



# THE FINTECH MAGAZINE

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**Jethro MacDonald** explains how **SmartStream** has come up  
with a tool the investment industry might find hard to put down



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The right stu :  
Under MiFID II,  
reporting  
data correctly  
is essential

# THE NEW RULES *OF* CONDUCT

**SmartStream** has combined its deep knowledge of regulatory reference data and super-fast, Cloud-based, AI-driven reconciliation, to solve the investment industry's reporting challenges. And – perhaps surprisingly – digital assets traders are clamouring for it, too, says **Jethro MacDonald**



**The second Markets in Financial Instruments Directive (MiFID II) isn't something you want to bring up in a dinner party conversation with investment managers. Why spoil a perfectly good evening? It's likely to have them reaching for the Hors d'Age brandy and dabbing beads of sweat from their brows.**

Four years ago, they might have been more sanguine, bullish even, about the impact of what was seen as one of the most important regulatory initiatives of the EU since the global financial crisis.

But then came two years of getting compliance systems, which were largely manually based, up to speed as the subsequent Markets in Financial Instruments Regulation (MiFIR) was embedded into European member states' legislation.

In 2021, the first report from the European Securities and Markets Authority (ESMA) revealed how the industry was doing: badly. Figures showed that the number of penalties imposed across Europe for breaching the rules had quadrupled from €1.8million in 2019 to €8.4million in 2020.

And these transgressions weren't committed by small family offices, but large organisations, with teams dedicated to compliance, handling thousands of transactions. Big trading venues were falling foul of the rules, too.

While the huge increase in regulatory action could perhaps be partly explained by the way national authorities identified and reported breaches to ESMA during that difficult honeymoon period, research the same summer from financial services advisory firm ACA Group found that almost all firms it surveyed were still incorrectly reporting transactions. And the majority didn't even know it.

Complying with the demands of MiFID II transaction reporting is undeniably complex; and proving the integrity of that data to regulators can place a real strain on organisations, according to transaction lifecycle management (TLM) solutions provider SmartStream. It was only too well aware of the immense pressure the directive was likely to put on firms

manually bringing together data, as most were, from multiple data sources in non-aligned formats, at immense scale.

It had been operating in the field for years, developing sophisticated, automated reconciliation software to give businesses better insight into their data and improve accuracy and processing speeds. But its decision to move its services to the Cloud, where it could infinitely scale resources and to make research and development of artificial intelligence (AI) and machine learning (ML) a strategic priority, put it on the front foot when the reality of MiFID II began to sink in.

SmartStream's AI-driven, Cloud-native solution, AIR (Artificial Intelligence Reconciliations), is capable of reconciling 'volumes of data that are unheard of in our industry; not just millions of rows, but billions of rows', says Jethro MacDonald, product manager of AI and machine learning at the SmartStream Innovation Lab.

"SmartStream AIR is a solution to the painful manual onboarding process of building new reconciliations. We speed up the whole process," he continues. "Throw AIR two files and it will tell you how they come together – in seconds. Then you can make informed decisions as to whether you want to change those match rules or not.

"On top of that, we use ML: if a user is manually matching data, we learn from their behaviour, then propose matches

to that client based on what the ML has observed. That means it's not just helping with onboarding, but with day-to-day tasks, too."

For many, meeting MiFID II compliance requirements is onerous. "Under RTS 22, Article 15 of MiFID II, firms have to reconcile from their front-office systems to the regulator, ensuring there are no gaps or reporting errors," says MacDonald.

That can involve up to 65 fields of information which must be completed as part of daily trading activity – information that will be used by regulators to monitor, for example, who is involved in a trade, and, in combination with other reports, perhaps flag market abuse. Too little or missed information risks censure; but neither do firms want to spend time on going to unnecessary effort.

"We not only give clients the means to reconcile the data and demonstrate the accuracy of their transaction reporting processes to the regulator, but we can also tell them whether their reporting decision is correct," explains MacDonald. And that's the game changer.

SmartStream achieves it by using an API to link two of its existing solutions: near-real-time reconciliations provided by AIR; and SmartStream Reference Data Utility (RDU), which tracks data from regulatory and industry bodies. It sense-checks what data the regulator actually requires, including validating whether a financial instrument is traded via a trading venue and is therefore reportable – or not.


SmartStream claims the resulting tool – Transaction Reporting Reconciliation and Reporting Decision Control – is an industry first. "It's certainly a really exciting use of the technology," says MacDonald.

So, that's the firms, but what about the trading venues? They have to meet an even higher bar.

Post-Brexit, ESMA increased the data continuity checks that trading venues must perform when reporting instrument reference and quantitative data. Any irregularities must be accounted for and mistakes re-reported, so that ESMA can meet its publishing timelines. That includes for instrument liquidity, size-specific-to-instrument and large-in-scale calculations. »

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Data is king:  
SmartStream's reach  
helps clients stay  
on the right side of  
reporting rules

» At present, trading venues typically check their records retrospectively, on a three-month basis, against massive ESMA data files. This highly complex exercise is costly and accompanied with a huge operational burden.

"The obligation on trading venues, from a MiFID perspective, is so much more than for any other firm," says MacDonald. "Importantly, the regulator reconciles their reference data and the quantitative data. The problem here is that there are nuances between these two reports, which means some instruments are reportable on one, and not on the other. You need really specialist reference data to help you with that.

"So, again, we've combined internally with the RDU, to feed in the reference data needed to make really important decisions, and, instead of asking the client for their reference data report, we're taking that directly from ESMA, because it's publicly available information. All the trading venue has to do, then, is submit their quantitative report to us, and we'll tell them whether they have an issue or not. And that's carried out proactively, daily."

The new regulatory solution, Trading Venue Quantitative Reporting Outlier Reconciliation, was launched in March of this year.

By virtue of the fact that SmartStream works with 70 of the world's top 100 banks, capital markets, buy-side firms and corporations, it has eyes across the industry and that gives its clients another major advantage when it comes to whether they are on the right side of regulations that are often hard to accurately interpret, and in a state of constant flux.

"The more data you have, the more

powerful the AI," says MacDonald. "So, we're looking at how we can use AI to tell us how the data comes together across multiple entities, to see if there are any reporting differences between a firm and its peers. That's huge for them because, while there are validation rules in place, at the moment, in regulation, that doesn't tell you if what you're reporting is in line with that of the rest of the market."

It could give an early signal of whether a firm is over or under-reporting, both of which it's wise to avoid. "In fact, recent fines have all been around over-reporting," says MacDonald. "And some of these issues may not be flagged to users until weeks, months, even years later."

Waiting, oblivious of some indiscretion, until a surprise knock on the door from prosecutors, isn't good for business, and neither is the lack of contemporaneous reporting and monitoring for policing the world's financial markets.

Like the weather, those markets are constantly changing. ESMA has already proposed amendments to MiFIR transactions and reference data reporting regimes, and, since the UK has taken a different regulatory path, following Brexit, they may well not align in future. But there are other winds blowing.

"Right now, digital assets aren't regulated, but, at some point, ESMA will review them. We saw that between MiFID I and MiFID II; we started reporting a lot more derivatives under MiFID II," says MacDonald. "From a foreign exchange (FX) perspective, I wonder

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if cryptocurrencies will be regulated, because FX isn't directly; however, I imagine cryptocurrency derivatives will be, in the next couple of years. We'll certainly adapt our systems to meet those regulations."

Perhaps encouragingly for SmartStream, given the potential disruption that decentralised finance could cause incumbents, digital asset companies have been seeking it out, reveals MacDonald.

"One of the things we'd hear people say is 'what's the use of reconciliation tools anymore? They're not going to be needed?'. But, actually, we've found the opposite. These firms themselves have a number of controls they need to meet.

"Trading venues, crypto firms, these companies are using the latest technology, too. So it's not hard trying to sell AIR to them! They understand the technology, they know the power of it, so we work quite well together in delivering a combined control framework.

"We're more than willing to help them with any reconciliation needs they have. We're always looking at how we can improve our tools and create new products that will help the industry"



# Let's talk about the next wave in AI, Machine Learning & Managed Services

SmartStream's fully integrated suite of solutions and platform services for middle- and back-office operations are more relevant than ever – proven to deliver uninterrupted services to critical processes in the most testing conditions. Their use has allowed our customers to gain greater control, reduce costs, mitigate risk and accurately comply with regulation.

With AI and machine learning growing in maturity, these technologies are now being embedded in all of our solutions and can be consumed faster than ever either as managed services or in the cloud.

Simply book a meeting to find out why over 70 of the world's top 100 banks continue to rely on SmartStream.

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