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Creative Ways to Cut the Cost of Data

DOES SFTR REACH TOO FAR INTO SHADOW BANKING?

How One Asset Manager Revolutionized Its Data Management Strategy

GOVERNANCE VERSUS INNOVATION

For Data Innovation, Governance Is Either an Oppressive Burden or Essential Ingredient

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Push the Boundaries, Baby

Like most parents, before my first child was born, I read some books about what to expect. At the time, the parenting advice racket was all about how mothers from other cultures are all far better at raising their children than American moms: Chinese Type-A tiger moms, Danish parents raising the happiest babies in the world, and—I am not making this up—*Achtung Baby*, a guide to raising self-reliant children, like German parents do. I admit I did not discover many practical suggestions, but one book offered a concept that stuck with me. *Bringing Up Bébé* is, of course, all about how to raise your kid like a French parent. Its core philosophy is that parents should set and strictly enforce boundaries, but the trick is that from inside the confines of the rules, children have total freedom. In other words, parents set up the framework, but from within, the children get to determine what they do, create and become.

Our feature on data governance and innovation reminds me of the advice for parents of *bébé*. As regulations continue to roll out, some data leaders are concerned about how increasing governance could inhibit innovation. However, as Amelia Axelsen reports, there is a different view: that governance is an essential component to data innovation because otherwise, new applications are built on shaky, unreliable foundations.

Of course, innovation also involves pushing those boundaries. Max Bowie investigates approaches to cost management that are both creative themselves, but also free up the budget necessary to innovate. And I had a conversation with Chris Sharp, Old Mutual Global Investment's head of data, breaking down how the firm's data governance transformation, when coupled with a decision to outsource benchmark data management, has not only revolutionized the way it approaches data usage, but done wonders for its bottom line.

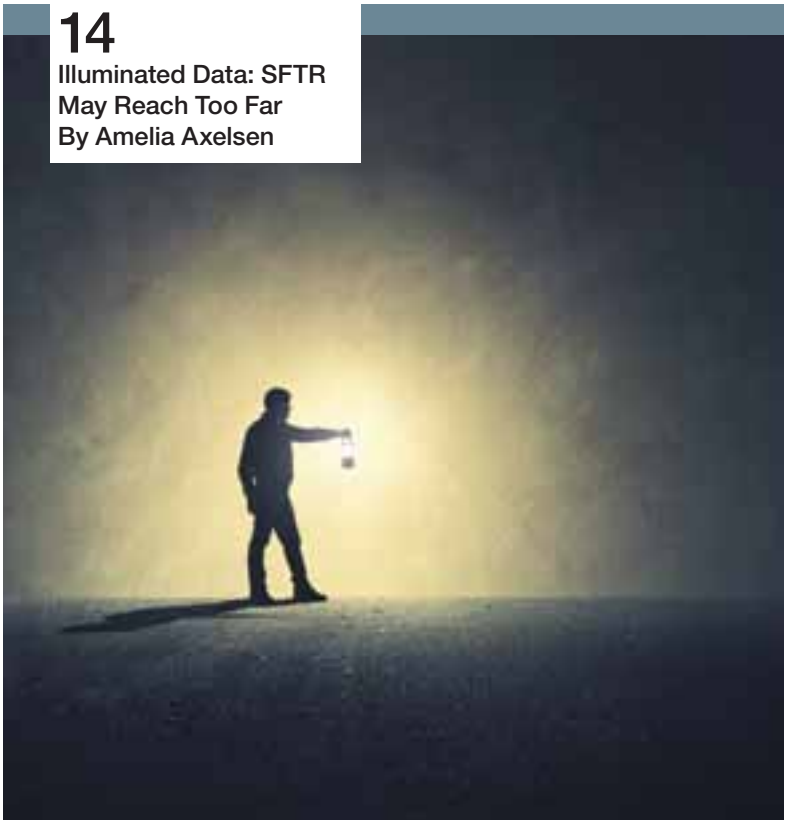
When regulators push boundaries, however, the results can be cumbersome for the market. Reporting for *Risk.net*, Sam Wilkes takes a magnifying glass to Mifid II, finding that in some areas, the regulation intended to increase transparency renders post-trade data more opaque than before. And Amelia Axelsen examines the Securities Financing Transaction Regulation to determine whether, when it comes to the goal of shedding light on shadow banking, SFTR is overkill.

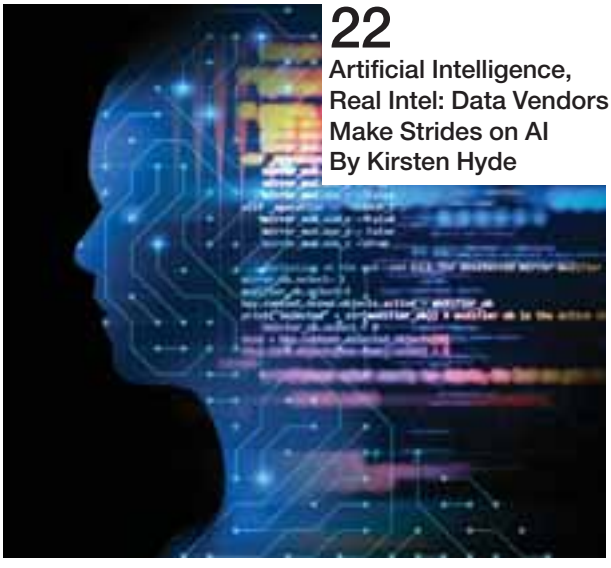
On balance, it appears that setting boundaries and pushing past them is a net gain for the market, so we are likely to see innovators continue to *repousser les limites*. ■

Jamie Hyman
Editor

Inside Data Management
Inside Market Data Inside Reference Data

Contents





August 2018

SFTR Could Mean Sharp Increase in Transaction Reporting

The Securities Financing Transactions Regulation (SFTR) could increase the burden of transaction reporting by as much as five times as many reports than trades.


Val Wotton, DTCC

According to research by the Depository Trust & Clearing Corp. (DTCC) and its consultancy partner, The Field Effect, the challenge for the industry will be to apply similar requirements to the European Market Infrastructure Regulation, which covers over-the-counter derivatives, to the securities financing trades covered by SFTR, since processes for how trades are carried out and recorded differ wildly for derivatives and securities. The research finds SFTR is likely to affect 60 percent of current trade-booking models.

Val Wotton, managing director of product development and strategy for derivatives and collateral management at DTCC, says the crux of the issue is that SFT trades happen "in and out of overall positions on a daily basis" with a single, rolled-up position report at end of day.

"That's been the way the SFT markets work, because they're generally shorter-term contracts than would be [the case] for derivatives," Wotton says, adding that SFTR asks the industry "to move away from reporting a position level."

So, instead of reporting an end position, SFTR requires reports of "all of those modifications or trades that have taken part through the day. That's where you get the quantum difference, versus the derivatives industry, where it's generally specific, one-off trades that are being executed, rather than moving in and out of positions on a daily basis."

Wotton says firms are undertaking analysis on SFTR's impact, and he believes the focus should be on moving away from how his segment of the industry has historically operated. "Depending on how data is captured or extracted, firms will have to extract those underlying transactions, those buys and sells that have taken place throughout the day," he says, emphasizing that firms have to review systems. "If they capture the data, do they expose that data and flow downstream?"

Wotton doesn't think the additional reporting requirements will lead to less trading. "It's just a case of firms having to represent their data in a different way," he says. "It may help them, even internally, with their overall transparency reporting."

The European Commission's review of the final report on SFTR is currently in progress, and technical standards are pending.

Bloomberg Integrates Filtered Twitter Feed to Boost EDF Offer

Bloomberg's enterprise data department has added a curated and filtered Twitter feed, designed specifically for electronic trading, as part of its Event-Driven Feed (EDF) and alternative data strategy.

Tony McManus, enterprise data CIO at Bloomberg, says: "There is a voracious appetite for data at the minute—the more alternative data, the better." Bloomberg is applying advanced filtering techniques by using machine learning and natural language processing (NLP)—as well as its journalists' lists of real and newsworthy accounts—to identify relevant topics and remove the 'noise', cutting the number of tweets from 500 million to half a million a day. "Tweets that are moving the market and changing the price of a stock, bond, currency, or commodity—they exist, but how do you find them? What we're providing is the technology to enable firms to find those tweets faster," says McManus.

The NLP curates Twitter content with financially relevant metadata such as stock ticker information and news topics in a machine-readable format, in order to reduce the time it takes for quant firms to find relevant information in the data.

"Clients are looking for trading signals which do not exist in traditional data sources… a source of data which is going to tell them something they don't already know—by looking at the markets, at the news, at the traditional sources of data that is input to more fundamental or factor-driven trading strategies," says McManus.

Exegy Bows Fifth-Gen Data Appliances, In-House NIC


David Taylor, Exegy

St. Louis, Mo.-based hardware ticker plant vendor Exegy has released the fifth generation of its market data appliances, featuring a four-fold increase in processing capacity enabled by a new, proprietary FPGA (Field-Programmable Gate Array) network interface card.

The Exegy Network Interface Card (XNIC) is a new area of development for the vendor, which would previously buy third-party NICs, and was developed in-house, except for a time-synchronization component that leverages an integration with Austin, Tex.-based clock synchronization technology provider FSM Labs' Timekeeper product.

By performing tasks such as arbitration, normalization and timestamping as close to the wire as possible, the XNIC directly contributes to a four-fold increase in input processing capacity, and a five-fold increase in the number of applications to which Exegy's ticker plant can distribute data—up from 40 to 200, says Exegy CTO David Taylor. "Before, we would very carefully select off-the-shelf NIC cards that we could perform low-level integrations with," Taylor says. "But we identified long ago that we would need to take over building that component in order to do more processing next to the wire."

FactSet Unveils Alt Data 'Exploration' Platform

FactSet Research Systems has rolled out FactSet Data Exploration, a cloud-based platform for investment professionals to evaluate and explore alternative financial datasets on the recently launched Open:FactSet Marketplace of alternative data, using Microsoft's Azure cloud platform.

Rich Newman, FactSet

Company officials say the Data Exploration cloud platform reduces the need for firms to invest in costly infrastructure themselves to test alternative datasets—which is a "huge hurdle" to adoption of new datasets—while providing the capacity for firms to build applications using the data.

In addition to the evaluation tools, the platform includes built-in visualization software that enables users to demonstrate their findings to stakeholders.

"From the outset, the vision for Open:FactSet Marketplace has been to deliver to our clients data and tools that facilitate quicker and easier access to and usage of alternative and financial datasets. FactSet Data Exploration has always been part of that vision, and today's launch has been planned for some time," says Rich Newman, senior vice president and global head of content and technology solutions at FactSet. "A key driver of the product's creation is the longstanding need in the financial market for a hosted environment that enables clients to test data quickly and easily. FactSet Data Exploration allows practitioners to immediately access a platform that is pre-configured with all the standard data evaluation tools—in addition to the requisite datasets themselves—lowering the barriers to putting new data into production."

FactSet will continue to expand Data Exploration further in the future by incorporating "additional technologies, tools and applications" into the platform. "Clients are already able to integrate third-party software and technologies—several tools integrated with Data Exploration leverage open-source platforms, allowing our users to import additional packages and features. We believe the platform will grow over time into a full data research and production environment," Newman says.

Before choosing to work with Azure, FactSet evaluated different potential partners—and continues to do so to support other areas of its solutions set, Newman adds.

"Microsoft Azure was the best fit for Data Exploration, in large part thanks to our organizations' and leaders' shared vision and approach. Microsoft and FactSet both have extensive experience with enterprise sales and implementation. We share a vision for the value Big Data can provide the institutional financial market," he says.

DTCC Expands Global Trade Repository in Singapore

The Depository & Trust Clearing Corp. (DTCC), is enhancing its Global Trade Repository service (GTR) to support equities and commodities trade reporting in Singapore under the next phase of the Monetary Authority of Singapore's (MAS) derivatives reporting requirements. "This new platform lays the foundation for enhanced transparency into reported data, and for the clients who submitted it. A new portal will be launched following this release which will, over time, provide clients with additional access to and control of the data they have submitted to the GTR service," says Oliver Williams, regional head of DTCC's GTR business in Asia. The new directives take effect October 1, 2018 and require firms to report equities and commodities transactions to MAS, in addition to the reporting of credit, interest rate and foreign exchange asset classes previously mandated under the regime. In line with the new MAS rules, DTCC has built capabilities allowing clients to submit messages specifically for equities and commodities.

Nasdaq Adds New Alternative Data to Analytics Hub

Nasdaq rolled out a series of new datasets for its Analytics Hub marketplace of alternative data last month as part of the exchange's ongoing efforts to broaden its alt data offering, officials say.

The new datasets include environmental, social and governance (ESG) data, social media sentiment, global news, and supply chain relationships between companies.

The ESG data leverages data from Nasdaq's 2017 acquisition of fund analytics provider eVestment, which is making its eVestment ESG dataset available exclusively through Analytics Hub. The data—which includes aggregated and anonymized content from eVestment's investment platform, along with data science from ESG stocks and funds, and trends in the ESG market—allows users to filter and identify ESG-friendly investments, enabling investors and consultants to make investment decisions and recommendations in line with international ESG standards.

Nasdaq is expanding its alt data offering

Nasdaq's Analytics Hub now offers social media analytics provider iSentium's Social Media Sentiment, which uses artificial intelligence and natural language processing to extract and transform unstructured social media sentiment into actionable scores for longer-term, equities-focused long/short strategies.

The new data also includes a Global News Exposure dataset that qualifies relationships between entities in international media and financial news, and Supply Chain Network Exposure, which measures global and regional supply chain information to spot relationships between companies.

Selerity Rolls Out AI Tools for Bond Trading

New York-based contextual search and analytics provider Selerity has expanded its Private Context Engine natural language processing (NLP) solution to cover fixed income markets, and has rolled out an artificial intelligence-powered suite of analytical tools to support bond sales and trading professionals, dubbed Trade Opportunities.

Junta Nakai, Selerity

The Private Context Engine uses NLP to track metadata of bond trades and potential trades within electronic communications with clients, while Trade Opportunities makes the results useful and allows firms to derive insights from the data about potential trades that were missed by identifying the CUSIP code for every bond where an inquiry did not lead to an execution.

Though the specifics of how each firm would use the data to improve their sales and trading activities are typically proprietary, they can broadly use the resulting information to create "an informed, data-driven playbook to guide sales activities," says Junta Nakai, global head of business development at Selerity. "About 80 percent of bond trading is still done over the phone or over chat—and the majority of that is over chat. That's a very unique market structure compared to equities or foreign exchange. So we're using AI to shine a light on an opaque corner of Wall Street… where the way technology is used has changed minimally in 30 years."

By bringing AI into bond sales and trading professionals' workflow, Selerity can help firms achieve "more shots on goal," Nakai says.

"One thing clients told us is that a lot of customer inquiries go unanswered. A trader at a big sell-side firm may have 50 chats open at any one time, and oftentimes the bandwidth is not there…. The story of Wall Street over the past 10 years is fewer people doing more work, and traders are always being asked to do more," he adds. "What makes a good trader today is their memory—how a few weeks down the line, if a customer asks about a trade, remembering that someone else had inquired about the other side of that trade. So we're trying to augment those traders and salespeople with data and tools to track those executions better."

While Selerity has offered the Private Context Engine for around two years, it has adapted it to understand the specific nuances and structures of the bond markets, while development work only began on Trade Opportunities in the second half of last year.

"It was a tremendous amount of work to understand the world of bond trading—the lexicons are unique, and trading sometimes follows non-uniform patterns," Nakai says. "When we first embarked on this, we hired former bond traders to bootstrap our algorithms. That's how we got the AI part right."

Another differentiator is the vendor's custom database of reference data. "We built a database of half a million bonds, 30,000 companies, and concepts like Brexit—so having that unique context in addition to our NLP is a key differentiator for us," he says. "We have a team of analysts constantly updating and refining the reference data. That's a non-trivial undertaking."

Exegy, FIF Add Capacity Info to MarketDataPeaks.com Reboot

Low-latency data technology provider Exegy and data industry association the Financial Information Forum (FIF) have relaunched and upgraded MarketDataPeaks.com to reflect new regulatory mandates and shifts in market data demands in the financial services industry since its original launch in 2008.

"The FIF took the view that all the market participants and vendors need to share data so that we all have a more complete understanding at the rate at which data is being published, and therefore how all the systems that process that data need to be sized and designed for capacity," says David Taylor, CTO at Exegy.

MarketDataPeaks.com will use Exegy appliances that feature hardware-based timestamping clock synchronization, and rate measurements to provide market data measurements at millisecond intervals. The new edition will also provide a wider breadth of metrics, including packet rates, which determines the capacity required by switches and interface cards on enterprise computing and cloud infrastructures.

Duco Grows Global Prescence

Mireille Dyrberg, Duco

London-based data engineering company Duco is opening offices in Singapore, Wrocław and Edinburgh, citing growth and a need for a larger pool of technical talent. The new offices will be open by September, and follow a $28 million funding round in January this year.

Mireille Dyrberg, Duco COO, says the company has been placing "technical, operational" people in Poland because "there is great talent and lower cost." The Singapore office was initially going to be dedicated to client services, not sales, she says, but a decision was made to opt for a "much more expansive strategy for Asia" and it will now offer the full range of services. Duco's research and innovation team, DucoLabs, is expanding into Edinburgh.

Dyrberg says Brexit wasn't a specific influence on the firm's geographical decisions, but it is grappling with a lack of London-based technical candidates. "We think the right thing to do is to expand into regions where there are pools of tech talent." she says.

FCA Chair: Regulations Will Ease as Brexit Ramps Up

The financial services industry can expect some easing of regulatory pressure, especially in the arenas of big data and technology, according to the head of the UK's watchdog.

Charles Randell, Financial Conduct Authority

In an address at a Reuters Newsmaker event, Financial Conduct Authority (FCA) chair Charles Randell said the regulator is waiting for final deliberations on the Brexit negotiations before creating a post-Brexit framework. But he does not expect the "same volume of regulatory change" as in the past decade, as firms are under pressure to update their business models to adapt to "transformational effects" of technology and big data.

"So, when firms are trying to grapple with that [transformation] and develop new business models that are sustainable, it won't necessarily be helpful for the regulators to visit on them the same volume of regulatory change that they have had over the last 10 years. I'm not sure that we as regulators have an appetite to go through what we've been through in the last 10 years, either," Randell said.

When it comes to Brexit, he said the UK will follow current EU standards, adding that whatever the outcome of the withdrawal negotiations with the European Union, he believes regulatory requirements will arrive at a slower pace. That would allow the FCA to evaluate the consequences of existing regulation to determine whether it has achieved its desired effect on market outcomes.

"It will be my intention to make sure that we redouble our efforts to engage with global standard-setters, because I think that will be necessary in a world after we've left the EU," he said.

The FCA is taking on additional functions, particularly around credit rating agencies and trade repositories, and Randell expects the post-Brexit rules to increase the range of regulations it manages. He also suggested the FCA needs to have robust systems in place around its own practices in order to fairly assess financial industry data practices.

"The question that particularly concerns me as chair is how do [regulators] maintain all the things... that firms should maintain in respect to their data—mainly management, governance, and controls that are commensurate with the tasks that we carry out?" Randell said. "We have been discussing that as an institution and as a board, and we are constantly updated in the developments of the negotiations to make sure that we are ready to take on that responsibility when it is given to us. But it will introduce a significant additional scope to the organization."

He said the FCA will be prepared to shoulder any additional responsibilities required of it once Brexit deliberations are finalized.

Bloomberg Adds Orbital Insight Parking Lot Data to Terminal

Data giant Bloomberg has begun carrying the US Consumer Retail dataset from Palo Alto, Calif.-based aerial imagery analysis provider Orbital Insight on its Bloomberg Professional terminal, to integrate the vendor's analysis with traditional fundamental and financial data delivered via Bloomberg.

The data includes daily car counts for parked cars at 80 US retailers—including department stores, home improvement stores, discount retailers, consumer staples, grocery stores at the store-level and chain-level, and wholesalers—with five years of historical year-on-year comparisons.

The vendors have "tickerized" Orbital Insight's coverage universe to seamlessly overlay Bloomberg's data and displays, and to enable users to compare this to other investment metrics, such as revenue and consensus same-store sales percentage revision.

Orbital Insight officials say the integration will help the vendor better meet the needs of buy-side traders, analysts, risk professionals and others who rely on Bloomberg terminals, and for whom geospatial analytics provide "a timely and accurate source" of additional value, by being delivered directly within their existing Bloomberg-based workflow.

DTCC Gets Ahead of Brexit with New Dublin Office

Tony Freeman, DTCC

The Depository Trust & Clearing Corp. (DTCC) is opening an office in Dublin, Ireland in order to continue services in EU27 countries and the UK, ahead of the latter's withdrawal from the European Union next year.

Tony Freeman, executive director of industry relations at DTCC, says the office will have a relatively small staff. "Dublin has a familiar feel from a taxation, legal, and financial regulation perspective, and obviously, the language and the time zone are common to the UK," Freeman says. "Our repository business is a very operational and technology-orientated business, and Dublin checked all the boxes." DTCC currently has two UK offices, in London and Wrexham, plus a larger European presence with locations in Brussels, Stockholm, and Frankfurt.

Freeman says DTCC plans to maintain its UK offices while operating in Ireland. The UK trade depository will fulfill reporting obligations in the UK under Financial Conduct Authority guidelines delivered following the final Brexit decision in March 2019, while the Dublin office will operate under ESMA guidelines to fulfil EU27 reporting requirements.

Blackstone Outlines Plans for Thomson Reuters F&R Spin-Off, Refinitiv

A senior Blackstone executive describes what led to its purchase of a majority stake in Thomson Reuters' Financial & Risk business, and some of the areas where it plans to invest once the unit is spun off later this year. Max Bowie reports.

Thomson Reuters may have only just announced Refinitiv as the new brand for its Financial & Risk unit once the business spins off from its parent later this year in a $20 billion deal with a consortium of investors led by private equity firm Blackstone Group, but the new owners already have plans for leveraging F&R's assets and combining them with other assets owned by Blackstone.

In fact, these plans have been in development for some five years, when Blackstone first looked at buying the business, but "couldn't really make the math work," says Martin Brand, senior managing director in Blackstone's private equity business, in a podcast describing the deal. "We revisited the idea in 2016, and at that time, it was clear that this would need to be a corporate partnership, so we really focused on developing the thesis: how would this business be better in partnership with Blackstone?"

After a significant number of meetings with the industry to develop this thesis, "the more we delved into this, the more our conviction grew," Brand says. "We thought, 'We can really make it a better business.' We thought, 'If it's partnered with Blackstone, we can help with clients on the sell side, we can help with clients on the buy side, we can help them on the business side, and we thought we could drive some efficiencies in the business and help with M&A. We identified areas to invest in and accelerate growth."

Then, a year ago, Blackstone held its first discussions with Thomson Reuters executives, who "bought in" to the thesis, then ran its commercial due diligence in the fourth quarter of last year. "At that point, we started focusing on the contract, and it was about a month-long negotiation, where we were basically holed up in a law office," hammering out agreements for every part of the business that would be included in—or excluded from, in the case of Reuters News, which Thomson Reuters will retain but lease to Refinitiv under a long-term contract—the deal.

Blackstone exec says the deal reflects the growing importance of Big Data

Data Investment

Brand says the deal reflects the growing importance of Big Data. "We believe that as machine learning will increasingly replace human business processes, data is going to be an extremely valuable commodity. But data needs to be efficiently ingested, it needs to be distributed, it needs to be classified so you can find what you're looking for—and those are areas where F&R is a market leader. We see [the need for] it in some of our portfolio companies which have valuable data but don't necessarily know how to distribute these, so there could be a synergy there," he says. "Blackstone has made a significant investment in data. We believe alternative data is a fast-growing segment, and so our thesis within this particular investment, of course, is to be innovative, become a market leader—to the extent that we aren't already—and invest behind this. And the fact that machine learning, AI [artificial intelligence], and Big Data are tailwinds for us makes this an even more attractive investment."

Eikon Migration

And contrary to industry speculation that Blackstone would seek to offload the Eikon terminal business, Brand says the firm is "excited" about investing in this space. "The most difficult time is really behind that business," he says, adding that the migration of legacy terminals to Eikon is 85 percent complete. "So the future, I think, is much better than the difficult period they had in the past…. And we also discussed several add-ons for Eikon that we believe will significantly strengthen the value proposition."

Brand also cites the vendor's Risk & Compliance business line and its assets such as Starmine and Lipper. "The key overall is that with the transaction, we'll accelerate the pace of investment and focus to allow the business to pick up its growth rate," he says.

Blackstone was unable to comment on Brand's remarks by press time. ■

Systematic Internalizer Rules Set to Switch from Optional to Mandatory

Though derivatives have been given a six-month reprieve, half of the obligations for systematic internalizers laid down in the revised Markets in Financial Instruments Directive will soon become compulsory. Jamie Hyman investigates industry readiness and what the mandate means for data quality.

The revised Markets in Financial Instruments Directive's (Mifid II) rules on systematic internalizers (SIs) for equity, equity-like and fixed-income products will move from being voluntary to mandatory on September 1. From that date, firms dealing above a threshold set by the European Securities and Markets Authority (Esma) are required to be an SI for those instruments.

"Suddenly, the SI regime moves from a voluntary code to something that is mandated by the regulators," says Peter Moss, CEO of Smartstream Reference Data Utility, which operates the SI Registry in collaboration with seven Approved Publication Arrangements (APAs). "I think there's a general perception across the industry that that's when the regulators will start to pay attention to adherence to the obligations."

Esma declined to comment on its plans for enforcement of the SI regime.

Moss estimates that between 85 and 90 SIs are currently in operation, a group that includes all of the large firms "because they have the capacity to handle the diversity of instruments involved." Medium-sized firms have opted in more selectively, but most recognize that "they would almost inevitably be forced to become systematic internalizers in the core instruments that they trade in their regional domestic markets," he says.

"Thoughtful firms" have opted in so that they will be prepared for situations where SI status is mandatory, Moss says. "They've also got the benefit of competitive value, being ahead of the market, and potentially taking additional volume from competitors as a consequence of [opting in]," he says.

Peter Moss
Smartstream Reference Data Utility

Last-Minute Realization

"I suspect there will be a number of firms that are either rushing to get this done at the last minute or that haven't really paid enough attention to it, who will suddenly realize they have to commit to the regulatory obligations around being an SI, possibly in a relatively small set of instruments," Moss predicts. Firms that are "the primary brokers in a particular instrument set" are likely to find themselves mandated to become SIs, he says. Smartstream offers a set of APIs designed for firms that are required to be an SI only for a small number of instruments.

Moss cites Australian banks with business in Europe as a good example of firms that suddenly may find themselves obliged to adhere to the SI regime: "That business is almost certainly going to be in Australian-dollar-to-euro interest rate swaps, foreign exchange derivatives, to support international trade. That's a relatively niche set of instruments, but you may well be trading the bulk of the volume in those instruments because you're a specialist in that Aussie/euro swap." He says that although the Australian banks that Smartstream has talked to are being thoughtful in their approach, "I suspect there will be [Australian] organizations that get caught because they haven't really thought [SI compliance] through."

Esma published the thresholds on August 1, giving firms a month to test against them and comply. Initially, September 1 was the date the SI regime would become mandatory for all instruments. But in July, Esma announced a delay until March 1, 2019 for derivatives. Moss says that split "has eased the pressure on quite a number of firms," and the focus is now on fixed income "because equities has always been a little bit more transparent anyway."

Mifid II is focused on transparency, in particular driving pre-trade transparency for prices so there is more visibility as to what is costs to trade, but "whether it is fully baked into the way people are operating yet is another question altogether, because I think it's still not straightforward to get access to that price data in the historic context," he says.

OTC Optimism

Moss predicts that access will "improve dramatically" over the next year or two, with post-trade transparency not far behind. "For a lot of OTC (over-the-counter) instruments where perhaps the liquidity is not as great as equity markets, getting a trade ticker of where the market has recently traded at is huge," he says. "It's all ultimately about shining that light of transparency on how markets are trading, particularly in the OTC world where, historically, it was always much more difficult to get visibility into what's going on."

While the SI Registry currently covers seven APAs, Moss says it is in talks with two more. ■

FCA to Tackle Big Data, Expects Firms to Maintain Ethical Standards

Charles Randell says data and technology usage by firms should "liberate" not "disenfranchize" consumers, and insists regulation is "central to defining" ethical practices. Amelia Axelsen reports.

In his first address since he was appointed chair of the Financial Conduct Authority (FCA) in April, Charles Randell warned that firms should act ethically when leveraging Big Data.

Speaking at a Thomson Reuters Newsmakers event, Randell said principle-based regulations and a center for data ethics may be on the horizon to maintain the UK's leadership role in innovation and ethics.

"The UK already has a trusted legal and regulatory system and contributes to setting global standards of corporate governance and business ethics. We need to contribute to new standards for data efforts too. The FCA and PSR [Payment Systems Regulator] are fully supportive of the governance proposals to establish a center for data ethics and innovation to ensure that the UK sets the highest standards for ethical conduct in harnessing the power of Big Data," he said.

Charles Randell
Financial Conduct Authority

Ethical Leadership

In a world where rapid technological advances allow firms to compile enormous amounts of personal data, Randell said consumers are potentially at risk if the financial services industry uses data science and technological efficiencies—such as advances in artificial intelligence (AI) and automation—to target and discriminate against individuals, rather than for purposes of financial inclusion.

He painted a stark picture of a world in which algorithms dictate how humanity should be governed, juxtaposing the prospect of firms using data unethically with a British TV science-fiction drama series from the 1960s, *The Prisoner*.

"I want to argue that we should be optimistic," he said. "Advances in data science have already brought huge benefits to society, such as smarter ways of detecting financial crime and market abuse, cheaper and faster transactions, and greater access to affordable financial advice and guidance. The UK fintech industry is world leading, and bursting with new ideas, but there's no room for complacency."

Randell said that while the FCA supports financial innovation, it is mindful of possible harm to consumers. He signaled the importance of continuing collaboration with European Union regulators while maintaining EU standards, whatever the final Brexit deal looks like.

"We will remain very involved in the global standard-setting process in the area of data, the regulation and oversight of Big Data, and the role of Big Data corporations. It's almost more necessary than in most other areas that there be an international standard developed, because I don't think any country can go at it alone very easily," he said.

When pressed for specifics on new regulation for data practices, he said UK firms should set their own standards and that he doesn't expect a "15-page rule book," but, rather, a set of principles. He anticipated more proactive supervision and enforcement for firms and individuals that use unethical and unfair data practices.

Innovation drives the industry in a positive way, Randell said, but there are areas that need to be monitored closely to ensure firms act with ethical discretion when it comes to data.

One such problem area is the vast amount of detailed datasets controlled by very few corporations, as well as the fact that AI and machine learning are delivering huge increases in processing power, which means corporations can mine big datasets for patterns more effectively than ever before.

"Whereas in the past, firms could only target broad groups of consumers, these patterns can now be turned into conclusions about each one of us as an individual," Randell said. "They can make predictions about our future behavior, and then decide what products and services we should be offered and on which terms."

Behavioral Science

He also highlighted the use of behavioral science to exploit decision-making bias informed by Big Data as another potential problem area.

Randell championed the FCA as a global leader in incorporating behavioral science into a "regulatory toolkit," but said that in order to act in the interest of "good innovation," firms must have sustainable business models, in which "people, purpose, and trust" are at the forefront. He said that because the UK is a "global leader in both technological innovation and financial services," ethics is an "important topic."

"If we can combine these skills with fair standards and with public trust, we can maximize the opportunities for the UK finance industry to succeed in the global market," he said. ■

Thomson Reuters Deepens Investment in Cryptocurrency Data

Thomson Reuters' new partnership with CryptoCompare reveals insights into the data giant's crypto strategy. Jamie Hyman talks with head of innovation, Sam Chadwick.

Thomson Reuters has expanded its provision of cryptocurrency market data and is looking ahead at how crypto advancements could help big bank clients.

Thomson Reuters' Eikon financial desktop platform now offers book and trade data on 50 cryptocurrencies through an integration with CryptoCompare.

The data giant's relationship with CryptoCompare began in 2016, when the cryptocurrency market data aggregator participated in a Thomson Reuters hackathon. Back then, says Sam Chadwick, director of strategy in innovation and blockchain at Thomson Reuters, "no one was particularly interested in cryptocurrencies," but one year later, there was a "boom through hyper-speculation around crypto assets," so Thomson Reuters added "a page inside Eikon that brought the various bitcoin capabilities, prices and news that we had together on one page."

In the period between the page's launch in October 2017 and March this year, it was the second most-viewed exchange landing page across the entire platform.

"It was absolutely remarkable to see the volume of traffic we were getting. With that intelligence, we went back to CryptoCompare and said, 'If there's really that demand, we may need to queue you up to contribute,'" Chadwick says. Thomson Reuters validated its theory with a survey of 427 end-users and found one in five "were considering starting a cryptocurrency trading desk in the next 12 months," so it approached CryptoCompare to perform aggregation on Thomson Reuters pricing data, a task he says can be challenging for a large organization.

Sam Chadwick
Thomson Reuters

"CryptoCompare has an incredibly difficult job in that the number of exchanges out there goes up and down all the time. With regulations, some get shut down. Many of them are start-ups. The liquidity moves around all over the place. The technology they're using is constantly being upgraded," Chadwick says. "We're pretty good with the traditional exchanges, the public equity exchanges. There are about 400 of those, but there are already 120 crypto exchanges. So, for an organization like us… we'd love to be able to move that quickly, but crypto is just one of very many domains that we are looking at. It's much better for us to partner and to select vendors in the space who we trust to aggregate that information on our behalf, and then we'll pass it through to our customers."

He says Thomson Reuters performs quality checks on CryptoCompare's data in the same way it does with other data integrated into Eikon, and that while the initial offering consists of 50 coins, that might change if there is demand for more: "We felt it was better to choose a shorter listing and get it to market sooner, rather than trying to stress ourselves with getting the entire universe for day one."

CryptoCompare is also looking at ways to enhance its offerings as interest in crypto data grows. In addition to pricing data, the company offers a news feed "because there's a lot of fake news in the crypto space," says CEO and founder Charles Hayter. There is also a blockchain project in the pipeline that will enable clients to "look at various ways of attributing value to each transaction, [such as] number of transactions per second or cost per transaction on the network. That's quite important data underpinning price to earnings ratio," he says.

Thomson Reuters' partnership with CryptoCompare comes after it expanded its sentiment data feed in June to cover the top 100 currencies, and the company's innovation team is looking at crypto "with interest," says Chadwick.

"Crypto assets could represent a very large proportion of the world's economy in the future," he says. "The initial coin offerings today are very much at the start-up end of the scale, so not of particularly great interest to investment bankers. As that progresses and moves up the ladder, which we hypothesize it could in this scenario, then private equity and investment bankers could use this same technology to reduce operating costs significantly and/or face new entrants into the space, which obviously would impact the composition of our client base."

Chadwick calls that the "primary trading piece," and explains that the secondary aspect focuses on how to "work out whether [a cryptocurrency] is overpriced or underpriced, and what position do you want to take, and what percentage of your portfolio should be in this coin?" He says Thomson Reuters has been focused on the secondary aspect until now, but is "looking at some primary trading capabilities toward the end of this year." ■

Burton-Taylor Bows Segmented Data Revenue Rankings

The research provider's league tables will show the market leaders in specific fields based on revenue and five-year growth figures, to give a range of potential subscribers a better understanding of vendors' market positions. Max Bowie reports.

Market data research firm Burton-Taylor International Consulting has released a series of league tables that rank data providers by revenue and growth in specific business areas and geographies, to make it easier for data consumers, vendors and potential investors in the field to identify strengths and opportunities associated with specific data types and providers.

The league tables, which are generated from the data Burton-Taylor collects annually to create its market share reports, breaks down provider revenues by product area (real-time and trading data; pricing, reference and valuation data; portfolio management and analytics; research and news), market segment (investment banking, investment management, equity sales and trading, retail wealth management, FX/treasury sales and trading, fixed income sales and trading, corporate, and commodities and energy), and user type (portfolio managers, research analysts, investment bankers and corporate financiers, governments, salespeople, media, financial advisors, traders, C-suite executives and investor relations personnel, and risk and compliance staff).

For each one, the vendors are tracked by revenue in each category overall and by five-year compound annual growth rate (CAGR), and are reported on a global and regional basis.

"This highlights not just the biggest, but also the fastest-growing providers," says Doug Taylor, managing director of Burton-Taylor International Consulting. "So, for example, Bloomberg dominates across product types and user types in real-time sales and trading… but the fastest-growing providers in that space are TP Icap [which owns Burton-Taylor] and Argus Media—so the biggest and fastest-growing are not necessarily the same company."

The rankings break down provider revenues by product area

The league tables can serve a variety of purposes and potential subscriber profiles. For example, market data managers can use them to quickly determine the leading vendors in specific categories and geographies for data-sourcing purposes, where one consideration in buying a service might be a vendor's strength in specific areas and whether that lowers the buyer's risk.

On the other hand, data providers might use them for competitive analysis, and to see where they rank compared to their peers. "If you're the fourth-largest vendor in a segment, you can see who's above you, and figure out what you need to do to move up the ranking," Taylor says.

The rankings can also be used by investors in the industry, such as private equity firms, to quickly get a sense of what companies—whether revenue leaders or those with fast-growing CAGR—might make good acquisition or investment targets. In fact, data consumers would also want to identify which of their current or potential data providers might be subject to takeover.

The league tables will be a free additional service for companies and individuals that already subscribe to Burton-Taylor's research, and the company will also make the new reports available on its website for those who might want to buy them on a one-off basis. Taylor says the company plans to produce the league tables annually, and to show how the rankings change over time in future reports.

"This is the first time we've ever done any rankings… and though we've reported news for years, we've never ranked them like this by segment or product or user type," he says. "There are probably many companies who take our data and crunch their own rankings to see where they stand, but of course they don't publish those."

Taylor gives two caveats: first, that the league tables only include the vendors already covered by its existing market share research—though it will add others over time—so there may be smaller but faster-growing vendors that aren't yet on Burton-Taylor's radar and are not included in the tables; and that sometimes revenues alone don't tell the whole story. For example, the value of Bloomberg's and Thomson Reuters' news businesses are much higher than the revenue directly generated by their news and media divisions, because they add immeasurable value to the vendors' terminal propositions, he adds. ■

Down to the Desk: OMG Transforms Data Management Strategy

Old Mutual Global Investors data chief Chris Sharp breaks down why benchmark data strategy is key to cutting costs. Jamie Hyman reports.

Asset management firm Old Mutual Global Investors (OMG) has achieved savings of $60,000 a month by drilling down on data management and making smart decisions about outsourcing.

"It's not popular," says OMG's head of data governance and management, Chris Sharp, when describing how the company revolutionized its approach to benchmark data. "It makes all the people in our office think about data, and the costs."

OMG's approach may not win any popularity contests, but it is a winner on the bottom line. "We're saving about $60,000 a month off our Bloomberg enrichment bill because we're no longer going out every day for fields that we don't need. It's just good housekeeping," Sharp says.

The company's former approach, he says, was to take in benchmark data from vendors, who "didn't have any governance," while OMG had no central contract, so it fell to the data team to get to the bottom of any problems. "So not only did we have a technical issue, we also had an operational issue as in terms of contacting the vendors. Added to that, the way that we technically processed [and] enriched those benchmarks ready for trading [was] quite cumbersome. It was quite an old-fashioned system," he says. It was also expensive, because the team had to enrich benchmark securities on a daily basis so that they were ready to trade.

"Not only would we get an initial hit, we'd get duplications hits, and every time we purchased a new benchmark, costs from the Bloomberg enrichment would go up," Sharp says. "You have a system, and over the years it gets added to. Someone says, 'Oh, I need this regulation check or this compliance,' and you find you're adding Bloomberg fields for all the different datasets. You suddenly realize you're downloading securities data that's probably about $40, $50 dollars a hit."

"Good housekeeping" helped OMG cut data costs

The solution, he says, is a database model where OMG knows every Bloomberg field attached to their benchmarks, where the data is used, what team used it, and why. The cost is then allocated to that specific desk. "We can attribute every single piece of market data down to the desk, so we know exactly how much a particular individual is using," he says.

Outsourcing Model

When adopting the plan, an early decision concerned whether to outsource benchmark data management. Sharp says the firm ultimately decided to partner with Rimes, a data management vendor, to centralize delivery and governance. "[Rimes does] a controlled enrichment, which means it only hits the database once, unless something happens to that security in the marketplace, then they refresh it. So all the data we enrich [in-house] is only static data—only reference data," he says.

OMG's partnership with Rimes also "created a single point of failure" for any given benchmark, Sharp says. So, if a benchmark is not delivered, rather than contacting individual vendors, the OMG data team alerts Rimes. The asset manager also requested a "unique asset universe" based on benchmark usage. "We have one file that comes from Rimes, and it doesn't matter if we add or remove a benchmark, that file just gets bigger or smaller. Now we can add a benchmark without affecting our mastering process."

In the financial data universe, Sharp says, conversations about governance often fail to ask how solutions will save money, or how to measure the success of governance efforts.

"What I loved about this solution was that it was real cash, bottom-line cash. And now, if a company says removing a benchmark might take five days of a developer's time, that's fact. And that developer could be working on something else," he says. "It was an easy win in my mind, but it was only when the bills dropped that everyone suddenly went, 'Oh my God, we can actually save this money.'"

Sharp says the transformation took about a year, with roughly three months spent on the business plan, then about eight months for Rimes to deliver on the proposal. His next project involves restructuring the security master by analysing every field within the model and how it is used, with the goal of significantly reducing reliance on Bloomberg data and its associated costs. ■

ILLUMINATED DATA:

SFTR May Reach Too Far

While waiting for the regulators' final word on SFTR's technical specifications, SFT market participants and counterparties are planning their compliance strategies amid concern that the regulation goes too far in its goal to bring shadow banking into the light. Amelia Axelsen investigates.

Shadow banking, the ominous term for non-banking financial intermediaries that facilitate credit across the global financial system but are not subject to the same regulations, is an opaque marketplace that continues to surge despite being one of the drivers of the 2008 financial crisis. As regulators attempt to shed light on the markets responsible for the demise of Lehman Brothers, securities financing transaction (SFT) industry participants say the Securities Financing Transaction Regulation (SFTR) data requirements take regulatory efforts too far by designing rules that are overly extensive for relatively simplistic and straightforward assets.

In 2013, the European Commission, in conjunction with G20 member leaders and the Financial Stability Board (FSB), outlined measures to address the risks that these markets pose, which involved a series of demanding data reporting requirements. One of those measures eventually became SFTR, which covers repurchase agreements (repos), buy-sell backs and sell-buy backs, margin lending transactions, and securities or commodities lending and borrowing transactions. The European Commission's review of the final report on SFTR is under way, with technical standards pending, and the regulation is expected to take effect in early 2020.

"What is quite different about the implementation of SFTR is that while it will likely be phased in to accommodate different types of counterparties, the actual nature of the regulation can be described as a 'big bang' from day one." **Mark Steadman, Depository Trust and Clearing Corp.**

"The SFT market is and will continue to be intrinsically valuable to the financial system because it provides a lot of the grease to the wheel of liquidity that allows people to buy and sell," says Glenn Havlicek, co-founder and CEO of GLMX, and former managing director at JPMorgan for 22 years. But virtually all of the biggest entities that either failed or were rescued during the financial crisis were trading in the securities financing market. "The SFT market is often an early warning signal and has been through history, indicating trouble within institutions, which, if not systemically important, are close to systemically important. Therefore, the regulators think it's a social good for them to have as much information as possible [on the SFT market]," he says.

According to the FSB, shadow banking accounts for nearly 13 percent of the global financial assets in 2018, but market participants claim SFTs are not well-understood and the data demands for both regulators and firms are far too complex. Regardless, regulators have no plans to roll back the legislation, so firms, brokers, lending agents, and Trade Repositories (TRs) need to be ready to address the data challenges for compliance.

Missing Data and Sourcing

Although SFTR awaits final approval, and is not expected to go live for at least a year and a half, entities in scope that are planning compliance strategies often note similarities between the regulation and European Market Infrastructure Regulation (EMIR), a similar regulation to address over-the-counter (OTC) derivatives.

"What is quite different about the implementation of SFTR is that while it will likely be phased in to accommodate different types of counterparties, the actual nature of the regulation can be described as a 'big bang' from day one," says Mark Steadman, executive director and European head of product development at the Depository Trust and Clearing Corp. (DTCC) Global Trade Repository. "If you look at EMIR in particular, while it was introduced with a defined field set, the actual validations were not that prescriptive initially. The reconciliation under EMIR also was not as onerous as SFTR will be on day one, so the derivatives industry, which by that point had had experience in reporting, got more leeway than the securities finance industry will get with SFTR."

A key SFTR challenge is the sheer number of data fields required for reporting at the end of trading every day. A white paper by the DTCC and consultancy firm the Field Effect reported that nearly 40 percent of fields are not currently or readily available, and expects reporting volumes to increase between 400 and 500 percent per day. Steadman says firms need to start "checking boxes" of their internal reference data, and if fields are missing, they should start working with counterparties externally to source absent reference data points.

Glenn Havlicek
GLMX

Tejpal Bilkhu
BNY Mellon Markets

Ed Oliver, managing director of product development at eSecLending (Europe) Ltd., an independent third-party lender, says within the securities lending industry, reporting 20 to 30 data fields is common and agent lenders are accustomed to reporting at that level but "the challenge is building the gap between the existing data and the 153 data fields that SFTR requires."

The necessary reference data may not readily exist, manual and analog internal processes make it demanding to acquire the data, and often firms have trouble sourcing the data from multiple venues.

Harpreet Bains, global product head for agent lending at JPMorgan, says SFTR's data implications are far and wide. "The data is currently located in multiple systems within an organization, and some of the data fields are not those that firms are used to reconciling today in existing reconciliation or affirmation processes. First establishing what data is required and ascertaining how it will be obtained, then finding a way of pulling it into a single place, combining and aggregating, while at the same time assessing for data quality—that's the challenge," she says.

SFTR is asking for a lot more detail on fields that are not necessarily in banks' trading systems, says Tejpal Bilkhu, securities finance EMEA business management at BNY Mellon Markets. "Another aspect is that there are a large number of reference data fields,

such as classification fields, Legal Entity Identifiers (LEIs), and other new types of fields, which are not difficult to source, but there is an additional challenge in securing the relevant licenses."

Jonathan Lee, senior regulatory reporting specialist (SFTR) EMEA at Kaizen, says implementing the necessary controls around accuracy and completeness is arduous. "There are relatively few 'golden sources' for much of the data—especially the counterparty and security reference and classification data—so you're going to see that firms are going to struggle to maintain consistency between themselves," he says.

Although securities lending may be slightly ahead in adopting technology than the other SFTs, a lot of the execution is completed over the phone or chat and then input manually into spreadsheets or internal systems. Havlicek says SFTR has hastened GLMX clients' demand to integrate trading platforms, but without regulators finalizing the technical specifications, preparation is a "herculean task."

"Repos started up sort of as a bottoms-up market, meaning it started out as a back-office function and it evolved into a front-office function," he says. "It's a very idiosyncratic market, and there are a lot of bells and whistles on a very simplistic concept, and the simple concept is borrowing and lending securities for cash or against other securities. That being said, [repo has] been slow to adopt technology."

Shruti Prakash, senior business consultant at Publicis.Sapient, says absent a single system with automated processes it is difficult to capture all the updates that go along with trading SFTs. Creating a common central hub to mitigate fragmentation and operational risk is one way to consolidate the data, she says. Lee concurs, saying SFTR may not completely alter the SFT landscape, but the regulation will accelerate the need for automation and standardization across the industry, as counterparties expect technology to be a primary component of the SFT market going forward.

Harpreet Bains
JPMorgan

Pairing and Matching

SFTR requirements may result in entities attempting to report despite disagreement among counterparties when it comes to technical details of the trade.

"There are lots of inconsistencies today within this market, and the repo market, in particular, historically has been very much driven by settlement events. So the trading desks and the operation departments have been primarily concerned with ensuring that the next leg of the transaction matches at the settlement level and not necessarily overly concerned with the correct set of contractual details for the non-economic attributes of the trade," says Lee.

For example, he says, one counterparty may book the repo rate at the current level of a floating rate and the other counterparty may book it with the actual floating rate, which would result in mismatched reports.

"You can never really mitigate against the possibility that two counterparties to a trade will have different views of that trade and report into a trade repository differently. We're currently working with the industry and the regulators to promote and define best practices for trade reporting," says Steadman.

Pairing and matching was similarly a problem with EMIR compliance, he says, and firms can leverage lessons from EMIR to create smoother processes with SFTR. For example, counterparties could agree on LEIs and unique trade identifiers (UTIs) at the end of the execution of the trade, since dual-sided reporting is required. The most important data elements to get right are UTI, the two counterparties for the trade, and the master

agreement type, and each firm should have a pre-break strategy, according to Steadman.

"The way firms report trades should be consistent. There have been some misconceptions, particularly in the last few years, around poor data quality when challenges have been primarily caused by a lack of consistency in the way that data is reported into trade repositories," he says.

In the latest version of SFTR, ESMA allows a one-hour window after the trade is executed for counterparties to delegate timestamps, but it is not clear how firms will report matching timestamps, especially for trades done over the phone.

Some firms are turning to vendors to reduce the burden of pairing and matching. Several buy-side and sell-side firms signed on to provide SFTR expertise for IHS Markit's Pirum solution in 2016 and 2017, but it is unclear whether solutions by different vendors will integrate successfully.

"We do need interoperability within the vendor solutions. If I trade a loan across the EquiLend platform, for example, then that will generate a UTI and time stamp on that platform. So how do I get that from that platform into the IHS Markit Pirum solution? Is there going to be interoperability between the two solutions so that they talk to each other?" Oliver says.

Bilkhu says banks are "stretched pretty thin" when it comes to regulatory projects and building the technology for SFTR could be a challenge internally. The solution might be hiring personnel resolve issues that arise from SFTR's data field requirements, he says.

Bains adds that this assessment of current tools and system, and how they react to breaks, is paramount for a pre-break strategy, and event-driven automation, as opposed to back-end reconciliation, would help ensure information is correct across counterparties and systems. "Firms don't have much of a window to identify and fix a break, so figuring out why the breaks are occurring and focusing on break elimination, not only break resolution, is important," she says, adding that smart compliance strategy identifies how data is generated and redesigns the processes "to minimise reconciliation issues is where focus is needed."

Shruti Prakash
Publicis.Sapient

Ed Oliver
eSecLending

Jonathan Lee
Kaizen

Data Overload

Despite pressure from lawmakers to eliminate SFTR's shadow banking tendencies, market experts attest that SFTs are low risk and highly collateralized.

"It's pretty unlikely that [SFTs] will be at the center of the next financial crisis," Kaizen's Lee says. Because SFTs are a niche market, he says explanations of how they function and operate can get "lost in translation," and a lack of understanding by the regulators is evident in some of the reporting requirements.

"For example, [regulators] didn't understand that in practice, the buy-sell back market is almost an entirely documented market today," Lee says. "And yet the regulation has been drafted in such a way that there is currently no provision to report a documented buy-sell back transaction as such, precluded by the level 1 text."

According to BNY Mellon's Bilkhu, regulators may not have understood the SFT market when writing rules for timestamps. "The timestamp requirement initially required matched reporting with no tolerance, so perhaps there was a degree of misunderstanding around SFT industry practices," says Bilkhu. "This is an OTC market and in terms of timestamps, it's the settlement date that's important if you're trying to capture the actual exposure when transferring securities from one counterparty to another. There have been some changes made in the text since it first came out, however, which makes pairing and matching slightly easier."

Based on industry feedback, SFTR now accommodates a one hour window for timestamp reporting.

Steadman highlighted another problem with SFTR: It attempts to group together and regulate a wide range of asset classes. "Repos, securities lending, margin lending, etc., are different asset classes in their own right. Until now, they did not integrate with each other. With SFTR, there will be one regulation that covers these different asset classes so adopting a global holistic view to compliance will be key," Steadman says.

Oliver is optimistic that the data SFTR generates for Esma could lead to an easing of regulation, because the data will demonstrate that SFTs are "well-managed and risk-adjusted."

However, SFTR cannot shed light on lenders based outside of the EU, and out of scope counterparties trading with EU entities will lead to "a lot of one-sided reporting," Oliver says.

ESMA will ultimately have to rely on the European counterparties to report accurately, Bilkhu says, and one-sided reporting still allows regulators to adequately evaluate risks and reduce the time spent on reconciliation breaks.

"ESMA will be receiving the exposure breakdowns and the LEIs, so regulators will still be able to see the exposure each European entity has to different counterparties," he says. "That's useful information. The disadvantage of one-sided reporting where the counterparty is not EU-based will be that the regulator cannot verify both counterparties to the transaction have the same data within their systems, and will therefore be relying on the reporting counterparty for accuracy."

Lee says that although he thinks SFTR is "overly complex," ultimately, the industry will figure out how to comply. "It's just going to take some time, in the same way that compliance with EMIR reporting for derivatives has taken quite some time," he says. ■

Data Cost Management 2.0

Financial firms must embrace innovative approaches to cost management is they are to meet tighter cost-control demands and free up budget to invest in new datasets. Max Bowie reports on how the industry is approaching this dilemma.

With an industry-wide cost of more than $28 billion per year, market and reference data is often cited as financial firms' third-largest expense, behind staff costs and office space. And since the financial crisis, data professionals have faced ever-tightening purse-strings and demands from management to reduce data costs year after year, while also coming up against end-users hungry for increased access to new data types.

"The volume of data being created worldwide is tripling every year, and the expected growth in what we spend on data is less than 20 percent. So the gap between the growth in data and our spend on it is growing much faster. And to close that gap, we have to be more efficient with data," says Caroline Sherman, managing director and head of the Enterprise platform at crowd-sourced hedge fund Quantopian.

So how are data professionals tackling these demands? Often, in many of the same ways that they have for decades. But with significant savings proving harder to come by, firms must become more creative in their approaches, and be willing to embrace—or initiate—more innovative solutions.

"We would expect all firms to have found and managed the low-hanging fruit. But that doesn't mean

there aren't more opportunities to reduce costs out there," says a market data manager at a large US investment bank.

But these are becoming increasingly difficult to find and execute on, with traditional cost rationalization exercises yielding "very little," according to one former buy-side data manager.

"I spent six months on one index provider, and we found some locations that could be cut off … but their standard price increases will eat up those savings—so you're just treading water," the buy-side data manager says.

Broadly speaking, methods for managing data costs—and potential areas for innovation—fall into two areas: technical and commercial. Technical opportunities refer to the ability to reduce data spend by analyzing usage and data delivery, while commercial factors include new approaches to negotiating terms, or new business models around data fees and licensing.

On the technical side, the investment bank data manager highlights the potential to reengineer delivery of market data, removing inefficiencies, and replacing or outsourcing incumbent systems with lower-cost alternatives. "One would imagine there are many legacy systems on Wall Street that could benefit from new technologies or from outsourcing processes to reduce the technical cost and footprint of market data," he says.

Some methods of identifying costs and savings are antiquated, such as manually listing individuals and the services they use—which can be costly and time-consuming, often requiring consultants to be on-site for several months—then recommending eliminating services altogether or replacing them with cheaper alternatives. Some more "modern" services—such as basic inventory management platforms—merely automate this process without leading to a more strategic conclusion. And while some of these processes are run in-house on an ongoing basis, others are performed ad-hoc by external consultants, which can allow bad practices and costs to inch upward again between evaluations.

"There are natural inflators of market data costs, so costs will always creep back up," especially when many data administration departments are still under-staffed, post-financial crisis, says Stephen Veasey, CEO of data consultancy 3D Innovations (3Di).

The Times They Are A-Changing

"The days of looking at a static report to see if you could save costs are over. Now, you need to see intraday where data is going and to who, and why it's going there, and you need to assign metadata to data—for example, is it for generating reports, or for front-office trading decisions, because the cost of using something for trading in the front office can be more expensive," says Amjad Zoghbi, director at Xpansion Financial Technology Services, whose Xmon platform can assign and track costs by individual consumer, desk, office, region, application, job function or business process.

"So you can see how much data is being used for testing or in reports, and how much each of those uses is costing. It elevates the discussion and shifts it from market data administration teams to business decision makers. They think data is cheap. So when we put this in front of them and show them how much it costs … in some cases, it opens their eyes to the cost of data," Zoghbi says.

Part of Xmon is a caching layer that prevents duplicative re-requests of the same data. West Highland Support Services' Reference Data Framework (RDF), launched earlier this year, provides a similar approach, and—by employing an abstraction layer, allows users to change the data source for a user or service, says Jeff Hays, RDF product manager at West Highland.

Distinguishing usage types is also a key feature of the Market Data Grip tool offered by Dutch vendor Rivium

Amjad Zoghbi
Xpansion Financial Technology Services

Barry Raskin
Jordan & Jordan

Business Solutions, which can segment data consumers with lower demand and determine suitable data solutions, rather than automatically giving them a full-featured premium terminal.

Hans van Sligtenhorst, business unit manager for market data at Rivium, says the tool helps counteract bad habits at end-user firms—such as copying the profile for new hires from previous user profiles, which can mean that from day one, new joiners are automatically given access to a more expensive package of data than they may need.

"We have about 80 different business profiles for content and capabilities within terminals and how they contribute to the business … so you can combine a theoretical profile of what we think someone should need to do their job with actual usage data," says Kees Brooimans, CEO of the Screen group of businesses at TRG Screen. But simply developing more granular profiles isn't innovative in itself, he says. Rather, leading-edge firms are handing off inventory management and usage tracking to vendors like TRG Screen so they can focus on strategy, business analysis and procurement. "That's more innovative—spending time on areas that add more value, rather than on processing an invoice," he adds.

A new twist on an older approach is offered by EasyFeed.io, a Paris-based startup that prices every request for data in real time and suggests alternative sources that could allow banks, asset managers, pension funds, asset servicing companies and insurers to save money.

"We work at the request level … and we calculate costs based on requests, so we can price every request, and in the context of other requests coming in during the month," says Vincent Goubert, managing partner at EasyFeed. "We capture and process every request in 300 milliseconds. So, for example, if you are a securities servicing com-

pany and you are about to onboard a new asset manager client, you can assess the cost for their funds and vendors in advance."

However, old-school displacement strategies are still commonplace.

"The idea at a lot of larger firms is to explore low-cost alternatives, but usually as a stalking horse to gain leverage over incumbent vendors," says Barry Raskin, managing director at market data and management consulting firm Jordan & Jordan, noting that the scale of a project to replace services—especially, for example, direct feeds—can be prohibitively complicated.

Instead, firms need to be smarter about what they buy and how they buy it, he says. "Firms should take a deep dive into their infrastructure and workflow to make sure they are buying smart and not paying for data more than once," such as when one firm acquires another with similar subscriptions, or buys the same data direct from an exchange, and again via real-time vendor services, as well as end-of-day files, Raskin says. "There are massive overlaps at large institutions that are costing a lot of money. But that kind of cost-saving analysis is complicated because you have to look at the plumbing, and many people own different parts of the plumbing."

The way firms organize their data access and processing can also have a big impact on cost management, says Dessa Glasser, principal at the Financial Risk Group, and former chief data officer (CDO) at JPMorgan Asset Management.

"People can now leverage the cloud and data services: You build a logical model with a data services layer, so you can re-use your data. ... Once data becomes a shared asset, it's in one logical place rather than having every unit bring data in themselves, so you don't have everybody redundantly cleaning it and moving it around," Glasser says. "It's about being smarter about how you use and purpose the data."

Instead of a business unit acquiring, onboarding, formatting and scrubbing data separate from other areas of the firm, which could mean it takes a month before the data is actually usable, firms should federate some of the work and apply "appropriate governance," rather than leaving a CDO office to implement a heavier-handed approach.

"Federated ownership is actually cheaper to maintain, and gives access to data closer to the source," Glasser says. "It makes it much easier to allocate costs, because you can see who is creating and using data, and who isn't … and you can put restrictions on who can access it. In addition, it causes vendors to become more streamlined and more competitive on costs. And by having a data layer, you can outsource, or move to a utility, or replace vendors more easily—so it forces vendors to focus on competing and on value-add."

Negotiation Needs Knowledge

Since data organizations are being held to new standards when it comes to saving money, they also need to hold their providers to new standards when negotiating deals.

"People are looking at enterprise deals more than in the past, including all-you-can-eat deals. Or maybe a firm already has an all-you-can-eat deal and wants more, or only uses a fraction of the data included in the deal and wants to only pay for what it uses," Raskin says.

"Other new areas for cost savings include, for example, what Symphony Communication Services is trying to do around open APIs. Firms are seeing that they don't have to be married to any single data platform, but can use APIs to bring in their preferred data sources, whether internal or third-party data," he adds, but warns that this approach will not yield immediate short-term savings. "It's a longer-term play, and requires a big investment of capital."

Caroline Sherman
Quantopian

Dessa Glasser
Financial Risk Group

Web services data provider Xignite has been focusing on emulation application programming interfaces (APIs)—which create an abstraction layer between data source and consuming application, allowing firms to switch data sources and phase out legacy infrastructure—for several years, says CEO Stephane Dubois. And while this model and data delivery via the cloud can save millions of dollars, he warns that "if you really want to drive cost control, control is knowledge of what costs how much. ... If you don't know how much something is costing you, and you can't associate it with a business area, then you can't fix it."

Harald Bina, COO of MarketMap at financial technology provider FIS, says that while initiatives like virtualizing datacenters and automating processes can deliver lower costs and greater controls, knowledge is key. "A market data manager must have a pretty deep knowledge of what's available out there and understand what vendors provide, to really drive efficiencies within a firm. It's getting more sophisticated for a market data manager to stay on top of things," he adds.

3Di's Veasey says that over 16 years the consultancy has delivered an average 11 percent reduction in clients' market data budgets, but adds that the "big wins" come from "technical rebalancing and rationalization of supporting infrastructures." Other areas of potential savings—such as license arbitrage between ratings and index providers—can also yield results, but require detailed work.

"There's a myth that you need all the top three ratings agencies. Often, you find that some functions just need one, some just need two, and some can use an internal rate … and there might be roles where you need more," Veasey says. "You have to work very closely with the business side—and often the business doesn't allow you to get that close because it's busy doing its job, and doesn't have time for a debate about data costs."

Once a firm has decided its position, if negotiations fail to deliver the desired result, "nothing succeeds like demand management," the investment bank data manager says. "Present it to the users and ask if they need those costs. The users will make intelligent choices. In our firm, every user has to re-certify their usage every year—and every year, we take between $4 million and $5 million out of our costs."

While re-certification programs can prove useful for controlling costs of individual subscriber-based services, some of the more challenging sources of data costs—such as index data and ratings—are typically licensed on a firm-wide basis.

"Really, the only way to save a significant amount is by disengaging from a vendor or dataset. ... You could take out $500,000 to $1 million of costs annually in one fell swoop by eliminating suppliers entirely," the buy-side data manager says. "To get to the next level of savings requires a dialogue with the business and asset owners to review the mandates required," such as the indexes used to benchmark performance, or requirements to use more than one source of ratings data.

"There seems to be a disconnect between knowing what you need to do and actually doing it—for example, being outraged over a ratings agency raising fees versus going to clients and saying you're going to remove that agency," he adds. "Have you engaged the asset owners? They could achieve better cost savings on investment products if they would be more flexible about what benchmarks you can use."

Tipping the Playing Field

There is a third way of managing data costs: acting preventatively or disruptively to challenge or offset expense. "When a provider or industry group is recalcitrant, we look at what we can do to introduce competition, such as initiatives to support new entrants into the index space to make the industry more competitive," the investment bank data manager says. "If we can't improve a deal with a vendor through negotiation, can we improve the landscape through competition? The more competition there is, the less you see behavior such as raising prices without adding value."

Harald Bina
FIS

John Bottega
EDM Council

Stephane Dubois
Xignite

MarketMap's Bina concurs: "One thing we've observed among our major accounts is that where index providers become very expensive—if not cost-prohibitive—and inflexible, this has triggered a number of firms to create their own indexes to track the market, or to base investment products on alternative indexes," he says.

Of course, they say offense is the best defense, and some firms are turning their data assets from an expense into a revenue source. Goldman Sachs and JPMorgan have both begun investigating the potential of selling proprietary data to quantitative firms as "alternative" datasets. Could firms with high data consumption bills explore ways to monetize data assets and offset demands to reduce data spend?

"If you want to pay for new data types by cutting other costs, then you have a limited ceiling," says Quantopian's Sherman. "When you're looking at growing the top line, budget is far less constrained—so I think these are treated differently."

The individual with oversight of these separate areas would usually be the chief data officer, though the traditional demands of this role may be at odds with the desire to commercialize data assets.

"In my previous roles, I've been not just the guardian of data, but also the person responsible for commercializing it—or, more accurately, for leveraging the asset value of data. That's a big distinction, because it's not always just about making money from data. Sometimes maximizing value is about reducing risk and streamlining operations as well," says a data consultant and former CDO, adding that the CDO role is typically a shared service supporting the needs of the entire organization, while a commercial function would generally be associated with specific P&L verticals.

Glasser says this shift in the structure of CDOs is already underway.

"I do think we will see chief data officers becoming more aligned with the business, and not just holding a purely governance-related role. Unfortunately, most CDOs have traditionally been aligned mainly to risk and regulatory functions, and anything revenue-generating is usually handled separately… so as the CDO moves away from a purely regulatory role and more towards finding insights in the data, this could be a natural extension of that," Glasser says.

John Bottega, executive director of industry association the EDM Council, who has served as CDO at Bank of America, the Federal Reserve Bank of New York, and Citigroup, acknowledges that the role of the CDO is changing to encompass data acquisition, and to work with other key roles within an organization—such as the other CDO, the chief digital officer, to create "digital storefronts" for data—but perhaps not all the commercial responsibilities that others envisage.

"Governance and commercial functions are different skillsets. I'm not a marketing expert, so to sell a store of data, I'd need a marketing expert," Bottega says. "If a bank has stumbled into a good source of data and wants to commercialize it, then it probably needs experts to do that. ... It takes a lot of infrastructure and people to sell data—it's a full-time job. But as the industry has changed, we've seen more cases where a firm may well have data that could be used by other organizations."

However, he says he expects cost controls to be ever-present, and that firms are unlikely to accept the promise of revenues to offset higher costs. With no obvious way to counter the rising cost of data, the pressure on firms to adopt more innovative approaches to cost management will only increase. ■

Artificial Intelligence, Real Intel:

Data Vendors Make Strides on AI

Artificial Intelligence and machine learning have quickly become hot topics in the capital markets. Kirsten Hyde takes a look at how the major financial information providers are deploying AI and machine-learning technologies to enhance their internal processes and the products they provide to clients.

After largely lagging behind other industries to adopt artificial intelligence (AI) and machine-learning technology, the financial markets are playing catch-up with a vigor that borders on obsession. However, some of the major financial information providers that collect, manage and disseminate massive amounts of information and data have been developing and applying these technologies—though often behind the scenes—for several years.

Over the past two years in particular, there has been a marked uptick in research and development activities, with vendors using machine-learning technology to create efficiencies in their internal processes and to improve the user experience for their clients. They are also enlisting a growing army of engineers and data scientists, launching machine-learning education programmes for staff internally, and this year, S&P Global paid more than half a billion dollars to acquire machine-learning technology startup Kensho—reportedly the largest price paid for an AI company to date.

Despite the current focus, AI is not new. Indeed, as a scientific discipline, AI has existed for more than 60 years, but has experienced a renaissance in recent years due to a number of factors, including an exponential increase in computer processing power; the declining price and growing convenience of data storage solutions, such as the cloud; and, of course, the explosion of data and proliferation of "free" information—much of it unstructured—and the corresponding need to process

and understand it. Thomson Reuters reports it now processes and collects more data in a single day today than it did in a month five years ago.

Valuable Tools

In an environment of high volume, time-sensitive news and social media stories, and with the unstructured nature of information—it is estimated that 80 percent of all data within the financial industry is unstructured—AI technologies and machine-learning techniques have become valuable tools for financial information providers to process and to extract actionable information and value-added meaning for customers.

At Thomson Reuters, AI and machine-learning technologies are already driving innovation and are the engines underlying many of its products and services after the organisation began phasing them in 25 years ago.

In 2016, the data giant created a Center for AI and Cognitive Computing (CAICC), comprised of scientists, engineers and designers focused on the development of smart applications through the extension of natural-language processing, machine learning, information retrieval, text analytics and human-computer interactions. CAICC partners with internal teams, customers and third parties, including start-ups and academics, to prototype and validate new solutions. It is located at Thomson Reuters' Technology Center in Toronto and is a branch of the much larger Thomson Reuters Research & Development group.

Together, the objective of the groups is to transform "knowledge work" by developing new capabilities and tools that address specific customer challenges, and to identify opportunities that could be enabled by AI and machine learning—including how Thomson Reuters consumes and analyzes a firehose of data from news, markets and social media, and how it enhances and organizes content.

"The R&D group drives innovation by creating new capabilities. So if a product or a service is in the making for future release, and the product planners discover that there's a vital piece of technology missing that they cannot just license from somewhere else because it doesn't exist yet—and I'm talking [something that is] ahead of the curve, maybe three to five years—they come to us with a request. They collaborate with our teams by providing domain expertise, their data assets, and the requirements of what exactly is needed, and we provide the scientific and development expertise to create something that's new," says Jochen Leidner, director of research at Thomson Reuters in London. "We can modify existing algorithms and machine-learning models, or extend them or create entirely new things. We then explore the properties of what we created by trying them out on Thomson Reuters' data assets and quantify the success of our efforts by measuring the accuracy of what we develop."

The group regularly files patent applications and publishes scientific papers to disseminate its technology innovations, and transfers that newfound knowledge back to its business units through its internal project partners, essentially making the group an internal service provider, Leidner adds.

Accuracy and Risk Exposure

A recent development from CAICC group is Reuters News Tracer, an AI-powered platform used by Reuters' journalists that detects newsworthy events breaking on Twitter and rates the likelihood of them being true.

Two years in the making, Reuters News Tracer harnesses the power of cognitive computing and machine learning by running algorithms on a percentage of Twitter's 700 million daily tweets. Its premise is to point journalists to events as they are reported around the world, filter out "noise," such as chat or spam, and assess the veracity of this reporting. Reuters journalists taught the tool to ask key questions, consult historical data, and weigh relevance just like a human would, but within 40 milliseconds, giving them a reporting head-start. The journalists then independently verify the information through their own channels and reporting, before publishing.

Adam Broun
Kensho

Gary Kazantsev
Bloomberg

"Reuters News Tracer is a fine example of the synergy between machines and human experts," Leidner says. "We are not automating away the journalists; rather, we are supplementing them with machine-learning tools that make them more productive."

The tool is also live with some of the vendor's financial customers. Thomson Reuters defines "channels" with market-moving potential or relevance to financial clients, and the clients consume that live stream without any human intervention, with a veracity score to determine the likelihood of accuracy.

Another example is Media Check, the recently launched media screening component within Thomson Reuters' World-Check One financial crime and risk monitoring platform, which uses machine learning capabilities to filter potentially relevant negative mentions in news and text data relating to companies or individuals.

Media Check aggregates 11,600 print and online media sources, and allows users to search for individuals, companies or vessels to help identify potential instances or links to money laundering, theft, fraud, cybercrime, and political exposed persons. Media Check leverages Thomson Reuters Intelligent Tagging—proprietary machine learning-based algorithms that process and tag unstructured content—and a financial crime-based taxonomy.

"If an individual, or a company, is exposed to certain types of risks—regulatory risks, criminal risk, environmental risk, reputational risk,

and so on—our machine-learning model will extract from a news story the kind of risks that company is exposed to and link it to the entity itself," Leidner says.

In many cases, the machine-learning work that the R&D group and the AI Center do is "under the hood," but the impact is better results for Thomson Reuters customers, which leads to enhanced productivity, he adds.

"For example, if we build a better search engine or a better question-answering system, then it makes our customers more productive. They don't have to sift through a hierarchy of menus anymore, and there is an increasing demand on professional services to provide the same convenience that our customers are used to as consumers. In the consumer space, we have all been spoiled: Responses need to be fast, relevant and accurate. That same pressure applies in the financial services industry, and that's why we need to conduct applied research in the verticals that we operate in, to provide the same high bars in terms of accuracy, relevance, and speed," Leidner says.

Thomson Reuters is banking so much on the power of AI and machine learning that it has doubled the size of its scientific teams over the past two years, which continue to grow. "We are hiring additional scientific staff and seeking to expand the R&D team further, and the Toronto base [and the AI Center], which is creating 400 new technology jobs by the end of this year, is a sign of that," he adds.

Expansion

Thomson Reuters is not alone in its efforts. Bloomberg has a dedicated machine-learning engineering group that has been expanding since its formation eight years ago and is on a recruitment drive today. Gary Kazantsev, head of the group, which consists of scientists, researchers and software engineers in London and New York, says machine learning has become such an important area at Bloomberg that the company runs an academic grant program to support machine-learning research at universities around the world.

"We also have positions for doctoral researchers. We take in people from academia to work with us on problems, and we run our own internal educational programs, which we started formally last year, to educate more of our engineers and product managers about the methods of machine learning, natural-language processing, and artificial intelligence. This has been very successful. Currently, we have five course offerings, which are very much like college courses," Kazantsev says, adding that Bloomberg plans to make one of those courses available online for financial professionals with a strong mathematics background to learn more about machine learning.

Bloomberg has been implementing and investing in AI since hiring Kazantsev 10 years ago. The aim of the machine-learning team is to derive intelligence and insight from the massive amounts of data, financial information and news stories coursing over Bloomberg's network to benefit the 325,000 professionals who subscribe to Bloomberg's terminal. His team also works to enhance Bloomberg's enterprise products that are sold as inputs into strategies for black box trading, risk analysis and other client automated workflow, and to improve the efficiency of internal processes in terms of processing, organizing and collating the data coming in.

Over the years, it has enhanced the terminal's question-and-answering capabilities, providing users with answers to complicated financial questions based on Bloomberg's data resources. The team's work enables subscribers to type questions in English queries rather than code—for instance, they could type "Which Chinese companies in the steel industry have had dividend yield of more than five percent last year?"—and receive real-time results, which

Michael Eisenkraft
Cohen Milstein

Kazantsev says represents a huge gain in productivity for clients. Other areas of focus include sentiment analysis of news and financial filings, market impact indicators, social media analysis, topic clustering, and predictive models of market behavior.

In fact, sentiment analysis—which involves the application of machine-learning techniques to identify a news story or tweet as being relevant for an individual stock ticker, and to assign a sentiment score to each story or tweet in the feed—is something that Bloomberg has been developing and enhancing for almost a decade already.

"When I worked on the first sentiment analysis project, it took somewhere between six months and a year to get to a point where we were happy with it," Kazantsev says. "Last year, following big investments by Bloomberg in infrastructure for machine-learning data science, we built three such models in three months. That's a big acceleration in being able to achieve real results."

One project the team is working on is the development of a multilingual sentiment analysis tool for instances where the underlying text is in a language other than English. Kazantsev says his team's work enormously simplifies clients' workflows. "For example, we have received feedback from clients, both internal and external, saying that they now use the search system differently. Where certain things used to be complicated or difficult, they're now trivial to do."

Fast Track

Other organizations investing heavily in AI power include S&P Global, which acquired Kensho Technologies in April for $550 million. The company says the acquisition will fast-track its use of AI, natural-language processing, and data analytics in existing and future applications to deliver improved actionable insights to clients, advanced search capabilities, and automated workflows that create new products faster.

Kensho, which previously counted S&P Global as a client and an investor, was founded five years ago out of Harvard University by CEO Daniel Nadler and has around 120 employees—mainly engineers and data scientists recruited from academia and tech organisations such as Google, Facebook and Apple. It started out by developing machine-learning systems to trawl through vast amounts of data and market-moving information seeking correlations between world events and their impact on asset prices.

"From there, we've built an expertise in structuring the unstructured—taking text, taking news, taking all sorts of unstructured data and turning it into linked and clean information that can be used to support different types of analysis," says Kensho president and COO Adam Broun. After becoming a firm fixture on Goldman Sachs' trading desks, the company's technology has expanded to several other Wall Street firms.

S&P Global began working with Kensho two years ago on products to address specific market segments that it serves. "What that helped us to see was that a change was happening in the industry," says S&P Global CTO Nick Cafferillo. "A lot of our clients have access to a tremendous amount of data, but they don't necessarily have access to 'information.' What we have heard increasingly from our end users is that they want to spend less time linking data and trying to put it in a format that's usable, and more time answering their clients' questions, gaining insight, and driving value for their firms. Machine learning and artificial intelligence help us to do that, and the acquisition of Kensho was a logical next step for us."

As such, a big focus for S&P Global has been to take different datasets from its ecosystem and link them to produce enhanced insights for clients. "It's fairly easy in US public markets to link data, because typically, companies have some form of identifier, but it gets more difficult when you go across borders, when you start looking at private companies, for instance. Historically, we've had an analyst team do the work, but it can take a long time. With Kensho, we've been able to build algorithms that link the information automatically, which means the analysts can then validate those links and move them along. We've been able to generate huge time savings that has allowed us to take on more information," says Cafferillo.

Nick Cafferillo
S&P Global

For example, using Kensho's machine-learning algorithms, S&P Global can now link to information on privately held companies licensed from Crunchbase, which allows it to provide expedited insights for organizations interested in acquiring or investing in private companies. The linking project was expected to take several months, but took just several days.

"What this has allowed us to do is use our resources to collect other private company information from other country registries around the globe—projects that would have been conducted much further down the line," Cafferillo says. "This reinforces how machine learning can have an impact on the way we work. It's helping us to unlock the power of our people, so we're able to produce new products more rapidly than before."

The Kensho linking capability also gives S&P Global the ability to expand quickly into new markets by allowing it to onboard new datasets, he adds.

In other areas, the company plans to bring natural-language search to its desktop platforms so users can ask questions and get quick results from across S&P Global's vast content sets.

"This is a journey," Broun says. "Each new dataset opens up new possibilities. As a new dataset comes in, the combinations of that data with existing data allows for an ever more sophisticated question and analysis to be done as the platform expands and develops."

For Kensho, collaborating with S&P Global, first in a commercial relationship and now as part of the organization (though operating as an independent division), has opened up a new world for its data scientists to develop solutions and solve problems with the datasets that S&P has.

Underground Movement

Behind the scenes, all the major information providers will continue to develop and deploy AI technologies. As Broun notes, "Where AI is being applied, and where it will continue to be applied over the next few years, is underground. It's in the subtle processes that underpin what humans do, to make those humans more productive, and it will just become the background of how every knowledge worker does their work."

Looking ahead, Kazantsev says he expects the pace of innovation to accelerate because the barrier to entry to using these tools continues to fall.

"What I would like to see, however, is more attention being paid to the 'interpretability' of machine-learning models. So, how do you build models which are understandable to human beings where their decisions can be explained? This is particularly pertinent in self-driving cars. If it crashes into a wall, you really would like to understand why that happened. But it is just as important in finance," he says. "For regulatory reasons, for instance, a compliance officer might need to be able to explain to a securities regulator why an automated workflow made a particular trade. Only recently has there been a sufficient amount of attention paid to this issue in the academic literature, so I think there is a lot of work to be done there."

And in a sense, this sums up the state of AI's journey in capital markets: though vendors have made great progress in scaling the mountain of applying AI to market data processing techniques, the summit seems like a distant and ever-moving target, and market participants will need to harness a new generation of techniques, tools and talent to unlock its full potential. ■

IT'S COMPLICATED:

Rethinking the Relationship Between Data Governance and Innovation

As data innovation moves from trend to industry standard, Amelia Axelsen investigates whether governance is its enemy, or an essential driver.

An influx of regulation in the financial services industry is squeezing funds and diverting capital toward compliance projects, but assuming that governance is the enemy of innovation may be a mistake.

One of the most visible instances of the battle between innovation and governance is Formula One motor racing, where engineers and drivers employ an arsenal of computers, streaming data from sensors, and technology to process, analyze, and distribute data from racetrack to factory and back again in fractions of a second, so crews can quickly assess the performance of both driver and race car. Today, an F1 pit box resembles less a garage and more a trading floor, overflowing with screens, data, and quants.

But stringent regulations require frequent upgrades to the cars to meet measures designed to make racing safer and eliminate fatalities. Those measures intended to limit speed and protect drivers are anathema to the spirit of Formula One, and hence teams engage in an arms race of evaluating and employing new technologies to increase speed. In F1 racing, regulation generates innovation and results in more competitive racing.

For example, in 2009, former Ferrari technical director Ross Brawn bought out the ailing Honda

F1 team. The minnow startup—piloted by Jenson Button and Rubens Barrichello—didn't stand a chance. Yet Button won the 2009 driver's world championship, as a result of the team's opportunistic interpretation of new rules governing F1 cars' rear diffuser systems.

The challenge of abiding by regulation while transforming data into innovation is not unique to Formula One. The widespread effects of the General Data Protection Regulation (GDPR) were a reminder that data is a tool and a commodity, entrenched within nearly every aspect of modern life. Perhaps no industry is more aware of the prevalence and importance of data than social media, specifically Facebook, whose CEO Mark Zuckerberg faced questioning and scrutiny from US and European lawmakers after it was discovered that the company provided individuals' data to political consultancy Cambridge Analytica, followed by a lawsuit filed in the state of California alleging that Facebook has "weaponized" data.

At the North American Financial Innovation Summit (Nafis) in May, Stephen Harris, global head of data management strategy at Facebook, touched on the scandal, joking that the Facebook Messenger service "extends from personal to business, and it also gets you an invite to Capitol Hill," but he is serious about regulation's effects on innovation in financial services. Harris told delegates that although at times regulation is "absolutely relevant and required," if there isn't a balance, the burden of compliance can "disrupt continued innovation and growth."

He said tech giants such as Facebook, Amazon, and Google are ahead of the financial industry in their use of data analytics to innovate—something he says financial services firms must do if they want to grow their business.

> "The perception that governance inhibits innovation is wrong. Innovation is achieved through trust and information—access to it, and the ability to apply it in the right manner."
> **John Bottega, EDM Council**

However, some data experts take another view: They say regulations that demand better data governance, such as BCBS 239, may actually foster innovation because they force firms to develop the tools for improved data management, which is a key first step in generating ideas that truly change the game.

"The perception that governance inhibits innovation is wrong. Innovation is achieved through trust and information—access to it, and the ability to apply it in the right manner," says John Bottega, executive director at the EDM Council and former chief data officer at Bank of America and the Federal Reserve Bank of New York.

Governance Groundwork

As the former head of data enterprise and data strategy at Wells Fargo, Facebook's Harris has extensive experience with the frequently frustrating realities of regulatory compliance. He says rules-based frameworks and regulations in the financial services industry can cripple data insights used to develop new business ideas.

"The ability to lean more toward controlling mechanisms, and not over-governing, will give you way more flexibility. If you weigh in on the governance, nine times out of 10 you're going to slow down innovation, and I think we all understand and know that—and it's what regulators need to hear," he said at Nafis.

Bradley Foster
Bloomberg

However, regulations require firms to develop distinct strategies wherein they take ownership of their data and manage it well, so good governance and data management are critical components of compliance, according to Bottega. As a result, he says, compliance projects can be pivotal in reforming legacy systems and overhauling management practices across every business unit.

Beyond increasing the efficiency of data analytics, governance is cultivating an environment where risk is evaluated effectively in order to prevent another crisis, Bottega says. While finance executives are often eager to pursue data management initiatives, the key to leveraging data into innovation is zeroing in on a distinct data strategy and governance plan that enables the collective flow of information between every office within an organization.

"Without guidelines by which to identify the ownership and curation of data, without a process to access data in an effective way, and ensure that it is being used in an appropriate manner, then what is being created is not innovation—it's incorrect results," he says.

Problems with the Plan

BCBS 239 requires 14 principles for effective risk data aggregation and risk reporting. Two and a half years past deadline, the Basel Committee on Banking Supervision and the European Central Bank both report that the industry is still struggling with implementation of the first two principles: data governance and data management.

Harris highlighted the slow, drawn-out adoption of data governance as a hindrance to growth opportunities. In his former role at Wells Fargo, he said, he noticed that Google and Facebook were able to move quickly when implementing data strategies, and wondered why the bank could not keep up the pace.

"Why do we [the financial services industry] need a third-party committee—the Basel Committee on Banking Supervision—to come out and introduce this principles-based regulation to help uncover and create transparency in the data? The point is, we [the industry] are talking about the data, so why is it so hard to have a fact-based data conversation with everyone sitting around the table, looking for a common set of definitions and to come out of the room with the same answers?" he said.

Bottega says the lack of common definitions is not limited to the fine details of the data itself. In some cases, it extends to data management at a senior level, as many top executives and data officials still grapple with how to define data governance for their firms.

A key obstacle is a lack of uniform, industry-wide methodologies, but having business lines across all levels of financial firms working together creates data ownership and accountability for data quality, said Rick Aiere, consultant and senior IT architect at AIG, during a panel discussion at Nafis. He said that even if governance slows the pace of innovation, it reduces costs and the time it takes to evaluate "dirty" data, adding that it might not be the best model for financial companies to follow the example of tech companies.

Damian Sutcliffe
Ipushpull

"If Facebook was so good [at data governance], then you wouldn't see Mark Zuckerberg answering all kinds of comments from Congress and governments today. Now you see the importance of governance, because they didn't think of it. It's not that they didn't do anything—they probably did; they thought they had their bases covered—but now those things are coming to light in terms of not thinking about data and focusing only on technology and innovation. There's a big pitfall, which is something we [the financial services industry] have learned over the last 20 years," Aiere said.

Once an organization has defined governance for itself, the next step toward creating an innovation-friendly environment is to maximize

the potential of its data professionals' expertise to create and respond to new opportunities.

Aiere said having the right people within an organization to understand datasets and take ownership over data sourcing is pivotal to ensuring correct context for information. "Knowing what your sources are provides a vantage point of consumption, which leads to more innovation because, for example, now you know exactly what the code for the data is and have all the data in one place."

Harris also warned against underestimating the power of leveraging data professionals' expertise: "Non-data professionals have a unique skillset as well, which is very much business-centric, and oftentimes embedded in core business processes, which can really drive the conversation when empowered with the right information. So lean on the data professionals in your organization to help you accomplish that, because the more you do that, the more insights you will glean from the data."

Damian Sutcliffe, former Goldman Sachs CIO and advisor to data sharing provider Ipushpull, says the complexity of the market and the magnitude of the regulatory demand for capital has made it difficult, especially in the investment banking space, to be as disruptive as Google or Amazon, but the financial industry shouldn't dismiss innovation by tech giants, either.

"Anybody who's not worried about Amazon, Google, Apple, etc., in any industry, is potentially going to get called out. Those types of companies are much more likely to disrupt the consumer end of the spectrum first, whether it is consumer banking or mutual fund-type investing," Sutcliffe says.

How Banks Rank

In the decade since the 2008 financial crisis, regulations have placed greater emphasis on data quality and accuracy, and on how data is managed, stored, and disseminated for regulatory reporting and risk analysis. Although projects to comply with new regulations have commanded a greater share of budgets than other efforts, they have led to better data management techniques, which can, in turn, support data analytics breakthroughs and other forms of innovation.

Rick Aiere
AIG

Stephen Harris
Facebook

"Regulation has not only created a framework for banks and buy-side firms to look at and manage their risk, it has also created a platform for banks and the buy side to differentiate themselves through their use of data. I don't think regulation has massively hindered innovation," says Bradley Foster, global head of enterprise data content at Bloomberg. "Regulation creates a great platform from which banks and buy-side firms can operate and use data as a means to generate alpha."

Foster adds that post-crisis regulation has been paramount in producing greater market transparency and pushing firms to create standardized systems. He assigns the blame for the financial crisis to a lack of transparency and the inability of firms to sufficiently evaluate risk metrics due to inconsistent and poor-quality data that isn't normalized. Working within that reality, banks may be better served if, rather than racing to keep up with tech giants, they partner with fintechs to bridge gaps in the industry.

"A bank might be trying to play catch-up, and if it's in that position, leveraging those fintechs can really allow an acceleration of leapfrogging the competition," Sutcliffe says, adding that fintechs may be a less expensive option for banks than fixing a problem internally. "It's a matter of fintechs trying to survey the marketplace to see if there's anything that can help achieve what's missing, and then going to a bank with an idea they think is better."

The explosion of fintech companies has fostered a "convergence between technology and financial services," Foster says. Industry-wide initiatives such as regulatory sandboxes and fintech–bank partnerships are providing fintechs with tools to test their ideas and gain capital. "Banking is coming together with the technology sector to form fintech partnerships to look at technology as an enabler and data as an answer. Financial services relative to other industry sectors, in my experience, is front and center," he says.

In fact, Foster says, the financial industry might not be so far behind fintechs. "Look at how data is being used for simple things like marketplace lending, for example, which was largely the domain of banks providing capital to small and medium-sized businesses. It was built off of mined data—aggregating data, mining that data, writing proprietary algorithms, and essentially figuring out how to approve certain borrower credits," he says.

The production of alternative datasets, the use of artificial intelligence to evaluate risks, and data aggregation for faster regulatory reporting all reveal the strides the industry is making toward generating alpha from data, according to Foster. Better data management—attributed to stringent data governance practices—is allowing firms to generate higher-quality data and manage it in a way it can be used for keener insights, he says.

EDM Council's Bottega says it is unfair to compare the banking sector to the technology sector when it comes to using data for innovation, because companies such as Facebook are "in the business of innovation." Although he believes banks are moving in the right direction, ultimately, he says, a bank's job is to provide capital. So using technology to support that goal will help improve the underlying function of the bank, but it isn't its sole purpose.

"Banking executives are looking at Silicon Valley, and it's the other way around, too. I think the concept of learning from peers and other verticals is an absolute, and I see the banks doing that," Bottega says. ■

OWN GOAL: MIFID II REDUCES Transparency in Some EU Markets

New rules replace voluntary arrangements in ETFs and Nordic bonds, fragmenting post-trade data. *Risk.net*'s Sam Wilkes looks at how, for some data, Mifid II results are the opposite of the regulation's intention.

So far, those hoping for more transparency in European financial markets have little reason to celebrate the arrival of new trading rules, which promised to deliver just that. Investors and dealers in some markets may even be wishing the revised Markets in Financial Instruments Directive (Mifid II) had never come into existence.

In a classic case of unintended consequences, Mifid II has reduced—rather than increased—the availability of ready-to-use information on some Nordic bonds and exchange-traded funds (ETFs). Voluntary arrangements in those markets used to provide aggregated trade data but have been replaced by Mifid II's post-trade transparency rules. The data is now fragmented between different venues and reporting services.

"I have been trading in the Swedish bond market for over 20 years and transparency was much better before," says Joakim Anjou, head of markets for Sweden at Danske Bank.

The sudden plunge into the dark has hit Swedish bonds hardest, as Danish dealers have reinstated a previous voluntary arrangement. In ETFs, meanwhile, some large dealers are managing to piece Mifid data together—this helps them replicate a

"The impact of reporting to different APAs was less transparency. Danish dealers quite quickly started to discuss that this is not good for their market and agreed with the help from us to do voluntarily reporting in line with the former Danish transparency rules."
Fredrik Ekström, Nasdaq

previously available aggregated feed but also points to a way some firms can make use of an influx of ETF data brought about by the new rules.

These are, however, band-aid solutions to a problem that is affecting all asset classes. To be able to reap the full benefits of transparency, traders need a consolidated, preferably live stream of volumes and prices across the European Union. But no one currently provides such a service or is likely to in the near future.

"Becoming a formal consolidated tape provider brings a lot of regulatory burdens, so it wouldn't make commercial sense to do it," says a business strategist at a trading venue.

Nordic Blues

The Mifid II post-trade transparency rules require trading venues to publish the details of trades executed on them, while some bilateral trades must be reported by counterparties through an approved publication arrangement (APA) of their choice. Venues and APAs must release the data as near real time as possible and are allowed to charge for it; 15 minutes later they must make the data available to the public for free.

Mifid II allows, although does not mandate, a delay in reporting—ranging from two days to four weeks—for trades in securities that are deemed illiquid or if the trade exceeds an instrument-specific size threshold.

For the Swedish bond market, these new reporting rules mean two things: The post-trade data is now split between multiple venues and APAs, and it comes out with a two-day delay for the vast majority of bonds as the European Securities and Markets Authority (Esma) currently considers most Swedish bonds illiquid.

Previously, primary dealers in Swedish and Danish bonds that are traded on Nasdaq's exchanges voluntarily reported their off-Nasdaq trades in those bonds to the exchange operator by 6:30 pm on the day of execution. This covered roughly 90 percent of the Swedish bond market, according to an estimate by Anjou at Danske Bank.

Nasdaq aggregated this data with details of trades done on its exchanges and published the consolidated information on its website at 9 am the following day. Based on the data, market participants could work out frequency of trading, prevailing prices, and their market share.

In theory, firms could aggregate the disparate Mifid data themselves, but that is no easy task, partly due to differences in reporting deferrals among EU countries.

While Swedish venues and counterparties can delay trade reporting by two days, the UK allows a delay of four weeks. So, for example, over-the-counter (OTC) trades in Swedish bonds by UK banks Barclays and Royal Bank of Scotland—which are large players in the market—can now be reported four weeks after they take place.

"The inconsistency in implementation of deferral regimes across different jurisdictions makes it difficult to understand when all trades have been published," says Fredrik Ekström, head of Nordic fixed income and European clearing at Nasdaq.

The upshot is "there is less transparency now than we had before Mifid II," according to a regulatory implementation manager at a Swedish bank. "If you were a market-maker, you would be able to find out your market share and what is going on in the market. It was actually quite helpful to see the flow. In Sweden at least it is less clear now," he says.

And the knock-on effect of that is a drop in trading, says Anjou at Danske Bank. "I hear from end-users that they don't know what is going through anymore. That adds to uncertainty for our clients and affects trading, which is not good for liquidity. … We trade less, and the loss of transparency is causing that."

Participants in the Danish bond market ran into similar problems after the introduction of Mifid II in January, but were quick to restore the transparency the new regime had broken.

Ekström says that same month Danish dealers agreed to restart the voluntary reporting to Nasdaq, alongside the obligatory reporting to APAs. Nasdaq pools the data with on-exchange trades and publishes the information on its website.

Some Swedish banks would like to follow their neighbours' example. But not all.

"As banks have set up processes to report to APAs under Mifid II, they are not very keen to add another reporting service," says Anjou. "I could definitely force someone at my bank to do it, but if not everyone is doing it then it doesn't make sense to do so."

Swedish dealers lack the impetus that has propelled Danish banks into concerted action: a unique model of funding mortgage lending—entirely through selling bonds with matching characteristics, such as term and currency. The interest rate on the mortgage is set based on the market price of the matching bonds at the time of their sale. Therefore, Danish mortgage lenders need to know the prevailing bond prices.

"The impact of reporting to different APAs was less transparency," says Nasdaq's Ekström. "Danish dealers quite quickly started to discuss that this is not good for their market and agreed with help from us to do voluntary reporting in line with the former Danish transparency rules."

More Data Does Not Transparency Make

The effect of Mifid II on ETF transparency has been more of a double-edged sword.

Many market participants have attributed this year's growth in the European ETF market to Mifid II obligations to disclose pre- and post-trade data, which revealed the substantial size of ETF trading volumes, attracting more investors.

But there is a catch.

"There is more data out there," says Simon Barriball, head of exchange-traded product trading at agency broker ITG. "But you cannot see it all [in aggregate] unless you do a lot of digging. It is not transparent."

Before Mifid II came into effect, consolidated data on a large portion of European ETF trading was available via a London Stock Exchange (LSE) service. Market-makers reported to the LSE their off-exchange trades in ETFs listed on the bourse. These included deals done bilaterally and on request-for-quote (RFQ) venues such as Bloomberg and Tradeweb. The LSE combined the data with details of on-exchange transactions and provided price and total volume information to Bloomberg terminal users.

Now market-makers must report their bilateral trades to one of the EU's 14 APAs, while RFQ venues have been designated as

multilateral trading facilities, which must publish—on behalf of the counterparties—the details of trades executed on them.

The result is "a bit of a mess," as one ETF trader puts it.

Some large market-makers say they have been able to recreate the LSE feed by stringing together post-trade ETF data from different sources. But that takes a lot of time and effort.

And others are struggling to do the same.

"We are replicating what was available before to some extent, but it's far from perfect," says Barriball of ITG. What is particularly difficult, he adds, is mapping relevant information to each ETF as each trading platform has its own identifier—or ticker—for the same ETF. Before, the mapping was done by the LSE.

A business strategist at a large ETF market-maker says there are on average 60 different tickers for each ETF.

How, then, is Mifid II supposed to deliver true transparency?

The directive's creators envisaged the emergence of a so-called consolidated tape provider (CTP)—a firm that would aggregate all the newly disclosed post-trade data into a live stream of volumes and prices. The CTP would be allowed to charge for the real-time information but it would have to make it available to the public for free after a 15-minute delay. The CTP would also have to guarantee the accuracy of the tape.

The problem is these requirements are putting firms off stepping forward. In particular, having to ensure the tape is accurate is seen as too heavy a burden as the tape would be based on third-party data that's infamous for its gaps and errors.

"Why would someone step forward to do it right now?" asks one trader. "If you are Thomson Reuters or Bloomberg and you could aggregate 80 to 90 percent of the data right now, you could sell that. It might not be perfect, but you can get revenue from that, without regulatory responsibility for accuracy of data."

Simon Barriball
ITG

In fact, investors and dealers may have to rely on exactly this kind of service as a way to resolve, at least in part, Mifid II's transparency conundrum.

"It is being designed for clients who want to power their analytics but who don't need the premium real-time data that enables trading desks to locate liquidity," a spokesperson says. "It will aggregate delayed and unattributed post-trade fixed-income data that is available because of Mifid II into a single consolidated service that is easy to consume and provides clients with a holistic view of bond trading across Europe."

Thomson Reuters will not seek authorisation as a CTP, the person adds.

Neither will Bloomberg, according to a spokesperson. "We provide aggregated equities and non-equities data to our clients, as permitted by law. This is not a new market data service."

A third potential candidate, Nasdaq, is not planning to become a CTP either, says Ekström. The company, which provides the aggregated data on Danish bonds, does not collect the information from APAs, as a CTP would. Instead, it asks dealers for duplicates of their reports to APAs. And secondly, Nasdaq cannot compel contributors to submit reports, while APAs would be obliged to make trade data available to a CTP.

OTC in the Dark

Another, deeper problem lies in a web of practices that mean the transparency requirements do not even apply to as many financial instruments as they realistically should—largely because too few are deemed liquid. The problem has already come to the fore in the bond market and is likely to be worse for derivatives.

"The number of derivatives requiring transparency will definitely be lower than it should be, because complexity increases a lot with derivatives," says the head of regulation at a European bank.

When Esma calculates for the first time, using post-trade data, which derivatives are liquid enough to require disclosure, over-the-counter instruments will be particularly vulnerable to being misclassified as illiquid. That is because a system of identifiers for OTC derivatives often treats the same instrument as a string of different ones, while a lack of clarity over what constitutes "traded on a trading venue" or TOTV in OTC derivatives is creating gaps in reporting.

For all derivatives, Esma may also run into the same data hurdles as it has faced in previous calculations based on post-trade data: incomplete information and the absence of data validation.

Ultimately, many of the firms tasked with reporting the data Esma needs have few incentives to ensure the data is accurate. "We don't care," says a business strategist at a European bank.

It is also Esma that determines whether instruments are liquid enough to be caught in the trading and clearing obligations, but the criteria and data for those are different from those it uses in the liquidity calculation for the transparency rules.

The first full transparency calculation for derivatives—due by April 30, 2019—should deem more instruments liquid as it will be based on a larger dataset of trading data than the transitional gauge, and so should find more instances of an instrument being traded. An instrument is considered liquid if its average daily trade count and notional amount are higher than thresholds set out by Esma. However, market participants still doubt enough derivatives will fall into the scope of the transparency regime, given persistent problems with the quality of the underlying data. ■

Human Capital

Lloyds CDO Maranca Departs Finance for Schneider Electric

Roberto Maranca, former chief data office (CDO) at Lloyds Banking Group, has left the banking industry to join Schneider Electric, an energy management and automation company that also owns agricultural and commodities data provider Telvent DTN, as vice president of data excellence.

Before joining Lloyds in 2017, Maranca held various data and technology positions over 18 years at GE Capital, including CDO of GE Capital International, IT governance and lending leader at GE Capital UK, and IT governance and business intelligence director, IT risk data programs lead, and CIO of the leverage finance business at GE Capital.

Maranca began his career in IT roles supporting the automotive industry, and a background in engineering has created a drive to be at the center of where things are built, he says. That led him away from finance to a new focus on understanding how people use data and the internet of things to foster global, sustainable and ethical standards of living.

"What attracted me to Schneider Electric is the incredible combination of the purpose and the values of the company," he says. "I think their purpose is attached to a set of sustainability values that resonated with me. Our CEO wants to help the 1.8 billion people in the world that don't have access to energy, which was a pretty powerful message for me."

Schneider is based in Rueil-Malmaison, France, but Maranca will be stationed in the London office.

Tim Walker

David Hait

OptionMetrics Shuffles Management Roles

Options pricing and analytics provider OptionMetrics has reorganized its management structure to better reflect its growth and enable it to serve clients more effectively, officials say.

OptionMetrics founder and president David Hait becomes CEO, expanding his responsibilities for leading and managing the company and its technology direction, while VP of sales and marketing Eran Steinberg becomes COO and chief of staff, responsible for project management and day-to-day implementation of business goals, in addition to his current responsibilities overseeing sales and marketing. Steinberg joined OptionMetrics in 2014 from S&P Global Market Intelligence, where he was VP and head of account management for the Americas.

In addition, the vendor has promoted Garrett DeSimone to head of quantitative research. DeSimone joined the company last year as a quantitative research associate, after completing his PhD in financial economics at the University of Delaware, where he also served as an instructor on various financial and economic subjects.

Roberto Maranca

S&P, Thomson Vet Walker Joins Fador Global

Tim Walker, a senior sales executive with more than 25 years' experience in the market data industry, has recently joined Fador Global Consulting, a Boston-based business development agency specializing in fintech growth companies.

Walker was previously managing director of global channel sales and alliances at S&P Global Market Intelligence, where he spent more than 17 years in various roles, including MD of global sales and client development, having joined S&P-owned Capital IQ as SVP of business development in 2005. Before that, he was regional MD for North American sales at Thomson Financial, which he joined via the vendor's acquisition of Worldstreet, where he was SVP of sales, prior to which he was a managing director at First Call, where he spent seven years.

He reports to Fador Global founder and managing partner Bruce Fador.

AlphaSense Names Thunnissen Chief Marketing Officer


Kate Thunnissen

San Francisco-based financial search provider AlphaSense hired Kate Thunnissen in June as chief marketing officer, based in New York and responsible for the vendor's marketing strategy worldwide.

Thunnissen was most recently head of marketing at London-based data, trading and analytics provider Dealogic, prior to which she was an executive director at JP Morgan Chase, VP of advertising at now-defunct online streaming TV platform Sezmi, a senior director at Time Warner Cable, and communications head at McKinsey & Co.'s Stamford office.

She reports to AlphaSense founder and CEO Jack Kokko, who says her "deep marketing expertise along with unique cross-functional and strategic perspective… will be invaluable in supporting our expansion."

Thomson Reuters Names Craig CEO of Refinitiv, Rebadged F&R Unit

Thomson Reuters has announced that David Craig, currently president of its Financial & Risk division, will become CEO of the business once it is spun off under new ownership structure later this year, when it will be renamed Refinitiv.

Craig joined then-Reuters in 2007 as group strategy director, and has served as president of the F&R division since 2012. Before joining Reuters, he was a partner at McKinsey & Co., prior to which he was a principal at management and technology consulting firm American Management Systems. The creation of Refinitiv is a result of a deal agreed in January whereby Thomson Reuters will sell 55 percent of the F&R business to a consortium led by private equity firm Blackstone that also includes the Canada Pension Plan Investment Board.


David Craig

AWS Taps Data Vet Barnes for ISV Partnerships

Data and trading systems industry veteran Ken Barnes has joined Amazon Web Services as partnership development manager for financial services independent software vendors, responsible for supporting ISVs in developing and executing cloud strategies. This includes helping vendors understanding how AWS can support their business needs, training them on cloud technologies, advising them on how they may need to change their commercial subscription models to capitalize on cloud delivery, and assisting with go-to-market campaigns and business development.

Barnes was most recently SVP of corporate development at IT and hosted services provider Options, prior to which he spent four years at NYSE Euronext, including as SVP of its capital markets community platform, and general manager of SFTI connectivity and co-location. He joined NYSE via its 2008 acquisition of Wombat Financial Software, where he was VP of business and planning. Before that, he was marketing director for Americas enterprise information products at Reuters, and director of capacity trading systems at Nextset Software, prior to which he was global manager of datafeeds and integration at Bridge Information Systems.

In his new role, Barnes reports to Nitin Gupta, global head of financial services solutions and partners at AWS.


Ken Barnes

Velocimetrics Hires Two to Boost US Presence

London-based performance monitoring technology provider Velocimetrics has hired John Benini as US technical director and Steve O'Brien as VP of sales for North America in a bid to expand its presence among US and Canadian banks, hedge funds, and exchanges.

Benini was most recently CTO at app technology provider Majestyk Apps, and is founder and CEO of Elemental Path, which creates e-learning toys. Before joining Majestyk, he was a senior software engineer at latency and performance monitoring vendor TS-Associates, which he joined via its acquisition of rival Correlix, and also served as a freelance trading systems integrator, and as a trading systems integrator at Morgan Stanley.

O'Brien was most recently senior director of sales at banking technology vendor SwapsTech Financial Technology Solutions, prior to which he was VP of global technology sales at MIAX Technologies, the IT arm of the MIAX Options exchange, and spent six years as a senior sales executive at Misys. Previous roles include VP at Societe Generale, where he was program director for the bank's Y2K project, and VP at Capgemini, responsible for front-to-back office trading applications across multiple asset classes.

Both men report to CEO Steve Colwill and COO Paul Spencer.


Russell Read

Investment Vet Read Joins MSCI to Cement Client Focus

Index provider MSCI has hired Russell Read as managing director and global head of client solutions, effective September, to "strengthen MSCI's investment-focused culture," and lead the vendor's efforts to deliver integrated solutions to asset manager and asset owner clients.

Read was previously chief investment officer at the Alaska Permanent Fund Corp., based in Juneau, Alaska, responsible for overseeing the investment teams running the state's $65 billion Permanent Fund. Previously, he was a senior advisor to Bellvue, WA.-based investment manager Mountain Pacific Group, and served as chief investment officer and deputy CEO of Gulf Investment Corp in Kuwait, prior to which he was chief investment officer at CalPERS, and deputy chief investment officer for the Americas at Deutsche Asset Management, and spent seven years as SVP of quantitative research and investment product design at OppenheimerFunds.

Based in London, Read will also sit on MSCI's executive committee, and will report to COO and chief client officer Laurent Seyer.

YCharts Adds TT President to Board to Drive Sales Strategies

Chicago-based investment research provider YCharts has added Trading Technologies president and CFO Michael Kraines to its board to leverage his experience of building and scaling sales organizations.

Officials say Kraines' experience in investment banking, venture capital law, and his "extensive network" in the financial industry will allow him to "spearhead YCharts' sales growth," adding that he will "factor heavily into the development of large strategic opportunities."

Kraines joined Trading Technologies at the start of 2017 as CFO and chief commercial officer, becoming president and a board member in February this year. Previously, he spent 12 years at Sandler O'Neil as managing director, prior to which he was a managing director at Wasserstein Perella, where he also spent 12 years. Before that, he was a VC attorney at Kirkland & Ellis.

SIP Advisory Committee Adds Schwab, E*Trade, TD Execs

The Securities Information Processors' Operating Committees, which govern the CTA and UTP consolidated tapes of US equities data, have added three new members to their advisory committee—Charles Schwab's Chris Nielsen, E*Trade's Todd Watkins, and TD Ameritrade's Matt Billings.

Nielsen has served as managing director of market data management at Schwab since 2015, prior to which he was a senior executive at SmartStream, and also worked at Capco and Iverson.

Watkins is director of product management at E*Trade, responsible for market data products, prior to which he was head of risk data services at Thomson Reuters, and held senior data positions at NYSE and Nyfix.

Billings is managing director of market data strategy at TD Ameritrade, which he joined via the firm's acquisition of Scottrade, where he was SVP of trading services. Before that, he held senior roles at Automated Trading Desk, Envestnet Asset Management and Web Street Securities, and served as CEO of Billings and Co., where he was a floor broker on the Chicago Stock Exchange.

The three join existing committee members from Thomson Reuters, Morgan Stanley, Goldman Sachs, BlackRock, Citigroup, Jordan & Jordan, and Glenmede Investment Management.

FTSE Russell Names Togno Latin America Head

London Stock Exchange-owned index provider FTSE Russell recently hired Jesus Togno as regional director for Latin America, responsible for business development and for managing and growing client relationships in the region.

Before joining FTSE Russell in April, Togno spent eight years at index provider MSCI, most recently as VP and head of Mexico and Central America for the vendor's equity index business. Prior to that, he was a strategic planning analyst at building materials manufacturer Cemex, and a process engineer at Jatco Mexico, a Nissan-owned manufacturer of car transmission components.

Based in Mexico City, Togno reports to Brian Rosenberg, managing director and head of Americas sales at FTSE Russell.

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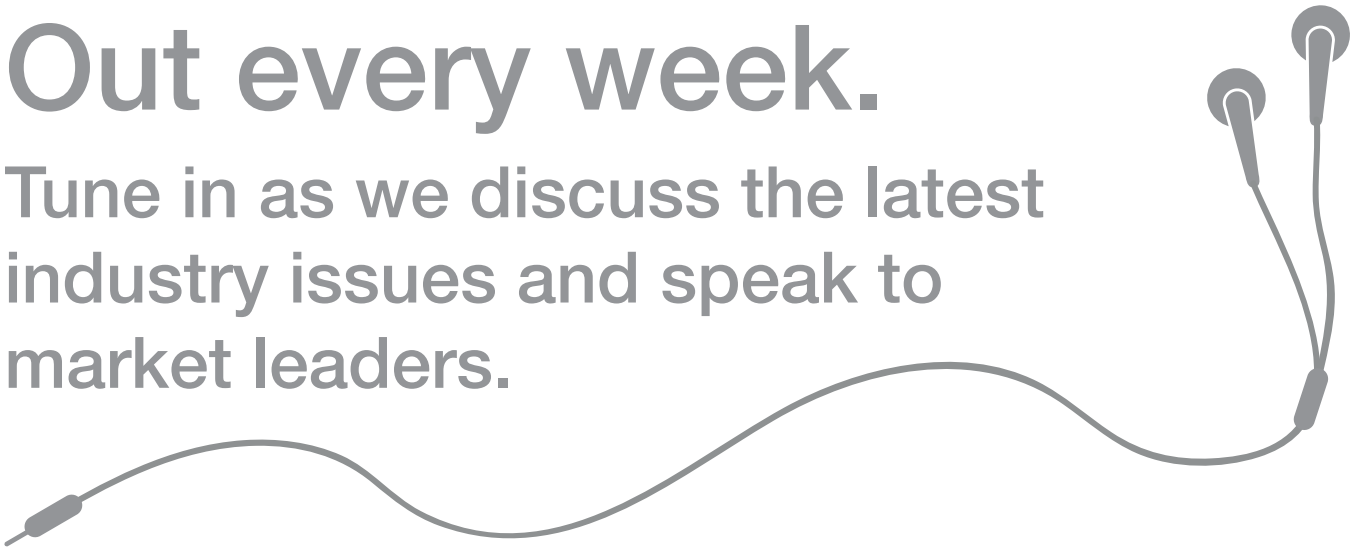

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