Current State of Data Governance in the Financial Industry

Data Governance is a word that has long been widely used, but the understanding varies. However, understanding quality of data, ensuring security, monitoring data infrastructure, building and establishing of the management system is gradually gaining importance. This paper introduces the recent trend of data governance in financial institutions and solutions for data governance that NRIFT India provides.

The biggest factor that promotes data governance in a financial institution is regulatory (regulation, rules/protocol) support. The regulation in recent years began with SOX Act (Corporate Reform Act was established in 2002 in United States) that plans to strengthen the data aggregation capacity of banks and internal risk reporting practices. In 2013, the principles of Basel Committee of Banking Supervision (BCBS239) was published, and the "EU-GDPR: General Data Protection Regulation" was announced in 2016, to become effective in 2018.

Traders of credit and derivative, IT staff, and risk managers of worldwide financial institutes had worked through the night to gauge firm’s exposer (Total sum of assets that is exposed to specific risks among financial assets maintenance) to Lehman Brothers in US after the bankruptcy. However it was very difficult to compile the risk data of all financial institutes affiliated with financial holding companies, even by using IT infrastructures developed by large investments. Additionally, all financial institutes had not used common financial terminologies even across similarly affiliated companies at that time. In particular, there was greater significance of using the same ontology across financial institutes, and especially across departments within the same company. As a result, they fell into a situation where they could not recognize and prioritize data assets.

BCBS239 was enacted to strengthen the data compilation capacity because of such massive failures. One of the solutions developed is “FIBO: Financial Industry Business Ontology”, which has been proposed by the EDM council.

The EDM Council aims the enhancement of data management of financial institutions. EDM Council, a nonprofit organization founded by experienced board members and Chief Data Officers (CDO) of prestigious banks of United States, released FIBO which is expected to help the implementation of BCBS239. FIBO is trying to define a common language across the financial industry. As stated above, there are various terms used in the industry to mean the same thing, such as securities code, which can be termed as brand code, product code, brand ID,
etc. FIBO is an attempt to make it common in the industry. This aims the automation of business process, as well as the efficiency of data compilation. If a common language of the financial industry is defined, the applications will become easier to the scholars of artificial intelligence (AI) and scholars of machine learning (ML).

Data Governance supported by Global IDs' solution

NRIFT India has tied up with US based Global IDs in June 2016. Global IDs is an IT company that has provided data management and software products to the world’s largest retailers, telecommunications companies, pharmaceutical companies and healthcare companies for about 15 years. Their solution shows authority in analysis, retrieval of big data by using reverse engineering and by using AI to characteristically survey (profile) client's data.

NRIFT India is a partner of Global IDs' solution consulting service and it has a partnership alliance also in strengthening the core product.

This Global IDs is newly focusing on services for financial institutions. Although the company's solution is substantially generic, it was not developed with the intention to solve the problems related to data governance that financial institutions have. NRIFT India is finding out the business issues of the financial institution where Global IDs' solution is applicable and can support in consulting and implementation for practical use. We would like to introduce two specific solutions as follows.

(1) Data Management support for Big Data

In big data era, it has become impossible to handle huge amount of data manually in the enterprises. Moreover, even though the existing IT infrastructure is generally capable of managing data silos, management of the entire ecosystem of major financial institutions that have repeated mergers is immensely difficult. However, Global IDs’ solution can make it possible.

To provide an example, most financial services institutions operating in capital markets spend significantly on buying market data from exchanges and third party vendors (Bloomberg, Reuters, IDC, etc.). With a large institution having branches in all countries of the world, there is a significant duplication in market data feeds coming from a variety of vendors. That leads to huge costs in terms of procuring and storing data and redundancy. There is notable potential cost savings if all the fields are organized and rationalized systematically. "Market Data Governance Product Suite", one of the Global IDs' software product, has been established to support the management and rationalization of the market data held by financial institutions.

This software can discover the redundancy of data, by monitoring and scanning more than 300 types of data feed automatically.

(2) Solution to EU Data Protection Regulation

In April 2016, EU announced “EU GDPR (GDPR: General Data Protection Regulation)” to support the changes of various IT environment and the personal information related rising risk according to that. European Parliament, Council and Commission enhances and unifies the personal data protection within Europe and plans to apply this also in the business outside of Europe. This is also applied in all the foreign companies that deal with the data of EU regional residents and it will be effective on 25th May, 2018. Should the "Right to be Forgotten" be imposed, an organization will have to remove the data element from memory even if it is not
directly covered under GDPR. A French lady attracted attention by winning a lawsuit against Google for erasing previously uploaded photos.

Violation in terms of security, information acquisition without consent, privacy rules will bear severe penalty under GDPR. GDPR also strengthens various rights of individuals. For an example, one of the difficulties for companies is to implement "Right to Revoke Consent" so that clients may be able to delete personal data if they request the company to do so.

Violators of GDPR may have to pay a penalty of up to 20 million Euro or 4% of their previous fiscal’s global annual sales, whichever is greater. That impact extends beyond the IT department to the entire company, making compliance violations a serious business risk.

Compliance to GDPR may seem simple at a glance, but the companies need to specify the information that directly or indirectly includes data that can uniquely identify individuals. They also need to define which data attributes fall under the purview of GDPR. It is a given that Personal Identifiable Information (PII) would have to be included.

Complexity of such an operation depends on the structure of relevant organizations, methods of managing data formats, data compilation process, time constraints, etc. Personal data provided by users may have been copied in several servers which could end up in different databases, geographically scattered in the entire company. In the event of a merger for a company, where complicated legacy systems, advanced CRM (client management) systems, and SNS (Social Networking System) coexist, it may become a highly complex and costly process.

It is in these sort of problems that Global IDs and NRIFT India provide service leveraging consulting experience and analyzing complex big data. Global IDs’ solution can use reverse engineering to sort and categorize systematic data making company’s data compliant to GDPR. The solution can consolidate the data from various structured and unstructured data source such as Excel, PDF, SNS message, e-mail, Relational Database Management System (RDMS) etc. Manual work cannot support in the big data era, as was done previously. Global IDs’ solution can operate automatically when handed a large amount of data by applying AI and machine learning.

Global IDs’ Data Governance and Financial services support GDPR compliance and become the basis for building efficient data ecosystems. Till now, Data Governance has focused on silo management. Now Global IDs enables management of the entire data ecosystem of the company. This approach allows the company to see the full view of their data and visualize business performance of the entire enterprise.

**New Era of Data Governance**

Global IDs was a visionary in spotting the specific challenges of complex data environments almost 10 years before the advent of Big Data and about 5 years before the Global Financial Crisis flagged by the “Lehman shock”.

Global IDs has shown the ability to predict and solve problems associated with complicated data environments. They have pursued design principles that were based on complex adaptive systems and have created scalable, flexible and adaptive software suites that would work in enterprise environments, with the right levels of performance, security and non-perturbation.

However, in response to the huge increase of data volume, the data management solution should also be progressed dynamically. The IT development center of NRIFT India, Kolkata is performing development support of the core technology of Global IDs. Specifically, the development of next-generation functionality is enabled by using machine learning and big data technologies. In addition, we are receiving the
guidance from the well-known Indian Statistical University (ISI) in the field of machine learning, with focus on personnel training.

Other than big data, financial institutions have many data management issues. For example, financial institutions that have merged more than once harbor very complex data. Until now, we have been able to take advantage of cheap labor costs offered by Indian offshore companies, but this fixed cost has become a major issue in conjunction with rising offshore cost. It has been seen that manual resolution will fail in the near future. The Global IDs’ solution uses AI, but it’s not easy to apply to actual business use cases. There are few AI experts, who can leverage their knowledge and apply AI appropriately. NRIFT India offers consulting services to solve such problems.

NRIFT India aims the automation of data governance by utilizing AI and machine learning in order to support governance of exponentially increasing data and find opportunities in this field.

As published in NRI Tokyo’s

IT Solutions Frontier (Vol. 34, No.4)

April 2017

Translated by NRIFT India

Double-click on this icon to read the original Japanese version of the article -