



Suade

Push / Pull

Can a pull-based model for regulatory reporting deliver radical efficiencies and present unique opportunities for firms and supervisors?



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01 Executive Summary

The twenty-first century has seen an extra-ordinary acceleration and innovation in our information exchange systems due to the rise of the internet and exponential development of hardware and software systems. Aside from the move from paper to electronic forms, and some updated systems, the information exchange philosophy leveraged by central banks to monitor and supervise the global financial industry has not dramatically changed. But could it? Could the financial industry move to a more regulator-led pull-based system? Would it make sense, what implications would it have and what would the new requirements for that pull system look like? In this paper we seek to explore how the industry could take learnings and experiences from the past quarter of a century to envision what a pull-based system for regulatory reporting would look like.

02 Introduction

Since the beginning of time, people have had the need to exchange information and objects. Inherently, the only two ways to get something are to receive it or to take it. Because of this fundamental design of exchange, our communication and economic systems have evolved to reflect this two-way dynamic.

Colloquially, this is known as either “pushing” or “pulling” models and our Information Technology systems have developed along the same lines. The terminology manifests in many ways such as "sender/receiver", "client/server" and "provider/consumer", but fundamentally, they all describe the same exchange relationship. Someone can push information to you, or you can pull information from them. These two approaches to communication are not always inter-changeable and where people or physics are involved, there is often an obvious preference like queueing at the post office or getting food from a buffet. But technology systems are



different. They can be silent, always-on, microscopic, move at the speed of light and increasingly cheaper to develop and maintain.

Technological advancements of the past decade have given us dramatic improvements in the capabilities of software and applications for automation, insights and analytics. Coupled with advancements in hardware, sinking costs of infrastructure and the rise of the cloud, more data than ever is being created and captured, notably within the financial system. This goes hand in hand with ever higher expectations in terms of data quality and timeliness required for supervision by authorities in their decision making. This was the Bank of England's premise when it undertook the writing of its discussion paper "Transforming data collection from the UK financial sector", published in January 2020, aiming to shape the evolution of reporting over the next 5-10 years. The Bank of England's paper sets out the three key themes of a discussion process involving over 200 stakeholders, and the possible remedies for the challenges data collection is currently facing. Among the key themes to explore, the most revolutionary was the possibility of performing data collection via a "pull model".

Traditionally, supervised firms have "pushed" data to their supervisors. This means sending a pre-defined, aggregated report on a periodic (daily, weekly, monthly, quarterly etc.) basis that can be processed and analysed. It is easy to see how we have arrived at this system when one considers that this push model of regulatory reporting is simply a digitisation of the decades old approach of filling in forms by hand and sending by post and later electronically.

“This push-model of regulatory reporting is simply a digitisation of the decades old approach of filling in forms by hand and sending them in the mail and later electronically.”

In the world of communications and IT, there also exists the “pull” approach, which is also a familiar concept in banking. Consider the difference between pushing a one-off payment to a friend via your bank’s mobile app versus setting up a direct debit for the utility company to pull your monthly invoice amount from your account. The reasons for choosing one approach over another relate to considerations of control and timing. Therefore, one can imagine an alternative regulatory approach whereby firms make data and reports readily available (like a data-room) so that supervisors can pull the information rather than have it sent to them at regular intervals. In other words, a pull-model is a system where control is handed over to the puller (the supervisor) to define technical specifications for how and when reports should be created and formatted. At first glance, this seems like an approach more consistent with prudential interests. There is even some evidence of this approach being implemented successfully already. Taking a deeper dive into this topic, however, reveals more nuance and complexity. Regulatory reporting, it turns out, is a lot more complicated than paying your electricity bill.

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Defining Pull: non-granular is a non-starter

Before analysing the costs and benefits of a pull model, it is important to define the pull model in more detail. The review set out in this White Paper was informed by many conversations with industry executives and bank supervisors. A common thread in these discussions was the view that pulling the same aggregated reports on the same dates as a firm would push them would not yield benefits exceeding the attendant risks and costs. While there may be some efficiencies in terms of data duplication and



storage costs, aggregated reports themselves are not very large and storage costs have been decreasing exponentially for decades. So any benefit from a data storage point of view may be overshadowed by the cost of change and other indirect costs and obstacles that can arise when altering a decades-old approach. The pull model envisaged by the experts we spoke with therefore implies a much greater shift in the operational process that would also drive much greater efficiencies and benefits.

We define a pull model for regulatory reporting as one where regulatory data is directly sourced from a well-defined, complete and granular data standard that each institution is required to maintain and make available via standardised APIs and protocols. This data would be at a product-level and most likely represented at an end-of-day balance or position level of granularity rather than fully transactional. The pull model would allow for a supervisor to apply standardised logic directly to this standardised data to improve data quality, improve report comparability and reduce the burden of implementation on firms. Importantly, ad-hoc requests for granular underlying data would be easier to produce.

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03 The push model status quo: why change?

The push model has obvious benefits

The benefits of the push model are clear. Reports can be validated, reconciled and signed-off before being submitted and data can be cleaned, prepared and explained to ensure effective risk data management principles. Having a clear cut-off and handover of the submission files also creates a clear division of roles and responsibilities between regulator and regulated firm. Furthermore, a push system is typically employed in situations whereby production is initiated by an anticipation of demand. As demand for regulatory reports is pre-defined and recurring, a push production model allows firms to optimise their reporting supply chains to meet these just-in-time demand requirements. The push model does also present some challenges, however.

But there are many challenges in a push model

Firms face data management challenges at distinct stages of the regulatory reporting process:

- Interpretation of the global regulatory reporting standard as well as jurisdiction's regulatory reporting rules and requirements – whose transposition into national law may vary from jurisdiction to jurisdiction;
- Transformation and interpretation of internal data into regulatory concepts and definitions;
- Implementation of numerous, complex calculations, which are continuously evolving as firms launch new products and responding to Q&As received on edge cases and rule changes.

A member of the industry noted that although banks often categorise the reports they need to submit in terms of complexity and/or importance,



regulators expect consistently high data quality in all reports and once a report has been submitted, it is outside the firm's control. The process for re-submissions can be onerous as the entire process often needs to be re-run and a new submission pushed. Ad-hoc queries can be difficult to fulfil as well, as they can be requested without advanced notice, with a tight turnaround time and for granular information that is not always easily retrievable.

Using the theoretical exercise of "How would aliens design this system if they arrived on Earth today," one industry specialist highlighted that "financial institutions spend billions of pounds in compliance each year, when there are certainly better and cheaper ways of doing things if we could start over. Perhaps only a quarter of regulatory reports are used for a bank's internal management purposes. Many are simply informational or not relevant to how the firm manages its operations." Others emphasised the significant dependence on regulatory subject matter and policy experts whose services are costly, few and far between. A general sentiment amongst practitioners is that, in an ideal world, less time would be spent on producing and submitting reports and more time spent on analysis and insights.

Challenges for supervisors

The push model creates a duplicate of everything in the regulator's file. This can be seen as a benefit - having an unalterable version of the file. But this also means that submitted data is disconnected from its source. If there is a gap or error in the data, it might take days or months for the firm to resolve after the fact. This can create frustration on both sides, but ultimately it blocks the supervisory work.

Receiving, processing, maintaining, and sharing the regulatory data of an entire industry is an immense undertaking, which often challenges the resources and budget available for these projects at public sector

institutions like central banks and supervisory authorities. If the IT burden of storing, processing, and presenting the data could be done firm-side, it could provide significant IT savings for regulators, in the same way that many apps are accessible in the browser with all the heavy lifting being done server-side.

Furthermore, without an underlying granular data standard, regulators are unable to source and compare detailed information easily. Due to this lack of granular data standardisation, the supervisory process can often require a supervisor to understand the proprietary internal semantic naming conventions, systems chains and data interpretations when conducting analyses that are more granular than the report level leading to additional burdens for firms and supervisors.

A push model also creates a lot of redundancy

Another key aspect of every firm pushing everything every time is that there is a lot of redundancy of roles, interpretations, processes, systems, data and therefore costs. A pull model could allow for greater centralisation of these steps in the regulatory reporting process, leading to greater efficiencies and a streamlining of costs and processes.

04 The allure of the pull model

Pull could remove the need for regulatory reporting entirely

The unquantifiable unknowns in regulatory reporting come from interpretation. The process of determining how to classify or process a firm's data based on regulatory text can be time consuming, ambiguous, and costly to implement and get wrong.



Interpretation and discretion are sometimes intended in regulations (determining if a deposit qualifies for higher outflows by determining if the deposit pays a rate of interest significantly exceeds the average market rate), but more often than not interpretation is an unintended consequence of trying to codify and classify an interconnected and complex financial system in simpler terms. Even the above example could be codified by defining “significant” as 50% over the risk-free rate for example.

The reason that interpretation causes issues is because ultimately, data and software are absolute, and classification functions return True or False. Consequently, each interpretation must get resolved to an interpretation-free state to be implemented. Conducting this interpretation at the supervisory level is therefore beneficial from a cost efficiency point of view.

Interpretation can manifest itself at the data level - e.g., maintenance of a database column titled “above market rate”. Therefore, to free firms from interpretation at the data level, a granular data standard must be defined concisely and re-enforced with examples, Q&A on edge cases and agile enhancements.

Interpretation can also manifest itself at the logical software level - e.g., a piece of code executed at runtime comparing the current rate to a variable representing a significantly higher rate. To eliminate interpretation at the logic layer, supervisors would need to pull the unambiguous data defined above to then execute a common and unambiguous set of calculations and rules to achieve the key figures and ratios for capital, liquidity and so on.

This is the true, visionary allure of a pull-model. Put simply, if the regulator has all the granular data from all firms, they could create any metric they are interested in by slicing and dicing the data to suit their needs, removing the need for reports entirely.

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In this future state, it is plausible to assume that there would be an instant reduction of the number of policy experts, implementation projects, IT systems and staff needed at each bank greatly reducing the costs associated with compliance. Industry experts agree that if new requirements and ad-hoc requests can be satisfied by the existing granular data, the costs and time to react to regulation significantly reduces, albeit with reduced visibility from the firm’s perspective.

Much like the way users can leverage web-based systems without having to locally store and process all the data, a pull system also means less of a need for the processing and storage capabilities on the supervisors’ side as data and reports can be re-created as needed. Finally, we can consider that the pull-model reduces risk of human error in data processing as there are fewer manual adjustments to the face of reports.

A pull model could lead to more agile regulation

With the pull-model, regulators could indeed flexibly build new regulatory templates without action required by the financial industry; they could even start tailoring rules for market conditions or firm types as they get the data at the source. With each firm making their data more transparent, more catered monitoring and supervision techniques become possible for different business models and different firm sizes/types. The pull-model will also necessarily advance the analytics capabilities of supervisory authorities, support data-driven decisions and predict future trends. An experienced industry practitioner noted that “the regulators having all this

granular data available will help them spotting defaults quicker as well as understanding broader systemic challenges, thus managing risk better and maybe even preventing the next crisis."

"The pull-model gives more agility to regulators."

With pull you can choose to get just what you need

One might question whether a pull model adds any value if we already assume that reports are being generated from a granular data standard. Ad-hoc queries are typically targeted to certain product types, reports or firms. Rather than pushing the entire granular data set every time, a pull approach would allow supervisors the ability to only pull what is needed for analysis, in the form of a "drill-down" which is likely to be much less than the full data set. This approach is akin to the benefits of running a SQL query to select only the rows in a table that match a criterion rather than being sent a full extract of the entire table each time.

Pulling can be better for privacy and confidentiality

When dealing with granular data, security and confidentiality become even more important. First, because regulators do not have to store a permanent copy of the data in a pull model, there is less risk of cyber security breaches on the data used. Secondly, the benefit for supervision is anonymity of the request for data. "In periods of market turmoil, it often becomes clear to the supervisor that a particular type of exposure or a particular company or sector is a source of significant risk", stated a former supervisor. "Supervisors will then try and gather as much information as they can on those exposures without having to resort to ad-hoc queries to gather data with a set of specific requests. The reason for the caution is that once the

supervisor queries a detailed data set, it can become a material signal for firms and inadvertently affect the market. Why does the supervisor want to know about our exposure to XYZ Corp? Is there a problem there we should be looking in to?”

05 Key considerations for a pull model

What is the cost of change?

Industry experts highlighted that it is necessary to consider the significant costs required to revamp the current system. Due to the considerable cost and effort to make such a major change, the industry is unsurprisingly reluctant. A regulatory professional from a smaller firm argued that any change in the mechanics of the regulatory system would disproportionately affect smaller firms without the resources to re-architect their systems. Participants from G-SIBS had other concerns: “We have to get to a global standard to actually realise these efficiency gains. If regulators are not moving in unison, then it becomes simply another, entirely different regulatory reporting regime to support without being able to switch off the legacy systems. A phase-in approach, by report or jurisdiction could last decades, leading to the counter-intuitive outcome being an increase in costs in the medium term.”

A pull model might create a reverse-push model

Once a granular data model reaches a certain level of maturity, it would virtually end the need for regulatory change management on the side of financial institutions after a few iterations. The methodology would also ensure timely data without the need to come back for more details. But if

firms are no longer generating their own regulatory reports and leaving that task to the supervisor, how will firms monitor and understand their compliance and breakdown of RWAs, capital, leverage, liquidity ratios and other metrics? Ultimately, the responsibility to remain within the thresholds of compliance stays with the regulated firm. A financial industry executive pointed out that “in order for firms to maintain an understanding of their position vis-a-vis prudential regulations (comparable to the view they have today) the regulator would have to effectively feed the reports back to firms. This information would likely arrive even later to a firm’s management, after the submission date, without the benefit of interim and draft reports or MI reports created from regulatory metrics leading up to a submission date.” This feedback of information in line with key deadlines for firms to assess their compliance starts looking like a push model, but in the other direction, from regulators to firms. Without a notable change in the legal and regulatory framework, a pull model, in practice, would manifest itself as a reverse-push.

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The responsibility still lies with the firm

“Even if we assume that the feedback of reports and key regulatory metrics generated is perfect, banks will still need to conduct their own analyses and reports on the data for their own benefit,” stated a regulatory reporting lead. Furthermore, without systems in place to replicate the reports generated by supervisors, firms would be unable to answer any further queries or generate further analytical insights. Finally, data quality is not directly addressed by a pull model as the responsibility still lies with the



producer of the information. And understanding quality means running aggregations, validations, reconciliations, in other words, running reports. A pull model with complete delegation of the reporting responsibilities does not delegate the compliance responsibilities of firms to have effective risk data aggregation and risk management practices.

An industry representative was quick to point out that, “in the push model, firms have considerably more information than the supervisors and if this information symmetry were to swing the other way by virtue of a pull system, you can bet that firms would double down on internal systems to go beyond regulatory requirements to regain that information advantage to effectively respond to ad-hoc queries.” This suggests, again counter-intuitively, that delegation of reporting duties in this manner could lead to an increased investment in regulatory systems and costs.

A former regulator also drew attention to the fact that pull means potentially more onus on the supervisor to digest, understand and respond to the data. “Banks currently have several sets of books - the general ledger, the risk management and the statistical systems. Having a pull system would require the banks to produce everything on all three bases or agree with the supervisor what should be available and in which book.” This overhead for regulators of trying to understand each firm’s set of books and systems at a granular level could present many operational challenges.

“Firms don’t have a problem sharing the data, being transparent, but they are concerned their data will not be understood or interpreted well. In a pull-model, firms are still accountable for the data and its quality, but not for the interpretation”, argued a member of the industry. “The regulator might not interpret data the right way, see the full picture or make the appropriate assumptions for missing or default data values. Another regulatory practitioner worried if “it could be dangerous for the supervisor to make decisions that may affect the industry or other firms based on data pulled from our systems that was incorrect or subject to interpretation.”

A centralised service provider is not favoured by firms

An alternative solution to not put the pull burden on the regulator would be to designate a central authority or joint venture between banks to do the collecting, reconciliation and standardisation of the data. This approach is used in the context of MiFID and EMIR for transaction reporting, with trade repositories or the AuRep model employed in Austria. But according to an experienced industry member "moving everything to one centralised place for the industry so regulators can access it is too much effort, an operational nightmare."

A technical lead for regulatory reporting further highlighted that "banks want to protect their data, and how to ensure data is handled securely if you're putting an extra step in the middle? Anytime you open your data to more people, that brings compliance issues."

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A technical expert working on central bank data projects stated that “with the technology available today, there is no need for a central counterparty anymore if the right standards and protocols are in place. A central service provider just adds costs with benefits you can easily achieve with the cloud and APIs. It would just create another layer of reconciliation for banks, certainly costing as much or more than the current model.”

Operational and technical practicalities for regulators

There are technical implications - such as the mechanics of pulling and storing large volumes of data securely and accountability in the event of a

security breach – that would need clarification and understanding. Banks might feel unease about the regulator or central bank having direct access to their systems, notably for security implications but also because they want to ensure their commercial confidentiality. They do not want their pricing strategy to be leaked to the competitors for instance. A financial director also asked the question about the General Data Protection Regulation (GDPR). “With GDPR, who is the data owner? Who is the processor? Lines get blurred. And ultimately the reputational damage will fall on the firm”

Central banks cannot effectively replace all the IT departments of firms and would have to learn too much about each firm’s data/operations to build meaningful IT solutions. However, a member of the industry recalled that “regulators should not have access to personal data all the time, as usually firms anonymise the documents they provide - except in certain rare cases as money laundering”.

06 Conclusion

Push is still more optimal for now

For most industry members, pulling does not seem like a realistic goal, even in the longer term. A seasoned regulatory reporting expert raised that data obstacles could make this a deal breaker: "Some banks cannot even get granular data from other branches of their own company, only aggregated ones. Sometimes regulators in one jurisdiction forbid granular information on transactions going to regulators in other jurisdictions. This could be for legal reasons (e.g., Switzerland) or operational ones." Several participants expressed concern that the dream of a real time view of data that is sometimes touted as the end aim of the pull model would never be achievable for fundamental reasons. “Data is messy in essence, it takes



time to clean it, checks and reconciliations are needed. This is a necessary human step to sign off and sense check. A real-time view would only be possible if regulators concede a level of precision, for data to be less than perfect." On the topic of how frequent data could be made, pull-ready participants said it would depend on the firm. The general sentiment was that it would be "impossible for banks to do daily reporting across the board, because banks cannot close the books every day, with the same precision as it is done at month-end. And this takes even more time when the bank has branches in different countries, with different time zones. Although it potentially could be achievable for smaller, single entity firms." Given the challenges of making data readily available a data expert asked, "but then is it worth switching to a pull-model if the data is not actually available on-demand?"

A former regulator looked at the timeliness problem through another lens. "Banks generally don't have real time data; but maybe it is not necessary. It wouldn't really make a difference because supervision also takes time." The trade-off that exists between more frequent and more accurate datasets remains a recurring theme.

Firms agree that there could be potential benefits of moving from a push to a pull model if certain reporting processes could be disabled, but then have concerns about how those requirements would be monitored and met.

A hybrid push-pull paradigm seems like an optimal solution

Achieving pull has many challenges, some of which may be insurmountable such as the change in responsibilities, the new burdens on regulators to produce reports and moreover, "banks would not want to create a data set to be used in addition to the existing reporting" added an industry member.

“Regulatory reporting systems have been built over decades, based on templates. Technology changes faster than philosophies. If the system were to be re-designed today, we might favour a pull model but now the push system is in place, it is not easy to shift for a different type of architecture. It is an immense piece of work.”

“What could interest firms is a system that reduces their effort to compile filings and also answer questions”, argued another expert. Therefore, a best-of-both-worlds solution could be designed to combine both push and pull mechanisms together.

We have already discussed how a push paradigm favours production of reports ahead of a perceived demand. This works nicely due to the continuous regular demand for (e.g., monthly) reports by supervisors, like a restaurant diner who has ordered the tasting menu - frequent and predictable. Contrastingly, a pull paradigm favours the production of data on-demand, once demand has been established. This is more akin to a diner at a buffet ‘pulling’ only the dishes that interest them. Of course, it is rare to see a restaurant that offers both a tasting menu and a buffet – it requires two different kitchen infrastructures. But technology is more flexible than food and the financial industry already leverages both architectures for other purposes (e.g., payments).

A hybrid model would aim to keep the push-based approach for the regular pre-defined (e.g., monthly) reporting, and use a pull mechanism to service the ad-hoc or targeted analytical queries. This hybrid model would provide the greatest additional value to all stakeholders with the minimum disruption to current processes, particularly if some legacy processes can be switched off.

As we look towards the potential benefits of a hybrid model, we must recognise that the first step in this journey is a globally harmonised set of data definitions for financial products and concepts.

Nothing is possible without harmonised data definitions

Clear rules from the regulator and data harmonisation are essential to this paradigm shift. For the pull model to work, regulators must define what data elements would be pulled, for what purpose and in what shape.

Industry experts lamented that “many regulator-led projects suffer from an overly academic and technical approach to data modelling and taxonomies that creates barriers to understanding which leads to these solutions not being useful for reporting firms.” An interviewee mentioned that “XBRL might be technically very sophisticated, but no one in our firm understands it, we are entirely reliant on vendors.”

Data definitions should consist of clear semantic definitions targeted at subject matter experts with the technical implementation being kept as simple as possible. Another key point is around harmonisation, regulators must make more effort to align these semantic definitions across regulations and jurisdictions. “In the US, even between the various departments at the national regulators, they are not always aligned on the granularity of the data they want, and often two different definitions will exist for overlapping concepts between regulators”, explained a member of the industry. “All the regulators do not want the same thing, there are different use cases. But we must still be sure to call an apple an apple.” “Cost is only mitigated if the requirements are clear, streamlined and rationalised.”

A senior executive emphasised that “the way data is delivered matters much less than creating a consistent standard view of definitions so the information can be efficiently understood and reported to the regulator. The key is a granular standardised data model, either in a push or pull model. Regulators and firms must be looking at the same data and have a common understanding of the same thing. Everything should be built on open data principles.”

All interviewees favoured a more collaborative approach between firms and regulators. A regulatory reporting lead commented that "In the US, banks already collaborate on standards definitions through professional associations, but it is not very efficient. Regulators must be part of the conversation as they have the final say." Several interviewees praised the Bank of England's open and interactive approach to their Transforming Data Collection initiative. Others had the viewpoint that leadership should come from the industry where the real edge cases, interpretation and implementation challenges get surfaced. "Harmonised data definitions that are so essential for regulatory reporting to move forward have to come from the banks, and then be refined by the supervisor", a technical lead highlighted.

A former central banker suggested a more collaborative approach to cost reduction: "I would really push the partnership aspect of this. The supervisory authority's entire technology budget might be about £40mn. The cost to the industry is a conservative £4bn. If regulatory reporting is determined in a way to keep the £40mn cost under control, the £4bn is likely to spiral even further. Instead, better to think that there is a £4.04bn total spend. How can we reduce that by half or a third? And let's worry where the cost falls later."

07 Next steps

As outlined above, the push system continues to hold greater appeal for banks than a pull system. This is due to the high cost of redesigning the system at a time when the industry has already spent – and expects to spend – significant costs in complying with recently adopted and soon-to-be implemented regulations. Thus, the shift to the pull model would have to be mandated for it to occur, as banks are unlikely to adopt it unless required



to do so by regulators.

It may be preferable that banks be encouraged to move in this direction, bearing in mind their common goal: greater operational efficiency through cost reduction and a streamlined and efficient regulatory process that keeps regulatory burden to a minimum. A hybrid model could be a solution, provided there is no overlap between the push and pull models. It should be ensured that the data that is pulled is not pushed in parallel.

Moreover, since the industry already spends a significant amount of money on reporting, it should be kept in mind that it already has a dedicated budget. If regulators were more explicit about the fact that they will be leading a shift to a new model, then we could imagine the cost of the redesign being part of the banks' current expenses.

But even then, the banks want something in exchange for such a harrowing process - a trade-off. A suggestion was for regulators to provide them with market intelligence derived from the data they collect. Real-time monitoring could also be used to develop stress test scenarios for banks and for prudential oversight considerations. This would require timely provision by the regulators of such scenarios and of early warning signals about counterparty exposure that were pulled by regulators in real time.

Having clarity from regulators about their expectations is an important prerequisite for the transition to another system. The lack of clear direction means losing current transformation resources and spent for the industry. For the pull model to work, regulators would need to address data standardisation seriously, at least for the subsets of data to which they want to have access. At the global level, data standardisation is unlikely, but data harmonisation is achievable and could bring the industry closer to similar guiding concepts.

Proposed next steps

In order to move forward and build upon these conclusions, we propose a concrete set of next steps for a proof-of-concept or minimum viable solution with an actual regulatory reporting use case.

For this, we propose using a report(s) where the reports themselves will be straightforward and consist mainly in offering various slices and aggregations of otherwise granular data. Another benefit of these reports will be that the relative ratio of reported data to underlying data will be quite high. This means that the technical and practical challenges of supplying the reported data will be at a similar (or closer) order of magnitude as the underlying data required to produce these reports.

We propose the following examples:

- FR2052A Liquidity Report in the US which is often already informally called a ‘data dump’. This report consists of many tables of quasi-aggregated data and each iteration (eg. 5G, 6G) that makes modifications to definitions or granularity could become easier if the full granular data set is well-defined and available to begin with.
- Statistical Reports, such as the Bank of England DQ template (an initial use case proposal for the Transforming Data Collection project). DQ report relies on only 4-5 attributes of the derivative contract (e.g. type, asset/liability, currency, counterparty type). Submitting this information as a CSV file would be potentially easier for firms, more lightweight than an XBRL file and also provide supervisors ways.

Additionally, all industry professionals agreed that more clarity and certainty around the future state from regulators would also allow

firms to plan ahead and focus some of their current ongoing transformation spend with the future state in mind. So certainly that a granular data model or a pull model will be adopted, even if target dates are still unknown. Specific timelines are less important when there is still certainty of something happening. The Fundamental Review of the Trading Book (FRTB) was on the horizon as a future state for several years and this helped firms prepare data, systems and processes for the eventual implementation date. The implementation process would have been much more challenging for firms if there was uncertainty about whether or not FRTB would need to be implemented.

In the longer term, when thinking about a change in the way information is exchanged between regulated firms and regulators, one must also consider the changes it will require in the reporting philosophy of the industry. Further reflection will be needed: What does supervision mean in 2030? Can we keep supervising a fast-paced, global system with data that is three months old? Banks admit to using only 25% of regulatory reports to manage their business. Can some less insightful reports be phased out if a pull system is in place? Are trends more important than absolute accuracy of figures? Could we accept less precision and more ad-hoc monitoring? Such a trade-off of timeliness of reporting / accuracy of data would favour a pull-model.

The pull model still leaves a lot of unanswered questions, but we hope this paper has helped raise some key considerations.



Special Thanks

This whitepaper is the product of 21 interviews conducted during November 2022. We would like to extend our special thanks to the members of our Regulatory Council, [Bill Coen](#), [Bill Dudley](#), and [Lyndon Nelson](#) and the many other individuals interviewed within the financial industry and public sector institutions that have contributed their thoughts and insights into this topic.

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