As regulation of financial markets continues to increase and a number of regulatory compliance deadlines approach, financial institutions are developing and implementing data management strategies designed to ease the burden of compliance both now and in the future.

Regulation and Risk

This report discusses existing and emerging regulations, and provides advice for data management practitioners who are addressing the challenges of risk management and regulatory compliance. Tim Lind, Pricing & Reference Services, Thomson Reuters; Martin J. Williams, Vice President, Reference Data Product Development, Interactive Data Corporation; and Cristiano Zazzara, Senior Director, Global Head of Portfolio Risk Solutions & EMEA Head of Application Specialists, S&P Capital IQ offer insight into the subject.

We hope you find it useful.

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A-TEAM Q&A: Regulation and Risk as Data Management Drivers

To what extent is regulation continuing to drive the need for change in data management?

Tim Lind, Thomson Reuters: Regulation continues to have a profound impact on operations as it relates to data management, risk management, compliance and reporting. While regulation is a catalyst in terms of monitoring risk and capital levels, development of data management infrastructure continues to be driven by the need to reduce costs, increase automation and make better trading and investment decisions. Capital adequacy and risk management are certainly driving the need for better data governance and integration. A sustainable infrastructure to capture and normalise transactional and positional data across the enterprise and then link exposure to issuers and counterparties is an essential requirement driving enhancements in data management.

Martin J. Williams, Interactive Data Corporation: Firms evolve data management practices for a variety of reasons, with regulatory compliance being a primary driver. This will continue for some time as new regulations are implemented, such as Solvency II, Basel III and MiFID II, which are the main European regulations remaining to be rolled out into 2016. Along with tactical efforts, firms are responding to key business drivers like regulation in a more strategic manner. For example, the evolution of data governance and policy functions is continuing, along with operational and organisational adjustments such as more centralised security and entity master activities.

Cristiano Zazzara, S&P Capital IQ: Evolving regulation is pushing for a more transparent and simpler financial market. Therefore, all kinds of financial and non-financial firms around the world will have to rapidly provide
comprehensive risk data by legal entity and business line to enhance decision-making processes and improve their ability to resolve any problems. Firms will have to spend more time collecting, processing and cleaning data for current and future regulatory requirements.

Looking at upcoming regulation, risk aggregation and reporting are key requirements, particularly in Basel III and BCBS 239. How can firms tackle the data management challenges of these regulations?

Lind: The Basel Committee has introduced what is essentially a blueprint for data management in a global banking group. It supports effective risk management policies through a more comprehensive view of exposure. Risk data aggregation will require transactional and counterparty data to be aggregated and managed with the same level of controls and governance as are applied to the attestation of accounting data for financial reporting. BCBS 239 outlines more than a dozen data management principles that banks will need to implement. The first step is establishing a data governance strategy, centralised IT infrastructure and company-wide data architecture standards. Core to the data governance function is supervisory oversight, which defines who owns data and how it is remediated, and ultimately how different business functions and regions will cooperate to break down silos. The output of these efforts will be risk reporting that is effective for both management and regulators. To achieve this goal, risk data aggregation and risk reporting practices will be iterative processes in which reporting is exhaustively tested for accuracy, completeness, timeliness and overall usefulness.

Williams: Adherence to regulations such as Basel III and BCBS 239 requires firms to look closely at whether or not their data management practices as constituted are in harmony with the requirements. For instance, BCBS 239 provides a set of principles that address governance and infrastructure, risk data aggregation, risk reporting and supervisory review. An in-depth analysis of these principles as compared to a firm’s data management strategy and day-to-day operations can yield guidance on how to address the data management challenges inherent in the regulation. An ongoing analysis of all regulatory obligations a firm faces, as part of an overall strategic approach to data management, can help address broader regulatory compliance.

Zazzara: Banks have huge data and reporting concerns, and these are only going to increase. Particularly, the data they use must be accurate, up to date, secure and ready to analyse. The key for banks, and also for other firms, is to put in place data systems that have proper policies and standards for aggregating data from different internal and external sources. The systems also need to be based on extensive use of automated data feeds.

Regulations already in effect, such as Dodd Frank article 7, EMIR and Fatca, look like they will have an ongoing impact on data management. How do you expect this to pan out?

Lind: Over-the-counter (OTC) derivatives reforms, including clearing and trade reporting, have been leading the regulatory agenda thus far. OTC markets will be transformed into something
that resembles exchange traded futures and options. This will require much better precision by banks in terms of defining eligible swaps and counterparties when trades must be executed on a swap execution facility and cleared by a regulated clearing house. Ultimately, the goal of regulators having greater transparency into systemic risk will not be achieved until swap data can be aggregated across the fragmented post-trade clearing and trade repositories that have been allowed to proliferate as Europe and North America have insisted on their own nationally controlled infrastructure.

From a data management perspective, both swaps reform and the Foreign Account Tax Compliance Act (Fatca) will require greater diligence in the Know Your Customer process for clients and market counterparties, and there will be a greater focus on the on-boarding process. Client data management operations will need to remediate and manage more information on the national origin of clients for Fatca and manage clearing/collateral policies based on the status of the counterparty.

Williams: The main impact of regulations that are already in effect will be demand for far more robust data management standards in order to address future regulatory pressure. Firms need to recognise that additional transparency and risk management will be an ongoing requirement and that currently implemented regulations will develop into new phases, demanding more transparency and more data, more quickly within increasingly frequent timescales. This could lead to continuous assessment scenarios within the space of the next 10 years.

Zazzara: The interplay of these regulations is another dimension firms need to take into account from a data management point of view. This adds further complexity to the regulatory landscape, particularly in terms of inputs and outputs that companies are required to produce. Building a data infrastructure that provides transparent and auditable outputs is key to complying with evolving regulatory requirements. Additionally, these regulations will significantly increase data-related technology costs. For example, among many other requirements, there are specific rules on electronic trading and real-time reporting for certain financial instruments, such as OTC derivatives.

On a broad scale, how can market participants best achieve compliance with accounting and reporting regulations such as Corep, Finrep and IFRS?

Lind: The key to any successful change is ensuring that the people, processes and technology are prepared. This is no different in the case of major accounting regulations that will continue to affect organisations. Corporations will need to follow carefully the many requirements mandated by accounting regulations. Corep and Finrep, for example, make it crucial for European banks to transmit via XBRL, while the effort to eliminate the disparity between GAAP and IFRS accounting has created a significant burden and major costs, but at the same time emphasised the potential of a harmonised global standard.

How can market participants manage data for more sector specific regulations, such as Solvency II and AIFMD?

Lind: The basis of prudential oversight in alternative investments or solvency of insurance portfolios starts with disclosure. For regulators to understand
risk and capital thresholds across many constituents, asset managers must be able to disclose positions according to specific templates mandated by regulators. This creates two primary challenges for institutions: obtaining new data types, particularly reference data and analytics; and being able to report in the proper format.

For example, Solvency II introduces new data requirements related to coding conventions, classification and fields to define the risk of financial instruments. Classifications include new schemes that are not native to the traditional security master files maintained by asset managers. Asset class and country codes, such as the Complimentary Identification Code, and industry sector codes used by the European Commission, NACE codes, will have to be captured and reported. The amount of reference data and analytics grows with each new regulatory template.

Williams: Firms must find out how specific regulations are tied to the high level principles and operating frameworks stipulated by regulators in terms of transparency, harmonised reference data, asset valuation and risk management, and integrate sector specific regulations into their data management strategy. There are many themes that are common to different regulatory schemes and they should be managed holistically. For example, the specifics of AIFMD fund transparency share characteristics with the Solvency II funds look-through requirement, while demands placed on derivatives traders under EMIR are also reflected under AIFMD.

Zazzara: These regulations involve specific valuation and risk reporting obligations, including scenario analyses and stress testing. Also, in this context, regulations are interconnected, as insurance companies invest heavily in products from asset managers and hedge funds, and under Solvency II they have to look through all their investment structures down to underlying assets.

For funds, being AIFMD and/or UCITS compliant is relevant in order to attract investments from insurance companies. Firms also need to take into account EMIR regulation as its mandatory trade repository requirements affect not only insurance and investment firms, but also sell-side and non-financial firms.

To comply with these regulations, firms have to get and manage data from a number of sources, and then carry out a cleansing process before producing valuation and risk outputs. Robust reference data systems are essential for investment and insurance companies, and for sell-side and non-financial firms, if they are to maintain a full and granular view of financial exposure not only for regulatory requirements, but also for business purposes.

Which other regulations do you consider to be key and what data management challenges do they pose?

Lind: Perhaps the biggest challenge to data management within banks will come from regulations such as BCBS 239, which require risk data aggregation. This requires the establishment of common data taxonomies and architecture across a banking group so that the value of exposure can be aggregated. This will include common definitions and classifications of data, such as common identifiers, codes and naming conventions of entities and counterparties.

Risk data aggregation is about rolling up exposure of trading positions, investments,
operating limits and market concentrations to the appropriate counterparties, countries, sectors or instruments that are creating the exposure. Being able to capture transactions and positions across a global enterprise and then normalise data for analysis and reporting is a massive challenge. Even the process of driving a consensus on data standards, such as what should be measured and what data is useful to understand risk, will require huge efforts.

**Williams:** In Europe, MiFID II is likely to become the main challenge for firms as they extend best execution and trade reporting to fixed income, structured products and other thinly traded assets. New demands covering conduct of business and organisational requirements for providers of investment services, and the creation of new trading platforms and organised venues, will drive far reaching changes for the sell side and its downstream clients.

**Zazzara:** The European directive MiFID II, with its new electronic execution and pre- and post-trade transparency requirements, will change the market structure of OTC derivatives and other non-equity asset classes. Therefore, companies will need new data and analytics that are designed specifically for the new environment. Particularly, the move towards electronic trading and the need for more timely, relevant and traceable data will drive demand for regulatory related products. In the new environment, multi-asset class, real-time data providers will play a key role in aggregating and disseminating data from central counterparties, electronic trading platforms and centralised data repositories.

**Lind:** Enterprise data management software and infrastructure continue to mature with each additional year of implementation experience and will certainly be useful for managing the additional risk inputs needed for disclosure and compliance. There aren’t any breakthrough innovations on the structured data front, but we will see a lot of innovation with regard to the management of unstructured data and text, not only for compliance, but also for investment decision support. Monitoring social media and client communication compliance will be a driver for capturing unstructured data, and the technology used to manage it will lead to innovation in sentiment analytics across data that was not previously considered.

**Williams:** Regulatory compliance is a key driver of data management strategies. As a result, many data management technologies across a fairly broad spectrum are evolving to meet emerging requirements. For example, solutions designed to centralise security and entity reference data together with transaction and position data have a positive impact on the need to aggregate a variety of data and meet reporting deadlines. Risk, analytics and reporting systems contain an increasing number of regulatory specific functions. Data vendors are increasing the scope of their offerings, while making their data easier to consume.

**Zazzara:** To be effective, a data collection, aggregation and reporting mechanism requires a technology environment...
that is scalable, flexible and secure. An efficient data management system should be able to perform properly as the volume of data to be processed increases. Moreover, it should be able to adapt to changes in requirements or processing demands, such as additional regulatory requirements covering new instruments, transactions and their data storage.

The Austrian requirement to report data using Smart Cubes takes effect next year. What impact will the concept have on data management and could it be useful elsewhere?

Lind: The most interesting impact of the Smart Cube/Basic Cube concept is collaboration between regulators, banks and service providers on a common set of business definitions designed to reduce ambiguity. Cubes define the terms of reference and attributes of a business transaction, which are the foundation of a common interpretation of risk data reporting.

Regulators often define the disclosure templates that institutions are expected to use, but it seems the Austrian initiative is designed to agree on a model and business meaning before the data structure is designed. It is an ambitious effort and requires a great deal of collaboration on business, legal and technology concepts. Implementing this approach across multiple regulatory regimes will be extremely complex, but the effort of Austria’s Central Bank in defining common business vocabulary and data models with its constituents will improve the usefulness of disclosure and effectiveness of macro prudential policies.

Williams: Smart Cubes provide a standardised and consistent way for firms to address regulatory requirements and report on security and entity exposures. This approach has the potential to streamline regulatory compliance functions substantially within a firm’s data management framework, but must, of course, be adopted on a widespread basis to deliver the benefits described.

Will technology changes made today support additional regulatory requirements going forward?

Lind: Ideally, institutions should be able to leverage investments made in centralising data management operations and governance to meet future risk aggregation and disclosure requirements. However, the reality is that most institutions continue to tackle individual regulations on an ad hoc basis. Some regulations share common risk aggregation and capital assessment themes, but the complexity, cost and different deadlines for compliance make it difficult to implement strategic or repeatable solutions. Better controls and adoption of internal reference data standards should make future requirements easier to implement, but institutions should still expect each new regulation to bring individual nuances that add development burdens.

Zazzara: As previously mentioned, a data infrastructure that is built following principles of scalability and flexibility should be able to accommodate new and additional regulatory requirements in terms of data, analytics and reporting.

What is your advice to practitioners seeking to address the data management challenges of risk and regulation?

Lind: Look for common data requirements and themes across the many
regulations that require risk disclosure. The need to aggregate exposure and concentration risk by counterparty, country and asset class is a common theme for both regulators and internal risk officers. As always, the most effective data management practitioners will be politically savvy enough to convince business leaders of the importance of common data standards and that ad hoc departmental solutions are not sustainable. Success will come as much from the ability to drive consensus on governance and controls, as from good technical implementation. Getting involved in industry groups on the various regulations and having a forum to voice ideas and share frustrations will remind practitioners that they are not alone.

Zazzara: We expect the current operating environment of low volatility and higher capital requirements to continue to put pressure on firms to explore ways to improve returns, including outsourcing certain workflows that are duplicated by many firms and can be managed at scale by third-party vendors.

We also expect new and evolving regulations, such as Dodd Frank in the US, EMIR, MiFID II and Solvency II in Europe, and Basel III globally, to continue to drive demand for a variety of data management, risk and compliance solutions as market participants seek quick and efficient ways to become compliant.