

Inside Reference Data

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Managing Risk

Special Report



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Identifying Risk

No matter what data management studies come through the inbox these days, the conclusions tend to be the same: managing risk is a key project driver. The focus is on counterparty risk, liquidity risk, valuation risk and so on—all types of risk that need to be identified and managed. This means risk units are becoming more involved in data management projects and taking an increased interest in what goes on in the data world.

At the conference side of our business, we are starting to see more risk professionals attending and speaking at data management events, and others report that data management is even becoming an agenda item for risk-focused industry associations. The data experts might have tried for years to persuade the business that data quality is an instrumental part of any risk strategy, but for some, it is only during this year that they have succeeded in getting their message across. And even with the tight economic environment, projects that help identify and manage risk are typically the data projects that are still seen to meet the requirements of this year's 'intelligent spending strategies.'

With this special report, which includes comments from industry experts and a news review, we hope to provide readers with an insight into the reasons behind the close link between data and risk management and the best strategies for taking the riskiness out of the business.

Yours sincerely,

A handwritten signature in black ink that reads "Tine Thoresen". The signature is fluid and cursive.

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Managing Risk: Ready for Anything?

Inside Reference Data gathers leading professionals to discuss the importance of sound risk management practises, especially during these turbulent times

How can data management activities help improve the efficiency of risk management systems?

Norman Brower, executive director, reference data solutions, Morgan Stanley: Having comprehensive, timely and accurate data is key. That is the *status quo* answer. Specifically, it is important to have comprehensive legal entity and account data. This data was critical to enable senior management to navigate the credit crisis of 2008.

We have made a significant investment in managing this type of data since the collapse of Long Term Capital Management in 2000. The continued focus on master data management even during periods without significant market events has enabled us to establish the technical infrastructure and processes to turn vast amounts of data into information. The result is our management has the tools to manage credit exposure better than many of our peers.

Rick Enfield, product business owner, Asset Control: Risk and compliance applications are highly dependent upon the quality and consistency of source data in order to fully leverage their complex algorithms. A data management infrastructure can link the various internal and external sources together to alleviate confusion around information by integrating, standardizing and cross-referencing information, as well as deriving information such as gaps in pricing sets and risk factors. This ensures that complete, accurate and consistent data is delivered to the consuming systems, which helps organizations optimize the results of the investments they have made in risk and compliance applications.

John Legrand, managing director Europe, Middle East and Asia Pacific, Eagle Investment Systems: By implementing a data management

strategy, a firm is provided full access and control over its data, and this directly improves risk management. A centralized data management strategy puts data at the core of an investment management firm, whereby all areas of the organization such as accounting, performance, trading, etc, access the same set of data.

Investment managers that adopt an alternative approach rely on multiple systems creating multiple sets of data. This is not only less efficient, but also opens a firm up to risk by mistakes or intentional manipulation. A centralized data approach provides more clarity and control over operations and offers more accuracy of data, so a firm can make informed business decisions.

Scott Preiss, vice-president, Standard & Poor's Securities Classifications: It seems to me that the same discipline that has developed in recent years in enterprise data management (EDM) can be leveraged across the risk management spectrum. I have often shared the observation that the worlds of risk management and reference data management are converging at an unprecedented rate.

The efficiency and usefulness of risk management systems can only be enhanced by applying many of the EDM lessons learned: confidence and certainty in the sources of risk content (ideally, primary sources); timeliness, global coverage, and regional support considerations of not only risk content, but the



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systems that support this content. And a final lesson learned from the EDM world: a firm-wide governance structure that ensures focus and investment in risk management systems not only during periods of duress, but in a sustained, strategic fashion.

Brian Sentance, chief executive, Xenomorph: Put simply: “Bad data in means bad data out,” regardless of the sophistication of the risk model being used. Risk management needs to analyze all asset types from all trading divisions. Coupled with this, the analysis of risk means all types of data need to be brought together: market, reference, counterparty, position and derived data.

Given the complexity and volume of data needing to be analyzed, too many risk professionals are spending too much time on manually cleansing and validating data, often in complex desktop spreadsheets. Data centralization combined with automated data validation can speed this

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process, allowing risk managers to focus just on priority data issues and hence spend more time managing risk.

Moving on from automated data validation, higher-quality risk management can also be achieved if risk and data management systems allow the risk professionals to drill back to the core calculations and data underneath the headline risk reports. “What lies beneath?” will become an ever more important question asked by management boards and regulators alike.

To reduce risk, some suggest there is a need to combine reference and market data and derived data. How are vendors and firms reacting to this trend?

Brower: We have always integrated this data content. However, that does not imply that a single group should manage these data domains, although there are obvious synergies in such an organizational model. What does matter is having good

data stewardship, a comprehensive strategy for managing and cross-referencing various industry identifiers, and having a “single truth” for all reference data.

Enfield: There are many different methodologies to govern the ways in which data is acquired, controlled, enhanced and distributed to fit the requirements of the organization. Firms are looking at the data they have in place to ensure they are not paying for the same pieces of information multiple times, and are benchmarking data quality to ensure they are sourcing the data from the best vendor(s).

The requirements surrounding derived data are more complex, since firms need to consider how derived data is created and where it will be used. The key element here is flexibility in terms of the creation, control, storage and distribution of data.

From an acquisition perspective, vendors are looking at different ways to deliver slices of data to meet client needs. This has resulted in a convergence of reference, market and derived data as data vendors expand their offerings into the assessment of valuations based on pricing models.

Legrand: Combining reference, market and derived data in a centralized repository is definitely the way the market is moving. However, not all organizations are doing this, and it can be a challenge trying to persuade an organization to follow this strategy. Data governance varies from firm to firm. However,

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the importance of implementing data management strategy and data governance process has definitely moved up companies' priority list. By having various groups manage data in separate areas of an organization, or data silos, you not only run the risk of inconsistency, but firms are also duplicating processes that would be more operationally efficient if managed by one team.

Current market conditions are driving organizations to rethink their data manage-

ment practices. Some vendors address this need. However, Eagle's solutions have been designed from day one to put data at the center of an organization's operations. We have seen other vendors adopt this approach more recently.

Sentance: Risk managers need a "risk view" of data, ie, combining all data regardless of type or asset class, rather than a "vendor view" of market data here, reference data there, counterparty data over there and I think the valuations come from that spreadsheet on this drive...In my view, data management systems should support reference data, market data, derived data and even spreadsheet data seamlessly and present a single consistent view of this data.

Put another way, it is vital that non-technologists can see and understand all the data they need, since these people are the professionals with the most understanding of what the data should be.

Focusing for a moment on valuations and derived data, I would suggest this data is the most valuable of all, and to have great data management processes in place is pointless if valuations are coming from a hotchpotch of front-office spreadsheets. It is essential to get the analytics closer to the data, to extend the core principles of good data management (centralization, visibility, auditability etc) to the management of the analytics feeding the risk management calculations.

Last fall, some firms spent weeks trying to identify their exposure to banks that had collapsed. What changes can be made in the back office to avoid a similar situation in the future? What new processes are likely to be introduced as a result of data management climbing the risk agenda?

Brower: You need good legal entity linkages and good account associations. If you associate the accounts with the legal entities and have all the legal entities linked, you can get an insight into the aggregated exposure. That will take you a long way to understanding total exposure.

In addition, with all the exotic complex products, a standardized set of terms and conditions or processes aimed at normalizing information could help improve the situation. Some of these products are so complex that even though you know what the counterparty is, it can sometimes take a little bit of time to understand exposure to a given position. A set of standing conventions or set of best practices would help move the market towards standardization.

Enfield: Determining exposure dependencies and amounts is not just a function of the back office. It requires combining different types of entity relationships such as direct investment, indirect investment, hierarchical relationships, look-through exposure and operational exposure. Data management can assist in this determination in areas such as better entity relation-

ship matching, hierarchical relationships for partial ownership, and look-through analysis in ETFs, derivatives and contracts.

Organizations consisting of thousands of entities and issued securities make it a daunting task for firms to quickly gain oversight and systemically report on total exposure across all businesses and branches. Data management silos, with different sets of identifiers, are no help. We're seeing renewed focus on counterparty data management that consolidates different sources and verifies them against commercial data sources.

Determination of the exposure value will also require changes to valuation systems, and those may present more significant changes. Firms will have to introduce more transparency into their processes, and ensure they can rapidly and succinctly gather the information they need to make appropriate valuation judgments on illiquid instruments.

Legrand: It all comes down to visibility and transparency. If your organization's

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various lines of business are sharing the same, positions, pricing data, market data, etc, you are already on your way. However, that is only part of the equation. You have to be able to drill into your data and extract information to truly understand your direct and indirect exposure to various investments. Not knowing exposure to the banks that collapsed was a huge issue last year. More and more, we believe organizations are going to demand solutions that can reveal the various hierarchies that exist in complex investments, and they are going to want to slice and dice the data to truly understand the level of risk to which they are exposed. A firm's database is only as good as how well you can mine the data, and we are seeing more demand for solutions that can achieve this level of detail.

Preiss: Last fall was a seminal event not only for market participants who were struggling to understand their exposure to troubled institutions, but for informa-

tion providers attempting to assist their clients in "real time" during unprecedented change. At Standard & Poor's FIRMS (Fixed Income and Risk Management Services), we found ourselves at the forefront of assisting scores of customers in understanding with immediacy the entity hierarchy of affected institutions, "who owns who," the specific financial instruments impacted, and ultimately, what institution is "on the hook" for repayment of various debt obligations.

The Cross Reference Services business we have built with strategic partners over the past 5–6 years was largely driven by the challenges brought to light in the Enron, Parmalat and other scandals. It was eye-opening for us this fall, therefore, to see so many organizations without a coherent, consolidated system to identify their exposures quickly and accurately. If the need for reliable and timely content, along with associated process investments was still in doubt, the data governance folks within these organizations should be convinced by now. The requirement for the back office to be prepared with these tools—and not to start scrambling for them after the next crisis—is self-evident. Fortunately, we are, in fact, witnessing the rapid ascension of these processes and related content on the agendas of many institutions today, even during a period of significant budget scrutiny.

Sentance: Focusing on the back-office, counterparty data and how that feeds

through to risk is a key focus for many institutions at the moment. The market crisis has been a catalyst for many industry initiatives; in particular JWG-IT is having some success in establishing a regulatory “sturdy-breakwater” on counterparty data with the banks and the FSA.

More generally, data needs to become the “lingua franca” of all departments from front to back office. I would advocate a more “wiki-data” approach, where the data was easy to see and understand by all departments involved, and hence all participants would have the chance to contribute towards improving its quality and completeness. Just an idea, but one that would go some way to capturing the different viewpoints all departments have on what makes data fit for purpose.

Some market participants suggest data and risk management units could merge, since data is seen as a key factor for successful risk management. Is this the best way to manage risk?

Brower: I would say no. Risk is just one of many business processes reference data supports. Reference data is required to perform trading, settlement, financial reporting, regulatory reporting, client reporting and so on. If each group that needs reference data were to separately manage the data they require we would end up with a fragmented solution, ie, “silos.” The result of such an environment is an

increase in cost and risk. Firms should be striving toward implementing master data management and central stewardship has a horizontal service independent of any specific business function.

Enfield: The goal of data management goes well beyond just making sure the data used in risk management is correct. It should ensure that data is accurate, complete and consistent and made available throughout the organization. But there is a long way to go to achieve this. Just within the risk and control functions alone, there still exists a silo mentality with risk reporting conducted along different qualitative buckets in market, credit and operational risk. Similarly, performance measurement, risk and audit often use different data stores and different standards. In order to break down silos and facilitate a comprehensive cross-risk, cross-asset view, data infrastructures need to help resolve the data uncertainty typically created by many different asset types, data vendors, standards, formats and identifiers. This uncertainty needs to be removed from the equation before the information reaches risk and reporting systems.

Legrand: I believe that if you combine data and risk units, you could be introducing more risk into the organization. Each entity has its own agenda. Data management needs to reside on its own as a distinct separate entity because there are too many other systems that rely on

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the data. Data should already be seen as a risk factor, and combining the control of data with risk management doesn't make it any more significant. Another important factor for keeping them separate is that data management strategies provide checks and balances for an organization. If you let risk teams control the data, you could lose your audit controls because that is not a priority of a risk management strategy.

Matthew Bastian, director, product development, Standard & Poor's Securities Classifications: It's easy to see why some participants are making that connection. As firms develop a more rigorous framework around governance, risk management and compliance—GRC, to use the acronym *du jour*—the data underpinning that framework becomes all the more crucial.

Simply put, bad data going into the GRC models will lead to errors in the models themselves. But while a holistic view of risk requires a global, consolidated view across issuers, counterparties, asset classes and currencies, the devil is in the details. Is the risk operational, credit, or market related? Is the data transactional or referential? As you drill down from the umbrella terms of "risk" and "data," the knowledge sets get more specialized: blending all those roles into one, smoothly functioning unit presents quite a challenge.

Some firms are having a tough enough

time centralizing their data management functions, which should ideally be viewed as an asset for the entire enterprise. While we are seeing a convergence between risk management and reference data, fusing the two together at the hip could be detrimental to other data stakeholders within the firm. The data and risk units certainly need to work together closely, but merging them outright is another matter.

Sentance: At many large institutions, achieving better risk management is hindered by the lack of clarity over who ensures the data is complete and of high quality. Illustrating through (some!) exaggeration, many market data departments are primarily focused on vendor contracts and have little understanding of the data or how it is used. IT departments often think their responsibilities end with the support of the technology and not the data. Front-office trading doesn't care about the data supplied centrally to risk so long as it does not affect their P&L. Even some risk managers become too focused on the process of producing the risk reports rather than owning their content.

Somebody needs to take responsibility, and it is up to senior management to decide who owns the "data problem." In my view, ultimate responsibility should fall to the risk management department as the ultimate consumer of the data, and as such data management should become an accepted part of the risk management process.

Basel II and the subprime issue have helped drive investment in data-related risk management technology. How do you foresee this developing in the coming year? Is there still money to spend?

Brower: We are being very prudent on where we are making investments in data management. A significant amount of energy was spent on optimizing the firm's 2009 project portfolio. In 2009, a significant portion of our investment in data management is for projects associated with risk, regulatory and compliance functions. Additionally, we continue to invest in technology and processes focused on improving overall data quality that in turn reduces the firm's overall risk profile.

Enfield: We're seeing continued investment in data-related risk management and compliance, as well as in investor communication. Going beyond just solvency reporting, investment is still spreading to other areas within financial services such as insurance under the EU's Solvency II regulation. Some banks recognize the need to overhaul their risk management infrastructures, whereas buy-side firms realize investors demand "x-ray views" of their portfolios. Transparency behind the pricing and risk assessment process through clarity on market sources, proxies, internal assessments and models will become a fundamental requirement. Some of these needs will be catered for through data providers and third-party services in

the areas of risk profiling, performance and attribution services, but the ultimate reporting and responsibility will lie with the firms themselves.

Legrand: This question reminds me of when Alan Greenspan presented to US lawmakers in October last year and admitted that if we had more transparency into the data, we would not have suffered such an extensive "credit tsunami." If we learned anything from last year, it was that we need to understand our exposure and manage risk better. The market will continue to spend money on systems that help reduce their operational risk. We don't know what new impending regulations will require from organizations, but we do know that straightening out data issues to provide more transparency and accuracy can only help an organization better meet new regulatory framework and help avoid future crises. There is definite heightened interest from organizations around implementing new data management and performance measurement systems which stems from

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Matthew Bastian, Standard & Poor's Securities Classifications

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Norman Brower, Morgan Stanley

more demands for data and transparency. Also looming is the deadline for GIPS® 2010. GIPS is becoming more adopted globally because it offers a common, global audit trail that organizations can follow. GIPS compliance offers organizations a sense of security, knowing that they are following a global compliance standard, and we continue to see firms looking for solutions to help them address GIPS 2010 requirements.

Bastian: Yes, as long as firms are confident they are spending wisely. At Standard & Poor's we have seen growth in our Cross References Services business, a reference data mapping utility that can play a key role in any GRC framework. We also have a number of technology partners whose data management platforms can work seamlessly with our content; they, too, seem to be doing well. With a renewed, almost surgical focus on improving GRC models to mitigate the chances of another episode like we experienced recently in the markets, firms are willing

to spend. But scalable, flexible solutions are the key: portfolio-driven deliveries of data, for example, as opposed to full "fire hoses" that may include unnecessary or duplicative content. As long as the solution, whether technology or data, can offer clients only what they need, and at a price to match, there are opportunities out there for vendors who are willing to listen.

Sentance: While overall IT spend has been hit recently, risk and data management for risk is still an area where projects are progressing. Regulatory pressure for high-quality data continues to drive many market and credit risk projects. Counterparty exposure and getting this to link into risk reporting is an obvious focus given recent events. The operational risk of over-dependence on desktop pricing and trading spreadsheets is still to be addressed at many institutions. New regulation such as that on liquidity risk management will also drive a lot of new activity and initiatives requiring risk aggregation across all asset classes and departments.

In my view, the risk and regulatory imperatives resulting from the current market crisis are ironically a real opportunity for institutions to break down traditional data silos and overcome the business and political objections towards a more centralized approach to managing data and analytics. As a result, let us all make every effort to take advantage of this difficult background we face and get something better in place for the future.