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Regulatory Impact on Reference Data Management

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Abstract— Bulk of financial institutions are not in a position to provide uniform and consistent risk information across the enterprise. There has been unprecedented level of regulation across Europe and Americas in the recent years to address risks and improve transparency in financial industry. Majority of the firms in capital markets are facing challenges from regulatory norms and the firms are expected to address inefficiencies of reference data management (RDM). Reference data management started acquiring strategic priority, with new and revised regulatory proposals potentially redesigning of the ways in which reference data is acquired, processed and consumed by various stakeholders and users. Over the next few years, the FATCA, MiFID, the Dodd Frank Act, EMIR, Solvency II will have a more impact on the way reference data are acquired, aggregated, structured, managed, distributed and reported. Financial firms have focused more to address data management challenges at an enterprise level and their roadmaps for adopting newer data management paradigms which would aid in establishing global standards for reference data. This research focuses how new and changing regulations impacting reference data.

Index Terms— Regulatory impact, Reference Data Management, FATCA, EMIR, Dodd-Frank Act, Solvency II, MiFID

I. INTRODUCTION

For all those businesses, particularly those that have cross-border and also cross-asset class activities, they have to meet their regulatory and investor reporting requirements will be disseminated across discrete organization unit silos and/or kept in different (often legacy) systems . Because of this, it would be difficult to extract the required data when required, and allow it to become consistent and comprehensive.

Regulatory developments lay a specific obligation on reference data management. In order to scale down systemic risk and raise transparency, regulators and Governments of nations are enacting several laws and regulations which will enforce increased disclosure responsibilities on investment management institutions.

II. GENERAL INDUSTRY CONTEXT

In order to meet new and upcoming requirements related to Reference Data Management, financial institutions have to face many new challenges mentioned below:

- With a relentlessly innovative market and never-ending new instruments to keep control of, financial institutions must be in a position to integrate and standardize securities reference data.
- Upcoming regulations and constantly ever increasing numbers of restrictive compliance regulations

- necessitate reliable and real-time accessibility, and superior quality data at all time.
- Competition within the securities industry reinforces to set up more economies of scale within a service that incorporates labor-intensive processes and extraordinarily skilled resources.
- Growing trading quantities coupled with demanding clientele with regard to data quality and transparency requirements force financial institutions to have control of their risks (operational, reputation, . . .) yet at the same time bringing down operating costs simultaneously.
- In an automated world where STP is the simple rule, institutions are unable to bear inconsistencies, incomplete or any inaccurate reference data that will actually generate internal failure.

A. Definitions

Static Data

- Security identifiers: ISIN codes, Sedols, Cusips, Tickers...
- Financial Instruments definitions: Name of the instrument, its interest rate, Date of its issue, currency etc

Dynamic data

- Data related to prices: End of Day quotes, Delayed quotes, Real-time quotes and Forex Rates
- Data pertaining to Risk and Tax: Tax and risk data associated to the financial instrument
- Data related to participants: Counterparties for securities transactions....
- Corporate data: Ratings, macro-economic data, alpha, beta...

B. What is Reference Data?

Reference data are the set of permissible values from outside the organization that are used by other data fields. The data are static and do not need occasional revisions. Reference data are the data objects pertaining to transactions and may include types and codes and sometimes cross-domain mappings or standards as well. Examples of reference data cover transaction codes, units or measure, country codes, date and time zone codes, corporate codes, calendar codes, currency codes etc. While reference data used to categorize other data within enterprise applications and databases and consists of only permissible values and textual descriptions such as lookup table and code table, master data represents the key business



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entities that participate within transactions and provide information of customers, materials etc. to enterprises. Information provided in reference data are used to classify or group other information and provides them contextual value.

Use of reference data helps organizations in executing business processes and helps them providing a logical segmentation based on which transaction data are analyzed. Human intelligence will be obligatory to map reference data. Some of the examples of reference data management are:

- Healthcare: Diagnostic Codes
- Spend Management: Product, Service & Supplier Codes
- Change Management: Product Codes and Point of Sales (PoS) Transaction
- Institutions having presence in more than one nation: Industry Classification Schemes

Capital markets firms are facing challenges from regulatory environment and industry expects need for addressing inefficiencies of reference data management (RDM). There is immense need for next-generation reference data management capabilities as every organization started realizing role of data management in revenue generation.

An exceptional standard of regulation is unfolding on either side of the Atlantic to focus on systemic risks, furthermore the soundness and disclosure of the financial sector. Such regulations include the Basel Capital Regulating Directives, Dodd-Frank Act, Markets in Financial Instruments Directive (MiFID) II, European Market Infrastructure Regulation (EMIR), Foreign Account Tax Compliance Act (FATCA) and Know Your Customer (KYC). To comply with regulatory requirement and to reduce systemic risk, the new regulations encompass data on trading transactions and counterparty identities

Firms need to have accurate data so that risk profiles and dynamics of various financial instruments and their respective legal entities. Changes in the regulatory environment expect OTC derivatives to get bought and sold via exchanges and get them cleared using central counterparty clearinghouses. Such changes would put additional pressure on the reference data management (RDM) function.

Firms recognize that data management not really a cost center but a valuable element of income generation. Capital markets corporations attempting to improve their operational efficiencies and flexibility as well. It can be understood that it can only be achievable with a new technology of reference data management competencies which will make use of social media analytics and virtualization. In addition to that, those capabilities help firms improving their risk measurement and regulatory reporting.

With the new regulatory reform, reference data is gaining importance as this would give rise to bring in consistency across organization because of office of financial research (OFR) field auditors analyzing both internal processes as well as overall data management. Moreover, consolidating reference data, integrating both client and account data, and implementing new legal entity specifications enhances in

importance throughout the Investment Bank. In summary, markets would see new ways to handle data management which would help firms achieving consistent, real-time and reconciled data for a successful data management.

Regulatory reforms force financial institutions to have basic requirements to be in place within Investment Banking:

- Risk including systems which usually assess will certainly acquire reconciled real time data
- Real-time monitors are made available for counterparty exposures, performance attributes, and various other management and operational monitors
- Real-time event trackers to caution before completion of trade transactions when restrictions are being approached, and when potential invalid trading or fraudulent trading events occur – in near real-time.
- Compliance real-time reporting internal and to external parties such as Office of Financial Research (OFR), US Securities Exchange Commission (SEC), etc., will be obtained and presented in close to real-time, moving from a traditional data management (BO) function to order management (FO) / fund accounting (MO) and overall management function.
- Centralized reference data center delivers reference data to trading platforms on a constant basis for all those products.

III. REGULATORY ENVIRONMENT

During the collapse of Lehman Brothers in 2008, it was evident that the enterprise reference data kept by organizations was neither up-to-date nor valuable enough to demonstrate a correct representation of market risk and exposure. Due to this, the default regulators did not have the information needed to identify the build-up of systemic risk earlier, and then counterparties to the financial institution were not able to recognize swiftly or accurately which of their trades were with Lehman group entities or other uncovered parties.

An important lesson from the episode is that data is unquestionably crucial to all of these efforts, and that enterprises will need to take individual responsibility for their data. There are many institutions that have not begun the process of analyzing their current data architecture and identifying quality issues with their data. These firms need to keep their attention on processes relating to business entity reference data.

Efforts in financial reforms increasingly gained importance in the recent years which focuses on managing systematic risk better and increasing interdependence on global markets. The overhaul of global systems following the financial crisis has led to an audit of data which enterprises keep about themselves and their counterparties or clientele, generally known as business entity reference data. This "data exploration" is being dependent on the cumulative result of different parts of regulation, which include the European Market Infrastructure Regulation (EMIR) and Solvency II in Europe and the Dodd-Frank Act and the Foreign Account Tax Compliance Act (FATCA) in the U.S. would impact globally. The most



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important objective of these proposals, except for FATCA, would be to make improvements to risk management in the financial system.

Regulatory support can certainly help in setting global standards for reference data. In addition, it is precarious to build a collaborative ecosystem that ensures a level playing field is created for all participants by eliminating a multitude of data standards and providing players with an assurance to invest in sanctioned standards. The RDM utilities will provide a stable, credible and consistent reference data to capital market firms. Mainly because the reference data is generated and utilized by industry participants, the environment provides a neutral ground and expected support to begin developing effective reference data management programs.

Organizations are expected to report certain information necessitating management of huge data and they started focusing on the architecture of data, creation of data, life-cycle maintenance and data quality from front through to back office. As businesses have started confronting a number of regulatory regimes, the complexity has increased because of market conventions and business definitions and regulatory reforms are posing challenge for them and put more focus on limiting systemic risk, making markets more transparent, safeguarding protection to customers from unfair market practices and improving regulatory compliance, level of transparency and corporate governance at the same time.

IV. IMPLICATIONS ON DATA

The following implications can be seen because of the new regulations:

- New regulations demand a high quality data than ever before – need to clean up data related to defaults and duplicates
- Get ready for regulatory change by conducting a data integrity assessment across data flows to identify, control and clarify 'hot-spots'
- Implement the processes, procedures and tools needed to promote continued data quality monitoring and remediation all the way through the data lifecycle
- Include data ownership in a robust Data Quality framework
- Standards and architecture can have significant impact on Data Quality and the ability of the organization to change and integrate

The regulations by and large place dependence on documentation and electronic data that is either collected through the Foreign Financial Institution (FFI)'s existing account opening process or that is normally maintained in the customer file, with specific reference in the preamble to the regulations to reliance on Anti-Money Laundering (AML)/ Know Your Customer (KYC) rules.

Let us look in depth on each of the key regulatory norms in detail and their impact on reference data management.

A. FATCA

FATCA was enacted in 2010 as a way to minimize perceived off-shore tax evasion by US individuals holding assets by way of offshore accounts that were not subject to US information reporting to the IRS. To ensure that firms comply these regulations, they will need to obtain and maintain additional data of clients, recognize and holdback tax on payments to people/entities violating the regulations, determine and disclose the proportion of assets that generate US source income (the 'passthru percentage').

An important difficult task for financial institutions is supporting the new data elements required to effectively comply with FATCA in terms of institution level data and instrument level data.

The data challenges include clientele on boarding, managing and supplementing data that already exists. Classification is important and quality of data is extremely important for this. FATCA enables selected assets to be grandfathered, however, this is also not easy in terms of data as any material modifications, and these were not clearly detailed and defined in the regulation, however, this could mean assets are no longer grandfathered can be subject to FATCA.

Classification of accounts under FATCA is one of the major challenges with this new regime. The biggest challenge in this new regime will be with regard to classifying accounts under FATCA. The pure volume of information and data that must definitely be compiled and evaluated for appropriate classification, understanding where exactly the data exists and stored, and understanding if the different sources are adequate to make the required classifications and can be used for reporting will be daunting. Some financial institutions need to depend on several sources both in front office and back office for customer and investor data.

FATCA compliance considers three basic components: (1) identifying client and documenting the same (2) reporting to IRS; and (3) withholding tax. The scope of each of these elements is far-reaching and potentially complex, but can be managed keeping right program in place.

Identification and Documentation require an analysis of the customer base and likely process changes. This early stage is where the lion's share of the work is required as it involves due diligence for both existing and new accounts. Furthermore, financial institutions will be required to examine their company structures and legal entities to classify them for FATCA purposes as "financial institutions" or "non-financial foreign entities." Additionally, financial institutions in the US need to examine accounts held by overseas entities to recognize potential indicia of US status. Those institutions should react accordingly, creating new processes to assess all new accounts opened by foreign entities. FFIs must also assess existing accounts held by individuals to identify potential US ownership.

 Legal entity analysis to determine the impact of FATCA by assessing and identifying the internal organizational structure, since FATCA may not be



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applied universally to all legal entities of a firm. It may apply differently for a few legal entities.

- Client onboarding and customer identification to locate and analyze the availability of customer information, evaluate data integrity, determine jurisdiction and governance, and assess current know your customer (KYC) and other processes and systems that support new client information
- Gathering customer and counterparty data is the key source of information for FATCA compliance. This requires determining the consistency of customer data within and perhaps across legal entities, distinguishing the forms of information and identifying possible legal impediments in one country or another to collecting or sharing information

Reporting requirements will likely call for some data that financial institutions do not currently collect or store, which, in turn, will impose significant changes to existing systems. It is important for financial institutions to examine constraints on technology front so that they can build and establish an annual reporting model to disclose account balances and payments for all US accounts.

Withholding needs information related to identification of systems architecture and current payment processes of the firm and existing procedure for withholding any payments under the scope. This is the visible "tip of the iceberg" when it comes to the potential financial impact of FATCA. The main support for FATCA's customer identification and information reporting obligations is the imposition of 30% withholding on payments to financial institutions and certain other customers and counterparties that do not comply with FATCA. In order to be compliant, a financial institution must be able to withhold when necessary. The IRS and Treasury can hold an institution liable for any tax it should have withheld if withholding is not done properly. Not just credibility and reputation of a firm would severely be impacted but also increases legal risk if payment is withheld incorrectly.

Data requirements to comply with FATCA:

US Internal Revenue Service (IRS) will assign a unique Global Intermediary Identification Number (GIIN) for each registered Foreign Financial Institution (FFI). A monthly update will be done from the IRS from the initial registry data in June, 2014. Several classifications control withholding rates include, in scope, exempt grand fathered (for those instruments which fail under grandfathering rule) and exempt short-term (for those instruments which fail under the short-term rule).

Institution Level Classification & Status: FFI registry status will be based on the Global Intermediary ID Number ("GIIN") issued by IRS. The registry status can be cross-referenced with several other identifiers, Legal Entity Identifier ("LEI"), for example.

Legal entity identifiers ("LEI"), unique counterparty identifiers ("UCI"), and product identifiers could be crucial tools for financial regulators tasked with measuring and monitoring systemic risk, preventing fraud and market manipulation, conducting market and trade practice

surveillance, enforcing position limits, and exercising resolution authority.

Information with regards to a counterparty's affiliations and corporate hierarchies should be made available in aligned with legal entity identifiers (LEIs) and unique counterparty identifiers (UCIs). This would increase the ability of regulators to acquire and aggregate data of all entities and markets as well as ensure monitoring systemic risk.

Impact of FATCA

Firms in capital markets are expected to develop in such a way that their risk management systems for both compliance and business purposes are met. From the reference data management standpoint, their ability to understand their counterparty risks is hampered by a lack of consistent reference data and legal entity identifiers. Following the global financial crisis, it has become important to have a universal view of risk exposures from a specific counterparty, region or adverse event. There are three main areas of impact for participating FFIs, a. Implementing the corresponding withholding mechanism for uncooperative individuals and entities, b. Identifying and classifying customer and counterparties of US accounts (including acquiring the relevant documents), and c. Implementing the required IRS reporting.

B. Dodd-Frank Act

The Dodd-Frank Act established new requirements for execution, compliance, and data reporting in relation to derivatives transactions, and defined entities that will be involved in these activities.

The Dodd-Frank Act Implementation phase introduces sweeping reforms that include mandating most hedge fund and private equity managers to register with the SEC and report on their trades and portfolios. It is also required that all OTC derivative transactions be reported to trade repositories.

Scrutiny in global financial services sector has grown because of volatility in the markets that made costs to go up which fail to meet regulatory requirements. Business enterprises should focus on implementing a thorough and impressive methodology and technique that does not harm their competitive position and limiting exposure to potential fines.

Regulators around the world are looking to monitor systemic risk through rules such as Dodd-Frank Act in the U.S. For financial firms these financial regulations will have a major impact on nearly every area including operations, compliance, Information systems, risk management and data management. Financial institutions really need to keep track of counter party risk, manage regulatory risk, and take care of real-time reporting to senior management of the institution and the regulators.

The objective of enacting Dodd-Frank Act was to create confidence in the public following the financial meltdown and taking measures to prevent such crises in future. Both agencies, Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) were entrusted with setting the guidelines for implementing this Act.



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Dodd-Frank Act is focused on safeguarding the transparency that includes contractual financial information related to instruments such as equities, bonds and derivatives; business entity reference data, mainly used to assess counterparty risk and defines parties to the business; data relating to prices; and data pertained to portfolio holdings.

The focus of Dodd-Frank Act has been on the OTC derivatives market to achieve the following objectives:

- To minimize systemic risk of derivatives trading.
- To create transparency in derivatives markets.
- To provide credit protection for derivatives traders.

Dodd-Frank Act will have an effect all who trade in Swaps in the US region, i.e., Swaps dealers (SDs) and Major Swap Participants (MSPs).

MSPs and SDs, under the Dodd-Frank Act, need to disclose reports on daily basis on derivatives trading, cleared or uncleared, to a registered Swap Data Repository (SDR). The reports shall cover the below mentioned areas:

- The Primary Economic Terms (PET)
- Continuation of data
- End-to-end data i.e., enactment and transition swaps.

The Dodd-Frank Act furthermore demands that SDRs take the appropriate steps to make certain that the data they receive is consistent and accurate.

Impact of Dodd-Frank Act

With the changes to the regulations, OTC derivatives need to be traded through exchanges and they should be cleared through central counterparty clearing houses which put additional burden on the RDM function. The reason is OTC market reforms in the U.S. and Europe is expected to result in data rates to grow by 400%, transaction volumes by over 20 times and three to four times in market data volumes from current levels. The push for straight through processing (STP) with shorter trade settlement cycles and order driven markets will increase the pressure on clearing technology and infrastructure requirements.

C. EMIR

The European Market Infrastructure Regulation (EMIR) was entrusted to regulate the OTC derivatives market and requires market participants to report all derivative trades to a trade repository. This European Union regulation given an opportunity to new and innovative prerequisites to strengthen transparency as well as bring down the counterparty together with operational risks typically associated with the derivatives market. Superior data quality, accurate reference data is extremely important to assuring compliance. EMIR proposes the central clearing of explicit categories of OTC transactions. In all cases in which central clearing is not required, parties to the trade to implement extra harsh risk control mechanisms.

Given that the EMIR was due to come into force by end-2012, qualified standardized OTC derivative contracts is required to be cleared through a central counterparty, with all cleared and non-cleared transactions disclosed to approved trade repositories. Equivalent guidelines have also been

introduced in other jurisdictions, which include Japan, Australia, Singapore and Hong Kong.

EMIR is applicable to financial counterparties in addition to non-financial counterparties ("NFCs") notable in the EU which means that by extension to firms how to deal with each one of them. An EU-established business comprises of its overseas divisions.

EMIR is applicable to a large array of derivatives: credit default swaps, options, futures and forwards, swaps and forward contracts for differences, over a widespread selection of underlying financial instruments, assets, commodities and indices, however, spot contracts are not included.

Under EMIR, all of the counterparties and central counterparties ("CCPs") need to make sure that particulars of any derivative contract are declared to a registered trade repository ("TR") within a single working day of its fulfillment, change or termination. The intent behind reporting is simply to make sure that the facts about the risks deeply rooted in OTC derivatives markets would be centrally organized and quite easy to access to ESMA, regulators and appropriate central banks

Categories of requirements introduced by EMIR:

- Risk management meeting margin and collateral requirements
- Regulatory reporting reporting listed and OTC derivatives to trade repositories of EMIR
- Clearing centrally clear almost all OTC derivatives regarded as clearing qualified with EMIR approved central counterparties

Non-financial corporations widely use OTC derivatives as a tool to manage risk can be exempted from the clearing requirement when their derivatives not hedged remain well below specified limits, however, they should be able to confirming with the reporting and a few requirements of risk management.

Impact of EMIR

- A data aggregator need to gather data from disparate sources in the enterprise to meet reporting obligations
- Trade data repository is to be created for real time regulatory data reporting

Challenges faced by market participants

- Difficulty in reporting trade related information to the trade repository and identifying data related to clearing, risk involved and lifecycle events in the stipulated time and format bound business rules
- Data maintenance and reporting requirements on all OTC derivatives
- Acquiring data from different sources and recognizing data fields for real-time

D. Solvency II

The objective of the Solvency II Directive is simply to create equal opportunity in the entire European region for insurers and also to create a market environment wherein insurance firms can have equal role to play. It is created to improve risk management in insurance firms and ensure they



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set aside sufficient capital to cover every risk they face including credit, market, and operational risks.

One of the major difficulties faced insurers is complying with the directive of maintenance of data management. Asset managers and securities service providers along with data vendors face challenge in meeting the directive.

Under this directive, insurers are required report to regulators large amount of data about their financial information. They will have to acquire and report additional data to give in-depth details, maintain consistency and quality than ever before.

It is well known that Solvency II is for the insurance sector, however, it could have impact on asset managers as well. Periodical data requirements, like quarterly, half-yearly or yearly data reporting, can result in getting matters complicated. Annual data requirements will be tedious and time-consuming, although there is a possibility of getting extension in reporting timeline.

Data management is critical for every financial institution and they need to their data acquired, managed and reported consistently. There needs to be sufficient coordination between back-office service provider, insurance company and its fund managers, and data vendors to make sure that data is consistent.

Firms need to focus on three data requirements. These data requirements include: new and innovative types of data; maintaining data quality; and examining the same.

Solvency II is increasing its current standards for data quality of assets, at times far higher than is needed at present. As the data quality is monitored by insurers and their respective supervisors as part of confirmation process, Solvency II wants the asset quality data to be correct in terms of completeness, appropriateness and accuracy.

Data consistency is very hard to accomplish. It is very likely that we might get different values from different markets for a defined asset class which could be correct in their own way.

Impact of Solvency II

Solvency II will impact investment managers in a number of ways.

Not only is asset data, reference data and pricing data required on a "by security" basis but also data such as financial ratios and average dividend yields.

To report on this data quarterly will require processes to be carefully thought out. If data cannot be held systematically this is a major manual undertaking each quarter, not just from a reporting perspective but also with regard to ongoing data maintenance. Adequate procedures and controls must be put in place to ensure that all changes or amendments to non-system held data are captured and updated. There may also be a need for a quality assurance type role to validate any data amendments. Utmost attention and care will need to be given to how this is enforced and monitored

With an increase in the amount of data required with increased frequency and in reduced timeframes for delivery, asset managers can expect not only an increased service charge

from their third parties but also a need to review and renegotiate SLA's.

E. MiFID

The Markets in Financial Instruments Directive (MiFID) is the new regulatory framework from the European Commission for the European Financial Markets with an objective to promote competition, improve competitiveness and enhance choice for investors in the European financial markets. The Directive was adopted in 2004 and came into existence in 2007 replacing the Investment Services Directive which was adopted in 1993. MiFID establishes a regulatory framework and aims to create a single market investment services and other related activities to provide protection for the investors who invest in variety of financial instruments.

No major changes or revisions are expected until at least 2015, however, changes expected include extending the original transaction reporting requirement to all financial instruments traded in a regulated markets. Firms will need to capture a large amount of data, and report it in accurate manner and within the stipulated timelines.

MiFID has addressed the concept of transparency in two forms, pre-trade and post-trade transparency. In a pre-trade transparency, investors are required to get access to quote details prior to trading such as outstanding order flow in their order book. In a post-trade transparency, transaction details of instrument traded needs to be disclosed to public.

As far as transparency in pre-trade is concerned, regulated markets and non-exchange financial trading venues such as multilateral trading facility (MTF) which are quote-driven need to publish information pertaining to best bid and off for banks or investment firms (who match 'buy' and 'sell' orders internally) and regulated markets. MTFs are supposed to publish information on five best bids and offers as they are order-driven. Systematic Internalisers (SIs) are required to provide quotes for stocks that are traded on regulated markets. SIs deals on own account but executes customer orders outside MTF without operating a multilateral system.

As far as having maintaining post-trade transparency, trading venues play a key role and are required to provide details of executed trades, including time stamps, the price, the quantity and the execution venue.

Major aspects of operations and data management include reporting of transaction data, conduct of business, and record keeping. These aspects relate primarily to operations of financial intermediaries. They have to report all transactions made and keep the records in durable medium for five years in order to comply with MiFID.

It is not a showy statement to posit that MiFID's implementation could overall shape of the European markets as we know them.

Market-led solutions will be in demand and will help implementing transition to the post-MiFID world. MiFID is expected to bring changes to the way in which market participants operate.



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Early readings propose that trade volumes could go up three to four times as many more firms benefit from electronic tools at their disposal to enable direct market access or when volumes of orders of made into small sizes. An additional difficulty will be to look at possible innovations in liquidity risk management by allowing back and middle office to match the risk management approach.

Financial institutions need to look at make strategic choices in relation to their internal capabilities, competencies and their service offerings and external factors like competition and economic conditions and their impact.

Order execution policies also impacting reference data and these policies should include data on several execution venues. Center for Economic and Social Rights (CESR) believes that business enterprises should have scope to make judgments about addressing implicit costs in the best manner. As a result, firms will need to have massive volumes of data for acquisition, storage, maintenance and distribution - with regards to market, reference and extracted data. A few observers foresee three to five-fold increase in volumes of data.

Impact of MiFID

The regulations of MiFID will affect most in the front office in order execution policies and maintaining transparency. This will require maintaining additional data that are fed into back office processes and classification of data.

The classified data needs to be managed and published against extremely tough timelines. The impact could affect most mid-sized firms not only because of the MiFID compliance but also because of broad-span directives like European Union Saving Directive and Basel Capital Risk Directive. The existing data structures of the firms also need overhaul.

Also impacting reference data is that under MiFID, order execution policies will need to include information on the different execution venues (where the investment firm executes its client orders and the factors affecting the choice of execution venue).

V. CONCLUSION

In summary, all the existing regulations are going bring changes in the financial markets which would ensure accuracy and smooth functioning of the system with the reference data management function. Table - 1

		Table 1	: Which t	ypes of	data are i	impacte	d?
	Instrument		Entity		C 1:4	A4	,
	Quoted	OTC deriv	Counter -party	Issuer	Credit Rating	Asset Type	th

		msuument		Linuty		Credit	Accet	Look	Tricing		1
		Quoted	OTC deriv	Counter -party	Issuer	Rating	Asset Type	through	Quoted	OTC deriv	Index
Dodd Frank	Systemic	No	High	High	No	No	No	No	No	No	No
	Form PF	High	High	High	Low	High	High	Low	No	No	No
	CCP	No	High	High	No	No	No	No	No	High	No
EMIR		No	High	High	No	No	No	No	No	High	No
FATCA		High	High	High	High	No	No	High	No	No	No
MiFIR				Med	No	No	High	No	High	Med	No
Solvency II		High	High	Med	High	High	High	High	High	High	No

Source: ISITC Europe, 2013

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