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The Next Frontier

Overcoming the Challenge of Transparency

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THE NEXT FRONTIER

Overcoming the Challenge of Transparency

May 2015

Since the collapse of Lehman Brothers upended the global economy, transparency has been the talk of the town. Regulators and investors have demanded more insight into hedge funds' holdings. Hedge fund managers have worked to meet these demands without giving away their proprietary strategies to competitors. While this was a major change for the hedge fund industry, was it enough?

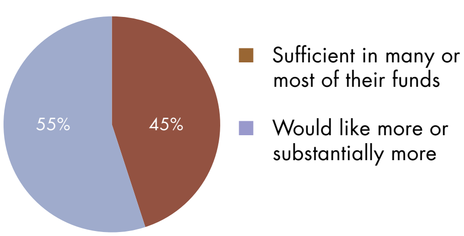
The answer, it turns out, depends on whether you're a fund manager or an investor. According to the global hedge fund survey we conducted in late 2014 (see Appendix 1 for details), investors and fund managers are largely aligned in their views of the industry and the direction it should be heading. When it comes to their perceptions about transparency, however, a substantial gap remains:

- We found that 55% of investors would like more or substantially more transparency from their hedge fund investments.
- But 98% hedge fund managers believe that all or substantially all of their investors are satisfied with the level of transparency they provide.

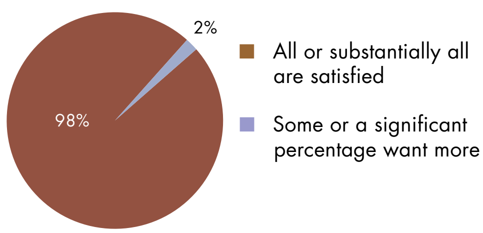
EXHIBIT 1: A SUBSTANTIAL GAP IN PERCEPTION

A substantial gap exists between investors' views on transparency and hedge fund managers' assumptions about those views.

How Investors Feel About Transparency



How Hedge Fund Managers Think Investors Feel About Transparency



Source: Northern Trust Hedge Fund Services 2014 survey

In an attempt to address transparency issues after the financial crisis, managed accounts and funds of one became more popular, giving large investors access to position-level transparency into holdings and exposures. Other creative solutions were suggested, including expanded risk attribution reporting, or the use of "risk aggregators" to take in trade-level detail and produce investor-level risk information. The two things these approaches have in common are that they are realistic only for the largest investors, and that, thus far, none of them has gained widespread adoption.

While we see agreement that we need a better way of getting investors the kinds of information they need to manage risk, we have yet to see a genuine consensus around how to achieve that. Recent efforts have helped move us toward useful solutions that can meet both investor and manager needs. But we're not there yet.

So what changes must the industry make to close the transparency gap? The solution lies in developing new ideas for data management and new market practices, changes that could be within reach thanks to technology advances and the maturation of the hedge fund industry.

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WHY THE GAP?

Why, with all of the effort that the industry has put into improving transparency, does such a gap between manager and investor views remain? Two key issues are at play in the differences:

1. **A fundamental conflict in priorities.** Managers understandably want to protect their proprietary strategies. Making too much information available exposes them to the risk of front running, replication strategies and other activities that can hurt investment performance. Investors, on the other hand, have learned that traditional levels of transparency, such as month-end sector-level transparency reports, lack the information they need to understand their exposures and the hidden risks embedded in their portfolios.
2. **Having information doesn't equal using it.** Investors and managers alike have learned that there is a difference between having transparency and making use of it. Many investors who adopted managed accounts have found it challenging to secure the expertise and systems necessary to take advantage of transparency as a means of holistic risk management.

IMAGINING NEW INDUSTRY UTILITIES

It's no coincidence that alternatives to the traditional limited partnership structure are just starting to emerge. The kinds of innovations being discussed today require strong technology and "big data" solutions. And for most of the industry's history, neither managers nor investors could conceive of such things. The operational and technological requirements were simply too great.

In addition, when it comes to transparency, the industry has no single standard for dealing with data or presenting risk information. Funds and managers use a plethora of methods for analyzing and presenting data – ranging from simple spreadsheets to sophisticated proprietary platforms.

The idea of the Open Protocol Enabling Risk Aggregation (OPERA) and the notion of risk aggregators – third-party firms with the technology and scale to take in large amounts of transactional data and produce factor-based risk information for investors – are attempts to bring about these types of standards. But neither has proved to be the ultimate solution. These ideas do represent a shift toward meeting managers' and investors' demands, but they fall short of some of the industry's key needs in terms of flexibility, granularity and data quality.

We're seeing a great deal of innovation in the industry's thinking about these types of challenges. We also see a strong appetite from both investors and regulators for further improvement. Advances in technology, coupled with broader maturation of the hedge fund industry, mean we can now consider more flexible capital structures and a drastically more data-intensive approach to portfolio construction and investment strategy attribution. What remains is translating that data-oriented innovation into solutions that provide investors with value while protecting managers' interests.

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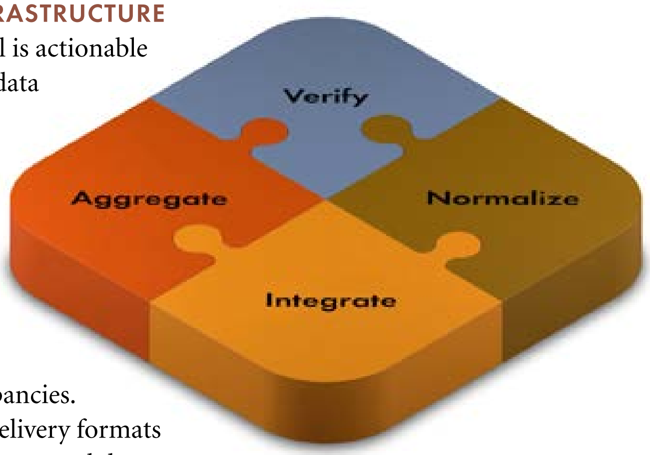
We believe it's possible to create an approach that not only synthesizes the necessary data, but does so in a way that's flexible enough to meet a wide array of needs for both investors and hedge fund managers. Part of it requires maximizing new technology capabilities, but as much as anything, it's about building industry-wide consensus around the best ways to maintain, present and deliver data.

Those who figure out solutions first and best are the ones who will be able to close the transparency gap – and meet investors' other needs. The funds that embrace this type of data system will reap the benefit in terms of better quality data, more investor interest, better capital and possibly more efficient investment decisions.

BUILDING THE NEXT GENERATION OF OPERATIONAL INFRASTRUCTURE

"Big data" is a means to an end, not the end itself. The ultimate goal is actionable information. Through this lens, a true "best practice" solution for data management must successfully achieve four things:



1. **Aggregation:** Capturing data from multiple sources, centralizing the data, and providing a presentation and data delivery layer.
2. **Normalization:** Translating and formatting data from each source consistently, enriching the data by sourcing missing values.
3. **Verification:** Validating the accuracy of received data through reconciliations, overriding valuations where needed, running data quality checks, and resolving any issues or discrepancies.
4. **Integration:** Integrating systems, business processes and data delivery formats to enable seamless delivery to external systems and make the aggregated data source the "golden copy" of data for counterparties.

While the industry has developed systems to handle aggregation, normalization or verification separately, finding a solution that manages all three attributes can be more challenging. And integration, the fourth aspect of data management, isn't fully on people's radar yet. But we believe integration is the key to unlocking the data puzzle – to creating a system that is flexible enough to meet the needs of both sides, within their own systems.

Aggregation

The most basic approach to "big data" is to consolidate data from multiple sources into a single data set. The growing compliance, risk management and regulatory demands placed on today's managers mean they need to see data firm wide. These data needs are being compounded as the hedge fund industry diversifies into new product lines, such as liquid alternatives and UCITS funds, creating a complex web of information held among multiple administrators, prime brokers, custodians and others.

Today, data aggregation is a common practice, often handled internally by many managers. The process consumes significant resources and faces limitations because these processes are often managed in spreadsheets. Service providers and technology vendors have provided a range of services and utilities to facilitate data aggregation. However, the value and functionality of these can vary substantially, since aggregation alone is typically of limited value.

Normalization

Aggregating data is important, but making that data truly useful requires normalizing each data point so that the timing, calculation methodology, source and even format (e.g., the number of decimal points to which a value is carried) are the same across the data set. This is complicated by the need to address key strategic questions about how to promote consistency across multiple instances of reference data, and the kinds of data sourcing strategies and data quality controls that need to be in place.

So data normalization is not the straightforward exercise it might seem at first glance, and the complexity increases with the number of data sources. Technologies such as extraction, transformation and loading (ETL) engines and proprietary matching/reconciliation utilities are making data normalization a more realistic and less cost prohibitive option for the industry. Yet while normalized data is more useful than simply aggregated data, it still isn't optimal.

Verification

The act of capturing and normalizing data still leaves the critical question: how do I know my data is accurate? Given all the moving parts inherent in data aggregation and normalization, market best practice demands controls and checks to verify the accuracy of the data received. This can be supported through a variety of approaches, but typically would include:

- Position and cash reconciliations to each data source and the street;
- Valuation verification; and
- Controls to either ensure consistency of reference data across multiple sources or to propagate a single set of reference data across sources.

Valuation verification can involve applying a consistent valuation layer to the consolidated data set or performing market value reconciliations to source data, and also should include valuation control checks on price variances, fluctuations, stale prices and missing prices.

Today, a variety of technological solutions offer support for data aggregation and, to a degree, normalization. These solutions, however, typically have a great deal of variance in validation standards. Where some solutions offer quality control mechanisms on sourced data and daily reconciliations to external parties, others provide little in the way of verification, creating a natural barrier to the usability of data.

To close the gap between investors and managers on issues of transparency, the industry needs to develop more efficient, and consistent, data management solutions.

Integration

Integration is the least-discussed facet of data management, yet it is arguably the most important. Managers are seeking the value and convenience of a consolidated portfolio view, but they really don't want to sacrifice control over how they use that data – they need solutions that allow them to use their own portfolio construction, risk management, compliance and performance systems. Likewise, sophisticated investors would benefit from data that could be integrated into their analysis processes, allowing them to better understand portfolio-wide risk and exposure, and to better model the implications of shifts in their overall investment strategy.

To solve the integration puzzle, the industry faces a paradoxical integration challenge: how do you maintain a single "source of truth" for all your data while feeding that data into multiple external systems, each with their own requirements?

Achieving smarter data integration is a function of cooperation as much as it is innovation. The technology exists, but to date industry participants have not worked together to meaningfully rationalize data practices. While attempts at standardized practice brought about by regulation or initiatives like OPERA are a start, we believe that a much broader, more concerted effort on the part of managers, investors, technology firms and service providers can help build an environment where big data integration is both achievable and cost efficient.

BRIDGING THE GAP, REAPING BENEFITS

To close the gap between investors and managers on issues of transparency, the industry needs to develop more efficient, and consistent, data management solutions. Systems and services that address all four aspects of data management – aggregation, normalization, verification and integration – have the potential to be used to create solutions that meet the needs of both parties:

- If managers can affordably implement better and more expansive validation procedures, they get both better data and the ability to compete on controls – differentiating their firm in the eyes of increasingly risk-conscious investors.
- Better and more affordable data integration capabilities open the door to a range of approaches to solving for investor transparency needs. Managers can offer investors the detailed risk-factor and exposure based information they want for their transparency needs, while managers are in a position to protect the intellectual property of their trading strategies by keeping position and transaction data confidential.

In addition to helping close the transparency gap, a scalable and accurate data system offers other, possibly more compelling, benefits to hedge fund managers.

ADAPTING TO THE CHANGING ROLE HEDGE FUNDS PLAY IN PORTFOLIOS

Many investors no longer think of hedge funds as a separate asset class. Rather, they are looking at specific hedge fund strategies and using them to complement their allocations in other, more traditional asset classes. Smart managers have recognized this and are modifying how they make the case for investment. We are seeing them change their value proposition from "here are the reasons you should invest in our credit fund" to "here is how our credit fund complements the exposures in your fixed income portfolio." When leading advisors take this approach it resonates powerfully with investors.

An integrated data management model can allow managers to take it a step further. With a standard, fully integrated data management model, the manager would be able to examine the investor's entire portfolio, analyze it, and help customize exposures and strategy accordingly, gaining an edge in the emerging correlation-based investment paradigm.

As markets grow more complex and investors' and regulators' demands continue to grow, the largest and most influential managers are rethinking their control and business resiliency environments. Innovative firms are envisioning more rigorous approaches to data quality and resiliency:

- Many managers have concluded they don't want to have the only consolidated data set, and are increasingly looking to administrators to serve as a validation source for commissions, financing fees and collateral holdings as well as valuations.
- As managers adapt to new regulatory standards – such as the use of trade repositories and the creation of Unique Trade Identifiers – they are seeing the possibility of using similar golden source of data approaches to streamline many processes that today are manual, bespoke and resource-intensive.
- Regulatory reporting – particularly around risk – has led many managers to ask, "If I already aggregate and produce this information for regulators, how much extra effort will it take to generate risk-factor reporting for my investors?"
- Shadow administration, which has been thought of as an option available only to the 11- and 12-digit mega funds, is becoming of interest to smaller firms. This is increasing the desire to find a way to make this type of data-centric operating and service model accessible to a broader cross-section of the industry.

The same data management systems and practices that can help meet transparency needs can help managers in these data quality and resiliency areas as well.

USING INTEGRATION TO CREATE GOLDEN SOURCE OF DATA

Integration is the key to these innovations and others that are only starting to emerge. But integration can be truly cost-effective and scalable only if it's a bilateral process – the data going into a manager's aggregation solution must align with its data set, which in turn must be aligned with the downstream systems consuming that data, as well any external data source used for validation.

To illustrate this principle, consider the objectives and logistical challenges in developing a dual administrator solution, which typically have three goals:

1. **Outsource middle- and back-office operations** to an administrator.
2. **Appoint a second administrator** to replicate the activities of the first – rather than maintaining an internal shadow accounting record.
3. **Conduct comparisons** of key outputs between both administrators as a quality control.

The biggest functional challenge inherent in this model is data integration; an efficient process requires all three parties to be working off of a single, accurate, normalized data set. The challenges in creating this "golden" data set require managers to aggregate and normalize outputs from their trading systems, as well as to standardize inputs (pricing, reference data sources, etc.). Most importantly, the manager must also standardize the data held by counterparties and administrators to facilitate validation and reconciliations.

Because the industry lacks a standard format for data, to successfully create this golden data set essentially requires a double pipeline of standardization with the fund manager on one side, and the administrators on the other. Right now, it's an expensive and time consuming undertaking. But in doing so, you have created source of truth for other parties – brokers, primes, custodians, administrators – to reconcile to. Operational reporting, fund accounting, performance, risk and regulatory reporting could all derive from a single source that is validated both internally and against the market.

If the industry overall created a common standard for data, the process of delivering that "true" data set to downstream systems would become more streamlined and more consistent. Capitalizing on the more innovative data management approaches taken by individual managers to develop industry-wide standards for data can then pave the way for affordable big data solutions that deliver value to managers and investors alike.

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INTEGRATED DATA MODELS CAN CLOSE THE TRANSPARENCY GAP, AND MORE

Creating an industry standard for data integration is an ambitious goal. But the forces driving the hedge fund industry today – investor needs, an increasingly competitive marketplace, more complex financial markets and regulator scrutiny – are creating very real needs for integrated data solutions. And these demands will continue to grow, driving more managers to seek out innovative ways of meeting the demands of their stakeholders. The technology exists today to make creating an integrated data solution possible, and as more firms adopt these kinds of practices, the costs will come down and make it more accessible.

Adopting an industry-wide integrated data model will not only help managers bridge the transparency gap with investors, it also will better position them to meet regulatory demands, facilitate data quality, and generate new and compelling value propositions for investors by making their services a more integrated part of investor portfolios. Market participants who embrace these trends early will gain a strategic advantage in the competition for market share. Managers will be able to differentiate on their ability to meet investor needs and attract more capital, and those managers will in turn show favor towards administrators, brokers, technology providers and data vendors that help facilitate a better and more flexible approach to data management.

APPENDIX 1: ABOUT THE SURVEY

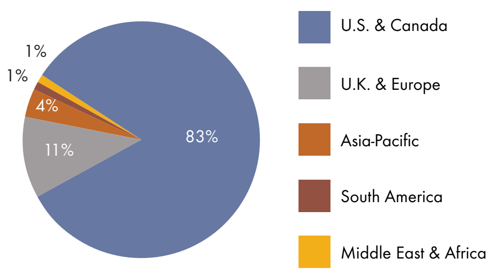
Northern Trust Hedge Fund Services worked with Asset International in September 2014 to conduct a survey of global institutional investors and hedge fund managers. Senior investment professionals from 303 institutional investors and managers of 118 hedge funds completed online questionnaires to determine their views on the current state and future direction of the hedge fund industry. To avoid skewing the results, Northern Trust was not identified as being involved in the survey.

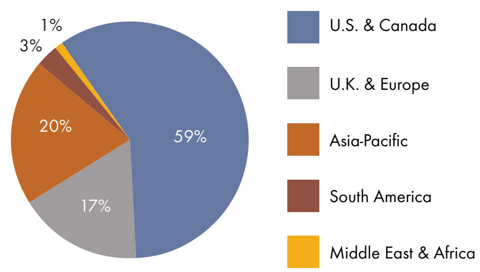
The respondents spanned the globe: 83% of the 303 investors were from the United States and Canada, 11% from the United Kingdom and Europe, 4% from the Asia-Pacific, 1% from South America, and 1% from the Middle East and Africa.

The hedge fund managers that participated also were geographically diverse: 59% were from the United States and Canada, 17% from the United Kingdom and Europe, 20% from the Asia-Pacific, 3% from South America, and 1% from the Middle East and Africa.

Of the institutional investors: 36% were corporate, 30% were public pensions, 18% represented endowments and foundations, and the remaining 16% came from sovereign wealth funds, unions, insurance general accounts and nonprofits. Sixty-five percent of the hedge fund manager respondents are long/short strategy managers, 21% are multi-strategy managers, and the remaining respondents represented event-driven, macro, credit and relative value funds.

2014 HEDGE FUND SURVEY RESPONDENTS





Source: Northern Trust Hedge Fund Services 2014 survey

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