



Whitepaper

MiFID-2 Regulatory Reporting

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Executive Summary

After coming into effect on 3rd January 2018, MiFID 2 focuses on the buy side of transactions, placing new obligations on organizations to minutely document transaction details, and sets a framework for trading venues/structures.

Trading firms need to know how companies can turn the need for compliance into an opportunity to use the data collected into a powerful tool for their business to function more effectively.

MiFID 2 has a number of key objectives comprising:

- Enhanced investor protection.
- Alignment of regulation across the EU-specific entities.
- Increased competition across the financial markets.
- Introduction of reinforced supervisory powers.

Through this Whitepaper, we hope to achieve specific objectives for any financial services powerhouse or investment service providers such as Investment Banks and Trading Firms.

The following are the tangible benefits to firms:

- 1) Reduced fines, Augmented Compliance, and Exponential Increase in Profit and Goodwill.
- 2) Framework for practical implementation - Case Study of GSIB (Global Systemically Important Bank).

1. Benefits of MiFID 2

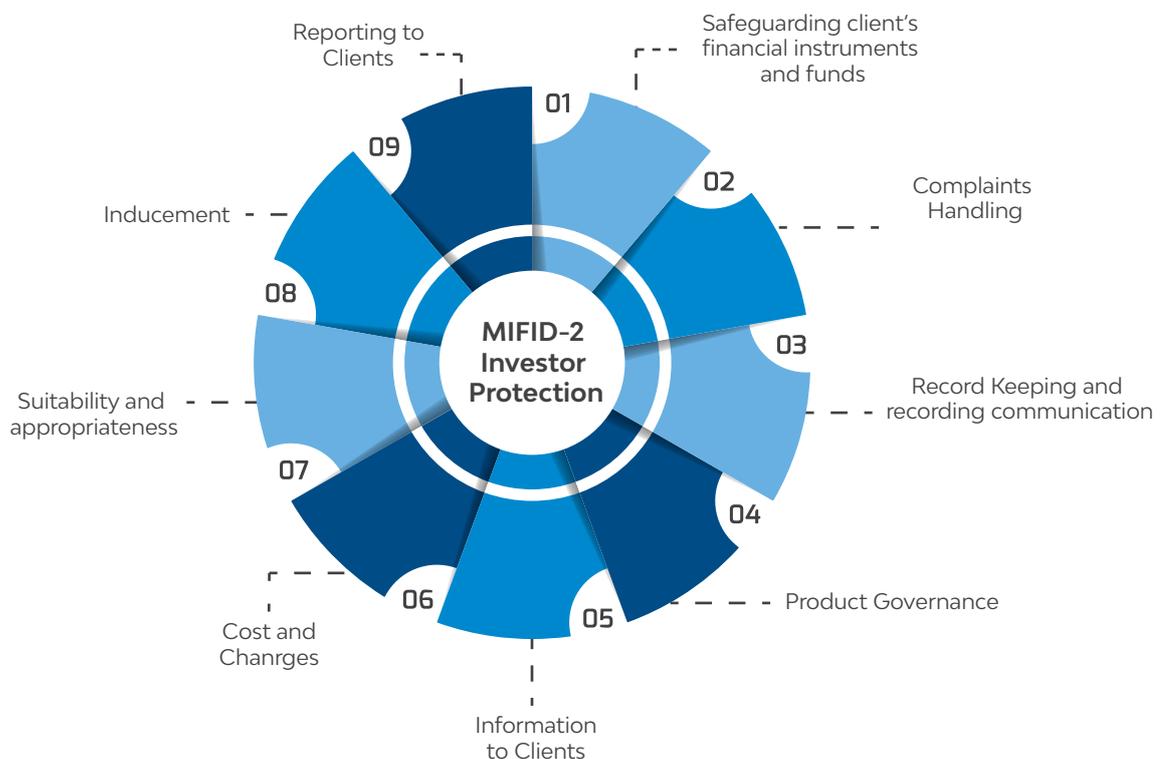
The benefits of these regulations are further described in the forthcoming pages.

- Market confidence – to maintain confidence in the financial system.
- Financial stability – contributing to the protection and enhancement of stability of the financial system.
- Consumer protection – securing the appropriate degree of protection for consumers.
- Reduction of financial crime – reducing the extent to which it is possible for a regulated business to be used for a purpose connected with financial crime.
- Regulating foreign participation in the financial markets.

2. Overview of MiFID 2 and Asset Classes Included vis-à-vis MiFID 1:

| Name Of Regulation | Region Affected | Markets & Asset Class Affected | Timeline | Regulators |
|--------------------|-----------------|---|----------|------------|
| MiFID 1 | EMEA | Equity, Fixed Income, Exchange Traded Derivatives | Nov 2007 | FCA |
| MiFID 2 | EMEA | All the asset classes in MIFID1+OTC Derivatives, Structured Products, Emission allowances | Jan 2018 | FCA, ESMA |

What is MiFID-2?



3. MiFID and High-Frequency Algorithm Trading (HFAT)

HFAT is included for reporting as per MiFID 2 compliance. The identifier for such trades is the algorithm name which is associated with each of these trades. The reporting engine gets these identifiers from the upstream (strategic data repository).

- 1) HFAT - latency gold standard is 200 nanoseconds.
- 2) Ensuring 24*7 Operating Time.
- 3) The time is captured with the precision of nanoseconds and reported to the ARM.
- 4) Setting the correct values for EDM and IDM in case of HFAT trades.

4. Problem Statement - Key Implementation Challenges of MiFID 2

1. Matched principal definitional scope

While sending out transaction reports, firms are required to disclose their trading capacity; either dealing on own account, matched principal, or any other trading capacity. Article 4(1) (38) of MiFID 2 defines matched principal trading as a “transaction where the facilitator interposes itself between the buyer and the seller to the transaction in such a way that it is never exposed to market risk throughout the execution of the transaction, with both sides executed simultaneously.”

This definition has resulted in many discussions about whether firms are likely to be caught by the definition of ‘matched principal’, regardless of their intention. In particular, questions have been raised on the term ‘simultaneous’ used within the definition and whether it should be taken literally.

2. Personal identifiers

The requirement to report correct and accurate details also applies to natural person identifiers. However, for natural persons, the Legal Entity Identifier (LEI) is replaced with a natural identifier,

which usually tends to be a National Id (includes passport and SSN). In case the National Id is not available, a Concat Id is used which is the concatenated lastName and firstName.

The ESMA CP 2015/1909 suggests that, in order to meet these requirements, firms could “monitor the expiry date of a non-persistent identifier”. This suggestion may result in firms having to continuously monitor information after the initial onboarding stage. Market participants have also highlighted possible additional complications like incomplete reference data and trader PII (Personal Identifiable Information) data to take into account for firms acting as the decision maker on behalf of a client. In case the trade is an Algo trade, the algorithm name should account as the investment decision maker.

A key issue with using natural identifiers, such as passports, is that they may change for a variety of reasons other than expiring. Furthermore, in addition to jurisdictional differences to take into consideration, the databases that hold this information are not always reliable. For example, the Poland trades have an issue where the Trader Id of the legal entity is not always updated before the trades executed by the trader. As a result, the trader details are not available leading to the trades in business exception preventing them from reporting. There have been instances where the Account and Security level data is insufficient, leading to bad trade data enrichment.

3. Strong privacy laws

Strong privacy laws within non-EU jurisdictions may result in venues not being provided with required data, such as client details, to produce a transaction report. This is vital in order to allow venues to report on behalf of firms within these non-EU jurisdictions. Therefore, the FCA's view, and the Commission's by extension, was that business with those firms cannot be undertaken.

Legally sound solutions allowing a 'break' in these privacy laws for the purpose of transaction reporting has been suggested. This would have to take place on a case-by-case basis. Other possible solutions would be to establish a similar protocol to the EMIR Port Rec, Dispute Res, and Disclosure protocol, or put in place a protocol that can cover all regulations.

4. SFT reporting exemption

Where a Securities Financing Transaction (SFT) is reported in accordance with Article 4 of the SFT Regulation (SFTR), that SFT should not be reported under MiFID 2.

In light of this carveout; questions have been

raised on whether firms would have to report SFTs prior to the application date. It has been suggested that firms may not have to report these transactions under MiFID 2 at all until SFTR goes live.

5. ARM authorization

For intraday reporting, the price denomination should be well differentiated by the reporting engine. As there are a number of standard third-party reporting mechanisms, a concern among market participants is that third-parties may not be allowed to handle data on behalf of firms without becoming authorized Approved Reporting Mechanisms (ARM).

Entities registered as an ARM today under MiFID 1 will not automatically be recognized as an authorized ARM under MiFID 2/R. Those considering applying for ARM status should not look at what currently exists as the requirements have changed; both Level 1 and 2 MiFID 2/R texts should be used instead.

All this has sparked a great deal of discussion on which entities will have to become authorized as ARMs and many market participants view this as one of the biggest implementation challenges.

6. No 'golden source' for products

Members noted that ESMA does not intend to provide a 'golden source' of reference data for financial instruments, as the list would not be considered complete. Instead, they will symbolize a 'silver source'.

Questions have been raised on what firms should benchmark their data against if ESMA does not intend to provide an 'official' list. While there has been some clarification on this issue, this ongoing discussion of ESMA's 'golden source' and its implications has not been fully clarified as yet.

7. Short selling flag

Uncovered short sales are banned under the Short Selling Regulation (SSR) and investment firms are required to track their net short positions and report any breaches across certain thresholds. While this has been already been an onerous requirement for investment firms, under MiFID 2, with its requirement to flag short sales in transaction reporting, firms may face even greater implementation difficulties.

In particular, market participants have highlighted just how difficult it would be to collate the data required for the calculations to determine whether short selling is taking place or not. Short selling calculations tend to be made at the end of each day at an LEI level, and determining whether or not a firm is short selling at the actual time of execution would be difficult. Further to this, questions have been raised on how the data would be validated.

8. Collateral reporting

Market participants have suggested that the reporting of collateral, under MiFID II, between two parties should not constitute a transaction, as collateral transactions are typically kept away from the trading systems.

Including collateral in the reporting would result in an increase in the number of source systems, leading to greater costs.

9. Buy-side reporting

It was highlighted at the conference that, under MiFID 1, approximately 50% of the buy-side do their own MiFID 1 transaction reporting, while others have been making use of SUP 17.2.2. Now, under MiFID 2, it appears that 100% are planning to do their own reports.

Many of these buy-side firms are planning to build systems in-house and from scratch. Furthermore, in preparation for transaction reporting under MiFID 2, some firms are using MiFID 1 as a stepping stone to gain experience on reporting.

While many will no doubt be listing a few of the above issues in their responses to the ESMA CP 2015/1909, the most difficult MiFID 2 implementation deltas mentioned at the conference were checking that over-reporting does not occur and ensuring the higher quality thresholds are met.

Overall, it is clear that the reporting burden from MiFID on regulated firms will be greater than for other regulations – with a much wider scope and a major impact on all primary and secondary financial and commodity markets.

Recording - Investment firms must arrange for records to be kept of all services, activities, and transactions that are undertaken, including recordings of telephone or electronic communications. Such telephone conversations and electronic communications shall also include those that are intended to result in transactions.

Retrieval - The records shall be retained in such form allowing reconstruction of each key stage of the transaction. It must be ensured that records can't be manipulated or altered. Organizations must also ensure data allows IT or any other efficient usage and analysis when the analysis of the data cannot be easily carried out due to the volume and the nature of the data.

The question remains, what will happen to regulations when the United Kingdom leaves the European Union?

What is clear is that while the UK has voted to leave the EU, MiFID 2 will still apply to our institutions not least because they are still bound by EU law when it comes into effect in 2018.

Perhaps more importantly than just timings, the scope of MiFID 2 covers businesses based anywhere who do business with organizations within the EU. This means that if UK-based firms want to trade with or provide services to European counterparties, they must be equipped to demonstrate 'regulatory equivalence' with MiFID 2. The FCA supports this thinking as is advising as such, added to the principles of the regulation are also shared by the G20 group looking to harmonize reforms to increase protection for individuals following the 2008 crisis.

This combined with the increasing move to international equivalence with other global regulations

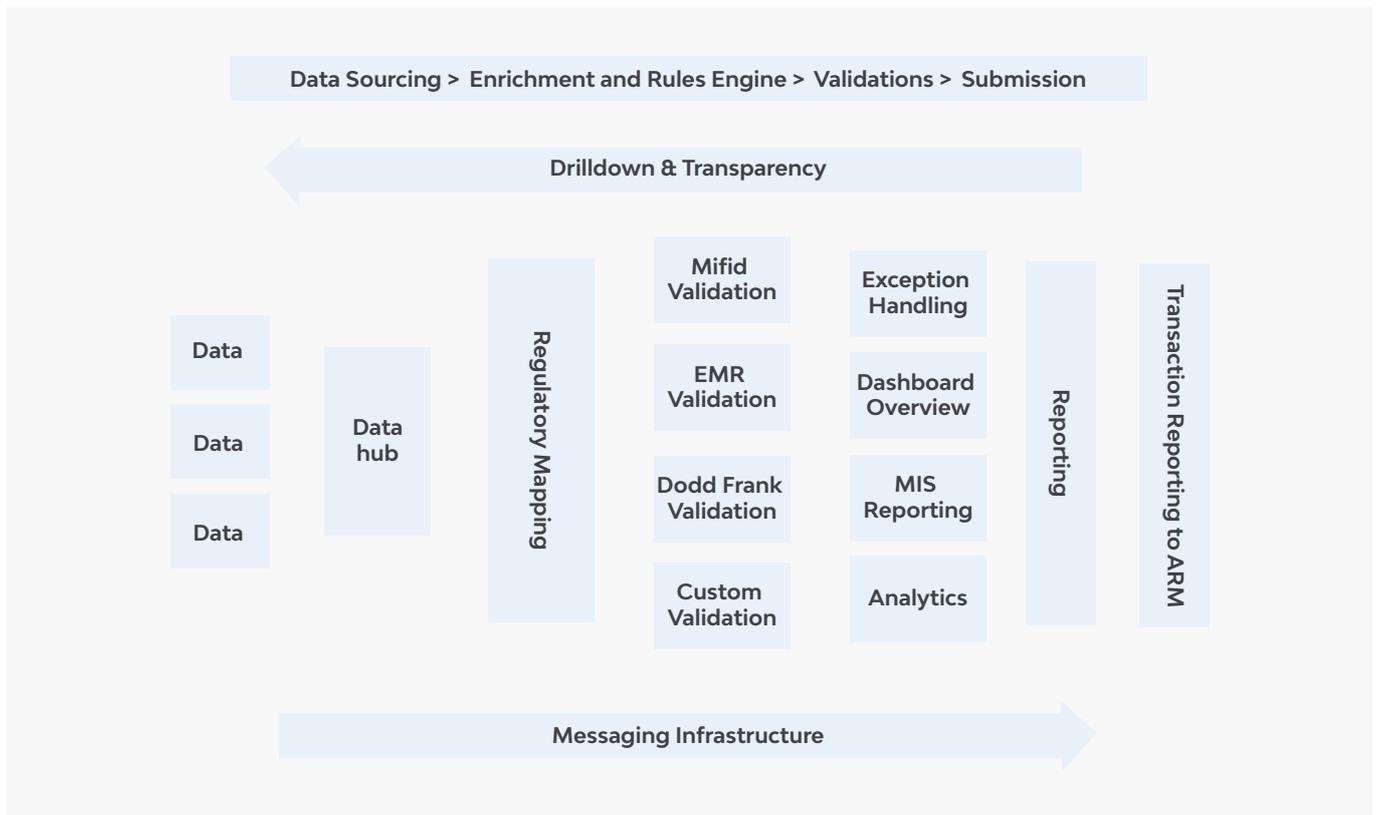
such as Dodd-Frank in the United States and signals from the UK government suggesting any rowing back from MiFID 2 regulations highly unlikely in a post-Brexit UK industry means the directions contained in the directive look like they are here to stay.

MiFID regulation focuses on OTFs (Organized Trading Facility) for the transactions previously traded over the counter.

MiFID focus areas:

- Algorithmic Trading and High-Frequency Trading.
- ARM (Approved Reporting Mechanism), APA (Approved Publication Arrangement), and CTP (Consolidated Tape Provider).
- Pre-Post Trade transparency.
- SI (Systemic Internalizer).
- Trading Obligation.
- Trading Venues – OTF for OTC trades.
- Transaction Reporting.

5. Proposed MiFID Sample Architecture – To be process



6. Proposed Solution

We aim to furnish the following recommendation that would overcome the above-mentioned challenges and lead to 100% compliance for MiFID 2 reporting.

1) Framework for practical implementation-

High-level functional overview of the GSIB – Here, we make sure that the messages from all the sources system across all the asset classes are received in a standard FPML (Financial Product Markup Language) format.



Above is the proposed architectural implementation of the GSIB solution for the Transaction reporting.

The Reporting Engine application sources all its data from the Ocean data mart. Various upstream, when sending the trades to Ocean, are enriched by the SMC (Security Master Central) for the product data and the AMC (Account Master Central) for the accounts specific data. Trader data and PII data (Personal Identifiable Information) are enriched from the HRMS. ARM then sends the asset class specific data in .CSV format to the ARM which in turn, runs its own business rules. The trades which are accepted by the ARM are sent to the FCA as part of the Transaction report. The rejected trades either by the ARM or by the FCA are sent back for correction to the Reporting Engine. The use of Legal Entity Identifiers for Buyer, Seller, Executing, and Transaction submitting entity has addressed the Personal Identifier issue. The traders are mandated to share the PII information, which flows down with the HRMS file, leading to the complete trader data enrichment. This has led to a reduction of the trades going into the exception queue and helped in reporting the large volume of trades accurately.

2) Expertise and Solution to help customers become more compliant and profitable.

A major risk in GSIB being compliant was the data storage capacity and data leaks. Some of the sources like PRIMO for Cash Equities sends around one million trades every day whose storage and retrieval is a challenge. To overcome this, Reporting Engine architecture takes an interface layer of Mongo database.

Data retrieval, storage, and archival is much faster using the Mongo database as it's a non-relational database having key value pairs.

Another advantage of using Mongo database in the technical architecture is that requirement enhancements, change requests, and bug fixes are easy to accommodate and quick to implement in the current Agile Project Management.

3) Reduced fines, Exponential Increase in Profit and Goodwill.

To avoid being non-compliant and reduce fines –

In case of Transaction reporting, the Reporting Engine application has an SLA of one day (T+1) to avoid itself from being non-compliant. In case of Pre-Trade/Post Trade Transparency, the trades are reported in real time (T0).

4) ORC users have the functionality of powerful search and replay the trades from the easy to use User Interface which are into business exceptions or are rejected by the FCA/Unavista (ARM).

5) To address the Short Sell flag implementation, the Reporting Engine blocks the trades and marks them in deferred status. In the Reporting Engine, the file from DPM application contains position against each account for a security for all equity trades. For fixed income trades, the Reporting Engine checks positions and group to aggregate at legal entity and instrument level.

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Ashish Dubey, a Senior Consultant within LTIMindtree Consulting, holds a post-graduate management degree from SIBM, Pune. He has 14+years of experience in Investment Banking, IT delivery, and Consulting, predominantly serving global Banking, Investment Banking clients. He has provided IT solutions to global banks to transform their business through new data solutions, migrations, enriched customer experiences, and extreme operational efficiencies.

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