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The Problems with Priips

US MARKETS BRACE FOR
MIFID II IMPACT

Trading Venues Slam Cost of
ANNA DSB ISIN Utility



DATA LIGHTS THE WAY

Shining a Light on 'Dark' Data; Illuminating Regulation's Murky Depths



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Mifid II: The Gift that Keeps on Giving

If you've left your Christmas shopping until the last minute, you're not alone: Many financial market participants have also fallen behind with their plans for the holidays—and specifically for New Year, after which the second iteration of Europe's Markets in Financial Instruments Directive (Mifid II) comes into force.

Over the past year, we've explored many of the data-related impacts of the new rules, such as how many firms have left their preparations so late that they may not be compliant—and hence be unable to participate in the markets—on day one of the new regime. Some firms may be so desperate for Legal Entity Identifier (LEI) codes—a requirement under Mifid II's "no LEI, no trade" provision—that the Depository Trust & Clearing Corp. (DTCC) has set up an expedited LEI issuance service, charging a 50 percent markup for a seven-hour turnaround.

Even firms outside Europe may be heavily affected by the new regulation: Firms in the US, for example, are still awaiting guidance on some areas of the new rules that conflict with existing US laws—and are in some cases fearful that legislators at home may view the Mifid II rules as the basis for a common standard that should be adopted more widely, such as those governing unbundling of investment research.

Another thing being left until the last minute is market participants' preparations to use ISIN codes for over-the-counter (OTC) derivatives trades. One of Mifid II's provisions is that ISIN codes must be used in trade reports that brokers and trading venues will file with regulators on a daily basis. However, balking at the uncertainty surrounding how much they will have to pay to support the ISIN service—particularly trading venues, which stand to pay the highest fees—market participants have been slow to sign up. As this magazine went to press, the Association of National Numbering Agencies' Derivatives Service Bureau (ANNA DSB) announced a surge in registration numbers—though no major trading venues have yet signed up.

And days before Mifid II, Europe's Packaged Retail and Insurance-based Investment Products (PRIIPS) rule takes effect, bringing its own challenges—specifically, how to calculate a fund's implicit costs, with market participants saying that using the wrong methodology could distort performance and potentially mislead investors, and even make it harder for regulators to police.

To be sure, the challenges will continue through 2018, but those with good quality data and effective data management practices will be better prepared to address them. ■

Max Bowie
Editor

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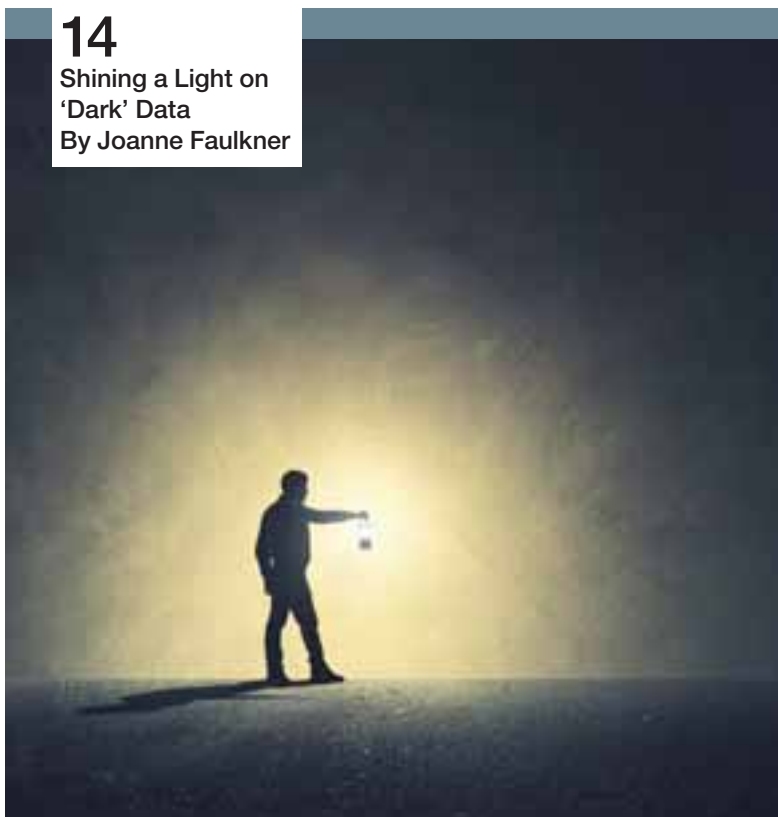
Financial firms are drowning in data, yet information that delivers genuine value remains scarce. Joanne Faulkner investigates whether new approaches to managing internal data could yield new insights, or whether new data privacy rules will impede firms' progress.

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After a year's delay, the Europe's Packaged Retail and Insurance-based Investment Products (Priips) becomes law on January 1, 2018. In-scope market participants racing to meet its significant data and reporting challenges all face the same hurdle: how to calculate implicit costs. Jamie Hyman investigates how a single data field can cause so much

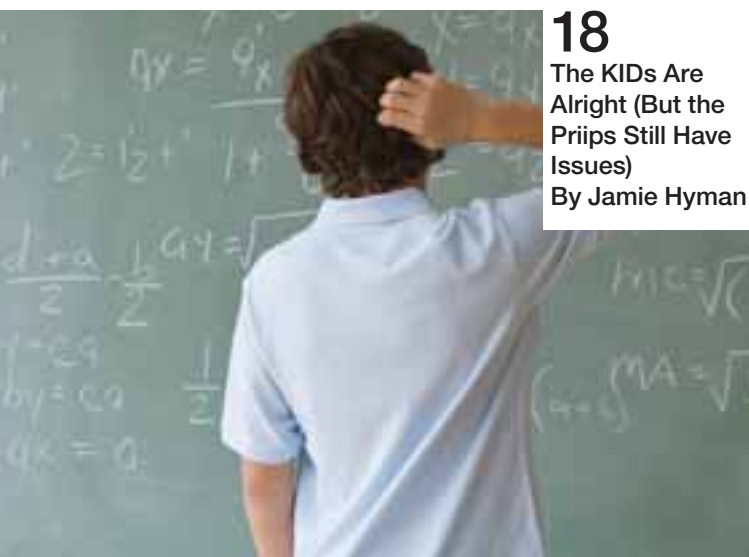
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trouble, what calculation options exist, and the ramifications if asset managers and insurers don't get it right.

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Financial firms commonly review trading activity after the fact to improve their execution strategies. But what they'd really love to do is perform that in real time, pre-trade. Max Bowie looks at how far along market participants are in pursuit of this goal, and the significant challenges to achieving it.

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With just weeks to spare until Mifid II becomes law, US firms affected by the rules are still waiting for regulators to resolve crucial conflicts between European and American laws, and are likely to be making adjustments well after the deadline has passed. By Kirsten Hyde

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The godfather of European financial regulations is making trading venues an offer they can't refuse. To comply with a compulsory reporting requirement of Mifid II, they must sign a contract that sources call "unacceptable." Risk.net's Samuel Wilkes reports on how trading venues are reacting to the ANNA DSB utility's commercial model.

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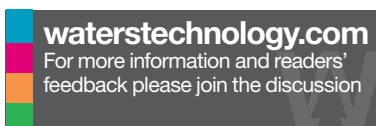
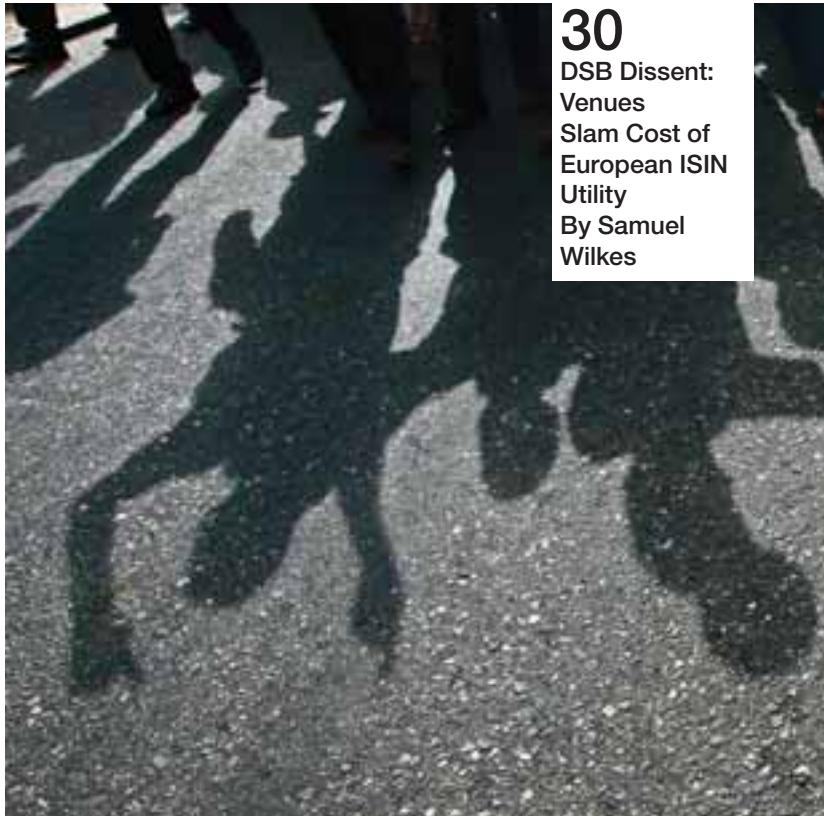
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House Approves Market Data Protection Act

The Market Data Protection Act of 2017 would require the Securities and Exchange Commission (SEC), the Financial Industry Regulatory Authority, and the operator of the Consolidated Audit Trail (CAT) to consult with the SEC's chief economist and develop internal risk control mechanisms to safeguard and govern the storage of market data, all market data-sharing agreements, and all academic research using market data.

The bill follows criticism from Congress over the SEC's ability to store data properly, and comes just days before the CAT's scheduled implementation date of November 15. The CAT contains data on trade orders and a cancellation for equities and options listed on US exchanges, and has been built by Thesys Technologies. The project has been criticised by some lawmakers, who express doubt over the SEC's cybersecurity defenses.



Rep. Warren Davidson (left) and Rep. Jeb Hensarling

Rep. Warren Davidson (R-OH), a member of the House Financial Services Committee and the sponsor of the bill, said the recent Equifax breach and a cyber attack against the SEC intensify the need to ensure top cybersecurity controls are in place. The SEC disclosed on September 20 that hackers had managed to gain access to Edgar, its online system for company filings, poten-

tially exposing the market to illicit trading activity off the back of non-public information contained within.

While the incident occurred in 2016, the public was only notified nearly a year later. "We need to make sure our house is in order at the SEC," says Davidson. "We know there are serious flaws in the way the SEC maintains its data, and in the ways they respond to and communicate errors and omissions. These flaws undermine the trust and confidence of the customers the SEC regulates."

In September, the chair of the House Financial Services Committee, Rep. Jeb Hensarling (R-TX), wrote to SEC chairman Jay Clayton and urged the agency to delay implementation of the CAT system "until the SEC can implement information security safeguards and internal controls to ensure the security of confidential and sensitive data."

Metamako Gains China Sales Certification Nod



Kevin Covington,
Metamako

Australian low-latency switch technology vendor Metamako has been awarded the China Compulsory Certification (CCC), which allows the vendor to sell its hardware in China, as part of its ongoing expansion in the Asia-Pacific region.

The CCC is a requirement for technology companies to sell hardware in China, and—according to CCC's website—is similar to other certifications for product quality standardization, such as the European CE system. Only products that have

been awarded the CCC may be sold or used in China.

The certification will allow Metamako to sell its low-latency FPGA-enabled MetaConnect 48 low-latency layer 1+ switch and the MetaMux 48 series of switches to Chinese domestic brokers, market makers and exchanges, as well as FPGA developers wanting to leverage Metamako's program and configuration.

Metamako CEO Kevin Covington says this is part of the vendor's expansion in Asia, which began last year with the opening of its Tokyo office, adding that the company also expects to expand into other verticals and use cases, including analytics, IT security and broadcast media in the short to medium term. "This is the first step in getting all our products certified for sale in China," he says.

Synechron, Xcalar to Build Virtual Data Warehouses

Financial services consulting and technology services provider Synechron has partnered with Big Data analytics company Xcalar to launch an accelerator for building virtual data warehouses to help financial institutions with risk management and financial reporting.

According to the vendors, financial institutions stand to benefit from scalable data architecture and virtualized data processing capabilities to enable them to meet their daily reporting needs. This joint solution works with existing databases and data sources and can be deployed on-premises or in the cloud.

Xcalar co-founder and CEO Vikram Joshi says it combines data processing and virtualization capabilities to solve common issues associated with processing data from various legacy systems and feeds around regulatory disclosures. Additional models are planned to deal with other industry challenges as the platform develops.

"The current approach of building vendor dependent warehouses is time intensive, expensive, and is unable to evolve and adapt," says Synechron co-founder and CEO Faisal Husain. "Xcalar created a virtual data warehousing solution that allows businesses to run powerful real-time computing without moving their data. This makes it easier to gain near-term intelligence, facilitates setting up a data lake if desired, and provides sophisticated compliance and data lineage."

MOEX, Fluent Partner for FX Connectivity The Moscow Exchange has partnered with US-based Fluent Trade Technologies, a provider of hosting, connectivity, data storage and distribution systems and feed handlers, to provide clients with access to the MOEX UAT (user acceptance testing) integration and test environment. Fluent now provides low-latency connectivity services for FAST market data and FIX order management interfaces to the MOEX foreign exchange market. The vendor supports access to datacenters where MOEX provides Point of Presence access to MOEX FAST market data and FIX order management APIs.

Barchart Enhances Free API Offering Chicago-based data and analytics provider Barchart has updated its free market data API offering to include North American coverage for historical stocks, futures and forex, and intraday delayed stocks data. The vendor says it is positioning itself as an alternative for users of Yahoo Finance's discontinued API service. The APIs have been made available via Barchart's OnDemand service, which allows startups, traders, and developers access to market data in XML, JSON and CSV format.

FTSE Russell Bows Taps Climate, ESG Data Models for New Indexes



Crest of the London Stock Exchange

London Stock Exchange-owned FTSE Russell has added two indexes to its suite of sustainable benchmarks, developed using proprietary data models covering green revenues and environmental, social, and governance (ESG) ratings.

Officials say the new FTSE Global Climate Index Series is the first product it has created that combines a smart beta factor approach alongside climate change considerations. It is based on three types of climate-related analysis: carbon emissions, fossil fuel reserves, and green revenues data. FTSE Russell's green revenues data model is made up of 13,000 public companies and is designed to measure their revenue exposure as they "transition to the green economy."

Meanwhile, the FTSE ESG Index is designed to help investors align investment and ESG objectives into a broad benchmark. Company weights within each index are tilted using the index provider's ESG Ratings and the green revenue data model, and reflect the performance of eligible securities from the FTSE Developed, FTSE Emerging, FTSE All-Share and Russell 1000 Indexes.

"We are seeing a clear move towards integrating environmental, social and governance considerations into core benchmarks and passive investments as part of this trend," says Tony Campos, director of ESG product management at FTSE Russell, in a statement.

UnaVista and MTS Collaborate on SFTR Reporting Solution

Globally hosted reporting platform UnaVista and European electronic fixed income trading market MTS—both subsidiaries of London Stock Exchange Group—are teaming up to release a reporting solution for the Securities Financing Transactions Regulation (SFTR).

Market participants connected to the UnaVista Trade Repository, trading on the Global Collateral Management segment of MTS BondVision, will be able match initial trade data fields, creating a report in the UnaVista portal which can be enriched with further data.

"Our new Global Collateral Management segment offers customers an automated, regulated and orderly market for repo transactions. Linking up with UnaVista to offer our clients a reporting solution for their repo trading ahead of the introduction of SFTR was a natural fit," says Fabrizio Testa, CEO of MTS, in a statement.

SFTR implementing measures are expected to enter into force in the European Union by end of 2017.

IHS Markit Launches Systematic Internalizer Registry

IHS Markit, an analytics, information and solutions provider, is launching a cross-asset systematic internalizer (SI) registry to assist firms with their trade reporting responsibilities under the revised Markets in Financial Instruments Directive (Mifid II).

The utility was developed in consultation with the International Swaps and Derivatives Association (Isda), broker-dealers, Approved Publication Arrangements (APAs) and other industry groups.

According to IHS Markit, the SI registry covers all asset classes covered by the European Securities and Markets Authority



Brie Lam, IHS Markit

regulatory standards, including bonds, all classes of OTC derivatives, equities and equity-like instruments and structured products.

In order to comply with Mifid II's trade reporting requirements, market participants must know which counterparties involved are an SI, as that determines the reporting responsibility. However, regulators have stated they will not provide a centralized, official list of registered

SIs by January 3, 2018 when Mifid II comes into force.

"Dealers are likely to adopt a range of strategies in complying with the SI regime," says Brie Lam, director of regulatory and compliance Services at IHS Markit, in a statement. "Some will opt to register broadly across multiple asset classes, and others will register on a granular basis for only the products in which they have significant trade volume. Our registry provides on demand access to SI status, giving firms full pre- and post-trade transparency for whether they are subject to reporting rules on any given trade."

APFIC 2017: Cloud's Data Potential Increases

The cloud will not just free up data consumers and producers to explore new consumption and licensing models, but will demand that new approaches replace traditional licensing models of yesteryear, according to speakers on different panels at the recent Asia-Pacific Financial Information Conference in Hong Kong.

"Everything that we call 'traditional' is disappearing. The markets and trading strategies are changing first, and in five to 10 years, I imagine there will be no more per-user licenses—it will all be on a pick-and-choose basis," said Nimesh Bharadia, head of Asia for data, product and strategy at interdealer broker Tradition. "Delivery of data is key, and so also is the technology.... Today, you have to be an anytime, anyplace, plug-and-play solution. So we have started to look away from traditional delivery technologies towards open-source technologies and plug-ins that are a long way from traditional data tools.... It's very much a case of 'However you want it, we can deliver it'."

Many of the growth opportunities in Bats Global Markets' data business are coming from new consumer types and markets that necessitate new license types and delivery models, said Stephanie Chen, business



APFIC 2017: Creative Licensing panel

development director at Bats. "Market data and cloud, for exchanges, is a really exciting place. So we're definitely looking at a number of distribution lines using cloud and APIs—especially for new geographical markets where you don't need that super-low latency," she said.

Yet exchanges face a dilemma of wanting to expand access to their content, but also wanting to ensure that only those licensed to access the content can actually view it.

"Once data is out there, it's out there, and it's very difficult to control... and know exactly where it's going. Our struggle as an exchange... is that obviously we want to control who's seeing our data, but we also don't want to stop people using it," said Virginie Barbot, head of business develop-

ment for Asia data services at Deutsche Börse.

However, cloud may offer both the challenge and the solution to data distributors' concerns. On another panel, Stephane Dubois, CEO of web services data provider Xignite, said the cloud can offer greater transparency into usage and control over access. "You can authenticate every API request," he said.

In response, Aaron Lee, messaging architect at messaging appliance vendor Solace, who moderated the panel, noted that "Authenticating every API call or message has a big overhead," to which Dubois shot back, "That's why you use the cloud... We probably service about one million messages per second."

However, while offering potential for data vendors and exchanges, this overhead and the lack of data management functionality available in the cloud may make the cloud impractical—or at least, not yet economically viable—for serving the enterprise-wide data demands of large financial firms.

"There is a cost associated with change, and [incurring costs] is not something we like to do," said Jeremy Green, regional head of Asia Pacific market data at Credit Suisse.

TruValue Bows ESG Scores Data Service

TruValue Labs, which uses artificial intelligence to create environmental, social and governance (ESG) datasets, has released its Insight360 Data Service, which identifies companies based on ESG criteria that outperform widely used investment benchmarks.

The service is available as a datafeed for quantitative investors and as a desktop for fundamental research, and comprises three scores created using AI, Big Data, and the Sustainability Accounting Standards Board's materiality framework: Pulse Score, which charts ESG activity in real time; Insight Score, a longer-term measure of ESG performance for building portfolios and indexes; and the ESG Momentum Score, which quantifies a firm's positive or negative ESG momentum.

In a back-test study, a portfolio of companies selected from the S&P 500 universe with good ESG Insight Scores and positive ESG Momentum Scores outperformed the index over a five-year period.

Vela Introduces SI Data Hub



Hazem Dawani, Vela

Vela, a global financial technology provider, is launching a systematic internalizer (SI) data hub, an addition to its revised Markets in Financial Instruments Directive (Mifid II) solutions suite.

The SI Data Hub grants clients access to multiple SI liquidity price feeds via a single application programming interface (API) to address best execution and liquidity fragmentation requirements ahead of when Mifid II comes into force on January 3, 2018. The Hub is available as an in-house software solution or as an addition to existing platforms.

"As new SI venues are launched over the coming weeks and months, our clients can quickly and easily access these additional pools of potential liquidity," says Vela product chief Hazem Dawani, in a statement.

PitchBook Goes Public with Morningstar Data

Private company information data provider PitchBook has integrated public equity datasets and equity research reports from Chicago-based data and investment research provider Morningstar, which bought Pitchbook last year, into its platform. Pitchbook provides research and data on the private equity, venture capital, and M&A markets. Morningstar acquired the vendor for around \$180 million in October 2016.

The vendor has now integrated Morningstar's Public Company Fundamentals, Morningstar Equity Research Reports, and consensus estimates to support users who want to benchmark companies across industries. According to the vendor, the combination of Morningstar's public equity data with PitchBook's private market information gives users a more holistic view of a company, industry, or vertical.

Fabrice Forget, chief product officer at PitchBook, says that while it had some fundamental data on public companies in the

platform, this was limited to "high-level" financial information. "The partnership with Morningstar means we can beef up the granularity of the information to the levels customers were demanding," and provide more detailed public company financial information, Forget says. "For each company, we've gone from having a few hundred data points to having 900."

Some of the new data points cover net finance income/expense states (including net investment income and basic earnings per share), deeper revenue numbers (median, high, low, mean, and standard deviation), deeper cash flow per share data, and valuations summaries and forecasts data. The vendor has data points on more than 44,000 public companies.

Pitchbook has also added Morningstar Equity Research Reports, covering 1,500 public companies, along with consensus estimates for EPS, cash flow, and revenue for public companies, allowing users to compare estimated growth rates across similar

organizations or portfolios. Users can access data from financial statements to determine a company's fiscal health.

Forget says this integration is the first in a series of public equity data rollouts within the PitchBook Platform. "We identified this data as the most needed. This was a no-brainer. We were losing clients and were not able to sell effectively. These were the obvious three that we needed to add. We know that once clients see that we have this data, they will ask for more features. We will improve the platform that way," he adds.

While the vendor's main customers are currently investment banks, venture capital firms and private equity firms, PitchBook hopes that adding this information will broaden its appeal to buy-side firms. Going forward, the vendor will look to pull in real-time data from Morningstar, as well as more analyst reports and research notes. "If we add more buy-side research we can create a one-stop shop... for public data information," Forget says.

NEX Leans In On SFTR



Collin Coleman, NEX Regulatory Reporting

NEX Regulatory Reporting, which operates within NEX Optimization, is applying to become a trade repository for the Securities Financing Transactions Regulation (SFTR). NEX also announced plans to release a dedicated reporting solution, pending the European Securities and Markets Authority (Esma) release of final technical standards, which are currently under review by the European Commission.

NEX's SFTR trade repository will be built and hosted in the cloud and eventually, added to the vendor's Global Reporting Hub. NEX Regulatory Reporting will connect to the BrokerTec and ENSO platforms, allowing clients to automatically transfer transaction data to the new SFTR trade repository.

Collin Coleman, head of NEX Regulatory Reporting, says in a statement that while most markets are used to some regulatory reporting because it's required by active regulations, "securities lending has to date been an unregulated market and so the introduction of SFTR will impact many global and regional banks and the buy side."

The EC and Esma are expected to release SFTR technical standards within a few months. SFTR is expected come into force, in phases, through 2018 and into early 2019.

Börse Stuttgart Acquires Data Startup Sowa



Alexander Höptner, Börse Stuttgart

German exchange Börse Stuttgart has acquired Ulm, Germany-based data analytics and consulting services provider Sowa Labs for an undisclosed sum.

Though Börse Stuttgart is not disclosing terms of the deal, it says in a note announcing the acquisition that a "seven-digit figure changed hands in the transaction."

Sowa was set up in 2013 as a spin-off from European Union-backed research initiative to develop data extraction and decision-support infrastructures for financial markets. Sowa pre-filters Twitter data using between 20 and 40 financial markets-related criteria, driven by algorithms based on machine learning and human expertise. For example, the system can screen out non-financial information, such as job offers posted on Twitter by a bank.

The technology is used by exchanges, banks, insurance groups and market data providers.

Alexander Höptner, a member of Börse Stuttgart's management board, says the acquisition will boost the group's ability to innovate. "We are focusing fully on the retail investor," he adds.

ING Sharpens 'Katana' for AI Bond Boost

ING says its new artificial assistant will help traders price bonds faster, more accurately, and more consistently. Joanne Faulkner reports on how the bank will wield Katana to combat rising RFQ volumes in electronic bond markets. [Joanne Faulkner](#) reports.

Dutch banking group ING has unveiled Katana, an artificial intelligence tool that uses data from hundreds of thousands of trades to help traders on ING's emerging markets desk in London to price bonds faster and improve trading decisions.

Alongside visualization of relevant historical and real-time data, the web-based Katana application includes an AI-assisted pricing feature which suggests a price that would be profitable when a client wants to buy or sell a bond. A green bar shows the confidence of the algorithm's prediction. The trader can use this suggested price or offer their own instead.

After a six-month trial, ING officials say Katana enables faster pricing decisions for 90 percent of trades, delivers a 25 percent reduction in opportunity cost, and allows traders to offer clients the best price four times more frequently.

ING's global credit trading team in London developed Katana in collaboration with its wholesale banking advanced analytics team—a project that began three and a half years ago. The team currently comprises 35 people based in Europe—though ING intends to ultimately expand the team to 300 staff—including data engineers and data scientists, the majority of which come from a non-banking background, as well as former employees of Google and Nike. ING will gradually roll out Katana to all of its fixed income traders in 2018, and hopes to ultimately make the prices directly available to clients.

Santiago Braje, global head of credit trading at ING, says one of the drivers for developing Katana was the bond markets' move from voice bro-



Santiago Braje
ING

kerage to electronic trading, which has led to a shift in the way that bond traders engage with clients. "Traditionally, investors would call a bank to get a quote on a bond they would want to buy or sell, and that process would go through a salesperson. This is migrating from a voice model to RFQ [request for quote] protocol on electronic platforms." The introduction of Mifid II in January will usher in even greater use of electronic platforms, meaning more competition for ING.

"Investors tend to send RFQs more often on electronic platforms, and typically in smaller size. On the dealer side, that means we are receiving more RFQs and we need to price more often. When you send a request through a digital channel it's very easy to invite as many quotes as you want. From a dealer's perspective, we are in competition with multiple dealers—easily 10 other banks—every time that we quote. This becomes quite challenging. If you observe the dynamics of a fixed income market-making desk, you see that traders are constantly responding to requests from clients. The time to read research and the time to engage with clients and have a conversation has pretty much evaporated," Braje says.

However, this also presents an opportunity, as it means more data about the market is becoming available and made visible through digital channels, recorded in a machine-readable format, Braje says.

Katana displays a visualization of the trade outcome. Traders can click on each RFQ for information on the size, position and how many dealers there are. Traders can also view a graph that represents the impact each

request would have on their current position, and a recent history of requests with color-coded dots showing their performance. Green means they won the trade. White means they were the second-best price, and purple means they lost the trade. "This gives the trader in one snapshot the intuition of what has been happening in this bond in particular, and how our prices have performed against our competitors—when we've won, and when we've lost," Braje says.

ING feeds five years of historical trade data into its assisted pricing feature. "The algorithms have many examples of trades won and trades lost, so it can learn under which conditions you will win and under which conditions you lose," Braje says.

However, emerging markets is a challenging dataset, as it includes an enormous potential range of instruments across many countries. "Connecting those dots is not easy. The trick is how you use other market information—for example, what is happening in all the other bonds in the market—and how that can influence the bond that you are pricing. We do a bit of that. There are also a number of other data sources. Price history of the bonds that you're pricing is important, but also other important data reference points," he says, adding that the bank is trying to mimic the way traders think, and determine what information is relevant. "We try to make it all available for the AI and see if it has an impact. Sometimes you find some information is redundant—you don't get an incremental improvement from adding a data source. But we throw everything that we find and see what works." ■

DTCC Debuts 'Same-Day' LEIs

Issuer anticipates demand for one-day delivery of Legal Entity Identifiers after Mifid II comes into force.

Jamie Hyman reports.

For firms that need a Legal Entity Identifier (LEI) when the “No LEI, No Trade” rule enters into force with the revised Markets in Financial Instruments Directive (Mifid II) on January 3, 2018, the Depository Trust & Clearing Corp. (DTCC) will offer an expedited service to meet the demand. Tony Freeman, DTCC’s executive director of industry relations, says its normal turnaround time for issuing an LEI is between 48 and 72 hours, but the faster service will issue an LEI by 5pm GMT on the day a request is submitted, as long as it is filed by 10am. Expedited requests made after 10am will be fulfilled the next business day. The seven-hour turnaround costs a 50 percent premium over the regular cost.

While the DTCC does not expect the expedited service to be used on a “bulk, widespread basis,” it offers flexibility for firms needing a quick turnaround, he says. There are two key reasons why firms might need a same-day LEI: an incorrect assessment of Mifid II’s impact, and new investment opportunities.

Mifid II’s “No LEI, No Trade” mandate requires that all entities trading with European counterparties, across all asset classes, obtain LEIs. Although this requirement seems straightforward, it might prove tricky in practice, he says.

“It isn’t as simple as some imagine to work out whether [a firm is] impacted or not. It isn’t entirely geographical—you can be a branch of an EU firm in Hong Kong or Singapore and you’re just as much impacted as if you’re in Luxembourg or London, because you’re in scope as a branch rather than as a locally incorporated subsidiary. You may do back-to-back trades. You may be a broker in Hong Kong that books the trades with your London entity,



Tony Freeman
Depository Trust
& Clearing Corp.

and therefore you’re in scope,” Freeman says, adding that some firms are ignoring such complications and treating LEIs as a mere tick-box exercise.

“Mifid II is incredibly extraterritorial and it affects the whole value chain,” so the mandate goes beyond “No LEI, No Trade,” to cover trade processing and reporting, he says. “Even if you are able to trade, you cannot assume that you are able to process the trade downstream without an LEI. You cannot at third stage do the reporting of the trade without an LEI.”

Freeman says most of the European market understands the complex inclusion criteria. “Where confusion exists is in the Americas and Asia-Pacific, where there is a variable amount of understanding about the extraterritorial reach of Mifid II,” he says, noting that some Asian firms are trying actively to avoid obtaining LEIs. “There are a number of markets in Asia where the number of LEIs is very, very tiny indeed, and we’re expecting—it hasn’t materialized yet—a very large increase in demand from those local markets.”

When it comes to Mifid II readiness, there is a belief that large firms are more prepared than smaller ones, but he says any firm could find itself in need of an expedited LEI. “Circumstances change—if a fund that’s never invested in Europe before starts to invest here, it might need an LEI the same day. You might create a new fund very quickly. You might suddenly get authorization from a regulator to set up a new fund, so it needs an LEI quickly.”

Freeman says the DTCC has clients that have more than 1,000 LEIs registered because that is how many funds they have, and some have implemented a dedicated LEI program as part of their data management strategy. “I think the

smart ones are beginning to see the benefits of having a code, a number-plate system that is both internal and external, because many of our clients have multiple platforms. Data management is an issue because the identification mechanism for a client across all those different platforms can vary,” he says, adding that a single, universal identifier will reap operational benefits in the long term. “That’s what the bigger clients are telling us, but not all of them. Across the board, not just in data management areas, the correlation between size of firm and readiness is not there. Some of them are enduring the LEI process, but they should be embracing it—and they will get some benefits from it if they embrace it.”

Meanwhile, the DTCC is already seeing a surge in LEI requests ahead of the Mifid II deadline. Freeman says the DTCC received three times the normal number of requests in October, and he expects similar numbers for November and December, followed by an even bigger surge in 2018. He says it is coping by deploying increased manpower, and that being accredited by the Global Legal Entity Identifier Foundation (GLEIF) has given it an edge.

“We have a dedicated team of people and additional resources, so we can pipe them in quite quickly as we need to,” he says. Flexible support will be needed because while clients must now provide parentage information, “Some find it surprisingly difficult to provide the required information, and there are often entities that don’t have a parent company.... Building up the knowledge of how to access that information, where to get it from—that’s a skill set that we’ve acquired because we’ve been an LEI issuer since the beginning. We’ve built up a lot of expertise.” ■

APFIC 2017: Firms Use Trial and Error, AI to Identify Data Value for Analytics

Refining and cleaning data may be time-consuming, but is essential to helping financial institutions perform better analysis on data, panelists in Hong Kong said. [Wei-Shen Wong](#) reports.

Determining whether a dataset adds value as an input to analytical tools requires an inevitable “trial and error” process of refining data inputs and eliminating those that are not relevant or provide little value, said panelists at the Asia Pacific Financial Information Conference.

“The challenge is that you don’t know which data is going to provide the value until you get exposed to the data and have a chance to try it. And that’s a challenge because we need to work with vendors that can provide us with data that we can start to use and see if it’s going to make sense to us. And if it does make sense, we will want to use that and start production of it. But without testing it you don’t really know for sure,” said John Pies, customer insights and analytics director for Asia Pacific ex-Japan at Fidelity International.

The trick to generating productive and valuable analytics is “blending” existing data with other data sources to create better predictors, he added.

Firms also need to focus on cleaning the data, which would enable firms to utilize it for more analytics, said Jon Glennie, executive director of trading technology for Asia Pacific at JP Morgan Asset Management, which collects data from standard market data sources but also relies heavily on internal data. However, when the firm starting looking at optimizing its trading strategies, it discovered that “human bias” existed in its internal data.

“When we first looked at our data, we realized... there were traders that just had muscle memory that could be ‘I’m going to trade this stock, I’ll go with Goldman Sachs’ TWAP, that’ll give me

the best outcome.’ And so we have a lot of data supporting one particular broker and one particular execution style which tends to skew it,” he said.

As a result, JP Morgan is now trying to take the broker selection out of the trading decision-making process, and is employing artificial intelligence to identify and remove the unconscious bias within the dataset to understand how the firm can improve its trading.

Pies said Fidelity is always looking for a “silver bullet” for data, though neither he nor the firm’s data scientists have found it yet. “What a data scientist or data analyst does is create new ways of looking at data, they try to find things and put it together to create value. But there isn’t any one golden source to provide everything. The single data source isn’t there right now” he said.

The “single source of truth” has always been the target model for insurance companies, said Simon Lee, regional head for business analytics advisory and Big Data at AXA, adding that the use of data analytics by insurance companies is still at an early stage, but could deliver a lot of efficiencies that would help insurers better understand their customers, the type of products to market to them, and when to sell to them. Insurers are very traditional, tending to rely on legacy systems that may be up to 30 years old and are not capable of collecting a lot of information. “For example, in the current claims form, we are only able to capture 10 percent of the customers’ information due to the current system,” he said.

This presents a challenge for the firm’s Big Data infrastructure: to collect all the information in one place through

APIs and at the same time merge all the data into one source. “Some databases store one part of the data, and another database has the other part of the data. There is no single solid key to merge them together,” Lee added.

The ability to integrate and test data often depends on whether it is structured or unstructured, where unstructured data is mostly text-based and collected from other sources that are outside the control of the organization.

“Even within our own firm, there’s a lot of data that is unused right now. It’s called dark data. Structured data is probably 10 percent and unstructured data is probably 90 percent. There are a lot of reports that we write and insights we create and send out to our distribution network, but that data has a lot of value in it that we create ourselves. But it’s still Big Data. It’s data that has information in it that is in textual format, or graphics which can also be used to create value,” he said.

External data includes information from news-related items that affect sentiment and set directions for investment activities. Capturing and understanding those news items requires a lot of work—especially when applying unstructured text analytics across different languages, Pies said.

“We’re talking about across Asia, so it’s multiple languages. It’s already difficult enough to get English into a NLP (natural language processing)-type process to understand what it’s telling us, but then if you look at multiple languages you can have multiple complexities there, and it adds difficulty to understanding what the signals are telling us,” he said. ■

Panel: Buy Side Needs FX Consolidated Tape

Speakers at a conference organized by *Inside Market Data* stablemate *FX Week* believe a consolidated tape of FX data is needed to support increasingly data-intensive analytics. *FX Week* editor [Eva Szalay](#) reports on the arguments behind calls for an independent data source.

The largest buy-side market participants should lead the way in creating a central, consolidated tape of foreign exchange market activity, though practical difficulties such as information leakage and having the resources to complete such a project may limit the appetite for such a project, panelists said at the 2017 *FX Week Europe* conference.

Fragmentation is a defining feature of currency markets, along with the lack of a consolidated price. Several private-sector initiatives have aimed to resolve this issue, though these efforts have mainly targeted liquidity providers and the sell side.

“The problem with existing tape initiatives is the lack of co-operation from the buy side,” said Patrick Fleur, head of trading and execution at Dutch asset manager PGGM. “I’ve been advocating for this for the last couple of years already, but I think the buy side has been too reliant on their banks for a number of years now and expected them to provide them with everything they want.”

The availability of market data has become a key requirement as market participants extend their use of analytical tools to evaluate counterparty behaviour and execution outcomes. But while FX trading platforms publish and sell market data from their venues, the challenge of creating an overall view of the market remains.

The cost of market data feeds is also an issue. For example, PGGM’s overall spend on FX market data is higher than its estimated trading costs, Fleur noted.

“We have been collecting our data for approximately nine years and we still don’t have enough to form a meaningful picture about our true cost of execution,” he said, adding that about

15 people at PGGM look at execution decisions and related analytics.

Questioning Internalization

Panelists highlighted that delving deep into counterparty behaviour has been a dominant theme this year, with liquidity takers being forced to display greater accountability for trading decisions, and broadening the set of metrics they use to evaluate liquidity providers.

A year ago, market participants primarily focused their attention on fill rates and response times, but over 2017 shifted their attention to the impact of “last look” and metrics such as market impact, said Jeremy Smart, global head of distribution at XTX Markets, who stressed the importance of selecting the right tools and metrics, but also ensuring the information provided is independent.

“I understand people are slightly skeptical of analytics that are provided by the liquidity provider. I think that’s justified. The value chain of FX is breaking down and the same thing is true of analytics. It should probably be done independently, because I have never seen a bank transaction cost analysis report that shows they’ve done a bad job in execution,” Smart said.

The availability of analytical tools has multiplied over the last 12 months, with platforms, liquidity providers and third-party providers offering various services.

Tim Cartledge, global head of FX and head of product at Nex Markets, said the broker will launch a new analytical tool by year-end, which aims to uncover the impact of last look and the cost of rejects as a result.

But internalization—where a market-maker matches an order internally with an offsetting order from another

client—attracted criticism from the panel, as lack of clarity remains around what happens to the order.

Cartledge noted that with an internalizing liquidity provider, the relationship is paramount. But panelists said that unless liquidity providers show clearly that they are working in an internalized environment, liquidity takers would be cautioned against participating.

“If your counterparty is hedging risk with a high-frequency trader then your signalling to the market will be just as strong, if not stronger than if you’d gone to the external market in the first place. The liquidity provider can then claim this trade is internalized, but it is not,” Smart said.

Liquidity providers are becoming more open about their internalization methods, Fleur noted, with roughly half of those used by PGGM now providing millisecond-frequency trading data.

David Mercer, however, whose hard-line stance on issues such as last look, internalization and market data clashed with the rest of the panel, dismissed this as not being a real step forward, noting that the world now moves in microseconds. But Fleur countered that an evolving environment such as this must move in iterative steps towards the ultimate goal.

Cartledge, meanwhile, encouraged attendees to continue digging deeper into counterparty behaviour and execution quality. “I would say buy-side market participants should focus on really going into the weeds of their execution quality, evaluating the performances of different liquidity providers and venues in 2018. It’s about taking ownership of execution,” he said. ■

For Money.Net, Scout Buy Marks First Steps Down ‘Acquisition Trail’

The vendor, known for its low-cost terminal and build-versus-buy approach, is eyeing potential acquisitions to fuel the next stage of its growth, CEO Morgan Downey tells [Max Bowie](#).

New York-based low-cost data terminal provider Money.Net is planning more acquisitions for 2018, after completing its first earlier this year—the purchase of the technology assets of mobile data and analytics provider Scout Finance for an undisclosed sum, to replace and build on its own mobile data offering.

Money.Net closed its acquisition of Scout Finance’s technology in October, and will make its mobile apps available to Money.Net clients as part of their \$150 per month terminal subscriptions, integrated with the terminal product, replacing its existing proprietary mobile app.

Scout, founded in 2014, released its first app for company fundamental and financial data in 2015 aimed at wealth managers, advisers and retail investors (IMD, Dec. 8, 2015).

“The reason we did this deal is to use [Scout] as the base for our own mobile build-out,” says Money.Net CEO Morgan Downey, citing Scout’s user interface and design as the key feature that made it appealing. “We would come across Scout at financial advisers, banks and hedge funds... and I use it myself, too. It’s a really well designed suite of mobile apps, with top-notch development teams.”

These factors—existing market penetration and well-developed tools—will influence the vendor’s decisions as to whether to build or buy features in the future. “We decided that if there’s a company with a great tool that is loved by its customers, we’ll buy that company,” Downey says. “We’re on the acquisition trail... and we’re looking for companies to acquire



Morgan Downey
Money.Net

that have great features. If we can’t build something better ourselves, we’ll buy it and integrate it.”

He says phase one of Money.Net’s relaunch—which began when former Bloomberg commodities head Downey took the reins in 2014—was to build out its platform in-house. And while that outlook will continue as the vendor now moves into the second phase of growth, it will also be more active about looking for opportunities to make more acquisitions where that makes sense, as well as integrating more third-party offerings, such as its integration with bank consortium-backed messaging initiative Symphony Communication Services. “Open ecosystems always work better. Trying to build everything yourself never works as well,” he says.

This is a philosophy that the vendor has carried over into the development of its terminal’s new front-end display, built entirely using HTML5, meaning that it now requires no download or installation, and allowing the vendor to more easily add features and integrate third-party services via a single sign-in, enabling it to deliver a “platform experience” that combines best-of-breed data, charts, news and research seamlessly, such as the messaging functions offered by Symphony, as well as third-party vendors that make their content or tools available via Symphony. Full integration with Symphony as well as access to live streaming financial TV news channels are two new features made possible via the HTML5 rollout.

“If Symphony has built a great chat app, or if someone else has built a social media tracker app, we can inte-

grate those... [but] people want that single sign-in experience. It’s critical to what we’re trying to do, and what customers want,” Downey says.

Done Deal

Now that its first deal is complete, the vendor will roll out more features and content onto the Scout Finance app over the coming weeks and months as a result of the integration with Money.Net, allowing the vendor to make its terminal content available on the app—specifically, cross-asset data to broaden its appeal to equity traders and analysts, and currency and commodity traders, as well as corporate treasury professionals and others.

“The Scout Finance app is very equities-focused at the moment. We’ll make it cross-asset with commodities, foreign exchange, and fixed income data, and more news—all content that we already have in the terminal,” Downey says.

Looking to the future, Downey says the vendor is already in discussions about some specific acquisition opportunities. “There are some companies and features—where their products have matured and have customer adoption—that we are actively talking about acquiring. Over the next year, our big focus is on acquiring features that are used by clients in the market, such as chat, charting, calculators and news,” he says, adding that any further purchases will be funded out of Money.Net’s existing cashflow. “We have the capital in-house to fund more deals,” he adds. ■

API Tech Could Cure Systematic Internalizer Headaches

As the industry navigates new responsibilities surrounding systematic internalizer rules under Mifid II, QuantHouse argues that APIs hold the key to compliance with minimal maintenance. [Jamie Hyman](#) reports.

In an effort to advance application programming interface (API) technology among the financial industry, French low-latency data vendor QuantHouse is focusing on how APIs can solve a key problem facing European firms: how to best comply with systematic internalizer (SI) rules that will go into effect when the revised Markets in Financial Instruments Directive (Mifid II) comes into force on January 3, 2018.

During November and December, QuantHouse made two announcements regarding its API strategy for SI compliance under Mifid II. First, the vendor made its QuantFeed datafeed and QuantLink infrastructure available via Virtu Financial's disclosed SI platform, allowing QuantHouse clients access to the electronic market maker's liquidity. Virtu Financial Ireland Limited plans to register as a SI in 2018.

Secondly, QuantHouse's QH API Ecosystem, powered by QuantFeed and QuantLink, will provide access to Sun Trading's SI platform, allowing QuantHouse clients access to Sun Trading's market data and order entry feeds, plus the SI's liquidity. Sun Trading provides bespoke equity streams and previously, only large tier-one brokers could connect directly to this liquidity.

There are a number of issues surrounding Mifid II's SI regime. Perhaps the most onerous is a lack of an official, regulator-authenticated SI registry. Identifying who is or is not an SI is essential for compliance, because it determines which counterparty has the obligation to carry out post-trade reporting.



Stephane Leroy
QuantHouse

Stephane Leroy, QuantHouse co-founder and chief revenue officer, says identifying SIs isn't the only root cause of SI headaches—there's also the matter of connecting to multiple SIs. As the Mifid II deadline approaches and the ranks of registered SIs swell, a bank may find that its trading desks want access to the new SIs, but its IT department doesn't have time to code to yet another API in order to capture data from the SI into the bank's trading systems.

"When you provide our type of service through just one API, the client just has to integrate this one API into his trading platform—and that's it—to receive the specific service they'd like to get," Leroy says. He compares the concept to an iPhone app that, once placed in Apple's app store, is immediately visible to all iPhone users. "One API has the possibility to hook up to all those SI venues, to be able to either benefit from those business advantages—or, if you work for the sell side, to allow your clients to have access to those pools of liquidity."

He says the complexity stems from each SI using different technologies and data formats, which clients not using APIs would have to integrate individually. So if there are 30 different SIs, they are likely using 30 different data formats, meaning the client essentially has to learn 30 different languages.

"APIs are a way for clients to really simplify access to structured data across the globe, because QuantHouse does the normalization, and they know the QuantHouse language, so [clients] don't have to worry, because

we always will present the data in the same structure," Leroy says. "The Mifid II format is a succession of fields. Whatever exchange clients want to connect to, it will always be presented like this. It's easier for clients of QuantHouse, with this API thing, to be able to comply with those Mifid II rules and opportunities, because they don't have to worry about anything from a technical standpoint."

QuantHouse's next API initiative is to build APIs that allow clients to manage unstructured data, such as weather reports, satellite images, and social media signals, Leroy says. "It's very difficult for a machine to understand this type of source, and those signals can be a very interesting source of trading signals for clients. Weather, for example—if there's the possibility to digitize readings of fields with crops, you can try to trade corn futures on the commodities market, but you need to have API-based technology to transform those types of human data into something that could be understood by a machine."

In the meantime, he says QuantHouse is "curious" about how regulations will alter the structure of the market.

"The buy side talks to the sell side, the sell side talks to exchanges; it goes up and down when it comes to data flow," Leroy says. "Maybe next year the world will become flat, where you will have at the same level exchanges, SIs, the sell side, market makers, the buy side. It's going to be a huge transformation for the industry." ■



SHINING A LIGHT ON 'DARK' DATA

Financial firms are drowning in data, yet for many, information that delivers genuine value remains a scarce resource. [Joanne Faulkner](#) investigates whether new approaches to managing internal data could yield new insights, or whether new data privacy rules will impede firms' progress.

Data is more available—and being created at a faster rate—than ever before, with experts saying that 80 percent (or 90 percent, depending on the expert) of the world's data has been created in the last two years. This has created a wealth of datasets that fall outside the realm of traditional market data for financial firms seeking new insights. But while some of these datasets have previously proved too onerous to extract value from, refreshing hitherto-outdated approaches to the processing and

storage of internal data could enable firms to harness information from which it was previously not possible—or not economically viable—to derive any usable value.

Data is currently the most undervalued commodity in capital markets, with many firms “giving it away,” so to take advantage of the increasing amounts of data being produced, banks need to take a more “entrepreneurial” approach, said Joanne Hannaford, head of technology for EMEA at Goldman Sachs, at Waters' Innovation Summit in



“One caveat is around the quality of the data and the representatives of the data. If consumers become a little more savvy around data, there’s a danger that they will start to opt out of specific processing, thus rendering the data that’s available not representative of the entire customer base.” **Mark Perrett, Teradata**

November, adding that one of the biggest issues that the bank is trying to address is not handling data volumes, but how much data it throws away.

“[Data] is the most valuable thing companies have. If you really value something, you understand who owns it and you understand how good it is. So for firms to take advantage of the data and assets they hold internally, they need to reinvent their data strategies and examine their data flows,” she said.

With most institutions broken down into divisions and teams, they need to look at how easy is it for those divisions to be able to ask very broad questions about data. “Historically, what we’ve done with data is put it into databases, and these spaces required you to define your data upfront,” Hannaford said. “We had to understand how to deal with that data before we even got to the point of finding it.”

For example, more than 600,000 students apply to work for Goldman Sachs in EMEA each year, she said. While in the past this information was largely discarded, Goldman Sachs now processes and archives

the data of consenting applicants. “Those students grow up. Either they come to Goldman Sachs or they go and work in other firms. We relate the data from those resumes into what could become future clients or employees, or just intelligence in the marketplace about people. This is an example of how the connectivity and the minimization of historic silos within an organization need to be eroded to think about data in a much more entrepreneurial way,” she said.

To achieve this, Goldman Sachs looked to companies that have a history of overcoming the challenges of handling large volumes of data for inspiration.

“If you think about Google or Amazon, they have created database technologies which make us completely rethink how we store data. They have built database technologies that allow you to quickly assemble data; it’s more like a directory structure, where you can copy a file from one directory to another,” which makes it easier to ingest data into a database, Hannaford said. “Think about how Amazon reinvented itself—it took

its engineering department and turned it from an expense into a revenue [stream], by adapting the technology it was developing for itself and applying it [to address its data challenges].”

The ‘Dark’ Side

Even with internal data, it’s not easy to determine whether a dataset will add value, and there still needs to be a process of refining and eliminating those that are not relevant or provide little value. At November’s Asia Pacific Financial Information Conference, John Pies, customer insights and analytics director for Asia Pacific excluding Japan at Fidelity International, noted that as well as Big Data sources that can be taken advantage of, there is also unused data—which he dubbed “dark data”—that could be harnessed to create value. At Fidelity International, 10 percent of this is structured data—transaction data that is controlled internally, and where Fidelity creates the database—while the remaining 90 percent is unstructured data: mostly text-based data collected from other sources usually not within the firm’s control.

“There are a lot of reports that we write and insights we create and send out to our distribution network. That data has a lot of value in it that we create ourselves. But it’s still Big Data. It is data that has information in it that is in textual format, or graphics that can also be used to create value,” he said. But there is no single clear-cut way to derive value from this data, he added, and while firms may be employing more data scientists and data analysts, what these data professionals are essentially doing is creating new ways of looking at data. “They try to find things and put it together to create value. But there isn’t any one golden source to provide everything.”



One firm taking advantage of “by-product” data is State Street. Chirag Patel, head of innovation and advisory solutions for EMEA at State Street Global Exchange (SSGX) and State Street Associates EMEA, defines this as data that is the by-product of other technology processes or activities undertaken as part of client service, which may have no value on its own but which becomes valuable when aggregated for other uses. For example, product developers at State Street used data from SSGX’s private equity clients to create an index that PE firms can use as a benchmark, and which asset

managers can use to create an investable index for their clients, creating a liquid alternatives product.

The biggest contributors driving firms to take a closer look at the data they hold internally are digitalization and the maturing of computational powers and computational methods, Patel says. “Digitalization means a lot of these datasets now reside in relatively accessible formats, and are stored in a relatively accessible fashion, particularly transactional information.”

While computation improvements means conducting meaningful analysis on that data is relatively easy,

pulling that data together in the first place from different architectures and data warehouse solutions across an organization can be a struggle, Patel says—but one that can now be overcome with the application of new technologies.

“It’s in disparate systems or in different formats, perhaps not even digitalized.... That was the first driver of the move to standardization across systems, as well as the presence of larger volumes of electronic data,” he says. “We now have modern computational paradigms being applied. AI is probably too strong a word to use, but

it still falls within that bucket. We can use things like machine learning and natural language processing to help us access and analyze that data a lot quicker. Pulling it together can be an investment of time and effort, rather than something that is an insurmountable problem. It's an easier effort now to start drawing some interesting insights on these datasets."

However, challenges still remain—the largest of which is making sure State Street has the right controls and processes in place, Patel says. Content is normally the first challenge.

"Often the data itself resides in individual client accounts, so there is an aggregation process—while preserving anonymity of individual transactions—that is necessary. It's a trade-off between the information value while preserving anonymity of transaction information. This is one of the more obvious challenges that must be dealt with right at the outset," he says.

With internal data, the key consideration is ensuring that State Street has appropriate controls in place governing how and where data is used, and—to preserve client confidentiality—if it relates to client information. "We have to be careful... it's a very large part of our due-diligence process when we think about Can we use this data? How can we transform the data to anonymize it? Within a large organization, some regulatory separation is necessary. How do we ensure that those are being held to a robust standard?" Patel adds.

GDPR: Big Data's Big Problem

But those firms that do treat data in a more entrepreneurial way may yet face another hurdle in the form of the upcoming General Data Protection Rule (GDPR) regulation, which takes effect in May 2018. For some, GDPR has slipped



Chirag Patel
State Street
Global Exchange

under the radar, overshadowed by the second iteration of the Markets in Financial Instruments Directive (Mifid II), which becomes law in January. While the industry seems to be entering a new phase of embracing Big Data analytics on a large scale, GDPR—which introduces new rules around data "portability," the "right to be forgotten," and data governance demands—could throw a spanner in the works.

"With GDPR, it's going to be interesting to see if banks can continue to exploit large volumes of data in the way that they have been doing," says Mark Perrett, head of financial services consulting at Teradata. Under, GDPR consumers have the right to "obtain from the controller the erasure of personal data concerning him or her without undue delay and the controller shall have the obligation to erase personal data without undue delay." That information cannot be kept and utilized for product discovery, marketing purposes or anything else that that data is commonly used for at the moment.

Industry observers say firms should be wary of the potential impact on the usefulness of some analytics. "One caveat is around the quality of the data and the representatives of the data. If consumers become a little more savvy around data, there's a danger that they will start to opt out of specific processing, thus rendering the data that's available not representative of the entire customer base," Perrett says.

However, Hannaford said GDPR won't significantly impact how Goldman Sachs manages its data. "GDPR means that as a company you have to be able to answer questions around what data is stored on an individual that identifies that individual. For us, it could be an employee or a client. We have to be able to justify where that data is and for what purpose we hold it."

Goldman Sachs' biggest challenge relating to GDPR is not the issue of whether clients can be identified, but rather deciding what information to store, she added.

At a recent industry event, panelists also expressed caution over the future of data analytics, urging attendees to install data governance practices throughout their organizations first, and warning of the impact new data sources could have on data governance.

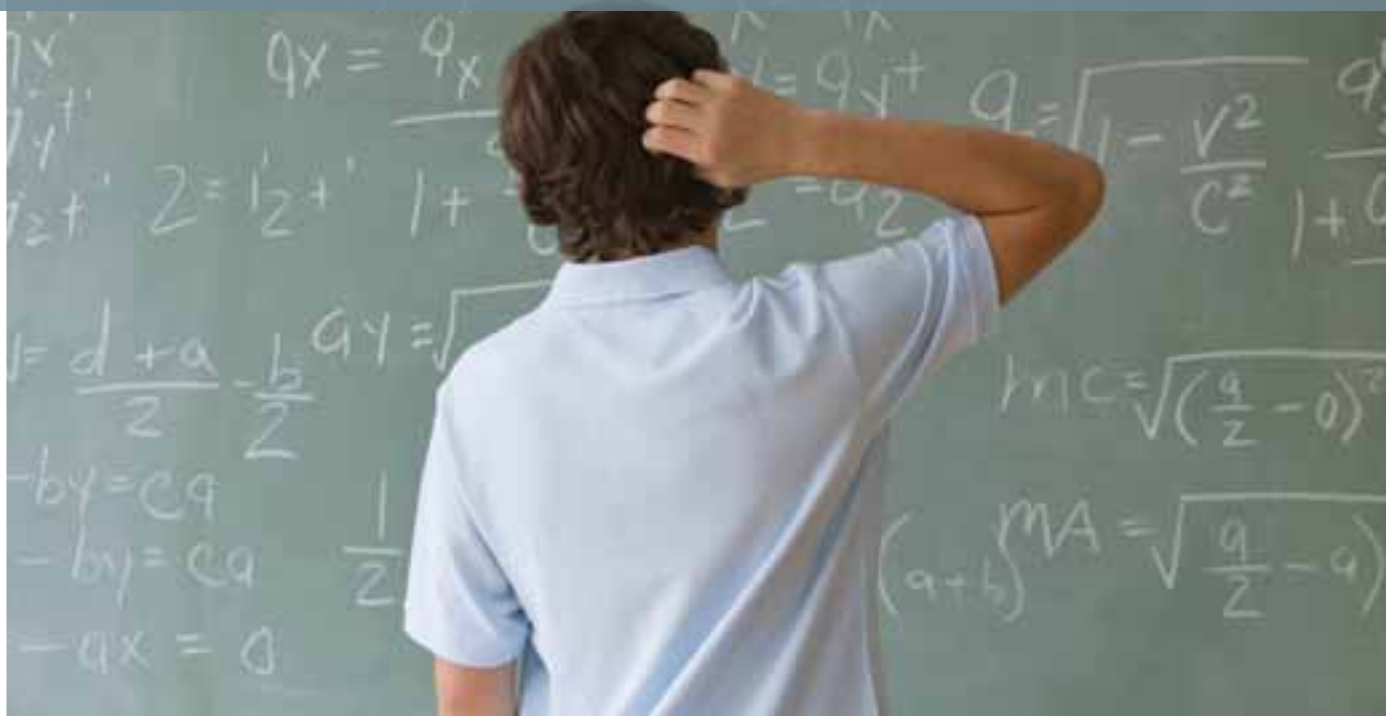
Andy Joss, head of solutions and data governance at Informatica, said that firms are anxious to put data to work, and are keen to try out new processes, perhaps without considering the full impact on the business. "There are a lot of organizations doing AI and machine learning thinking it's the panacea to all things. My concern comes in terms of what is it learning, what are we teaching it, and are we giving it the right information to start with? If we're giving it the wrong information in the first place, how do we know we are getting the right output?" Joss said.

Elaine Priest, chief data officer for data and analytics at the Royal Bank of Scotland, agreed that professionals within financial firms must be aware of the full information lifecycle, adding that it is crucial to have a system in place for managing how data can be used once it is identified, tagged and described.

"We have to be very clear on the use of data. It's really important for people to understand that data isn't one dimensional, and it has the opportunity to change through the cycle, and therefore context is a very important," Priest said. "There are a number of different factors when it comes to understanding data and its journey... [and] as we move into the GDPR regulation, which is about the rights of the individual, we need to understand how data is consumed." ■

The KIDs Are Alright

(But the Priips Still Have Issues)



After a year's delay, the Europe's Packaged Retail and Insurance-based Investment Products (Priips) becomes law on January 1, 2018. In-scope market participants racing to meet the regulation's significant data and reporting challenges all face the same hurdle: how to calculate implicit costs. [Jamie Hyman](#) investigates how a single data field can cause so much trouble, what calculation options exist, and the ramifications if asset managers and insurers don't get it right.

Time's up: 2018 is the year regulations become reality. While the revised Markets in Financial Instruments Directive (Mifid II) and General Data Protection Regulation (GDPR) are justifiably grabbing most of the headlines, the European Union's Packaged Retail and Insurance-based Investment Products (Priips) regulation—though smaller in scope—is a massive and complex compliance undertaking for those affected, covering retail and insurance-based investment products, and coming into force January 1, 2018, just two days before Mifid II.

Compliance managers have the green light to combine deliveries for both regulations, but even with those overlaps, Priips presents its own data and reporting challenges.

Initially, the Priips directive was due for implementation in January 2017, but the deadline was delayed a year in the hopes that further legal clarity would lead to smoother implementation. In March 2017, the European Commission published a revised draft of the Regulatory Technical Standards (RTS), and the European Supervisory Authorities (ESAs) have published three Q&As—the most recent at the end



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of November. Still, there remains a lack of clarity around certain aspects of implementation. One area proving especially problematic is how to calculate implicit costs.

Multiple Methodologies

Starting in 2018, each Priip must be accompanied by a Key Information Document (KID), an investment sheet that provides customers with standardized information about each investment product, fund and investment-linked insurance policy—such as description, risks and cost—with the aim of enabling retail customers to easily compare the potential risks and rewards.

According to the Association of British Insurers, the European Priips template (EPT)—which is endorsed by Insurance Europe and the European Fund and Asset Manager Association (EFAMA) as the industry standard—provides the minimum set of data necessary to help insurers in their obligation to provide the Priips KID to retail investors. (EFAMA and Insurance Europe also endorse the “Comfort” EPT, which does not make any content changes but provides two possible methods for the Value at Risk Equivalent Volatility calculation for regular premium.)

Matthew Luff, a Mifid II consultant at Henderson Global Investors, says the KIDS have been around for a few years, and have been “relatively successful” in standardizing each fund, but notes that Priips adds “a real drilldown into the costs.” Specifically, the EPT has a field for implicit costs, which are “all costs incurred in order to acquire and dispose of investments,” he adds.

Luff says he thinks the regulation’s intention is to assess the risks involved in different types of trades, then assign a numerical value for comparison purposes, but adds that it’s “hard to say” whether that purpose actually comes through in the implicit cost numbers.

“It’s just very difficult to take that number and reproduce it consistently across all funds and across different market participants,” he says, adding that there’s a lack of education about what the implicit cost numbers actually mean, and what constitutes a good number.

“The way it gets measured is basically the price of the asset at the time it goes to the dealing desk compared to when you actually execute the asset,” Luff explains, but adds that under certain market

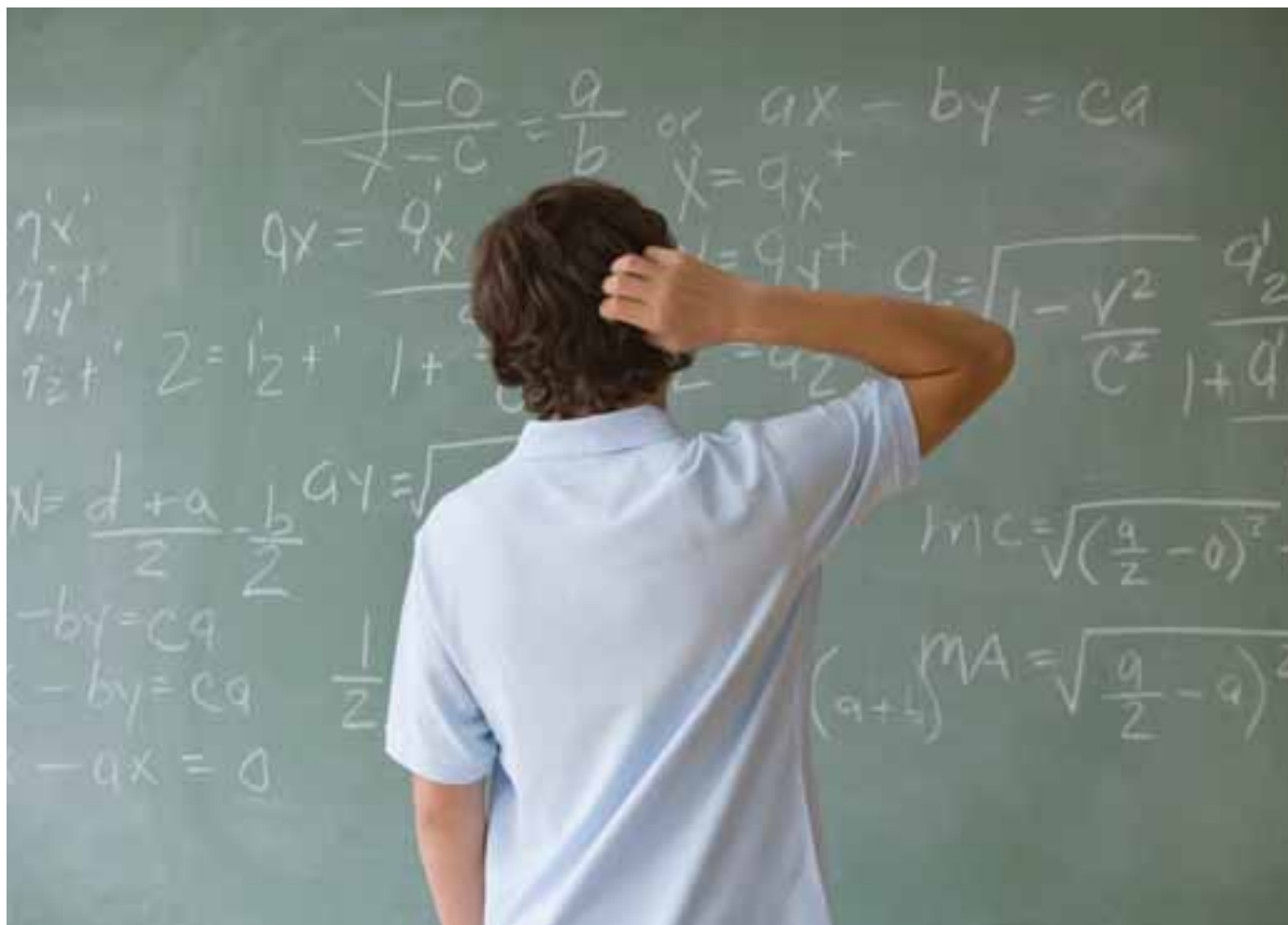
conditions, “You’re always going to get a positive carry, so it always will look like you’re getting a really good price on execution. But you might be buying an asset that’s about to halve in a day. So is that good for your performance as a whole? I would say probably not.”

Arved Kolle, conduct regulation policy adviser at the Association of British Insurers, says there are generally two ways of calculating those implicit costs under Priips: arrival price—which Kolle calls the “full methodology of Priips”—or estimations, which are easier because the arrival price methodology requires firms to extract three years of trading data (including timestamps) and calculate a reasonable transaction cost figure. He says another option is to rely on Undertakings for Collective Investment in Transferable Securities (Ucits) Key Investor Information Documents (KIID) data, even though Ucits funds are out of scope for Priips until the end of 2019.

According to Priips Article 14 (2), an asset manager can use current KIIDS to provide specific information about a product, its risks and potential return, and costs. “While [the ability to use Ucits] is obviously good, because the Ucits KIID is already out there, there are also some challenges in how then to mix data from the Ucits KIID with methodologies based on Priips,” Kolle says, adding that the issue is mainly at the product level, as opposed to the KID for underlying fund. The Ucits KIID focuses on on-going charges as the primary figure for comparison, whereas the Priips KID focuses on a reduction-in-yield figure that embodies all one-off, recurring, incidental costs—both direct and indirect—in a single figure presented as a reduction-in-yield over various periods before, during and after the recommended holding period. Additionally, the Ucits



Arved Kolle
Association of
British Insurers



KIID does not include credit risk in the risk/reward indicators within the Synthetic Risk and Reward Indicator calculation, and does not include Priips-required transaction costs.

In the UK, most funds will require the full methodology approach, and generally have sufficient longevity that the three years of historical data should exist, Kolle says. “The other issue... is that through the new RTS, it’s not much easier to use Ucits cost data. Manufacturers will have to make a decision whether they then want to have the full methodology of Priips, the estimations methodology, or combine Ucits and Priips methodologies,” he says.

Ashan Ramakrishnon, head of investment risk at BNY Mellon Investment Management EMEA, revealed at a recent conference that his organization would take an evolving approach to calculating implicit costs for Priips compliance. “At the moment, it’s being done on an estimated basis, but we’ll look to tie that down as we have better data going forward,” he said.

Henderson’s Luff says the issue is far more complicated than it needs to be and could be solved by a new funds model approach.

“There were so many different methodologies.... I think the best one would have been to say, ‘What is the benchmark for the fund, what is

the average bid-offer spread on that benchmark,’ and then multiply it by turnover,” Luff says. “It’s quick, it’s easy for people to understand, and it can be applied equally by all fund managers. I think that’s one of the most important things. The idea with Priips and KIDS is that they can standardize this information across a number of funds, but if you’re going to have people calculating one way, and other people calculating another way—and frankly, it’s very hard to find out exactly how they have done it—then you’re not comparing apples with apples, and somebody is going to get an unfair competitive advantage because they’ve [calculated costs] in a certain way. To me, that just doesn’t seem right.”

Luff and Ramakrishnon both disagree with Kolle's belief that most UK funds would have the required three-year cost history at the ready. Speaking at the aforementioned conference, Ramakrishnon said that when BNY reached out to fund managers to get analysis, it found that "They just don't have that data. It's something which, going forward, is very easy to do, but looking on a historical basis—and [regulators] want to actually have that kind of data available—it's not always easy to have."

Luff agrees that firms can put in place something going forward to collect the historical data, but adds that for firms that do not currently have the three-year history, scrambling to comply without the data could actually create new problems.

"For all the historical stuff, most people don't have that information. If they do, it's incomplete. Then they're going to use different methodologies on top of the one that they've got. They're going out to providers to get extra data. It costs a huge amount of money for some of these companies," he says.

Nonsense Numbers

Improperly or inconsistently calculated implicit costs can also lead to erroneous data or, in some cases, "dangerous" practices, where firms engage in a sort of compliance arbitrage. Luff says regulator ambiguity around how to calculate implicit costs opens the door to targeted calculations. "In effect, [firms] kind of already know the number that they want to get, and I think you're going to see an awful lot of reversion to the mean—let's just put it politely—whereby they'll kind of make sure that the numbers look like the numbers that they want. And I don't see that that is helpful to the industry, but then you get one, two, three companies doing that, and then you get other companies



Ronan Brennan
MoneyMate
Group

that are trying to do it correctly, and they're big outliers. That's going to look unfavorable," he says.

Luff argues that under the current RTS, it is possible for a fund with the exact same fees as another fund to publish an implicit cost that is half as much, leading customers to believe that it is a better product, even though there is no indication whether the differing cost numbers would affect performance at all.

"It clearly is a drag, but you've still got the same actual performance as all the other funds. I think you'll see people trying to group them, and then kind of post-justify how they did the results, which I think becomes dangerous," he says.

Ronan Brennan, CTO of MoneyMate Group, says that among buy-side firms, "there is definitely a feeling that the [implicit cost] figure that's been calculated is nonsensical," and based on the algorithms specified by European Insurance and Occupational Pensions Authority and European Securities and Markets Authority, "there is the potential for quite strange data to come out." Specifically, because the calculation includes market impact, "the market could move in a positive way in the period from where the transaction entered the system to where it was executed, and in fact, the calculation of the cost in that scenario could end up generating what we would call a positive cost—as in, it would appear that the fund, just by trading, was generating a return. And that's nonsensical, because that's not how the world works," Brennan says.

That opens up the possibility that funds benefiting from this market timing could appear to be very low-cost, or to have no cost at all, when of course, every trade has a cost. If the principle of Priips is to be fair, clear, and not misleading, Brennan questions whether the possibility for positive costs violates the spirit of the regulation.

"Are we being misleading, are we being fair, are we being clear if the calculation of costs potentially is presenting this erroneous view of the world to an investor, that there is very little to no cost included in this product?" he says, adding that some asset managers are opting not to include the positive costs, even if it means they don't implement the Priips RTS exactly as stated. "Instead, they're going to use the overriding principle as a guidance to what they should do."

Many market participants had hoped the third Q&A, released by ESA at the end of November, would clarify implicit cost calculation, Brennan says, but it did not.

Kolle says the positive cost conundrum is a result of asset managers employing the estimations approach to calculate implicit costs, and these "unusual" figures are an area that could benefit from further testing, but that is difficult with the deadline so close.

Additionally, asset managers rushing to meet the deadline also could create problems. "If an asset manager just went with the estimations approach, and that maybe gives some weird figures, then suddenly costs are blown out of proportion and are very unrealistic," Kolle says. "And of course, it's not just the costs, but costs will also change the future performance scenarios, so that could be an issue."

Luff says the lack of clarity may have a negative impact on regulators' own enforcement of Priips. "I've always been of the opinion that if [standards are written] as simply as possible, people will do it," and when regulators get buy-in from the industry and everyone meets standards using the same methods, regulators are empowered to identify and "go after" market participants who do not comply, he says. "Whereas doing it this way is so haphazard, you really can't have that level of oversight." ■



THE DARK ART OF Pre-Trade Analytics

Financial firms commonly review trading activity after the fact to improve their execution strategies. But what they'd really love to do is perform that in real time, pre-trade. [Max Bowie](#) looks at how far along market participants are in pursuit of this goal, and the significant challenges to achieving it.

Every trader—or trading algorithm developer—wants to know how what impact their proposed trade will have on the market: will it produce a massive rise or fall in that instrument's price, or even move the market as a whole? Will it produce a flurry of activity from competitors in reaction? Or will it skim unnoticed below the radar, allowing them to place more of the same kind of trade?

While there are a plethora of tools claiming to perform pre-trade analysis of trades, many simply factor the proposed trade into firms' preset risk parameters that determine how much of an asset a firm is comfortable

holding. Actually delivering a pre-trade, real-time analysis tool—either for predicting market impact or measuring transaction cost analysis (TCA)—that provides an indicator as accurate as a trader's "gut feel" is harder and more resource-intensive than one might first think.

"Anyone who claims to have super-accurate pre-trade TCA on a per-order basis is lying to you. Unless it's one extreme or another—i.e. a massive buy or sell order that will almost certainly drive the price up or down—it's very hard to predict because you can't tell who else is in the market at the same time. You could be buying a stock, but someone

else could be selling twice as much of the same stock, more aggressively,” says Gerrit Van Wingerden, managing director of Japan at order and execution management system vendor Tora.

Perhaps the greatest challenge facing someone aiming to predict how a market will react to a trade is grasping the characteristics of how that market behaves—and to achieve that, firms need a simulator with the ability to act like marketplaces themselves, and which contains the entire history of quote and trade data from each market to accurately reflect its trading activity.

These simulators may have originally been conceived as testing environments to demonstrate the robustness and functionality of new applications designed for use with exchange data and trading platforms, but have evolved into engines for gauging strategy performance.

“You might want an exchange simulator for user acceptance testing of anything that talks to an exchange, such as for regression testing around changes—so while that wouldn’t tell you about the profitability of your strategy, it does tell you that everything’s working,” says Mark Skalabrin, CEO of ticker plant and feed handler provider Redline Trading Solutions, which has offered its Mars market simulator for several years for regression testing purposes. “The next use case would be to tell you how well an algorithm is working—for example, to test whether an order would have been filled by just trying to trade against the best bid or offer... which is fine for orders where your strategy won’t move the market.”

Whereas this common usage relies on real historical prices and doesn’t attempt to factor the orders into the historical data to measure market impact, Skalabrin says a more complicated use case—and one that the vendor is now evaluating with clients—is to simulate individual exchange matching engines and allow users to post “orders” to this simulated engine, and see those orders

show up in the “market data” generated by the fake matching engine, creating a synthetic reality that would show how their trades affected the market data stream.

“From what I’ve seen, people are in the infancy stages of addressing this problem. Most firms don’t even have an accurate replay of what actually happened, let alone how the market might react,” says Shimrit Or, senior professional services consultant at UK-based performance monitoring and analysis technology vendor Velocimetrics, whose mdPlay tool provides data capture and analytics. The vendor originally developed the solution to replicate problematic events from trading systems within a test environment, though Or says she has seen clients use it for many different purposes, including for testing algorithms, smart order routers, and vendor applications such as feed handlers.

“Most firms are still at the stage of looking at whether their data is complete—i.e. doesn’t have gaps. They’re not even at the stage of looking at the data quality itself,” Or says, adding that this involves not just an accurate replica of live data from the markets, but accurate timestamps and clock synchronization.

This precision timing data is a key component of data that helps firms gain a deeper and more accurate understanding of their trading performance. “Without good timing information, you have no ability to understand what’s going on in your trading system. You have no way of knowing if someone is front-running you if you don’t have good timing information. The ability to tell what happened depends on your clocks being accurate,” says Victor Yodaiken, CEO of timing technology vendor FSMLabs. “Firms may have multiple gateways to different—or the same—trading party, and at some points in the day, some may be busier than others. And there’s no way to know that during the trading day. You may



Gerrit Van Wingerden
Tora

even see something that looks like a problem, but is actually a result of your clocks being off.... In the past, companies have told us that they’ve been able to tweak their algos because their clocks were better.”

Data Quality is Key

While the specifics required to build an accurate analytics tool vary depending on the asset class being served, but all share a basic fundamental requirement: quality, granular data. In particular, any analytic designed to guide a trading algorithm must have access to a significant amount of historical data to gauge the markets’ historical reaction to past events.

“From a quantitative perspective, we want to answer the question of what does something mean over time, and whether it adds to or detracts from our performance,” says Kevin Shea, CEO of Boston-based registered investment advisor Disciplined Alpha. “We can’t look at something that just happened one time. We’re not a black box with a hundred factors changing from one month to the next... so we want data going back a long time.”

That’s where established brokers and technology providers can bring their resources to bear. “We handle about 11 percent of institutional volume in Japan. As a result, we have a very large database of historical order data. We have assumptions about what impact an order will have on the market, and we test those. We can do simple regression testing, or more recently, we’ve been using artificial intelligence and machine learning,” says Tora’s Van Wingerden. “We have training and test datasets, and from there we can see how good our models are, by measuring slippage against the mid price, and you can come up with what on average is a fairly good measure. We look at liquidity consumption, volatility, and spread [as inputs to our pre-trade TCA]. We also take into account the broker-specific algorithm being used. There can be significant



Shimrit Or
Velocimetrics

differences based on the broker algorithm—for example, some do better when executing small-volume trades, or in lower-volatility names.”

Denver, Colo.-based data, analytics and trading technology provider CQG tells a similar story: “CQG has been around awhile, so we have a wealth of historical data. We have back-testing functions, and have tools that allow people to write strategies, back-test them, plug in costs, and see if they will make money. We’ve had that ability for years,” says John Arvanites, CTO at CQG, whose latest initiative is applying those tools to third-party algorithms to measure TCA and support execution of block trades without moving the market.

“We’ve had conversations around pre-trade TCA, but haven’t implemented that yet. It’s difficult because of the data, and also because of the algos themselves, because you need to know how an algo will react. So we can do that for our own model, but not for external algos.... It’s partly to do with IP—there’s a trust issue, where algo providers don’t want to share the IP of their strategies,” Arvanites adds. “We’ve had some requests to see ‘Once my order was fully filled, what is the outcome—for example, was I too aggressive?’ So we are tweaking some of our TCAs to give more of that kind of information. We can overlay any of our TCAs over any of our studies or any market activity.”

Though CQG’s efforts may be pushing the TCA envelope, Arvanites says basic data quality is key. “The first priority is quality of data. We have mechanisms in place to scrub and correct data and make sure it’s accurate. Sometimes we get trades, bids or asks that are completely out of line, or simply didn’t happen. So pulling out a trade, and going back through the historical data and pulling it out of there, then correcting the data and pushing it out worldwide... it’s not rocket science, but having the systems in place to correct it after the fact is important.”

Those systems for collecting, cleaning and processing don’t appear overnight. Behind any successful analytical or TCA tool sits a significant amount of infrastructure. And that doesn’t come cheap or easy.

“There are high barriers to entry. It’s hard to justify just building a TCA product. But if you can build the trading algorithms, that puts you 80 or 90 percent of the way there. For example, we have the exchange links, so everything is in real time. If you already have that... it’s easier to layer a TCA component on top,” says Guy Cirillo, head of partnership sales at broker and technology provider Quantitative Brokers in New York, which is also planning its own pre-trade TCA product.

“You need a lot of storage, you need historical data, real-time data, and software to run the analysis. So code has to be written, and you need servers in proximity to where the executions are taking place,” Cirillo adds. “From a Quantitative Brokers point of view, the data was already there because we had the algorithms. Once that was in place for the execution component of the business, building models was the next challenge. That’s where we feel we have an advantage. If you have people who can build trade execution models—i.e., the algorithms—you can build software that analyzes them.”

One factor that makes these analytics so costly—in addition to the infrastructure required—is the amount of data flowing across that infrastructure that must be processed. Equity options in particular present a challenge because of the number of strikes compared to underlying equities.

“Not all of those strikes actively trade, but the sheer volume of market data does add a level of complexity. In the US, we’re now up to 15 options exchanges... and to get a complete picture of the market, you have to subscribe to data from all of them. Paying for that, bringing it into your organization, and reading that data all adds to the



Victor Yodaiken
FSMLabs

angst and cost,” says Tom Lehrkinder, senior analyst at Tabb Group.

“If you start getting into more complex orders, such as multi-legged trades, it becomes a substantial project to get up and running in terms of time and money, when there are shops available that make this almost plug-and-play,” Lehrkinder adds. “There are a couple of schools of thought: Build-your-own is really, really difficult. Some of the big market makers and high-frequency traders have the resources and wherewithal to build their own. Then you get a hybrid approach at smaller firms who’ll buy something from a vendor and may supplement that with something they’ve acquired or developed themselves. And then there are firms who only use vendor products.”

Certainly those at the sharp end of the debate are picking build versus buy. “Most of the time, if you want something unusual, you have to build it yourself. It’s rare to be able to buy all the features you might want. It seems like everybody out there has much the same thing,” says Harindra de Silva, president and portfolio manager at Los Angeles-based investment manager Analytic Investors.

Redline’s Skalabrin agrees, despite offering a solution of its own for this purpose. “Everybody builds this themselves for the most sophisticated use cases. Banks spend a lot of time building market simulators and building intelligence into them,” he adds.

In Quantitative Brokers’ case, it built the tools itself as a way to drive clients to its trading services. “We had to build our own TCA tool and our own market simulator because when you go to a client and say, ‘This algorithm will perform better than what you’re currently using, even including the fees we will charge,’ you need to be able to prove that,” Cirillo says.



Mark Skalabrin
Redline Trading
Solutions

Problem Data and Human Factors

So for many well-established datasets, even outside vanilla equities, obtaining the data isn’t hard. Even more nuanced

data associated with exchanges and other trading venues, such as dark pools, that can be harder to find but go further towards building a full picture of the markets, are becoming easier to obtain. For example, Analytic Investors' de Silva says trading venues are becoming better at sharing information such as historical volumes and strategy decay—factors that would enable traders to pick their destination venues on a day-to-day basis.

But firms wanting to incorporate alternative datasets into their strategies face a bigger challenge in that the data may simply not exist, or have only been collected for a limited time.

"In the past, firms might have asked vendors for 10 or 20 years of data. But new datasets might have two years of data," says Michael Raines, director of quantitative data solutions at event data provider Wall Street Horizon. "Say we add a new dataset and clients ask how much history we have. I say 'It's been ready for six months, so I have six months of history,' because we won't back-fill data. So if we have a hole, then we have a hole, and if someone else claims to have that, I can't necessarily trust how they got it—it needs to be self-sourced or primary-sourced."

Others note that for newer datasets or parameters with less available history, there may not be enough examples of how something impacts the market to be statistically significant.

One area where little data exists to incorporate into pre-trade analytics—and far harder than testing whether an order would have executed historically, or how an exchange matching engine might respond in a test environment—is the unknown human factor: how another trader or competing algorithm will respond to an order. Evan Schnidman, founder and CEO of Prattle, a technology company that uses sentiment analysis to predict the market impact of central bank and corporate communications,



Evan Schnidman
Prattle

suggests two ways—neither perfect—to achieve this.

The easiest approach would be to simply poll traders about how they would respond in specific market conditions, though Schnidman notes that this is less scientifically rigorous because people may not necessarily answer truthfully. The optimal way to model trader reactions would be to set up "a true simulation using real money so that people would not take undue risk," and conducted in a sufficiently large simulated market to deliver statistically significant results, yet self-contained so that those running it can test specific scenarios, or test how different individuals and collective user profiles react when emotional factors such as panic or exuberance are introduced into the mix.

"But no one has ever successfully simulated all the dimensions of a stock market," he says. "It would take tens or even hundreds of millions of dollars to get the level of information you'd need [from a simulation]. Firms may already have this data, but are not likely to share it. The Securities and Exchange Commission may have it, possibly anonymized. Or you could use 13-F [holdings] filings from the previous quarter if you know which prime broker funds use. It's not easy to find, and that information would give you data for the trailing quarter at best."

Even then, how traders react would likely be a best guess based on how the collective herd moves in a given situation.

"The behavioral stuff is tough, because people react differently. For example, what's the lifecycle of an algo before it gets detected? Hours? Days? If you get lucky, a week or two? So any arbitrage opportunities are quickly swallowed, and someone quicker will take over that spot. There's still a lot of the human factor, and I think it will be a while before that goes away, and I don't know how you would use machine learning to

model how people think and react," says CQG's Arvanites.

Here and Now

For some, existing pre-trade analytics deliver all they need. "Now, pre-trade analytics have evolved to include optimization tools that enable you to build a 'trade list' and see how it looks from a pre-trade perspective, to look at where the volume and liquidity are in a stock so you can route orders to the right venues, and what are the 'tilts' in the list,"—those stocks that "tilt" a portfolio to outperform a benchmark—says Analytic Investors' de Silva.

And especially beyond the equities market, there's a long way to go in terms of what people could build, but also how much demand there is from market participants for more sophisticated pre-trade tools. You would think firms would be clamoring for anything that delivers additional insight, but outside of the more advanced firms, there seems to be a steep learning curve ahead.

"This area is old-school for the equities markets, but in futures, options and other asset classes, this is still in the early stages. We're out there educating the market," Cirillo says. "You have to make sure you have a clean source of data... to do TCA in real time during the day. But there is a cost associated with that.... And is that something clients really want or need when we're still educating clients on TCA? Given that, the tools we've created are more than sophisticated enough to meet their needs."

Inevitably, clients will become more sophisticated, and tools will become readily available. "As time goes on, things that are not practical today will soon become practical. Costs are constantly dropping. A trader needs to understand what he's going to get in per-tick revenue against what he pays in exchange and clearing fees, and in taxes—so he doesn't build anything without taking those into account. Newbies don't, and they quickly run out of cash," Arvanites says. ■



Guy Cirillo
Quantitative
Brokers



LAW & DISORDER:

US Preps Defense Against Mifid II

With just weeks to spare until Mifid II becomes law, US firms affected by the rules are still waiting for regulators to resolve crucial conflicts between European and American laws, and are likely to be making adjustments well after the deadline has passed, reports [Kirsten Hyde](#).

For thousands of traders, brokers and fund managers in the US, the clock is ticking. On January 3, the revised Markets in Financial Instruments Directive (Mifid II) will come into force, affecting everything from investment research to the platforms on which firms can trade, as well as post-trade issues such as trade and transaction reporting.

While the new rules, which cover virtually all aspects of trading across asset classes within the EU, will not be the rule of law in the US, they will have profound implications for its financial institutions, not least because US and EU firms are the biggest participants in each other's markets. For instance, for

US firms that have subsidiaries, investments, risk exposures or trade through European markets and venues, Mifid II will require them to engage with and report to European regulators and counterparties. If an EU firm hands over services such as portfolio management to a US affiliate, that firm will also be subject to Mifid II rules.

According to some industry surveys published over the last two months, a high percentage of firms in the US, particularly on the buy-side, will not be fully prepared for the Mifid II compliance deadline, and will still be coming to grips with the new rules well after the deadline has passed. Perhaps even more startling is that regulators are closing



“Where we have witnessed an increased demand is from firms not directly impacted by Mifid. They are adopting the more appealing elements of unbundling where they can introduce improved efficiency in their investment process.” **Vicky Sanders, RSRCHXchange**

off key outstanding issues and resolving conflicts between Mifid II and existing US rules as late as December, with less than a month to go.

“There is still much work to be done and many issues still in flux before buy- and sell-side firms can call themselves compliant. Declaring victory would be easier if all of the regulatory issues had been resolved and the complete set of rules defined. The problem is, they haven’t,” says Valerie Bogard, an equity analyst at Tabb Group and author of the report *Racing Against the Clock: How Buy-Side Firms Are Preparing for Mifid II*. For example, she notes that until early December, firms were waiting for European regulators to officially release a list of US venues that would be deemed “equivalent” for the purposes of Mifid II’s share trading obligation.

It wasn’t until December 8 that it emerged that some US trading venues, known as dark pools, would not be handed equivalence status by the EU. Just three days prior to that, the European Commission said in a statement that the EU had granted equivalence status to some derivatives trading venues in the US, such as those run by CME Group and Intercontinental Exchange, and more

than 20 swap execution facilities, allowing European banks and companies to continue trading derivatives on US markets come January 3. The announcement underscores the global implications of Mifid II and shows how late in the game regulators are reaching deals to avoid disruption in January.

Unbundling Conflict

One of the most contentious issues for Wall Street firms has been the European requirement to “unbundle” the cost of investment research from that of executing trades, to give investors more transparency into how much they pay for specific services. While the rules are primarily targeted at EU asset managers and firms, US banks that distribute research to their European clients fall under its scope. But the unbundling requirement runs counter to the US regime, which requires institutions that sell research for hard dollars (instead of indirectly through trading commissions) to register as investment advisers in the securities industry, or commodity trading advisors in the futures and derivatives markets—registrations that would impose more stringent duties and costly compliance obligations.

While the US Securities and Exchange Commission (SEC) recently ended uncertainty in this area in the securities industry, banks and brokers operating in the futures and derivatives markets are still waiting for assurances from the US Commodity Futures Trading Commission (CFTC) that they will not have to register as commodity trading advisors. “Until now, US commodity brokers and swap dealers have been fairly clearly exempt from CTA registration on the basis that they do not accept separate payments in connection with distribution of any research that is ancillary to their main brokerage or dealing business,” says Nathaniel Lalone, a partner at law firm Katten Muchin Rosenman. “The new European rules, however, mandate that research be paid for separately, which would require these US firms to do one of three things: undertake the arduous process of determining what constitutes research on a publication-by-publication basis and then attempt to limit the distribution of ‘research’ to EU investment firms; limit the distribution of research across the board; or register as a CTA. Each of these is either time-consuming, or costly, or both. The status quo can easily be maintained where the CFTC grants appropriate relief, which is what the industry has requested.”

Similar to the lobbying efforts of the Securities Industry and Financial Markets Association (Sifma) and other industry groups with the SEC, the Futures Industry Association (FIA) has asked the CFTC for assurances that firms will not be sanctioned under the agency’s registration provisions for complying with the EU rules. A spokesperson for the FIA confirmed that the industry group has requested relief from the CFTC, but declined to comment further.

Two people with knowledge of the matter confirm that discussions between the CFTC, industry par-



Kara Stein
SEC

ticipants, and the FIA are ongoing. “The CFTC wants to avoid market disruption. It is like any governmental regulator: whenever it looks to grant relief or an interpretation, it wants to ensure that it will not create a loophole that can be exploited. It is going about this in a careful and deliberate way,” says one. “However, I do not think it is an unrealistic expectation that the CFTC will issue relief on this matter before the January 3 deadline.”

This might be likely, considering firms were given a reprieve by the SEC at the end of October, when it issued three “no-action” letters allowing US brokers and asset managers to comply with the research requirements of Mifid II in a manner consistent with US federal securities laws.

This followed intense lobbying from Sifina on behalf of US financial institutions, who had grown increasingly concerned that they would have to overhaul their operations to continue providing research to European customers.

The SEC relief, which allows US banks and brokers to accept payments in hard dollars or through research payment accounts without the research being considered investment advice, was provided narrowly, however—only to payments from asset managers impacted by Mifid II “either directly or by contractual obligation.” In other words, it doesn’t allow US brokers to accept cash payments for research from US asset managers not subject to Mifid II.

The no-action relief will last for 30 months, starting from the Mifid implementation date, to allow the SEC to assess its impact and determine whether broader rule-making is necessary.

Although a victory for Wall Street firms, some US investors have been left disappointed, arguing that the European rules would likely reduce costs, increase transparency and should



be fully rolled out to the US. According to Sanford Bragg, a principal at Integrity Research Associates, the SEC had received letters from US pension funds and trade associations representing US pension funds requesting that the pending relief be applied broadly to allow US brokers to accept cash payments from any source, including asset managers not subject to Mifid II.

Kara Stein, a Democratic commissioner on the SEC, also criticized the agency for not providing investors with more visibility into what they pay for analysis. In a public statement, she said the reprieve “merely kicks the can down the road,” and added that “this inaction may be costly to investors and advantage some market participants over others.”

Not Fully Prepared

While some regulatory issues are yet to be resolved, many US buy-side firms are struggling with the specifics of fully adopting all of the requirements prescribed by Mifid II, according to Tabb Group’s report, published at the end of October.



Nathaniel Lalone
Katten Muchin
Rosenman

Tabb’s Bogard says the research and consulting firm interviewed 34 European and US buy-side firms that it had identified as the most advanced in their Mifid preparations, and found that even these firms, when pressed for specifics, identified a significant number of gaps in their Mifid II implementation.

“So many gaps, in fact, that except for a few outliers, we believe that the majority of firms will not be fully prepared for the deadline and will still be making adjustments well after the deadline has passed,” Bogard says.

Similarly, survey results from investment management software vendor SimCorp released at the start of November showed that 58 percent of buy-side respondents confirmed that they need to comply with Mifid II, but only 23 percent of this group felt “extremely confident” that they had a plan in place. The remaining 77 percent were either somewhat or not at all confident. A total of 28 percent of respondents were unsure if and how their firm would be affected.

According to SimCorp's survey, which polled 150 North American buy-side participants on the operational impact of Mifid II, respondents cited complying with transaction reporting requirements, understanding the new market structure, and the unbundling of research and execution as their top three operational challenges.

Bogard agrees that the unbundling of research and execution is one of the biggest challenges for buy-side firms. "The whole process of unbundling is really a challenge, especially in the US, because it is an exercise that these firms haven't really done in the past," she says.

Although many US asset managers are not subject to Mifid II, Bogard believes that some are taking steps to unbundle to meet changing investor expectations and to cut down on costs. "They can see European buy-side firms formalizing pricing agreements with their brokers, and think it would be beneficial for them to go through a similar process, at least in terms of separating out their execution and research costs and having more discretion to decide which brokers to go to, to trade," Bogard says.

Vicky Sanders, co-founder of research aggregator RSRCHXchange, agrees. The London-based company recently announced that it would be expanding its operations to North America as a result of increased demand. "Where we have witnessed an increased demand is from firms not directly impacted by Mifid. They are adopting the more appealing elements of unbundling where they can introduce improved efficiency in their investment process," Sanders says.

Fines and Enforcement

Given the last minute deliberations, guidance and, still, in some cases, regulatory uncertainty, buy-side firms spoken to by Tabb Group doubt that regulators will issue fines for non-compliance during the first six months after Mifid II is implemented.



Sanford Bragg
Integrity
Research
Associates

"European regulators have said that as long as firms are taking sufficient steps to be compliant, they are not going to be knocking on the door on January 4," Bogard says. "With the late release of some regulatory details, they understand that it is a work in progress and as long as firms are showing that they're moving in that direction, the regulators are going to be fairly lenient."

Indeed, speaking to *Waters* magazine last month, Steven Majoor, chair of the European Securities and Markets Authority (Esma) said, "I don't think it would be the smartest strategy to set maximum enforcement capacity on non-compliance on the 4th of January."

He clarified, however, that Esma cannot intervene in national regulators' policies or actions, and that he trusts that Europe's various national regulators will make smart choices in terms of supervisory priorities.

Even with buy-side firms quickly making changes, many will most likely still be in the process of adopting all necessary requirements at the beginning of January, Bogard says—and regulators seem to be cognizant of this. In a speech to the Economic and Monetary Affairs Committee of the European Parliament in October, Majoor said, "2018 is the starting date, but at the same time we should not forget that Mifid II implementation will keep the large part of the regulatory community and financial sector busy for many months afterwards."

'Measured Approach'

Looking ahead, market participants believe US regulators will observe how the Mifid II rules will affect European markets before implementing any tougher rules in the US—particularly around research unbundling. "The temporary nature of the SEC relief allowing US brokers to accept Mifid II-generated cash pay-

ments—and Commissioner Stein's public criticism—will encourage those arguing for more widespread adoption of research unbundling in the US to lobby the SEC for broader relief. However, an accompanying statement from SEC Jay Clayton made it clear that the SEC is taking a 'measured approach' and is not yet committed to 'substantially altering the US regulatory approach,'" notes Integrity Research's Bragg.

This wait-and-see approach is also being adopted by large asset managers. At a recent earnings briefing, Larry Fink, CEO of BlackRock, the world's largest asset manager, would not be drawn into saying whether Mifid II should be a template for the rest of the world or whether BlackRock would adopt a global policy of paying for research from its P&L. "We have to see how Mifid II works out in the European environment for us to have a real strong opinion globally," he said.

Bragg says Fink is "a useful bellwether," whose comments reflect wider caution among US asset managers as a whole.

"Research unbundling faces a more hostile environment in the US than in the UK and Europe. US regulators are cautious about changing the current regime, the media is largely indifferent, and the big US investment banks and asset managers prefer to keep Mifid II's rules 'ring-fenced' to their European operations," Bragg says. "Large US asset managers arguably should support research unbundling because it would squeeze smaller competitors, as is happening in Europe, but so far they have been circumspect. So it potentially falls on the shoulders of US asset owners to force the change, and, although a few asset owners are concerned, it appears that the majority have other priorities, for now. Unbundling may indeed come to the US but it will not be a quick process." ■



Valerie Bogard
Tabb Group



DSB Dissent: Venues Slam Cost of European ISIN Utility

The godfather of European financial regulations is making trading venues an offer they can't refuse. To comply with a compulsory reporting requirement of Mifid II, they must sign a contract that sources call "unacceptable." Risk.net's [Samuel Wilkes](#) reports on how trading venues are reacting to the ANNA DSB utility's commercial model.

The Association of National Numbering Agencies' Derivatives Service Bureau (ANNA DSB), the registration authority responsible for generating ISIN (International Securities Identification Number) codes for over-the-counter (OTC) derivatives in Europe under the second iteration of the Markets in Financial Instruments Directive (Mifid II), is reporting significant increases in takeup of its service ahead of Mifid II becoming law in the European Union on January 3, 2018.

In a press release issued as Inside Data Management went to press, ANNA DSB said that as of December 7, 77 organizations had signed up for

fee-paying subscriptions to its service, with a further 74 registering for its no-cost data services—up from just 29 users reported last month, all of which were paying clients.

However, it seems that organizations—particularly trading venues, which will bear the greatest burden for requesting new ISINs, and will therefore be subject to the highest costs—are signing up only reluctantly, complaining of uncertainty over how much they may end up paying. Indeed, ANNA DSB notes in its statement the "higher than expected proportion of participation by banks (both global and regional), major buy-side firms and smaller trading



“Venues are trying to get answers on certain issues, such as the arbitrary limit on how many ISINs the ANNA DSB would permit to be created at 50,000 per week, an artificial cap apparently created to generate a private income stream.” **Alex McDonald, Wholesale Markets Brokers' Association**

venues,” admitting that “anticipated participation by larger trading venues has not yet materialized.”

The service will play a key role in trading firms and market operators' compliance with Mifid II. Regulated markets, multilateral trading facilities (MTFs) and organized trading facilities (OTFs) will have to disclose the reference data—including ISINs—of every financial instrument traded on their venue in transaction reports, which must be sent to local regulators at the end of each trading day.

To request the creation of ISINs for OTC derivatives, trading venues must sign up with the bureau. The service has been open for business since October 2, but with less than a month until Mifid II enters into force, venues refuse to join.

However, despite the recent surge in registrations, Alex McDonald, CEO of the Wholesale Markets Brokers' Association (WMBA), a lobby group for interdealer brokers, told Risk.net in November that he was not aware of anyone who has signed up to the service so far. At the same time, three European trading venues told Risk.net they have not yet on-boarded with ANNA DSB.

“It is a pretty terrible document,” says a source at one venue, referring to

the body's commercial terms. “The problem is we are obviously running out of time for the start of Mifid II. My understanding is not a single venue so far has signed up to ANNA DSB for ISINs. Eventually we will be forced to sign up to it, but reluctantly.”

McDonald and the three venue sources all call the contract's commercial terms “unacceptable” because they include open-ended charges that make the overall cost of the service unknown.

Emma Kalliomaki, managing director at ANNA DSB, acknowledges there have been challenges, but says firms have not signed up to the service because they are not yet prepared at a technical level.

“The pattern has been that the execution of the agreement and transition to [ISIN] production has really been based on the level of readiness of firms to move in that direction,” Kalliomaki says. “The testing environment has been operational since April, and that doesn't require any contract in place or fees. Therefore, the firms that have that connectivity and are ready to do that transition are the ones that have been more likely and [swifter] to move into the production environment.”

She says there have been challenges around the fee model and

because there will not be certainty on the fees until the beginning of next year. “It creates some challenges with regards to firms signing off internally. I think those same challenges have occurred across the board, but some have been able to act more swiftly for those matters,” she adds.

No Choice

The venues, however, have no choice but to join. ANNA DSB is the only source for them to request the creation of ISINs. If they don't join, they will be unable to comply with the reference data reporting requirements of Mifid II, and will be fined by their local regulators.

“It is the most bizarre terms of service. It is a cash cow. They are going to be making a lot of money from Mifid II, and there is nothing we can do about it,” says the source at a second European trading venue, while a third likened the situation to having a gun leveled at their heads and being told to sign the contract. All three venues admitted they will eventually have to sign the contract before the start of Mifid II. Two confirmed they had set themselves an internal date for signing the contract, with one saying they planned to sign at the end of November.

In a press release on November 9, ANNA DSB announced it had 29 users signed up to the service, including “the majority of top-tier US and European swap dealers as well as some buy-side and trading venues.”

ANNA DSB will charge fees to three of its four categories of users: “power,” “standard” and “infrequent.” These users will be able to create new ISINs and conduct real-time searches for issued ISINs in the database. The fourth user category, referred to as “registered,” will not be charged to use ANNA DSB but will only receive an archive of ISINs at the end of each day and be able to do manual real-time checks.



The 29 users signed up to the service in November were all “power” users, which is an attractive option for investment firms because—despite not necessarily needing to create ISINs—the category allows them to integrate their own systems and processes with the ANNA DSB’s ISIN engine. This will then allow them to attach ISINs onto post-trade reports or send the information to counterparties to help them complete reporting requirements.

The initial user fee for the 2017–2018 period is estimated at €82,500, and the annual fee is estimated at €65,000, Kalliomaki says. At first glance, €82,500 seems small. However, there are parts of the contract under which fees can quickly escalate, with the second venue source estimating they could pay just short of £1 million a year. If correct, that venue alone could be paying an eighth of the operational costs of running ANNA DSB, which estimates the costs of running the ser-

vice at €8.8 million a year. The first variable component of the charge is applied per trading venue needing to connect to ANNA DSB. This means if a market operator has multiple MTFs and OTFs to sign up to ANNA DSB, they will have to pay €82,500 for each venue.

“If there is one entity with 10 trading venues, then they would have to pay 10 fees. There is no discount, because it would mean those with fewer venues as well as other users will then have to pay higher fees,” Kalliomaki says.

In Kalliomaki’s example, if a market operator were to run 10 venues, its initial cost to receive ISINs would be €825,000. This charge is also applied if the market operator wishes to register any reporting facilities they have. Some trading venues will also run approved publication arrangements or approved reporting mechanisms. Investment banks are allowed to register with ANNA DSB at their group level, but

if they have separate businesses such as asset management, custodial arms or private wealth managers, they would all have to sign separate agreements.

The Cap Doesn’t Fit

Costs will rise if a venue breaches a 50,000 cap on the number of ISINs it needs ANNA DSB to generate per week and a 100,000 cap on the number of search requests. After the cap is breached, ANNA DSB then applies a series of tiered charges increasing with every 10,000 ISINs issued to users every week.

“Venues are trying to get answers on certain issues, such as the arbitrary limit on how many ISINs the ANNA DSB would permit to be created at 50,000 per week, an artificial cap apparently created to generate a private income stream,” says WMBA’s McDonald.

At first glance, again, the 50,000 limit seems reasonable as it offers a large amount of ISINs for a venue to create, and seemingly provides plenty of headroom for venues to create ISINs before breaching the limit. But venues say they will need more than the limit offers almost every week because the code uses the maturity of an instrument as a field to distinguish between different financial instruments. This will mean derivatives that rely on tenors to determine the end date of a contract—such as interest rate swaps—will have to be reissued with ISINs every day because the maturity will change from one day to the next. This could result in venues requesting tens of thousands of ISINs each day alone, says the source at the second trading venue.

“The caps ensure there is no mismatch between fees and usage and all users are paying the same flat fee irrespective of the number of ISINs they need to generate,” Kalliomaki says. “This ensures we have a fair policy across users, which means there cannot be a disproportionate use of DSB’s resources across one user versus another. Actually, for the majority of users this has not been an issue. The number of

users who have signed up indicate the thresholds are considered acceptable.”

However, if most of the users signed up so far are investment banks, the cap for requesting ISINs to be created should not affect them. Under Mifid II, investment firms are obliged to send transaction reports to local regulators at the end of each trading day and publicly disclose instruments they trade before and after they transact those, depending on if the trade is below size thresholds and the instrument has a liquid market. However, investment firms only have to fulfil those obligations if the instrument is traded or admitted to trade on a venue—in which case, the venue will already have created the ISIN that the investment firm must report. This means dealers should only be affected by the higher cap to search for ISINs, and not the cap on creating ISINs. Venues will be affected by both caps.

The result of these provisions in the contract means trading venues have no guarantee of how much the ISIN service will cost. “The costs are unknown, so you are having to sign up to something you don’t know how much you will have to pay for,” says the source at the first trading venue.

ANNA DSB responds by saying it is difficult to calculate exact fees before having a complete picture of how many users there will be, estimating that between 100 and 200 organizations will register as power users.

“As an industry utility trying to ensure there is a fair distribution across all firms, it is a challenge; I think it is definitely difficult to do when you don’t have the basis of knowledge of how many users you are going to have,” Kalliomaki says.

Game Theory

ANNA set up the DSB as a not-for-profit utility specifically to create ISINs for OTC derivatives on a cost-recovery model, which means the fees paid by clients will be used to cover the costs incurred by running the service. The governance of ANNA

DSB is dictated by requirements set by the International Organization for Standardization (ISO) on the operations of numbering agencies, which includes pricing of services on a cost-recovery basis. ANNA is contracted by ISO to serve as the ISIN registration authority, and ISO is responsible for oversight of ANNA DSB.

A group of four investors—Euroclear, Herausgebergemeinschaft Wertpapier-Mitteilungen Keppler, S&P Global and SIX Financial Information—who provided the funding to develop ANNA DSB also sit on its board. According to a final fee model report published on June 28 by ANNA DSB, the funding will be repaid over a period of four years at €1.4 million each year. On top of that, ANNA DSB will pay the investors €320,000 each year in interest payments for four years. Power users are supposed to contribute to a larger share of the cost. If more users sign up to the service, the costs will be revised and the fee per user will decrease; any surplus will be used to reduce fees in subsequent years.

But if fewer users sign up to ANNA DSB, they could increase the fees for 2018. The third source says this also makes them uneasy, as the contract stipulates ANNA DSB can unilaterally alter the fees in the middle of the contract. The second venue source believes the fee structure discourages venues from signing the contract early, because if they wait until after their competitors join the service, it may mean they will be able to negotiate for the revised fees.

The fee model report also provides an example of how fees would change, depending on whether the service has 100 or 200 power users on board. If there are 100 power users, it will charge €65,000, and if the number of users increases to 200, then the initial charge decreases to €38,000.

“We have this first-mover disadvantage because if there are more trading venues that connect to ANNA DSB, then the price dramatically decreases. You end up in a situation where you

are thinking to yourself, ‘Do I wait until they have more users to avoid the more expensive version, or do I apply now to get to 100 users and pay out up front?’ If you pay out up front, then your competitor will join later on and never have to subsume the extra cost for being the first mover,” says the second venue source.

Kalliomaki disputes this, as ANNA DSB will use January 5, 2018, as a cut-off date before revising fees for 2018 on January 15, and will not revise fees before January 5.

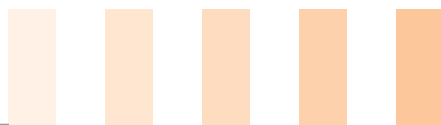
“If they don’t sign before January, then those numbers aren’t included in the fee determination, so the fee would be higher than if they were to join before January 5; the more users we have, then the lower the fees are. So by not joining before January 5, everybody is being disadvantaged because those numbers don’t get counted in the fee determination using the actual numbers,” Kalliomaki says.

But most venues are still negotiating the contract and consider it a stand-off. If they wait until the last moment, ANNA DSB may be tempted to revise the fees so as to ensure it reaches the target of 100 power users. The second venue source also questions whether the contract being offered to them matches the rationale of a cost-recovery model. Venues face the extra costs for using the service more frequently, yet have in theory already paid for the cost of building the infrastructure in the initial fee.

Indeed, the lack of participation from trading venues has caused ANNA DSB to revise its revenue expectations, with investment banks now projected to cover up to 60 percent of the overhead, and 15 percent covered by buy-side firms and vendors, leaving trading venues contributing as little as 25 percent.

Trading venues can’t avoid using the DSB. But—though the body reports new contracts continuing to arrive—with so little time left, venues will have to move quickly to be compliant on day one of Mifid II. ■

Human Capital



SIX Appoints Dijsselhof CEO, Launches Venture Fund

SIX Group, the parent company of SIX Financial Information and the SIX Swiss Exchange, has appointed Jos Dijsselhof as CEO. Dijsselhof will begin his role at the start of 2018. He succeeds Urs Rügsegger, who announced in May that he would be stepping down after nine years at the helm.

Prior to joining SIX, Dijsselhof was group COO at Euronext, and also served briefly as interim group CEO in 2015. Before that, he spent four years at Australian bank ANZ, first as general manager for operations in Asia-Pacific, Europe and America, and then as general manager for group hubs, where he was responsible for the development and running of ANZ's offshore centralized delivery in locations including China and India. He also held senior operations roles at RBS and ABN Amro.



Jos Dijsselhof



Ralf Roth

Selerity Nabs Former Goldman Sachs Exec Nakai for BizDev

New York-based contextual search and analytics technology provider Selerity has appointed Junta Nakai global head of business development, responsible for creating growth opportunities by promoting the vendor's products, including its Selerity Context and Selerity Private Context Engine.

Nakai was previously head of Asia-Pacific equity sales for the Americas at Goldman Sachs, where he spent 13 years in roles that involved automating and digitizing sales and trading processes.

As part of Selerity's executive team reporting to CEO Ryan Terpstra, Nakai replaces Brendan Gilmartin, who will take on a senior sales role managing top global accounts.

Quantitative Brokers Taps Roth for CEO, Ascher as Chair

New York-based broker-dealer and trading technology and analytics provider Quantitative Brokers has hired technology and data industry veteran Ralf Roth as CEO, and former ISE executive Thomas Ascher as executive chairman.

Roth, who was most recently CTO of IHS Markit's equities division and a member of Almax Analytics' advisory board, replaces Quantitative Brokers co-founder Christian Hauff, who will continue to serve as a member of the firm's board and executive committee. Before joining Markit in 2016, Roth was managing director and global head of the Elektron data infrastructure offering at Thomson Reuters, prior to which he spent 17 years at Deutsche Bank in various roles, including managing director and global head of



Simon Ringrose

equity product development, where he was responsible for the bank's Autobahn electronic trading platform.

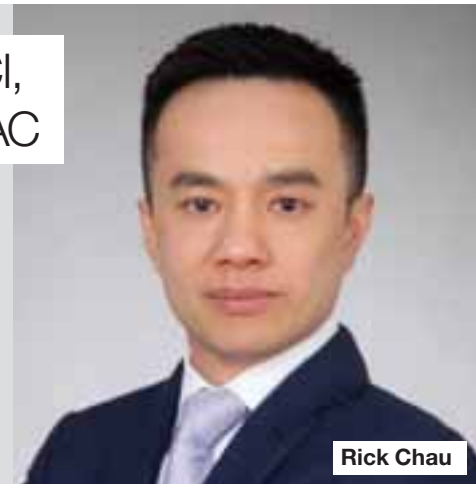
Ascher, who has served as a member of Quantitative Brokers' board for the past four months, was previously president and CEO of International Securities Exchange technology spin-off Longitude, and spent 11 years at parent ISE, including as chief strategy officer, during which time he also served as a board member at Hanweck Associates, Quadriserv and Direct Edge. From 2002 to 2003, he was CEO of Nasdaq Liffe Markets, and spent three years as executive vice president at Interactive Brokers, prior to which he spent 10 years at the Chicago Board Options Exchange.

Ringrose Moves to Wall Street Horizon After Decade at EPFR

Simon Ringrose has left his role as managing director of sales at fund flows data provider EPFR Global to join event data vendor Wall Street Horizon as sales director, based at the vendor's headquarters in Woburn, Mass., and reporting to WSH founder and chief executive Barry Star.

Ringrose spent the past 10 years at EPFR in Cambridge, Mass., prior to which he was senior vice president of sales and marketing at Decision

Stoxx Hires Former MSCI, FTSE Exec Chau for APAC



Rick Chau

Economics, was a major account manager at Reuters America, and was an account manager at Bridge Information Systems.

Former JPM Asset Management CDO Glasser Joins FRG

Dessa Glasser, former chief data officer at JP Morgan Asset Management, has joined risk management consultancy and services provider Financial Risk Group as a principal at the firm, to develop a practice of risk and data solutions for FRG's clients.

Glasser was previously principal consultant and co-owner of New York-based data, analytics and regulatory compliance consultancy Briter Consulting, prior to which she spent three and a half years at JP Morgan, including as the first chief data officer of its asset management division, responsible for setting up its chief data office. Before that, she was deputy director of the US Treasury's Office of Financial Research, chief risk officer at agribusiness company Bunge, and held senior roles at Credit Suisse, IBM Global Services, KPMG Consulting, and Merrill Lynch.

At FRG, she reports to chief executive John Bell.

Overbond Hires Ex-Bloomberg Exec Harrington

George Harrington, former head of global markets at Bloomberg, has joined bond original and trading platform Overbond as head of US business development in New York.

Harrington was most recently a global business development executive at US futures market Eris Exchange, prior to which he spent 10 years at Bloomberg, including as head of global markets. Before that, he was head of credit default swap trading at

Deutsche Borse-owned index provider Stoxx has hired Rick Chau as managing director and head of Asia-Pacific, responsible for distribution and relationship management in the region.

Chau previously spent almost seven years at MSCI as executive director, with roles including heading the index provider's hedge fund and broker-dealer client coverage team in Hong Kong and its institution investors and asset manager team in Taiwan, and head of stock exchanges and regulators in Asia Pacific. Before joining MSCI, Chau was regional head of business development for North Asia at FTSE, served as national key accounts manager

at Lehman Brothers in Sydney, Australia, and was a business development manager at Australian Wealth Management.

Based in Hong Kong, he reports to Zurich, Switzerland-based global head of sales Roberto Lazzarotto.



Dessa Glasser

Tradeweb, and a senior consultant at PricewaterhouseCoopers.

EDM Council Names Bottega Interim Managing Director

Former Enterprise Data Management (EDM) Council chair John Bottega is now the organization's interim managing director, taking over from Mike Atkin, who will shift his focus to advancing the trade association's research and education initiatives.

Bottega has worked with the EDM Council since 2005, when he was an industry contributor, and served as chairman from 2007–2014. He then joined the executive team as a senior advisor. He has more than three decades of data management experience, most recently as CDO for Bank of America, and previously with the Federal Reserve Bank of New York.



John Bottega

Bottega is tasked with growing the EDM Council's membership and promoting industry initiatives such as the Data Management Capability Assessment Model and the Financial Industry Business Ontology standard, which is moving into full production.

Atkin has occupied leadership roles at the organization since its formation in 2005.

FTSE Bolsters ESG Capabilities with Senior Hires

London Stock Exchange-owned index provider FTSE Russell has hired Aled Jones as head of sustainable investment, EMEA, and appointed Rory Sullivan as interim head of ESG standards and Innovation.

Jones will be responsible for supporting the ESG investment strategies of FTSE Russell's clients, in particular asset owners and asset managers. This will include input into new and evolving ESG methodologies, and product development in collaboration with FTSE Russell's research, product and business development teams.

Before joining FTSE Russell, Jones held a number of senior roles at Mercer Investments, including head of responsible investment for EMEA. He has also held roles at ESG research firm Innovest and Jupiter Asset Management, and has headed ESG at pension funds LPFA and PPF.



Sullivan will be responsible for leading a team to develop research and to further define market standards and ESG methodologies, along with collaborations in the marketplace. He is an author and consultant on responsible investment and has worked with the UN Global Compact to develop advice for companies on the strategies they can adopt to manage the impacts of investor short-termism on corporate sustainability.

Both Jones and Sullivan report to David Harris, head of sustainable investment at FTSE Russell.

Pendo Hires Former Bloomberg Sales Exec Schulze for BizDev

Data management and analytics platform vendor Pendo Systems recently hired Suzanne Schulze as sales executive to bolster its business development capabilities.

Schulze was most recently director of sales at Institutional Investor, prior to which she was a new business development manager at Bloomberg, responsible for sales of the vendor's Professional terminal, and was also an equity and options specialist on its Global Analytics desk.

At Pendo, Schulze is responsible for "engaging and influencing"

market participants on issues relating to artificial intelligence and its uses for analyzing structured and unstructured data, and reports to founder and CEO Pam Pecs Cytron.

Blockchain Vendor AlphaPoint Names Ex-Nasdaq Data Head Donde CEO

New York-based Blockchain technology provider AlphaPoint has hired former Nasdaq data executive Salil Donde as CEO. Donde left Nasdaq in late 2016, where he had served as executive vice president of Global Information Services since the start of 2015. Before that, he spent three years as CEO and a director of structured finance analytics provider Lewtan Technologies, which was acquired by Moody's Analytics in 2014, and also spent three years as CEO of property valuations services provider Marshall & Swift/Boeckh, prior to which he was president of Fiserv Life and Financial Software and Solutions.

Donde joined AlphaPoint as a board advisor in the first half of this year, before being appointed CEO and a board director last week. He takes over the role from AlphaPoint founder Joe Ventura, who continues to serve as CTO.

Credit Benchmark's Smith Taps Former Thomson Colleague Haney to Replace Him as CEO

London-based consensus credit ratings provider Credit Benchmark has hired data industry veteran Bill Haney as CEO, based in New York. He takes over the role from co-founder and executive chairman Donal Smith, who held the position since the departure of Elly Hardwick early last year.

Haney was most recently CEO of performance and attribution software



Suzanne Schulze

vendor BISAM, which FactSet Research Systems acquired earlier this year for \$250 million, and which he joined in 2013 as COO. He previously spent a dozen years at Thomson Reuters and Thomson Financial—where he also worked alongside Smith, who served as CEO of EMEA and Asia—including as managing director of investor relations services, managing director of EMEA, and vice president of M&A and corporate ventures.

CQG Shuffles Executives for China Push

Denver, Colo.-based analytics, data and trading technology provider CQG has moved president Rod Giffen to China as president of CQG Asia Pacific, to support the vendor's "imminent" launch of an initiative to add China to its network of data sources and execution venues. Giffen, who has served as president since 2014, began his career at CQG in 1995, and has held a range of positions, including head of operations, executive vice president of business development, and global head of sales and support.

As a result of Giffen's move, CQG has hired Ryan Moroney—who spent 11 years at the vendor between 2003 and 2014 in roles including data quality intern, director of operations for its Continuum Trading Solutions division, and product manager for market data and enterprise solutions—as president of CQG Europe and the Americas.

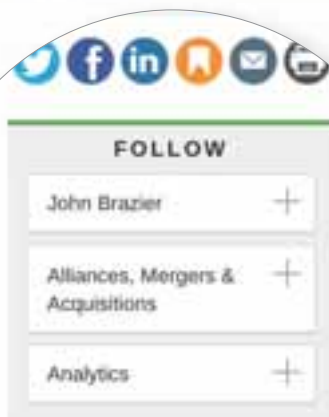
Moroney, who will rejoin CQG in December, is currently vice president of sales for non-financial corporate clients at S&P Global Market Intelligence, which he joined as director of business development in 2014.

Both Giffen and Moroney report to CQG CEO Tim Mather.



Ryan Moroney

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