

Wall Street & Technology

Business Innovation Powered By Technology

*Hedge funds know regulations are coming.
Fund managers need to get their ducks in a row now
to prepare for new transparency requirements. [p.8](#)*



Get **Ready** for
Transparency

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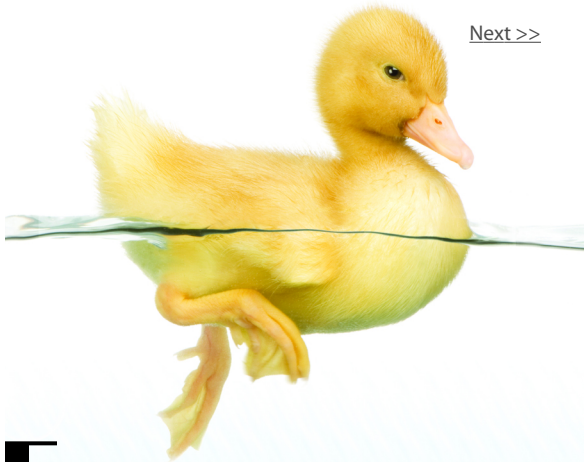
New rules are coming. To get ready, hedge funds must invest now in technology and processes that provide the level of transparency demanded by regulators and investors.

Industry Voice 11

Data, Data Everywhere

Already overburdened by an explosion of market data, hedge funds' IT infrastructures may be crippled by new regulatory reporting requirements, says Algebraix Data's Charlie Silver.

This is the second of four all-digital issues that *Wall Street & Technology* will be producing in 2010.



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Partnering to Promote Transparency Revere Capital Advisors taps SRL's Nexus platform to enable institutions to monitor investments in real time.

The Value of Independent Valuation

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Revere Capital Promotes Transparency

By **Melanie Rodier** mrodier@techweb.com

Revere Capital Advisors has taken an equity stake in Statistical Research Laboratory (SRL), a U.K.-based technology company focused on providing the asset management industry with greater transparency. Revere is an investment group and hedge fund platform based in New York, London and Singapore.

SRL's Nexus is a fully integrated investment platform that provides improved investor transparency and ownership of data, allowing institutions to evaluate all of their holdings together, according to a release announcing the partnership. The technology strengthens institutions' oversight capability through the provision of an independent audit trail of investment activity, communications, and regulations and compliance, the release stated.

"SRL ... is at the forefront of the institutionalization of the asset management industry," said Revere CEO Dan Barnett in the release. "The partnership allows Revere and our clients to monitor investments on a real-time basis as well as respond to the increasing demand of clients requesting a managed account solution."

Neil Puri, CEO of SRL, added, "The Nexus platform is revolutionary in its provision of integrated applications, from portfolio management and risk management to due diligence and operations reporting. The shared manager/investor platform ensures that both investors and managers are equipped with the tools necessary to make informed investment decisions using a dedicated neutral, transparent and robust framework to increase operational efficiency."

Revere provides capital, advisory expertise, and sales and distribution and technology infra-

structure to its partner hedge fund managers. Current Revere partner managers include Dickson Capital Management, a London-based long/short equity fund; Broadmark Asset Management, a tactical allocation long/short equity fund based in San Francisco; and San Francisco-based Bayswater Asset Management, a systematic global macro manager. ■

"The partnership allows Revere and our clients to monitor investments on a real-time basis."

—Dan Barnett, Revere Capital Advisors

Harmonic Adds Independent Valuation

By **Melanie Rodier** mrodier@techweb.com

Harmonic Fund Services, a specialized global hedge fund administrator, selected Numerix, a provider of cross-asset analytics for derivatives valuations and risk management, to provide independent valuation and risk management for OTC derivatives. Through the use of Numerix's analytic platform and extensive library of independent models for pricing all OTC derivative asset classes, Numerix CrossAsset, Harmonic will have an enhanced ability to independently value a comprehensive range of financial instruments and transactions, according to a company statement.

The library will be integrated with Harmonic's proprietary platform for alternative investment managers, FM3, a comprehensive front- to back-office system that supports, among other functions, portfolio management, risk management, accounting, investor management, complex fees and compliance. To integrate Numerix's analytics into FM3, Harmonic is utilizing the Numerix CrossAsset Software Development Kit (SDK), which provides programmer-level access to

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“Being able to offer clients a standardized and independent means of asset valuation has become increasingly important.”

—John Wolfe, Harmonic Fund Services

Numerix’s analytics and library of pricing models and methods.

“Independence is currently a major theme in financial services and particularly in alternative investment management,” said John Wolfe, managing director at Harmonic, in a release. “As a

fund administrator, being able to offer clients a standardized and independent means of asset valuation has become increasingly important. Numerix’s ability to handle and price any standard or custom derivative, coupled with the flexibility of the Numerix platform and software, gave us the confidence we needed to choose them as a ... provider.” ■

Hedge Funds Reduce Risk to Attract Investors

By Ivy Schmerken ischmerken@techweb.com

In response to the financial crisis, hedge fund managers are enacting a series of operational changes to reduce risk and enhance their ability to attract investors, according to a recent study that examined the operational practices of more than 50 hedge funds in North America, Europe and Asia with assets greater than US\$1 billion. More than two-thirds of the hedge fund managers who participated in the survey said they believe that operational improvements and automation have a direct and positive impact on their ability to attract investors and assets.

“Better routines and work practices have helped us provide transparency to our clients, which gives investors additional confidence in us,” stated one North American fund manager, according to a release announcing the availability of the research.

Counterparty Risk Concerns Drive Hedge Funds to Add Prime Brokers



According to the study — which was sponsored by Omgeo and conducted by Greenwich Associates — hedge fund managers are starting to automate key processes, such as reconciliation, cash management, collateral management and pricing. Approximately 70 percent of survey respondents said they have altered their operations to reduce counterparty risk. Among the steps taken by these managers were revising policies and control, increasing cash accounts, and adding prime brokers.

In fact, almost 60 percent of survey participants reported that they have increased the number of prime brokers with which they work — a move that virtually all of the respondents said is intended to reduce counterparty risk. Managers based in Asia were especially likely to have increased their number of prime brokers, with 78 percent noting an increase. Meanwhile, about 40 percent of the managers who participated in the study said they have taken steps to improve reporting and increase transparency for investors, and about one-third said they have started to obtain more independent valuations and accounting.

“The events of last year have illustrated the direct link between operational improvements and hedge funds’ ability to attract and retain assets from investors,” said Andrew McCollum, consultant at Greenwich Associates, in a statement. “There’s a real change of behavior going on — the days in which investors would entrust their money to the black box of a skilled hedge fund manager are over. In the post-crisis marketplace, investors are demanding not only transparency, but also sophisticated operational processes and infrastructures capable of managing the types of risks they’ve experienced over the past 18 months.”

A white paper highlighting the results of the survey can be downloaded at omgeo.com/hedgefunds. ■

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Mini-Prime Brokers Flex Their Muscles

Mini-primers such as Direct Access Partners are building out their multiprime brokerage offerings to help small hedge funds forsaken by the large brokers reduce risk.

By Ivy Schmerken ischmerken@techweb.com

With an eye toward reducing counterparty risk for small and midsize hedge funds, Direct Access Partners, an institutional agency broker, has strengthened its multiprime brokerage offering with the introduction of Global Prime Services. DAP added Goldman Sachs Execution and Clearing to an existing best-of-breed multiprime brokerage platform that previously included Bank of America Merrill Lynch and Bank of New York Mellon/Perusing. Meanwhile, the agency broker also has partnered with Paladyne Systems for order management, data aggregation, and risk analysis and reporting.

According to industry sources, some of the large prime brokers have pushed out smaller hedge funds because their accounts are not

lucrative enough. So-called mini-prime brokerages, which aggregate this smaller business for the larger primes, have emerged to address the needs of these smaller funds.

"We come in as an introducing broker, and we become the single point of contact with the hedge fund for trading, technology and operations," explains Mark Salameh, New York-based Direct Access Partners' director,

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sales and marketing, Global Prime Services.

In many cases over the past 18 months, Salameh reports, in response to investor pressure, hedge funds with a single prime broker at one custodian are seeking to reduce counterparty risk by adding custodian and prime brokerage relationships. "Typically they'll have a single custodian and then they will either switch custodians and go multiprime or add another custodian onto their platforms," he relates.

But unless they are multibillion-dollar hedge funds, they typically don't have the operational and back-office staff in place to support such a move, Salameh adds. In addition, most of the newly launched hedge funds have \$30 million to \$40 million in assets, rather than the half-billion in assets common just a few years ago, making them less attractive to the large primes.

Ready for Action

That's where Direct Access Partners comes into play. "What we really built here is an institutional-ready platform," says Salameh, who suggests that DAP's technology can provide funds with the trading access they need while reducing set-up and maintenance costs.

According to a DAP release, clients can utilize a diverse service offering that includes multi-asset execution in more than 100 markets, independent research, securities lending and business consulting. In addition to connecting with numerous direct-market-access (DMA) platforms, the new Global Prime Services offering also provides access to New York-based Paladyne Systems' order management technology, data aggregation services for consolidating data from multiple prime custodians, and risk reporting and risk analysis.

"Paladyne is playing an integral part in the multiprime solution," DAP's Salameh relates. "It's the concept of simplifying complexity to the hedge fund and aggregating data when you are multiprime and have multiple data



"We become the single point of contact with the hedge fund for trading, technology and operations."

—Mark Salameh,
Direct Access Partners

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operations

reports from the custodians."

According to Sameer Shalaby, CEO of Paladyne Systems, an infrastructure provider to hedge funds, "The idea is to originate the trades in Paladyne, stage it in the market through broker-neutral systems and, as you are getting fills back, you are able to receive a real-time P&L, allocations and position-keeping system. You aggregate that from the different counterparties, and you can produce an aggregated view of the positions they're trading with the different brokers and produce all the reports."

Measuring Risk

Further, through a relationship with RiskMetrics Group, a global provider of financial risk management products and services, Paladyne is able to offer RiskMetrics reports to DAP's clients. "This becomes a compelling solution for the hedge funds that can operate and deal with the full trade life cycle, from order generation to allocations to risk reporting, which would be key for investors," says Shalaby, who notes that investors increasingly are demanding exposure reports from hedge funds in addition to performance reports. He adds that compliance rules monitor restricted lists and sector concentrations.

Shalaby points out that Paladyne has proven this model over the past few years with Credit Suisse, which provides the vendor's technology to its hedge fund clients. As a result, he relates, the DAP integration effort went smoothly.

The Global Prime Services platform, DAP's Salameh notes, was built from the investor's perspective so that the hedge funds could monitor their institutional assets. "We've taken

the extra step by creating transparency through the RiskMetrics reporting, which is a well-known name with investors and it strikes a chord with them," he adds.

While it owns a floor brokerage on the New York Stock Exchange, DAP offers multi-asset execution services in equities, international equities, fixed income and options. The company plans to go live with futures in the second quarter of 2010. ■

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coverstory HEDGE FUND TRANSPARENCY

As they prepare to comply with new and more stringent rules, hedge funds must align their technology and processes to provide the transparency demanded by regulators and investors alike.

Get Your Ducks in a Row

By **Melanie Rodier** mrodier@techweb.com

Since the Madoff scandal and the unraveling of the credit markets, few financial players have been more publicly vilified than hedge funds. With the general outcry against hedge funds' often-secretive practices ringing in their ears, regulators have been scrutinizing the industry that, at its peak in 2007, had more than \$2.1 trillion in assets under management but has since shed \$700 billion in assets and seen multiple funds close shop as fearful investors have fled for seemingly safer vehicles, according to research from TABB Group.

Today, however, the hedge fund industry is making a comeback. Fund managers once again seem bullish. Despite all of the headlines purporting hedge funds' greed and evil intentions, investors are returning, and assets are expected to climb back to nearly \$2 trillion by

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the end of the year, says TABB's Matt Simon, who recently authored a report on the state of the industry.

Still, hedge funds face a massive transformation as regulators prepare to slap new and more stringent rules on fund managers. Hedge fund managers should anticipate that they will need to register with either the SEC or at the state level in the near future, says Lance L. Friedler, a partner at New York-based law firm Sadis & Goldberg.

"The general consensus is that hedge fund managers with assets under management of greater than \$150 million will likely have to register at the SEC level, and those with less may have to register at the state level," Friedler reports. "If registration is required, hedge fund managers would need to build out a compliance infrastructure that is SEC- or state-compliant, which would include having written compliance policies and procedures and personnel to carry out such policies and procedures."

A Transparent Future

While much uncertainty remains around the specifics of new regulations, their intentions are certain: to create greater transparency for both regulators and investors. "Hedge funds will need to disclose more about their trading practices, and will have to record trades and have a system in place to reasonably tell them what funds did the day before, what and how much they traded, and that they carefully examined risk," says TABB's Simon.

Even small hedge funds, which likely will not be required to register with the SEC, may want to consider the benefits that would come with registering and complying with new transparency rules, Sadis & Goldberg's Friedler suggests. "The benefits for smaller managers being SEC-registered would be, first, the potentially greater ability to raise assets from institutional investors; second, the ability to publicly market their advisory services —



"Hedge funds will need to disclose more about their trading, ... what and how much they traded, and that they carefully examined risk."

—Matt Simon, TABB Group

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although the private funds they manage still must be privately placed; and third, potentially more flexibility in managing assets, ... such as corporate pension and 401(k) assets to the extent the manager also qualifies as a qualified professional asset manager," he explains.

John Wolfe, managing director at Harmonic Fund Services, a specialized global hedge fund administrator, points out that investors are already pushing hedge funds to upgrade their technology and better define systems and business processes. "Since the credit crunch, the hedge fund space has become much more investor-driven," he relates. "Excel is no longer acceptable as an institutional technology platform. Investors want better reporting and transparency." (For more on how Harmonic is helping address investor transparency demands, see related article, [page 4](#).)

A Chief Concern

According to the chief compliance officer of a \$9 billion hedge fund, who was speaking in an off-the-record forum at the Financial Technologies Forum's 3rd Annual Hedge Fund Operations & Technology conference in New York in April, hedge funds should prepare for this transparent future by first hiring their own CCOs. "Some may be tempted to attach this role to the CFO, but that's not a good idea, as it's a heck of a lot of work," she said, explaining that funds no longer can rely on standard templates for compliance manuals.

Instead, companies need to put in place solid policies and procedures that can withstand an examination from the SEC, whose tolerance for wrongdoings or lax procedures is widely deemed to be at an all-time low. And it is not enough to just outline these policies. Hedge funds must make sure they review their policies at least annually and update them in order to make sure they remain relevant to their business, experts say.

But compliance programs are expensive —

and on the heels of broad budget cuts, many smaller funds are shying away from buying technology before they know exactly what regulations are forthcoming, according to TABB's Simon. One New York-based hedge fund manager speaking at the Financial Technologies Forum notes that total compliance costs for his firm can easily reach \$1 million to \$2 million annually.

Nonetheless, experts stress, even while hedge funds often are reluctant to spend money in areas where they will not see a return, they must act now to ensure that they are ready ahead of a potential SEC examination. "The theme is the dog wanting to wag the tail rather than the tail wagging the dog," says Neil Puri, CEO of Statistical Research Laboratory (SRL), a U.K.-based technology company whose Nexus investment platform promotes transparency by allowing institutions to aggregate and evaluate all their holdings together.

"Investors want to know what's going on with their money — what's at risk and what's not, such as counterparty risk a la Lehman Brothers," he con-

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5 Signs of Maturity

The regulatory hammer is expected to fall on the hedge fund industry in the coming months.

Experts say now is the time for hedge funds to self-regulate and make sure they are fully prepared to comply with any new rules from the SEC, whose tolerance for wrongdoing is at an all-time low. At the Financial Technologies Forum's 3rd Annual Hedge Fund Operations & Technology conference, held in April in New York, **Holly Miller**,

partner at Stone House Consulting, outlined several clear signs of maturity that hedge funds should be able to demonstrate to regulators:

1. Management of the business — not just the fund.
2. Communication and transparency.
3. Quality of staff.
4. Awareness of risks and best practices.
5. Oversight (external and internal).

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tinues. "Risk isn't an additive. They need to know their positions and how their portfolio is performing." Revere Capital Advisors, a hedge fund platform, recently took an equity stake in SRL. (See [page 4](#) for more on the Revere/SRL partnership.)

Reconcilable Differences

Enhanced portfolio accounting systems are key to providing this transparency, according to Harmonic's Wolfe. "There is a need for integration of the front office with the middle and back office, with a seamless platform to see the results of reconciliation and positions, and to monitor P&L and risk measures in real time," he says.

Today, Wolfe adds, managers are concerned with the diversity of counterparties. "Even smaller ones have multiple prime broker arrangements," he comments. "Managers now need integrated technology to reconcile against all prime brokers, aggregate, and splice and dice information."

A lot of information needs to be reconciled, agrees Andrew Godfrey, executive managing director at Revere. "That's where technology comes in — in an environment with multiple sources of information that needs to be aggregated in some way," he says. "Data is much richer than the VAR number. Portfolio management is where it's at, using information to make an optimal hedge."

There is more demand for effective data/risk management and stringent data security than ever before, asserts Tony Hernandez, managing director, SMART Business Advisory and Consulting. "There are issues around confidentiality and encryption," he says. "You have a responsibility for protecting it first and then for monitoring it. And you must alert your investors if there is a breach."

Indeed, given the public repercussions of a breach, regulators are keen to scrutinize data

security. This is particularly important for funds since a lot of their clients have very high net worths, says Tom Reilly, CEO of security firm ArcSight.

"You have to be very focused on protecting your clients' information, as well as protecting who your clients are," he advises. "You don't want someone to take their names to a new competitor. So there's a tremendous focus for hedge funds on protecting data."

Discovering the Truth

E-discovery is another data management area that hedge funds should not overlook, says Adam Cohen, senior managing director, FTI Technology, an e-discovery solutions provider. "Traditionally, hedge funds have not been subject to the same regulations. But as hedge funds started to play a major role in financial markets and to have a higher profile for the public, they started to get sued more," he points out.

"While a very small number of them have already implemented [e-discovery policies and procedures], the vast majority know nothing about e-discovery compliance," Cohen contends. "They will have to start from scratch to develop a client ecosystem, including dealing with different sources of data. ... This will come as a major shock."

Amy Lynch, CEO of consultancy Frontline Compliance, says e-discovery is one of several areas where hedge funds may need to beef up their technology resources. "But it's not just about purchasing technology," she insists. "It's also a requirement that someone has to conduct periodic reviews of electronic communications to determine that there's no egregious activity in those communications."

Large hedge funds may already be doing this, Lynch notes. But many smaller funds have never implemented adequate procedures. "We see many hedge funds that purchase technology and have systems in place but then don't follow through with reviews and the internal processes that are needed to make sure the technology is being used properly and there are no violations taking place," she says. ■

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Data Deluge

Already overburdened by market data, hedge funds' IT infrastructures may be crippled by new reporting requirements.

As the financial reform bill rattles through Congress, politicians are now debating the best way to reestablish confidence on Wall Street in the wake of one of the worst financial crises since the Great Depression. This likely will include further modernization of our financial system and more government oversight, including a Consumer Financial Protection Agency and Systemic Risk Council.

The bill also has very specific implications for the hedge fund industry, including requiring hedge fund managers with more than \$100 million in assets to register with the SEC. As a result, they'll have to supply the SEC with asset information, counterparty risk exposures, investment positions and valuation policies, among other information. The SEC also may add its own set of hedge fund requirements, which will tax an already overburdened IT infrastructure that hedge funds use not only to comply with increased disclosure

regulation but also to make investment decisions.

Furthermore, about a decade ago, 1.5 billion trades executed each day. In 2006 the number jumped to 4.2 billion per day. By the end of 2008 there were more than 10.5 billion trades executing daily. This number keeps on growing, creating a challenge for hedge

fund managers to store, monitor and make sense of vast amounts of data. This is especially true for quant shops, which rely on the ability to process, analyze and make automatic investment decisions — involving millions, if not billions, of dollars in aggregate — literally in the blink of an eye.

Think of the volume of market data that needs to be analyzed and acted upon. Consider the implications of digital SEC filings, which are instantly available, searchable and quickly mined for data that can be used to make investment decisions. Increased disclosure regulation will only create more filings, more information and more variables with which to make investment decisions.

Our current IT infrastructure is not equipped for this dramatic information explosion, which will be utterly crippling for IT in this decade — unless we find a better way.

Back to Basics

The recent retirement of renowned mathematician, Renaissance Capital founder and quantitative investing pioneer James Simons marked the end of an era, but his legacy is instructive given the tech challenges the industry now faces. Simons was one of the first to employ specialists with non-financial backgrounds, including mathematicians, physicists and statisticians, to “crack the code” of quantitative investing. He knew that designing complex formulas and making investment decisions based on a set of predetermined variables would ultimately lead to success. He was right.

IT has made it possible to do many of the things that previously could not be done, including the ability to spot business and stock trends and design increasingly complex quantitative investing strategies to act on them. Hedge funds and quant shops employ fast computers to find predictable patterns within financial data.

In many ways, investing has become

About the Author

Charlie Silver, CEO, Algebraix Data Corp.

Charlie Silver is CEO of Algebraix Data Corp., which is pioneering a new technology that leverages advanced mathematics to intelligently search and analyze data.



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heavily dependent upon database management and analytics. Analytics are the extensive use of data, statistical and quantitative analysis, predictive models, and fact-based management to drive decisions and actions. Analytics may drive fully automated decisions or may be input for human decisions.

The questions that analytics are able to answer represent the higher-value end of the spectrum — the decisions that impact the bottom line. Analytics don't by themselves constitute a strategy, but investors use them to optimize distinctive business strategies, which most definitely do.

The Problem With 'Modern' Data Analysis

Since the beginning of the 1980s, relational database management systems (RDBMSs) have been the most popular database format. However, the volume and complexity of data in the enterprise has grown to unprecedented size during the past decade, increasingly challenging antiquated row-and-column-based systems. Additionally, the row-and-column format for storing and managing data is not well suited for advanced business analytics.

It wasn't until the early 2000s that business analytics became a multi-billion-dollar IT market and began to earn its place as the enterprise staple it is today. As the status quo database methodology, conventional RDBMSs have been adopted for business analytics, a purpose for which they were not originally built and are not well suited.

Information contained in conventional RDBMSs is not inherently searchable. The onerous need to constantly restructure and index source data to make it searchable creates delays in data availability, poor performance and limited functionality for analytics applications. As a result, vendors have relied on various workarounds to overcome some of the limitations of conventional RDBMSs, including proprietary techniques that require special programming.

Some, such as Netezza, Oracle and Teradata, employ proprietary hardware. Others, including Aster Data, Greenplum, IBM, Microsoft, Oracle and Vertica, employ massively parallel clusters of computers or so-called "column-oriented" RDBMSs in attempts to increase parallelism and performance.

The ability to apply statistical analyses has become a critical success factor in today's information-driven world.

While these techniques represent improvements, they all rely on decades-old conventional RDBMS technology.

Moreover, they dramatically increase the cost of deploying RDBMSs due to the expense in hardware, programming and time; often with limited results.

A Better Way to Invest

Algebraix Data Corp. is working to change the underlying technology of analytics by employing advanced mathematics to analyze data relationships independently of their data structures. The approach has shown to increase query performance while reducing the costs of hardware and support, and it is disrupting the entire business intelligence (BI) infrastructure.

By using mathematics instead of tables to define the relationships between data, this algebraic approach eliminates time-consuming table maintenance and the performance problems related to importing, cataloging, indexing and storing data that's required to be in a specific format. Additionally, it creates a system that can self-optimize with mathematical precision while retaining a history of data manipulations and relationships.

At a time when the hedge fund industry is struggling to keep pace with the flow of information, high-performance business analytics offer a smarter way to operate and create the market insights that drive good investment decisions. The ability to apply extensive data, statistical and quantitative analyses, and fact-based decision making has become a critical success factor in today's information-driven world.

It's time to take a page from Mr. Simons' legacy at Renaissance Capital and rethink the basic math that powers this industry — especially in light of recent legislation and the continued information explosion on Wall Street. ■

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