

Data integrity: Your key to confidence in a complex regulatory environment

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Why data integrity matters in a complex regulatory world

Financial institutions face a global landscape characterised by regulatory complexity and scrutiny. Every aspect of their business - reporting, trading, operations - is being watched, as regulatory tolerance for errors declines.

At the heart of this sits data. Underpinning every decision, every report, every process flow, data is the foundation on which a financial institution's ability to meet regulatory expectations rests. Which means that if the integrity of this data is compromised so is the firm's ability to survive.

Unfortunately, all too often data integrity is compromised - by poor data management practices, by manual processes, or by a lack of control. When it comes to meeting regulatory expectations, financial institutions which cannot have total confidence in their data are setting themselves up to fail right from the start.

Leading fintech firm, Gresham Technologies (Gresham), which specialises in providing solutions for data integrity and control, banking integration, payments and cash management, brings digital integrity, agility and confidence to financial markets, enabling its customers to deliver total data confidence across the enterprise.

In this paper, our team of data integrity experts including CTO Neil Vernon, Business Development Director, Regulatory and STP Services, Philip Flood, and Group Business Development Director Dr. Christian Schiebl, add their voices to industry research as we explore how financial institutions can take control of their data in order to meet today's regulatory expectations.

This paper will enable you to:

- ▶ Anticipate and prepare your data for upcoming regulatory developments
- ▶ Overcome the practical barriers to enhancing the integrity of your data
- ▶ Communicate the importance of data integrity for regulatory compliance to key stakeholders in your organisation
- ▶ Identify key questions your firm should be asking itself to meet regulatory data quality expectations
- ▶ See how data integrity challenges were tackled in practice by one of the world's largest banks

What does the regulatory environment mean for your data?

In a word: **Complexity.**

A 2020 report on the state of capital markets by PwC summarises the situation: ¹ “For capital markets participants and users, the regulatory landscape is ever more complex and more difficult to navigate ... Our survey shows that 90% of industry executives expect it to take between one and five years to execute on [regulations such as Basel III, Dodd-Frank, etc.]”. These lengthy, complex programs can quickly consume large amounts of a bank’s resources.

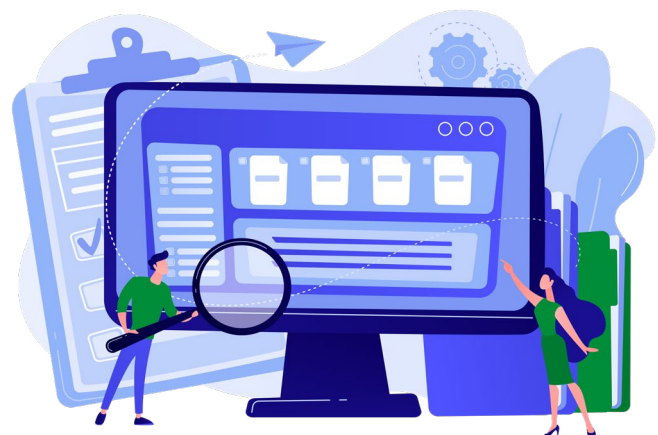
This report also points out that “not only are the rules much more complex, but ... Regulators are increasingly less flexible in their demands to improve compliance, reporting, risk controls and the underlying business processes and data.” So firms are saddled with the twin challenges of greater expectations and greater scrutiny.

But regulators are not only **analysing** the reports that firms submit. Increasingly, they want to understand the data that underpins them - how it was sourced, validated and where values have come from.

“Regulators are asking us to prove the source and validity of every piece of data we give them”

- says the head of business data architecture at a Tier 1 European bank.

“That means the ability to map the data, greater granularity and lineage of data are all increasingly important.”



¹A 2020 report on the state of capital markets by PwC

The marketplace has recently witnessed increased regulatory activity around data quality, such as the European Securities Markets Association (ESMA)'s recent investigation into data quality for both European Markets Infrastructure Regulation (EMIR) and Securities Financing Transactions Regulation (SFTR).

The analysis of EMIR reported data indicated that a significant number of derivatives trades are being reported late or not in accordance with the required data format and content rules. Findings with respect to SFTR's key data quality indicators, such as rejection rates, suggested that market participants need

“to set aside sufficient resources to monitor data quality thoroughly.”



Meanwhile, the Bank of England this spring published a report detailing a plan for improving data collection from financial institutions. In the report -²

‘Transforming data collection from the UK financial sector: a plan for 2021 and beyond’

- the Bank said new demands for regulatory data are straining processes and systems used to collect data, acknowledging the burden that this places on the industry. It also said that early attempts to use technology to improve data collection have brought it to the conclusion that more fundamental changes are needed in terms of how data is defined and managed, suggesting increased focus on this area going forward.

The Bank is not afraid to act when firms do not meet the required standard - for example, the £44 million fine imposed on Citigroup's UK operations in 2019 for failings relating to their internal controls and data quality with respect to regulatory reporting.

“Regulators introducing dedicated data quality initiatives is a clear signal to the industry that their tolerance for errors is waning. Firms are coming to us saying that they recognise this is a tipping point for the industry and that taking action has moved up their priority agenda”

Neil Vernon, Chief Technology Officer, Gresham Technologies



² [Transforming data collection from the UK financial sector: a plan for 2021 and beyond](#)

In summary, banks are faced with more complex reporting requirements, more scrutiny of the data that they use to fulfil them and more severe consequences when things go wrong.

Why data integrity holds the key to compliance confidence

Despite the recent challenges of COVID-19, regulators have made it clear they will not accept reporting errors. In fact, they have indicated that they will be enforcing existing regulations more forcefully. In addition to the Bank of England Citigroup fine mentioned above, Goldman Sachs and Merrill Lynch have also been censured recently for non-compliance with reporting rules.

But ensuring that you are reporting high quality, accurate data is far from straightforward. In many instances, data is stored across multiple repositories, making it easy to miss key elements. Different jurisdictions require different data fields, creating complexity that leads to duplication of effort and unnecessary costs.

“Data comes from multiple systems and in multiple formats and it’s this complexity which can make guaranteeing data integrity so difficult. Working with a data agnostic solution is the only way to navigate this” - Dr. Christian Schiebl, Group Business Development Director, Gresham Technologies



For many firms, their response is an attempt to create a 'golden source' - a single view of the truth. This includes tracking data lineage - how can you verify data's origins to ensure its accuracy?

However, the effort required to create and manage a golden source can also reduce the flexibility and responsiveness of your organisation, stifling innovation. Firms need to get the balance right.

Today's data integrity landscape: Challenges and solutions

Challenge:

Silos and legacy technology

Mergers and acquisition activity and the complexity of financial services has created an internal IT landscape characterised by overlapping systems. Legacy technologies without transition plans or documentation make it impossible to upgrade or maintain these systems effectively, leaving firms too frightened to touch them until the inevitable breakdown occurs.

Solution:

'If it ain't broke, don't fix it' does not apply here. These systems are broken - making it harder and more expensive for your firm to access essential data and putting you at risk of reporting inaccuracies or total failure. Regulators will no longer accept this outcome.

Those working closely with legacy systems need to communicate the scale of the problem - and the consequences - at executive level, to obtain resources to fix them. Avoiding data silos should be a key part of operational future planning and legacy replacement projects should be broken down into smaller components, working with third parties where in-house expertise is not available.

With many firms looking towards a future in the Cloud, there's simply no place for platforms which are not flexible or scalable. Taking a legacy platform into the Cloud simply doesn't make sense, which is why organisations are turning towards solutions built on modern, versatile technology.

Challenge:

Culture

Whilst data is often called the “*lifeblood of the organisation*”, financial institutions have struggled to establish data-centric cultures, with data-related activities frequently overlooked in favour of front-line business functions. Few in financial services join the industry to focus on data, and data-related activities are frequently regarded as a poor cousin to front-line business functions. Whilst the widespread adoption of the Chief Data Officer as a senior position within the firm is a step in the right direction, many financial institutions have much work to do in order to change the culture and establish a data-driven organisation.

Solution:

Firms need to promote the value of data throughout the enterprise, building on the work done around data governance and ownership. Data democratisation should be encouraged to increase the accessibility of data to end users. Appropriate data quality KPIs should be treated with the same importance as other goals and targets. Senior executives must acknowledge the role that data plays in organisational success and critically, ensure that the projects addressing it are adequately resourced and funded.

Solution:

Considering data and operational implications of new business initiatives needs to become an integral part of the process, going back to the culture mentioned above. Firms need to think about how new products will be controlled and settled by the back office, how can new reporting requirements be incorporated? How can issues and errors be detected in near-real-time? These questions must be considered at the outset.

Challenge:

A ‘front office first’ oriented approach

A ‘front office first’ approach to application and infrastructure development can see data and operational concerns forgotten in favour of responding to a new opportunity.

Challenge:

No single view

Whilst the limitations of golden sources are acknowledged above, a recent survey of data managers by [Adox Research](#) found that only 15% of firms have a single view of their data. Where data may need to be viewed through different lenses depending on context, there must be an element of consistency and holistic visibility.

Solution:

The same survey found that 60% of firms use more than 10 systems for security master data, inevitably leading to inconsistencies as this data is delivered via disparate APIs from overloaded systems. Simplifying your processes is vital, and using automation can eliminate the errors that come with human handling of data sources.

Solution:

The cost of tackling data integrity may appear overwhelming - and for firms reliant on in-house IT resources, it often is. Specialist vendors are in a much better position to tackle this complex area cost effectively. It's also important that stakeholders realise that there is a cost to not acting, which comes from the increased time and effort required to access, validate and report your data, not to mention the costs of rectifying errors.

Challenge:

Cost

Financial institutions have multiple pressing needs competing for attention and budget - and at a time where many are expected to 'do more with less'.

“ A global, tier one investment bank that we worked with to replace its legacy solution saved £3 million a year by improving its data and controls. This just shows how the costs associated with poor data integrity can escalate. ”

- Neil Vernon, Chief Technology Officer, Gresham Technologies



Barriers to Data Quality



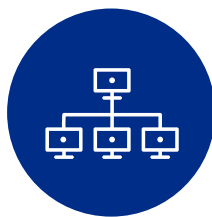
Organisational Complexity

Data held in silos



Lack of Simplicity

No single source of truth



Poor Data Standardisation

Inability to automate workflows



Legacy Systems

Outdated technology unfit for purpose



A Shortfall in Data Integrity

Inability to meet regulatory requirements & expectations with confidence

Upcoming regulatory developments: Is your data ready for change?

Financial institutions face regular regulatory updates that add complexity, increase the number of data fields, and require more frequent reporting.

Consolidated Audit Trail (CAT)

The US CAT introduces the need to map transaction data against counterparties' transaction reports. The volume of trades in scope is challenging - even with an error rate of 1%, a firm submitting 100 million records per day would face one million exceptions. An extremely low error rate is required to meet reporting obligations, and a robust mechanism for counterparty communication to resolve issues quickly.

“The scale of Consolidated Audit Trail reporting is the ultimate motivation for firms to drive their error rates down as far as possible. We recently achieved an error rate of 0.0004% with a major buy-side firm - the key was managing the integrity of the data end-to-end, including validation and reporting.”

- Philip Flood, Business Development Director, Regulatory and STP Services  Gresham

Monetary Authority of Singapore (MAS) OTC derivatives reporting update

With go-live scheduled for October 2021, a year later than planned due to the pandemic, the new MAS reporting requirements mean that insurers, subsidiaries, and other financial market licensees need to report on further asset classes, including equities, commodities, and FX derivatives. Whilst banks and others who are already reporting to MAS on these asset classes may need to make some changes to their processes as a result of additional firms being in scope, the bigger challenge is faced by institutions who are reporting on these products for the first time.

EMIR REFIT, Dodd-Frank and FINRA TRACE updates

ESMA has already consulted with the industry on its EMIR REFIT proposals and is expected to issue further detail later this year, whilst MiFID II and MiFIR are also up for review in 2021. The CFTC meanwhile is planning a re-write of certain parts of the Dodd-Frank Act, which will result in updates to required data fields and validation and reporting timings, and FINRA is looking to make changes to the way that US Treasury Securities data is collected for its TRACE reporting.

Whilst the individual details of each of these updates will no doubt pose a challenge, the real work for financial institutions comes from the fact that they will be expected to continue making updates and adjustments to their data collection, validation and reporting processes – and even seemingly minor adjustments can result in a great deal of work on the back end when solid data integrity is not in place. Moreover, the nature of these updates means that data integrity will be under more scrutiny than ever. Firms should therefore see the need to incorporate these updates as an opportunity to address the underlying data integrity issues which increase their cost etc.

Where to begin?

5 key questions to ask your organisation

Do I understand the root cause of my data errors?

“The issue is that we’re not collecting data properly at source,”

says the director of data management technology at a major French bank.

“The fact that data is in such a mess coming in is what makes it difficult to use.”

Firms unable to manage data integrity at collection will find themselves fighting an uphill battle. The complexity of multiple data sources, feeds and formats is often what makes this so hard. A solution which is truly data agnostic, allowing you to take any data, from anywhere, and use it as needed, without additional transformation work, is key.

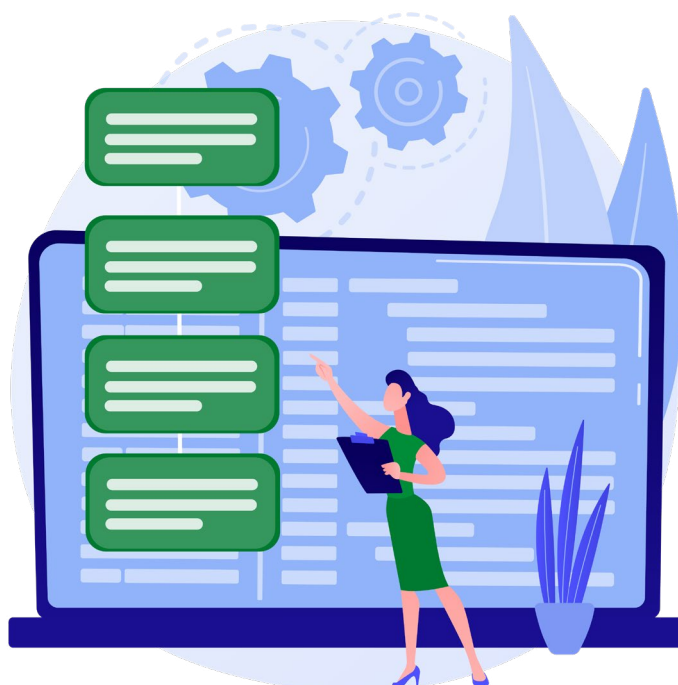
“Visibility of where your data has come from, how it has changed and where it is being used - this is the key to data integrity and control.”

- Philip Flood, Business Development Director, Regulatory and STP Services, Gresham Technologies



Does the business understand the consequences of getting this wrong?

Decision makers and budget holders who do not sit closely to day-to-day regulatory compliance activities will be aware of headline risks, but may not make the link between regulatory reporting and data integrity. The business needs to be aware not only of the risk of reporting failure or inaccuracies, but also of the cost burden that a lack of data integrity places on the organisation.



Are we leveraging automation?

Automation might be the buzzword of the moment but where data integrity is concerned, many firms are still not automating to their full potential.

The Bank of England's report³ outlines the consequences of the manual processes that many firms still rely on:

“[Data and reporting] tasks often require manual intervention as similar data are often recorded in multiple systems using different formats - users need to consolidate millions of data points, recorded by thousands of systems.”

As a result, it said.

“The costs of reconciliations are huge.”

Automation isn't just about making things cheaper and faster, but also getting better results.

Says the head of business data architecture at a Tier 1 European bank:

“Achieving greater granularity and lineage of data enables more use-cases for the data, but it also means greater cost as this is still a manual exercise and there is a need to do it in a more automated way.”

Automation removes the risk of human error inherent in manual processes, which is why many firms are now looking to automate their data integrity and control processes.



Do I have flexibility for the future?

With much of their IT infrastructure based on legacy technologies, many firms lack the flexibility to handle new data sources and formats, not to mention today's fast paced trading environment and sophisticated products. Inflexible systems invariably leave you reliant on IT support, which can quickly become a bottleneck and increase costs. Whatever system you are using to support your data quality and integrity, you need to ensure it is able to adapt to future requirements and scale and grow with the business.

Am I working with the right partners?

With many vendors in the data integrity space, it's important to find the right partner. The Proof of Concept approach will certainly weed out those who say and those who actually do - it's easy to produce a great demo with theoretically perfect data, but the real test of a solution comes with multiple different feeds and formats that have built up over time.

“Automation can deliver some truly game-changing results for customers - one global clearing firm we worked with reduced the time taken to onboard new ETD controls by 97%.”

- Neil Vernon, Chief Technology Officer, Gresham Technologies.



³Bank of England's Delivering Data Standards report, April 2021

Introducing Gresham Technologies & the Clareti Platform: Finding the right technology partner

[Gresham Technologies Plc \(Gresham\)](#) is a leading software and services company that specialises in providing real-time solutions for data integrity and control, banking integration, payments and cash management. Listed on the main market of the London Stock Exchange (GHT.L) and headquartered in the City of London, our 270 customers spanning more than 20 countries include some of the world's largest financial institutions, all of whom are served locally from offices located in Europe, North America and Asia Pacific.

We empower our customers to connect and control their data across their enterprise and the wider financial ecosystem, with a focus on:

- **Reconciliation and post trade automation**
- **Regulatory reporting**
- **Cash management and payments**

Our solutions

Clareti Connect: Fast, simple data connectivity to trading partners, clients, regulators, and more.

Clareti Connect solutions provide the single go-to source for all the connectivity, data migration and integration services you need to build your business's networks with speed and ease.

Clareti Control: Automate data validation, reconciliation and reporting, and processes across your business.

Clareti Control solutions provide the single go-to point for automating all the process and data validation, reconciliation, and reporting services you need to build your business's data confidence with speed and ease.

The Clareti Platform: Technology for today, built with you in mind

Our Clareti Connect and Clareti Control solutions are powered by the latest big data, cloud-native technology via the Clareti platform. Designed by technology leaders with decades of industry experience, the Clareti platform is cloud-ready and enterprise scale, with the flexibility and agility needed for the post-digital world. Effortlessly handling any data, any where, and with a variety of deployment options - your cloud, their cloud, our cloud, or on-premise – it's always up to you.

In June 2021, Gresham completed the [acquisition](#) of Electra Information Systems Inc. (Electra), a leading provider of post-trade automation solutions with a focus on improving efficiency and mitigating risk for buy-side participants, reinforcing Gresham's market leadership position in reconciliation solutions for financial markets. Customers will benefit from the combination of Electra's highly respected buy-side solutions and the power of Gresham's Clareti platform, as well as a rich portfolio of cloud services, covering STP connectivity, data aggregation and control, matching and reconciliation, exception management, regulatory reporting, banking connectivity and payments.



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Data integrity: Your key to confidence in a complex regulatory environment

Clareti Connect supports your business across four critical domains:

Regulatory services: One service for regulatory reporting across multiple regulations and jurisdictions.

STP services: Intelligent straight-through-processing delivering intelligent, real-time automation across the entire trade lifecycle.

Payment services: Complete managed service for message transformation, multibanking, cash, and payments.

Message services: Complete managed solution for getting the right data, in the right format, exactly when and where you need it, across your business.

Clareti Control supports your business across four critical domains:

Transaction control: Reconciliation and control of any type, size, or shape of data.

Regulatory control: Regulatory reporting, control and connectivity delivering real-time, high quality, accurate data.

Cash control: Out-of-the-box, self-service cash reconciliation.

Securities control: Quick, simple automation and optimisation of your securities reconciliations.

Improving Data Integrity to Meet Regulatory Expectations: A Clareti Use Case

How a global, tier one bank simplified compliance for its capital markets and investment banking business

The Managing Director of Global Operations was running out of time to comply with G20 regulatory requirements

Complex regulatory requirements with a challenging deadline

Spiraling compliance costs and an unmanageable workload for IT teams

Outdated, unsuitable controls requiring updates or replacement

Resources diverted from value-adding activity

Concerns about the cost and complexity of future regulatory demands



Clareti transaction control's agile, real-time matching engine

Accelerated implementation of complex new controls

Controls built and managed in partnership with IT

Controls across a range of asset classes onboarded quickly and easily

Front office staff free to focus on generating business

A lean, self-sufficient operation able to tackle future regulatory challenges

Highlights:

Fast, simple compliance

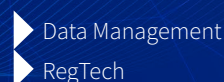
with the G20 regulatory deadline

Strategic

positioning of the operation to meet future regulatory demands



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