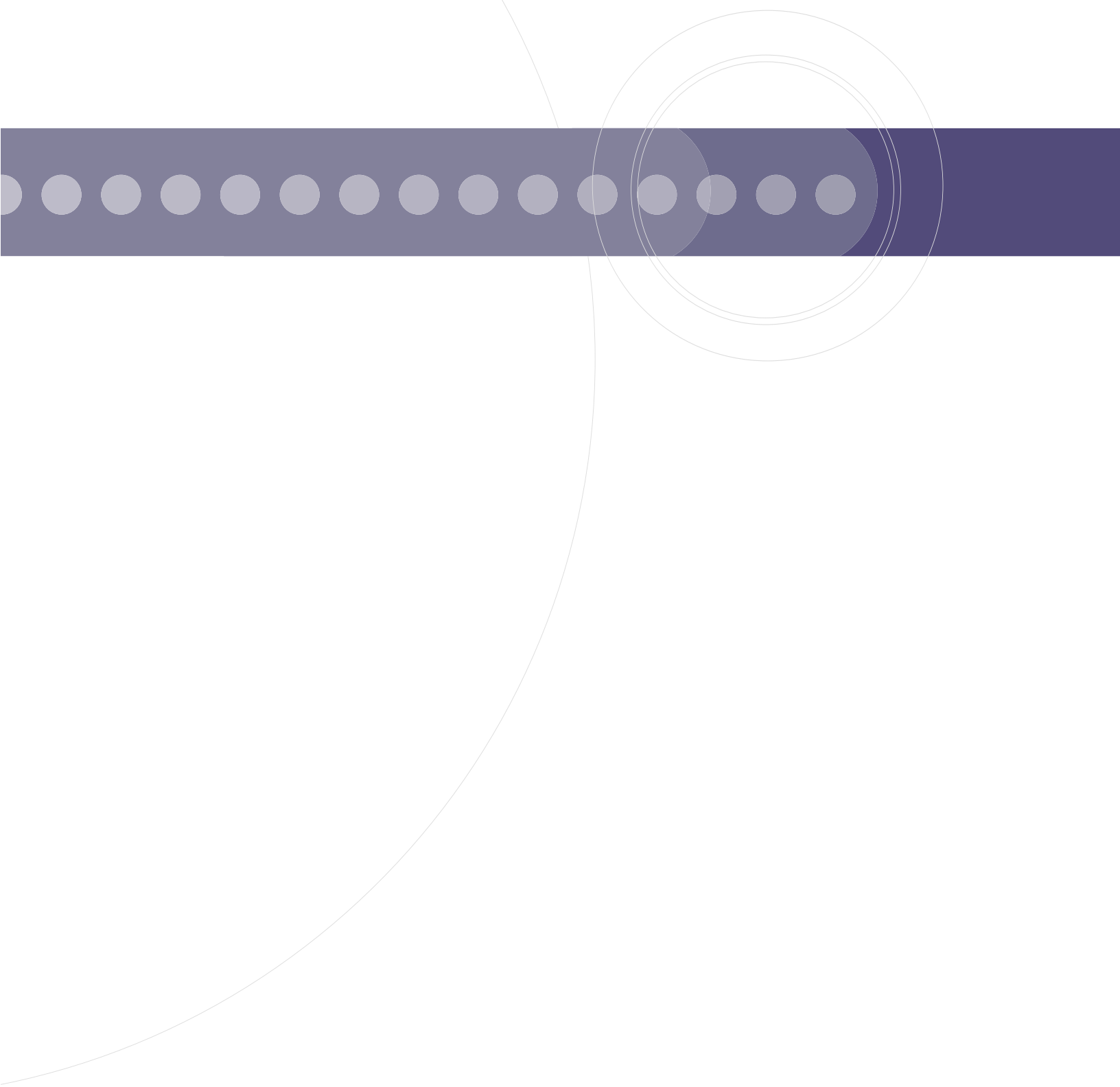


Data Quality, Compliance, and Risk for Financial Institutions





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Introduction

Risk management has long been high on the agenda for financial institutions. However, the increasing array of mandates and regulations that have emerged in recent years is causing banks, asset managers, and insurance companies to look at risk and compliance in a new light. Where once it might have made sense to manage different types of risk such as market risk, credit risk and operational risk as entirely separate initiatives, financial institutions are now taking a more comprehensive view of risk and are moving towards bringing it together under a single enterprise risk framework.

Risk managers frequently cite a lack of clean, quality data as the biggest inhibitor to achieving their risk management and compliance goals. Poor data quality is endemic in most large organizations. Generally speaking, financial institutions accept this as a day-to-day operational challenge and devise both simple and complex work-arounds to compensate for the data's shortcomings. But, to effectively manage risk, the financial institution needs to be able to easily integrate data from different business units, areas, and geographies, and provide consolidated reports and query functions on that data. Risk and compliance bring sharp focus to the requirement for consistent data definitions across the business and streamlined processes for capturing and reporting on high quality data.

The universe of data that has relevance to an institution's regulatory compliance and analysis of risk is growing all the time. More data from more source systems is being used to drive risk and compliance engines. Risk data needs to be enterprise-wide and tied into all aspects of customer, commercial, financial, and operational data, at the lowest level of detail, to enable necessary statistical analysis to be undertaken.

And this data is not static. Information about instruments, counter parties, and market events is constantly changing and those changes need to be reflected accurately throughout the risk management infrastructure. Throughout the process, data is transformed via risk methodologies into usable information that, in turn, creates more data that needs to be managed, measured, and monitored.

To achieve this, Chief Risk Officers rely on technology, people, and processes. More than anything, however, they need access to a solid foundation of clean, accurate, standardized, and timely data. Banks, insurance companies, and other financial firms that invest in improving data quality for risk management and compliance should not just view it as a cost. The availability of high quality data on customers, products, and assets will pay dividends throughout the organization if leveraged appropriately, enabling financial institutions to improve customer service, gain operational efficiencies, and more efficiently manage assets.

The Compliance Challenge

Basel II is perhaps the highest-profile of the regulatory requirements currently facing financial institutions, but others are equally pressing. For example, all public companies traded in the United States must comply with the Sarbanes-Oxley Act (US). Other initiatives such as the USA PATRIOT Act¹ and anti-money laundering directives have similarly broad data quality requirements.

The globally expanding array of regulations effectively moves data quality out of the 'it-would-be-nice-to-fix' status into an issue that must be addressed.

Sarbanes-Oxley

Sarbanes-Oxley is composed of several regulatory provisions, the most important stating that an organization must submit regular assessments of its internal financial audit controls to the Securities and Exchange Commission (SEC). Any executive who submits inaccurate or misleading information to the SEC could face a million dollar fine and up to twenty years in prison. It is notable that the stiff legal penalties of Sarbanes-Oxley apply also to corporate officers who make inaccurate audit declarations in good faith.

Financial institutions are in the vanguard of institutional conformance with Sarbanes-Oxley, and many have already advanced in compliance. However, the data challenges facing some financial service providers are still considerable and will remain so while the Act is in force. As with Basel II, organizations face the hurdles of profiling, cleansing, and aggregating vast amounts of data.

Like Basel II, compliance with Sarbanes-Oxley is only possible if the data underlying the corporate audit is reliable. This represents an opportunity to improve business practices and data quality across the enterprise. "Spending on Sarbanes-Oxley is an up-front investment in making the processes of the company better," says Iain Macdonald, group vice-president and group controller, British Petroleum. "BP has come together from multiple heritages, so it has a lot of different business processes in the group. Sarbanes-Oxley forces us to be extremely systematic about looking at those processes."²

Anti-money Laundering and the USA PATRIOT Act

The USA PATRIOT Act is a wide-ranging response to the threat of terrorist attack that faces the United States in the aftermath of September 11, 2001. Title 3 of the Act relates specifically to anti-money laundering (AML) and anti-terrorist financing initiatives. Again, there are stringent penalties for organizations that fail to live up to the regulations. On November 30, 2004, Federal Regulators imposed a \$24 million penalty against Bank of New York for AML violations, and specified that the bank would also have to submit to independent monitoring of its AML compliance program.

¹ Full title: Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001.

² From "Making Compliance Pay" by Clive Davidson. Risk magazine, May 2004.

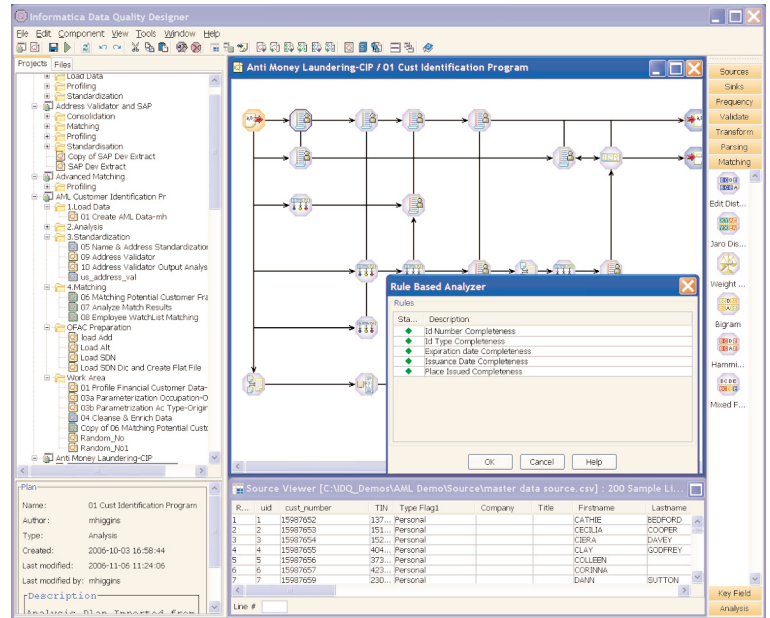


Figure 1: Informatica Data Quality Workbench showing an Anti-money laundering plan

Of particular interest to financial institutions are Sections 314 and 319 of the Patriot Act. Section 314 calls for cooperation and information sharing between law enforcement agencies, financial institutions, and regulatory bodies concerning terrorist or money-laundering suspects. Section 319 calls on a financial institution to provide full details for any account it holds within 120 hours (five calendar days) of receiving a request from a federal banking agency. In other words, the Act requires that a financial services provider must be able to rapidly locate accurate, timely, and comprehensive data on any of its accounts. To meet this requirement, high-quality and readily available account data is crucial.

Basel II

The Basel II accord is a set of standards and practices that describe how financial services providers should manage their exposure to the risk of default on financial dealings (Credit Risk). It has three main areas or “pillars”: calculation of minimum capital requirements; supervisory review, and market discipline.

Basel II (and particularly Pillar II of the accord) places new responsibility on financial institutions in the areas of data quality and data management. Banks must look at the accuracy of their risk exposure calculations throughout the entire business. For many, this encompasses the exposures from businesses in many different countries.

Regulators including the Financial Services Authority (FSA) in the UK, the US Federal Reserve, the German Bundesbank, and many more are mandating that banks and lending institutions self-certify the accuracy, completeness, and appropriateness of Basel-critical data. Banks must now tailor their data management strategy to meet this requirement.

An example of the explicit requirements for data quality is highlighted in the FSA's application pack for internal ratings-based (IRB) approvals: "Describe how the firm ensures that IRB (internal ratings-based) data standards are met and, in particular, how it ensures the accuracy, completeness, and appropriateness of the data underlying the firm's regulatory capital calculations."

The key data quality priorities for banks under Basel II IRB regulations are:

- Quantitative assessment of data quality
- Efficient business-specific strategies to cleanse data
- Changes in business processes to maintain data integrity
- Establishing a framework to measure and manage data integrity on an ongoing basis


Data Quality, Benefits Beyond Compliance

Banks and other financial services providers have little choice but to invest in risk and compliance. However, on pure accounting terms, it can be difficult to justify the amount of effort and resources that must be expended if risk and regulatory compliance are treated separately from the business. While compliance remains the focus of risk management efforts, those organizations that can see most value in the investment have started to transform risk management into a function that provides other value to the business.

For example, Basel II shouldn't be addressed solely as a "compliance chore" but instead as a genuine opportunity for financial institutions to increase profitability by pricing products and deals more accurately and improving their business strategies. However, these opportunities are only available to those institutions whose financial data is healthy enough to enable reliable data analysis.

Surveys show that a high percentage of financial services providers are using inadequate data to model their financial transactions. And, as a consequence, they are missing the chance to maximize profits in several business areas. The need to comply with regulations such as Basel II is providing the impetus for them to improve the quality of their data and thus take advantage of some of the other benefits of good data quality such as more profitable product strategies and better customer service.

Basel II is thus a carrot-and-stick to the financial services provider. From 2007, some form of compliance with Basel II will be mandatory in Europe and will start to emerge as a requirement in the USA. Even without these mandates, however, it is in financial institutions' commercial interest to improve their data.



Basel II is not the only current regulatory proposal that financial services providers must contend with. In recent years, several regulatory and compliance initiatives concerning the data-driven operations of financial organizations have emerged and all of these are tied up with enterprise risk in some way. These range from legislative acts at national levels, such as the Sarbanes-Oxley Act in the United States, to best-practice initiatives from trans-national professional bodies, including International Accounting Standards and anti-money laundering initiatives.

What these initiatives share is an understanding that financial institutions must apply the highest standards of accuracy and integrity to their financial data. Together, these regulatory and risk initiatives constitute a network of complementary systems that will enhance the profitability, efficiency, and ultimately the safety of the financial services provider and its customers.

Risk Data Quality: Where to Start?

Regulators have specified that good data quality is part of the overall risk and compliance process. For example, data quality scorecarding became a focal point for Basel II compliance when the Financial Services Authority (FSA) in the UK proposed data quality scorecarding as an external audit point. Many other regulators have also taken a lead from the FSA and have put in place requirements for similar data quality reporting and monitoring capabilities.

Data quality reporting, monitoring, and scorecarding was always a central component of the Informatica data quality solution. Financial institutions around the world have implemented Informatica data quality scorecards to comply with reporting requirements within the jurisdictions of the FSA, Bundesbank, the Federal Reserve, the SEC, the South African Reserve Bank, De Nederlandsche Bank, and more.

Specifically, Informatica Data Explorer's and Informatica Data Quality's ability to work with all data types enables banks to implement a single solution to report on:

- Customer (CRM) Data Quality
- Market & Risk Data Quality
- Finance Data Quality

And our solution enables organizations to demonstrate to their regulators the quality levels of the many data elements used to calculate risk related values such as:

- Probability of Default (PD)
- Loss Given Default (LGD)
- Exposure at Default (EAD)

The Informatica data quality scorecarding capability follows a metrics-driven approach that offers a standard and well understood way of measuring, tracking, and reporting on data quality defects. Having a common language based on attributes such as completeness, conformity, consistency, accuracy, duplication, and integrity ensures that business and IT can work together to deliver the highest levels of data quality to risk management and the business.

In addition to being the basis for external reporting, Informatica's data quality scorecards also provide the ammunition needed to drive ongoing data quality improvement across the organization with the full Informatica enterprise data quality solution.

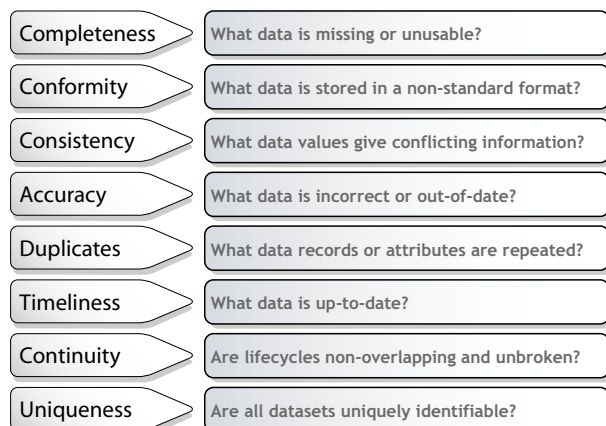


Figure 2: Data Quality Metrics

Informatica provides a data quality management framework that gives the business total assurance to:

- Manage data quality on an aligned and integrated basis, meeting best practices on legacy data management and new business development
- Measure and monitor data quality using:
 - Existing and newly created internal reference data sources
 - Third - party reference data sources
 - Informatica Data Quality's own reference databases
- Act on areas identified for improvement and do so without threatening the quality of the existing data
- Handle change requests and new developments and do so without threatening the quality of the existing data
- Empower data owners and risk and compliance professionals by letting them change the data quality business rules in a controlled and auditable manner
- Report on data quality in a consistent manner across business units and product lines
- Provide assurance to senior management and the board on the accuracy of the data being stored, generated, and on which decisions are taken
- Match data against trusted reference sources for validation and enrichment
- Ensure that there is consistency in approach to data management
- Monitor and cleanse, on an ongoing basis, gaps in data accuracy and identify incidences of non-conformance
- Deploy a data quality firewall, ensuring that new data is consistent with Basel II requirements
- Support data remediation, data stewardship, and data governance processes



Informatica Data Quality Products

Informatica is a world leader in the fields of data quality and data integration. Its software is in use in over 2,600 corporations worldwide, including some of the most significant multinationals and financial services corporations. Informatica offers a unique combination of state-of-the-art software and an enterprise-level data quality methodology that another business and IT collaboration. The business can address the data issues, which they are best equipped to do. IT can then deploy appropriate data quality rule enterprise-wide.

Crucially, Informatica's solution—embodied in the Informatica Data Explorer and Informatica Data Quality data quality management products — is easy to use, flexible, and unobtrusive in the enterprise. Informatica does not add another layer of management, and its software presents a low cost of ownership proposition, enhancing the profit potential of the organization's compliance program.

Informatica Data Explorer: Key Benefits

Informatica Data Explorer is breakthrough software that puts powerful, easy-to-use data profiling and mapping capabilities in the hands of the business and IT. Data profiling is the foundation of data management—and Informatica Data Explorer is the most comprehensive and powerful data profiling software available. Its sophisticated algorithms automate the profiling process, helping you understand your source data and produce metadata that is complete and accurate. The product provides the following business benefits:

- Delivers accurate source system knowledge
- Enables accurate data migration, integration, and consolidation projects
- Integrates multiple, disparate data sources
- Mitigates risk in data management projects
- Minimizes overruns in enterprise application projects
- Improves the productivity of data management projects
- Reduces project errors and project costs

Informatica Data Quality: Key Benefits

Informatica Data Quality is unique software that is specifically designed to deliver control of data quality processes into the hands of the business. With unparalleled ease of use, the software delivers powerful data cleansing, matching, and reporting and monitoring capabilities in a single solution. Data analysts and data stewards use Informatica Data Quality to easily design, manage, deploy, and control individual and enterprise-wide data quality initiatives. By providing a complete process for measuring, monitoring, tracking, and improving data quality at multiple points across the organization over time, Informatica Data Quality empowers business information owners to implement and manage effective and lasting data quality processes enterprise-wide.

Moreover, Informatica Data Quality addresses all data quality challenges raised by the new regulations. The solution:

- Empowers financial institutions to monitor and report on data quality across all data types
- Enables institutions to profile, cleanse, enrich, and consolidate their data, enabling faster and more accurate financial analysis
- Is part of Informatica's comprehensive data quality methodology
- Supports end-to-end data integration efforts, being seamlessly integrated with Informatica's data integration platform, PowerCenter.

Informatica has developed Informatica Data Quality as a platform for tackling data quality at multiple points across the enterprise, while enabling the control and management of data quality standards and Key Performance Indicators (KPIs) from any desktop in the organization.

Conclusion: Responding to the New Regulations

All countries regulate the activities of the financial services providers in their jurisdictions in order to protect investors and prevent bank failures. In the current decade, however, the quantity of voluntary or mandatory regulatory standards that financial services providers face has mushroomed.

Financial services providers can be forgiven for feeling overwhelmed, and there is a risk that “compliance fatigue” will lead organizations to do only the minimum in regulatory compliance or to adopt new standards for public relations purposes only. This would be a misstep for any financial institution.

The standards currently on the table present an opportunity for banks to transform their understanding of their businesses and to radically improve their data modeling and data analysis capabilities—in turn, enabling more lucrative allocation of resources across the organization and greater potential for profits. Basel II and other new standards offer opportunities that, even if they were not obligatory, would build into an irresistible business case.

Financial services providers that act promptly to implement best-practice risk management systems and business processes, as required under Basel II and other regulatory initiatives, will realize better customer service, more efficient and profitable product delivery, and improved business intelligence. Ultimately, these organizations will enjoy true market advantage.

The mandates of regulators give financial services providers an opportunity to go beyond mere compliance and improve their operations by making them more efficient and predictable. Because of the numerous interconnections among Basel II, Sarbanes-Oxley, and other initiatives—in customer data and in other areas—financial services providers need to move towards a converged data quality infrastructure if they are to meet regulatory compliance objectives.

Through its experience with leading banks and financial institutions, Informatica has created an end-to-end data quality management framework that enables financial institutions to know their data, their customers, and their risk.



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