



Inside Reference Data

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Reference Data Technology

Special Report



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Editor's Letter



What Drives Data Tech?

Cost and efficiency are consistently touted as the two opposing forces affecting reference data technology decisions, as addressed in responses to the first question in the Virtual Roundtable feature of this special report (page 8). Still, it's curious that cloud resources, as far as reference data professionals are concerned, remain on the back burner as a result of data security concerns, despite their great potential for reducing costs and boosting efficiency. Adam Cottingham of SmartStream points out in the Roundtable that cloud-based services must be agile to succeed—advice that cloud services providers would do well to heed.

With new types of data continually arriving and driving up the volume of reference data that firms must manage, integrating all of these can become an “insurmountable” obstacle, Cottingham says. A centralized data policy could be a solution, as could making data utility models more flexible.

Brian Buzzelli, head of enterprise data management for the Americas at Nomura, who has extensive experience on both the provider and user sides, sees vendors keeping pace with the increased complexity through new capabilities, he tells us in the Roundtable. The regulatory boom that has spawned the CICI and LEI identifiers will have a positive effect, Buzzelli believes. Reference data technology projects created for compliance purposes are an opportunity to review data platforms, flows and operations methods, he says.

The strongest driver for reference data might be something else entirely, though. Consultant Ed Ventura, in the closing Q&A of this report (page 14), identifies “Wall Street attitude” as the biggest push for creating new technology in this space. Regulation could just be the helping hand.

Yours sincerely,

A handwritten signature in black ink that reads "Michael Shashoua". The signature is fluid and cursive.

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Inside Reference Data

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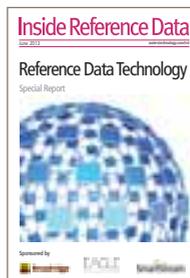
Inside Reference Data gathers together leading industry professionals to discuss the latest developments in reference data technology

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Information Mosaic Launches IMValue

Post-trade support software provider Information Mosaic has launched IMValue, a suite of performance indicators and analytics tools that promises to better automate the extraction of corporate actions information at faster speeds and with a better method for supporting risk management in corporate actions.

“We know about the frustration organizations have at an operational level in getting a business case [strong] enough to automate a process or some function in the operational area,” says Gerard Bermingham, senior vice president of business strategy at Information Mosaic. “It’s much easier to provide statistical

information and actual values by taking a front-office application perspective.”

IMValue also speeds the processing of notifications and improves their quality, says Bermingham. The suite enables better risk management as it eliminates a time-consuming, spreadsheet-based method of extracting relevant risk data, he says. It identifies areas of concern using risk and compliance efficiency models. It can quantify the value of performance indicators and model for revenue, cost and balance sheet implications. It also offers a real-time dashboard to monitor risk and benchmark quality.

Michael Shashoua

Sapient Launches System for DTCC Swaps

Advisory analytics and technology services provider Sapient Global Markets is offering its Compliance Management and Reporting System (CMRS) to users connecting to the Depository Trust and Clearing Corporation (DTCC) Swap Data Repository (SDR) reporting.

Sapient’s service will link different message formats used by swap data repositories such as the DTCC’s, as well as those of the Intercontinental Exchange and the Chicago Mercantile Exchange (CME), which the company expects to introduce in the third quarter of this

year, according to Arun Karur, vice president at Sapient Global Markets. It can accommodate FpML, which is used by the DTCC, and XML, which is used by the CME.

Sapient began developing CMRS in 2010. The system collates data received in various formats from different systems, translates it into the correct message format for its destination, delivers it to regulators, and now receives acknowledgements back from the DTCC.

Michael Shashoua

Torstone Technology Makes Inferno Available in Virtual Private Clouds

Software vendor Torstone Technology has made Inferno, its clearing, settlement and accounting system, available in virtual private cloud (VPC) environments such as Amazon and Rackspace, in a move it says will help firms reduce costs and improve flexibility. Torstone has migrated all reliance that Inferno had on non-standard operating system libraries onto standard libraries and packaged these within the Inferno installation directories.

Brian Collings, Torstone's London-based chief executive, says Inferno is well suited to VPC deployment. According to Collings, the security and robustness of the system is ensured by the fact that a logically separate network is created for each individual client's Inferno instance.

Collings says VPC deployment of Inferno will help firms reduce running costs, and will give them the flexibility to expand and contract the environment as they need and the ability to quickly deploy services to clients. He expects the VPC option to be popular with smaller clients, such as small brokerage firms, asset managers and hedge funds.

Nicholas Hamilton

Calastone Automates Ruffer's Notifications

London-based investment management firm Ruffer has gone live with an automated trade notification service from global fund transaction network provider Calastone.

The service aims to reduce users' operational risk and costs. It automatically generates trade notifications containing settlement data based on price messages sent from fund providers. In turn, it sends settlement instructions to custodians, and uses logical messaging based around a set of technical and business rules.

Interactive Data Launches Taxation List Service

Data vendor Interactive Data has launched a service that provides customers with a daily updated list of securities that fall within the scope of new financial transaction taxes in Italy and France.

Interactive Data has analyzed issued share capital data and pricing data to calculate the market capitalization of Italian and French entities to understand which securities are subject to the tax. The data will fit into the back-office operations of Interactive Data's clients.

Technology on track?

Inside Reference Data gathers together leading industry professionals to discuss the latest developments in reference data technology

Are cost savings still a major driver in reference data technology decisions? Has efficiency or quality overtaken it?

Robert Brachowski, product manager, reference data, Eagle Investment Systems: Reducing overall cost remains high on the priorities of many investment management firms. The theme of doing more with less has not gone away. However, risk management and regulation such as the Dodd-Frank Act and Solvency II continue to drive the investment management space towards reference data technology. Another important factor influencing the decisions of data management technology is data quality. These drivers increase the amount of data managed, and when there is more data, quality can often suffer, and data management technology becomes critical.

Brian Buzzelli, head of enterprise data management, Americas, Nomura: Cost

savings are still a major driver from a reference data technology standpoint. Many firms have implemented consolidated reference data technology platforms contributing to increased operational efficiency and reduced operational costs. The data management discipline continues to mature, with an ever-increasing focus on additional cost rationalization.

Efficiency has become a major hallmark of reference data management, with increased consolidation and maturation of reference data infrastructures. Firms tend either to implement industry-leading reference data management platforms from firms such as GoldenSource and Asset Control or to have highly mature, proprietary platforms. As data management practitioners, we have driven continuous improvements into both platform approaches, thereby yielding increasingly efficient centralized reference data management and distribution architectures.

The efficiency dimension is very important. Cost is still a tremendous driver. The cost for reference data from the data vendors and the cost savings associated with rationalizing and optimizing reference data remains of major importance. Through the continuous improvements in reference data technologies, our industry has become far more conscious of and sensitive to the costs associated with vendor data.

Adam Cottingham, vice president, data management services, SmartStream: Cost savings are undoubtedly a driver in the implementation of a new technology solution, though there has been a major shift in focus from direct costs of procurement and implementation to the indirect cost element of fixing errors caused by poor quality. Recent research suggests that the cost of fixing a single broken trade can range from a low of

“Risk management and regulation such as the Dodd-Frank Act and Solvency II continue to drive the investment management space towards reference data technology”

Robert Brachowski, Eagle Investment Systems

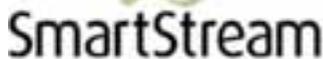


Robert Brachowski,
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\$6 to a high of \$45—creating avoidable aggregated costs of hundreds of millions of dollars annually. Inefficiencies in existing processes can also mean that these same costs are being replicated at multiple points in the same firm—so quality and efficiency are themselves cost issues, and the only way to solve one of them is to solve all of them.

Individual firms struggle to achieve this within their existing structures, and also find that the costs identified at the start of a process rarely take into account the ongoing costs of change. Mutualization of operations has been attempted before, but usually within the framework of an outsourced implementation of software, which is an unsustainable model and can't deliver the economies of scale or quality benefits

Virtual Roundtable

The logo for SmartStream, featuring a stylized green wave above the company name in a bold, sans-serif font.

Adam Cottingham,
Vice President, Data
Management Services
SmartStream
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provided by a truly centralized utility. A centralized utility allows a single operations team to monitor and manage data just once for all customers, which, as well as delivering maximum efficiencies, allows quality controls to leverage the experience of the collective to the benefit of the individual.

Are cloud resources truly catching on with investment firms as a reliable and secure means to store and manage reference data?

Brachowski: Absolutely. Secure private clouds are becoming the technology delivery and data-storage method of choice for many investment managers. At Eagle, we find more than 80% of our new clients are selecting our cloud offering. Cloud technology is one piece of the outsourcing continuum. Many firms elect to outsource their technology architecture, while others choose to outsource

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

Buzzelli: My impression is that reference data management in the ‘cloud’ has not yet matured across enough dimensions to enable widespread adoption and significant momentum. However, there is a healthy dialogue throughout the industry, at industry forums and by leading cloud technology, hosting and reference data platform providers. Many of the technology providers offer comprehensive cloud technology management services, and several major reference data providers, including Bloomberg and Thomson Reuters, along with firms such as Sungard XSP, GoldenSource and Euroclear, are now offering cloud-related reference data management services.

Data security is of paramount importance to any investment or financial services firm—whether buy side, sell side, broker-dealer, service administrator or others—and there are still many challenges to overcome, including jurisdictional privacy laws, risk and liability, and licensing. The concept is very appealing, but more development is required.

Cottingham: Cloud strategy has been an industry buzzword for several years, though projects have been hampered by the need to weigh the security of sensitive or proprietary information against compliance with internal, third-party and regulatory standards. These capabilities are a prerequisite for any cloud strategy. The business case for achieving economies of scale and effective mutualization of logic when leveraging cloud solutions needs to be underpinned by core technology capabilities that include multi-tenancy and robust workflow capabilities.

The viability of a cloud strategy for data management should be focused on achieving more with less. This approach should be a flexible service that is results driven, simple to adopt and extensible according to client needs. The success of cloud-based services needs to be based in their agility, and this should not be limited by technology but underpinned by it. The things by which these services are judged sit across access to resources, expertise, best practice, promotion of standards, adoption of client specifics and applying evolving requirements. This needs to be proven in simple metrics. Clients need SLAs for protection.

Are increasing volumes of reference data affecting operations? Is available technology keeping up with needs created by greater volume?

Brachowski: Increasing data volumes are driving companies to find solutions that resolve issues quickly and efficiently. They want solutions that help them uncover trends or patterns in their data to help them understand the underlying causes of the issues. Today's solutions can help firms identify and resolve the underlying cause for several issues at one time, creating even more efficiencies. The best reference data solutions offer firms a platform that meets their current needs but also has the flexibility to address future demands as the business evolves or expands.

Buzzelli: Volume could be expressed two ways: vertical volume refers to the number of records, rows, and so on, while horizontal volume refers to the diversity of new data domains and new data elements. Vertical volumes typically increase and decrease in the normal course of business and generally do not drive significant impacts on or changes to data management opera-

“Reference data management in the ‘cloud’ has not yet matured across enough dimensions to enable widespread adoption and significant momentum”

Brian Buzzelli, Nomura

Virtual Roundtable

“To capitalize on new and improved technology, investment managers must have an overall data governance plan and a good understanding of their business requirements”

Robert Brachowski, Eagle Investment Systems

tions. Clearly, bandwidth, mass storage, processing optimization, and so on, all come into play. However, the expansion of global regulation, regulatory reporting and risk management requirements are driving significant changes in reference data operations.

New data domains, including legal entity identification (such as the CICI and LEI), entity classifications and tax jurisdictions, to name but a few, demand new data elements, data sources, platform changes and a host of new data quality controls. With a renewed focus on the importance of the data that drives our financial industry, global reference data managers and their operations are being challenged with new and diverse data-stewardship requirements to service our business, clients and operations, and to meet our regulatory controls and reporting mandates.

Cottingham: Increasing volumes of

data are a key pressure on operations departments, and stem not only from the requirement to add additional feeds to cater for evolving operational requirements, but also from the proliferation throughout firms of duplicated data, which not only increases storage requirements but also creates divergent versions of the ‘truth’, which exacerbates the workload. The golden-copy approach often falls victim to disassociated projects, which leads to the illogical position of holding multiple golden copies that are managed independently. In many cases, technology can be the cause of increased volumes, rather than a solution.

Where data is being added to an existing operation, the increased volume is not the only challenge to face. Often, the integration of the new data (be it from a new source or an extension of the service being taken from an existing source) is an insurmountable obstacle. Firms are consequently becoming more attuned to the need for a centralized data policy, but have struggled to implement one using traditional deployed technology, despite the best efforts of the industry.

A utility’s approach allows these firms to leverage both an experienced operations team and mutualized best practices that can be leveraged to support customer-specific requirements and deviations in dynamic consumptions of

data. The flexibility built into the model not only diminishes the technology footprint required for data storage but removes the process-intensive data-duplication issues, reduces the time to market required to add a new data provider from months (or years) to weeks, and produces a level of data quality that dramatically reduces time spent on non-essential operations.

What complexities have developed in reference data and how are these spurring technology providers to improve on their services for data management?

Brachowski: Our industry continues to evolve year after year, and with that evolution comes new regulations and new types of securities. Firms need the flexibility and structure to use their data while handling the increased volume at the same time. There are also constant changes with data vendor feeds. Today's companies are looking for services to help with the process, and some vendors address this with data integration servic-

es. Firms are also looking to their vendors to offer business intelligence services to help support their business decisions.



*Brian Buzzelli,
Nomura*

Buzzelli: Expanded regulation, including Fatca, new client-entity classifications and the introduction of the CICI and LEI, have increased the complexity of reference data management for the financial industry. Practically every reference data management technology and service provider, including the data vendors, has responded with product and service enhancements delivering new data structures, processing systems and services to support these new industry demands. It seems all vendors have developed new capabilities in the form of a service or tool to help the client community with these new data management challenges.

Cottingham: Universes of millions of securities with horizontal relationships to prices and corporate actions, as well as vertical relationships to legal entities and market listings, have always been difficult to manage. Risk and exposure calculations have been based on models that have been exposed as flawed because they have either been disregarded or

“Technology should be an enabler for effective data governance, but is often inhibiting the process”

Adam Cottingham, SmartStream

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“Increased standardization of security and entity identification is expected to greatly improve operational efficiency and reduce misaligned data”

Brian Buzzelli, Nomura

have been managed through unsustainable workarounds. The real challenge for firms now that these complexities have been exposed is how to balance compliance with budgetary pressures to reduce costs.

This leaves technology providers in a difficult position, since managing these relationships at a price point that is acceptable in this new environment is not something that can easily be done in legacy systems.

How can the industry capitalize on new and improved technology to address reference data issues? How should it do so?

Brachowski: To capitalize on new and improved technology, investment managers must have an overall data governance plan and a good understanding of their business requirements. The business requirements must be viewed across the organization and not restrict-

ed to one group, or firms may end up having to solve the same problem over and over, or they may be resolving only a symptom of the problem rather than the cause. Once the correct policies and procedures are in place, the next step is to ensure the data is consistent across the organization. This is where technology can be used to help solve problems for the business. The end result is that technology by itself is not the answer—it is a tool to help solve the business problems, but one needs to understand both the problem and the tool in order to solve them.

Buzzelli: The regulatory boom has the potential for significant positive impact. As an industry, we are working toward a unified, industry-recognized entity identifier that is anticipated to have tremendous benefit in the data management arena. While we each have our own internal entity identifiers that allow us to maintain data integrity within our firms, the ability to connect the client account, counterparty and transaction externally is critical. Increased standardization of security and entity identification is expected to greatly improve operational efficiency and reduce misaligned data.

The industry has an opportunity to leverage new initiatives, including the integration of the LEI and UPI. Projects designed to embed and inte-

grate new business, risk and regulatory data requirements present an excellent chance to launch an enriched review of our data platforms, technologies, flows and operations. These include new architecture and operational process changes, leading to an increase in the quality and integrity of the data that drives our business. The industry can capitalize on the regulatory-required improvements and enhancements in data integrity and quality that would drive increased investment in reference data technology platforms. Data management operations in our industry would certainly benefit from increased funding to invest in reference data management improvements and data management technologies.

For example, adoption and compliance with the LEI and the CICI is expected to drive increased efficiency within data management operations. Standardized entity identification enables greater data integrity between our financial operation and our trading

“Firms are getting more attuned to the need for a centralized data policy, but have struggled to implement one using traditional deployed technology”

Adam Cottingham, SmartStream

partners, clearing and settlement services, and the regulators. The net result of increased data integrity should result in lower cost of data management operations, fewer transactional failures, and increased operational efficiencies.

Cottingham: New and improved technology can only go so far in improving standards in reference data. Making processes bigger and faster will not necessarily make them better. This is even assuming that systems—both to manage data and to consume it—can support these new technologies. Even if they can, it may mean a serious and costly redesign of processes. Technology alone is not the panacea that some see it as—it needs people to use it efficiently.

Technology should be an enabler for effective data governance, but is often inhibiting the process. Often, adding another stack to the environment delivers no results at a high cost. Delivery risk and the cost of change means clients are looking for a new approach to mitigate the risk while reducing costs.

Centralization—combining people and technology to deliver results that cannot be produced by a traditional deployed solution—is one way in which the industry can benefit from technological advances without a complete overhaul of existing systems.

The Truth About Quality

Despite the multifaceted benefits to be garnered on the back of data management improvements, the expense involved in developing and maintaining a sophisticated data infrastructure will give many organizations pause for thought. Years of difficult market conditions—and an uncertain outlook—mean investment managers, banks and brokers face shrinking revenues and margins and escalating pressure to cut costs and rethink operating models. As a result, many in the industry are considering alternative ways to address the data management question.

Institutions strive for the ideal data trinity: accuracy, consistency and transparency. The journey to achieving this trinity, however, can increase operational costs and potentially even incur risk. Many firms don't realize the true cost of data management, which goes beyond just the cost of data acquisition and management.

To understand the real cost of data management, firms must consider how incremental improvements in data quality enhances operating margins across your organization, the importance of timely and quality data on decision-making and the total cost of

ownership of managing data in-house, not only within one business silo but enterprise-wide.

So how can firms effectively manage data with these challenges in mind? Rather than dedicating valuable internal resources to this task, financial services firms should partner with an expert third-party to provide managed data services. By working with a partner to fully manage reference data, financial services firms can tap into technical and operational scalability, depth of proven experience, up-to-date software and hardware and significant cost savings.

The importance of transforming reference data management is rooted in the direct impact quality data can have on a firm's growth. Quality data is no longer a differentiator—it is an expectation. The following are the primary benefits of a robust managed data service:

- **Agility:** By consolidating data into a common data platform, firms achieve improved global transparency. As a result, they benefit from the needed agility to comply with future regulations and expand with greater control and visibility.
- **Effective resource management:** Rather than allocating valuable inter-



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nal resource and budget to maintaining technology, firms can receive maintenance and regular technology upgrades by outsourcing software, hardware and infrastructure support.

- **Enterprise-wide insight:** A managed data service allows for expert data cleansing and global data validation. Having a single source of multi-asset class data facilitates data oversight, improves regulatory reporting and reduces risk.
- **Global access:** By automating enforcement of business rules and entitlement controls, firms get secure, auditable and controlled access to data across the world.
- **Faster go-to-market:** Firms can connect to new data sources quickly and easily and, as a result, support new business lines and asset classes cost-effectively. This provides firms with the flexibility they need to enter new markets rapidly and broaden the product coverage services available to clients.
- **Due diligence:** With industrial-strength infrastructure and governance in place, firms can satisfy the due diligence requirements of regulators, clients and investors effectively.

Quality data is crucial to the caliber of decisions made enterprise-wide and helps firms increase control over expanding governance and regulatory requirements.

As the financial landscape continues to evolve, quality data is the foundation

for a firm's success, no matter how large or small they may be. Firms should seek out specialist providers in the space who can help create a business case for transforming their data management strategy.

Broadridge Managed Data Services is the winner of the 2013 Inside Reference Data Award for Best Managed Service for Reference Data. Broadridge's Managed Data Services provides a complete solution to help firms meet increasing demands for data consistency, transparency and accuracy, while avoiding the high costs and potential risks associated with a firm gathering, cleansing and distributing such data on their own. We work closely with banks, broker-dealers, asset managers and hedge funds to manage their complex data requirements.

Broadridge has been a proven provider of outsourced data management solutions for more than 10 years. We employ highly experienced data professionals positioned globally within their respective markets and expertise. We continually monitor data quality metrics that track accuracy, timeliness and completeness. Broadridge uses industry-leading software, world-class experience and proven processes to deliver the best-in-class enterprise data management solution.

Data With Attitude

Inside Reference Data speaks with Ed Ventura, president of Ventura Management Associates consultancy, about achieving data quality and the drivers of reference data technology



Who should be responsible for data quality—business users at financial firms, IT staff or others, and why?

Data quality is something that everyone in the data lifecycle must have a stake in. It is best achieved through a strong data governance program that addresses organizational participants, data ownership, data stewardship and metrics to measure the success of the program as well as the quality of the data. Companies are starting to realize that with the amount of data available, formalized control mechanisms are required. The imperative is that data must be recognized as a corporate asset and the resources to manage those assets must be allocated.

From reference data services being built for compliance with new regulations or standards, are end-user firms deriving improvements for onboarding new clients? How does that change data management approaches?

Reference data services are helping end-user firms in just about all aspects

of the business. From an onboarding perspective, having consistent ontologies and taxonomies greatly improves the onboarding process, and understanding the corporate hierarchies and entity relationships helps with that. Once the services are in place and the teams are educated, the overall process is facilitated and better controlled.

What are the strongest drivers for creating and implementing new reference data technologies?

The strongest driver for creating new reference data technologies is the ‘Wall Street attitude.’ The Street has always attracted hardworking, intelligent people who figure out ways to increase revenues and to reduce expenses. To support the business with the complexities that are realized, data has moved to the forefront. Regulations have also been introduced to address concerns about the complexity of financial instruments and they also drive the need for data and the technologies to support the data.

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