Inside Data Management

Inside Market Data Inside Reference Data

Esma Probes Rating Agency Fees, Mifid II Trade Report Data

WRESTLING OVER COMPETING DATA DEMANDS OF GDPR, MIFID II

Trading Firms Metamorphose into Fintech Butterflies

PEOPLE IN GLASS HOUSES...

Esma Throws First Stones in Battles to Boost Transparency

North American Financial Information Summit

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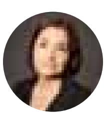

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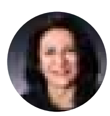

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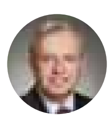

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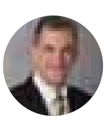

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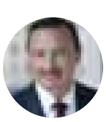

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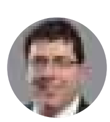

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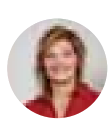

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Inside Data Management (ISSN 2514-0574) is published monthly (12 times a year) by Infopro Digital Risk Limited. Printed in the UK by DG3.

Regulatory Watchdogs Show Their Teeth

In the run-up to the implementation of the Mifid II regulation, lawmakers took great pains to stress that they wouldn't make an example of firms that weren't fully compliant on day one of the new regime, but would give them some leeway, provided they had made a demonstrable effort to comply. As the same time, they warned that they wouldn't tolerate non-compliance from firms that made no effort.

Though some doubted the European Securities and Markets Authority's (Esma's) commitment to enforcing its own deadlines, having already delayed Mifid II for one year prior to its eventual go-live date, and also having more recently granted a six-month grace period for compliance with Mifid II's Legal Entity Identifier (LEI) requirements for firms unable to comply in time, Esma is already starting to demonstrate that it's not just all bark and no bite.

For example, Esma has said it will investigate some Approved Publication Arrangements (APAs)—the bodies designated to provide trade reporting for compliance with Mifid II's transparency requirements—after lawyers and one of Mifid's architects warned that APAs were not adhering to the spirit, and possibly even the letter, of the law.

On another transparency issue (though not Mifid-related) Esma is also looking into how credit rating agencies set their fees, after years of complaints by banks and investment firms forced to buy ratings to support their responsibilities to investors that the fees are too high and subject to increases without any justification.

And while we've made a big deal in these pages about firms not being ready for Mifid II and the six-month LEI grace period, sometimes regulators need a break, too: Esma itself has also required a grace period for another data-related regulatory issue, delaying the implementation of the double volume cap on dark pool trading—a calculation that determines the levels of acceptable trading activity off lit venues, and suspends trading in securities that exceed strict limits—until it had a sufficiently complete and accurate 12-month dataset on which to base its calculations.

The moral of all this? Data doesn't discriminate, and it doesn't do you any favors. Well-managed data is a rising tide that lifts all boats, while poor-quality data has a negative impact on all parties associated with it.

Data is the fuel not just for trading, but also for regulatory compliance. Take care of your data, and compliance will take care of itself. Take your data for granted, and you might just feel those teeth. ■

Max Bowie
Editor

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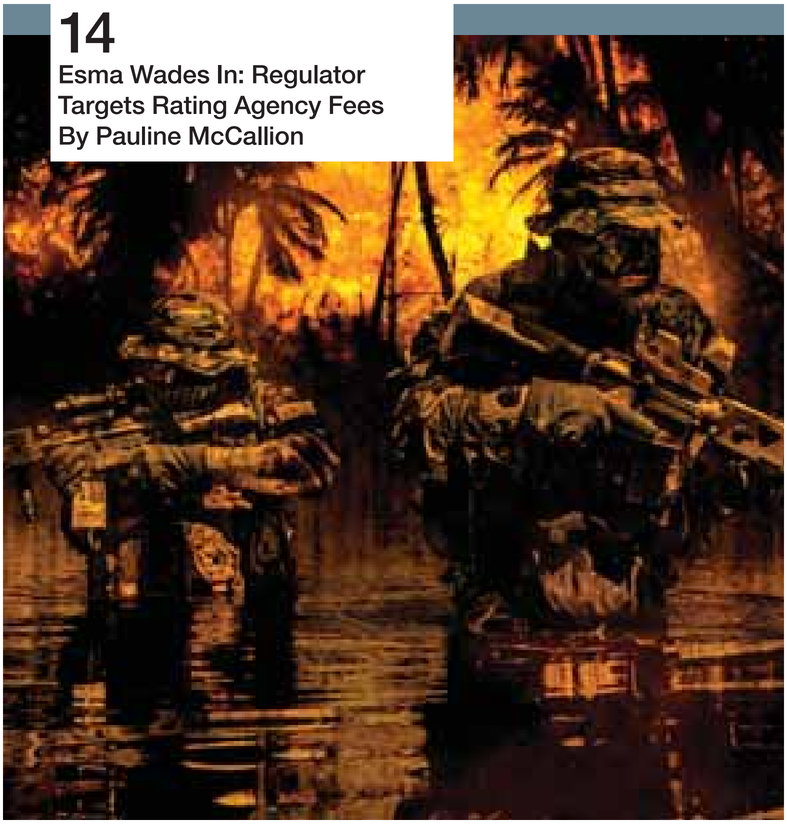

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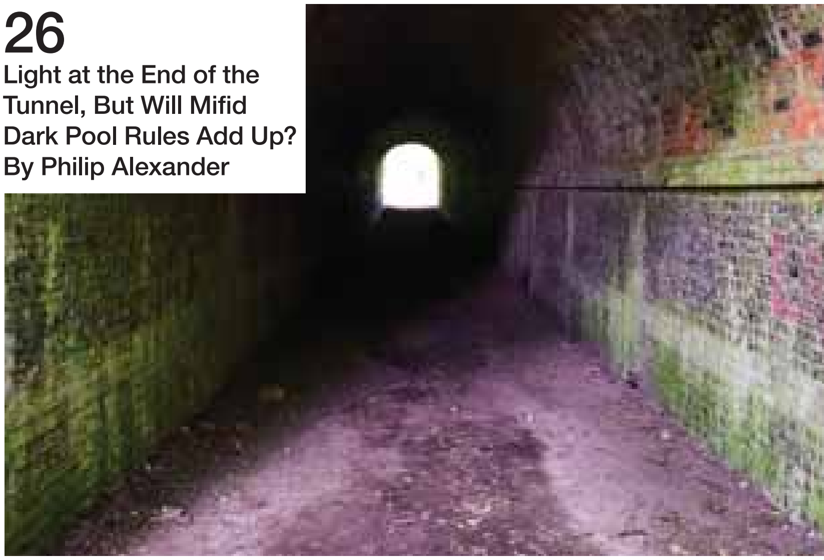
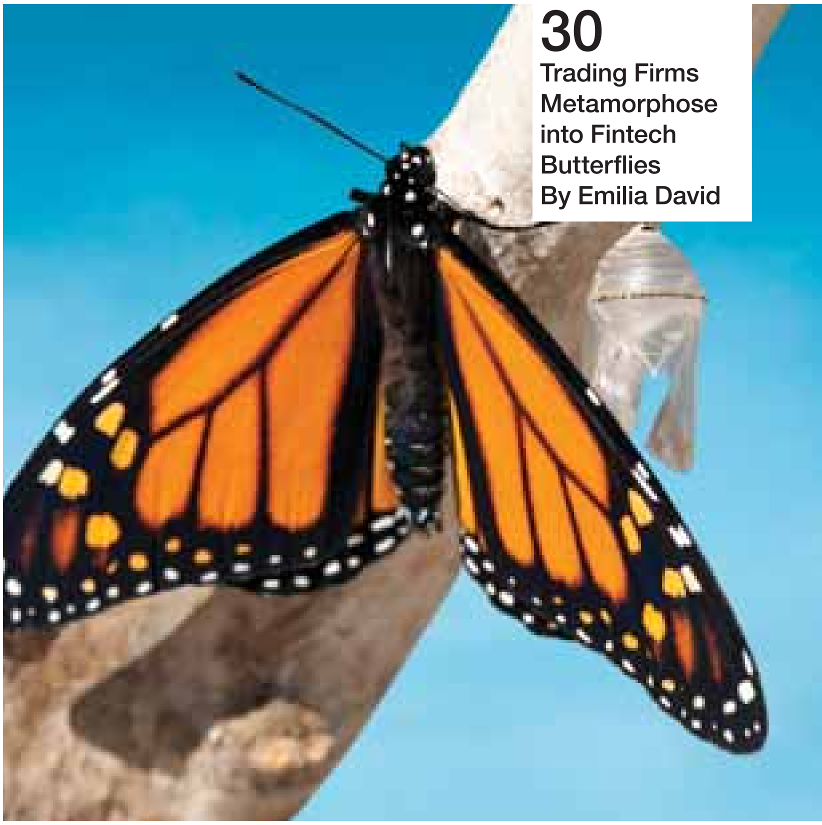


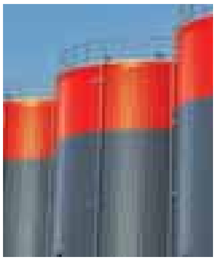


Platts Builds Blockchain Oil Supply Data Collection Network

S&P Global Platts, the energy and commodities data arm of S&P Global, has created a Blockchain network for capturing and publishing information on oil storage volumes from the United Arab Emirates-based Fujariah Oil Industry Zone to clients and the local regulator, FedCom.

Platts already served as the exclusive publisher of Fujariah's weekly oil inventory figures—which commodity traders can use to determine supply and demand and to set prices—but previously, the 11 terminal operators submitted data to FedCom, which then passed the aggregated data to Platts.

"Fujariah has an amazing physical infrastructure… as a potential export hub for crude oil and for storage of distillates. And it wants to be a trading hub where people can come to manage their inventory and risk—and a key part of that is transparency," says James Rilett, senior director of innovation and digital strategy at S&P Global Platts.



Monitoring oil inventories is a manual-intensive process

However, the submission process remained very manual with delays of up to three weeks to inspect paperwork relating to shipping or ownership changes of the stored oil, whereas the Blockchain network allows Platts to remove FedCom's intermediary role, yet still protect the submission process so that Platts only receives the aggregated data, rather than individual submissions from terminals, but can be confident that the aggregate number contains submissions from all the terminals.

Platts then passes the data through an editorial review process to spot any unusual changes in the data, and adds commentary, historical data and other relevant market information to provide extra context around the data.

In the first phase of deployment, those responsible for submitting the data will continue to do so manually, but using an input screen with a secure login instead of email and spreadsheets. In the second phase—which the vendor is working on now—Platts will be able to automate data collection to extract information directly from forms and storage and pipeline flow monitoring systems.

"We've had interest from people wanting us to integrate with their tank monitoring systems, which would enable daily or even real-time—rather than weekly—data collection," Rilett says.

The Blockchain approach also creates the potential to generate digital title reports, eliminating the need for manual paperwork and reviews. However, the big benefit is not making paper-based processes more efficient, but being able to eliminate the potential of fraud or mis-statement that could wipe out a firm's profit in one fell swoop.

Publicis.Sapient Adds NPLs to European DataWarehouse

Digital transformation and consulting firm Publicis.Sapient has created a data repository for the European DataWarehouse—the European data repository for loan-level data stemming from asset-backed securities (ABSs)—which allows fixed income market participants to collect and disseminate non-performing loan (NPL) data.

The European DataWarehouse repository's data collection and dissemination mechanisms are based on the guidelines and templates specified by the European Banking Authority in response to a mandate from the European Commission and the European Council last year. By extending the templates' use, the European DataWarehouse expects to broaden the investor base for NPLs, lower the barriers to entry, improve data quality and availability, and support price discovery and the development of a secondary market in NPLs.

As a result of initiatives to support ABS trading, the European DataWarehouse already hosts a billion low-level ABS data points, and—from an infrastructure, market and hosting perspective—is already prepared to support NPL data, says Bernd Harnisch, global product lead at Publicis.Sapient.

"NPLs still pose problems for countries within Europe, but initiatives are being developed to build a secondary market," Harnisch says.

Pontus Vision Launches GDPR Compliance Tool

With the May 25 deadline for compliance with the European Union's General Data Protection Regulation (GDPR) fast approaching, London-based regtech platform vendor Pontus Vision has launched an open-source solution aimed at ensuring firms are compliant with the initiative, which aims to deliver greater consumer protection and transparency around how companies use and process personal data.

Pontus Vision's new software allows data protection officers to easily collect and analyze data and reduces the time required to respond to subject access requests and to track privacy impact assessments.

The software uses a three-stage approach: extract, track, and comply. In the extraction stage, the software finds all the unstructured data about a customer stored in databases or in emails and documents, then cleans up this data and eliminates duplication.

"In the tracking stage, we can create relationships between various data types. We have standardised in a data model used by the UK Government called POLE (Person, Object, Location, Event)," says Leonardo Martins, founder of Pontus Vision. "In the final stage, we provide data protection officers with a web portal containing a single view of all of the [GDPR-related] data stored by their organization."

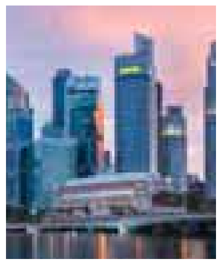
Updata Charms Python Developers for Charting Tools

UK-based charting provider Updata Analytics has made its charting desktop software compatible with the Python programming language, enabling users to use any of the growing number of Python libraries or even run their own native code within Updata. In addition, Python developers will be able to use Updata's wide range of feed content, and will now have out-of-the-box access to Updata's back-testing and charting tools. Updata is already compatible with Visual Basic and C# as well as the vendor's own programming language.

QuasarDB Uses Funding to Open New York Office

Paris-based database technology vendor QuasarDB is opening an office in New York. The office, located at 222 Broadway in Manhattan, will house salespeople and solutions architects to support local clients. The move follows a recent $2.5 million seed funding round—led by venture capital firm Partech Ventures and including investments from positioning, navigation and timing technology supplier Orolia, among others—to increase the vendor's sales and marketing efforts in the US.

BSO Optimizes SGX-HKEx Network



Upgrade aims to meet Asian demand for faster trading

Network provider BSO has rolled out an optimized low-latency route between the Singapore Exchange (SGX) and Hong Kong Exchanges and Clearing (HKEx).

The route provides financial institutions trading derivatives between the two exchanges with the lowest latency currently available, BSO officials say, enabling electronic market makers to boost profitability by trading derivatives on HKEx faster than was previously possible.

Fraser Bell, chief revenue officer at BSO, says the provider optimized its existing route in response to increased demand for faster trading across Asia.

As well as the network, BSO will also provide in-depth local regulatory knowledge to ensure best possible connectivity at all times. "We ensure our routes adhere to all local rules. We don't rely on local regulatory knowledge from a partner, rather we have this understanding directly as a business operating, and with experts in, the area," Bell adds.

Jonathan Leung, head of hosting services at HKEx, says the exchange welcomes BSO's enhanced service at its datacenter, where its market participants can access an array of information, technology and network service providers within a secure ecosystem environment.

SIPs Publish Historical Consolidated Tape Revenue

The operating committees of the two US Securities Information Processors (SIPs) now provide current and historical revenue data for the various consolidated tapes administered by the Consolidated Tape Association and the UTP Plan.

Historical tape revenue data will be available via the plans' websites on a quarterly basis with a 60-day lag, including trade and quote revenue back to 2007 distributed to participants for Tape A (New York Stock Exchange-listed securities), Tape B (NYSE Amex, NYSE Arca, Bats and regional exchanges), and Tape C (Nasdaq-listed securities), aggregate per-trade and per-quote message revenue for all tapes back to 2007, and revenue by fee type for Tapes A and B back to 2009 and for Tape C back to 2007.

The historical data so far shows revenues declining over the past decade, despite message volumes doubling since 2008, notes Emily Kasparov, chair of the SIP Operating Committees.

ASX Announces Project to Upgrade Secondary Datacenter

The Australian Securities Exchange (ASX) is undertaking a project to upgrade its secondary datacenter over a two-year period.

"We are currently refreshing our ASX communications infrastructure, and… in addition, to bring our full primary, secondary and tertiary systems to the same level of sophistication, we are going to upgrade our secondary datacenter," said ASX CEO Dominic Stevens during a briefing for ASX's half-year results for the financial year ending December 31, 2018.

Stevens said the upgrade will complement ASX's Australian Liquidity Center, the exchange's primary co-location facility, which provides customers with communication, execution and information services.

Upgrade will replace ASX's 20-year-old backup facility

This upgrade will replace its current backup facility, which has served ASX for about 20 years. Stevens said this move will take the exchange 24 months to fully implement.

"Firstly, we will continue with our core technology refresh program, which will see updates over time on our underlying databases and ongoing upgrades of our core software and hub. Second, we are going to upgrade our secondary datacenter. ASX has been using the current premises and facility for 20 years-plus, so this is a change made only once in a very long time," he said.

Stevens said he expects the cost of the move of the associated hub to be in the range of A$20 million to A$25 million ($15.8 million to $19.8 million), and to take around two years to fully complete.

Nasdaq, Sina Hail Data Deal's China Globalization Boost

Sina, an online media company serving China and Chinese investors worldwide, has become an official vendor of Nasdaq's Last Sale (NLS) and Global Index Data Service (GIDS) in China.

Users of Sina's platforms now have access to NLS and GIDS on top of access to real-time US market data from Nasdaq, which the vendor has carried since 2013. Sina makes the data available via its online and mobile portal, and mobile applications, as well as its Weibo social media platform.


Tomas Franczyk, Nasdaq

Tomas Franczyk, managing director of global information services for Asia-Pacific at Nasdaq, says Sina will feed the data to downstream companies that are launching products and applications.

"There is tremendous attention on technology diversification—particularly in China, where several fintech brokers have emerged and are launching trading products. Nasdaq is working with Sina to power these products and financial applications with NLS and GIDS to make it easier than ever for clients to access the US stock market and take advantage of and invest in any company listed in the US," Franczyk says.

Li Pai, chief editor at Sina Finance, says that in addition to the existing data deal, there is scope for the parties to collaborate on advertising and marketing initiatives, adding that the vendor is also interested in carrying more of Nasdaq's data.

Franczyk says Nasdaq is continuously looking for ways to expand beyond its core data products and to create innovative products, and sees China as a huge opportunity for growth.

"We have reinvented our product innovation process and are using machine intelligence and advanced analytics to deliver powerful signals derived from relative strength analysis, Twitter, banking, and investor sentiment data. We are keen to explore these new analytic datasets with partners to actively engage their clients to keep them return for more engagement," he says.

China's middle class is expected to grow by 850 million people by 2030. This growing pool of investors are becoming more interested in diversifying their assets and having access to global networks for real-time information.

Li says Chinese investors are diversifying in the domestic market through a combination of domestic equities, bonds, real estate and other investments. Global diversification in overseas stocks, and real estate, among other asset classes, are also becoming more popular because domestic investment opportunities are comparatively narrower and can be highly correlated, making it hard to hedge risk, he adds.

He says the cooperation between Sina and Nasdaq will help investors broaden their horizons and allocate assets globally—and in doing so, increase risk protection.

EDI 'Solves' for Real-Time Fixed Income Pricing


Jonathan Bloch, EDI

London-based reference data provider Exchange Data International has added real-time fixed income data to its services via a partnership with Rockville Center, NY-based Solve Advisors.

Through its SolveQuotes product, Solve Advisors creates real-time market data by parsing client messages and collecting contributed prices from market participants, covering: structured products such as collateralized loan obligations and asset- and mortgage-backed securities; corporate bonds; bank loans; and municipal bonds.

In addition, Solve provides a BWIC (bid wanted in competition) Calendar/Monitor that includes real-time aggregation of price talk and covers, an Inventory Monitor that aggregates inventory and offerings by dealer, as well as portfolio management, screening, alerting and visualization tools, and API-based and secure FTP-based datafeeds.

Exchange Data International CEO Jonathan Bloch says the data will deliver more transparent pricing for clients, and enable them to make better business and investment decisions.

Thomson Reuters, DealVector Ally for Bond Messaging


Mike Manning, DealVector

Thomson Reuters has added secure messaging capabilities to its LPC (Loan Pricing Corporation) desktop products for syndicated loan and collateralized loan obligation data by integrating tools from fixed income asset registry DealVector, which allows market participants to source liquidity on specific assets and communicate directly with other players in the bonds and loans market on DealVector's network.

Via Thomson Reuters' LPC LoanConnector and LPC Collateral products, clients will also be able to receive notifications of outstanding corporate actions and recent pricing activity from DealVector, while DealVector clients will receive news alerts from LPC that could impact their holdings.

"This partnership and integration with LPC is the first step in our Network of Networks strategy to make data more immediately actionable, and therefore valuable," says DealVector co-founder and CEO Mike Manning.

Screen Opens Singapore Datacenter to Host InfoMatch

Dutch data inventory and cost management platform vendor Screen InfoMatch has opened a datacenter in Singapore to give clients in the Asia-Pacific region access to its InfoMatch platform as a locally managed service.

The vendor went live with its space in Equinix's Singapore datacenter over the course of December and January, after evaluating local providers and selecting Equinix in the second quarter of last year, then spending the remainder of the year testing its hardware and software running remotely. Screen will now begin the process of migrating clients to hosted instances of their InfoMatch platforms running within Equinix's datacenter.

This migration—which officials say should be virtually seamless for clients, who merely need to access the platform via a different URL—first requires clients to sign off on the transfer of their data between jurisdictions, after which Screen can copy each client's database of user information and data sources over to the Singapore facility. This step should only take "a matter of hours, says Screen co-CEO Peter Fruitema.

> "When you are supporting a hosted service, it's important to have people in the same timezone." **Peter Fruitema, Screen InfoMatch**

Officials say that hosting the platform locally for clients in the region will improve the client experience by reducing any delays in the user interface, which was previously hosted from Screen's primary datacenter at Equinix's facility in Amsterdam.

"We opened our Singapore office almost two years ago because we had growth in our client base in Asia and decided that supporting them from the Netherlands was too cumbersome, and there was too great a time difference. When you are supporting a hosted service, it's important to have people in the same time zone," Fruitema says, adding that the vendor chose Singapore for its hosting center because of its central location in the region and because many firms from other regions use Singapore as their first step into the Asia-Pacific market.

He says Screen believes the move will help the vendor attract more clients in the region, as well as making it easier for the company and new owners TRG to roll out other products and services locally. "Certainly it helps for clients to know that data is hosted in Singapore, which is regarded as a country with very high standards of data security. So we believe it will speed up the IT component of any evaluation [by a potential client]," Fruitema says, adding that the managed service provides significant capacity for the vendor to grow its base to several hundred hosted instances.

Nasdaq Sues IEX for Trading, Data Patent Infringements

Nasdaq says IEX copied technology

Nasdaq filed a lawsuit against startup exchange IEX March 3 to protect its intellectual property, alleging that IEX copied technology used by Nasdaq's matching engine and key data services.

The suit alleges that IEX hired four Nasdaq technology staff with knowledge of Nasdaq's technology and patents, who then used that knowledge to create IEX's trading platform and closing auction process, which is "substantially similar" to Nasdaq's own closing auction. The lawsuit also alleges that IEX acknowledges its Auction Information is substantially similar to the Net Imbalance Order Indicator. It cites IEX statements that the startup created its own processes after reviewing those of Nasdaq and other exchanges, suggesting that in doing so, IEX was copying the processes.

Overall, the lawsuit claims infringement of several patents covering Nasdaq's processes and products, including the method by which it updates datasets. Nasdaq says it aims to "stop, and obtain fair compensation for, IEX's unauthorized reliance on Nasdaq's technology."

The move follows IEX receiving approval to operate as an exchange and list companies for trading, and the introduction of its own auction process.

CLS Bows FX Reporting Tool

CLS, a market infrastructure delivering settlement, processing and data solutions, has launched CLSReporting, a foreign exchange (FX) reporting and settlement mechanism designed to help firms comply with the revised Markets in Financial Instruments Directive (Mifid II).

The service will enable CLS parties and counterparties to share additional information regarding their FX trade settlement instructions submitted via SWIFT FIN and ISO 20022 XML messages. FX trade information will be collected from both CLSSettlement and CLSSameday, creating a single report after end-of-day processing.

The company says it developed CLSReporting during 2017 to meet customer demands arising from their Mifid II compliance obligations. It expects the service to be fully integrated in the second quarter of this year.

Kevin Swann, CLS data program director, says CLSReporting was developed relatively quickly and in response to member requests for additional fields on messages sent within settlement systems. "We've essentially just added or extended trade data fields that we receive through the transaction reporting system in order to accommodate an extra number of fields," says Swann.

Morningstar's AI Quest to Replicate Analyst Ratings

With the fund industry growing at exponential rates, Morningstar turned to disruptive technologies to keep pace without compromising the processes used by its human analysts. Max Bowie chronicles the five-year project that led to the vendor's AI-based Quantitative Rating.

Chicago-based data and investment research provider Morningstar has completed a five-year project to leverage machine learning and artificial intelligence to create an automated fund rating process that accurately mirrors the same processes used by the vendor's human analysts.

Lee Davidson,
Morningstar

The new Morningstar Quantitative Rating—designated on Morningstar's websites, data services and workstations by a "Q" beside the rating—allows the vendor to rate more than 10,000 open-end and exchange-traded funds, six times more than the 1,800 currently covered by its analysts in the US. This significantly expands the ability of investors, advisors, wealth managers and researchers to use Morningstar's ratings for fund selection and to provide forward-looking insight that supports their investment decisions. The Quantitative Rating will only be used to rate funds not already covered by Morningstar analysts.

The rating was originally conceived in response to the continuing growth of the mutual fund industry and consumer demand for greater coverage. Just after launching its Analyst Rating for Funds, Morningstar realized that its "rigorous and intensive" manual approach could not be scaled in line with the growth in coverage required, and embarked on a project to replicate its analysts work using artificial intelligence.

"So we were asking how we address that gap… and AI was one of the things we looked at. We had a hypothesis that it would be possible because we have a history of training new analysts to think the way we think, and to apply our rating to new funds—so it should be a process that's repeatable," says Lee Davidson, head of quantitative research at Morningstar, adding that the vendor judges the success of the rating not based on its ability to accurately predict returns, but rather, its ability to replicate what an analyst would do.

Key Elements

Specifically, when a Morningstar analyst rates any fund, they must consider five key elements—process, people, price, parent, and performance—and produce expectations for each of these five areas before delivering a final overall rating that corresponds with the vendor's existing Analyst Rating scale: Gold, Silver, Bronze, Neutral, and Negative.

When it comes to the data used as an input to the ratings, Morningstar also replicated the research process used by its analysts. "When it comes to data, we had a pretty good idea of what our people looked at, so we pulled in around 150 data points that our analysts had used in the past, then whittled those down to a select number of the most important decision points," Davidson says.

The machine-learning aspect of the rating also allowed it to make its own decisions about what data to use, where appropriate. "Most modeling processes struggle with 'conditions'—i.e., if A, B, C and D occur, then do E. AI is pretty good about figuring these out, even if the inputs and conditions are not explicitly made clear," he adds.

Developing the rating was a challenging process that involved a lot of trial and error, Davidson says, adding that it wasn't a foregone conclusion that it would ever see the light of day. "We would probably have pulled the plug if we hadn't liked where it was going—that's the sign of a good R&D department."

The initial build took several months, then his team developed new iterations every few weeks, but it was still some two years before internal stakeholders felt it was worth testing. From that point, Morningstar has been running the rating internally, constantly vetting and refining it before eventually rolling it out in a "limited release" on the Morningstar Direct service in June 2017, ahead of a full rollout on the vendor's other data services by the end of March this year.

During the lengthy vetting and refinement period, Morningstar was constantly evaluating the rating against the "three pillars" of performance, stability, and accuracy to ensure it was accurately replicating how analysts would make decisions, and did not fluctuate from one rating in one month to the opposite position the next month for the same fund.

Ironically, though Morningstar developed the rating to deliver coverage far beyond the capacity of its analysts, Davidson says human expertise was the key component in building it. "There are many open-source and publicly available tools available to do this, such as Python, R, and SQL… but you have to know how to use them. The human capital is the most important piece," he says. ■

GLEIF Releases Beta Version of Golden Copy Files

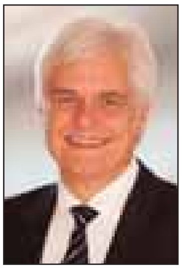
With a newly launched beta version of GLEIF Golden Copy Files making the Legal Entity Identifier data pool easier to access and process, GLEIF CEO Stephen Wolf tells Jamie Hyman why he believes it could also inspire innovation.

There were 1.1 million Legal Entity Identifiers (LEIs) registered as of January 2018, a number that exceeds the capacity limits of an Excel spreadsheet and means most market participants lack the capacity to process the reference data on a daily basis. The Global Legal Entity Identifier Foundation (GLEIF) has made the data available to users via an open data license, and has now released a new way to access and explore it. The GLEIF Golden Copy Files contain past and present LEI records, plus the relevant reference data, in a single, central repository.

Stephan Wolf, GLEIF CEO, says the release is a response to user requests, and the key to the data is the delta files. GLEIF issues three sets of Golden Copy Files every day, with each release corresponding to Asian, European and American time zones. Each time, GLEIF will also issue a set of delta files that identify newly issued LEIs plus any changes to an identifier's reference data since the previous release, free from technical duplicates, with enriched reference data.

"We now show all the history of every LEI that was ever issued," Wolf says, noting that there were issues in the early days of LEIs, such as the potential for an identifier to be lost from one day to another. Those problems simply cannot happen with the golden file, he says.

The delta files allow users to quickly identify new or updated LEIs and reference data without having to download files containing the complete LEI population. Wolf says the release includes other enhancements that make processing LEIs easier for users. For example, sometimes there are two Local Operating Units (LOUs) attached to the same LEI for a period of time, and the burden has fallen to users to parse the data and check the status in order to determine whether the LEI was in transfer.



> "The efforts for all these IT folks who want to incorporate the data directly is going to go down… In the future, we might be able to show intra-day new LEIs, which is a big plus. It requires a little bit of engineering on the LOU side, but we are working together with them to achieve that." **Stephan Wolf, Global Legal Entity Identifier Foundation**

"This is a complication which we wanted to take away from the users, so for each LEI there is only one record and you can see clearly the status it's in," Wolf says. "It is easier to process the files, so the efforts for all these IT folks who want to incorporate the data directly is going to go down."

He says the delta file generation offers the LOUs multi-day transmission, which means the current 24-hour cycle could become faster. "In the future, we might be able to show intra-day new LEIs, which is a big plus. It requires a little bit of engineering on the LOU side, but we are working together with them to achieve that," he says.

Wolf has other plans for the future of the GLEIF Golden Copy Files and accompanying delta files, including making the data available via online search and APIs. He says both services are in the works, though no release date has been set.

In the meantime, Golden Copy Files is available as a beta release for users to preview. GLEIF is asking for feedback, including suggestions for other features that users would like to see implemented, and notifications of any problems or bugs. "It's a typical beta preview program that will allow people to make themselves familiar with the system, and a few months down the road we will officially release it as final," Wolf says.

The feedback period lasts through April 30.

Geographical Data

One new feature Wolf says he hopes users will find inspiring is geocodes. "Every day when GLEIF gets LEIs, we check them against geocodes as an additional means of verification and validation of data. Since we have the geocodes already, through our quality campaign, we thought it would be nice to publish them so that people can use the geocodes to their advantage in map applications and all kinds of online stuff," he says, adding that he would like to see fintech organizations figure out innovative ways to use the geographical data.

Instructions for accessing and downloading the files, as well as a directive on how to provide feedback, are available on the GLEIF website. ■

Esma Mulls Heavier Hand as Industry Grapples with Priips Cost Calculations

Differences in how issuers disclose the costs of structured products are harming comparability and leading to inaccurate assessments, observers say, prompting the regulator to weigh whether or not to publish even more regulatory guidance around Priips, reports Frances Ivens.

European authorities are considering whether to issue extra guidance around rules governing the sale of structured products to investors in Europe, amid concerns that the existing regulation is being interpreted inconsistently by issuers.

Under new legislation governing packaged retail and insurance-based investment products (Priips) that came into force on January 1, issuers must provide a simple breakdown of the risks and costs of each product, to enable buyers to easily compare performance across investments. But issuers are using different methods to calculate the cost to buyers, undermining any attempts to achieve comparability.

In a statement to *Inside Data Management* stablemate *Risk.net*, an official at the European Securities and Markets Authority (Esma) said that "While cost calculations are specified in the Priips delegated act and ensure comparability among products, [European authorities] are currently looking into these issues and would issue any guidance, if needed."

The Priips regulation specifies the types of costs to be included in the key information document (KID) accompanying each product. But critics say the regulation does not give sufficient detail about how the costs are presented to would-be buyers. For products that are active over a fixed or recommended time period, the calculation and presentation of costs is straightforward. The complication lies in products that have a variable or unpredictable maturity, such as autocallable products—a type of structured product that returns the principal and a coupon to the investor ahead of maturity if the underlying breaches a pre-set barrier. Here, issuers are in a bind over whether to present the costs as yearly figures, or aggregated over a given time period.

Esma's offices in Paris, France

Lack of Consistency

"Unfortunately there is very little consistency across issuers," says a senior structured products trader at a private bank. "They do not appear to be using the same approach or calculation. As a result, the numbers are not meaningful at this stage. I am hoping it starts to improve as the industry gets used to it."

For example, a potential source of confusion over cost disclosure in autocallables arises if the product is autocalled early, explains a senior structurer at a European bank. In the case of a 10-year product that incurs a charge of 500 basis points, the issuer may present the yearly cost in the KID as 50bp per year. But if the product is autocalled early after two years, one might reasonably assume the total costs so far were 100bp (50bp multiplied by two years), when in reality the total yearly cost was 250bp—i.e., the 500bp full-term cost divided by two years.

"If you are looking at two of exactly the same products, one bank which is offering a more competitive payoff can also show higher costs and charges on the product than the other bank. The difference between the upfront costs can be quite significant." says one structured products distributer.

Annex VI of the Priips regulation lays out the types of costs the issuer or distributor should include in cost calculations. The costs fall into three broad categories: one-off, recurring, and incidental. Within each category, different types of charges are listed. For example, when calculating one-off entry costs and charges, the regulation says the figure should include: "sales commissions, structuring costs, hedging costs, legal fees, costs for capital guarantee, and implicit premium paid to the issuer." Similar detail is given for the other categories.

But the regulation is less detailed in the presentation of the costs over time. The KID document offers a one-size-fits-all template detailing cost estimations at three time intervals and the impact on investors' return, set as percentages.

The guidance does not seem to make allowances for the nuances of different investment types, and how their costs are presented; whether the issuer details the full cost of carrying the instrument or presents the cost per annum calculated on assumptions about the term of the product.

"The charges are the charges—you have got hedge costs, margin, etc. So they are in there; it is a question of how you show the impact of those on the carrying cost of the instrument," says the European bank's structurer. "We disclose the full cost, other banks choose the per annum cost assuming that the instrument runs to term—which if it doesn't, they are underestimating the impact of the charges."

The full version of this article appears on *www.risk.net*.

EDM Council 2.0: Trade Body Unveils New Program and Platform

The Enterprise Data Management Council is launching a new social media-based platform that reflects the wider industry shift toward greater collaboration, managing director John Bottega tells Jamie Hyman.

The Enterprise Data Management (EDM) Council is undergoing a quiet transformation. John Bottega, EDM Council managing director, says that much like the financial services industry, the trade association's transformation is a result of, and has occurred parallel with, the response to the financial crisis a decade ago.

When he joined the EDM Council roughly seven years ago as a member of a bank, Bottega says the CDO role was relatively new to the financial industry, with CDOs talking through the council about how to build a good data management program. That resulted in the EDM Council's data management capability assessment model (DCAM), which provided a data management framework that includes business case, strategy, funding, program, architecture technology, data quality and data governance.

"The DCAM model identified the 'what?' of data management. What it didn't address was the 'how?'" Bottega says. That need became the EDM Council's Best Practices Program, which he describes as a "broad stroke" that provides best practice recommendations on the implementation of data management.

"Now what we're doing as a continuance of our Best Practices Program is a deep dive on these different topics: data quality, data governance, and even more granular, picking these very topical issues like response to GDPR and the identification of critical data elements (CDEs). These have spawned from that effort and that's really flesh-

ing out our program," Bottega says. "Lots of topics, lots of opinions in the industry, and the council is trying to rally those people together, and trying to summarize and take a position in each one of those critical capabilities and present that as the best practice," he says, adding that the result may be a guideline, a workbook, a white paper, or some other format.

> "It is an enclosed network for the membership so they can share their ideas between members." John Bottega, Enterprise Data Management Council

Bottega says the financial industry may not agree with all of the EDM Council's recommendations, but its goal is to create the "North Star" of best practice, with the understanding that firms may adopt the recommendations at different levels. He says the association believes the program is enough to move the industry forward, adding that it has already received support from banks, consulting firms and regulators.

"If [we] can get the banks and the regulators to say this is how to do it, that'll move the market. The council has been very pleased with the Best Practices Program and now we want to continue to evolve the program going forward," he says.

'Next Generation'

That evolution represents a change in the council's strategy that Bottega says is a "significant shift" in its approach to how it serves its members.

"With advances in technology and data management practices, the challenges with regulation, it behoves us not to be the owner of that content, but to be the purveyor of or broker for that content," he says. "There are a lot of smart people out there doing a lot of good things, so it's not that we're abandoning our opinions, because we as a trade association should take a position on things, but we also want to engage our members and bring their knowledge to bear."

Bottega says the result is a new EDM Council website that includes a social media-based platform, which will be launched by the start of the second quarter. "It is an enclosed network for the membership so they can share their ideas between members," he says, adding that with more than 8,000 members, it was the best way for the association to communicate effectively.

The new platform will allow the association to reach outside of finance, and to create communities for data professionals in healthcare, manufacturing, and other industries, which would both increase EDM Council membership and allow the members to learn more from each other.

"This is the next generation of knowledge management. The council's membership expansion happened because of crisis and regulation, and now they're facing new challenges," Bottega says, adding that the industry was previously defensive, responding to regulation and compliance, but that has now changed and the focus is on data insights and understanding how the market moves, so members can create innovative products and services.

The Big Shorts: Buy-Side Stock Holdings Disclosures Reveal Short Sale Strategies

With short trading activity frequently accounting for more than 50 percent of a stock's total traded volume, according to Finra, and some "spectacular" short trades recorded in the past year, short sales can be both profitable and risky. Max Bowie reports on startup Caretta Data's efforts to bring transparency and insight to short trading.

Imagine being able to predict the impact of short trading activity on your portfolio—or even on your own company—or to be able to spot and profit from others' short trading activity, preventing trading losses or even generating profits. That's what Jacksonville, Fla.-based startup Caretta Data claims it can do by analyzing the holdings of trading firms and funds.

Founder and director Adam Longenecker—a quantitative research analyst whose work as director of quantitative research at fund flows data vendor EPFR Global helped the vendor increase sales by more than 400 percent over four years—originally set up Caretta to analyze holdings in exchange-traded funds. "I had high-end quants wanting me to do what I'd done at EPFR for ETF data," he says.

However, midway through compiling its ETF holdings dataset, Longenecker says the vendor "stumbled across" a unique dataset that it believes no one has previously spotted: manager-level short interest data that reveals short sale activity among buy-side firms.

"To collect ETF holdings from fund managers daily, we had to build a significant web-scraping infrastructure. And in the process of doing that, we found files that were holdings reports, but which were for hedge funds, not ETFs," he says.

These files exist because various jurisdictions worldwide demand that anyone who owns more than 0.5 percent (or 0.2 percent, depending on the jurisdiction) of a stock and who shorts that stock must report their positions and trades. Caretta takes that data and tags it by type of firm and strategy, and captures data on the size and duration of a trade, so it can tell how significant a trade is.

Caretta focuses on "crowding"—the reaction of other investors to cover their positions. "If you think a stock is going to go down, you can use our platform to see which other managers have a position in that stock… and it tells you whether your trade is a good idea, or whether you're going to get hit by a bus as other investors move to cover their positions—think of it as a 'do not short' list," Longenecker says. "Quants can take the data and try to predict the impact of covering those positions on a company's share price… and on the risk profile of a trade you might be about to place."

> "If you think a stock is going to go down, you can use our platform to see which other managers have a position in that stock… and it tells you whether your trade is a good idea, or whether you're going to get hit by a bus as other investors move to cover their positions—think of it as a 'do not short' list."
> **Adam Longenecker, Caretta Data**

Meanwhile, long-only firms can use the platform to identify and buy undervalued stocks whose share price will rise once investors have to buy stock to cover their short trades. The vendor is now looking at how fundamental discretionary managers could use the data.

Shorting Insights

Caretta launched a beta version of its platform last May, rolled out its first production version in August, and unveiled version 2.2 in January, which now tracks around 700 individual fund managers. And this month, the vendor will launch a new product based on the same data, dubbed Short Notice, aimed at providing insight to listed companies that might be the target of a short sale.

"With Short Notice, we can tell you within 24 hours who shorted your stock. That gives a company time to react—for example, to explain to investors what caused the short," Longenecker says. "Not only can you see if you are being shorted, but you can also see whether you are being shorted more or less than your peers."

Short Notice uses the same underlying data as its other tools—"just re-framed for a different audience." Caretta presents its data in a range of formats—from market intelligence reports to raw data and full analytics—depending on what customers want to see. "For example, quants don't want analytics; they want raw data because they don't necessarily trust vendors," Longenecker says. "But this gives you a glimpse into what some of the most secretive investors are doing—and they, in turn, want to know what's going on among their peers." ■

Canada's Banks Prep FRTB Data Utility

Six Canadian firms have rejected the advances of major data utilities to build their own data pool for trade data to help meet the requirements of FRTB, choosing to tackle the complexities themselves, reports Dan DeFrancesco.

Canada's largest banks are creating their own data pool in response to new market risk rules, rebuffing the overtures of third-party vendors to develop and run the utility.

The banks intend to compile their trade data in a bespoke utility to help them incorporate hard-to-model risk factors as pricing inputs. Under the Fundamental Review of the Trading Book (FRTB), institutions face punitive add-ons to market risk capital requirements if the risk factors used for their internal models are deemed non-modellable. Risk factors based on markets where data is thin or patchy are in greater danger of falling into the non-modellable category, forcing banks to consider pooling data.

Several large vendors have begun developing such pooled solutions for banks, including IHS Markit, Bloomberg and the Depository Trust & Clearing Corporation. Over the past 18 months, Canadian banks are understood to have spoken with various vendors about building a proof-of-concept data pool utility for banks' FRTB modelling needs in local markets.

But now, Bank of Montreal, CIBC, National Bank, RBC, Scotiabank and TD Bank have opted to go it alone, conceiving an internal project known as the Canadian Data Utility, to be run as a separate legal entity owned by the banks. Cost was the major sticking point that stopped the banks signing up to at least one vendor's solution, says a source who was party to the initial discussions.

"What the vendors were proposing didn't really get good traction from the Canadian banks, mostly because we didn't see, at the time, what the value-add of it was. If we can organize the Canadian banks to provide data, why not do it by ourselves, rather than integrating a third party which will basically become the ultimate owner of the banks' own internal data and will charge fees? One of the main concerns was the expensive fees around getting the pooled data," the source says.

Scotiabank: one of six banks to take part in the project

The banks chose Montreal-based technology firm TickSmith to build and maintain the data pool, though he banks themselves will operate it, avoiding fees for packaging the data and supplying it back to them. TickSmith CEO Francis Wenzel acknowledges that the vendor has added an FRTB data modellability module to its TickVault data lake platform, but declines to comment on the Canadian banks' project.

Powers of Observation

Under FRTB, banks' market risk models can only use risk factors that meet strict eligibility criteria: each must be referenced by a minimum of 24 "real prices" a year, with a maximum period of one month between two consecutive observations. "Real prices" are defined in the FRTB text as those at which an institution has conducted an actual transaction, or those obtained from a committed quote.

Risk factors that fall short are dubbed non-modellable risk factors (NMRFs), and are capitalized outside of a bank's internal model. A 2016 industry study revealed these NMRFs could represent up to 30 percent of the total market risk capital for banks using the internal models approach. For some banks with a large presence in less liquid markets or products, the total could be as high as 50 percent.

To shrink their exposure to NMRFs, firms are looking to data pooling utilities. However, the development of these utilities was initially slowed by dealers' concerns over privacy issues, data standardization, and a lack of clarity from regulators. Larger banks with bigger trade datasets have also echoed the Canadian banks' reluctance to pay for data submitted voluntarily to utilities.

Some also question whether six banks will have enough power and resources to make it smooth enough to use. The group considered including major brokers active in Canada in the utility, but decided the banks' data alone would be adequate, since trading in domestic Canadian markets centers on a handful of firms, which should make any data pooling efforts easier.

"The coverage that the data pool will provide from the six Canadian banks will be large enough to provide the real picture of modellability of data," the bank source says. "The modellability of data for NMRFs they are concerned about is mostly around fixed income, as well as main swap instruments and swaptions. For those types of instruments, the integration of the markets around the Canadian banks is very high compared to other regions, for example, in Europe or Asia."

And while the source says some regions might look to the Canadian Data Utility as a model to follow, it will not suit all regions. Markets where a single, large player accounts for a significant amount of the trading activity would have difficulty putting a local utility in place. "I don't think that banks gathering together to build an internal venture… will be the solution that all regions will think about," he says.

ESMA WADES IN:

Regulator Targets Rating Agency Fees

Data consumers have long-bemoaned the fees charged by rating agencies, citing both the prices themselves and a lack of transparency around how the fee levels are set as key concerns. With no response from the agencies to user groups, Esma is now weighing in on the subject, and may expand its oversight of rating agencies and their affiliates. Pauline McCallion reports.

Pan-European financial regulator the European Securities and Markets Authority (Esma) is promising to take action on the fees charged by credit rating agencies (CRAs) after transparency concerns raised by user groups went unanswered by the major CRAs.

In November last year, Paris-based data user group Cossiom (Comité chargé des Services et Systèmes d'Informations destinés aux Opérateurs de Marchés) sent letters to Fitch Solutions and Moody's Analytics—the data arms of Fitch and Moody's, respectively—outlining its members' concerns about fees and data policies, and asking for greater transparency relating to changing fees and commercial models. It also proposed arranging a "constructive discussion" with these organizations so that Cossiom executive management could lay out its members' views on this issue.

Opaque and Unresponsive

The letter to Moody's, dated November 20, 2017, said Cossiom members had been informed of an upcoming review of the agency's commercial model for asset managers, which could result in a price increase of more than 100 percent in some cases. "There seems to be no rationale and no solid business justification from Moody's for such increases," Cossiom officials wrote in the letter.

> "It would be very difficult for banks to migrate to new CRAs, because information systems and reporting to the clients are all based on the main existing rating agency's [systems], and have been for a long time. The situation is the same for the use of financial data products such as indexes."
> **Jacques Bouyssarie, Fitex Consulting**

Cossiom is yet to receive a response from Moody's, according to representatives for the user group. When contacted by *Inside Data Management* about the concerns of Cossiom's members and the unanswered letters, a spokesperson for Moody's declined to discuss issues relating to pricing, adding that "Moody's Analytics continually engages with our customers and broader market participants. However, we don't comment on individual customer relationships or correspondence."

And in a letter sent to Fitch Solutions on November 29, 2017, Cossiom said members had become aware of attempts to roll out "new commercial models and policies... leading to very significant fee increases for clients." Its members had not received any information regarding the rationale or business justification for such changes, and felt these new models were "not transparent at all," Cossiom said.

Cossiom has not yet received a response from Fitch, but in a statement, a Fitch spokesperson says, "Fitch Solutions regularly reviews its fees for its products, and is in regular dialogue with its subscribers to ensure the fees for its products are competitive and transparent. We engage with all of our subscribers to ensure our current fees, and any proposed changes to fees, are clearly and promptly communicated, and [we] have held, and concluded, constructive, bilateral discussions with our subscribers in recent months on this topic."

Transparency Concerns

A European executive from the Information Providers User Group (Ipug), a UK-based non-profit that represents market data services users, argues that CRAs have been continually developing more complicated data and price policies since the financial crisis. "A 2002 CRA agreement contained around 15 pages. Now it would be more like 50 pages to reflect the increase in usage clauses and similar limitations," the Ipug exec says.

While regulators tightened their oversight of CRAs following the credit crunch and subsequent financial crisis in financial markets, he says the resulting legislation—the Credit Rating Agency Regulation (CRAR)—concentrates on "the generation of the ratings, but not the data usage and associated commercial rights of these ratings."

Increased Scrutiny

However, Esma has voiced similar concerns about transparency around fees charged by CRAs. In a report published in January, the regulator indicated that this issue deserved further investigation—both in general, and specifically in relation to the use of datafeeds. Esma's *Thematic Report on fees charged by Credit Rating Agencies*, published on January 11, highlighted several key concerns regarding fee provisions by CRAs, including issues surrounding transparency and disclosure, as well as fee-setting.

Acknowledging concerns about transparency among CRA clients, Esma said the rating agencies must "ensure sufficiency and clarity of information provided to actual and potential clients as well as to Esma, aiming at reducing the existing information gap between CRAs/TRs (trade repositories) and other stakeholders," adding that "clients should be able to understand the key elements of the fee schedule, the reasons for deviations from it as well as the reasons of price increase/decrease."

However, one of Cossiom's complaints is the lack of such a fee schedule, making it harder to understand the significance of price increases. "For instance, as far as we know, there is no official price list available provided to clients," Cossiom officials wrote in the user group's letter to Fitch.

Esma also suggested that there may be a need to expand its oversight to include the CRA affiliates that provide additional services such as datafeeds to the financial services sector. Larger CRA groups tend to be structured in such a way that affiliated entities provide rating-related services, such as the provision of datafeeds used by financial services firms for both regulatory purposes and to support investment decision-making processes.

However, since these affiliates do not fall under Esma's direct supervision, it is difficult for the regulator to ensure fees for such services are calculated and charged according to CRAR's provisions. Furthermore, Esma states in the report that "a lack of transparency emerges from the fact that issuers, investors and users of ratings are not able to clearly discriminate between the services provided by the registered CRAs as opposed to non-registered affiliated entities."

In addition, Esma said it is "concerned about the risks to investors and clients/users of ratings" that could arise when data is distributed or licensed by non-registered affiliated companies. "In particular, registered CRAs do not exercise any direct control on how rating information and related content are marketed and distributed by affili-

ated entities (e.g. price, terms of use, agreements and limitations)," Esma said in its report.

Esma also highlighted the lack of information provided not only to data consumers, but also to the regulator itself, stating that "despite the fact that such services are a by-product of the credit rating assessment conducted by the CRA, no related information is reported to Esma (e.g., fee schedule, or other information on the type of services), which impairs Esma's ability to properly assess the existence of potential risks associated to the production and distribution of such rating-related services."

Esma's report also stated that cost-based and non-discriminatory principles outlined in the CRAR "might not be currently applied to the fees charged for such rating-related products marketed by entities affiliated to the CRA." According to the report, subscribers to these services claim to have experienced "more than three-digit" fee increases in recent years without proper explanation and possibly only in line with the value of the service to clients rather than the actual cost of producing the service—whereas Esma's report emphasized the need to use cost-based pricing when setting fees, rather than basing any changes on the perceived value of its services to the individual client.

The regulator also echoed Cossiom's concern that users view pricing models in general as opaque. In a statement released alongside the *Thematic Report*, Esma said that "CRAs need to ensure that provision of rating-related services by affiliated entities does not conflict with the non-discrimination and cost-based principles."

But while the use of affiliated entities for such services, and the resulting separation from the regulated CRA, has raised supervisory concerns that Esma has pledged to look into, details of the next steps in this process are

unclear. An Esma spokesperson says that while Esma will "continue to follow up on [these] supervisory concerns," there is no specific timeline for this action at present, adding that "Esma monitors industry-wide developments through engagement with the supervised entities and other external stakeholders."

Other Avenues

Jacques Bouyssarie, owner of Paris-based Fitex Consulting, which administers Cossiom's activities, says alternative options for data users remain limited at present. "It would be very difficult for banks to migrate to new CRAs, because information systems and reporting to the clients are all based on the main existing rating agency's [systems], and have been for a long time. The situation is the same for the use of financial data products such as indexes," he says, adding that faced with rising data costs, financial institutions may eventually have to start passing on the real cost of the data to their clients.

Given concerns about transparency in relation to CRA fees and fee schedules, as well as the regulator's current lack of oversight when it comes to the affiliates that provide data services, movement on this issue seems unlikely any time soon. While Esma has committed to investigating the issue further, without a formal timeline for action, any resolution remains out of sight for now.

In the meantime, the Ipug executive says there are other avenues open to the industry. "The usual solution would be to engage with the vendor first, but if extremes in terms of complexity or spend levels are reached and senior management has given its approval, there is the possibility in the European Economic Area (EEA) to request advice from the competition authorities," he says, though he adds that since market data annual spend is "a drop in the ocean" compared to overall financial services costs and revenues, "it might take some time to catch the competition authority's interest, versus other sectors such as pension funds that might trigger a more favorable echo," as a result of their size and more direct connection to retail markets. ■

Wrestling Over Competing Mifid II, GDPR Data Demands

The data gathering, retention and reporting requirements of Mifid II seem at odds with the enhanced personal data protection rules of the GDPR. But with careful consideration, financial institutions can balance their regulatory obligations under the two pieces of legislation, although the road to compliance is far from smooth, as Kirsten Hyde reports.

On the surface, two new behemoth European regulatory regimes affecting financial institutions—the Markets in Financial Instruments Directive (Mifid II) and the General Data Protection Regulation (GDPR)—appear to be at odds. While Mifid II seeks to protect investors by requiring investment firms to retain more information about them and their activities, GDPR aims to reinforce the data protection rights of those same investors and sets parameters on what information firms can hold and for how long.

The purpose of Mifid II, which came into force on January 3 this year, is to provide a strengthened financial services regulatory framework with improved transparency requirements for the benefit of investors. As a result, large sets of data, often including personal data, are processed by investment firms to comply with the rules. For example, firms are required to keep records for at least five years of client orders and decisions to deal, transactions, and order processing details to aid regulators in their crackdown on market abuse. As part of these transaction reporting and order record-keeping obligations, firms must collect and process personal data of individual traders and clients, including their full name, date of birth, and a unique identifier, such as

"It requires some careful thinking. It's challenging, but not impossible [to reconcile Mifid II and GDPR]. In most cases, there is a way of reading one in a way that doesn't violate the other. With careful consideration and by acting in a reasonable manner, you can get both sets of rules to work together 99 percent of the time."
Nathaniel Lalone, Katten Muchin Rosenman UK

an ID number, passport number or a concatenated code.

In addition to the collection and storage of this data, Mifid II places requirements on investment firms and trading venues to submit reports to national regulators that detail the trades and personal information of the trader and client by the end of the next working day, either directly or through Approved Reporting Mechanisms (ARMs) or trading venues.

Mifid II also requires firms to record all electronic communications and telephone conversations relating to activities intended to result in the conclusion of a transaction or the provision of client order services, even if they do not. These records must be stored in a manner that allows them to be accessible for future reference, readily available if regulators request them, and must be retained for a minimum of five years, and in some cases, up to seven years.

Meanwhile, GDPR, which will come into force on May 25 this year, brings in new rights for data subjects governing how their data is stored and used, and enshrines in law the "right to be forgotten"—whereby a person can request that firms delete all personal data held on them.

A key principle of GDPR is that the ownership of personal data is deemed to remain with the individual and not with the data controllers (financial institutions that determine the purpose of the processing) or processors (external vendors who process data on controllers' behalf, such as cloud technology vendors or outsourcing providers).

GDPR provides, among other things, that any personal data that can be used directly or indirectly to identify a person, should: be relevant and limited to what is necessary in relation to the purposes for which they are processed; be kept for no longer than is necessary—and after that, data should be securely destroyed, or anonymized if firms wish to retain it; be processed lawfully, fairly and in a transparent manner in relation to the data subject; and be obtained for specified and lawful purposes.

The fundamental difference of GDPR is the overarching principle of accountability. Organizations must not only comply, but must also be able to demonstrate that they comply. And the stakes are high: GDPR gives regulators the means to impose hefty fines for serious breaches of the regulation totalling 4 percent of a firm's annual global turnover, or €20 million ($25 million), whichever is higher. Where firms suffer a data breach, as a result of a cyber-attack, for example, they will be required to notify their regulator within 72 hours—something regulators hope will remedy current under-reporting of cyber breaches.


Georgina Kon
Linklaters

The regulation assigns to data processors many of the same legal responsibilities that apply to data controllers, although controllers have full responsibility for their processing relationships, and they are liable for the actions of the processors they select. GDPR is also explicitly extra-territorial and regulates the protection of personal data of all European Union subjects during processing, no matter where in the world the business takes place, which means US and Asian financial institutions that service European clients, as well as the subsidiaries of firms in other countries, will also have to comply with the regulation.

Reconciliation

It is understandable that the two regimes appear to conflict: Mifid II includes an enhanced data gathering, retention and reporting regime with personal data caught in its net, while GDPR hands individuals more control over their data. On closer inspection, however, the two rule sets can be reconciled with careful thinking and consideration, legal experts and regulators say.

"Investment firms have to reconcile the processing of personal data under the requirements of GDPR with what they actually need to hold and how they need to maintain and disclose information and keep records as required under Mifid II. One thing I always go back to is that within Mifid II there is language that says that the processing of personal data pursuant to the directive must be carried out in accordance with personal data protection rules in the EU—and it makes reference to the Data Protection Directive [which GDPR will replace]," says Nathaniel Lalone, a partner at law firm Katten Muchin Rosenman UK.

In a similar vein, the UK's Financial Conduct Authority (FCA) issued a joint statement with the Information Commissioner's Office in February, stating, "We believe the GDPR does not impose requirements which are incompatible with the rules in the FCA Handbook"—a statement viewed by some to include the requirements of Mifid II. "Indeed, there are a number of requirements that are common to the GDPR and the financial regulatory regime detailed in the Handbook," the FCA-ICO statement says.

"There is clearly intent for the two rule sets to be read in a way so that one is compatible with the other. The question is, how do you do that? From an investment firm's perspective, when you hold and maintain personal data, you're meant to, for example, destroy it in an unrecoverable format when it is no longer needed. If you're an investment firm the question becomes, 'When does it become no longer needed?' With Mifid II obligations, firms can say, 'For this particular type of record it's five years, or seven years, and potentially longer if there is reason to think that there might be an enforcement action,'" Lalone says. "It requires some careful thinking. It's challenging, but not impossible [to reconcile Mifid II and GDPR]. In most cases, there is a way of reading one in a way that doesn't violate the other. With careful consideration and by acting in a reasonable manner, you can get both sets of rules to work together 99 percent of the time."

There are six lawful bases for processing personal data under GDPR, and four in particular apply to financial institutions. These are: consent, where the data subject has given consent to the processing of his or her personal data for one or more specific purposes; contract, where processing is necessary for the performance of a contract to which the data subject is party; legal obligation, where processing is necessary for compliance with a legal obligation to which the controller is subject; and legitimate interest, where there is a compelling justification to do so.

If firms can assign at least one of these for each process, the requirements of the two regulations can start to be reconciled. For instance, a data subject's right to be forgotten, where they request that a firm stops the processing of their personal data, must be considered in conjunction with the organisation's legal obligation for regulatory reporting and to retain records under Mifid II and/or anti-money laundering and fraud regulations.

"If a firm receives a request from someone asking it to delete personal data, but needs to keep that personal data for a period of time to comply with a specific obligation under other legislation, then it is entitled to retain that data to comply with the legal obligation to which it is subject—that is, the GDPR right to erasure will not apply," says Joanna de Fonseka, an associate at law firm Baker & McKenzie. "I would make the point, though, that the data will still need to be processed in compliance with GDPR, so a firm would still have to put in place appropriate security measures, for example, to protect that data."

In other areas such as record keeping, a key consideration when designing procedures that are compliant with both pieces of legislation is whether records can be stored confidentially, ensuring that only the specific people who need to access these records can do so. Lawyers say that banks should also be able to demonstrate that they have considered the principles of necessity, proportionality and data retention at the time of designing or amending their recording procedures.

Where firms are obliged to record phone conversations intended to lead to transactions, personal data disclosed during the course of those conversations will also be retained for the prescribed time by firms under their Mifid II obligations. Lawyers say this should constitute a lawful basis

Joanna de Fonseka
Baker & McKenzie

for processing personal data, but that firms will nonetheless have to meet their obligations under GDPR by clearly informing clients and employees about the scope, procedure and potential consequences of recordings.

Outstanding Issues

While the two rule sets can be navigated, there are some aspects that still concern market participants, particularly relating to the storage and transmission of personal information of individual traders and clients under Mifid II's transaction reporting requirements.

"One of the aspects of GDPR we keep hearing over and over again concerns consent to the use, transmission and processing of personal data. The consent needs to be clear and specific, and one of the things that is problematic is that transaction reports that capture personal data of individuals get passed from one firm to a platform, perhaps on to an exchange, and then to a regulator. It goes through potentially lots of different steps, and it may be hard to then show that the data subject has consented to each of those steps," Lalone says.

Jurriaan Jansen, a lawyer at Norton Rose Fulbright, agrees, saying in a presentation that "Mifid II leads to increased regulatory burden… and an increase in data flows, having the potential of making it difficult for individuals to understand what is happening to their data and to control their data."

There is also concern that the transmission of personal information between firms, ARMs, platforms and regulators increases the risk of cyber breaches and identity theft because hackers have more points of attack. The concerns are particularly pertinent in the context of GDPR, which places a greater onus on data processors and controllers to identify data breaches and notify the owners of the data if there is a risk to their rights and freedoms, including financial loss.

To curb this risk, some industry participants have developed a way of substituting personal data with unique numbers known as short codes. NEX Group, for instance, last month launched its Industry Standard Common Identifier (ISCI) short code service, which can be used by trading venues and investment firms that use NEX Regulatory Reporting as their ARM. But so far, largely because of pressing regulatory timeframes, there is no common industry approach to developing standardized short codes, and they have not explicitly been approved under Mifid II, despite working well from a GDPR perspective.

Ron van Wezel
Aite Group

To-Do List

Notwithstanding these issues, financial services firms are facing a huge task of reviewing how they handle, process and govern the use of personal data across their entire organization. Keeping records of processing activities and compliance practices are among their key requirements, and have forced them to undertake vast data mapping exercises.

"Generally speaking, the first step to GDPR compliance is to understand the personal data held by the organization—who the data custodian is, the sources of data, where the data is being sent, how it is used, purposes of collection, location of the data, and much more. For large companies, such data mapping is challenging… and some still struggle with this data-mapping exercise," says Ron van Wezel, a senior analyst at Aite Group and author of the report, *Data Protection in the Board Room: The Impact of the GDPR*.

"From a GDPR compliance perspective, firms should also be mapping out the processes they're using for Mifid II compliance and documenting these," adds Georgina Kon, a partner at Linklaters in London. "From an accountability perspective, it's important that there is a clear trail of what they are doing, why they think those steps are necessary and proportionate for the aim they're pursuing. So, for example, are there controls that they can put in place to make sure that only the minimum amount of data is processed and that only people who need to see it, see it? How will subject rights' requests be treated? These are all normal data protection compliance steps, and should not be a bar to firms achieving Mifid II compliance in a sensible way."

Lawyers at UK law firm Burges Salmon also highlight the importance of drafting and maintaining new policies that are sufficiently compliant with different legal regimes, such as Mifid II and GDPR, and say these will require "continuous consideration." In a legal update, they add that "in order to be able to demonstrate GDPR compliance, regulated firms will need to ensure that they have tested their systems and processes, and newly implemented policies and procedures, to ensure that they can comply with enhanced data subject rights and the new obligations under GDPR (for example, relating to breach reporting)."

In other areas more generally, being able to demonstrate whether client consent to retain data has been sought is a challenging task, lawyers say. Obtaining an individual's consent may seem an easy way to establish a legal basis for processing, but it is not as straightforward as it seems.

"Some banks have hundreds or thousands of clients—not all of whom necessarily are going to be responsive or like what is written, so any repapering exercise like that can take a long time," Lalone says.

Kon says she has seen banks and other clients moving away from consent as a lawful basis for processing because of the difficulties associated with collecting valid consent, particularly with the new higher GDPR threshold where firms need an express affirmative action. "Instead, firms are finding alternative legal bases for processing—for example, where there is a legitimate interest to do so, or because they need to comply with a law such as Mifid II, or because it is necessary for the performance of a contract. There are different ways firms can frame what they are doing," she says.

Central to every bank's compliance efforts will be the updating of contracts with existing third-party data processors—another vast "repapering" exercise. GDPR requires the insertion of specific clauses into contracts setting out the subject matter and duration of processing, its nature and purpose, and the type of personal data involved. Contracts must ensure that those processing data are doing so under a confidentiality obligation, that processors encrypt data as appropriate, they obtain prior written consent from controllers if they wish to sub-contract work out, and they delete or return personal data at the end of the agreement.

"One of the biggest challenges is time. To update existing processor agreements for GDPR compliance, financial services firms need to review and redraft the relevant provisions in their current agreements and will likely also need to allow for some negotiation time with processors," de Fonseka says.

According to some of the lawyers spoken to by *Inside Data Management*, regulators are cognizant of the amount of work involved in meeting GDPR requirements.

"It's an open secret that most large, global organizations will not have their GDPR compliance programs fully completed by May 25 because there is simply too much to do, and regulatory guidance and local laws are evolving, even now at this very late stage. Regulators understand this, and they have indicated that in the first few months after May we can expect them to be helpful rather than on the lookout to impose large fines," says Kon. "However, that's certainly not a 'get out of jail free' card. If a firm has done nothing to comply with GDPR in high risk areas, then that type of flagrant breach will not go down well." ■

Esma Probes APAs Amid Mifid Trade Data Issues

Approved Publication Arrangements—a critical component in the new Mifid II European markets regulation—may be falling short of their requirements under the new transparency rules, and have drawn Esma's attention. By Samuel Wilkes, with additional reporting by Lukas Becker

Pan-European regulator the European Securities and Markets Authority (Esma) is investigating whether so-called Approved Publication Arrangements (APAs) are adhering to their trade reporting obligations under the second iteration of the Markets in Financial Instruments Directive (Mifid II), after lawyers and a key lawmaker warned that some APAs may be breaching the spirit—and in some cases, possibly the letter—of the law.

The controversy concerns APAs, which investment firms use to fulfill new pre- and post-trade transparency requirements under Mifid II and its accompanying Mifir regulation, which came into force on January 3. Pre-trade transparency means publishing offered executable quotes, while the price and quantity of certain trades must be published after execution.

The APAs must make the data free and available to the public 15 minutes after execution of the trade, but they can charge users for real-time access to the data.

The benefit for traders of having pre- and post-trade data—even with a delay—is that it will help them compare prices available in the market. However, sources complain that the data published by two APAs in particular—Tradeweb and Bloomberg—is potentially unusable.

> "From our first observations, it appears the data made public by several APAs may not meet these requirements.... We will continue our assessment of how APAs make data available to the public." **Steven Maijoor, European Securities and Markets Authority**

"The APAs seem to be acting [in a way that], if not in violation, [then] clearly frustrating the concept of publishing data free of charge and also in a machine-readable format. It is an issue with both APAs and trading venues. The entire mission of Mifid II is to improve transparency, particularly in the non-equity markets and this is not helping," says a regulatory expert at a large investment firm.

While the APAs might not be violating the letter of the law, lawyers and the member of the European Parliament responsible for drafting the rules say they are breaking the "spirit" of the law, which aims to increase transparency in non-equity markets.

"I have heard complaints from market participants that post-trade data is either provided in unusable file formats or only during an unreasonably short time span. While this might technically be in compliance with the letter of Mifid II, it is certainly not in line with the spirit of the law, which was to democratize access to such information. Clearly, this behavior of certain APAs is an attempt to sidestep the Mifid II transparency regime," says Markus Ferber, the parliamentary rapporteur responsible for negotiating Mifid II.

In response to those complaints, Ferber sent a letter to Esma chairman Steven Maijoor on February 15, asking whether the pan-European markets regulator has observed the same practice, and if it will do anything to resolve it.

In response, in a letter dated March 6 and seen by *Inside Data Management* stablemate *Risk.net*, Maijoor says that "From our first observations, it appears the data made public by several APAs may not meet these requirements…. We will continue our assessment of how APAs make data available to the public."

No Copying

One method of presenting post-trade data that has frustrated two sources is publication in a format that cannot be copied—a technique used by the Tradeweb APA.

The regulatory expert at the large investment firm says the only way they can copy the information is by taking screenshots of it on the website and manually copying the data afterwards, which makes it difficult to consolidate. *Risk.net* used Tradeweb's APA site on February 21, and also found the only way to copy information was by taking screenshots.

Two lawyers are unconvinced this meets certain requirements set out in Mifid II.

"The APA that doesn't allow you to copy and paste strikes me as pretty close to violating the rule by letter, as well as by spirit," says a partner at a law firm in London.

A Tradeweb spokesperson says that its APA "makes data available to the public for free 15 minutes after the initial publication of the trade report on both a website and in a machine-readable format, which we believe is in compliance with the regulatory requirements of Mifid II." However, sources say the machine-readable data is only available through other third-party technology providers that charge for their services.

A requirement placed on APAs in Article 14 of a delegated regulation finalized by the European Commission on June 2, 2016, is for them to ensure their published data is machine-readable. The delegated regulation lists a series of provisions outlining machine readability, one of which says it should be able to be accessed, read, used and copied by computer software free of charge.

The two lawyers say they do not believe that the format can be called machine-readable if a computer cannot actually select and copy the data, as it suggests a computer is unable to identify the information.

"I am not convinced that meets the requirements for the information to be machine-readable. There is a legitimate argument from either side, but that is clearly not what was intended," says a regulatory expert at a second law firm.

The partner at the first law firm also believes this practice is in violation of another requirement in the Level 1

text of Mifid II, which says APAs and trading venues must ensure their pre- and post-trade data can be consolidated with similar data from other sources.

The purpose of this provision is to enable the creation of consolidated tape providers in equity and non-equity instruments. At the moment, no consolidated tape providers exist, but the law firm partner does not believe this voids the obligation on the APA to ensure the data can be consolidated.

"The consolidated tape providers don't seem to exist right now, but the fact is that if these APAs are subject to an obligation that they need to be publishing things in a way that can be used by third parties, that is not really being met if you can't extract the information being made public," says the partner at the first law firm.

Disappearing Data

The investment firm regulatory expert at also expressed concerns at the difficulties involved in using the APA operated by Bloomberg, which publishes single-slice files in a spreadsheet format throughout the day. Each file contains a list of trades executed between each periodic publication. However, each file is deleted within two minutes after publication and the information does not reappear.

Risk.net downloaded files from Bloomberg's APA on February 21, between 10:10 a.m. and 10:15 a.m. GMT. During that time, four files were uploaded to the website, but each one was deleted once the succeeding file uploaded. Each file contains data on between one and three trades, and does not contain any information on the trades in the previous files. *Risk.net* rechecked the Bloomberg APA website on March 13 and found this to still be the case.

The regulatory expert at the investment firm says that unless the firm assigned someone specifically to monitor the site and download every file, they would not have a complete view of activity. But a source at a data provider says the vendor has written code that monitors the website and downloads each file as it is uploaded.

Both lawyers speaking to *Risk.net* believe this is within the letter of the law, because the legislation places no time limit for the data to be available. But the partner at the first law firm says the original intent

> "When the commission was drafting the delegated acts under Mifid II, I warned them it will not do the trick to define 'reasonable commercial basis' as 'costs plus a reasonable margin' as this leaves the fundamental question of what 'reasonable' means unanswered. Once again, it will be supervisory authorities that will have to come up with some guidance, but this is an issue that could have been easily avoided."
> **Markus Ferber, European Parliament**

of the regulation—to increase transparency in the marketplace—is not being fulfilled.

"APAs are subject to an obligation to make the data available within a certain timeframe post-execution, but the rules don't then go on to say you need to maintain the visibility of the data for a certain amount of time thereafter. So, while it may not be in violation of the expressed letter of the law, the regulatory purpose is not being served here if you [only] have 30 seconds to capture the information before it is gone," says a London-based partner at the first law firm.

A spokesperson at Bloomberg says that its APA data is "freely available in machine-readable format 15 minutes after a trade is published on a public webpage, which isn't gated. We consider this approach compliant with law, and [with] the objective of ensuring the public can use computer software to directly and automatically read transparency data."

Esma's Maijoor does not mention the practice of APAs only publishing data for a short period of time in his letter, but says Esma will now speak with the national authorities supervising the APAs—in the case of Bloomberg and Tradeweb, UK regulator the Financial Conduct Authority (FCA).

Defining 'Reasonable' Fees

But some sources say they believe the APAs have deliberately made the data difficult to use so as to incentivize demand for their own premium services.

"By making what is publicly available as useless as possible, it compels you—if you actually want the data—to subscribe to some data package that is maybe available now or at least [which] these entities are thinking is a longer-term opportunity," says the regulatory expert at the large investment firm.

Tradeweb APA runs a real-time service that charges for the data, while Bloomberg also makes trade data available via its Bloomberg Professional terminal and B-Pipe real-time datafeed. However, two sources speaking to *Risk.net* say the fees for these services are excessive for the uses for which the data is intended.

An electronic trading expert says they have been quoted fees ranging from $1,000 to $2,000 per month for each user. Considering there are more than five APAs, each publishing different trades, and investment firms want multiple traders to have access to the data, the overall cost for an individual institution can soon mount.

As a result, the electronic trading expert says it is currently difficult to justify the price tag—particularly because of numerous problems with the underlying data itself.

Some firms have sought legal counsel on the fees charged by APAs, as one lawyer says some clients are complaining that the fees are not set based on reasonable commercial terms.

"Firms are complaining that [the fees charged by APAs] are not on a reasonable commercial basis. Some of the APAs are charging hundreds of thousands," says the regulatory expert at the second law firm.

Under the Mifid II legislation, APAs and trading venues are allowed to charge for their real-time data as long as those charges are made on a "reasonable commercial basis"—a term that the regulator does not explicitly define.

Although the European Commission outlined the meaning of "reasonable" commercial terms as the cost of producing and disseminating data plus a "reasonable margin" in a delegated regulation finalized in May 2016, parliamentary rapporteur Ferber argues this is still open to interpretation.

"When the commission was drafting the delegated acts under Mifid II, I warned them it will not do the trick to define 'reasonable commercial basis' as 'costs plus a reasonable margin' as this leaves the fundamental question of what 'reasonable' means unanswered. Once again, it will be supervisory authorities that will have to come up with some guidance, but this is an issue that could have been easily avoided," Ferber says.

The partner at the first law firm says this argument over commercial terms is typical in cases of vital services being provided to clients. "Customers will always complain they are going to be gouged by their service providers. I don't think there is a way to solve that by putting more words in the legislation," the partner says. ■

LIGHT AT THE END OF THE TUNNEL

But Will Mifid Dark Pool Rules Add Up?

Esma has released the first figures to support Mifid II's caps on the percentage of equities trading that can be transacted on dark pools. However, critics warn that although the delay has given Esma more time to validate data and clean up queries, the absence of a consolidated tape will remain an obstacle. By Philip Alexander

It's been a nervous start to 2018 for dark pool operators in Europe, who have been awaiting calculations that set levels for double volume caps (DVCs)—which determine how much volume in single equities can be traded on dark pools—from pan-European financial regulator the European Securities and Markets Authority (Esma).

Though part of the new iteration of the Markets in Financial Instruments Directive (Mifid II) and its associated regulation, Mifir, which became law on January 3, Esma had delayed the implementation of the DVC until March because of "data quality and completeness issues," but published its first set of data for January and February on March 7—albeit for significantly fewer instruments than expected.

Dark pools have never liked the rules, which can suspend dark trading of any stock that exceeds a percentage of the market-wide volume—4 percent for a single pool and 8 percent for all pools—over the past 12 months. But they also fear the mysterious lack of data that prompted Esma to postpone the DVC—requiring an extra two months of data—could yet resurface.

If dark trading in a stock breaches these levels, local regulators can suspend trading waivers for the dark pools to trade the instruments for six months.

But even temporarily removing specific players from the market for

> "As we go forward, the data is going to get cleaner and easier to determine. But [given] the combination of the fidelity of the trade flagging under Mifid I and the amount of data—it was a full year's data we had to submit—as well as the ingestion process by the regulators, it was not too surprising in the end that it was a challenging thing to do in that time."
> **David Howson, Cboe Europe**

a given instrument—either all dark pools, or an individual dark pool that triggers the 4 percent cap—has competition implications. "Regulators do not want, and are not mandated, to get in the middle of that," says Juan Pablo Urrutia, European general counsel at ITG, which runs the Posit dark pool.

Other pool operators note that, despite the delay, the rules have already affected the way investors trade, steering them toward auction trading, block trades that benefit from the large-in-scale waiver, or to so-called systematic internalizers (SIs)—dealers that have a big share of a given market and are therefore subject to additional transparency requirements.

If dark trading shrinks voluntarily, of course, then the caps are less likely to be triggered. But some market participants still have reservations about whether trades are being classified correctly, and the response of regulators and policymakers if the caps do not function as expected.

Four major dark book operators tell *Inside Data Management* stablemate *Risk.net* that they submitted all data as requested. Two sources suggest problems with the UK Financial Conduct Authority's (FCA's) market data processor reporting system in the early days of Mifid II may have had some impact on Esma's receipt of data from UK venues. Unlike most other jurisdictions that asked their venues to report directly to Esma, the FCA collected the double-volume cap data from UK venues and forwarded it to Esma.

The data reported by dark pools itself depends on reference data on individual equity instruments drawn from primary listings on national incumbent exchanges. If there were any delays or gaps in that reference data between the Mifid II go-live and January 9, it would stymie the reporting process for the dark pools.

"As the golden source reference data has to come from the primary market—that base record that Esma relies on—that puts a sequencing into the whole equation that means nobody else can submit, potentially, until the primary market has submitted its data," says one industry source.

However, there are indications the problem was broader and more profound. Esma's statement announcing the postponement said: "While Esma's systems are functioning and ready to receive data, a large proportion of trading venues have yet to provide complete data." The regulator indicated that only 75 percent of venues had submitted, and complete data was available for just 2 percent of the approximately 30,000 European equity instruments.

"If you get data from 75 percent of venues, unless the 25 percent of them that didn't report represent 98 percent of the data and failed completely, you have to draw the conclusion that some of the 75 percent didn't get through, for whatever reason. That could be because of erroneous submission, erroneous processing, or something in between," says David Howson, COO at Cboe Europe, which operates both dark books and a periodic auction facility.

The additional two months were intended to provide time for Esma to tackle specific queries triggered by the initial data reporting, and validate the data it has. Sources suggest part of the challenge was that venues needed to fill the reports with data on the use of Mifid II waivers from lit trading, but the period covered—January 2017 to January 2018—was before the new rules came into force.

As a result, the waivers used at the time were actually those under the Mifid I criteria. Under Mifid II, only waivers for large-in-scale trades will be fully exempt from the double-volume cap, whereas trades using the reference price or negotiated (off-book, on-exchange) trade waivers will be subject to the caps, and therefore need to be reported in greater detail than under Mifid I.

"The requirement is for trading venues to collate and prepare data retrospectively that wasn't required to be collected—to the granular level at which you need to give [it to] Esma—at the point when the trade happened. Obviously in the future, the problem will go away, because now everyone knows what is expected of them, so they can collect the right data; but there is an issue in the transition from one to the other," says Christian Voigt, senior regulatory adviser at trading technology firm Fidessa.

Christian Voigt
Fidessa

Individual Exemptions

Even the criteria for individual waiver types have been modified in Mifid II. Although negotiated trades in general

count toward the cap, some are still exempt and can be executed in the dark without limitations. Mifir Regulatory Technical Standard 1 specifies certain types of negotiated trade, such as trades based on a benchmark, transactions that are part of a portfolio trade, or trades contingent on the execution of a derivatives contract that must be executed as part of a single lot, do not contribute to price discovery. They are therefore not eligible to be counted toward the caps.

"Getting all the right nuances and flagging all of the trades to make sure 'Does this trade count or not, does it go in the numerator and the denominator, or just the denominator?'—that kind of granularity was not mandated in Mifid I," says Cboe's Howson.

He points out some of these flags were available under FIX Trading Community's Market Model Typology, which Cboe's platforms have supported since 2013. That typology is more likely to be used now that Mifid II is in effect, because it maps all of the Mifid II flags

"As we go forward, the data is going to get cleaner and easier to determine. But [given] the combination of the fidelity of the trade flagging under Mifid I and the amount of data—it was a full year's data we had to submit—as well as the ingestion process by the regulators, it was not too surprising in the end that it was a challenging thing to do in that time," Howson adds.

ITG's Urrutia believes the policy decision to leave Esma with responsibility for all the data collection process was flawed. Instead, the regulator should have a consolidated tape provider—either a commercial entity or a public utility—perform the task, he says.

Mifid II has created a licensing regime for consolidated tape providers, but no company has so far applied to offer this service. Article 90 of Mifid II leaves open the possibility of a public procurement process if no firm steps up to provide a consolidated tape, instructing the European Commission and Esma to report on the matter by September 2019. Therefore, any public utility is unlikely to emerge before 2020.

Consensus on Reporting

But there is a more immediate issue to resolve in reaching industry consensus around how trades are reported under Mifid II, says Rebecca Healey, head of European market structure and strategy at global institutional trading network Liquidnet, citing the perceived substantial increase in trading volumes on SIs. Since these dealers must provide pre-trade transparency in equities via firm quotes, they are not subject to the double-volume cap.

According to data compiled by Liquidnet, average daily volumes for equities trading on SIs in January peaked at approximately €6.6 billion ($8.2 billion), around double the pre-Mifid II levels, once volumes have been filtered to exclude non-interactable liquidity.

Excluding the out-of-hours trades, average trade sizes are around €6,000, which may suggest SIs are not necessarily being used for the large, principal trades that policymakers had in mind when they allowed continued SI trading in equities, but instead may be serving as a substitute for the old broker crossing networks that are forbidden under Mifid II. Lack of industry consensus on what can be reported as an SI trade means some firms are including on-exchange, off-book negotiated trades within SI totals, whereas others are not.

"We as industry participants need to be clear on what we think is legitimate SI activity, versus what is activity that should really be reported on exchange—not necessarily as an SI-negotiated trade, but potentially as an off-book, on-venue transaction that should be under the trading venue. So there is an education process that needs to go on between industry participants in just trying to clarify what is truly addressable liquidity, versus that which is not really representative of trades a market participant could interact with," Healey says.

Failing that clarification work by the industry, she is concerned that Esma and policymakers may be dissatisfied with the lack of transparency and potential confusion in understanding how trades have been executed. Alongside the increase in the use of systematic internalizers, there has also been a jump in large-in-scale trading. Fidessa data shows large-in-scale trades have risen from 12 percent of dark trades at the start of 2017 to more than 22 percent on February 9, 2018.

The other development has been the rise of Cboe's periodic auction facility, which reported €296 million average daily notional value traded in January 2018—a rise of more than 885 percent compared with the fourth quarter of 2017. Although they do not provide continuous trading opportunities, periodic auctions allow the execution of large trades in the lit market with minimal price impact. Posit has now launched a periodic auction facility as well, while the London Stock Exchange's Turquoise platform is expected to debut one this month.

The combination of periodic auctions, large-in-scale trades and systematic internalizer use could substantially limit the numerator for the double-volume caps. Liquidnet estimated around half of equity instruments could be capped, but of those, around 30 percent are very close to the boundary, so the universe of names subject to the double-volume cap could turn out to be substantially lower than previously thought. For example, 17 instruments in January and 10 instruments in February saw trading on a single dark pool exceed 4 percent of total volume across all EU trading venues over the past year. However, for the same months, 727 and 633 instruments, respectively, saw their percentage of trading across all EU trading venues exceed 8 percent of their total volume for the past year.


Rebecca Healey
Liquidnet

"[There is a need] to create industry guidelines that give the regulator the transparency they are looking for, provide politicians with the information they need that dark pools are not being misused and are actually there to provide price or size improvement, and give market participants the color they need so they can actually decide what are the most appropriate venues they can trade on, so they get the best execution they need to deliver to the end-investor," Healey says.

Dates Distort Data

Before Esma published the DVC data earlier this month, market participants were unsure whether the regulator would use the 12 months to March, or the original 12 months to January that should have been used if the caps had been implemented on schedule. Some pointed out that it would make little sense to use January 2018 data to trigger caps in March. And Esma confirmed that it planned to implement the caps based on the data for the year to March 2019. But some venue operators say there are drawbacks to this approach.

Cboe's Howson says it effectively extends the risk of a cap being triggered further into the future. The rolling averages for January and February will be beyond what they would otherwise have been if caps had been triggered on schedule, because dark pools continued eating into their 4 percent solo and 8 percent all-venues entitlements.

However, even after the postponement of the caps was announced, market participants continued to adjust their behavior in expectation of their eventual implementation. That means more use of large-in-scale, systematic internalizer and periodic auction trades, shrinking the size of the numerator for the first round of caps in March. That could mean fewer initial dark pool caps than policymakers had expected Mifid II to deliver.

"If you are looking at volumes March-to-March, the risk is there will be an insufficient number of instruments breaching the double-volume cap to deliver the anticipated reduction on trading in the dark. While that may be politically difficult to follow through, it is important to understand the differences in dark trading [between] that which can legitimately go back to lit venues versus wholesale activity, which needs the protection of the dark to deliver best execution to end investors," says Liquidnet's Healey.

Voigt says this is exactly the purpose of the caps—to change and curb the use of dark pools. He points to Article 5, paragraph 7b of Mifir, which explicitly states that "Operators of trading venues shall be obligated to have in place systems and procedures to ensure it does not exceed the permitted percentage of trading allowed under those waivers… under any circumstances."

In other words, dark pools are supposed to reduce their footprint precisely to avoid triggering the double-volume caps. While this is difficult to do on the aggregate 8 percent level prior to Esma releasing the public data on dark pools, Cboe has already published data on its individual compliance with the 4 percent cap, and Voigt expects other venues will also manage their compliance with the solo cap.

"I could easily see a mechanism where venues voluntarily, if they get close [to the cap], interrupt trading—not for a pre-defined six-month period, but maybe for a month, waiting until their moving average reduces to a level that allows them to reopen again. In my mind, the benefit of that mechanism is that dark pools comply with their requirement not to breach, but more importantly, it gives them some flexibility about the length of the interruption. Once they breach the 4 percent, there is no discretion; it is a six-month interruption," Voigt says. ■

Trading Firms Metamorphose into Fintech Butterflies

One of the most vocal supporters of high-speed trading recently announced that it was shifting focus to become a trading technology vendor. It is not the only entity to succumb to the lure of being a fintech, as market forces reshape the capital markets and technology promises a lucrative alternative where struggling trading firms can find growth. By Emilia David

Tradeworx, one of the pioneers of modern high-speed trading, has invested heavily in financial technology throughout its existence: Low-latency routes for data and trading, co-location with exchange matching engines, ever-faster switches and server boxes—none of it came cheap. But the firm had an ace up its sleeve: It developed its own proprietary technology—its secret sauce—which allowed it to be successful in the cutthroat world of high-frequency trading (HFT).

Soon, Tradeworx began offering this technology to others, slipping into a dual role as a technology vendor and an active market participant, trading millions of shares per day using its technology. At times, it became hard to distinguish where the technology began and the trading firm ended. That was until January 2018, when Tradeworx announced that it had decided to abandon HFT and focus solely on its fintech arm, Thesys Technologies.

Tradeworx decided to break off from its trading arm—which renamed itself Blueshift Asset Management and sold a minority stake to a group led by private equity firm White Oak Equity Partners—and rebranded itself Thesys Group. The spin-off strategy was to allow the trading business to follow its own growth strategy, executives say, but mostly it was done so that Thesys could pivot specifically toward technology.

“The consolidation trend has been ongoing for a number of years, but firms have different decisions for doing deals. Speaking specifically for Thesys, we started in 2009 and have experienced growth and transformation over the past nine years and decided to sell our trading business to further expand as a standalone tech firm.” **Mike Beller, Thesys**

The high-speed trading market is no stranger to consolidation. Strategies have been squeezed as it becomes harder to gain an edge, and a number of prominent shops have either shut down or have sold themselves to rivals. But Tradeworx chose to embrace its role as a technology provider—a phenomenon that has become increasingly common with the growth of the fintech sector.

Thesys CEO Mike Beller says the trading side of the firm had its own ideas for growth that might work better if the two sides were not part of the same entity. “The consolidation trend has been ongoing for a number of years, but firms have different decisions for doing deals,” Beller says. “Speaking specifically for Thesys, we started in 2009 and have experienced growth and transformation over the past nine years, and decided to sell our trading business to further expand as a standalone tech firm.”

While this might not signal a trend quite yet—Beller says these decisions are often made on a case-by-case basis—Tradeworx is the latest in a series of firms that have decided to pull back from trading activities and focus on fintech. And it’s unlikely to be the last.

Codependent Relationship

With the rise of electronic trading, technology and trading have become intertwined. Financial services firms see themselves as innovators and early adopters, having embraced many innovations early to help address inefficiencies. Today’s trading environment forces firms to implement the most advanced systems—not just to execute transactions, but also to correctly report to regulators. Even regulators themselves have an interest in using emerging technologies to better monitor markets.

As the business environment has evolved, some financial services firms have started building their own innovations focused on their needs, while others were in the process of figuring out what exactly technology can do for their businesses. Trading firms realized that they needed to develop platforms capable of handling volumes and speeds, with extra functionality to provide a competitive advantage against off-the-shelf software. It therefore made sense for them to build such technology in-house. Banks, in particular, have become so wrapped up in technology that they often refer to themselves as technology businesses first and foremost. Goldman Sachs and Deutsche Bank have both repeatedly described themselves as technology firms, as have other top-tier banks and large buy-side firms like BlackRock. Innovations developed by banks are sometimes even sold as standalone products for use by the wider industry, similar to the traditional prime brokerage and white-labeling models.

Monica Summerville
Tabb Group

“We’re a tech company,” says a senior technology executive at a major US bank. “We have a $10 billion tech budget. There are 40,000-plus people in technology, which is larger than some [pure] tech firms out there, even like Facebook or Apple.”

But the relationship between finance and technology is not limited to capital markets firms building technology for themselves—the fintech sector in general is white hot at present, illustrating the capital markets’ dependence on technology. Investments in fintech firms reached $8.2 billion in the third quarter of 2017 alone, according to a report from KPMG. Reflecting this relationship, Thesys is not the only firm that has moved on from its trading roots to focus on a more lucrative business.

Sell-Offs

Another prominent examples of a financial firm moving toward financial technology is NEX Group, formerly known as Icap, which sold its voice-broking business in late 2016 to rival Tullett Prebon. Rebranded as NEX, it runs its foreign exchange trading platform EBS, fixed-income platform BrokerTec, and is a financial technology provider through its NEX Optimisation and NEX Opportunities businesses.

Better known before its rebranding as the world’s largest interdealer broker, Icap started to invest in financial technology in 2002 with a minority stake in TriOptima. Over the years, the company expanded its financial technology portfolio until it finally sold its voice-broking operation and fully embraced its transformation. “We are very much a financial technology company, with technology underpinning each and every one of our businesses,

enabling us to provide our customers with electronic trading platforms and a complimentary suite of services across the transaction lifecycle," says Michael Spencer, CEO of NEX Group, adding that the firm "will continue to grow by providing clients with the data, tools and services to make better decisions, increase efficiencies, and de-risk their trading activities."

For NEX, the writing had been on the wall for some time. A shift away from voice broking to electronic trading had characterized the interdealer market for almost two decades, and its derivatives business had suffered at the hands of seemingly permanent low interest rates across major trading jurisdictions. Added to that, the Icap brand had become embroiled in a series of scandals following the financial crisis related to benchmark fixing and cabal-like behavior in markets.

In earnings calls leading up to the announcement, Spencer often emphasized the pivot toward electronic trading, and away from the traditional interdealer broker heartland of voice, while Icap spokespeople would ask journalists to refer to the company as "market infrastructure and post-trade services provider," rather than an interdealer broker in articles.

Yet others cite more prosaic reasons for the switch. "There was a very clear need for consolidation in the voice-broking business; there were five brokers and only room for three in a period of low volatility, declining revenues in this sector, and an increase in electronic trading platforms," says a source familiar with NEX Group's thinking at the time. "Because of the voice-broking business, Icap was subject to consolidated waiver requirements, which impacted the profitability of the company and held back the electronic execution and post-trade businesses. By selling this business, we no longer come under the consolidated waiver capital requirement of the Financial Conduct Authority (FCA), and so there was a material capital release for the company."

Icap isn't the only example of this metamorphosis, even if it is, perhaps, the most prominent. Day trading firm Trillium, after being censured by regulatory authorities for spoofing, began to sell its surveillance software, Surveyor, to other firms, while the ill-fated Twitter hedge fund, Derwent Capital Markets, grabbed headlines for the few short months of its existence in 2012 before it, too, pivoted in an anemic attempt to become a vendor by auctioning off its predictive analytics technology to little interest. It raised £120,000 of a £5 million target. The firm later became an investment manager, Cayman Atlantic, which appears now to be defunct.

Blame Game

But is the trading environment really to blame for the consolidation and sell-offs, or is it the individual companies' strategies that are at fault? Moving from a primarily trading business to one focused mainly on technology appears to be the more lucrative of the two options. But this is a strategy that has more to do with how each company manages to survive in a difficult trading environment than one solely influenced by the low volatility in the market.

Taking the Tradeworx–Thesys example, nowhere has this been more evident than in the high-octane world of HFT. The sector has experienced a tumultuous few years. Amid a low volatility environment, it became harder for HFT firms to gain an advantage, and returns began to suffer. Proprietary trading firms soon had to contemplate the decision of whether to remain with their current strategies, sell or even close up shop altogether.

In the past few years, several trading shops have either been sold or have abandoned high-speed trading. In April 2017, Virtu Financial bought rival KCG Holdings for $1.4 billion, a move that resulted in an earnings boost for the company based on its fourth quarter earnings report released on

February 8. Another HFT firm, DRW Holdings, bought two other trading shops—Chopper and RGM—in 2017, further fueling consolidation in the market. Other firms have abandoned many of the HFT policies they employed and have chosen instead to focus on more quantitative strategies, like Teza Technologies. Virtu bought some technology from Teza.

But those mergers had more to do with the larger HFT consolidation, says Monica Summerville, an analyst at Tabb Group. "Consolidation in the HFT world has been going on for a while. Those strategies are not as profitable as they used to be," she says. "The latency race to zero has largely been won, so operating on pure speed is getting harder and harder as that technology becomes more affordable and widespread."

Corporate Strategies

But that was not the case with the NEX and Thesys breaks, according to Summerville, because these were decisions made specifically in response to the individual companies' corporate strategies, rather than based on a wider industry trend. "Thesys clearly recognized that they have this technology component that can be leveraged for other purposes. They developed sophisticated technology—especially in data analytics—for their trading business, and realized they could monetize that," she says. "For NEX, that's more complicated. Icap had a strong voice-broking business but that industry is another one that is under pressure due to the shift toward electronic trading, which is further encouraged by new regulations like Mifid II. Though voice will have a place for the foreseeable future, that market is going in a different direction to NEX's electronic trading business."

In 2015, Manoj Narang, one of Tradeworx's founders who became a face for HFT, left the company over disagreements with the board regarding the firm's direction. By the time of the split, Thesys Technologies—then a unit of Tradeworx—had already won two major contracts providing the Market Information and Data Analytics System (Midas) and the Consolidated Audit Trail (CAT) to the Securities and Exchange Commission (SEC)—systems that were built to the specification of the regulator and the industry.

Michael Spencer
NEX Group

This highlights another problem with firms that operate dual trading and fintech arms: any association between them is likely to raise questions about conflicts of interest. Ultimately, these are often resolved by cleaving the two apart. This was of particular relevance for Thesys, as it handled sensitive information from Midas and the CAT, raising the potential perception that its trading business may have received some unfair advantage by being part of the same company handling regulatory technology mandates. "While no one is suggesting any impropriety, it came as no surprise to the people I have spoken to that Thesys has spun off its trading arm," Summerville says.

Beller says that while at the start Thesys had to rely on the Tradeworx association to market itself, the company has been able to prove itself sufficiently that the "conversation around conflict of interest, at some point, isn't even worth having anymore" particularly as the two units are now separate.

Dismissive

For its part, Blueshift is dismissive of the impact this change will have. Mani Mahjouri, Blueshift CEO and chief investment officer, says technology continues to be important for the firm—just not, perhaps, in the way it used to be. Blueshift will focus on quantitative investing and HFT, and will still continue to build technology—but solely for itself, instead of offering platforms to other industry participants. The sale of a minority share to the White Oak-led group helped fund the buyback of some intellectual property from Tradeworx.

"Technology was a means to understand the changes in the capital markets, and in the early days it made sense to create technology resources built by traders for traders. But now the market knows how to build trading systems," Mahjouri says. "Our goal, as a group of scientists, is to focus on specific elements of technology that are commoditized, where we feel our efforts produce outsized returns."

The cost structure of maintaining technology for HFT is a limiting factor for returns, though technology will continue to remain a large part of the trading world, Mahjouri adds.

Others agree. Though other trading firms, like Virtu, also offer their technology to clients, there is a fundamental difference in that they have never evolved into fully fledged vendor organizations. A source at Virtu points out that the lack of customization being offered to clients allows the company to continue to focus on its core business—trading. "We also license our technology to clients like Bank of New York and JPMorgan, but that is the same platform that we use," the source says. "The nature of Thesys' products is that they use their expertise in the market to develop programs for others, while we build technology for ourselves."

The Virtu source explains that this strategy allows the company to focus on its core business, rather than having to build a separate team focused solely on working for clients and essentially becoming a de facto vendor.

As such, while it might not be a full-blown trend yet, the case of trading firms and their fintech interests continues to repeat with increasing frequency—and the scalps it claims are no small fry. As fintech continues to rise in prominence across financial markets—and, perhaps crucially, profitability—it's unlikely that NEX Group and Tradeworx will be the last firms to cast an eye over their business lines and wonder whether one should be sacrificed in favor of the other. ■

Human Capital

QuasarDB Taps Tech Sales Vet Jones for EMEA BizDev


Peter Jones

Paris-based database technology provider QuasarDB has hired Peter Jones in London as a business development executive on the vendor's EMEA sales team, with responsibility for business development activities in the region.

Jones, who has more than 30 years of experience in technology sales and product management, is also CEO and owner of business development agency Jaag, through which he serves as VP of sales and business development at German distributed cloud technology provider Cloudseeds, EMEA sales representative at both UK-based trading analytics vendor Packets2Disk and high-performance microprocessor provider Solarflare Communications, where he has also served as MD of sales and business development for EMEA and MD of international sales and channels since first working for the vendor in 2009.


Naren Goel

Before Solarflare, Jones was a sales and marketing consultant at SMC Networks, marketing business development consultant at Ario Data Networks, and VP of sales and marketing at Troika Networks (which was acquired by Qlogic), having begun his career at companies such as Raytheon and Digital Equipment Corp.

He reports to QuasarDB COO Jean-Claude Tagger.

Ephesoft Scores Goel for CFO

Irvine, Calif.-based machine learning-based document and capture and analytics solutions provider Ephesoft has a new CFO. Naren Goel is tasked with enacting a fiscally responsible model to meet the growing demands of Ephesoft's software to solve unstructured data challenges as it enters new, global marketplaces.

Goel has nearly 20 years of experience in senior finance leadership positions at both start-ups and large corporations, including VP of finance roles at analytics dashboard and monitoring provider SignalFX and cloud data storage provider Coho Data, and VMWare, where he was senior director of corporate finance.

Ephesoft's patented machine-learning technology provides software solutions to organizations in sectors ranging from healthcare to banking, with the ability to mine unstructured data to automate business processes and improve accuracy. The company received $15 million in Series A funding from Mercato last summer and opened new headquarters in January.

S&P Shuffles Execs Following Divisional Restructure

Data, indexes and ratings provider S&P Global has assigned new roles to some senior executives following the


Warren Breakstone

implementation of a new organizational structure at the start of this year.

The vendor has named Nick Cafferillo global CTO at S&P Global, responsible for software engineering, product platforms, development, and data science. Cafferillo was previously COO for S&P's Global Market Intelligence (GMI) division, and has spent a decade at the vendor, which he joined in 2008 from Institutional Shareholder Services, where he spent five years, including as chief product officer for ISS and for RiskMetrics Group. Before that, he was EVP of product management at Thomson Financial.

In addition, S&P has appointed Warren Breakstone chief product officer at S&P GMI. Breakstone was most recently MD and general manager of the capital markets group within GMI, and in his new role will be responsible for GMI's datafeed and digital distribution platform, and for expanding digital consumption and distribution of data across the vendor.

Breakstone joined S&P in 2015 from Thomson Reuters, where he spent a total of 16 years, most recently as SVP of operations and technology. Before that, he spent six years at Chase Manhattan Bank with various responsibilities, including brand management and re-engineering its wealth management and direct banking platform.

The new roles follow S&P's decision to revamp its operating model into four divisions—S&P Global Ratings, S&P GMI, S&P Global Platts (now separate from GMI) and S&P Dow Jones Indices—effective January 1.

In other changes resulting from the restructure, Mike O'Connell, who was previously MD for public sector and professional services, now takes on responsibility for GMI's corporate client segment (including non-financial firms, professional services firms, government agencies, and academia); John-Patrick O'Sullivan, previously senior director of global financial institutions and real estate, now focuses only on the financial institutions segment (including investment banking, commercial banking, investment management, insurance, and private equity); and Jon Wright, senior commercial director of industry solutions, will form a new group to lead all cross-platform dataset solutions.

Buy-Side Start-up Limina Hires Ex-Macrobond Sales Director


Max Eklund

Stockholm-based OMS, PMS and risk management systems vendor Limina has hired Max Eklund as sales director, responsible for revamping the start-up's sales efforts and playing a key role in its global expansion plans.

Eklund was most recently engagement manager at executive search company Aggancio Research, prior to which he spent seven years at Malmö, Sweden-based data vendor Macrobond Financial, including as director of sales and head of Americas operations in New York between 2014 and 2017, and as international account manager in Sweden. Before joining Macrobond in 2010, Eklund held a sales role at Larsson & Partners Asset Management in Malmo.

At Limina, Eklund reports to CEO Kristoffer Furst, who says: "Max brings domain expertise and a strong network with him as he joins Limina as sales director. As a salesperson, he's smart, listens and understand client demands very well—all the way down to a technical level."

SenaHill Taps Industry Vets Korhammer, Weil to Head Markets, Info Providers Sectors

SenaHill Partners, a merchant bank specializing in fintech companies, has hired industry veterans Richard Korhammer and Alex Weil to head two of its five principal sectors—Capital Markets and Exchanges, and InsurTech and Information Providers, respectively.


Richard Korhammer

Korhammer was previously CEO of online research marketplace Airex, prior to which he briefly served as CEO of SR Labs (now Vela Trading Technologies), and was a senior advisor to Lightyear Capital, as well as a director and chairman of The Receivables Exchange. Before that, he was managing director of global equities electronic trading at Citi, which he joined via its acquisition of Lava Trading, which he founded and served as CEO.

Until last year, Weil was director of financial services strategy at PwC's global strategy consulting business, Strategy&, prior to which he was a director at Lazard, an executive director at UBS Investment Bank, and spent six years as co-head of internal M&A at Citigroup. He also served as an assistant vice president at GE Capital, a research associate at William Blair, and an assistant portfolio manager for fixed income at AAM Co.

RegTech Vendor Ascent Adds CME Ventures Vet to Board

Chicago-based regulatory technology vendor Ascent Technologies has appointed Mark Fields, a partner at Alsop Louie Partners, an early-stage, San Francisco-based venture capital firm focused on the risk industry, to its board of directors, after the firm led a $6 million Series A funding round for Ascent. Fields joins other board members Ascent CEO Brian Clark and COO Aaron Droba, Madison Dearborn Partners co-founder Paul Wood, and Jim Gray, CEO of proprietary trading firm G-Bar LP.

Fields was previously CEO of messaging and collaboration software provider Wickr, prior to which he spent 15 years at CME Group, including as managing director of its strategic investment group, CME Ventures, and also held M&A and strategic advisory roles at Ernst & Young and TD Bank.

AIM Continues North American Expansion

Vienna-based enterprise data management developer AIM Software is continuing its North American expansion in order to develop new


Sanjay Vatsa

solutions to high data demands in the US and Canada.

Newly appointed head of Americas Sanjay Vatsa is focused on accelerating growth and developing new strategies to deliver AIM's GAIN data solutions to North American markets. Vatsa has more than 25 years of experience in the financial services and technology industry, and has led and implemented organizational strategy and transformation initiatives with a focus on data management, governance, and regulatory initiatives.

AIM has also appointed Jose Manso as sales director and Jared Geer as sales executive.

BNP Paribas Asset Management Names First CDO

BNP Paribas Asset Management hired Christophe Bonnefoux as CDO in January, with responsibility for data management and quality across the firm. His duties will involve setting strategic direction for data integrity and quality, defining the firm's data quality management framework, and promoting and leveraging the use of data management tools.

Bonnefoux spent the past six years at Accenture Digital—most recently as director of data and business analytics, and as director of advanced customer and marketing analytics—prior to which he was a senior manager at Ernst & Young for nine years, and a senior consultant at Arthur Andersen.

Based in Paris, Bonnefoux reports to Fabrice Silberzan, COO at BNP Paribas Asset Management.

Network Vet Ellis Joins Wave2Wave from Ciena

Datacenter connectivity automation service provider Wave2Wave Solution has hired Duncan Ellis as director for EMEA, responsible for leading the vendor's operations in the region and capitalizing on growing demand for its automated optical networking solutions, which connect and reconfigure fiber-optic cable networks in seconds, rather than days.

Ellis previously spent more than 13 years at network technologies provider Ciena, including as head of global market development and consulting, and director of global alliances for EMEA, and is also co-founder of ID8 Consulting.

Rimes Taps Markit's Scott to Head EMEA, Asia Sales

London-based managed data services provider Rimes Technologies has hired Ewan Scott as head of sales for EMEA and Asia-Pacific, a newly created role responsible for accelerating sales growth across Rimes' managed services and regulatory data solutions in those regions.

Scott joins Rimes from IHS Markit, where he spent six years, including as head of sales in EMEA for enterprise data management. He joined Markit via its 2012 acquisition of Cadis Software, where he spent


Chris Harrison

two years in senior sales roles. Before that, he held sales roles at Fiserv and Checkfree, and support roles at middleware vendors Braid and Mercator.

Based in London, Scott reports to Rimes CEO Christian Fauvelais.

Barchart Names former GlobalView, FutureSource Exec Harrison CTO

Chicago-based data and analytics provider Barchart has hired Chris Harrison as CTO, with responsibility for the vendor's offerings across datafeeds, APIs and software, and for growing its product and engineering teams.

Harrison was most recently SVP of engineering for the MarketView platform at oil and gas data and software vendor Drillinginfo, before which he was chief product officer at GlobalView Software, which Drillinginfo acquired in 2016. Prior to joining GlobalView in 2010, he spent eight years as CEO of CVH Reese, and nine years as SVP of product management at FutureSource.

Harrison replaces Eero Pikat, who continues to serve as president of Barchart, overseeing technology architecture, new technologies, and research and development.

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WINNER: Stephanie Clarke, Broadridge Financial Solutions

> EDM professional of the year
WINNER: Georgia Prothero, Schroders

> Engineer/programmer of the year
WINNER: Kate Stepp, FactSet

> Exchange professional of the year
WINNER: Karen O'Connor, trueEx

> Legal/compliance professional of the year
WINNER: Jennifer Keser, Tradeweb Markets

> Market data professional of the year
WINNER: Patti Sachs, Citigroup

> Reference data professional of the year
WINNER: Aouda Bellout, Schroders

> Rising star (end-user)
WINNER: Kari-Anne Clayton, Deutsche Bank

> Rising star (vendor)
WINNER: Hella Hoffmann, Thomson Reuters

> Risk professional of the year
WINNER: Boryana Racheva-Iotova, FactSet

> Startup professional of the year
WINNER: Emma Margetts, Visible Alpha

> Support professional of the year (end-user)
WINNER: Anitha Iniyavan, RBC Capital Markets

> Support professional of the year (vendor)
WINNER: Dawn Patrick, Numerix

> Technology innovator of the year (end-user)
WINNER: Kim Prado, RBC Capital Markets

> Technology innovator of the year (vendor)
WINNER: Jennifer Peve, Depository Trust and Clearing Corp.

> Technology leader of the year (end-user)
WINNER: Wendy Redshaw, Deutsche Bank

> Technology leader of the year (vendor)
WINNER: Bethany Baer, IHS Markit

> Trade execution professional of the year
WINNER: Mariya Kurchuk, Pragma Securities

> Trailblazer (lifetime achievement)
WINNER: Debra Walton, Thomson Reuters

> Vendor partnership or alliance professional of the year
WINNER: Wendy Collins, UnaVista (London Stock Exchange Group)

> Vendor professional of the year
WINNER: Veronica Augustsson, Cinnober Financial Technology

> WatersTechnology's woman of the year
WINNER: Sallianne Taylor, Bloomberg

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