



## Regulatory Reporting Newsletter



## INTRODUCTION

Welcome to the Q2 edition of the Quorsus Regulatory Reporting Newsletter. After a winter of significant change from a regulatory perspective, our experts deep dive into CFTC, specifically the performance of firms' notifications for part 45.14, we are also conducting a detailed cross-regulatory comparison between EMIR Refit and other jurisdictions.

In addition to this, we examine the story so far leading up to Phase 2e of the Customer & Account Information System elements of CAT, which have been delayed once again; and finally an overview of why a high performing Software Development Lifecycle is crucial for regulatory compliance.

### Newsletter Terminology

- **ASATP** As soon as technically practical
- **ASIC** Australian Securities and Investments Commission
- **CAT** Consolidated Audit Trail
- **CDE** Critical Data Elements
- **CFTC** Commodity Futures Trading Commission
- **CG** Capgemini
- **CSA** Canadian Securities Administrators
- **DMO** Division of Market Oversight
- **DTCC** Depository Trust and Clearing Corporation
- **EMIR** European Market Infrastructure Regulation
- **ESMA** European Securities & Markets Authority
- **HKMA** Hong Kong Monetary Authority
- **ISO** International Organisation of Standardisation
- **JFSA** Japan Financial Services Agency
- **MAS** Monetary Authority of Singapore
- **NFC** Non-financial counterparties
- **OATS** Order Audit Trail System
- **OTC** Over-the-Counter
- **REFIT** Regulatory Fitness & Performance Program
- **SDR** Swap Data Repository
- **SDV** Swap Data Verification
- **SEC** Securities Exchange Commission
- **SFTR** Securities Financing Transaction Regulation
- **SME** Subject Matter Expert
- **TR** Trade Repository
- **UAT** User Acceptance Testing
- **UPI** Unique Product Identifier
- **UTI** Unique Transaction Identifier

## WHAT'S INSIDE THIS ISSUE:

**CFTC PART 45.14** *Review of the industry's performance against requirements including level of breaks, notification procedures, and outlook for the year to come*

**EMIR REFIT Comparison** *Analysis of the similarities and differences between the latest rules for EMIR Refit, JFSA, and ASIC*

**Software Development Lifecycle** *The benefits of an optimized software development lifecycle in regulatory compliance*

**CAT** *A review of progress to date including an outlook for the upcoming CAIS regulation*

## WHO WE ARE

Part of Capgemini's Financial Services Strategic Business Unit since October 2022, Quorsus provides consultancy services to financial institutions facing a range of challenges and constraints across the post-trade landscape. We offer **unparalleled expertise in post-trade technologies, operations, regulatory solutions, and market infrastructure, helping our clients to achieve their goals through intelligent reengineering of platforms and process**. We pride ourselves on the strength and character of our consultants. This, combined with decades of industry expertise, ensures that our clients meet their objectives, however steep the challenge.

# 2023

## Global Regulatory Roadmap

**H1** MAS Updated Reporting Rules Publication\*

**Q2** Hong Kong UPI/CDE Consultation

**H2** CAT CAIS Implementation

**11 SEP** SFTR Validation Changes

# 2024

**29 JAN** CFTC Phase 2 Go-live (UPI)

**1 APR** JFSA Rewrite Go-live

**29 APR** EMIR Refit Go-live (ESMA)

**Q2** CSA Rewrite Go-live\*

UK EMIR Refit Go-live





**30 SEP**

ASIC Rewrite Go-live

**21 OCT**

MAS Updated Reporting Regime Go-live

**21 OCT**

Global  APAC   
AMER  EMEA 

\*Tentative date of go-live/publication

## CFTC 45.14 PERFORMANCE

In previous articles, we provided our interpretations and recommendations for complying with the CFTC Rewrite swap data verification, error correction, and regulator notification rules ahead of December 5th. In this article, we will discuss how firms are complying with the requirements in practice, based on our specific client engagements and publicly available information in industry forums. In addition to this, we will also be looking at the outlook for the remainder of 2023 and similar requirements that will be introduced by other regulatory rewrites.

### Firms' Compliance with the Regulation

#### Swap Data Verification

Firms have viewed Swap Data Verification (SDV) as a separate, standalone process from their daily BAU completeness and accuracy reconciliations. There are differing interpretations across the industry regarding the definition of books and records, however we have found there to be three main interpretations; (i) Source systems, (ii) Output of the reporting engine, and (iii) A combination of both source systems and output of the reporting engine. In terms of the build of the reconciliation, once again firms have been split between in-house reconciliation tooling and vendor solutions.

We have seen that firms have been focussing their SDV on the accuracy element, with completeness being validated as part of the BAU control framework. Firms have been advised to look to add a dedicated completeness check to SDV as per the regulatory requirements.

**FIRMS HAVE VIEWED SWAP DATA VERIFICATION (SDV) AS A SEPARATE, STANDALONE PROCESS FROM THEIR DAILY BAU COMPLETENESS AND ACCURACY RECONCILIATIONS**

# CFTC 45.14 PERFORMANCE (CONT.)

Firms with whom we have spoken submitted numerous (over 15) DMO notifications in the first few months as a result of SDV. They are seeing several issues across specific themes:

1. Rejections (NACKs)
2. Accuracy breaks: where field conditionality allows you to report something that contradicts the regulatory requirements
3. State issues: where positions at the SDR are generally out of sync with internal books and records. This can be the result of submission failures, issues with eligibility, or incorrect reported lifecycle events and exits
4. Existing issues pre-Rewrite: which were not addressed by the implementation

## ***Error Corrections & DMO Notifications***

There is an assumption that firms already have in place robust error correction workflows as part of BAU and were using that for day 1, with the key difference being the new regulatory deadline of 7 business days. Within BAU, we have seen some firms introduce an observation period, where operations and technology teams are given time to confirm an exception is a legitimate issue prior to the 7-day clock starting. The SDV process cannot benefit from this interpretation as the rule clearly states the 7-day "shot clock" starts the moment the verification process begins, regardless of when an analyst ultimately confirms the error.

When it comes to correcting issues ahead of the deadline, it depends on both the complexity of the issue and the maturity of the back reporting process. Correcting an issue as per the new rules requires updating not only the latest state of the position but also all impacted messages historically. We consider fixing the root cause within 7-business days to not be strictly required if a tactical workaround is in place, although this is not an approach most firms are taking.

We have seen firms manage the error correction process for both SDV and BAU together where the discovery date as per the rules drives the priority. This is usually a joint exercise involving operations, technology and compliance, whereby operations manage the execution of the overall process, technology provides the root cause analysis, impact assessment and remediation plans as required by the DMO notification forms, and finally operations leadership and compliance sign off on any notifications that were sent out.

Firms are also generally following industry guidelines when it comes to populating the DMO notification. When a field is not known, some firms are providing estimations whilst others are taking a more conservative approach by saying "not known on initial assessment". For the latter scenario, the expectation is firms continue their investigations in parallel and ultimately provide the required information when they are confident enough to do so.

Overall, there is a collective agreement between firms that the notification only applies to new root cause issues, and that there is no obligation to report status updates unless any of the information in a previous notification is incomplete or misrepresented. A practical example of follow up notifications which firms are sending is when they provide a "date for a date" for the remediation plan fields on the notification, since they are not able to finalise a plan by the deadline of the initial notification.

As the CFTC did not agree to materiality thresholds, all firms are taking a conservative approach by notifying all issues found.



***THERE IS A COLLECTIVE AGREEMENT BETWEEN FIRMS THAT THE NOTIFICATION ONLY APPLIES TO NEW ROOT CAUSE ISSUES***

***FIRMS ARE TAKING A CONSERVATIVE APPROACH BY NOTIFYING ALL ISSUES FOUND***



**AS THE 7-DAY  
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COMPLETED**

# CFTC 45.14 PERFORMANCE (CONT.)

## *Key Challenges & Successes Across the Industry*

### *Swap Data Verification*

#### **Challenges**

Population reconciliations are probably the biggest gap across the industry. Most firms address 'completeness' as part of BAU and have initially focused on the 'accuracy' aspect of the monthly SDV process.

While accuracy reconciliation was a key focus of SDV, we have found that firms are finding it challenging to implement these reconciliations for all fields given the number of transformations as required by the CDE. Without a rule-based reconciliation solution that is configurable and maintained by the user, the only practical option firms have is to reconcile between the reporting engine output and the SDR. Firms are struggling with manual reconciliation solutions or solutions where the logic is embedded in the code. Even without a robust reconciliation tool, we recommend that firms should implement "primary economic terms" back to source at a minimum.

#### **Success**

Whereby firms having a daily BAU completeness and accuracy reconciliation can reduce the burden of SDV, as they identify and correct issues throughout the month. On that point, some firms leveraged the month of December to correct false break issues with the SDV reconciliations logic ahead of the first official run for SDs in January.

### *Resourcing & co-ordination amongst teams*

The 7-day deadline for error correction and DMO notifications leaves no room for error, and we have seen firms struggle with understaffed teams, particularly so in technology which is responsible for many outputs such as root cause analysis, the impact assessment and the remediation plan required for each issue. Combined with many new and pre-rewrite issues, organisation is a critical factor in maintaining integrity in the process.

There is also an added burden for firms who are using an external partner/vendor to establish these resourcing requirements.

Whilst firms have been sending notifications on time, resourcing issues are impacting several factors such as the timely confirmation of legitimate BAU issues, and the data quality of the fields in the notification.

#### **Success**

There are recommended procedures that some firms have put in place which have enabled them to fare better with the new requirements. These include clearly defined roles and responsibilities, guidelines and SLAs for each error type and control process, prioritisation methodologies, and comprehensive issue tracking with status updates and management reporting (MI). As the 7-day process is chronological by nature, some firms have defined a calendar-based approach which indicates which day each component of the process should be completed (e.g., by day 4, all issues under investigation must begin DMO drafting). Firms have also benefitted from outreach and training of the new requirements across the organisation, particularly to stakeholders who provide tangential or infrequent inputs to the process.

# CFTC 45.14 PERFORMANCE (CONT.)

## Success

Firms which have considered the recordkeeping and MI requirements as part of their process and technology design have been able to reduce their ongoing administrative effort with minimal upfront planning.

## *What is the industry doing?*

There have been no formal communications on the process from the CFTC since go-live. It has been mentioned in one of the industry forums that the CFTC are surprised at the number of DMO notifications being received.

The ISDA P45.14 group has resumed sessions to review the interpretation and policy decisions which were agreed last year taking into consideration the six months of production data points now available. The initial meetings focused on the DMO field interpretation, whereas future sessions are set to focus on more thematic issues. The goal is to level set the industry's interpretation and approach, ideally getting a stamp of approval from the CFTC.

## *Closing – future changes & other jurisdictions*

Looking ahead to the future, the rules do incentivise firms to prioritise and resolve issues holistically without discrimination. Over time we expect less issues as firms' reporting and control frameworks improve.

However, firms do acknowledge that in the short term, the administrative burden associated with the DMO notifications does take time away from fixing the issues they find. The CFTC's original expectation for the burden on firms was to only take up 6 hours a year of a teams' time. Firms agree that this is vastly underestimated. Firms have far more notifications than expected, and are scheduling daily calls with groups of resources across their firms just to stay on top of the process.

Regarding other global rewrites:

- EMIR Refit introduces a similar regulator notification requirement; however, the rules include a materiality threshold, whereby only significant issues need to be notified. The rules also do not stipulate a set deadline. ESMA has indicated they will publish specific guidance further defining these rules in the future.
- The Canada Rewrite consultation paper proposes a verification requirement every 30 calendar days for derivatives dealers. There is also a proposed notification requirement for all errors or omissions to be notified to the regulator as soon as technically practical (ASATP), but no later than the end of the business day following the day of discovery.

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# EMIR RULES COMPARISON

## Overview

In the current landscape of regulatory change, a comparison of similar regulations can streamline interpretation and implementation, which will save time and reduce costs. Transaction reporting is based on a set of common principles which highlights the evolutionary harmonization of global regulation. Whilst there is a lot of cross-over and the products traded are virtually the same, nuances will always exist where risk appetite differs, and internal technological limitations prove restricting.

In this article we will focus on comparing EMIR to three other jurisdictions – CFTC, ASIC and JFSA, highlighting both similarities and differences in reporting requirements at both field level and across multiple themes. This review will be based on regulatory specifications with the exception of CFTC where the DTCC message specification has been used.

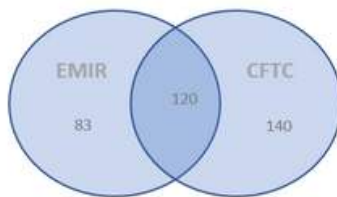
The themes which will form part of this review includes;(i) Delegated reporting, (ii) Product eligibility, (iii) Collateral and Valuation data, (iv) Transaction data, (v) Reporting eligibility, (vi) Reporting formats, (vii) Reporting Timeline, and (ix) UTI generation.

## EMIR & CFTC

Of the three reviews, it was found that EMIR and CFTC had the highest number of differences as highlighted in the table below, examples include Single sided (CFTC) vs Dual sided (EMIR) reporting, and mandatory delegated reporting for EMIR which does not exist for CFTC.

There are also big differences in how each regulation is structured, CFTC is comprised of four key reports under regulations: Transaction, Collateral and Valuation under Part 45, and Real-time under Part 43. However, there is no Real-time equivalent for EMIR. CFTC also has additional verification requirements which EMIR does not include. Despite these differences, there are many similarities between the regulations, particularly at the field level.

### Field Commonality Breakdown



### EMIR & CFTC Comparison

| Theme                         | Similarities   | Differences  |
|-------------------------------|--|--|
| Delegated Reporting           |  | EMIR allows entities to delegate reporting to their counterparty   |
| Product eligibility           | OTC products are in scope  | EMIR has the addition of ETDs<br><br>EMIR covers security-based products (SEC covers these in the US)<br><br>EMIR includes crypto assets if they meet the definition of a derivative |
| Collateral and Valuation data | Valuation reporting is aligned<br><br>Alignment of 16 of the 25 EMIR collateral fields with CFTC | 9 of the 25 EMIR collateral fields do not have equivalent fields in CFTC   |
| Transaction data              | 99 of the 173 EMIR transaction fields have equivalent fields in CFTC                             | EMIR has a large number of product specific fields which are not aligned to CFTC, for example there are 16 Commodity specific fields in EMIR, of which only 1 has a CFTC equivalent  |

**OF THE THREE REVIEWS, IT WAS FOUND THAT EMIR AND CFTC HAD THE HIGHEST NUMBER OF DIFFERENCES**

**DESPITE THESE DIFFERENCES, THERE ARE MANY SIMILARITIES BETWEEN THE REGULATIONS, PARTICULARLY AT THE FIELD LEVEL**

# EMIR RULES COMPARISON (CONT.)

## EMIR & CFTC Comparison (cont.)

| Theme                 | Similarities   | Differences   |
|-----------------------|--|---|
| Reporting Eligibility |  | <p>EMIR requires dual sided reporting, where each counterparty reports their leg of the trade.</p> <p>CFTC uses single sided reporting, where waterfall logic is used to determine which counterparty is the reporting party.</p> <p>EMIR has mandatory delegated reporting, where if one counterparty is a small non-financial counterparty (NFC-), the other counterparty must report both sides of the trade. CFTC does not have mandatory delegated reporting</p> |
| Reporting Formats     | Both regulations are working towards the introduction of ISO 20022 as their only reportable message type (CFTC will follow EMIR) |   |
| Reporting Timeline    | T+1 for EMIR & CFTC Part 45  | 15 Minutes for CFTC Part 43   |
| UTI generation        |  | <p>CFTC - the reporting party generates the UTI</p> <p>EMIR – waterfall logic is used to determine the UTI generating party</p>   |

## EMIR & ASIC

ASIC has made a conscious effort to align their reporting framework to similar regulations in different jurisdictions, particularly EMIR. When breaking down the population of reportable fields, only 4% of fields are unique to ASIC. ASIC have been proactive in their approach through engaging the industry by releasing two consultation papers.

Feedback has led to iterative updates and the release of a final explanatory statement which brought ASIC reporting obligations closer to other jurisdictions. ASIC have estimated that 97% of their reporting entities will also be impacted by global regulatory rewrites, and benefits of this alignment will lead to lower implementation costs, a shorter implementation phase and more complete, accurate and timely reporting.

Whilst ASIC has been receptive and flexible in its approach, there are still some differences and this is reflected in the diagram and table below.

### Field Commonality Breakdown



**WHEN BREAKING DOWN THE POPULATION OF REPORTABLE FIELDS, ONLY 4% OF FIELDS ARE UNIQUE TO ASIC**

**WHILST ASIC HAS BEEN RECEPTIVE AND FLEXIBLE IN ITS APPROACH, THERE ARE STILL SOME DIFFERENCES**

# EMIR RULES COMPARISON (CONT.)

## EMIR & ASIC Comparison (cont.)

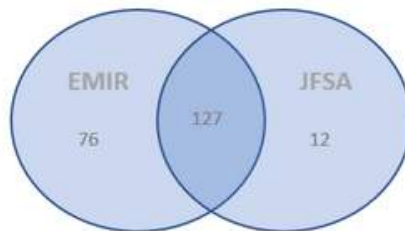
| Theme                         | Similarities  | Differences  |
|-------------------------------|---|--|
| Delegated Reporting           | Entities can delegate reporting to their counterparty   |  |
| Product eligibility           | OTC products are in scope   | EMIR has the addition of ETDs, however the ASIC exemption may change in the future<br><br>EMIR includes crypto assets if they meet the definition of a derivative  |
| Collateral and Valuation Data | Valuation reporting is aligned<br><br>Alignment of 18 of the 25 EMIR collateral fields  | There are 7 EMIR collateral fields which do not have equivalent fields in ASIC   |
| Transaction Data              | 96 of the 173 EMIR transaction fields have equivalent fields in ASIC  | EMIR conditionally links related fields<br><br>EMIR has a large number of product specific fields which are not aligned to ASIC, for example EMIR has 16 commodity specific fields, of which only one has an ASIC equivalent |
| Reporting Eligibility         | Dual sided reporting and provisions for small/non-financial entities where the other counterparty must report both sides of the trade |  |
| Reporting Formats             | ISO 20022 will be the reporting format by the end of 2024   |  |
| Reporting Timeline            |   | T+1 for EMIR<br>T+2 for ASIC   |
| UTI generation                | Use of waterfall logic to determine the UTI generating party  |  |

## EMIR & JFSA

Similarly to ASIC, JFSA have also looked to align their reporting framework with EMIR and reduce the burden on their members with the view that alignment will reap benefits for both the regulator and member firms.

As it stands, the JFSA are yet to publish written implementation guidelines to accompany their technical specification. To counter this, the information that follows is based on the field level requirements:

### Field Commonality Breakdown



### EMIR & JFSA Comparison

| Theme                         | Similarities  | Differences  |
|-------------------------------|---|--|
| Delegated Reporting           | Entities can delegate reporting to their counterparty   |  |
| Product eligibility           | <i>JFSA have not yet provided product eligibility details</i>                                       |  |
| Collateral and Valuation Data | 4 of the 5 EMIR valuation fields are aligned<br><br>19 of the 25 EMIR collateral fields are aligned | There are 6 additional collateral fields which do not have equivalent JFSA fields  |
| Transaction Data              | 104 of the 173 EMIR transaction fields have equivalent fields in JFSA                               | EMIR has a lot of product specific fields which are not aligned to JFSA, for example there are 16 Commodity specific fields in EMIR, of which only 1 has a JFSA equivalent |
| Reporting Eligibility         | Dual sided reporting  | EMIR has mandatory delegated reporting for non-financial counterparties, it is not yet clear whether JFSA will put similar provisions in place                             |

JFSA HAVE ALSO LOOKED TO ALIGN THEIR REPORTING FRAMEWORK WITH EMIR AND REDUCE THE BURDEN ON THEIR MEMBERS

THERE ARE 39 FIELDS WHICH ARE UNIQUE TO EMIR (19.2%), 1 OF WHICH - EFFECTIVE DATE OF THE NOTIONAL QUANTITY OF LEG 2 - IS A CDE FIELD



# EMIR RULES COMPARISON (CONT.)

## EMIR & JFSA Comparison (cont.)

| Theme              | Similarities   | Differences                  |
|--------------------|--|------------------------------|
| Reporting Formats  | ISO 20022 will be the reporting format by the end of 2024    |                              |
| Reporting Timeline |  | T+1 for EMIR<br>T+2 for JFSA |
| UTI generation     | Use of waterfall logic to determine the UTI generating party |                              |

## EMIR ONLY

There are 39 fields which are unique to EMIR (19.2%), 1 of which - Effective date of the notional quantity of leg 2 - is a CDE field. Of the 39 fields 19 fields are asset class specific which pertains to products with 15 specific to Commodities. There are also 7 fields relating to Details on the Transaction, including information on PTRR (Post Trade Risk Reduction) which is a concept unique to EMIR.

Finally, there are 5 fields unique to EMIR relating to information about the Parties to the Derivative.

The other 80.8% of EMIR fields have corresponding fields to at least one of the other regulations, 85 of these fields (41.9%) have equivalent fields across all four regulations.

## CONCLUSION

Throughout this article we have compared EMIR Refit to each of the different regulations individually, however the below table gives a high-level view of the themes across each regulation.

This table shows that there are some aspects of the regulations that are consistent across all jurisdictions, for example, all the regulations allow delegated reporting, and will use ISO20022 as their main reporting format.

There are also areas of divergence, such as whether reporting is single sided or dual sided, and who is eligible to report.

## Overall Comparison

|                      | EMIR   | CFTC  | ASIC   | JFSA   |
|----------------------|--|---|--|--|
| Delegated Reporting  | Yes  | No  | Yes  | Yes  |
| Product Eligibility* | OTC and ETD Derivatives  | OTC Derivatives   | OTC Derivatives  | JFSA have not yet provided product eligibility details                                     |
| Reporting Obligation | Dual sided reporting with an exception for small non-financial counterparties where mandatory delegated reporting means the other counterparty reports both sides of the trade | Single sided reporting with waterfall logic to determine which counterparty is the reporting counterparty | Dual sided reporting with an exception for non-reporting counterparties where the other counterparty reports both sides of the trade | Dual sided reporting (no information yet on how reporting counterparty will be determined) |
| Reporting Formats    | ISO 20022  | CSV but moving to ISO 20022 in the future   | ISO 20022  | ISO 20022  |
| Reporting Timelines  | T+1  | Part 45 - T+1<br>Part 43 - 15 minutes   | T+2<br>All times are in AEST/AEDT unless otherwise stated  | T+2  |
| UTI Generation       | Waterfall logic used to determine UTI generating party   | Reporting party generates the UTI   | Waterfall logic used to determine the UTI generating party   | Waterfall logic used to determine UTI generating party                                     |

\*Contact us for more information around specific exemptions



**THERE ARE SOME ASPECTS OF THE REGULATIONS THAT ARE CONSISTENT ACROSS ALL JURISDICTIONS, FOR EXAMPLE, ALL THE REGULATIONS ALLOW DELEGATED REPORTING, AND WILL USE ISO20022 AS THEIR MAIN REPORTING FORMAT**

# SOFTWARE DEVELOPMENT LIFECYCLE

## *A high performing Software Development Lifecycle is fundamental to regulatory compliance*

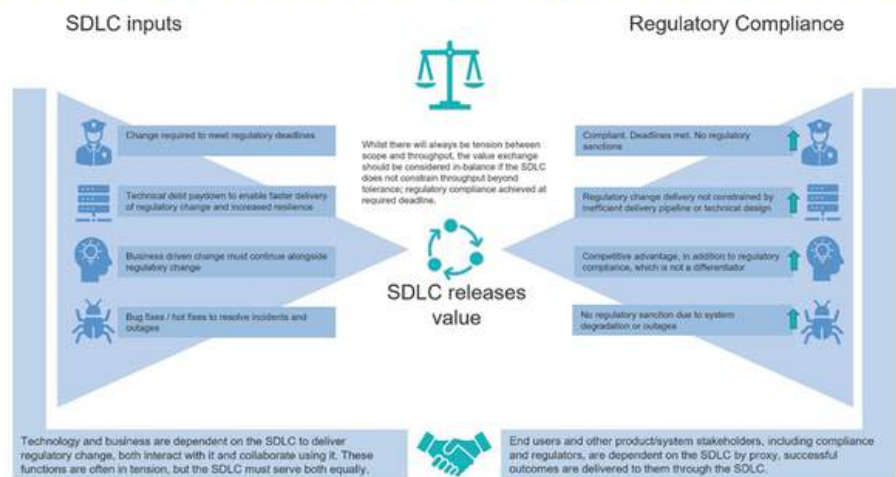
Attaining and retaining regulatory compliance whilst preserving and improving speed to market are two of the most critical success factors for financial institutions. Key to both is the creation and maintenance of a scalable Software Development Lifecycle (SDLC) which does not constrain the delivery of business-critical change beyond an organisation's tolerances, whether this be from a regulatory, technological or business perspective.

The health of the SDLC is as important to positive regulatory outcomes as the functionality and resilience of the production system itself.

Factors which can positively impact the health of an organisation's SDLC include; tool driven control, adequate governance, and rigorous audit of production change. When coupled with the prohibition of (i) uncontrolled access to the production environment, and (ii) manual intervention at deployment, these factors allow regulatory-driven change and release scope to be tracked together, facilitating effective milestone reporting for multiple releases and driving increased automation.

It is this automation, along with tooling, which will in turn support linear scaling of throughput and reduce key-person dependencies, ultimately increasing the likelihood of meeting regulatory deadlines.

## The SDLC is a critical process in regulated organisations



A highly repeatable and automated SDLC with quality control at every stage and minimal friction will allow deployments on-demand. For multi-participant testing of regulatory change, this means that participants will spend less time blocked whilst awaiting scope or bug-fix releases. This can be further optimised by using feature-flagging to decouple deployment from release, meaning that participants can elect to carry out asynchronous testing as and when elements are ready.

Further downstream, an SDLC with its risk minimised through repeatable automated quality control and release promotion and deployment, will result in fewer change failures and greater agility in recovering from regulatory breaches. Efficient hot-fixing via the same SDLC path-to-production as planned change, and root-cause analysis, with no compromise on quality and minimal regression risk, will reduce time taken to return to compliance.

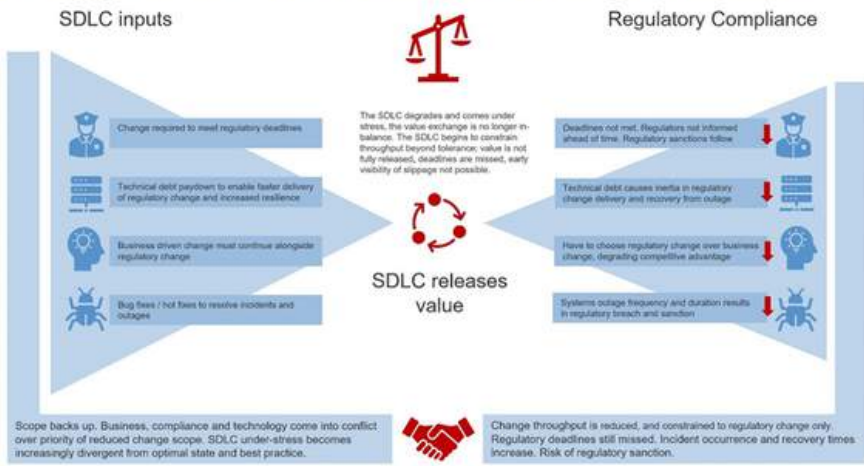
**HEALTH OF THE SDLC IS AS IMPORTANT TO POSITIVE REGULATORY OUTCOMES AS THE FUNCTIONALITY AND RESILIENCE OF THE PRODUCTION SYSTEM ITSELF**

# SOFTWARE DEVELOPMENT LIFECYCLE (CONT.)

In a candidate's market, attracting talent to a team looking to deliver regulatory change but carrying technical debt will be more challenging. Furthermore, firms are in competition with each other and other industries to be perceived as cutting edge. As such, a technology and tool-driven approach to the SDLC can help to attract and retain candidates.

To optimise ROI on team members, it is important that fungibility of engineers is encouraged and maintained through limiting the divergences in an organisation's various SDLCs. A lack of fungibility can result in increased upskilling lead times when engineers are required to "swarm" around a specific regulatory change initiative which will incur significant cost as they align on process.

## A degraded SDLC has significant regulatory impact



An SDLC which was once optimal will atrophy if not proactively maintained and reviewed against both best practice and best-of-breed tooling. Notwithstanding, it can be challenging to carve out the necessary time and resource for such maintenance, especially as unplanned pressures resulting from regulatory breaches will further exacerbate issues.

A policy of continuous measurement of SDLC performance will identify any degradation in either throughput or quality. A well-functioning SDLC should emit a wide range of metrics including; idle time, peer-review duration, build time, merge issues, and test fails, etc. Through the use of adequate progress and velocity reporting, any issues with meeting regulatory deadlines will become apparent early in the delivery. These can then be escalated and mitigated.

Even where friction and risk are identified early, they are often deprioritised in favour of delivery. Indeed, delivery teams can even become resigned or reconciled to friction and risk, often preferring the status quo to effective change. This can be especially problematic in regulated organisations, where domain knowledge may be favoured over technical expertise. A robust and well-defined approach to prioritising and managing technical debt versus regulatory obligation, agreed organisation wide, is a key aspect of a healthy SDLC in a regulated environment.

Degradation in the efficiency of an SDLC often occurs once the product of a regulatory demand enters a steady state and focus is lost, leading to challenges when the next round of regulatory change enters the backlog. Furthermore, as priorities change, ownership of the SDLC may reside in a centralised devOps or developer enablement team which can result in unilateral decision making regarding best practice that do not always solve the highest priority problems faced by regulatory change teams.



**AN SDLC WHICH WAS ONCE OPTIMAL WILL ATROPHY IF NOT PROACTIVELY MAINTAINED AND REVIEWED AGAINST BOTH BEST PRACTICE AND BEST-OF-BREED TOOLING**

# SOFTWARE DEVELOPMENT LIFECYCLE

## *SDLC Best Practice*

Whilst complete alignment may not be possible due partly to the non-existence of a one-size-fits-all SDLC model, or due to the constraints inherent to a regulated environment, best practice in as many areas of the SDLC as possible should be pursued, including at a team-member level.

Following the initial SDLC build, individuals may be re-assigned to different teams and from that point no longer exercise the skills or tooling proficiencies that they acquired during that period. Reviewing these tools and techniques against evolving best practice/best of breed may fall out of the capabilities of the new team, to the detriment of their delivery.

In addition to this, where changes to regulatory requirements, for example mandating a multi-cloud strategy, may have necessitated re-platforming and the introduction of new technologies, a review and refactor of the SDLC should be undertaken.

Furthermore, the initial overhead of building an SDLC is often addressed through temporary ramp up of team size. In many cases this leads to steady state teams which may not have the bandwidth or expertise to remain aligned to best practice, particularly where regulatory change is necessarily prioritised over SDLC evolution.

## *How can we help?*

### **Our view**

Those responsible for regulatory adherence should view the organisation's SDLC as a key enabler in achieving and sustaining effective compliance. The SDLC must embrace automated testing, continuous release, devOps, site reliability engineering and infrastructure-as-code. This will go a long way towards ensuring that engineering best practice, automation-first and shift-left principles are fundamental throughout system build, test, delivery and operate.

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### **Change Throughput**

SDLC should be designed around agile principles to support incremental change and on-demand or continuous release.

### **Operations**

Operational change should be delivered via an efficient SDLC. Improving audit and change throughput accelerates incident diagnosis and remediation.

### **Quality Control**

All facets of quality should be tested via automation at each stage of the SDLC. This should include code and functional quality, security vulnerabilities, resilience, and recovery time.

### **Vitality**

SDLC atrophy should be prevented by continual improvement driven by cycle time and quality control KPIs.

# CONSOLIDATED AUDIT TRAIL (CAT)

In 2012, following the 'flash crash' in 2010, the US SEC voted to implement rule 613 of the Securities Exchange Act requiring FINRA and the National Securities Exchange to jointly submit a National Market System (NMS) plan. The objective of the plan was to implement a Comprehensive Audit Trail (CAT) that identifies orders, cancellations, modifications, and trade execution for all exchange-listed stocks and options across all U.S. markets.

Following a series of errors and delays in 2019, FINRA stepped in. Once FINRA had taken over, the transition to the new Customer & Account Information System (CAIS) began in April 2020, ushering a new era of regulatory reporting for onboarding and account management teams for broker-dealers.

The path to full implementation has been a bumpy road with the go-live date pushed back several times due to reporting challenges. The final stage (phase 2e) will enable firms to meet their Interim Reporting Obligation 4 requirements as well as see the introduction of CAIS, which provides new and improved features compared to its predecessor – the Order Audit Trail System (OATS).

The timeline of 17th March 2023 has come and gone and a revised 'go-live' date is expected in the third quarter of 2023.

To ensure the move to CAIS is a smooth one, firms must repair all pending rejections for active accounts where the format does not align to the new system specification. Additionally, all material inconsistencies with customer records linked to active accounts must be resolved before submitting into the production environment.

The most significant requirement that firms must comply with relates to FDIDs (Firm Designated Identifier). Whilst FDIDs were previously used to note a client's transaction, these are now used to identify a customer.

This is completed through use of a 40-alphanumeric character identifier and was created by the broker dealers to designate trades to specific clients, allowing industry regulators to trace orders and events and remain informed about possible market trading breaches.

In previous phases of CAT, broker dealers not only had to overcome the difficulty of developing a new customer identity that spans systems and potentially business lines, but also construct this identifier without having knowledge of the final form that client data will take before being sent to CAIS or the best way to internally connect the data to the FDID.

Although this knowledge has been made available, phase 2e, the full CAIS compliance go-live has multiple reporting obligations that include FDIDs. Amongst many, these include:

- Reporting of all new FDID Records with CAT-reportable activity (as of the 12th of June 2022)
- Reporting of all new FDID Records for active accounts to the production environment by 8.00 am EST on the next CAT trading day
- Remediation of all rejections by 5:00 p.m. EST on T+3 after the customer or account information is available to the industry member



**THE PATH TO FULL IMPLEMENTATION HAS BEEN A BUMPY ROAD WITH THE GO-LIVE DATE PUSHED BACK SEVERAL TIMES**

**THE TIMELINE OF 17TH MARCH 2023 HAS COME AND GONE AND A REVISED 'GO-LIVE' DATE IS EXPECTED IN THE THIRD QUARTER OF 2023**



## CONSOLIDATED AUDIT TRAIL (CONT.)

- Reporting all changes and additions to FDID Records for active accounts previously accepted by CAIS by 8:00 a.m. EST on T+1; and
- Resolving material inconsistencies by the time specified in the CAT Reporting Customer and Account Technical Specification for Industry Members-Full CAIS:
  - For triggering firms: By 5:00 p.m. EST on CAT T+3 after the day the customer or account information first becomes available, for triggering firms.
  - For impacted firms: By 5:00 p.m. EST on CAT T+3 following when the discrepancy was discovered

The impact of implementing and complying with phase 2e of CAIS will prove challenging and costly for many firms. In addition to what has already been noted, firms will also need to conduct data quality validations on customer and account reference data, ensuring all reviews and remedial activities is completed within a short time period. Between now and go-live, firms are advised to join the FINRA CAT industry calls and complete a comprehensive testing program.

Potential pain points will be reduced through proper planning, adopting a coherent approach, and ensuring the right infrastructure and tooling is in place to handle the many challenges posed by this regulation.

To find out more about how our team of experts can help you, get in touch with one of our regulatory specialists.

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# If you would like to discuss more, please reach out to our regulatory reporting leads:



**Paul Grainger**

Editor & Regulatory Solutions  
Expert



**Andrew Pinnington-  
Mannan**

Head of Regulatory  
Reporting Practice



## WHO WE ARE

Part of Capgemini's Financial Services Strategic Business Unit since October 2022, Quorsus provides consultancy services to financial institutions facing a range of challenges and constraints across the post-trade landscape. We offer **unparalleled expertise in post-trade technologies, operations, regulatory solutions, and market infrastructure, helping our clients to achieve their goals through intelligent reengineering of platforms and process.** We pride ourselves on the strength and character of our consultants. This, combined with decades of industry expertise, ensures that our clients meet their objectives, however steep the challenge.



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