short-term solution to offsetting negative returns, but rather a more permanent situation that will require strategic changes to the current hedge fund operating model. In a 2007 survey of fund managers, 31% predicted decreased or unchanged spending on IT and investment operations in the coming year. In 2008 that figure rose to 44%<sup>2</sup>. If spending continues to decline, hedge fund managers must implement longer-term operational solutions that will allow for substantial growth at reduced cost.

In the past, the typical hedge fund operational model has been to build IT and support infrastructure in direct correlation to its growth in assets under management. Those hedge fund managers with successful track records have ambitiously sought to build out complex IT infrastructure and large middle- and back-office organizations. In many cases, managers have hired application developers either as full-time staff or as independent contractors to build and maintain costly proprietary technology.



Source: Cost as % of management fees and revenue, Source: KMPG.

This current operational model has resulted from a number of factors. Many fund managers simply had privacy and security concerns pertaining to outsourcing, or were influenced by their past experiences. Since most fund managers began their careers at large financial institutions, they were provided with massive infrastructure and support staff to maintain their trading operations. These traders and portfolio managers had no insight into the cost of building and maintaining this infrastructure, yet they became heavily dependent on its existence. As these same individuals ventured out to start hedge funds, they assumed a similar infrastructure was required to run a successful trading operation, and embarked on costly projects.

Besides manager bias, the industry in general lacked sufficient outsourcing solutions, due in large part to technology limitations. In the past, managers of complex funds simply had no choice but to build out infrastructure; however, this void in the industry is no longer the case.

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<sup>2</sup> Advent Software, Inc. 2008 Asset Management, Operations and Compensation Survey, October 2008.

Recent advancements in the areas of Internet security, web-based development tools, virtualization and remote connectivity have resulted in an increased number of outsourcing solutions covering all areas of a fund's operations, from trading to investor reporting. These outsourced solutions are more cost effective and can be implemented faster with minimal risk and upfront cost. They have the further advantage of enabling a manager to customize and modify a solution over time based on their growth and changing business needs.

In the past, fund managers were always faced with the "buy versus build" decision pertaining to technology. Today, there is little to no reason for hedge funds to build proprietary software. There are many products readily available in the marketplace to support standard operational processes such as order management, portfolio accounting, risk management, security master, data warehousing, pricing, and reporting at far less cost than building and supporting an equivalent proprietary application. The only potential exception to this rule is in the area of investment decision making – such as trade algorithms, research and valuation models – which incorporate a fund's proprietary knowledge and competitive advantage. Even in these instances, however, a number of specialized toolkits do exist, such as model libraries to minimize the need for custom development.

Taking this argument further, there is really no need for a hedge fund to maintain any technology solutions in house whatsoever when they can be hosted, accessed remotely, and maintained by a third-party service provider. The latest hosted technology platforms deliver a desktop user experience over the Internet supported by a multi-million dollar technology infrastructure, including 24x7 maintenance programs and built-in high availability disaster recovery solutions, all at a fraction of the cost of buying or building a similar platform and maintaining it internally. These hosted technology providers also provide full IT, desktop and networking support which eliminates the need for maintaining internal IT staff.

The same outsourcing argument pertains to middle and back-office processing. Most of the business processes performed by a hedge fund's middle- and back-office staff are routine and common to all funds. Daily tasks such as trade capture, portfolio pricing, reference data management, trade and position reconciliation, and report generation may be outsourced to service providers who specialize in these processes and offer solutions at a much lower cost.

It is clear that cost cutting will be a primary objective for fund managers in 2009. A recent report from a leading accounting firm estimates that over a quarter of the cost of running a fund is spent on facilities, infrastructure and IT<sup>3</sup>. The cost of operations comprises 19% of revenue, or 35% of management fees. The study further estimates that 30% of managers are now looking to outsource services and 50% will be focused on cost reduction in the coming year.

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<sup>3</sup> Hedge Fund Cost Survey, KPMG, September 2008.

Clearly, outsourcing represents a huge opportunity to cut costs. The recent availability of hosted technology solutions and specialized service providers coupled with the intense cost pressure facing today's fund managers will prompt a massive shift toward outsourcing and will result in a new operational model for hedge funds. To stay competitive, all fund managers will need to explore and adopt various outsourcing alternatives, and as a starting point, should first explore potential outsourcing solutions within their existing third-party relationships.

## A New Role for Fund Administrators

Over the past few years, fund managers have placed increased reliance on their prime brokers for value-added services in support of their operational needs. Prime brokers provided technology and daily reporting solutions to their clients, which traditionally served the needs of those managers using a single prime broker. As we have seen in recent months, the prime brokerage industry is in a major state of transition, and fund managers can no longer operate in a single prime broker model. In an effort to minimize counterparty risk and satisfy investor due diligence requirements, fund managers have been forced to maintain multiple prime broker relationships [as we outlined in a recent research paper<sup>4</sup>], and are now even establishing relationships with more traditional custodians with stronger balance sheets in an effort to minimize risk. The operational complexity of hedge funds has increased significantly as a result, and managers now require aggregated reporting and multi-prime technology solutions not readily available from their prime brokers. In response, Credit Suisse has moved to provide a multi-prime solution, and as we discussed in a recent research paper<sup>5</sup>, we expect more prime brokers to provide multi-prime solutions in the future.

The increase in operational complexity brought on by the multi-prime trend does create a unique opportunity for fund administrators, since they already maintain

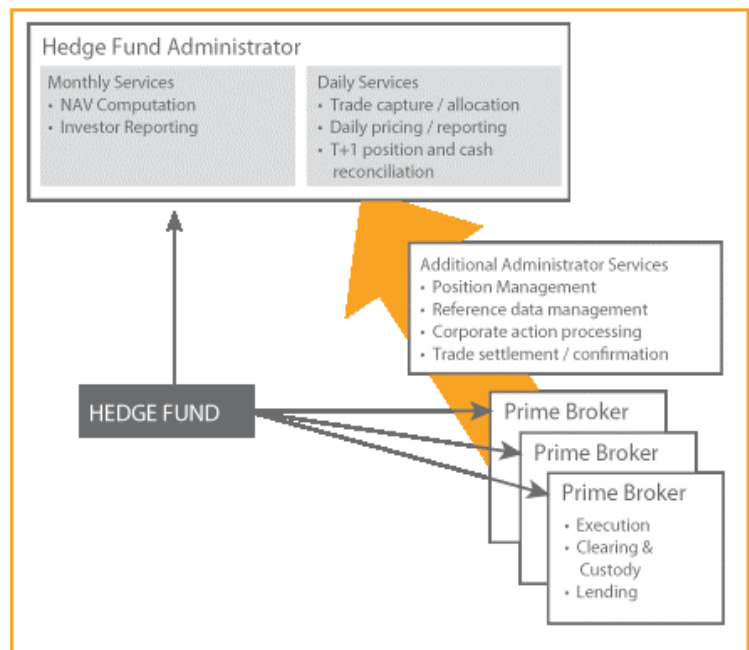


Figure 1. The multi-prime trend is creating opportunities for administrators to expand their client service offerings.

<sup>4</sup> Market Insight: The End of the Single Prime Broker Model, Paladyne Systems Research Paper, October 2008.

<sup>5</sup> The Next Generation Prime Broker, Paladyne Systems Research Paper, August 2007.



aggregated portfolio information on behalf of their clients. Today's fund administrators are uniquely positioned to provide outsourced services to their clients in two key areas: hosted technology and business process outsourcing. Most administrators do not currently provide these services; but given the anticipated demand shift for outsourcing, administrators will require enhanced service offerings and outsourced solutions in order to stay competitive and meet the increasing demands of clients.

### ***Hosted Technology Solutions***

In general, today's fund administrator can be classified as either a daily or monthly service provider. The majority of administrators provide month-end services only; however, a small group such as Citco, IFS, and GlobeOp do provide comprehensive daily services to their customers, including client-facing technology and value-added middle office services. These daily administrators have spent millions of dollars building technology and support infrastructure, and incur the ongoing costs of development teams and end-user support staff. These technology solutions require constant enhancements and upgrades to keep pace with the growing demands of fund managers and investors, which is costly and distracts from their main business of providing administrative services. As the industry transitions and the outsourcing shift continues, the situation will only get worse. Those administrators with no client-facing technology or middle office services will require a solution in the short- to medium-term in order to successfully compete for new assets.

Ironically, fund administrators are faced with the same decision as their hedge fund clients: Either build out expensive infrastructure or leverage third-party technology providers. The same outsourcing arguments facing a fund manager also apply to fund administrators. There is no reason for fund administrators to build out and maintain expensive infrastructure, especially client-facing technology, when hosted, third-party solutions are available at a significantly lower cost. At a minimum, those daily administrators with existing in-house technology can immediately reduce costs by leveraging third-party providers for hosting, IT maintenance, and comprehensive disaster recovery services.

Most administrators do recognize an urgent need to expand their services offerings, and in response, have been actively exploring newer client-facing technology solutions in the areas of order management and execution, real-time P&L, and custom reporting. These client-facing technology solutions can be hosted by a third party, and still be tightly integrated with an administrator's existing in-house technology platform. As this trend continues, we expect a new operational model to evolve whereby the administrator and their clients "share" an integrated technology platform. In this scenario, a front-office solution provided by an administrator would be fully integrated with the back-end accounting system, which eliminates all manual trade capture and insures that the client's data is fully reconciled with the administrator's accounting system on a daily basis.

The concept of a “shared” technology platform also enables fund administrators to more effectively offer middle office services. If the client and fund administrator are using the same integrated technology platform, administrators can offer any combination of services, including trade allocation and confirmation, reference data management, daily reconciliation, cash and collateral management, data warehousing, and custom reporting. Many of these tasks can be fully automated such that the administrator and client are reconciling on a daily basis.

In some cases, fund managers or investors will prefer a “shadow accounting” solution, whereby the manager maintains an independent set of books and records which are then reconciled to the administrator at month-end. We expect this practice to decrease given the added costs of maintaining two sets of books and the inherent efficiencies of a “shared” technology platform; however, for those administrators who offer client-facing reporting and data warehousing technology to their clients, these tools can be used to automatically reconcile the two sets of accounting books on a daily basis.

### ***Business Process Outsourcing***

As the shift to outsourcing gains momentum and fund managers begin downsizing their internal operations, they will become increasingly reliant on third-party services providers. Fund administrators are well positioned to capture this demand by offering a combined technology, middle office and fund administration solution. Given their economies of scale, fund administrators can provide middle-office services more cost effectively than a fund manager’s internal operations team. Since many daily tasks are similar to the tasks performed at month-end, administrators to a large extent can leverage their existing resources to extend their services offering. Most fund administrators have also built offshore teams over the past few years, which may be utilized to provide timely and lower cost services.

In 2009, we expect hedge fund managers to focus their spending on front-office trading and trade support tools, and to pursue outsourced solutions for the following middle office tasks:

- Trade capture and allocation,
- Trade settlement and confirmation,
- Reference data management and corporate action processing,
- Daily pricing and reporting, and
- T+1 position and cash reconciliation.

These daily processes are fairly standard across hedge funds and can be seamlessly outsourced to a middle office service provider at a lower cost. By providing daily services, a fund administrator will gain huge efficiencies in their month-end process and more existing resources can be allocated to performing daily services.

We do expect fund managers to readily adopt outsourced technology and services offerings given the current market conditions and industry-wide cost-cutting efforts. Historically, it has been difficult for a fund to change administrators; however, the current environment had opened the door for managers to re-evaluate their fund administration relationships with little to no scrutiny. As a result, those administrators with limited technology and services offerings will struggle to retain existing clients and will have difficulty competing for new clients.

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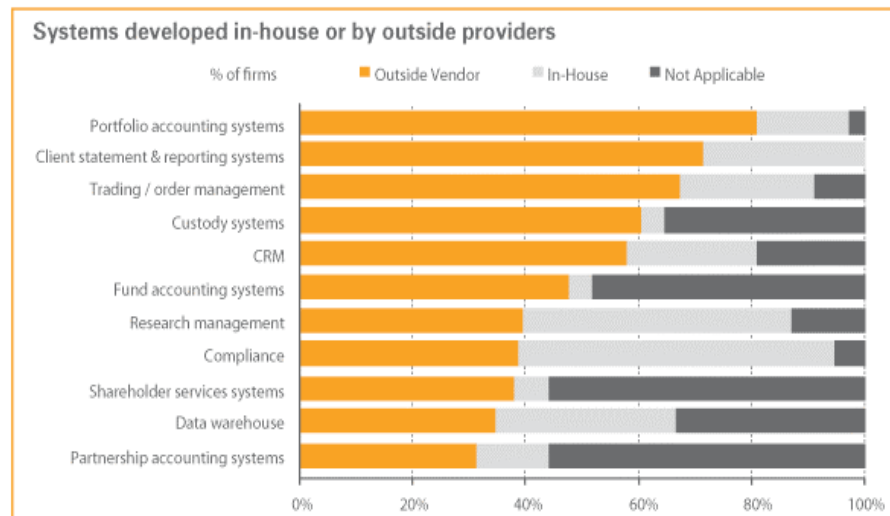
## Benefits of Hosting Technology Solutions

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Hedge funds have grown increasingly complex, and many have built out massive infrastructure and proprietary applications, such as trading and risk systems, that are specifically designed to execute a firm's trading strategies and differentiate its investment approach in the marketplace. While building customized tools can be a strategic advantage for many firms, in the case of the commonly available functions such as portfolio accounting, security master, data warehousing and reporting, building and maintaining proprietary systems can be a time-consuming, expensive exercise that in many cases results in failed projects.

The hedge fund industry has matured to the point where many fund managers do recognize some of the advantages of IT outsourcing. Historically, fund managers could choose one of two types of hosted solutions: pure hosting and managed hosting. However, with recent advances in technology, a third alternative has emerged which combines hosted technology with a managed IT service, providing what is essentially a turn-key infrastructure solution.

Pure hosting firms were the first to appear in the market, providing a less expensive alternative to building an internal data center. The hosting provider would lease data center space with conditioned power and cooling and provide dedicated server racks for clients. Connectivity was supplied by multiple carriers for redundancy and was managed by the



Source: Advent Software, Inc.

hosting provider. The fund managers, however, were responsible for maintaining the actual servers and applications which still required IT infrastructure.

Many hosting firms expanded their offerings by including a managed IT service for ongoing maintenance of the servers, SAN storage, and basic disaster recovery services such as daily tape back-up and hardware failover. Managed hosting is significantly more expensive than pure hosting, but it reduces the IT infrastructure requirements of the fund manager. The managed hosting solution, however, is still incomplete since the hosting firms were only able to manage the servers themselves, not the installed software applications. Recently, some managed hosting firms have emerged who specialize in servicing one or more third-party applications in addition to providing their managed IT services. This model is sub-optimal since the specialized hosting firm has no access to the intellectual property of the applications and cannot provide ongoing support.

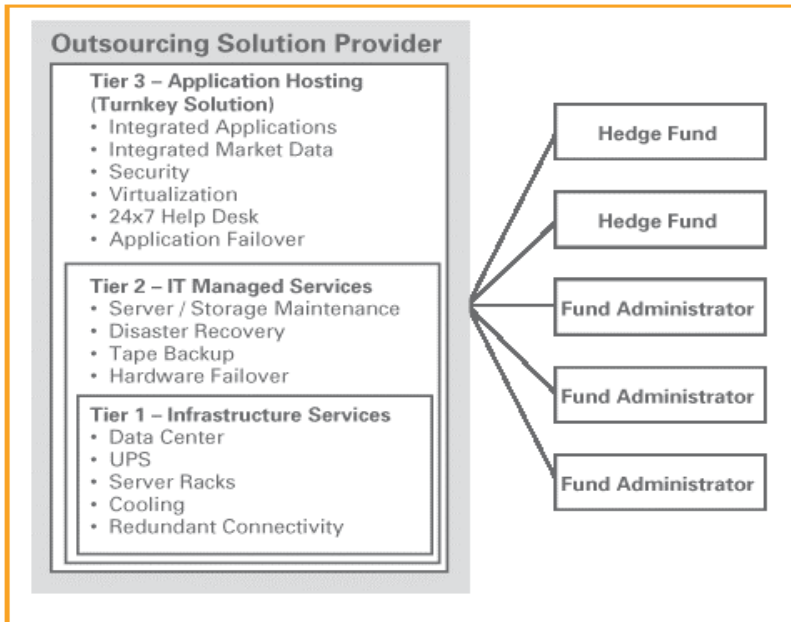


Figure 2. The next generation of turnkey hosting providers offer a completely outsourced infrastructure solution to the hedge fund industry at a fraction of the cost of an in-house solution.

In response to these limitations, a new “turn-key” hosting provider has emerged, offering the full benefits of hosting and managed IT services coupled with an integrated suite of hosted software applications. Essentially, these firms began as software companies and evolved into managed hosting providers. These turn-key hosting providers leverage the latest connectivity, security, virtualization, mirroring, and SAN storage technology to deliver a desktop user experience over the Internet and a comprehensive IT infrastructure offering. Clients can simply log into a dedicated hosted environment and run their businesses on an integrated suite of software applications, including 24x7 help desk and IT support. Even the most basic desktop support – workstations, phones, e-mail, print and file servers – can be outsourced to these turn-key hosting providers. In Figure 2, the three tiers of hosting services are illustrated:

The pricing structure for these turn-key hosted solutions is very compelling, especially for fund managers with complex trading strategies, or smaller managers (e.g. under \$250 million in net

assets) who cannot afford comprehensive infrastructure, and as such, have had difficulty competing for new investors. Hosting providers typically charge a quarterly services fee to the fund manager based on their net assets under management, which includes full access to the hosted software and all of the IT support services. This quarterly fee is a fraction of the cost of building in-house infrastructure and has no large up-front fees typically associated with buying third-party software and hiring support staff. Fund managers also benefit by expensing these services to the fund as opposed to the management company. In return, investors receive the added benefits of tighter operational control, risk reduction, and improved transparency.

Turn-key hosting providers offer two additional “hidden” benefits: discounted access to market data and complete “hot site” disaster recovery. Turn-key solutions typically include streaming market data feeds for pricing, terms and conditions, and corporate actions. In such cases, the hosting provider will typically negotiate significantly reduced pricing from the data vendors. The data vendors benefit from the relationship by leveraging the hosting providers as both a sales distribution channel, and more importantly, as a front-line support resource. In return, the data vendors extend discounts to the hosting providers, which are passed on to the end client. Hosted providers have also pre-established the optimal connectivity with each data vendor, resulting in more seamless and timely deployment. In the past, managers incurred the costs of deploying, testing, and integrating dedicated circuits for each data vendor feed.

A second “hidden” benefit of a turn-key hosting provider is a robust and “live” disaster recovery (“DR”) solution. In reality, most funds do not maintain sufficient DR solutions and do not allocate sufficient time for planning, building, and testing their DR infrastructure. In many cases, fund managers simply maintain an end-of-day server backup procedure. An effective DR solution with a mirrored physical hot-site location is expensive, time consuming, and requires costly and complex technology. Most funds do not have the budgets or expertise to deploy these DR solutions, and as a result, have major exposure in the event of a disaster. Hosted providers invest heavily to ensure uninterrupted service to their clients in the event of a disaster by carrying out regularly scheduled DR simulations with power outages and failover testing between multiple physical sites.

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## Conclusion

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Hedge funds are in a difficult situation of having to demonstrate comprehensive operational control, while facing intense pressure to minimize expenses and lower fees. Those managers who do not make the necessary changes will find it difficult to attract increasingly sophisticated investors. In response, we are predicting a major shift toward outsourcing as a solution to these challenges. Fund managers can leverage outsourcing providers for technology and managed IT services and achieve an overall reduction in their operating costs coupled with significantly improved infrastructure and systems. We expect fund administrators to play a prominent role in delivering value-added outsourcing services to fund managers in the form of both hosted



technology and middle office services. By providing a “shared” technology platform to clients in combination with daily services, fund administrators will experience considerable productivity gains, improved client retention, and increased revenues.

Finally, we predict that turn-key hosting providers are the wave of the future for fund managers, fund administrators, and prime brokers. The combination of tightly integrated software products, hosting services, IT and application support, market data, and robust disaster recovery at a fraction of the current in-house cost structure is far too compelling not to become the standard operating model for the hedge fund industry. The turn-key hosting solution addresses the current challenges facing fund managers, provides fund administrators with improved competitive advantage, and delivers a multi-prime technology platform to prime brokers. In the end, however, the primary beneficiary of this new outsourced operating model is the investor, who is assured of greater transparency through better reporting and tighter oversight based on the integral relationship between the operations of the funds and their service providers.

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## About Paladyne Systems

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Paladyne Systems, Inc. ([www.paladyne.com](http://www.paladyne.com)), a leading solutions provider for the hedge fund industry, develops and distributes technology and managed hosting services designed to streamline hedge fund operations while providing business efficiency and cost savings. Paladyne offers a turn-key hosted technology platform known as the PALADYNE™ Suite which is capable of supporting the front- to back-office requirements of today’s most comprehensive hedge funds. The PALADYNE™ suite is an integrated set of applications including: execution and order management, real-time P&L and portfolio management, portfolio accounting, global security master, data warehousing and custom reporting, pricing and valuation, and automated reconciliation. Paladyne was formed through an acquisition of its technology platform from a large US-based multi-strategy hedge fund. Paladyne is headquartered in New York City, with offices in New Jersey, San Francisco, London, and Russia.