

# Raising the game in transaction reporting

How banks are shaping their quality assurance functions to comply with regulations and meet the challenges ahead

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# Contents

Executive summary	4
Evolving challenges in transaction reporting regulations	5
Quality assurance function for transaction reporting	8

## Executive summary

All major trading jurisdictions (Europe, the US and Asia) have introduced detailed reporting requirements such as MiFID, EMIR, SFTR, Dodd-Frank, HKMA, MAS over the previous 18-24 months. The underlying objectives of all these regulations are to improve transparency and oversight of financial markets, including derivatives markets, provide enhanced supervision and prevent market abuse by bringing in detailed pre-trade transaction and post trade submission reports.

These dynamic regulations have had a significant impact on all financial institutions globally, in terms of investments on both resources and technology to monitor, adhere and adapt to them. Major global banks today have put in place a clear operating model and dedicated reporting functions to adhere to these requirements and are now looking at making the process leaner, highly robust and more efficient by leveraging process automation, quality assurance, advanced technologies and analytics.

However, firms still need to be agile to adapt to additional challenges arising from ever-evolving external and regulatory changes. In this paper, we analyse the challenges faced by banks with a specific focus on transaction reporting regulations.

An area of sharper focus among regulators is the assessment of the quality of data submitted – regulations mandate that firms ensure precise reporting and have controls in place to identify and prevent misreporting. Trade Reporting User Pack (TRUP) 3.1 also mandates procedures to be in place not only to identify exceptions, but also to correct them and resubmit them. In addition, firms must also be able to demonstrate that they have full oversight and control of the trade life cycle to fulfil their trade reporting obligations.

To fulfil these mandates, an increasing number of firms are implementing automated assurance processes to ensure the completeness, timeliness and accuracy of reported trades. We provide an overview of how banks are shaping their quality assurance functions to ensure they are in compliance with the regulations and address the challenges that lie ahead.

# Evolving challenges in transaction reporting regulations

## Controls for algorithmic trades

EMIR regulations mandate strong pre- and post-trade controls for all high frequency and algorithmic trading activities. These include market and credit risk limits, maximum order volumes, automatic execution throttles, monitoring by both first and second line of controls as well as a kill switch functionality. The governance frameworks for firms must clearly set out their systems and controls in relation to algorithmic trading. In addition, firms must conduct real-time monitoring and regularly review their automated alerts.

### Implication and focus areas



There is still considerable ambiguity on what qualifies as an algorithm under MiFID II. Firms are taking a practical approach by creating a complete inventory and designing controls proportionate to the risks each algorithm poses to market integrity. MiFID II reinforces the Market Abuse Regulation (MAR) obligation in terms of ongoing monitoring behaviors and firms need to develop adequate and ongoing controls to address the obligation. Firms are also falling short on the implementation of change management and standardisation of firm-wide processes and guidelines around algorithms.

## Share (SDO) and derivative trading obligations(DTO) for cross-border trading

For trading obligations, third-country trading venues can be treated as regulated markets for shares and derivatives only if the EC considers the third country “equivalent”. In light of Brexit transition, it is thus important that the EC produces equivalence decisions to mitigate the conflict of rules – else it may impact and prevent cross-border trading (for example, non-EU clients using the services of an EU-based firm).

### Implication and focus areas



In its recent communication, ESMA highlighted that it will complete UK assessment before the end of the Brexit transition period. However, there is no clarity on how many UK venues will be deemed transparency-equivalent when ESMA completes its formal assessments. Firms will need to thus have an ongoing monitoring mechanism for this till the end of 2020 to consider the impact of the STO and DTO on their trading activity and put in place adequate controls.

Firms subject to clashing obligations can only trade DTO/STO instruments on venues that the EC and FCA have both deemed equivalent. This might be impractical as it would require mutual membership of a third-country venue and could trigger local licensing issues. Firms, however, may want to start identifying such venues for major trading partners.

## Transparency reporting for TOTV instruments

Firms today need to report information relating to OTC trades in TOTV instruments. Trades on a third-country venue are treated as OTC trades, meaning that the participant needs to present transparency reports for TOTV instruments unless ESMA determines that the venue has comparable transparency standards.

Currently, the UK has a transparency reporting reprieve; however, this is a temporary measure until the assessment of UK venues is completed by ESMA.

## Multiplicity of reporting

In addition to the above requirement, an investment firm is also required to submit a detailed transaction report to its home regulator when it trades a TOTV instrument either on-venue or OTC. Post transition, EU firms will be subject to both the EU and UK transaction reporting requirements when a trade is done in the UK. The same will apply to UK firms when they trade in EU.

## Ambiguity in deferral rule

Firms today have the option to report equity and non-equity trades post the timelines based on deferral rules of the individual country. The key non-equity deferral regime determinants are size specific to the instrument (SSTI); and large in scale (LIS), which firms can calculate or request the APA to do on their behalf. All trades should be sent within the standard reporting timeframes, and the APA will then queue the trades and defer their publication based on these calculations.

### Implication and focus areas

In case of delays of format assessment of UK venues or lack of clarity on the number of UK venues before the transition period, it may mean enhanced reporting of OTC trades as a third-country venue and updation of reporting rules engines. Currently, many firms are inconsistently populating the Trading Venue Transaction Identification Code leading to data accuracy issues and this may compound the errors.

### Implication and focus areas

In practice, this will mean that a firm subject to double-reporting will either need a contract with an Approved reporting mechanism (ARM) to send transaction reports to two regulators, or establish a direct connection to its host regulator. While this was being done with one regulator now, multiplicity will increase and new reporting arrangements will have to be put in place before the transition period.

### Implication and focus areas

However, there are multiple challenges and ambiguity with regard to these calculations as well as Ambiguity in determinant calculation as well as individual regime requirements of various countries.

For deferral rule to be applied on package transactions which have multiple factors and variations by asset class and booking model, clarity on the scope and boundaries of the definition of a package transaction are critical. The responsible party obligated to report a package transaction needs to be determined and then the deferral rules application can be made. Certain components of a package could be non-ToTV. However, if one element of the package is eligible for deferral, then all elements of the package are eligible for deferral. These factors are leading to significant confusion, trade pairing and matching issues between counterparties

## Best execution and fairness of OTC products

For firms, a key requirement is to check the fairness of the price proposed to the client when executing orders or taking decisions on dealing in OTC products. This extends to bespoke products where estimation is done by gathering market data used in the estimation of the price of such products and, where possible, by comparing with similar or comparable products.

### Implication and focus areas



To ensure compliance with this requirement, firms will need to consider and demonstrate usage of market information on credit risk, discount rates and yield curves prior to trading securities to demonstrate fairness.

To demonstrate best execution, they will also need to provide a list of the execution venues for each class of financial instruments, and a list of qualitative and quantitative factors used to select an execution venue. Firms will also need to develop and demonstrate compliance to a selection process for execution venues, execution strategies employed, the procedures and process used to analyse the quality of execution obtained and how the firm monitors and verifies that best possible results are obtained for clients.

## Improving UTI pairing and matching rate – identification of issues

Reported trades by the counterparties are paired by using the Unique Transaction Identifier (UTI). While some firms continue to face the challenge of getting UTI paired itself, there is considerable improvement. Most firms have evolved but are facing challenges in matching a few of the 47 critical fields.

The transmission of order indicator indicating how the execution of the order has happened, the venue data field and trading time are fields where a majority of matching fails.

### Implication and focus areas



Firms are exploring multiple and more regular reconciliation and monitoring processes to get these resolved. There are requirements for a series of interconnected reconciliations and integrity checks to monitor and resolve any data issues as they occur.

## Quality assurance function for transaction reporting

Through legislations and periodic industry updates, regulators have clearly communicated their expectations on the quality of data submitted. They expect firms to have appropriate systems and controls in place to monitor the quality of data, identify where mistakes have been introduced and demonstrate adherence and compliance. The Financial Conduct Authority (FCA) has been clear that reporting firms should monitor, investigate and resolve all data issues post submission as well. We provide an overview of how the quality assurance function is evolving and the related roles and responsibilities.

### Organisation model

- The quality assurance function of banks is in various stages of maturity today. Most banks now have an operating model defined with a dedicated quality assurance team in place and this is in line with regulatory expectations of an independent validation group. This team usually sits between the first and second line of defence, a sort of hybrid 1.5 line of defence.
- Multiple regulations demand reporting at different times, thereby necessitating firms to have a nearshore and offshore model and core teams with well-defined skillsets, including regulatory SMEs as well as testing specialists. Change leaders within the regulatory reporting function are playing an increasing and definitive role in the quality assurance process.
- In many firms, we are seeing that the quality assurance function is also taking on enhanced responsibilities of conducting training and ensuring standardisation to minimise source level issues.

### Approach and coverage

- Banks have a risk-based approach to ensure the quality assurance function is both effective and efficient given the large volume and variety of reports being submitted. To that extent, banks are identifying key regulations globally to enable end-to-end testing across the lifecycle through automated reconciliations. The post submission process, especially for rejects and resubmission as well as ad-hoc testing, is largely manual and investigative in nature.
- There is also a secondary line of teams performing deep-dive quality checks across the lifecycle, regulatory interpretations, business rule validation, issue identification and root cause analysis primarily for preventive controls to identify 'valid but wrong' issues which may be missed out as part of technical validation checks. This is usually sample based on clear parameters.

### Quality parameters

- Firms have coverage for transaction testing; however, conformance testing of review procedures is still evolving.
- Individual and detailed control testing processes are still carried out by a separate specialist team, usually the SOX Team as part of firm wide internal control quality checks.
- The primary quality parameters of timeliness, completeness and accuracy are well defined



#### Timeliness

An essential check on whether the reports are being submitted on time as per regulatory requirements

- Requirements vary across products as well as report time, ranging from 1 minute for equity products, 15 minutes for derivatives and T+1 submissions for various other consolidated reports.
- Regulators expect 100% coverage on timeliness, although there are deferral rules in place for delayed submissions



### Completeness



Firms need to do completeness checks for both trade level reporting and various fields for each report

- At a transaction level, regulators demand precision and there should be no over or under reporting of the number of trades and reportable instruments. A major issue firms, especially trading venues, have is the presence of duplicate trades (considering MiFID II firm as non-MiFID firm), leading to over reporting.
- Firms also need to ensure that out of the 65 fields, the mandatory ones are always filled lest it causes rejection. In cases of optional and conditional fields, firms need to ensure accuracy in case they are submitted

### Accuracy



Transaction reporting regulations have very specific and in some cases, non-standard reporting formats across regulations

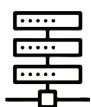
- The format accuracy metrics such as a percentage versus whole number check, date format, etc. are checked using automated validation checks (but not 100% captured)
- Data accuracy checks are usually implemented via the use of business rules and translation logics (such as incorrect mapping, conditional field rule check)

## Quality assurance across the lifecycle

Banks need to have full oversight and control of the trade life cycle to fulfil their T&TR obligations. The process requires a series of interconnected reconciliations and integrity checks across the workflow

to monitor and resolve any data issues as they occur. The current data flow is from the source systems to the reporting engine. Aggregation of reports happen from the reporting engine before the final submission.

### Data sourcing



The primary component serves to source the transactional data from the firm's trading infrastructure. The source systems refer to both the source documentation and the trade book system. The source systems should be golden sources for either asset classes or specific entities.

Data quality checks at this stage are a mix of reconciliation, middle-office controls, and source documentation checks.

### Data ingestion



Transactions are then ingested onto the reporting engines where centralised rules are being applied to minimise non-standard application of rules. These typically take the form of holiday business rules, calendars and date sequencing. Exception management occurring due to different regulatory requirements in regions are a key part of this process.



## Data enrichment



Application of reference data is carried out on the enrichment of transaction data. This is a critical piece where quality assurance is being applied on how reference data (LEI, ISINs, counterparty data mapping, etc) is being captured, along with the source of reference data itself (third parties included). Application of reference data rules on transaction reporting where reference data is either missing (use of internal codes) or in cases of multiple reference data (multiple BICs being used by a counterparty) are ambiguous and lead to reporting errors.

## Data validation



Validation logics are applied to ensure that illogical data combinations (negative price units, incorrect trade reporting time, etc) are highlighted and corrected.

## Data submission and post-data submission



Necessary exception management routines are applied for submission to ARMs and response handling. After the submission of reports, end-to-end testing on a post facto basis is conducted and rejects are investigated via an automated reconciliation process. The process helps to understand inconsistencies in submission and perform end-to-end source system checks across the above workflow.

- Rejects may occur due to mandatory fields not being reported or other technical validation errors, incorrect application of rules such as trade suppression, duplication of submission or translation of logic errors.
- Thematic issues such as data format, time stamp, clock sync and UTC translation are also identified in this process for correct resubmission

Firms are mandated to show understanding of where mistakes occurred and what was done to reconcile them. A key objective of this process is to ensure minimal rejections and resubmissions.

## Independent quality assurance

Post-submission rejection and quality assurance may not always help identify 'valid but wrong' submissions. It is therefore important to also have a deep-dive quality team which essentially looks at a sample of trades to determine if 'what needs to be reported' and 'what has been reported' are in line, primarily to provide preventive controls, issue identification and root cause analysis.

- The remit of this team is full reporting albeit on a sample basis as detailed use cases.
- This team will independently run the test script via translation logics on the actual trade data and tie it back to reporting. Translation logics are also independently redeveloped by this team based on the specific regulations and requirements (for example, they may develop the logic for identifying the venue identification code depending on whether the trade was agreed to be executed on market or bilaterally or to ensure clean price calculations for bond futures).
- When issues are identified, the team will work with front line teams (development, FO) to close out underlying issues either in the reporting engine or the code itself.
- This team will also undertake ad-hoc tests on controls, rules and filters to ensure they are updated and remain appropriate.

## Reference data checks

Reference data errors account for a majority of transaction reporting errors and challenges include the lack of standards and the availability of reference data such as the lack of LEIs, venue codes or ISINs for derivatives.

- Reference data quality checks are usually owned by a separate team which executes a range of tests to counterparty and instrument reference data to check for both accuracy and completeness, including real-time checks on LEIs and normalisation of legal name and address.
- Automated cleaning of enterprise data, legal entities and real-time support on hierarchy based on corporate actions are routinely carried out by the teams.

Reference data QA is an ongoing process for reference data management due to the nature of the data and the need to keep data updated and validated.

Quality assurance function undoubtedly is an area of focus and banks are leveraging quality assurance function to achieve robust controls around the transaction reporting obligation, to weed out inefficiencies and ensure full oversight across the trade lifecycle. It is a key lever for banks to gear up to meet supervisory expectations as well as be prepared to meet the evolving challenges.

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