Inside Reference Data

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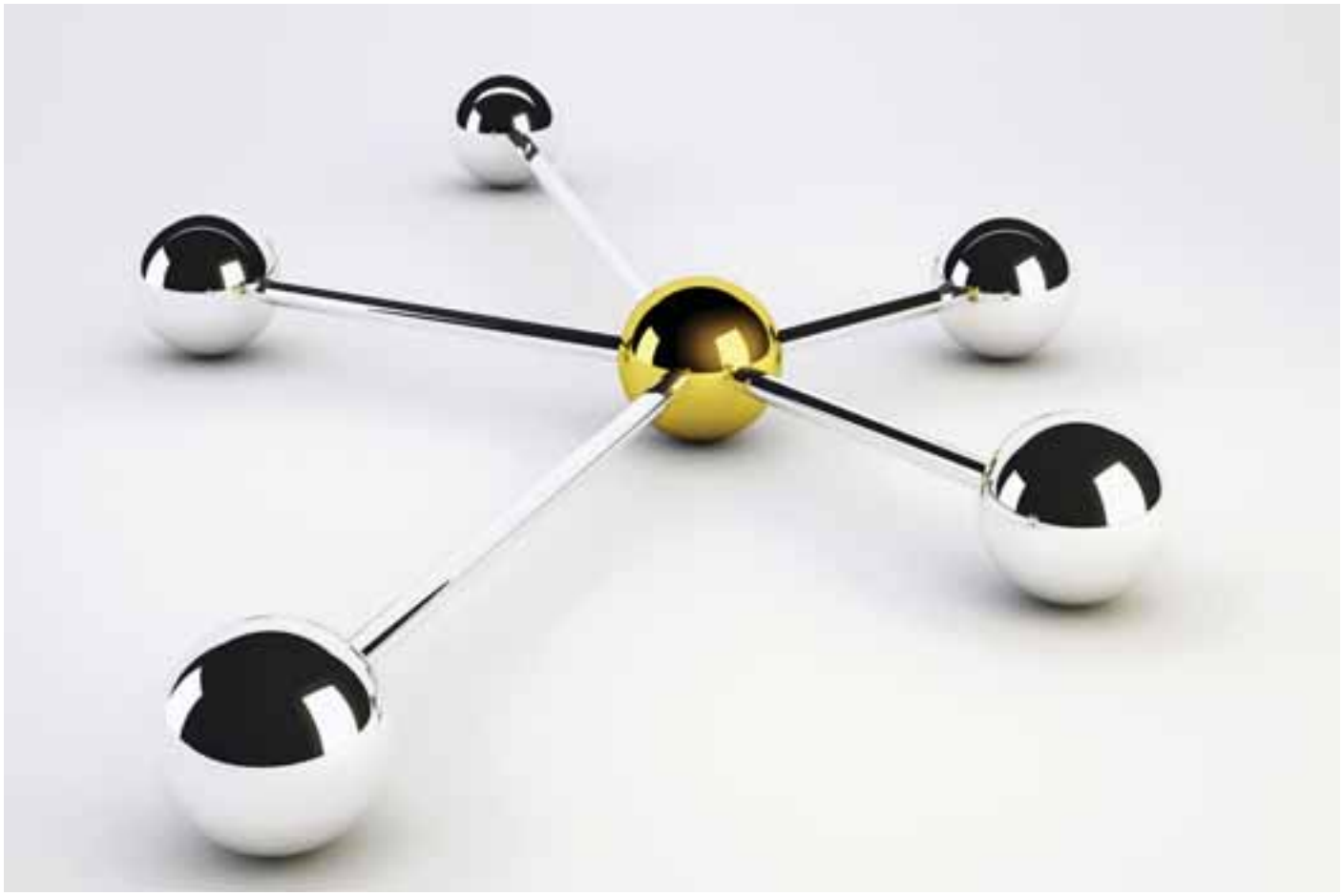
Data Utilities

Special Report



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Editor's Letter

Learning to Share

When I went to visit a bank to spend some time with their data analysts a few years back, I remember being excited about seeing a clever web link from the address field in the counterparty data management system to the UK postal organization Royal Mail's website. When analysts clicked the link, the address was automatically converted to the UK standard address format and verified. This feature enabled the data analysts to tap into data already aggregated and normalized by the Royal Mail. The reason I got so excited to see this was that it was my first experience with a utility approach, as postal services organizations could be seen as acting as utilities of address information.

When it comes to finding addresses, it is pretty standard to rely on postal services to have the correct information. Few would find it necessary to source this information elsewhere when the data is sourced and maintained by one reliable organization servicing a large number of customers. This is exactly what is needed in the reference data market in general. The data quality issue is increasingly viewed as being too big for one organization to fix on its own, and a recent WatersTechnology survey found that there are now more firms that would want to leverage a shared service than there are firms that want to do it all internally.

Firms are increasingly realizing there is no need for every firm to duplicate the work. It is about time to take the next step, and that step means replicating some of the concepts already recognized in other industries, such as postal services. It's not only about address information though. It's about various types of securities reference data and counterparty data that can be taken from a utility to share costs between many organizations and improve quality.

Right now, it sounds obvious that the Royal Mail is the only organization that needs to update addresses and firms can link into that database to ensure their information is correct too. At some point in the future, it will probably be as obvious that certain types of reference data are processed by one provider instead of being aggregated, normalized and enriched by every financial organization.

In this special report, *Inside Reference Data* has gathered the latest research on the topic and advice from industry experts on moving to a utility model.

Yours sincerely,
Tine Thoresen, Consulting Editor, *Inside Reference Data*

FEATURES

NEWS

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JP Morgan, Northern Trust Search for Data Quality

The quest for greater data quality is driving new projects at investment firms such as JP Morgan and Northern Trust, data management executives from those firms told attendees at a webcast on April 17, sponsored by SmartStream, S&P Capital IQ and *Inside Reference Data*.

Overall, the functions that are proving important for improving the quality of data are verification, immediacy, metrics and regulation, the executives said, as did officials from data service providers who spoke in the program.

A desire for higher-quality data and firms' needs for risk management are the two largest drivers for new data management practices, according to responses to a poll in the webcast. Linking data sources was a secondary concern, respondents said.

JP Morgan, which recently underwent a consolidation of its Investment Banking and Treasury & Securities Services divisions into a single Corporate and Investment Bank (CIB) division, also has a firm-wide initiative to develop and deploy a new instrument master across the CIB division, according to Ludwig D'Angelo, New York-based executive director for JP Morgan CIB.

"The Global Instrument Master (GIM) is a golden record of reference data on roughly 12 million instruments together with their issuers, ratings, and issuer legal and obligor hierarchies," he said. "It will replace all existing security masters currently in use and support the pre-trade data requirements of applications. It's a monumental project, and like trying to change the wheels on a race car as it speeds down the highway."

Rules-based data validation, if not done properly, can force a trade-off between data quality and exception counts, he added. "The optimal environment is one that provides the best quality data with the fewest exceptions-exceptions that generally only be cleared with production manpower," said D'Angelo. "You want to provide the best-quality data for your organization, but at the same time, you want your operating model to be fully scalable to increases in instruments and/or asset classes and subscriber applications."

Northern Trust, in turn, has been modifying its data quality program, according to Brian Sobolak, the company's Chicago-based vice president of asset reference data quality. "The increased regulatory focus led us to the same top-down approach to data quality, where we looked at everything inside the security master, and started building out specific quality programs and projects to attach issues we found while doing that," he said. "This year we've taken a more bottom-up approach, looking at specific client needs and requirements in a more structured and focused way. We have a consolidated security master, so we have one place to go to get all of this."

Completing Linkages

In response to another audience poll, 49% said validation was the most important part of data quality standards, joined by 25% who said linkages and 19% who said verification. The panelists' discussion focused on linkages. New projects for end-user firms include linkages of foundations, particularly for identifiers.

The firms want linkages sooner in their data management process, namely when setting up assets in their systems, according to MaryRose Carosia, vice president of enterprise solutions at S&P Capital IQ. Linkages are necessary to deal with multiple IDs, she said. Firms must understand the methods for multiple linkages of both active entities and historical entities.

Data hierarchies require completion of linkages, according to Adam Cottingham, vice president of data management services at SmartStream. "Data lineage is proven through the hierarchy, and the hierarchy exists through the lifecycle of the data from where it originated, through use and decision-making, where different hierarchies can conflict," he said.

The full version of this article appeared in the May edition of *Inside Reference Data*.

Michael Shashoua

News Download

Demand for More Timely Ref Data Increasing

In the pursuit of higher-quality data and new ways to leverage it, data managers are looking for more up-to-date and relevant data, faster, according to Neil Smith, managing director of the global product group at Fitch Solutions in New York. "We're a global business now, so it's not always on US business hours," he says.

"We have to know where our clients operate—many of them are outsourcing to India for some of their data management, for instance. So we need to reflect exactly what their needs are, in timing and quality."

Data Quality, Usage Issues Increasing

Data quality is lacking and usage fees for data management tools are becoming more prominent areas of concern for the financial services industry, concludes a Deloitte report based on surveys of financial services professionals and additional research.

A lack of data quality and a surplus of "rudimentary tools" for data management are issues that will increase in importance for the financial services industry, according to a survey report produced by Deloitte.

Data quality is only "good" or "excellent" for 42% of 33 financial services professionals who responded to the survey. Another 30% of respondents ranked their data "adequate" and 27% called it "un-integrated".

A split in information between firms' technology operations and business operations can make it more difficult to determine the quality of data to be used for risk assessment functions, according to Dallas-based Omer Sohail, head of the banking analytics team at Deloitte. "There have been a lot of efforts in the past between the technology side and the business side. They have implemented data quality but failed to realize they haven't focused on... functional use cases."

Utilizing Utilities

Inside Reference Data gathers leading data management professionals to discuss the opportunities for adopting a utility to improve data quality, reduce costs and mitigate risk

Is the market ready to adopt a reference data utility?

Ludwig D'Angelo, executive director, JP Morgan: I think the market is more ready than ever to adopt a reference data utility, but I think that the value proposition will differ greatly depending on where in the reference data consumer food chain you sit. Money center banks with large reference data mastering organizations will likely see the greatest benefit—if two or three such banks "anchor" such an industry utility they will provide the data governance and standards required to succeed. Smaller organizations can either opt to pick and choose the data sets they require or buy everything. The rate of return for clients should be fairly good with higher investments in integration returning more substantial benefit. There are still the considerations to be made for vendor data licensing, but I believe the right mix of motivated vendors can easily do this.

David Thomas, global head of client data, global shared services, Barclays: Yes—I think the market would be prepared to accept a utility model for the industry-wide data sets. Across the client, instrument and reference data environments there are large populations of publicly available data that could easily be utilitized with clear savings to consumers from both a headcount and cost perspective. Having a "single version of the truth" is something we have targeted for some while. There is a limit—there are internal attributes across all data sets that would clearly need to be retained within the consumer architecture. I would view the utility model as just one piece of the jigsaw.

Martijn Groot, director, central data utility product management, Euroclear: The market appreciates the benefits of pooling data processing costs, for which there is no competitive advantage to be gained. As cost pressures mount, the traditional ways of managing reference data via silo-based product and business units are no longer feasible. On the other hand, institutions will look for wide-scale market adoption of a utility solution and for ways to leverage the investments they have already made for internal data distribution.

Adam Cottingham, vice-president, data management services, SmartStream Technologies: The market is not only ready for it, but requires it. Our feedback from the market and our working groups confirms our view that firms are concerned that the existing solutions that they have in place are no longer cost-effective or delivering the results they require. In addition, regulation is increasingly stressing the need for standardization and cooperation and this is exactly what the central data utility (CDU) provides, while incorporating and in some cases initiating client control over their data universe.

In addition, many firms have spent the past few years implementing data management solutions and have subsequently discovered that while they confirm to the initial project requirements, they do not provide the flexibility required to expand beyond those limits. The SmartStream service aims to help firms leverage their existing data infrastructure, supported by utility best practices, to deliver immediate improvements while allowing the solution to remain relevant over time, governed by flexible

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"Regulation is increasingly stressing the need for standardization and cooperation and this is exactly what the central data utility provides"

Adam Cottingham, SmartStream Technologies

Ludwig D'Angelo, JP Morgan

and results-driven service level agreements (SLAs).

Mark Bands, data management stream lead, over-the-counter derivatives reform programme, ANZ International and Institutional Bank: I am not sure if the market is "ready" to adopt a reference data utility—or even how that readiness may be measured—but it is indisputable that the market needs to adopt a reference data utility. A broadly adopted industry utility would address many of the pervasive issues from which the financial services institutions suffer, as a consequence of badly managed reference data. In the absence of such a utility firms are trying to solve multiple reference data issues for themselves, many times. What they are doing is spending a lot of money and time addressing the same problems as everyone else, with nuances as data moves across organizational divisions and/or jurisdictions. It has been widely acknowledged that an industry utility, where all contributors both publish and subscribe to the relevant data will, in a measurably short time, produce a more transparent, consistent and top quality global data set.

Chris Johnson, head of product management, market data services, HSBC Securities Services: The Global LEI (Legal Entity Identifier) System will become an example of a data utility (or more likely a network of utilities) that will provide new and "pure" original source of entity data once it is complete. However, the LEI system will have limitations and my understanding is that it is not intended to be used as a general source of company entity data. In other words it is specifically designed to help manage systemic risk as opposed to being a utility source designed for other business purposes. On the other hand, data utilities that recycle existing reference data (as opposed to providing a new "pure" original source) are usually a much less compelling proposition and expectations are rarely met. These represent well-trodden ground with a poor track record to date.

The recent raft of regulations (for example EMIR, Dodd Frank Act (DFA), FATCA and Solvency II) highlight the need of data utilities to be in tune with the management of data attributes associated with these regulations and the utilities' role as part of the overall operating model. Hence the need for subject matter expertise practitioners and system flexibility to include the implications. Finally, the strong regulatory emphasis on derivatives makes it necessary to support the reference data requirements of derivatives as well as securities.

Where are the quick wins in the reference data supply chain?

D'Angelo: In my opinion the quickest win in the reference data supply chain is around new issue reference data from exchanges and depositories. The ability to obtain this data on a direct basis from these sources will provide tremendous benefits for those banks looking to develop a pre-trade environment that would drive straight through processing rates for transactions and eliminate the potential for errors from manual input. Another quick win is in the hierarchical mapping of issuers within corporate structures and likewise to the ratings agencies issuer identifiers. There is a real gap in the market in this area and any firm looking to improve its risk reporting will need the capability.

Thomas: Standardizing the data sets through industry agreed taxonomy and utilizing current regulatory drivers (for example LEI, FATCA and EMIR) to improve the quality of the data.

Currently data is high on the agenda of many industry participants – including an increasing number of companies where this is a topic discussed at board level. The increased focus and drive to address the recognized issues presents the data industry with a unique opportunity to realize the wins that exist.

Groot: The biggest areas for improvement are cost-base management and the delivery of quality data that is fit for purpose. On the cost side, the opportunity is to transform a high, fixed-cost base that has evolved during the pre-crisis years into a more variable, and ultimately much lower, per instrument cost basis. On the data itself, the opportunity is to provide a much better service to consumers by giving them the reins of control to shape and select only the data they require and to improve the overall data quality level. End consumers too often have to do a lot of work on the data themselves before they can use it. This is similar to ordering a meal in a restaurant and then being shown the way to the kitchen to prepare it yourself (while still paying restaurant prices).

Cottingham: From an industry perspective, having a single entity taking care of the heavy lifting involved in the day-to-day management and quality assurance of much of their data, there is an almost immediate efficiency and cost win to be made using already available utility-enabled processes. As the market moves towards greater standardization—such as in the case of the LEI initiative—having an entity already ideally placed to adopt and disseminate these standards will deliver additional benefits in market-wide transparency and the adoption (and cost of adoption) of new regulation to the benefit of all participants.

At a time of reduced and uncertain budgets, firms want the flexibility of an overarching project without necessarily having to go through the expense of analyzing what their exact end state should be. Technology solutions are predicated on the basis that they are expensive upfront to implement but even more expensive to remove. The CDU means that customers don't have to start out with a monolithic vision but can develop one over time to fit their changing requirements—such as starting out with a single asset class or data type and gradually harmonizing their data set in an evolutionary way.

Bands: The low-hanging fruit in this space is the ability for the more sophisticated utility platforms to acquire data from several sources and then consolidate that data (bearing in mind vendor imposed data co-mingling restrictions) to create a single client or security master record for consumption by the client firm.

Johnson: The LEI will improve entity data that is needed for know-your-customer controls and will help to streamline client data gathering. This will provide immediate improvements for trade booking for derivatives. In comparison instrument data quality is quite neglected (at an industry level) and truly efficient straight-through processing across the end-to-end investment process will remain a pipe dream until there is a global instrument identifier, at a sufficiently granular exchange level, with LEI-style license freedom, that can be used to track a trade all the way from cradle to the grave. The currently deficient reference data requires much reconciliation and cross-referencing and is bogged down in proprietary licensing constraints.

The quick win, for instrument data, I would suggest is extend the EMIR 'Unique Transaction Identifier' and the DFA 'Unique Swap Identifier', beyond derivatives to incorporate listed securities, such as bonds and equities, using the same open principles as for the LEI. The Financial Stability Board has publicly said that it intends to tackle instrument reference data at a later date. In summary I think the priority is to establish new and effective data content standards, using existing technology, as opposed to building yet more systems.

What will the end data consumer notice and how will their role change when moving to a data utility model?

D'Angelo: My expectation is that the overall quality and consistency of the data will improve. In general all reference data initiatives in organizations seek to rationalize the cost of the data, optimize the cost of data mastering and improve the consistency and quality of the data. The ancillary benefit of better quality data is a general reduction in reconciliation breaks and overall improvements in trade processing, not to mention the increased agility in risk management and responsiveness to regulatory requirements.

Thomas: Once consumers reach the stage where the quality of the data can be trusted, the hygiene work almost all industry participants still complete should be eliminated. The role of the data teams will change from a position where we manage and/or control quality through to value-added tasks, where we can support revenue generation and expanding business opportunities. The opportunity to use data for these purposes has been recognized for a long time but the capability to deliver solutions within this space has been hindered by quality issues.

Groot: On a day-to-day basis, the end user should notice improved data quality and reduced data management costs. Practically, because the end user will be empowered to have more control over how the data they need is being sourced and treated, they will need to be clear about what they require. Having your hands on the steering wheel also means that you need to know where you are going… so a proactive approach is essential.

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In a utility model, end users are welcome to contribute their data knowledge to the utility so that it can be incorporated into its business rules, if required, so that any shaping and processing work done by them can be moved upstream. Lastly, in a data utility model, end users are likely to also get more contextual information about the quality checks the data they use has undergone and the different sources used to help decision making.

Cottingham: The end consumer will benefit from increased data transparency and should see improved communication as a central utility acts on behalf of the entire market, not just single entities—meaning that as soon as a significant event or problem occurs for one customer, all affected customers are notified. This should also decrease upstream operations, as they are obliged to deal with fewer customer queries in favor of a single point of contact.

The role of data professionals should become more focused at the same time, as they have to deal with fewer low-level (but time-consuming) issues in favor of spending their time on dealing with cost or time-sensitive ones. This also means that the proliferation of complex and ineffectual workarounds that are in force at many firms will become a thing of the past, as a single, central provider is able to provide robust and reusable solutions to these issues.

Finally, delivery of data is governed by SLAs under

"End consumers too often have to do a lot of work on the data themselves before they can use it. This is similar to ordering a meal in a restaurant and then being shown the way to the kitchen to prepare it yourself (while still paying restaurant prices)"

Martijn Groot, Euroclear


David Thomas, Barclays

a utility approach, but perhaps even more significant is the ability of the utility to take a more timely view of the data content itself, analyzing the impact of (for example) corporate actions and applying them to the remainder of the data set before traditional aggregators. The impact on the end user is better quality data, which gives them both more confidence and a competitive edge on the rest of the market.

Bands: Ideally the end data user would have a fundamental role change from previously spending the majority of their time on manual data provisioning and checking tasks to a more "exception management" focus dealing with ad hoc data anomalies that fall out of the "machine". The actual end data consumer, at the very end of the supply chain, should only notice improvements in data quality and availability—the right data, at the right time.

Johnson: Most firms have systems that are hooked into proprietary data feeds directly from several data vendors with business resources managing the data quality aspects. A data utility that intends to replace such existing feeds and controls will need to be connected directly into to each firm's infrastructure, and business operating models, would need extensive (and expensive) re-engineering. Data utilities should in theory have the effect of moving the quality assurance checks further upstream, to become available to multiple users, and to reduce duplicate validation checks. The practice is far more difficult to achieve because the data content is complex and varied, at a granular level, and must be fully compatible with the consuming systems.

Can you identify the key considerations for clients adopting a utility approach?

D'Angelo: It starts with the business case—which is incumbent on understanding your current state—vendor costs, operational taxonomy and total cost of ownership. In addition you need to understand the cost to integrate your environment with the data utility. You need to be able to understand the benefits of good quality reference data, or taken another way, the implications and issues with poor quality data. The payback may take a few years depending on the integration course you take—but the opportunity should be compelling nonetheless.

Thomas: There are three key considerations:

- Complete trust in the quality of the service being offered—without this organizations will continue to keep core data in house.
- The capability to enhance the data service with internal attributes or data sets. I don't believe there is an appetite at this stage to outsource all data elements.
- Strong collective governance and collaboration across all industry participants, leveraging the current collective approach to meeting regulatory requirements to drive out a more strategic and sustainable model that fits all.

Groot: Key considerations will be how to internally manage the transition to a new data-sourcing model. Clients may want to leverage their data distribution infrastructure and direct the utility feed into an existing security master database. Also, clients will need to be reassured that their suppliers have sufficient scale, operational strength, expertise and credibility to enter into a long-term strategic sourcing relationship. They may demand it be a regulated entity.

Cottingham: All approaches will carry a cost consideration and a utility data service is no different. A utility will have to produce results at a competitive price point relative to the cost of a firm doing this work themselves, as well as a long-term total cost of ownership that fits in with company budgets. Our utility is well placed to do this as it is predicated on the principle that work can be done once to the benefit of many clients, and it also benefits from feedback from multiple recipients of the data. This is not to say that the cost of the solution is the only consideration as we have seen that existing solutions rarely deliver firms the overall visibility and data coherence they require. The utility is designed to cater for this problem by taking and delivering a holistic view of the data being consumed. In addition, a simple cost-saving model that removes control is not attractive to our customers. What they are looking for is a way to deliver sustainable, long-term efficiencies while still maintaining assurances that they will receive a fully personalized service with controls and oversight throughout the data lifecycle.

Bands: Key issues would relate to i) the technology integration considerations—that is integrating with an external utility deployed on Software as a Service (SaaS) for example, and ii) data considerations—that is the organizations own level internal data management maturity (definition of data life cycles, associated roles, hierarchy requirements, business use categorizations and security policies). Understanding where a firm is up to with both of these items is essential in considering the adoption of a utility approach.

Johnson: Utilities need to overcome several pitfalls if they are to succeed. Ensuring flexibility within a "one-stop-shop" is very challenging because reference data is anything but static and there is no such thing as "steady state" in reference data. Change management needs to be capable of managing multiple, concurrent project demands for system integration and user acceptance testing to exacting timelines and involving multiple competing dependencies for change. Trying to service multiple users and non-standard service requirements massively complicates the effort of managing a utility and makes it slow to change and adapt due to the governance needed. Equally the "time to market"—representing the speed of availability of data necessary to book trades, cannot be impeded even where an extra step in the chain is being added. Utilities do not tend to offer meaningful liability for

data quality, which means that firms might decide they need to retain their in-house data quality validation checks. Clients need to be sure that the utility can provide reference data content that is compatible with their adopting systems as well as achieving regulatory requirements for completeness, accuracy and appropriateness. Clients need to assess their existing data feeds and sources and quantify the logistical impact of displacing them with a utility. Data security and first-rate disaster recovery are also necessary. Finally, all of the above challenges must be overcome while still providing significant long-term cost savings.

What does the end state of data management for financial services firms look like?

D'Angelo: I think any description of the end state of data management in financial firms includes an environment that is well defined and optimized with clear data governance and stewardship across all data types. It includes a recognition of data as the key enabler for an organization at the same level as technology itself; there needs to be an understanding and appreciation of the value of enterprise data management by the business leaders—the ability to leverage data to achieve corporate goals—whether they be business, risk management or regulatory/compliance.

Thomas: Much smaller teams of data specialists who leverage data rather than manage it. All data professionals will need to start driving a far more commercial model, looking for opportunities to drive revenue from the data we hold. We are all largely focused on cost and quality, but if these are taken out of the equation, we can take a far more proactive approach to the services we offer our stakeholders.

Groot: The end game is back-office simplification and lower fixed costs. While measurement is typically expressed in cost per transaction, in data management terms, success could be measured in terms of yearly costs per security (including costs to manage the associated pricing, issuer and corporate action information). The preferred end state for data management fits into this overall simplification process.

We envision different large-scale processing facilities handling part of a financial institution's back office and, due to scale, delivering significant cuts in data management costs for the financial industry. This is similar to what has been achieved in other areas of market infrastructure involvement, for example, in custody and in central counterparty models. As a result, data quality demands are increasingly pushed upstream to the point of data origination. Standards will help with that process.

Chris Johnson, HSBC Securities Services

Cottingham: The end state is a simpler, less complex environment that places less emphasis on post configuration and processing of data in favor of more pre-processing. Firms

Mark Bands, ANZ International and Institutional Bank

lack the resources and budgets to continue in the current vein. The market has also historically been guided by the consensus view, purchasing through references and the evaluation capabilities of others rather than based on their own specific requirements. Firms need a solution which gives them more control over the input parameters to an evaluation and provides them with concrete examples and guarantees of delivery rather than a generic use case and an addendum of development promises without the backing of a service-level specification which rolls up delivery and software into a single analysis. Firms introducing additional accountability structures and checks that they are getting what they pay for is going to shape the way that they engage with service providers, and this accountability should translate to a more transparent and measurable engagement process with suppliers.

Bands: The end state would be the broad adoption and use of "collaborative" data utilities. That said, there are many barricades to the end state, including challenges presented by the very nature of the global industry, especially as relate to the use and re-use of existing identifiers, intellectual property rights allied to data content and the ever-evolving standards landscape. There are many global politicians and regulators who need to be managed and directed, by the industry, in terms of what is possible and what the realities of the global market are today. The utopian reference data utility would provide the ability to manage all securities, associated legal entities, settlement instructions and content tailored specifically to address regulatory regime requirements across FATCA, Dodd Frank, EMIR and MIFID. It will also provide a global logical data model for all asset classes across all regions and provide associated metadata for the sourcing of that data, extended cross references across all market codes as well as leverage collaborative technology platforms that empower the contributors of the content… so not much at all!

Johnson: During the past 15 years most investment in data warehouses and utilities has been focused on technology capability and little, if any, has been focused on industry data content standards (other than the LEI). The new regulations demand data content that is complete, accurate and appropriate and these requirements represent "virgin" territory at an industry level. Given the lack of industry data governance and leadership in respect of standards, and the lack of commercial incentive for firms (in terms of return on investment), I think data standardization will need to be driven by regulation if it is going to happen. The "holy grail" would be to agree standards for commonly used reference data fields, to be supported universally, along with a license model that supports operational efficiency for end investors.

Leveraging a **Centralized** Data Utility

The cost of reference data management has come under increased scrutiny in recent years, as firms have been under pressure from clients and regulators demanding greater efficiency and transparency. It is about doing more with less—finding a new approach to solving data issues, enabling data governance and simplifying the legacy landscape

In the years following the financial crisis, the reference data market has seen a surge in projects aimed at minimizing risk and improving data quality. Data management practitioners have experienced improved understanding from front-office and C-level executives, and technology vendors have reported increased appetite for investments aimed at centralizing systems and processes.

But this new focus on data problems has come at a time when budgets have been under pressure. The demand for an improved quality of data must be balanced with the cost of making necessary changes. The projects that have received funding in recent years have often returned to basics. A key objective has been to get the foundation right by implementing a golden copy defining policies and procedures while lowering overall costs.

An exclusive WatersTechnology survey sponsored by SmartStream Technologies, with responses from senior data management decision-makers within global investment banks, securities services firms, universal banks and asset management firms conducted in 2013, reveals that nearly a third of firms operate with a golden copy of reference data, but 37% still manage data in silos (figure 1).

With firms often having a history of mergers and acquisitions, it is not surprising that the silo-environment continues to be a reality for many organizations. When data management first climbed the agenda in financial services, some attempted to take a 'big bang' approach and replace all these legacy systems with an all-singing, all-dancing data management platform, but these initiatives did not always go as planned. Project costs and total cost of ownership often failed to match initial estimates.

In recent years, when budgets have been under intense scrutiny, large-scale projects have not been at the top of the priority list and, in some cases, firms have taken the difficult decision to cancel existing projects. Many firms still have the infrastructure cost base of pre-crisis revenue levels. While the requirements in terms of data and reporting are only rising, the money is simply not there.

The changing economic and regulatory environment has put pressure on firms to optimize costs at the same time as improving data quality, resulting in an increased appetite for alternative operating models. Of those surveyed, 6% say that a golden copy approach is not suitable for their firms and they have identified a need to review alternative data strategies. Another 5% have taken the leap to outsource reference data management to an external vendor.

Since the nature of the industry means that all firms are processing the same data to meet expectations from regulators and customers, it is not surprising that organizations are reviewing alternative models, such as a shared-service data offering. Fixing the data problem is no easy task, and for many it will be more cost-efficient to have data cleansed and normalized by a third-party vendor, which performs the same task for several clients.

In the one-to-many model—where a provider is servicing multiple participants—there is typically a lasting cost reduction since industry common requirement costs are shared. This is one of the reasons why more firms are reviewing the model, favoring a utility approach to an outsourcing approach, which typically results in a one-off drop in labor costs, but then potentially a rise after the initial period because of new requirements and additional costs for change management.

Paying the Price

With a long list of new regulatory requirements being introduced, firms are constantly faced with new data requirements. Managing this data comes with a hefty price tag, which is why many firms are starting to

question whether it is still financially viable to be duplicating this effort rather than leveraging a centralized data utility that delivers holistic and high-quality data according to client standards. There are more firms that think it will make financial sense for their organization to leverage a shared service to fix all the data quality issues than the number of firms wanting to fix all the problems internally.

Many organizations are looking at alternative ways to fix the problem of quality because, to succeed with data management, it is vital to have correct information feeding the systems and operating with poor data poses a significant risk to any organization. According to the WatersTechnology survey, cleansing and enriching data to ensure quality and consistency is seen as a key data management challenge in today's market, with close to half of global investment banks saying it is of critical importance to their firms.

One of the reasons that it is so expensive and challenging to improve data quality, however, is the complexity of the issue. Despite data management often being labeled an IT problem, it is not simply a case of implementing new technology. More technology can in some cases have the opposite effect since new implementation sometimes fails to live up to initial expectations. Getting the data right also means establishing strong data governance firm-wide, integrating data sources, defining data policies and procedures across the business, and ensuring everyone speaks the same language.

In fact, achieving good data quality is also linked to other internal challenges. In many cases, firms rely on vendors to provide accurate data. In the survey, asset managers rated sourcing data from third-party vendors and ensuring that vendors meet expectations for quality and timeliness as the most critically important challenges.

But overall, cleansing and enriching reference data is seen as the main headache for firms and, with the volume of data increasing, this is not likely to change soon. It is becoming more expensive to manage, and there is seldom praise for good-quality data; quality typically appears on the agenda when poor data leads to costly mistakes.

The Next Step

In recent years, former UK regulator the Financial Services Authority has put added pressure on firms by

Figure 1: What is your organization's approach to reference data management?

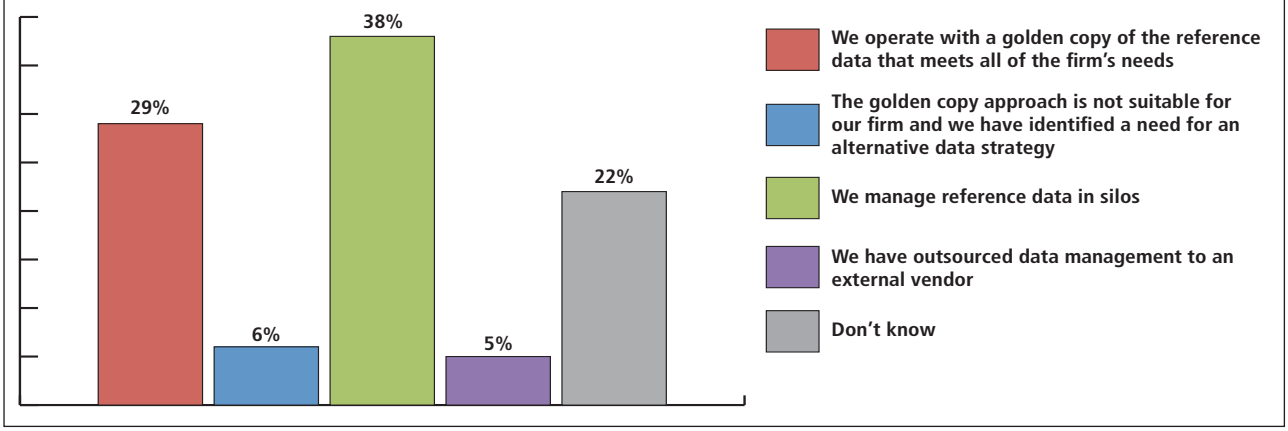
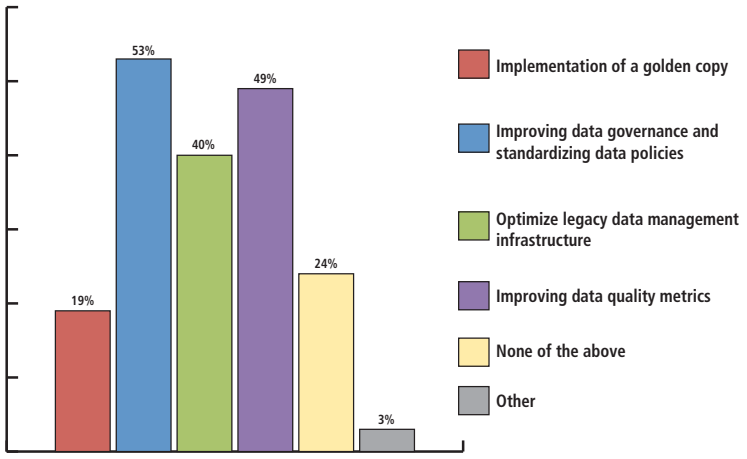


Figure 2: Which data management initiatives does your firm have planned for the next 18 months?



fining institutions for failure to meet reporting requirements, and the use of incorrect reference data has appeared on the radar. Regulators in both Europe and the US have stressed the importance of fixing the quality issue, resulting in more organizations realizing there is a need to make changes sooner rather than later.

Part of the problem with meeting changing regulatory requirements has been that data is stored in disparate systems, making it difficult to pull together the necessary information for reporting requirements and having a full overview of the business from a risk perspective. In an ideal scenario, securities reference data, corporate actions data, legal entity data, holiday data and pricing data would be viewed in the same context, but in reality only one in four firms have this capability. More firms are, however, looking at making changes, and this is shown by projects, such as incorporating corporate actions data into a golden copy creation, being mentioned as on the agenda in the next 18 months (figure 2).

But for many, the projects that will be prioritized in the near future are the ones that are directly targeted at delivering quick-wins and improving data quality. In the next 18 months, 53% of firms will focus on improving data governance and standardizing data policies, and close to 50% will be looking at improving data quality metrics.

Two-thirds of organizations that already operate with a golden copy have plans to improve governance and data policies. This suggests that firms often start addressing data management by looking at technology, but recognize that data management is not an IT problem. It is promising that a growing number of firms are realizing that improving data quality also means establishing strong data governance and standardized policies and procedures.

By addressing these issues, firms are better placed to meet changing requirements from regulators and customers, and this is exactly where the focus is right now. Meeting changing regulatory requirements is rated as the most critically important objective for investments in data initiatives, and improving customer service is rated as the second most critically important objective (figure 3).

Although lowering operational costs and reducing risk are also high on the agenda, the survey indicates that regulators and customers are driving the agenda in the data management market.

Creating a Winning Culture

The key challenges related to meeting demands from regulators is often the tight deadlines and number of regulations coming into force around the same time. It is also often a concern that it is difficult to know exactly what needs to be done to comply, as detailed advice is sometimes published later than anticipated. To meet requirements on time and on budget, firms need flexible systems and the ability to make changes fast.

In this sense, the ability to change is also related to culture. As the market evolves, firms have to change organizational structures. Many organizations are hampered by the past. Some complain IT and operations are not always in sync, with IT perhaps being happy with a project but operations finding the result unsatisfactory.

The lack of understanding between IT and operations can at times slow down progress, and firms are increasingly focused on moving data decisions out of IT. According to the WatersTechnology survey, only 15% of firms say IT is the main driver of data strategy decisions. In 45% of organizations, business heads drive data strategy decisions and in 26% C-level executives drive data strategy (figure 4).

In recent years, there have been a growing number of firms that have made C-level executives accountable for data management, and some have also established a central unit to overlook data quality, such as a chief data office. It is promising to see that C-level executives set the agenda in more than one in four firms, as this would indi-

Figure 3: What are the main objectives of your firm's investment in data initiatives? (1 = unimportant, 5 = critical importance)

	1	2	3	4	5
Lowering operational costs	4%	6%	32%	39%	19%
Reducing operational risk	2%	4%	27%	33%	34%
Improving customer service	4%	5%	28%	27%	37%
Meeting changing regulatory requirements	5%	5%	21%	30%	39%
Facilitating business change	4%	14%	28%	38%	16%

cate that decisions are being made firm-wide, resulting in increased standardization and harmonization across the organization.

The problem, however, is that projects are still difficult to get off the ground. With firms looking for tangible benefits to justify investments in new initiatives, it is typically always a challenge for data practitioners to secure the necessary funding to make improvements. For many, it has become even more challenging in recent times, and 54% say increased focus on cost-cutting and reduced budgets is one of the most important budgeting constraints within their organizations. The second biggest constraint in today's market is the problem of fitting projects into defined budgets and timescales, with 52% saying this is one of the most important issues (figure 5).

The survey results suggest firms need to change the budgeting process, allocating funding in a way that reflects that the market is evolving. One example would be that data cannot be seen as an IT problem, and it is not sufficient to budget for data technology investments. Firms need to consider the different aspects of data management, budgeting for feeds, containers and data professionals.

A Definition of Success

When organizations do get it right, IT and operations are working in sync and data management is viewed as a service as opposed to a piece of technology. This is perhaps also when initiatives deliver improved efficiencies, transparency and cost savings, which is what most are looking for when evaluating a finished project.

But in the end, it is all about the customer, which is something several survey respondents added in their comments. The ultimate measure of success for a business is happy customers. The end goal for any data management strategy is to improve customer service, which means delivering accurate, comparable and relevant information within a pre-defined time frame and having customers in control. Customers need to be able to order and get the data sets they need without having to go through an internal IT or change management process.

To meet changing requirements from customers and regulators, firms have been forced to increase investment in data management processes, but fixing the data quality problem is not done overnight without a change in culture and budgeting. Investment banks, universal banks and asset management firms are duplicating their efforts by cleansing, enriching and normalizing the same data in a bid to overcome a shared challenge: data quality.

Some firms have made significant investments in data management platforms—also often resulting in a large fixed-cost base—but what they need is not necessarily an IT project. To reduce total cost of ownership and avoid relying on expensive and unpredictable, in-house IT implementations to improve data quality, it makes financial sense for many firms to tap into a utility that aggregates data from different vendors and delivers cleansed and normalized data to clients, enabling them to move to a variable cost base for data management.

To prepare for a change that data issues are solved the market must evolve. Firms first need to review business cultures, ensuring operations and IT are in sync and assess whether the way budgets are being set work in a changing data management market. As firms start to move more towards viewing data management as a service, adopting a new approach to data management—leveraging a centralized data utility—could be a practical and more cost-efficient strategy.

Figure 4: Which stakeholders drive data strategy decisions in your firm?

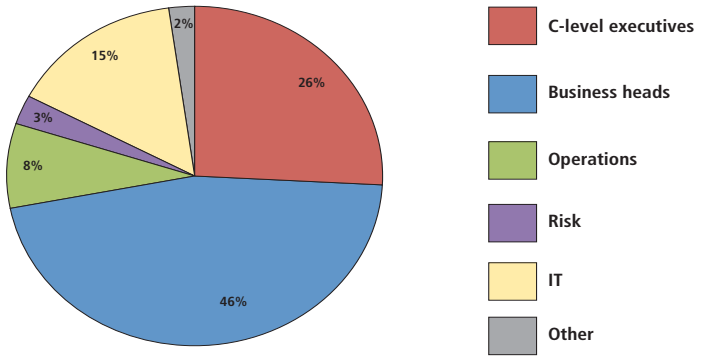
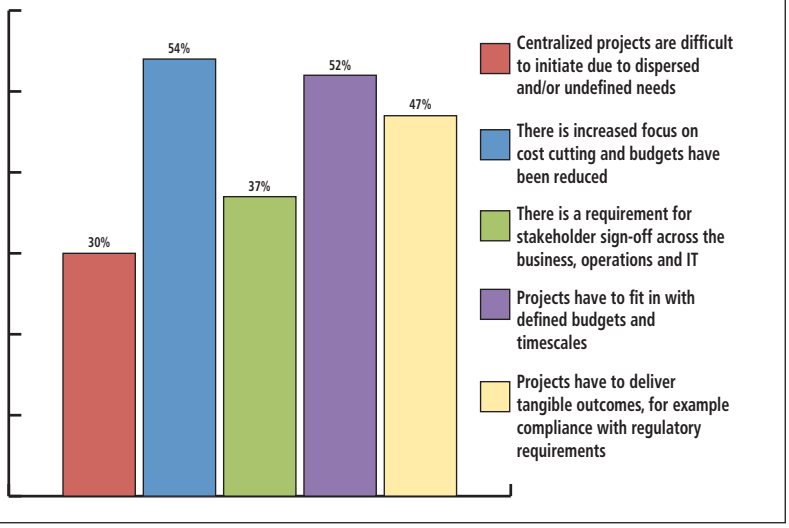


Figure 5: Which are the most important budgeting constraints within your firm?



The Logic Behind Shared Data Services

There is a growing realization that data management is not an IT problem, and firms need a lot more than good technology to succeed with data management. Considering the complexity and often unpredictable costs related to preparing reference data for downstream consumption, firms are looking to adopt a shared service to improve operational efficiencies, mitigate risk and meet customer expectations. By Martijn Groot

When data management first appeared on the agenda in the financial services industry, the standard approach to tackle the issue was to invest in large-scale IT projects, implementing new strategic platforms that aimed to deliver an enterprise-wide master data set. However, this approach came with high fixed costs, high running costs and material risk in implementation, so centralized data initiatives rarely came to full fruition. More recently, it has become obvious that more needs to be done—the data quality issue has not disappeared, despite high technology budgets, which are stretched to comply with so many new regulations, and since it is more important than ever before to get the quality right to meet expectations from regulators and customers, alternative operating models are starting to get attention.

The data management puzzle has so many pieces that firms are finding it makes little financial sense to address them all internally. Instead, some are reviewing opportunities to adopt a model where one provider aggregates, normalizes and enriches data for many organizations to avoid every firm repeating the same work internally. After all, there is little competitive advantage in getting reference data correct.

The data utility concept—based on the principle that one provider can collect and cleanse data for many organizations—has gained traction in recent years. It has even received regulatory recognition in legislation such as Dodd-Frank, and the utility approach has been regularly discussed at industry events. One of the reasons experts are backing the one-to-many model is because the cost argument is hard to ignore.

Five years ago, it was perhaps easier to sell an internal project aimed at addressing specific data requirements, but this is not necessarily going to hold up any more when the same data can be supplied by a shared services provider. Investing in an internal project means the firm will also be paying for all changes that need to be made at a later stage to meet new regulatory requirements, and since there has been an array of new regulatory requirements in recent years, this is typically a bigger concern now than it used to be. When data collection, cleansing and distribution is supplied by a utility instead, the costs are shared among many organizations, making it a more cost-efficient solution from a change management perspective. Furthermore, because it has to accommodate requirements for multiple clients, a utility can be more proactive in incorporating new data categories and accessing additional data sources.

Despite labor cost arbitrage, outsourcing and offshoring models cannot compete with a one-to-many model over time. Although there has been an increase in deals in the outsourcing and offshoring space in recent years too, firms will still have to pay for changes to meet new regulatory requirements with these models.

Quality First

But the reason data utilities have appeared on the regulatory agenda is not first and foremost related to costs. The financial crisis highlighted the scale of the data quality problem, and moving to a central data utility emerged as a concept that could help solve this issue. With a one-to-many model, a firm can also benefit from improvements suggested by peers. This model is now seen as being more predictable when it comes to quality and costs, and more flexible when it comes to selecting which data categories to source.

In October 2012, Euroclear Bank and SmartStream formed a partnership to provide the first centralized reference data utility service. Known as the Central Data Utility (CDU), the Euroclear Bank service channels financial reference data from data vendors selected by the CDU's clients, as well as from data originators, such as central securities depositories and stock exchanges. Powered by SmartStream technology, securities data processed in the CDU is validated, cleansed of inaccuracies and then enriched before being relayed to clients in the precise format they have chosen, on an intra-day basis.

The CDU, which is ready to be adopted, gives a lot more control to users and is aimed at improving operational efficiencies and mitigating risk. In fact, what users get can be compared to an *à la carte* menu. The shared services model puts the user in charge of picking the data sets and the sources they require, and having it served in the way they prefer. The model is end-user driven, and continuously measured by KPIs.

Opting for a data utility model makes sense in today's market, where firms are striving to balance the need for cost reduction and back-office simplification with the need to fix the data quality issue to meet expectations from customers and regulators. By adopting a shared service, where results are measured by the quality of outputs and not inputs, firms can attain predictable levels of quality and costs. This is what is in store for those firms wanting to have the opportunity to order *à la carte* instead of settling for a set menu.

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