



# Inside Reference Data

June 2012

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## Reference Data Technology

Special Report



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## Editor's Letter



### Unifying Technology

Regulation, cost savings and risk management are the big three reasons driving technology implementation decisions, according to participants in this issue's Virtual Roundtable. What surfaces in the discussion, however, is that increasing volumes of data mean industry practitioners must solve greater volumes of data issues, all at once.

"Gone are the days when companies can afford to solve every reference data issue individually," says Robert Brachowski, product manager, reference data, Eagle Investment Systems. He does see a solution, however. "Root cause analysis helps firms identify and resolve the underlying cause for several issues at one time, rather than having to resolve each of their issues separately."

Could cloud technology be the one way to address reference data needs? Roundtable participants are generally positive about this prospect. Kingland Systems' Tony Brownlee calls cloud "an incredibly viable strategy". Anna Nicodemou of SIX Financial Information believes it will change how firms manage data sources, data sets and applications; Genevy Dimitrion of State Street calls it nothing less than a "game changer" for the industry. Patrik Neutjens of Swift says cloud services will increase data management agility, reduce costs and decrease complexity in data operations. Yet, as Brian Sentance of Xenomorph points out, data vendors are still leery of cloud technology and firms still have reservations about hosting data remotely.

When asked what capabilities we will see from reference data technology service providers in the future, Roundtable participants mention unifying views of data, connecting research tools, cross-referencing and integration in general. One could conclude that the industry has to connect these solutions together to reduce data duplication and errors, for a coherent and accurate view of data.

Yours sincerely,

A handwritten signature in black ink that reads "Michael Shashoua". The signature is written in a cursive, flowing style.

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# State Street Embraces Semantic Technology

State Street has begun its semantic technology effort by creating a single semantic repository, according to David Saul, chief scientist at the firm. Multiple applications can feed the reference data they produce into that repository, and when the characteristics of any one of those applications changes, a semantic repository can recognize that and adjust the information fed in from the other applications, he explains.

“We can automate a process that in the past might have required changes in multiple different places,” he says.

“By having a single semantic repository, we’re able to do that once, reducing the time to make the change, the cost and the risk that it won’t be done the same way in every place.” Accordingly, as the firm makes more changes to data, in succession beyond its first two, it need not go back and change the first two pieces of data, Saul continues.

Semantic technology also allows State Street to define data ownership and the relationships depicted in data, he added.

*Michael Shashoua*

# Bloomberg Next Enables Bond Pricing Comparisons

Bloomberg has added Bloomberg Next capabilities to its Bloomberg Professional data terminal. The data provider says Next will streamline workflow for its users, and enable them to more easily drill down into data in detail.

Bloomberg Next compares various pieces of bond pricing information with Bloomberg’s own independent valuation, according to Jean-Paul Zammitt, global head of core product development at Bloomberg. The price a dealer is willing to pay for a bond and the price at which a dealer is willing to sell that bond, along with prices at which the bond has recently traded, are all types

of pricing available for comparison. Bloomberg Next also enables gathering of prices for the bond communicated by contacts through email.

Next reorganizes the presentation of data details from presenting analytics users could employ to reach conclusions and changing that to presenting an answer right away, with users having the option to do more research, says Zammitt. Menus for that ensuing additional research are specific to the securities and also associated with announcements concerning those securities.

*Michael Shashoua*

## Fitch Solutions Takes on CDS Data Challenge

Fitch Solutions, the data and analytics unit of Fitch rating agency, has developed early warning signals on liquidity movement and pricing changes, through improved analysis of credit default swaps (CDS) information, according to Catherine Downhill, regional head of product, EMEA and Asia Pacific.

“The CDS market is very opaque and doesn’t publish trade volume information,” says Downhill. “We had to look at other ways to tell you the liquidity.” Fitch Solutions identified bid-ask spreads, midpoint dispersions and how fresh CDS prices are, as items that can be used to calculate a liquidity score, according to Downhill. The new signals are achieved through consensus on CDS pricing information, which can in turn be used in calculating net asset values (NAVs), Downhill explains. CDS index information also supports NAV calculation as peer benchmarks, she adds.

Fitch Solutions’ development of pricing and liquidity signals grew from applying new analysis and indexing methods and capabilities to CDS information. This action helped the company decipher true credit risk information from market changes and use of CDSs in the markets, as opposed to bank credit information; deal with volatile CDS prices; and manage CDS information across regional boundaries worldwide, says Downhill.

*Michael Shashoua*

## Open Data Model Challenges FIBO

The Open Data Model, a challenger to the FIBO ontology and Data Management Maturity model established by the EDM Council, has set classifications for data based on the ISO 10962 framework.

The model offers a roadmap based on asset classes such as equities, debt instruments, rights instruments and others, says Rodger Nixon, chief executive and founder of Open Data Model.

## CITIC Chooses GoldenSource Platform

CITIC Securities, an international investment bank based in China, has selected GoldenSource’s 360 Enterprise Data Management platform to enable it develop its international buy-side operations.

CITIC Securities has a Qualified Domestic Institutional Investor license from the Chinese authorities, which allows it to trade international securities. GoldenSource is initially focusing on enabling CITIC Securities to buy international securities within its fund management, investment management and proprietary trading businesses.

# Reference Data Technology: Keys to Change

*Inside Reference Data* gathers leading industry professionals to discuss what's driving investment in data management technology, how data management tools are keeping up with more reference data volume, and what data functions firms should consider to prepare for changes

**What are the main drivers for investments in new data management technology at the moment?**

**Rick Aiere, vice president, information technology, Credit Suisse:** Risk management and growing regulatory requirements are the main drivers for investments in new data management technology. Cost reduction and increasing efficiency would be the other important influencing factors.

**Robert Brachowski, product manager, reference data, Eagle Investment Systems:** There are three main drivers for investments in data management technology. The first is regulation such as the Dodd-Frank Act and Solvency II that is pushing companies to increase the types of data they must support and also increase the frequency at which the

data is required. Another driver is the globalization of the investment management space. As clients expand both their business locations and the securities they hold, the number of securities they handle and the types of data they must support has grown extensively. The third driver is the continued underlying need to improve data quality. Since firms are dealing with more data, the quality of the data becomes increasingly important. In short, firms are asked to provide more services on more data than ever before.

**Tony Brownlee, managing director, Kingland Systems:** Over many years of working with major institutions, we see four main categories of drivers consistently grabbing budget for data management technologies: risk, operational efficiency, compliance and revenue generation. Of

late, risk and compliance have been the most prevalent given the economic and regulatory climate. However, operational efficiency and revenue generation, if done well from a business case perspective, will capture the most attention. The best plans include value that covers all four spectrums and creates buy-in across these different stakeholder groups as well as at the executive level.

**Anna Nicodemou, reference data content manager, SIX Financial Information:** The main drivers are risk management, transactional reporting, data quality and compliance functionality. With the increased demand for complete transparency between trading firms and their clients and the standardization of data, e.g. common identifiers such as the Legal Identity Identifier (LEI), financial institutions realize they must continue to invest in solutions that will help manage data issues in a much more responsive manner. Also with the many impending regulatory requirements, Dodd-Frank, Basel III, MiFID II etc., financial institutions have no choice but to invest in technology that will allow them to seamlessly report correctly to the various authorities.

**Richard Bemindt, chief technology officer, SmartStream:** A number of market factors are driving investments in new data management, and one is regulation.



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Increased regulation in the marketplace is causing the need for further governance around data used as part of the trade.

Firms are also realizing data is scattered around the firm, stored in different repositories. Some are trading on one set of data, settling using data from a different repository, while risk reporting uses another, posing operational risk.

There is also a growing focus on costs, and it is not cost-efficient to maintain disparate repositories around the firm. Instead, firms find they can reduce cost by centralizing reference data in one standardized repository, or minimally by ensuring consistency across different repositories if they can't centralize.

**Genevieve Dimitrion, vice president, global product management, State Street:** The need to support new and upcoming regulations, greater transparency around our information and enhanced technologies

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**Tony Brownlee**, Managing Director,  
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to support a robust data management solution are all critical, not to mention the continuous development around standards in support of our data management needs. We are in an era in which vendor firms are all looking to create their own solution to address the “DATA CRISIS,” which in turn is making the situation more complicated for firms such as ours, who have to extend our services to manage all this data across multiple systems with the ability to apply the appropriate value for downstream processing. The biggest driver for investment in new technology is the need to aggregate data from multiple systems and sources into an easily accessible format. Aggregated real-time data to manage risk across the trade lifecycle, and improved transparency and traceability are the top priorities.

**Patrik Neutjens**, head of reference data,  
**Swift**: Regulatory compliance, competi-

tion and the need to reduce costs and risks would be some of the biggest drivers influencing investment decisions.

Much of the regulatory change taking will continue to have a significant impact on both reference (instrument/product, counterparty) and transactional data. This impact ranges from additional data capture requirements such as those for Foreign Account Tax Compliance Act and LEIs, and the associated downstream reporting requirements, through to the process improvements required to ensure additional transparency doesn't reveal data integrity problems.

At the same time, competition across the sector has increased and margins are under pressure, driving a need to target new clients, improve revenues from existing clients and reduce operational costs. This means increasing visibility of the business: understanding how risk is distributed, where profits originate, how capital is structured—and how to access and respond to this information efficiently.

By leveraging data to streamline processes and improve efficiency, firms can identify and resolve weaknesses, reducing overall operating costs. In short, for firms willing to take on the challenge, strategic reference data management can be a competitive advantage in a difficult climate.

**Brian Sentance**, CEO, **Xenomorph**: The

main drivers at the moment are regulation, reducing data costs and better risk management. The most forward-looking firms are recognizing the business value of data management and exploring the ways in which it can help firms take advantage of new market opportunities and business models. Data costs are rising as exchanges see trading volumes fall, but despite this background there are still many institutions that pay for the same data multiple times over across different business units and departments. Nobody needs to be told that new regulation is ubiquitous currently, but a common theme seems to be a requirement for greater data granularity regardless of the type of institution or the regulation faced. On the banking side, optimizing regulatory capital is a priority, with regulators being very focused on the quality, consistency and auditability of data feeding internal risk models. Over to investment management, asset managers and hedge funds are required to provide more information to regulators, prompting clients to rethink what they themselves could and should ask of their investment management firms.

**How can firms best manage the growing volume of reference data needed for regulatory reporting and risk calculations? Are the tools in the marketplace keeping pace with changing user requirements?**

**Aiere:** Reduction in data duplication would

help manage the growing volume of reference data—settling on a golden copy of reference data that satisfies the needs of multiple consumers adds to the complexity of meeting this challenge. Tools are evolving to manage the growing volumes both in terms of offering better technology to reduce cost, providing compression, reducing storage requirements and managing growth, but there is no magic bullet for elimination of data duplication, one of the key causes of significant volume growth.

**Brachowski:** Gone are the days when companies can afford to solve every reference data issue individually. The volume of data requires them to seek out new ways to resolve issues in a timely manner. Companies are moving to solutions that allow them to perform root cause analysis, which provides the ability to see trends or patterns in their data in order to understand the underlying causes of the issues. Root cause analysis also helps firms identify and resolve the underlying cause for several issues at one time, rather than having to resolve each of their issues separately. Some reference data solutions are keeping up with changing user requirements by providing a foundation that meets their current needs, but also the flexibility to meet future demands.

**Brownlee:** We find a sound master data management (MDM) strategy is a “must

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have” building block of any data management strategy. Establishing the tools and patterns for managing and leveraging master data only improves firms’ abilities to keep up with the changing requirements. For example, with a legacy environment, it’s not uncommon for a request for a new data attribute to take six months to implement. We’re driving that implementation down to six days (end to end).

**Nicodemou:** The increase in volume of clean, accurate reference data delivered in a fast and consistent manner to enable firms to comply with regulatory reporting and risk calculations will require significantly enhanced business and product functionality. Costly system overhauls and upgrades to existing data infrastructures will be unavoidable for many firms.

With many of the larger institutions, it is difficult to integrate and upgrade in

line with the latest version of a particular software house. Many firms tend to buy an out-of-the-box system, and then build their own business rules and product logic as an additional layer to reduce the need for manual input to also reduce manual error. The effect of this is that as a new version of the system becomes available, firms are unable to integrate quickly due to the complex structures and dependability of downstream/upstream legacy systems.

To remedy this, firms must look at the ‘bigger’ picture, review the functions performed today and work with vendors to ensure the data attributes and components they require are delivered in a usable format that can be absorbed by multiple systems, and retire processes that are no longer feasible.

**Bemindt:** Managing these large data repositories takes quite an effort. Managing data volumes, ever-changing file formats, and cleansing rules is costly. As a processing agent, we acquire, cleanse, process and distribute reference data for clients. We can insulate clients from changing formats, increased volumes across multiple providers and the detailed work required for developing cleansing rules. We can also help streamline the delivery of data throughout the enterprise. A utility like ours goes a long way in insulating a firm from the data volume increases.

**Dimitrion:** Firms must be engaged with the industry to support the standards that are being defined to provide a universal solution to meet the increasing needs related to data. The regulatory bodies have recognized the need for industry involvement in the definition of needed information in support of the numerous mandates that have been documented. A multitude of tools are available within the marketplace, which can be seen as both a positive and negative. Aligning to industry standards across any type of organization is critical to success. Having the ability to manage their reference data needs, particularly when they are being dictated by regulatory bodies, is essential.

**Sentance:** One of the main challenges with the current raft of regulatory requirements is that they are not yet prescriptive in what individual firms actually need to do to comply. The Dodd-Frank Act is an obvious example of this, where the regulation asks more questions than it answers. As such, firms need to get the basics right across instrument data, static data, entity data, positional and derived data to be able to respond to whatever the regulators ultimately require. This needs very flexible data management architecture, one that bridges all asset classes and data types and allows new instruments and reporting requirements to be met without redesign.



The logo for SmartStream, featuring the word "SmartStream" in a sans-serif font. Above the letter "i" in "Stream" is a stylized green leaf icon.

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### **How do you see the cloud technology trend impacting the reference data market?**

**Aiere:** Offering low-cost solutions would be an impacting factor. Cloud technology is making significant strides in the marketplace but needs to demonstrate more maturity in handling confidential and sensitive data to get a complete buy-in in the financial industry.

**Brachowski:** If cloud technology holds true to the predictions about it, companies that utilize the cloud will see a reduction in cost and will be able to reallocate their resources to focus on their business strategy rather than technology architecture. I view cloud technology as one aspect along the outsourcing spectrum. Some clients will choose to outsource the technology architecture component, while other clients will choose to go further down the spec-

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**Patrik Neutjens**, Head of Reference Data, Swift

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trum and outsource both the technology and the operations. If a majority of the financial firms outsource both the technology and the operations of reference data, reference data management itself will become more of a commodity, since the companies providing this service will strive to standardize the process.

**Brownlee:** Cloud is an incredibly viable strategy and every firm must consider it in their enterprise roadmap. The technology has improved significantly and the data services available, coupled with that technology, have provided significant cost savings—from data center, to IT staff, to development staff, to operational staff to manage data, cloud can deliver cost savings in all categories. This is a big reason why we at Kingland, working with our partner IBM, have launched our MDM Cloud; it's a response to the market and our commitment to innovation.

**Nicodemou:** Cloud technology is going to change the way institutions manage their data sources, their own data sets, and the applications to manipulate this data dramatically. Once the responsible operations, IT and security specialists are convinced that everything runs smoothly even if they do not control all layers of the infrastructure, the potential savings are massive. There will be cultural changes necessary on development and testing cycles, but the financial arguments are eventually going to win over all reservations. Also, as more functions move into a cloud environment, traditional delivery channels must be reconsidered. I expect to see multi-provider platforms emerging, where the clients have their data scrubbing done in the cloud and only download the resulting clean records in the format needed, or continue processing these records in the cloud, too.

**Bemindt:** Cloud technology has a big impact on the reference data market. We are a cloud-based solution, unlike other data management offerings, which deploy a system in the enterprise. Our utility is the only multi-vendor, multi-tenanted platform. Some firms use us to do the heavy lifting required to manage the data providers and cleansing operations prior to loading their enterprise data management

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systems, while others use us as their “security master in the cloud,” where we feed their downstream system directly from the utility, eliminating the huge costs of deploying and maintaining an enterprise data management system on premise. Either way, clients are using us to get a better return on investment.

**Dimitrion:** Cloud technology in the reference data management space has the potential for being a game-changer in the industry. At the very least, it has the capacity for making reference data management solutions much more accessible, as vendors are moving their software onto a cloud infrastructure. To have applications accessed through a web browser where the consumer does not have to take on the management of the underlying cloud infrastructure or even individual application capabilities will minimize a lot of the costs and

pain associated with maintaining some of these large applications.

**Neutjens:** Cloud-based services (including cloud computing) are reshaping the way many companies do business. According to Gartner, over a third of all financial institutions will invest in cloud services within the next five years.

There are many reasons why cloud services are appealing to the industry. As it holds the promises to offer:

- More agility: with easier, quicker and more effective changes and release management.
- Cost reduction by reducing CAPEX and optimizing OPEX.
- Less complexity by allowing customers to focus on core business rather than training staff and funding non-core activities.
- Mash-ups or combination between different services or applications.
- Leveraging effects and innovation: by bringing together the expertise and skills of others to do things that were hard or not thought of before.

Customers are also asking for more cloud-based services, applications, or even solutions combining different services.

Reference data is also a good example of how cloud technology could enhance the way customers access and use it, for example through application programable interfaces to directly integrate

in their own applications for online consumption.

It can also reshape the way reference data services providers and developers serve the industry by combining strengths.

Cloud technology will make it possible to combine reference data coming from various sources or providers or have it bundled with other assets such as business intelligence data or other sources of relevant data. Or for developers to build applications that could bring 'spot-on' value to end-users in niche markets.

**Sentance:** The key trick with the cloud is not the obvious technical advantages of the technology, but rather the business implications of using it. Many clients want to focus more on their core business, so anything that can be done to reduce the IT burden whilst increasing scalability is obviously welcome. That said, the data vendor market is still very nervous of cloud technology. While attitudes are changing quickly, clients retain reservations about remote hosting of key infrastructure and data.

**What new functionalities do you expect to see reference data technology vendors releasing in the coming years?**

**Aiere:** In the coming years, I expect to see more intelligent and efficient data distribution mechanisms. Providing a more unified and standardized view of the data is a trend

that would have a significant impact.

**Brachowski:** Trying to predict the future of reference data tools is difficult. But one trend I do feel will become more prominent is placing reference data solutions within an ecosystem that connects various types of research tools. For example, by linking a reference data solution and a tool that helps manage unstructured data, companies will be able to find more data related to either securities or issuers than a pure reference data solution could provide. This in turn would allow companies to develop a more complete view of their business entities and what influences them. In order to sift through this larger set of data, reference data technology will increase their dependencies on both interactive discovery and root cause analysis tools.

**Brownlee:** More integration, easier integration, and proactive and intuitive data management processes.

**Nicodemou:** I expect data vendors to continue to develop tools and functionality to address the need for greater transparency, data quality, accuracy and speed of delivery. We are about to complete our VDF Pulse offering that started with a subset of the feed some time ago. VDF Pulse lowers the interval of batch data delivery to just 15 minutes, allowing for time-

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*Rick Aiere,  
Credit Suisse*

critical reference data and corporate actions information to be received much faster, as well as reducing the volume peaks that occur when processing once or three times in 24 hours.

Other functionality I expect to see are time-zone specific deliveries, the support of additional and configurable output formats, more meta data on top of the payload indicating quality assessments, more refined status information and similar.

**Bemindt:** Our utility helps firms manage different data types in one system. Built on a single integrated relational data model, our platform understands how all reference data is interrelated. For example, legal entity data is tied to securities data, which is tied to corporate actions data. Firms need to understand how all this data is aligned. Doing so will lead to improved accuracy, efficiency and lower trade processing costs.

Currently there is too much money spent on integrating data across systems. Like our utility does, more emphasis needs to be placed on seamlessly integrating EDM with the rest of the enterprise, making data available on-demand

and in real-time to satisfy different needs in the enterprise.

**Dimitrion:** We see the vendors coming out with increased support for standards and the ability to offer tools that can not only source the information but can provide cross-referencing services for the multitude of recognized global securities. Vendor firms are currently providing their own proprietary alternatives to a unique security identifier, but they need to take it to the next level by accommodating other identifiers and also provide a comprehensive cross-reference capability. They will also need to extend their services and capabilities around the LEI, and the needed data around a true entity as well as defining the roles they play in the transaction lifecycle.

**Sentance:** The trend towards “One Data” will increase where past historical divisions between market and reference data will erode, particularly as data management expands out of the back office into the front office and risk. More attention should be paid to front-office data management and the amounts of data being paid for, stored and used within front-office tactical systems such as spreadsheets—some back-office-focused data management projects might be considered a success whilst in the meantime the front office has its own separate world of data,

managed and paid for separately.

It will be interesting to watch how emerging data and data model standards take hold, both with those being mandated such as LEI and other broader initiatives such as FIBO from the EDM Council and OMG. Looking at data quality, visualization also has its part to play in assessing data quality, and we could see some interesting developments in data management as NoSQL technologies are combined with excellent visualization and data analysis tools.

**As firms are waiting for more details on coming regulatory requirements, there has been an increased focus on building robust data management foundations. What is the optimal strategy for preparing for change?**

**Aiere:** Organizations need to have a clear strategy to adapt to the changing landscape and they can achieve this through:

- Altering organizational structure to address changing requirements, defining policies and principles to adapt to change.
- Commitment from C-level management to perpetuate this change through the firm.
- Having a flexible target state and a clear roadmap from present state to target state.

**Brachowski:** To be prepared for change, companies must fully understand both their data strategy and what solutions they have at their disposal. By having a compre-

hensive data governance policy in place, clients will ensure they have a consistent process to store, manage and distribute their data. A data governance policy alone is not enough; firms must also have a reference data solution that is flexible and provides a layer of indirection between the end-user and the data. A layer of indirection within a reference data solution provides various capabilities, such as the flexibility to extend the data model with the application automatically recognizing the new structure, consistently deriving data elements without having to store each derived data element, and executing business rules such as tolerance checks over a period of time. This flexibility allows clients to customize their reference data solution without impacting the actual data. Finally, the reference data solution must be aligned to deliver across a broad spectrum of requirements to all the different business groups that rely on the data.

**Brownlee:** The first step is for each firm to assess their current environment. Look at the systems, applications, processes, and functional units from a holistic perspective, but think about the data and information each area produces and consumes. Doing an inventory by “data domain” (e.g. securities, client and counterparty, reference data) is critical for understanding the current capabilities. Then, going through the exer-

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cise of an “information agenda” to plan out the information needs, weaknesses, and opportunities to leverage data management technologies from ETL to MDM to big data will provide the context many executives need to develop the right strategy.

**Nicodemou:** Firms need to build flexible and adaptable data models up front to allow them to implement impending changes as and when they become relevant to the market. Without flexibility and adaptability, it is difficult to accommodate the latest requirements in a cost-efficient manner, as it could mean the complete re-structuring of a system and all its associated processes. Firms also need to think about how they process data today vs. how they would like to process data in the future. If they keep to a more generic and standardized approach, firms will be able to re-use existing functionality and deliver data in an already recognized data format, allowing customers to absorb the data in both a seamless and efficient manner.

**Bemindt:** SmartStream has developed a reference data utility design for protecting firms from many of the changes seen in today’s market. The way data is processed is changing. Our utility insulates our customers from these

changes, and we see firms using it as a vehicle to meet new requirements.

In terms of the utility, SmartStream acts as a processing agent. We are acquiring the data, cleansing it and bringing it to a much higher quality for clients. We also manage the process around change. All the work performed in the utility is documented and audited. From changing file formats to rules-based selection of data to value overrides, our platform understand and audits the complete lifecycle of the data from the point of origination to delivery. Moreover, our governance tools help clients document and maintain how reference data is used throughout the enterprise. This level of control and understanding is paramount to meeting regulatory requirements.

We also insulate our customers from data provider changes by distributing data to them in a consistent mutually agreed upon format, where the meaning of data elements remains consistent. This insulation makes it easier for customers to change vendors, as the data continues to be sent to them in that same format.

**Dimitrion:** Firms need to understand what the end game is and what they are looking to ultimately provide as a service to their clients and partners. This means a thorough understanding of all the regulatory requirements and how and

where they apply within their business. It means building in a flexibility and agility for accessing data needed for regulatory compliance. It means that if you or your firm are not involved in defining the standards, you need to get involved. You must make sure you have a voice in what the industry is defining and creating since it will have an impact on your firm—whether you realize it or not. Communicate and engage with the regulators and industry organizations that are driving these changes, like ISITC and Sifma.

**Neutjens:** In the past, organisations have failed to capitalize on the strategic opportunities presented by reference data. Now, the scope and depth of regulatory change is forcing organizations to reconsider the silo approach and recognise the pervasive impact of poor reference data. The case for a consistent enterprise-wide approach to reference data management has been strengthening, with regulatory requirements a key catalyst. Delivering consistent group-wide reference data is an ongoing process, rather than a point-in-time exercise: data needs to be appropriately governed, as would be done with any significant asset with such wide-ranging impact. A strategy for preparing this change should be all-encompassing in scope, have internal business cases and management sponsorship. The solution design should carefully consider

standards to be adopted, an operating model to be implemented (which could be both centralized or distributed), data governance in place and data quality processes defined.



*Genevy Dimitrion,  
State Street*

**Sentance:** Data governance and people aspects are key aspects of a successful data management strategy. That said, in addition to the “stick” of data governance and process policy, I would like to see more done on the “carrot” side of things to encourage front office and risk to become involved. The cost and efficiency savings from such a front-to-back office approach are enormous, but in addition, it is often front-office staff who know most about what is “good” and “bad” data, so let’s leverage their expertise and get them involved. On a related note, the move away from data management siloed by business unit is well underway. However, this is a challenging process for many larger firms. I am optimistic though, since both regulatory compliance and key issues such as capital optimization are pushing the business towards seeing data management as a source of competitive advantage.

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# Enterprise Data Management: from tactical to strategic

A strategic approach to reference data management will reduce operating cost, improve risk management and compliance, and support growth whilst also having the potential to release much-needed capital. “Strategic approach” in this context means addressing reference data challenges at an enterprise level, not just a functional level; managing aspects of reference data acquisition, data management, data quality, data distribution, data governance and workflow control centrally, thereby allowing users to focus on their core activities.

Whilst making the right technology choices is obviously important in this context, people should realize data is not a technology asset. In addition, delivering consistent group-wide reference data is an ongoing process, never a point-in-time exercise: data needs to be appropriately governed, as would be done with any significant asset with such wide-ranging impact. Therefore, improving data usage and quality is not just a question of deciding which applications and processes to buy or scrap;

what needs to be improved is how business applications and processes can benefit best from the data they need to deliver the results the business side is looking for. In that context, it is crucial to define efficient solutions across product and business line boundaries in an organisation.

A strategic approach to reference data management should be a globally integrated, enterprise-wide implementation effort—including cross-functional senior sponsorship, clear governance structures and budgeting across divisions. The reality of how to achieve this will be unique to the firm, and preferences about the specifics of the design of the data infrastructure (the familiar question of whether to centralize or decentralize) should be secondary to the foremost concerns of how well it can meet the underlying requirements of availability, consistency, timeliness and accuracy of data and the business benefits the wider model can offer.

Another element to take into account for choosing the right (technology) solutions is the ongoing shift in approach



from manual processing towards automation. This shift is important, because it leads to sustainable pressure to increase data quality. However, manual processes still dominate, often seeing distributed IT environments with multiple ‘golden sources’ for reference data managed by separate data management teams within the same organisation.

At best, this approach is inefficient; at worst it is error-prone and expensive. The reliance on a manual approach to data management is costly as well as restrictive: the organisation’s ability to grow will be constrained by their data management team’s capacity to process ever-increasing volumes of transactions in a timely manner. As headcount increases, so does the risk of inconsistencies and duplicates—in time demanding further expense for remediation. Longer-term, this approach becomes unsustainable.

By contrast, a strategic approach to reference data management facilitates automation across the transaction lifecycle by defining a model where reference data is delivered from a globally consistent source, providing a near real-time view of the transaction chain and all its participants—trading entity, counterparty, client and third-party agents.

The tipping point that has forced reference data to the top of the strategic agenda is the regulatory pressure

following the financial crisis, and the resulting need to take a more holistic, centralized view of the reference data lifecycle. This further validates the need for adopting some key principles when looking at functionality, technology, platforms and solutions (choices to be made to benefit the business users); these include:

- Matching technology with customisable matching rules to improve data quality
- Applications for data storage and updating
- Data quality, integration and synchronisation processes
- Service-oriented architecture for integrating consolidated master data in participating applications
- Overall, standardisation and usage of standards is key: clear rules, clear maintenance, correct interpretation; utilize industry standards where possible and ensure common language across stakeholder groups, e.g. product definitions, hierarchies
- Building a single global view of clients, as well as client analysis and reporting across business lines
- Using a single golden source for reference data with an automated data distribution capability

*Patrik Neutjens is head of reference data, Swift*

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# Cutting Costs with a Reference Data Utility

*While firms are under pressure to meet changing regulatory requirements and mitigate risk associated with poor-quality data, there is a growing focus in the data management market on doing more with less. One option that has generated increased interest recently is moving reference data to a utility and outsourcing data maintenance and cleansing to improve cost efficiencies and address data quality concerns*

When SmartStream won the *Inside Reference Data* award for best enterprise data management initiative (vendor) for its universal data management platform, one of the comments from judges was that the platform helped firms address data management problems at a lower cost compared to internal builds. Increased focus on costs is one of the main reasons firms are looking to vendors for help with data management, and the utility approach, which SmartStream offers, is particularly relevant when it comes to improving cost efficiencies.

Enterprise data management programs aimed at centralizing securities data or legal entity data can often be time-consuming and expensive, involving large software deployments and costly configurations. Instead, SmartStream gives clients the opportu-

nity to manage data in a utility, which is aimed to be a less expensive option.

The other challenge with traditional data management software implementations is that there is no guarantee the system will produce accurate data. Rules can be configured, but the data still needs to be maintained. With the SmartStream utility option, the customer will no longer have to allocate resources to these activities. When a client signs up, they determine the format they want to receive data in. This format will never change despite data vendors and exchanges making format changes.

In other words, SmartStream is combining software with processing capabilities, an approach that helps clients focus on other business activities and save money on data processing. There is no competitive advantage for firms in doing their own work on

dealing with changing vendor data formats, for example, and maintenance and cleansing of reference data should not be treated as core business functions. When data formats are managed externally, it is also easier for firms to change to different vendors if they are not happy with the price or quality of existing data providers.

Still, one of the key drivers for firms to move data to a utility is to improve quality at the same time as cutting costs. SmartStream has service-level agreements (SLA) with clients, and the company has never had to pay a credit back to a client for missing an SLA in its three years of operating the utility. In fact, one firm did a survey based on their experience with the utility and found the data they received from SmartStream well exceeded the SLA and was consistently about 10% higher than the next best offering the firm could find in the market.

Improving data quality can also have a direct impact on the cost per trade. The real cost of poor data is linked to trade breaks. Statistics show around 30–40% of trade breaks are caused by misaligned or bad reference data, and having consistent data on securities and counterparties throughout the enterprise could help fix this costly problem. Firms typically employ a large number of people to reconcile these

trade breaks, and if the need for this was eliminated, the cost of processing trades would go down dramatically.

In addition, increased pressure from regulators means there are growing requirements for implementing robust governance around data, auditing processes and monitoring changes. Firms need to understand data governance and how data flows across their organizations to comply with regulation. This involves ensuring reference data is treated consistently, and that the firm can view who changed what data, and when. The SmartStream offering includes governance capabilities, and data management processes are completely audited in the utility. Every change is logged within the system, and clients can receive detailed reports on how changes have been made.

The utility route offers firms the ability to deal with budgetary constraints at the same time as addressing data quality and governance concerns. In today's market, cutting costs is not only about reducing spend on software implementations, but also about the costs of non-compliance with regulation and the cost of reconciling trade breaks.

*Richard Bemindt is chief  
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# Data Painkillers

*More investment firms are turning to enterprise data management and cloud technology to address regulation requirements. Inside Reference Data speaks to Virginie O'Shea, analyst at industry consultancy Aite Group, about how firms are using these methods to meet their needs*



Virginie O'Shea

## **What do investment firms say their reference data management needs are?**

There is a big push to support risk management reporting and new compliance requirements at a lot of the larger investment management firms. Changing regulatory dynamics such as the Alternative Investment Fund Managers Directive in Europe and Form PF in the US are also compelling some of the larger hedge funds to examine where they are with regards to data quality underlying their reporting. From our recent research, it seems a lot of the smaller buy-side firms hope their brokers will take a lot of the pain away, and have not thrown much investment at reference data management.

## **How are vendors responding to these stated needs?**

The EDM vendor community is evolving at a fairly rapid rate—with so much M&A activity in the past year or so, the functionality that will be offered by these firms will likely change much more in the

next 12 months. At the moment, there are three main offerings from this community: toolkit-based software solutions, more structured off-the-shelf EDM solutions, and hosted or outsourcing-like solutions.

## **Are any reference data management tasks not being addressed, which you expect will be addressed soon?**

Legal entity data management is fairly nascent and a lot of providers could bolster their efforts to meet growing demand. That demand is being driven by business and risk management requirements as much as by regulatory dynamics.

## **What role is cloud technology playing in reference data management?**

As buy-side firms begin to examine their core offerings and the areas where they can bring down cost, I expect to see much more outsourcing of data management to third parties, but with strict service level agreements in place to ensure the process is seamless for their end clients.

With more than 1,500 clients, including the world's top 10 banks\*, we know what it takes to support the industry's leaders.



## Redefining post trade operations globally

SmartStream delivers highly flexible and innovative transaction processing software that supports critical operational infrastructures: from industry-leading reconciliations and cash management solutions to reference data management.

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