



Financial Services

## *Taking Digital Regulatory Reporting from Concept to Reality*

At a roundtable that took place in Summer 2018, bankers acknowledge that straight-through processing of regulatory returns is coming, albeit along a circuitous path as details and kinks get worked out

Industry roundtable on the FCA's Call for Input on Smarter Regulatory Reporting

# Taking Digital Regulatory Reporting from Concept to Reality

**We often are implored to work smarter, not harder. Like many worthy ambitions, this one can be easier to aspire to than achieve, and that is shaping up to be the case when the work concerns the automation of compliance and regulatory reporting.**

In its Digital Regulatory Reporting (DRR) project, the U.K. Financial Conduct Authority (FCA), in conjunction with the Bank of England, has invited financial institutions to explore ways to work smarter on these activities by delegating much of the hard work to technology. Success in the endeavour, as the FCA put it, “opens up the possibility of a model driven and machine readable regulatory environment that could transform and fundamentally change how the financial services industry understands, interprets and then reports regulatory information.”

Part of the project’s work program was a two-week “TechSprint,” held in November 2017, that was intended to test the feasibility of fully automated regulatory reporting with straight-through processing of regulatory submissions. Among the anticipated benefits, accruing to financial institutions and regulators alike, are greater accuracy in data submissions and reduced time, cost and overall effort in generating them. The TechSprint demonstrated that DRR could be accomplished under such controlled testing conditions and provided a proof of concept. Since then the program has held an extended pilot, as well as industry-led roundtable discussions bringing industry experts together, to try to determine whether and how DRR could be scaled up and put into practice in the real world.

The chief aim of the roundtables is to go over issues – legal, technological and regulatory – that could facilitate or impede the introduction of DRR. Participants in the latest and final one, held in London in June and hosted by Wolters Kluwer, seemed intent on contemplating the limitations of the concept: attempting to identify what a system might be able to do by acknowledging what it most likely will not be able to do. One thorny matter that was highlighted involves a potential conflict between DRR, which participants generally agreed would be most effective following hard and fast rules – ideally by using a standardized model encompassing many supervisory frameworks employed across multiple jurisdictions – and the principles-based supervisory architecture that has evolved since the global financial crisis. If a substantial portion of the reporting process is handed over to machines, will management judgment be forced to take a back seat in matters of risk management, compliance and overall governance? Put another way, how compatible would DRR be with post-crisis supervisory architecture if interpretation of regulations by bankers is deemed a feature of the latter and a bug of the former?

The discussion, held under the Chatham House rule, which allows remarks to be disclosed as long as speakers are not identified, devoted much attention to other trade-offs that may have to be made. For instance, if a reporting system is limited to a handful of fixed rules, will it stifle technological innovation? If a standardized model proves impractical, at least for the foreseeable future, and each reporting system is given a narrow brief, covering just one regulatory framework or type of asset, say, or activities in a single country, will consistency be sacrificed?

Another subject of interest was the division of labour, including how active the various constituencies – industry professionals, regulators and technology providers – would be in developing and maintaining DRR capabilities. A related concern was over how to resolve issues involving fault and liability that are bound to arise when something goes awry. Even in the better tomorrow that we all hope for, someone will have to take the blame when things go wrong.

Perhaps befitting a big idea in its early stages of development, and the complex, imperfect world into which the fruits of the idea may be put into practice one day, the discussion featured many more questions and opinions than firm answers.

## The quest for one model for all occasions

In the coming age of DRR, sophisticated software, backed by powerful hardware, will read, analyze and submit data to authorities with minimal human intervention. That's the plan, anyway.

As the imaginable evolves into the feasible, it's time to ask the tough questions, starting with: What exactly will the machines be asked to do, and will they be able to convey enough information accurately and consistently to bankers and regulators to permit them to draw the right inferences and insights about their institutions and the financial system, respectively?

As those questions were put to participants at the London roundtable, the answers coalesced into two conclusions – the good news and the bad news: A standardized data model is the best foundation for a DRR system, and there are solid reasons to doubt that one will be implemented for many years – perhaps five at best, but more

likely 15 to 20. Some participants noted that standardization efforts covering certain spheres of financial activity have been tried, with only mixed success. Their aims have been more or less ambitious, and efforts and desires to comply have varied. In one cited example, the G20 countries agreed in 2009 to standardize financial instruments and do cross-border aggregation. Seemingly far simpler tasks than the industry and regulators have in mind for DRR, but the job remains unfinished.

It would seem as though a true standardized DRR model would have to be as inclusive as possible, almost by definition, operating across a wide range of frameworks and jurisdictions. But variations in the scope of frameworks under the existing architecture, and in supervisory standards and practices in different locales, as well as technological capabilities, would limit the effectiveness of such a model.

Something more limited in scope was thought to have a better chance of success. A workable model that was intended to cover a certain regulatory scope, or a group of related ones, or that was created to apply in a single country might be an easier bar to clear, with it also being the best starting point toward a more standardized data model. For something broader to be effective, it would have to be based on a “skinnier” rulebook that included common terms for certain concepts used across regulations, one participant said. A similar suggestion was to devise sets of common reports, data fields, taxonomies, products, along with actions for each product, that would apply to everyone everywhere.

Still others thought that a machine-readable, but not -executable, system stood a better chance of working, or else that machine-executable operations should be limited to matters of prudential regulation instead of matters of conduct, which have a greater contextual element to them.

Perhaps taking the reasoning further than initially intended in the FCA mission statement regarding DRR, the extent to which regulations would have to be rules-based, rather than principles-based, was among the most widely discussed topics. Many agreed that a DRR model, even a less ambitious one, would be most conducive to a set of formal, prescriptive rules that left as little as possible to interpretation. After all, how would something like the Senior Managers Regime be

convertible into 1s and 0s? But as the existence of such a regime shows, supervisors have asked senior managers to rely on flexible principles to guide their planning and decision-making. Simpler does not necessarily mean simple, either. While explicit rules may be more compatible with DRR technology and objectives, it was acknowledged that they can be deceptively complex.

Not every rule can be expressed as machine-executable code, and the ones that can may be easier for institutions and technology innovators to avoid or evade. Other rules, while ostensibly straightforward, may incorporate principles, imploring parties to “act reasonably,” for instance, or to make other judgment calls. Others have ambiguities embedded in them, by accident or design, that would have to be eliminated or somehow accounted for in any machine-readable system.

It was also pointed out that any system of rules is necessarily a moving target. New ones come along all the time that would have to be added to the analytical framework.

But more hopeful perspectives were proffered, too. The mere act of setting the goal of developing DRR capability and taking steps in that direction might steer regulatory authorities to synchronize and standardize their protocols and firm up definitions within rules.

Several elements in the existing supervisory architecture, moreover, could serve as the scaffolding on which to build a standardized model. Previous initiatives have been more or less successful, and more or less ambitious, in standardizing the information. The Legal Entity Identifier (LEI) initiative, though limited in scope, has become a staple of clear and unique identification of participants in financial transactions, and the Banks’ Integrated Reporting Dictionary (BIRD) seems to be getting some traction as well. But authorities will have to help the construction project along, mainly by improving cooperation with one another and with the industry to ensure that clear blueprints are followed. And institutions will have to make sure they are using the right tools to put a solid foundation in place.

## Paving the way, in any direction

The roundtable outlined steps that institutions and regulators could take to help ensure the success of a DRR model, whatever form it might take, whenever and wherever it were implemented and whichever regulations might be covered. Many measures would serve the industry well under any compliance and reporting backdrop, human or machine. Some might be difficult to implement, however, because the future, at times, is fated to be a victim of its past.

Making DRR happen, especially with a standardized model, will require banks and supervisors to use different means to work toward the same intermediate objective: achieving clarity and consistency in data management. Regulatory authorities will have to approach their task with greater precision and cooperation, and institutions will have to integrate and update their data systems, albeit at great expense, most likely.

The drive toward DRR is a good catalyst for firms to do some spring cleaning by reviewing their data architecture and ridding themselves at last of silos. Participants were encouraged to work toward creating a central data repository, and then to foster efficiencies and synergies by developing a uniform regulatory rules engine covering business and data field definitions and common calculations.

To aid in the effort, a bank might set up a steering committee, staffed by technology and data experts, among others, to analyze global regulations with an eye toward finding those synergies, create a common regulatory data model and dictionary, and map out where all relevant regulatory data is located within the firm. But the prevalence of legacy systems in the industry, built up over many years for various purposes with little overall planning, would make this a challenging undertaking. One participant brought up a 2015 Deloitte report that highlighted the reliance on legacy systems. Of the 55 billion euros that European banks had spent on information technology the year before, the report said, 85 percent “was used to ‘bolt-on’ more systems to the antiquated existing technologies and simply keep the old technology going.”





The presence of so much legacy technology is a particular hindrance because everyone's architecture is different, guaranteeing divergent approaches to data management across firms and making industrywide consistency all the more difficult to achieve. Data is not treated at the same level of granularity for all instruments, for example.

For their part, regulators can help lay the groundwork for DRR by approaching the same mission from the opposite end. They should scrub their rulebooks, simplifying their structures and coordinating and harmonizing them with one another to ensure that they are asking for similar things by similar names. Authorities were cautioned to be more precise and to seek consensus in their classifications and definitions to lessen ambiguity and improve overall effectiveness. When clarity is lacking, banks are inclined to fill in the blanks and provide their own interpretations of rules.

The onus is on regulators, many in the discussion felt, to create a common DRR data model, or at least the raw materials for one. They were encouraged to focus first on a set of universal rules and to broaden it out from there.

That would require a high level of collaboration, something that is seen to be lacking. It was pointed out that there are initiatives promulgated by various authorities to create data dictionaries, for instance, but that they won't be aligned with one another. A useful step, it was suggested, would be to connect data through a semantic model – based on the meanings of factors in the context of relationships among them that exist in the real world – rather than rely on static definitions. That would make for easier execution and updating and would persuade regulators that rules were being applied consistently.

Although the agency has articulated its intention to emphasize a rules-based approach to DRR, the FCA was encouraged to sort its regulations into categories based on the extent to which they are rules based, and therefore more compatible with a DRR system. Binary rules could clearly be coded. Ambiguous regulations would be excluded from the system. An intermediate category, learnable regulations, could be left to the system to figure out using neuro-linguistic programming techniques.

## One for all and all for one?

Cooperation and collaboration of all sorts were big themes during the discussion. Much consideration was given to whether DRR could be implemented using a utilities model, in which relevant compliance and reporting obligations from a group of banks were ring-fenced, possibly to be outsourced to a third party.

Opinion was mixed. Outsourcing might work on tasks on which banks don't compete, such as know-your-customer provisions. In other areas, however, it was thought that rulebooks have inherent ambiguities, leaving much that is open to interpretation. That creates incentives for firms to try to use them to get an edge on one another. Financial institutions generally have a poor track record when it comes to sharing information and working together, one participant observed. But even if a utilities model proves impractical, other steps to facilitate cooperation might succeed.

Examples included coding in open-source software and establishing a data hub where banks can share and compare rule interpretations or other knowledge. Precise, onsize- fits-all coding, by contrast, leads to limited outcomes, it was pointed out, potentially limiting innovation among technology providers. Another suggestion was to create a translation mechanism among models, say in different countries, so that reconciliation of discrepancies could be automated.

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## How to build the future

Opinion was also divided on the role that providers of regulatory technology (RegTech) could and should play in the development of DRR systems. This may be understandable because any perspective on products and services that barely exist yet is necessarily speculative.

An area in which the fuzzy and amorphous nature of the views was on display is artificial intelligence. One participant expected AI to be relegated to rote, repetitive tasks like cleansing and validating data, while another saw an opportunity to use it for higher level operations, such as spotting patterns in data and writing regulations. If the former outlook proves closer to the truth, there is likely to be more room for human analysis in the broader reporting process and allow for greater innovation elsewhere.

When it comes to erecting the broad technological architecture, it was generally agreed that regulations and models should be developed in a way that promotes the greatest innovation, and that this could be achieved by being as transparent as possible to provide guidance to technology providers on where to direct their attention. But views split from there.

Some felt it was best to encourage the development of tech that addresses rules that apply to everyone everywhere. The counterpoint was that limiting the field of interest like that would restrict developers' creativity. Others cautioned against being too lax and letting the tail wag the dog. They don't want to suffocate innovation, but they do want to control it. They expressed concern that models and regulations might be crafted simply to conform to whatever RegTech inventions might come down the pike.

## Where the buck stops and where the bucks start

The roundtable pondered several obstacles to be surmounted on the way to success after implementation. When a problem arises, as it is almost certain to, how will it be determined who gets the blame: the regulator, the bank or the company that built the tech? When the model is in conflict with the rulebook, which one takes precedence? Putting the horse back before the cart, some wondered who is going to pay for all this. If it's the banks, then what's in it for them,

especially institutions for which the cost will be prohibitively high because they are burdened with large, poorly integrated legacy systems? Can a business case be made for Digital Regulatory Reporting, as with other data management improvements?

One participant cited the efficiencies that could be derived from a less ambiguous set of regulations to comply with and suggested that competitive advantages could emerge for firms that adapt to new tech and new reporting procedures faster. Avoiding ambiguity was generally seen as vital; regulators don't have to build or finance a DRR capability, but they need to be clear on what they want from it. It would also help, some said, if regulators could give firms a break and cut back on introducing new standards and changing existing ones while DRR is implemented.

## Heading out the door to parts unknown

British financial institutions and supervisory authorities like the FCA have an additional element of randomness and complication to contend with: Britain's departure from the European Union. As Brexit negotiations approach their conclusion, many legal and commercial uncertainties remain, and they are likely to push DRR further down a firm's list of priorities. Until the fog begins to lift over the landscape and banks feel they're on firmer footing, their interest in what lies over the next hill is bound to be diminished.

There was little consensus on the impact of Brexit on financial supervision. Nothing much may happen, or it could be the catalyst for devising the next wave of regulations.

Either way, authorities were advised not to put too much distance between Britain and the Continent. The European Union was offered as a shining example of cross-border regulatory cooperation and harmonization and was admired for the consistency of the frameworks in place from one member state to the next. Some participants urged the word-for-word incorporation of E.U. regulations into U.K. law after Brexit.

As far as transnational DRR planning is concerned, the roundtable acknowledged the risk that Britain will become marginalized and that its voice will not be heard across the Channel. But the FCA was encouraged to turn the challenge into an opportunity by using the imminent breaking of its fetters to take the lead in innovation and perhaps set the regional or global agenda for DRR.

## Working smarter isn't easy

If there was one thing that participants at the London roundtable could agree on, it's that much remains to be done merely to design a workable Digital Regulatory Reporting system, let alone put one into operation. Participants were looking for direction on fundamental issues related to the scope and scale of a system, what types of regulations it will cover, who will pay for it and who will be responsible when something goes wrong.

A standardized DRR model was recognized as most desirable but also most elusive. Doubts were expressed about the extent to which supervisors across jurisdictions would cooperate to make it happen, and also about the degree to which financial institutions would be willing to work together. Yet another impediment is the lingering reliance on legacy data systems.

A particularly worrying sign is that bankers seemed skeptical not just over whether and how the hurdles could be cleared, but whether crossing the finish line would feel much like victory. They wondered if digital reporting would be a significant advance on regulatory compliance and reporting as they exist today, and whether the promise of enhanced efficiency and reduced cost will be kept.

But just taking part may produce a victory of sorts. Making regulations more clear and precise, and overhauling data management architecture by updating systems and integrating them around a central data warehouse, were highlighted as vital intermediate steps that will be their own reward. If supervisors and institutions put in the effort, it should allow them to work smarter, no matter how reporting obligations are fulfilled.

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