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Reference Data Technology

Special Report

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Editor's Letter

The Small-Step Approach

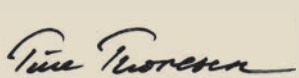
It seems as though everything has changed since the fall of Lehman. But, in fact, the requirement for a best-of-breed reference data system has not. In many cases, it is the implementation process that has changed. Software companies have enhanced their propositions to help clients realize benefits a lot quicker. The multi-year projects might be gone, but the objectives have typically remained the same. Vendors have simply taken a more flexible approach, becoming better at slicing and dicing propositions to enable firms to show immediate results—but still get to the end goal.

The small-step approach to technology projects is also the strategy most of the firms undergoing mergers seem to be taking. Some suggest the data integration projects have been more focused on data interaction than integration. It has not always been a case of doing a drastic overhaul.

Still, the numerous mergers happening in the industry at the moment have resulted in this being one of the main drivers for change. It can be an opportunity to start at square one, review requirements and roll out the best solution—just not overnight.

This process is what we hope the reference data technology special report, which includes comments from industry experts and a news review, will help readers with. And if you find this interesting, we also hope you will want to join us at our upcoming events, the European Financial Information Summit in London on September 22 and the Asia Pacific Financial Information Conference in Hong Kong on November 3–4.

Yours sincerely,



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News Review

Risk Mitigation Climbs OSI Agenda, Focus Remains on Points of Impact

NEW YORK—The US Options Symbology Initiative (OSI), which will introduce new options symbols that become mandatory in February 2010, will affect more systems than firms originally anticipated, underlining the need for implementing sound risk mitigation strategies, officials tell *Inside Reference Data*.

Norman Brower, executive director, reference data solutions at Morgan Stanley, says the hardest part of the problem is the identification of all the points of impact. There is a knock-on effect in terms of impact, and if the reference data system passes OSI symbols to trading systems that in turn pass that data along to the clearing system, all three will have to change.

Firms are looking to implement strategies to mitigate the risk of potential failure to identify these points of impact. "One way is to use tools to scan source code looking for impacts. A second is for subject matter experts to look at their source code and validate what the tools are telling you. Third, to do a reasonable amount of testing," says Brower.

The full version of this story appeared in *Inside Reference Data*, April 2009.

Tine Thoresen

GE Capital Boosted by Enterprise Data Warehouse

MIAMISBURG, OHIO—General Electric's financial services unit GE Capital's implementation of a large data warehouse and supporting applications from Ohio-based technology company Teradata has allowed GE Capital to eliminate silos within its business and improve data accuracy and accessibility, *Inside Reference Data* has learned.

GE Capital's enterprise data warehousing initiative, which started in January 2004, first consisted of multiple projects focusing on data centralization, standardization and quality, with the aim of creating an integrated data warehousing environment throughout the firm's corporate umbrella.

Prior to the initiative, GE Capital had a siloed approach to data management. "This was one of the main drivers behind the project," says David Schoeff, principal senior consultant at Teradata, and data architect at Teradata enterprise warehousing at the time the project began.

The full version of this story appeared in *Inside Reference Data*, April 2009.

Carla Mangado

Deutsche Bank Goes Live with Data Segment of Reporting Project

LONDON—Deutsche Bank has gone live with a data management system as part of a large reporting project, according to a speaker at the Master Data Management Summit in London.

During 2008, Deutsche's global markets division revamped the reporting infrastructure, streamlining financial and management reporting processes. As part of this project, it implemented Oracle's Hyperion Data Relationship Management, which helps synchronize upstream master data with downstream systems. London-based Antony Stanway, director, business intelligence services at Deutsche Bank in London, who runs reporting at the firm, said from a reporting perspective, data is critical. "You cannot really have a successful reporting platform without having a strategy around your master data," he said.

Stanway's group, which supports all business lines within the investment bank, said: "One of the driving objectives I have is to make sure the systems I produce and the services I provide are actually non-business specific."

The firm selected the Oracle product after looking for a way to help model hierarchies. Stanway said Oracle, now at the heart of the reporting architecture, enables financial and analytical master data management in fast-changing business environments.

The full version of this story appeared in *Inside Reference Data*, May 2009.

Tine Thoresen

GoldenSource Launches Derivatives Product

Enterprise data management vendor GoldenSource has introduced a new data product to help firms value derivatives portfolios and manage risk. GoldenSource for Derivatives is a pre-configured risk management system, providing a 360-degree view of the instrument, issuer and counterparty exposure.

Reference Data Factory Adds Support for VDF Feed

Reference data integration company Reference Data Factory has added support for ValordataFeed (VDF), the reference data feed from SIX Telekurs, which includes security master reference data, corporate actions and valuation pricing for more than 5 million global securities.

Cadis Acquires C8 Software

Cadis, the enterprise data management systems provider, has acquired C8 Software, a provider of client, management information systems and compliance reporting software with its Consolid8 product. The acquisition will enable C8 clients to leverage the data stored within the Cadis EDM application.

Virtual Roundtable

Reference Data Technology: Meeting Demand

Inside Reference Data gathers leading industry professionals to discuss how firms can optimize reference data technology to meet new requirements for speed and flexibility

In what ways has the financial crisis changed reference data technology requirements?

Norman Brower, executive director, reference data solutions, Morgan Stanley: I don't think it has had a big impact on reference data technology requirements. Dealing with increased trading volumes was not so much an issue for reference data, it was more of a market data problem because the number of pricing updates (ticks) flying around the industry created an increased demand for capacity.

From a technology data perspective it really didn't change anything, but I think some companies realized how insufficient their information infrastructure was when it came to calculating exposure to counterparties. Morgan Stanley and some others were well positioned to deal with the information demand required to manage credit exposure. Others, however, were less fortunate and became aware of the importance of resolving this problem following the financial crisis. I suspect many firms will make investments needed to address this shortcoming.

Peter Serenita, global head of pricing operations, JPMorgan Worldwide Securities Services: The financial crisis has helped to highlight the importance of reference data across an organization. It has moved the dominant driver from an efficiency (return on investment) discussion to a heightened awareness of the importance of reference data in the quality of information across the organization (for example risk or profitability). The original technology requirements have not changed but some of the requirements have been heightened. The need for accurate data is still there but now

there is a better appreciation that there needs to be a renewed focus on the integration of that data across the organization. One of the biggest changes in the requirements is the frequency/timeliness of the data. Speed in delivery has become more critical, as well as the flexibility of your reference data solution. The reference data systems need to be able to quickly adapt to new requirements as additional information requirements are defined by executives in the firm and regulators.

Tony Brownlee, principal, Kingland Systems Corporation
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Tony Brownlee, principal, Kingland Systems Corporation: The requirements are more precise. I don't see many firms (if any) looking at 'big bang' reference data technology implementations right now. Instead, these firms are looking to make very surgical technology improvements, which, given the size and complexity of many of their environments, often leads to custom implementations. The requirements this year are focused on using technology to drive or ensure quality, or to eliminate non-value-adding or duplicative processes. I see firms looking for reliable components or experienced outsourcing partners as a way to meet these requirements rather than 'big bang' vendors.

John Randles, chief executive officer, PolarLake: I think the crisis is putting a very healthy pressure on the industry to quantify, measure and deliver meaningful business value. These pressures were present in the past but they were sometimes put to the side as the vendor community, in particular, couldn't articulate the real monetary value of what it was trying to achieve. The 'trust us over the next five years, you will get value' proposition is gone. Also, the technology is now expected to deliver incremental value in weeks, not years, as was the case in the past. And all the focus is on operational cost saving, risk management and compliance. The technology itself, I don't believe has changed dramatically with the crisis. The need to couple the technology with a five-year discounted cashflow cost-benefit analysis has certainly changed.

Elliot Noma, senior risk adviser, Asset Alliance and managing director, Garrett Asset Management: For hedge funds the main changes have been increased need for transparency, greater need in many cases for multiple sources of data, and the need to intensively monitor the liquidity of positions. This is coupled with the smaller number of players in the market and the problems with getting an accurate indication of the market when little is trading.

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Fritz Hediger, head of global sales, SIX Telekurs: Firms have become more cost-conscious and are looking to reduce all superfluous expenditures, although they remain prepared to pay for good-quality reference data and technology. Risk management is also at the centre of current concerns, especially counterparty risk. In recent months, we have seen a raised interest in counterparty linkage (instrument to issuer, plus issuer to structures above). For many clients the solutions in place need improvement. Shorter delivery intervals are also being discussed more in-depth, even if processing this means considerable investment.

Jason du Preez, global head, enterprise platform, Thomson Reuters: There will be continued debate on the weaknesses exposed in the global financial system and its regulation. A lack of information together with inconsistent data has indisputably been a catalyst for a crisis that ultimately led to significant loss of confidence and compounded many underlying issues.

Risk management and regulatory compliance are at the forefront of the industry's priorities with the aspiration to fully understand total credit exposure across institutions and asset classes. Demands on reference data technology are therefore evolving. It's no longer just an issue of data quality—it's also about rapid integration of new sources (such as independent pricing and risk); near real-time evaluation of credit curves, collateral value and volatility; and orchestration of cleansed data through services that directly enable downstream risk and compliance processes. While data management and data integration have often been regarded as complementary but independent technologies, these demands dictate greater assimilation, resulting in reduced cost of implementation, reduced time to market and greater flexibility, transparency and visibility.

Adam Honore, senior analyst, Aite Group: Risk management. First, it is accelerating the shift from looking at the world through instrument lenses towards looking at it through issuer lenses. Second, there are more data requirements for more instruments. As firms consolidate trading desks, they also have to consolidate reference data models. And they have to roll up complex instruments and data from non-domestic markets. That said, there is still a lot of work to do on data quality and getting rid of data silos through better integration.

There has been an array of mergers in the financial industry, with many firms focusing on integration projects this year. What are the key factors to consider when selecting the reference data technology platform best suited for a new combined group?

Brower: Ideally, you would want to take the best of breed because if you have two companies you have the opportunity to select the strongest platform. Best of breed has a couple of dimensions—technology, capability, in terms of depth and breadth of data, and cost of ownership. One of the challenges is the cost of migration, which could impede taking the best of breed. For the Morgan Stanley—Smith Barney merger, we're focusing more on the legal entities, books and records dimension, not necessarily integrating all operations and IT infrastructures. But we have a multi-year program to do the true integration, which will aid cost savings.

Serenita: The two most important aspects are flexibility and integration. The reference data technology platform needs to be flexible so that it can satisfy the needs of the disparate organizations that it is bringing together. This means it needs to be quickly extendable to satisfy the data needs of platforms from both heritage organizations. The system also needs to have a sophisticated integration capability to speed the integration of these 'newly acquired' systems.

Brownlee: Mergers are a mainstay in our industry, so while the problems might seem new, they aren't. I would say the two factors to consider are process and legacy systems. The key to the castle for reference data is rarely technology, but rather process. Well-defined processes that meet the business needs of the merged organization and account for the entire reference data lifecycle must drive the technology choice. Second, legacy systems must be a key consideration. In many firms these systems support a large percentage of the business, are not well maintained and cannot be easily enhanced to work with a new platform. In either case, the two factors (process and legacy systems) might lead firms down a custom application path or an 'out of the box' platform.

Randles: What we are seeing is a very pragmatic approach being taken by the newly merged entities. I don't see them going down the road of the mega-platform projects replacing existing platforms in both institutions. What we see a lot of is a concentration on integration processes and technology, where one existing platform may be nominated master and they are beginning the process of uncoupling downstream systems so they can retire many other duplicate platforms. I don't see firms solving the problem by introducing more data models.

The key to any decision on technology platforms, which might be obvious but is not always done, is to look at the actual problem being solved not what is being marketed as 'the solution'. There is now a general maturity in data modelling and

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cleansing in these organizations, and the main issue is integration.

When choosing the correct integration technology approach, you need to look at the specialization in the people and technology when it comes to reference data integration. This is not the same as payment systems, transaction processing or generic ETL. Integrating major organizations is risky enough without engaging technology and people that know and can deal with the scale of complexity in the reference data world.

Noma: The main factor is the quality of the data. This requires an understanding of the source behind the information provided. A follow-up due diligence call/meeting is important in understanding the status of trading desks doing the marking and the groups compiling the information. Staff cuts and difficulties in co-ordinating the compilation of numbers due to systems incompatibilities would raise red flags.

Hediger: When two companies merge, often double the number of criteria need to be addressed, and in some cases these criteria are even in conflict with each another. There are three main factors regarding reference data technology platforms that are crucial in the decision-making process of a recently merged company. The first is quality and completeness: such a platform must be based on technology that supports and secures data integrity. Any gaps widen over time, and are not easily identifiable.

The second crucial factor is integration. It is important to ask whether the existing technologies of both the merged parties can be upgraded or easily migrated to the chosen system.

The final point is that of local support. Companies, especially in the current financial climate, rely on local support, strong customer relationships, and local-know how—but in the case of a merger, "local" may mean a number of places. SIX Telekurs has 23 offices around the world, which enables us to be close to the markets and—more importantly—close to our customers.

Du Preez: When selecting the reference data technology platform, financial services firms need to be cognisant of the requirement to assimilate data management and data integration capabilities—in general, one provides purpose-built functional capabilities to acquire, validate, normalize, cleanse and store data; the other provides general infrastructure capabilities to integrate, transform, route and orchestrate

data flows. However, too many reference data projects fail as a result of bringing these technologies, usually two discrete sets, together. This is typically as a result of escalating costs of implementation or elapsed time to market.

A holistic approach to reference data management and integration is needed. The technology platform needs to promote flexibility by providing a suite of data services for rapidly acquiring new sources of data (including in-house, proprietary and custom data repositories), distributing cleansed data to downstream applications and business processes (where appropriate, leveraging existing business integration technologies) and integrating calculation engines (for example, derived data risk factors that can be subsequently cleansed and stored in the platform).

To achieve this, the data services framework firstly needs to support a canonical data model that provides a critical layer of abstraction from the underlying source data. Second, the data services framework needs to provide a programmatic interface that is abstracted from both the technology transport and the content, allowing all data-consumers and publishers to send and receive data in a consistent, well-defined way.

Finally, the platform needs to promote transparency. With renewed interest in outsourced middle- and back-office processes to reduce cost, modern reference data technology platforms can leverage advances in data service frameworks, reporting and business intelligence tools to provide managed services with comprehensive metrics for improved qualification of service-level agreements.

Honore: Vendor selection is the least of the problems encapsulated in that question. Assuming you have the budget and charisma to choose a solution and pull a co-operative team together, you are going to be looking for three things—economic viability, proven deployments, and an agile data model. Look at the vendor's books. Code escrows won't do any good because it will drive up your internal maintenance cost if the vendor goes down. CIOs are looking hard at high maintenance applications during budget cutting as low-hanging fruit. There are some new vendors trying to gain market share. Make sure they have some deployment experience because this is not the market to go first. Lastly, plan for life beyond vanilla instrument data. Make sure the data model can support the long-term roadmap for the company. Many companies have moves into other instruments and foreign markets on hold right now. It would also be a good idea to ensure the data model can ultimately support a strong counterparty hierarchy.

The market turmoil has resulted in users typically needing the data 'yesterday' and speed of delivery has become of the essence. To what extent can reference data technology help improve this process?

Brower: It is important to have the ability to realize tactical solutions in very short

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order and be able to take disparate data and put it into some purpose-built data mart that includes cross-referencing capabilities. It is about having good data, good technology, and identifiers that enable the disparate data to be cohesively joined.

Serenita: The same themes of flexibility and integration are key to satisfying the need to bring new capabilities and new data quickly. The reference data systems tend to send their information to numerous systems across the organization, so at times, the change process can be slow as the impact of change across these systems (and organizations) can be significant, and hence require a very structured testing and verification process. If the reference data system was flexible and able to control the change process across the subscribers, then the ability to satisfy new requirements can be successful.

Brownlee: Technology can be an enabler, but if the processes, procedures, governance, and quality standards are not addressed, speed of delivery will be very disappointing for many firms. Data technology is improving every year and will continue to do so…but must be approached pragmatically.

Randles: It might sound obvious but the key to speed of delivery from a technology perspective is the distribution platform. Many downstream systems and personnel have very particular data requirements, such as format, classifications and semantics, pricing rules, overrides, quality measures etc. Having a distribution technology where consumers can independently subscribe to a pre-set universe of securities though a GUI or an API, dictate the schedule, business rules and format would greatly help people to achieve "yesterday." When people say "I want it "yesterday"," they typically mean "I want the relevant data for my business in a way that suits my needs, yesterday." The frustration comes in when meeting these specific needs just takes too long.

Noma: The quality of the data is the most important issue. The need for speed is understandable, but getting inaccurate or misleading data on the time table does not solve the issues.

Hediger: Timely delivery of reference data is even more important at the moment, as volatile conditions and increased data volumes exert ever-increasing pressure on firms to react quickly to external as well

as internal events. SIX Telekurs has identified that timeliness is an important issue. Therefore, we are developing VDF Pulse, which will deliver basic reference and cross-reference data on new institutions, instruments and listings, every 15 minutes, just as soon as we capture the information in our database.

However, fast data is worthless if the technology does not allow quick or even constant reconciliation. In other words, it is of little use if the data is coming in real time, but the system needs hours to compile the data and to make it available to internal systems. The data itself, if presented in the way SIX Telekurs offers in its Valordata Feed product (fully coded, uniquely structured and intelligently linked) can be a huge facilitator to STP.

Du Preez: The events of the financial crisis demonstrated the need for a near real-time response to market events as they unfolded, and regulators are taking action to ensure appropriate measures are in place moving forward. Traditional end-of-day risk calculation models are being revised and there is increased demand for reference data technologies to support the convergence of real-time and non-real-time data.

One way reference data technology can improve this process, is by supporting the growth in the market for interactive vendor feeds (reference and pricing data feeds that support request/response and in some cases fully programmatic interfaces for acquiring intra-day data). Reference data technology platforms should also be built to accommodate more demanding delivery schedules, and massive increases in data volumes.

Norman Brower, Morgan Stanley

Honore: Actually, reference data technologies are the wrong answer for this question. Instead, think of the reference data architecture as the top of a time circle. At the start of every day, positions and prices are loaded into an in-memory instance that gets fed via some event-processing engine intra-day. It then feeds risk management systems, P&L systems, etc, for real-time tracking. At the end of the day, the data all goes home to the reference data system for cleansing to get ready for the next morning.

In recent years, a growing number of firms have explored the options for leveraging front-office technology investments in the back office, and more firms are starting to utilize non-traditional technology to streamline reference data. What is the background for this development? Are reference data technology requirements moving closer to the requirements seen in the front office?

Brower: Back-office technology tends to have been around for multiple years, and in many cases they tend to be batch-oriented mainframe systems. For reference data, we

Peter Serenita, JPMorgan Worldwide Securities Services

have a hybrid model of mainframe systems and renovated platforms that are all Unix based that leverage a fair amount of message-type event processing.

One challenge requiring near real-time processing capabilities is listed derivatives. When a new options or futures contract comes into existence intra-day, you have to be able to instantiate them intra-day so you can trade and settle them. We all have to have some near real-time event-based processing to address this business requirement. However, this is not new to Morgan Stanley, and I suspect many institutions have similar solutions.

Brownlee: Front-office requirements are ending up in the back office because the front office is paying for more and more of these initiatives. Additionally, involving these stakeholders in reference data technology processes yields important requirements (often presented as problems) that can be addressed much earlier in the reference data lifecycle in most firms.

Randles: We have been through a natural evolution in the approach to reference data technology, where the cycle has gone from disparate silos to centralize everything and to the point where people are again looking for a more flexible, agile approach to meet many conflicting requirements of downstream systems.

This is where the front-office style of technology comes in. Individual lines of business need more flexibility, speed and choice than many centralized solutions have been able to offer. Many firms are now trusting particular data vendors' raw data feeds for specific asset classes rather than the mixing and matching of multiple vendor feeds of old.

With this approach, fast, effective integration and smart application of business rules specific to a line of business becomes essential. Many systems want the price from different trading venues or have very different classification requirements. A convertible bond is a bond in one system and is an equity in another. The chatter about front-office technology and the emergence of the term DDM (Distributed Data Management) all reflect a demand for more flexibility, speed and more complex requirements from the consuming systems. Also I believe consumers now better understand what they want from an internal reference data service, and have raised the bar with new requirements. It is purely a reflection of the industry focus moving from data modelling as a solution to a focus on the core integration pedigree of a technology.

Hediger: The idea of using the same reference data in the front, middle and back office recognizes that consistency is crucial to an uninterrupted operational workflow.

The great advantage of using uniform technology across the board would mean that, for example, trading, risk management and settlement would run off the same platform, reducing ongoing data conversion costs and minimizing operational risk.

Essentially, by homogenizing the technology platform (and presumably the data that feeds it), data quality would be less expensive and far easier to maintain, as the human element would be removed. Data conversion from one system to another would also be eliminated. However, using the same data solution in the back office as in the front office can also cause problems. Firms need to recognize that data solutions providers have different strengths. Data that is highly prized for front-office use is often too "thin" for back-office purposes.

Similarly, things such as market depth, which trading desks need as a vital component, is of no interest to the back office when settling a trade, or dealing with corporate actions. Firms need to evaluate whether the data solution really provides a front-to-back solution or whether different solutions are needed in each area with full links between identifiers (ticker to ISIN for example), to make sure data flows seamlessly and that each area of a firm has exactly the information they need to carry out their tasks.

Du Preez: The data convergence challenge can, indeed, be extended to the front office. With the emergence of distributed enterprise risk architectures to improve consistency of valuations between front-office systems and the central risk repository, there is a need to integrate associated data streams. For example, reference data platforms should be able to acquire intra-day pricing and derived risk data from front-office systems in the same way they acquire from other sources, subjecting that data to business rules for cleansing, normalization and threshold checks. Similarly, reference data platforms should be able to exploit front-office data distribution technologies to readily distribute reference data to front-office applications using extended market data models.

Elliot Noma, Asset Alliance and Garrett Asset Management

Honore: Well, the answer to part two is yes and then some. Reference data is absolutely moving to faster processing cycles with more data to manage. It also has to support more downstream systems. For part one, electronic trading and an increased focus on real-time risk management are the drivers. If you look at a modern low-latency trading infrastructure, there are many technology choices available that can improve reference data management. CEP, in-memory databases, better messaging middleware, better feed handlers and better reporting technologies all offer options for improving the way firms manage reference data.

Adam Honore, Aite Group

Beyond the technology, the front office gets interesting data that could ultimately become part of a reference data architecture. Elementized news feeds, web crawling agents, real-time economic indicators and other information will ultimately help create a more complete picture for both issuers and instruments.

Following the financial crisis, market participants have suggested that improved communication between the front and back office could help firms avoid future problems. How could this trend be reflected in reference data technology? Where is the market in terms of front-to-back linkages?

Brower: At Morgan Stanley, we have developed our reference data solutions around a guiding principle of "single truth." Data is procured into a single master database and propagated to front- and back-office systems as needed.

Brownlee: Again, technology may be an enabler here, but technology is likely NOT the solution. Improved communication, as it relates to reference data, needs to be addressed with improved governance, organizational alignment and training. We see the use of metrics, aligned with key business objectives and defined collaboratively with the front and back office, as an effective way for firms to drive improved communication. Nothing drives communication better than a metric sitting in your face each day that you can reference to drive the change the business wants. Technology can play an innovative role in bringing these metrics to the forefront on a daily or even real-time basis.

Randles: Front- to back-office linkages are obviously a good thing, but I think we have to be realistic about what can be achieved through reference data technology. This goes back to the whole debate on STP, and you have to look at why many of those initiatives failed. I think firms are now looking at smart integration technology, where the linkages can be implemented incrementally over time.

Noma: I don't know, but I would be concerned about any trends towards merely piping front-office data into the reference data system without some data checking. With company restructurings potentially lowering the level of trader oversight and greater difficulty in determining valuations in times of thinner trading, this is not the time for blind trust in the views of a trading desk with incentives to value positions in certain ways.

Hediger: Increased communication between front and back offices is a long-standing and worthwhile aim, although we still have a long way to go. SIX Telekurs, together with a number of leading soft-

ware houses, is working towards this goal. The solutions offered by these partnerships offer many different interfaces to reference data, so that front-, middle- and back-office staff can access the same set of reference data consistently and without difficulty. A key element to the reference data SIX Telekurs offers is the use of data standards such as ISO standards. We are committed to promoting these standards wherever they can be applied, and are actively involved in such initiatives.

Du Preez: Modern reference data platforms are already able to provide front-to-back linkages and leverage existing technology investments in both domains. Integration, rather than displacement of front-office and reference data technologies, is the key to reducing costly reconciliation between trading and risk management systems.

By leveraging a consistent reference data technology framework in that it supports convergence of real-time, static and transactional data, firms can begin to get the necessary consistency of information from front office to back office. By implementing the framework in an incremental fashion, staged deliverables can be ensured and measured with ROI being realized at each step.

Honore: We make introductions to two groups within the same company to suggest how they might help each other or share budgets on a regular basis. In some cases, those 10-minute conversations can pay for the year's worth of investment they put into our research if it helps that company avoid a double hit on technology.

For instance, take the fastest messaging middleware brokers, the 29 West, Tervela, Solace group. All have added guaranteed delivery capabilities to support the slower back-office systems so they don't overload the processing capabilities. Or, take CEP. Some firms are using CEP to send the last price they receive on the tape as a closing price to start batch cycles for the back-office earlier. The key to working together is figuring out how NOT to work together. Use the same infrastructure, share the same data, but do not fill a conference room with 20 people who each have their own objectives.

Make sure the backbone supports concurrent development so each group can manage their own objectives without stepping on another group. It is possible, but it takes communication and someone with an understanding of the technology landscape to map individual objectives into a shared backbone.

"Integration, rather than displacement of front-office and reference data technologies, is the key to reducing costly reconciliation between trading and risk management systems"

Jason du Preez, Thomson Reuters

Sponsor's Statement

Why ETL Isn't Good Enough for

ETL as a concept sounds very well suited to the world of reference data distribution. Extraction, transformation and loading all sound like good things to do when distributing reference data. This is why a lot of ETL vendors show up at reference data conferences. It all sounds logical. And many financial institutions are using it for reference data distribution (RDD), usually because there is an available license and it is notionally "free" to use.

However as the reference data management discipline has matured IT staff have discovered that the reality of real-world implementations differs dramatically from what seemed straightforward at the outset of an EDM implementation. Take for example a common problem in the world of RDD. A business comes to IT with a seemingly simple request "I need a golden copy feed for a new trading system, same as the standard feed except five additional fields and I need four existing fields overridden".

Sounds straightforward, right? Unfortunately that's not the case. The above request, while appearing to be an exception, has become the rule. Everyone wants something just that little bit different when it comes to reference data. And this is where ETL falls down. A product designed for high-speed data synchronization of a small number of customer, product and supplier databases of similar dimensions for all industries is poorly suited to the complex world of security masters, corporate actions, SSIs, counterparty data etc. Add to that multiple feeds, asset classes and downstream systems and the problem multiplies in complexity. ETL vendors are not specialists in the financial services industry so they assume the simplicity and static data structures of many other industries. ETL is great at shifting manufacturing data from SAP into a business objects data warehouse with static data structures that may never change. We all know reference data in the financial services sector is all about change. New feeds, asset classes and downstream systems are the norm. The danger of ETL is that it demonstrates very well and it gives everyone a false sense of security.

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However, that simplistic view of ETL vendors is becoming less and less toler-

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Reference Data Distribution

ated as the RDD discipline matures. When reference data IT staff see an ETL line drawing demo in 2009 they tend to be more cynical and aggressive as to how this will scale and be manageable when exceptions become the rule. They have the experience of dealing with non-stop exceptions and change. They also have the unpleasant job of maintaining the existing mappings in ETL tools. The beautiful new golden copy data warehouse has been surrounded by an ugly new legacy, a spider's web of integration mappings.

Add to that the ETL tools do not support request/reply processing, data subscriptions (pub/sub), real-time data delivery, message prioritization, data reconciliations etc, and you can see why the assumed fit to the reference data world just isn't as one would have assumed.

The internal consumers of reference data are now in charge. The backing that the centralized reference data service was looking for is now coming from departments such as risk management. Now that firms have solved the collection and cleansing element of the reference data problem, the typical distribution questions are: "What data my clients are interested in? When to schedule deliveries? What format? What business rules are specific to my subscription? How can I measure and reconcile the data quality of my delivery? How do I filter out unwanted data?" These are not questions for a generic ETL tool not designed for the problem.

John Randles, chief executive officer, PolarLake
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About PolarLake

PolarLake enables firms to deliver on the full promise of EDM, integrating into downstream systems with 75% less time and 80% less resources than generic ETL products. Its flagship product, PolarLake RDD (Reference Data Distribution) is a purpose-built integration application built to manage the end-to-end process of RDD. PolarLake RDD provides unique capabilities for business operations, business analysts and technology to manage and control RDD. PolarLake has been recognized by industry analysts as a leader in its space, named by Aite as the most packaged RDD solution, included in the Gartner visionaries' quadrant and named by Forrester as the best current offering in the ESB market. PolarLake's clients include global sell-side, buy-side and asset servicing institutions.

Q&A

Do You Have the Technology?

IRD speaks to Adam Sussman, director of research, Tabb Group, about the financial crisis and importance of investing in first-class reference data technology

Adam Sussman, Tabb Group

How do you see firms rating the importance of investing in best-of-breed reference data technology?
The importance of reference data technology has increased to meet more stringent counterparty risk and collateral management requirements.

To what extent have good systems helped firms in the turbulent economic environment?
Firms that have streamlined document management have been able to handle this [the crisis] a little better. The operational challenge has been part of this credit crisis. Investors are asking more questions now and all this is happening when IT budgets have been cut.

Are there any particular types of companies that are more focused on building out their data management infrastructure?
Everyone is focusing on data management but in different ways. High-frequency strategies are focusing on implementing low-latency market data technologies. Credit strategies are looking to expand ability to analyze lots of loan-level data. Folks trading OTC derivatives want better counterparty data management solutions.

It has been suggested the recovery from the crisis will be V-shaped. Why do you think it could look V-shaped?
Today's markets process and react to information very quickly. Put another way, the crowd may be wise but it has a very short-term memory. While the final shape of the economic recovery remains to be seen, the equity markets reaction will continue to be volatile.

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