



## PROJECT OCTOPUS

Citi and Bank of America are overseeing an initiative that is designed to fend off higher fees and disintermediation in case established multi-dealer platforms start trading CLOs and syndicated loans electronically. Its code name? Project Octopus.

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**Editor-in-Chief** Anthony Malakian  
anthony.malakian@infopro-digital.com  
**Editor at Large** Max Bowie  
max.bowie@infopro-digital.com  
**European Editor** Jo Wright  
joanna.wright@infopro-digital.com  
**Editor, Asia** Wei-Shen Wong  
wei-shen.wong@infopro-digital.com  
**Senior Reporter** Josephine Gallagher  
josephine.gallagher@infopro-digital.com  
**European Reporter** Hamad Ali  
hamad.ali@infopro-digital.com  
**US Staff Writer** Rebecca Natale  
rebecca.natale@infopro-digital.com  
**Reporter** Mariella Reason  
mariella.reason@infopro-digital.com  
**Head of Editorial Operations** Elina Patler  
elina.patler@infopro-digital.com

**Global Content Director** Victor Anderson  
victor.anderson@infopro-digital.com  
+44 (0) 207 316 9090  
**Commercial Director** Ince Saleem  
Tel: +44 (0) 20 7316 9258  
ince.saleem@infopro-digital.com  
**Business Development Executive** Sonja Patillo  
Tel: +1 212 776 8083  
sonja.patillo@infopro-digital.com  
**Account Manager** Daniel De-Bruce  
Tel: +44 (0) 20 7316 9126  
daniel.debruce@infopro-digital.com

**Marketing Manager** Louise Sheppey  
tel: +44 (0) 20 7316 9476  
louise.sheppey@infopro-digital.com  
**Design** Lisa Ling

**Corporate and Single Subscriptions**  
US: Barbara Falman tel +1 646 736 1852  
info@waterstechnology.com

**Global Brand Director** Katie Palisoul  
katie.palisoul@infopro-digital.com  
**Global Editorial Director** Duncan Wood  
duncan.wood@infopro-digital.com  
**Managing Director** David Pagliaro  
david.pagliaro@infopro-digital.com

**Infopro Digital Head Office**  
Fifth Floor  
133 Houndsditch  
London EC3A 7BX  
United Kingdom  
tel: +44 (0) 20 7316 9000  
fax: +44 (0) 20 7930 2238

**Infopro Digital US**  
55 Broad Street, 22nd Floor  
New York, NY 10004  
tel: +1 646 736 1888

**Infopro Digital Asia**  
Unit 1704-05  
Berkshire House, Taikoo Place  
25 Westlands Road  
Quarry Bay  
Hong Kong  
tel: +852 3411 4888

**Infopro Digital Customer Services**  
tel: +44 (0) 1858 438 800

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## Can giant killers exist anymore? Could they ever?

As you'll read on page 4, Max Bowie broke the news that Money.Net has filed for Chapter 7 bankruptcy. This story is a bit complex, so I won't get into the details of the company's legal troubles. What is interesting for this column, though, is that the market data workstation provider tried to tout itself as a low-cost alternative to the Bloomberg Terminal.

In 2014, Morgan Downey joined the vendor as CEO, and, as Max writes, embarked on a series of ambitious expansions to upgrade the platform, including adding new content and tools—from cryptocurrencies to a proprietary artificial intelligence (AI)-generated news service and integration with quant tools—and partners, such as an alliance with OpenFin to broaden its exposure, making itself available via Symphony Communication Services' platform, and joining LPL Financial's partner program. The company also poached several former Bloomberg employees to help it gain traction.

It didn't work, but I enjoyed the few conversations Downey and I had in the past, and I think he had some interesting, unique ideas.

The fact is that the term "Bloomberg killer" gets thrown around a lot. It's an easy way for vendors to market their product and get media outlets to run "Bloomberg killer" in their headlines next to the vendor's name, and those media outlets get clicks, in return. Shit, even before "clicks" existed, in 1990, we ran as a headline "Levkoff The Brain Behind Reuters' Bloomberg Killer" and followed it up in 1991 with this headline, "Another Year On: Where Is Reuters' Decisions 2000 Bloomberg-Killer?"

This brings me to Symphony, another company that got tagged with the "Bloomberg killer" moniker. It's not something that we ever played into—hopefully because of past experience—but there's no question that when Symphony launched with the backing of several Wall Street giants, the target was Bloomberg. CEO David Gurle would always object to that characterization, but it certainly didn't hurt marketing efforts for media outlets to make the comparison.

As you'll read on page 5, Reb Natale broke the news that Symphony has suspended its Sparc offering indefinitely, as the vendor is engaged in ongoing talks with the US Commodity Futures Trading Commission about the service's registration status. As our colleagues at *Risk.net* wrote in 2018, Symphony was trying to "march on Bloomberg" with the introduction of Sparc.

Here's my question: Is there a market in the terminal/workstation space for innovative startups to take real market share from the likes of Bloomberg, Refinitiv, FactSet, etc., and do so independently without falling into the seemingly endless cycle of consolidation? I think tech is evolving fast enough that it makes interoperability—and, thus, disruption—more viable, but we're not near there yet. **wt**

**Anthony Malakian**  
Editor-in-Chief

# waterstechnology

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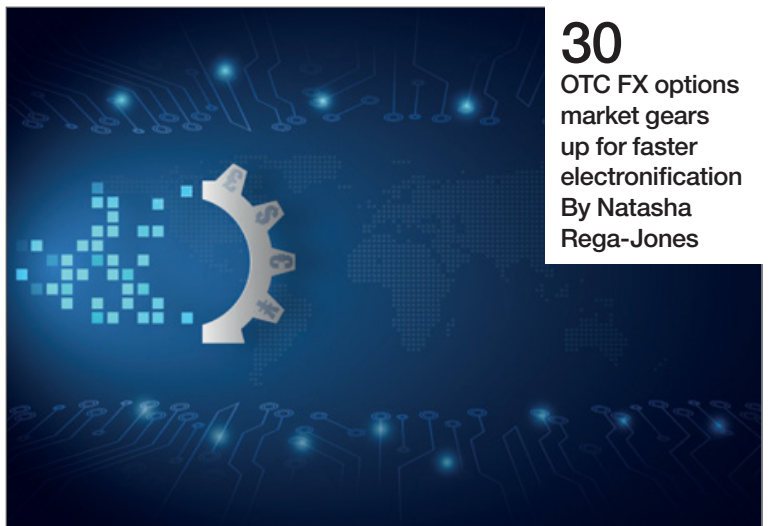
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OTC FX options  
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By Natasha  
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# Money.Net files Chapter 7 bankruptcy amid lawsuit

Despite a series of ambitious content expansion projects and senior hires, the low-cost vendor failed to win over institutional clients. By [Max Bowie](#)

New York-based Money.Net, the market data workstation once touted as a startup to rival Bloomberg, has filed for Chapter 7 bankruptcy protection, following a judgment in an ongoing lawsuit from investors alleging financial mismanagement, *WatersTechnology* has learned.

Unless the company can reach a deal with creditors, it is likely to be wound up. Chapter 7 prevents those owed money by a company from collecting or demanding payments owed to them, or initiating lawsuits while the petition is in effect. Firms that file for Chapter 7 protection are appointed a trustee, which arranges a meeting between the company and its creditors, where the company must answer questions about its condition. In a Chapter 7 case, the trustee will typically liquidate a company's assets to pay creditors. As a result, many companies don't emerge from the process.

The Chapter 7 petition was filed in the Delaware Bankruptcy Court on April 15 by Matthew Ward, a partner at law firm Womble Bond Dickinson, based in Wilmington, Delaware. Since the filing, the court set a deadline of April 30 for the company to submit information, and has scheduled a meeting of creditors for May 20.

The company often touted its data workstation as an alternative to premium terminals, but for a fraction of the price. The vendor charged \$185 per month, which included real-time US equities (though additional exchange fees may have applied) and real-time currencies data, cryptocurrencies, and end-of-day data for international equities and commodity futures. The platform also offered newswires,



**Morgan Downey**  
Money.Net

charting, screeners, fundamental data, corporate actions data, Securities and Exchange Commission (SEC) filings, and various alerts and indicators.

## Big ambitions

But the platform's low price point may not have been enough to fund the vendor's big expansion plans or senior hires, which sources say left it unable to pay suppliers. Under the leadership of Morgan Downey, who joined the vendor as CEO in 2014, Money.Net embarked on a series of ambitious expansions to upgrade the platform, including adding new content and tools—from cryptocurrencies to a proprietary artificial intelligence (AI)-generated news service and integration with quant tools—and partners, such as an alliance with OpenFin to broaden its exposure, making itself available via Symphony Communication Services' platform, and joining LPL Financial's partner program.

However, these efforts failed to generate real traction for the business, and trying to expand the offering left it "one mile wide and one foot deep," says an executive at a data vendor, and "under serious pressure," says an executive at a second data vendor.

Dan Connell, managing director of Greenwich Associates and former president and CEO of data vendor Interactive Data Real-Time Services, says he's not shocked by the situation. "The data vendor business is quite an expensive undertaking when you look at the costs of data aggregation. And Money.Net seemed lost in the space between retail and institutional. It seems they had a hard time conquering the retail/financial advisor market with

the existing competition of systems that are certainly good enough for that market. And they pursued the content need for institutional but—even if you can assume their quality was good—the competition with Refinitiv and Bloomberg is just too much for someone like Money.Net to overcome. I can't see a firm replacing one of the major vendors with them."

## High senior turnover

And its senior appointments didn't last long term: Downey, who previously served as global head of commodities at Bloomberg, and earlier in his career ran trading desks at Citibank, Bank of America and Standard Chartered, enlisted former Bloomberg executives to help boost the platform's presence. Among them was Norman Pearlstine, former Bloomberg chief content officer, who was also editor in chief at *Time* magazine, and a senior advisor to the Carlyle Group. Pearlstine joined Money.Net as chief information architect to oversee the AI news initiative in September 2016, but left in early 2018.

In August 2017, the Money.Net hired Stefanos Daskalakis as chief product officer. Daskalakis, whose career included a seven-year stint at Bloomberg as global business manager, left after less than a year in June 2018. In 2015, Money.Net hired Alina Sullivan, a former senior salesperson at S&P Capital IQ, TheMarkets.com and Thomson Financial, as global head of sales. Sullivan joined Gartner as client director in April 2019 and does not list Money.Net on her LinkedIn profile. **WT**  
*Editor's note: To read a longer version of this story, go to [waterstechnology.com/7825406](https://waterstechnology.com/7825406)*

# Symphony suspends Sparc pending registration talks with CFTC

The comms provider may have to register its RFQ workflow and messaging tool as a Sef, or perhaps permanently shut down the business line. By [Rebecca Natale](#)

**C**ommunications and workflows platform provider Symphony has suspended its Sparc offering indefinitely, as the vendor is engaged in ongoing talks with the US Commodity Futures Trading Commission (CFTC) about the service's registration status, *WatersTechnology* has learned.

As part of its Symphony Market Solutions suite of services, Symphony Sparc was unveiled in June 2019 as a workflow tool for interest rate and cross-currency swaps, in which buy- and sell-side traders could use a single chatroom for both request-for-quote (RFQ) negotiations and standard messaging. The execution play was a prelude to the vendor's grander theme of Symphony 2.0, an ongoing rebrand meant to position the company as an end-to-end client- and trade-lifecycle platform, marking a significant move away from a pure communications facilitator.

Now, nearly two years since the presentation of Symphony Market Solutions to the industry, the bundle of offerings has hit a major roadblock.

"Symphony and the CFTC are in current discussions about the registration status of its capital markets solution, Sparc. As a matter of prudence, we have suspended Sparc pending the outcome of those discussions until further notice," says a Symphony spokesperson.

As those discussions play out, Symphony will have to weigh the risks and rewards of operating Sparc as a swap execution facility (Sef). If it resumes activity as a regulated entity, that could have ramifications for its registration status in Europe, where it might be seen as a multilateral trading facility (MTF). As recently as last



“Rather than have, say, five different chat windows with your five dealers, you have a single view of the world where you're engaged in several bilateral discussions.” **Scott Eisenberg, formerly of Symphony**

year, regulated European venues were already crying foul over Symphony Sparc and tools like it, arguing that this breed of unregulated tech vendors puts them at a competitive disadvantage by being able to offer comparable services for lower costs in an agile fashion.

The suspension of Sparc comes amid signs that the vendor was beginning to make headway in capturing a significant network of buy-side clients, a demographic that has been slow to embrace Symphony throughout its rise.

A survey released last week by *The Desk*, a publication for institutional investors specific to fixed income, gauged interest in Symphony from 59 major asset managers across the US, Europe, and Asia-Pacific. Despite trading interfaces from Bloomberg, MarketAxess, and Tradeweb main-

taining the lion's share of interest, 5% of respondents said they planned to use Sparc as a trading interface this year. Additionally, though Symphony has no primary market platform, 7% of respondents planned to use the vendor in some way to handle the primary bond issuance process, while Symphony again clocked in at 5% for the secondary markets.

When regulated European venues raised concerns about unregulated entities such as Symphony last year, former general counsel at Symphony, Scott Eisenberg, who left the vendor in January of this year, rebutted their claims, arguing that Symphony's "bilateral" quality was distinct from the way regulators define MTFs, which involves bringing together multiple parties to transact—hence, "multilateral."

Conversely, Sparc's bilateral nature made it "no different than having five telephone conversations going at once," Eisenberg said. "Rather than have, say, five different chat windows with your five dealers, you have a single view of the world where you're engaged in several bilateral discussions," he added.

An online disclaimer of Symphony Market Solutions was last updated in February this year.

"Any Symphony Service, such as Sparc, that permits customers to negotiate the terms of any financial instrument, is offered, and only capable of being used, on a purely bilateral basis. Symphony has no role or involvement in the negotiation or arranging of any transactions in financial instruments nor in the introduction of counterparties to one another for purposes of entering into such transactions," it reads. [WT](#)

# Banks, asset managers weigh trade-offs in third-party machine learning tools

Although many banks and asset managers still prefer to build models in-house, off-the-shelf products are maturing. By [Hamad Ali](#)

**“B**uild versus buy” is an age-old conundrum in most aspects of financial services enterprise technology. That is no less true for emerging technologies like machine learning than it has been in other, more traditional parts of firms’ tech estates. While off-the-shelf products have improved hugely, and no- and low-code platforms promise to make building models a breeze, many organizations still prefer to build their own algorithms and models.

Andy McMahon, machine learning engineering lead at NatWest Group, says his needs are very specific, and off-the-shelf solutions aren’t really relevant for that reason. Often his team has to develop not one model, but rather several models that can work in a chain or a pipeline.

“I think almost all the [machine learning-related things] that I work on, on a day-to-day basis, have no off-the-shelf solutions for them. That is not because there are no third-party solutions we could have used, it’s just that we have to chain together quite disparate things,” he says.

In general, McMahon says, an organization has a better understanding than a third party would of its own data, how it interacts with other data sources, and the synergies between those data sources. Internal staff, for example, could more easily see connections between datasets within a firm’s enterprise resource planning system and its customer resource management system. A vendor might find it difficult and time-consuming to work through those links.

But, he says, off-the-shelf products



could be good training for firms that are not very mature in using emerging technologies like machine learning.

“It is quite a natural thing to use off-the-shelf tools more at the beginning of your data maturity journey because you don’t have to worry about so much,” he says. “You can just focus on building the right model and really understanding how things work. And then, as you become more advanced, you can start stripping away some of those off-the-shelf solutions and doing your own thing to make it more bespoke and really tailored to your own use case.”

Of a similar vein of thinking is Raul Leote de Carvalho, deputy head of the quant research group at BNP Paribas Asset Management, who says that AI models have become less work-intensive and more user-friendly. However, his fund is not working with popular low-code tools such as Microsoft Power BI or TensorFlow, Google’s open source library for machine learning,

as they aren’t relevant to the type of investment problems that BNPP deals with. “There are some applications that could be useful, but for a lot of the things we currently do, we do not have enough data,” he says.

His fund’s strategy is to buy a stock with the view of selling it three or four years down the line. Leote de Carvalho says this is a “slow frequency” problem, and just doesn’t generate enough data to justify the use of off-the-shelf tools.

## The case for buying

In 2017, Irish fund Mediolanum Asset Management said it was developing proprietary machine learning algorithms to drill down into its data and understand clients’ behavior, in partnership with a specialist research center. But just three years later, the fund is accessing these capabilities via Microsoft Power BI, a low-code analytics service that provides business intelligence such as customer data insights.

“Machine learning models, such as convolutional neural networks and self-training models, have improved in leaps and bounds, even in that space of time,” says Barry Noonan, chief information officer at Mediolanum. “What was cutting edge at that time is encapsulated in more off-the-shelf components three years later.”

For just over a year now, the fund has been engaged in a data governance project that involves restructuring its enterprise data warehouse and moving to the Azure cloud. The shift to Power BI is part of these wider modernization efforts.

Microsoft says its Automated Machine Learning (AutoML) within



Power BI is aimed at allowing business analysts without strong experience in machine learning to build models that solve business problems that once required data scientists. AutoML adds automatic guardrails such as training-test data split to ensure that the models are of good quality.

Noonan says AutoML supports binary prediction, classification, and regression models, which are types of supervised machine learning.

“Because we get these models out of the box, and they are no-code, our data scientists can focus on more value-added problems: predicting more difficult variables like fund flows, potential changes in customer complaints, or what our Morningstar ranking is likely to be in the next 12 months,” he adds.

He says users at Mediolanum also like that Power BI integrates with services from Microsoft competitors such as Google and Amazon. For example, users can access Google Analytics or connect to an Amazon Redshift database via Power BI’s desktop.

“Once upon a time, Microsoft was very monolithic and said, ‘You must do all of [a particular process] our way,’” Noonan says. “They have now become much more open to services outside of their own ecosystems, and outside of their own control.”

Adrian Poole, director of financial services for UK and Ireland at Google Cloud, says it might be generally true that firms see more value in building their own models. But, he adds, the tech giant has tools aimed at financial services firms that can simplify data scientists’ work. Firms could build baseline models using these tools and then tailor them afterward.

AutoML Tables or BigQuery ML, for example, create models that are easy to use and effective on a new problem, he says. “Firms can then invest their experts to beat that baseline through expert, domain-specific knowledge and approaches.”

AutoML Tables is a supervised

learning service with which the user can train a model with example data to make predictions. It can be used, Poole says, where the return on building the model is not enough to justify the resources that would be spent on a bespoke model.

“We have clients who have used AutoML Tables to train models to identify which clients are likely to proceed based on RFQ [request for quote] data to determine which clients are likely to trade. This can be extended to model what-if and explainability tools to understand underlying drivers,” he says.

Poole says AutoML could address a problem that McMahon describes: developers having to work on multiple models which must operate together. AutoML Tables uses ensemble approaches such as “stacking,” which, in the context of machine learning, means it combines multiple algorithms to get better predictions than one algorithm alone.

“Because we get these models out of the box, and they are no-code, our data scientists can focus on more value-added problems: predicting more difficult variables like fund flows [or] potential changes in customer complaints.”

**Barry Noonan, Mediolanum**

Google offers a continuum of machine learning services, from pre-built models accessible via API, to customizable models using TensorFlow. Poole says financial firms use pre-trained natural language processing and natural language understanding models from Google Cloud for sentiment analysis and to enable conversational AI with chatbots.

“Over the last year, we have seen a large uptake in Document AI, to scan and understand documents, to reduce reliance on paper. Specifically for financial services, we have rolled

out Lending DocAI to help reduce the mortgage process from months to hours,” Poole says.

### Sticking points

NatWest’s McMahon concedes that off-the-shelf offerings have improved greatly since he began his career in 2017 as he was finishing a PhD in physics.

“There are people saying they can help do MLOps [machine learning operations] properly, solutions that can help monitor these models in production, or help tag your data,” he says. “The whole field has evolved and has become more mature. I think we now know the pain points better, and third-party vendors have honed in on that.”

But, he adds, apart from the consideration of relevance to the organization, there are wider industry trends that impact the decision to use an off-the-shelf product.

“In financial organizations, especially if we are dealing with a lot of legacy solutions, we are sort of in a hybrid world where we have legacy things that we have to maintain, but we are also trying to migrate to the cloud,” he says. “So, I think you would be hard pushed to find off-the-shelf solutions that can deal with the internal complexities of your systems.”

Poole counters that Google works with clients at all levels of digitization, and adds that it’s the quality and quantity of data that is material to the success of machine learning models.

He says that, for a bank with legacy technology, he would recommend breaking down data silos in order to start consolidating data across the enterprise. Once a client has their data in a normalized, controlled environment, they can then look to machine learning models and build a platform with MLOps to streamline model training to production.

“This provides the first step to improving analytics, visualization, and democratizing data insight for the firm, and is typically more beneficial than an isolated science project,” Poole says. **wt**

# Users clash with ASX over changes to its DLT settlement system

Industry groups and tech experts are worried that proposed last-minute changes will introduce new risks.

By [Luke Clancy](#)

Changes proposed by Australia's top exchange to its new block-chain-based settlement system for stocks have drawn fire from prominent sections of users, who fear that the amendments will create new risks.

Under the proposal published in February, the Australian Securities Exchange will move to an exception-only reporting model, meaning that clearing brokers will no longer receive confirmation messages for trades that settle successfully. The overnight netting cycle will also be replaced by a continuous process, which ASX says will result in greater capacity.

The consultation closed on March 18. Based on conversations with seven industry sources, ASX will have received some unhappy feedback—pointing to hiccups in the rollout of distributed ledger technology (DLT) in finance as the technology's popularity grows around the world.

"The proposed changes in functionality shift substantial processing load and risk onto clearing brokers," says Damian Jeffree, senior director of policy at the Australian Financial Markets Association (Afma). "[The changes] will require substantial rework of systems and processes at what is quite an advanced point in the project, and this increases risks."

ASX's new settlement system will replace its current aging system known as Chess. Under Chess, both securities and funds settle on a net basis across participants, and this will be retained.

But individual confirmation messages for successful transactions will no longer be sent out. Rather, participants will be notified of the total funds set-



“We are not putting operational risk on our customers but are proposing to do things a different way than we have done historically over the past three decades.” **Tim Hogben, ASX**

tled, as well as of the instructions that have failed. They will be able to request the details of the underlying instructions that formed part of settlement for a specified account, security, basis of movement, and settlement date.

Judith Fox, chief executive of Australia's Stockbrokers and Financial Advisers Association (Safaa), echoes Jeffree's criticisms of the proposal, arguing that it will result in "a significant increase" in operational risk for participants.

"They will no longer be provided with an auditable settlement chain to definitively identify the settlement

obligations being netted and fully settled," she explained in her consultation response seen by *WatersTechnology* sibling publication *Risk.net*. "Participants will be required to self-determine settlement finality by performing additional processing, reconciliation and verification activities for a large volume of client transactions during business hours."

Fox also agrees with Jeffree that market participants will have to redo much of the work they have already completed.

"This introduces additional costs. Furthermore, all additional change at this stage in the project incurs additional delivery risk," she wrote in her response.

The proposal was put forward as late as five years after work on the Chess replacement began and only two years before its delayed go-live date.

ASX itself said in its consultation that software providers might

need to “refactor”—in simple terms, restructure—some of the software they had been developing in preparation, depending on whether they had already developed to the code delivered to the “customer development environment”.

Afina and Safaa are calling for an independent review of the proposal to determine if it poses any additional risks to users.

### Scale but at a cost

Some software vendors are also critical of the changes being considered by ASX. An executive at a vendor that connects to Chess says reducing the number of confirmation messages could introduce systemic risk in the event of a counterparty failure or liquidation event.

“Today everything is kept in sync and all participants are fully informed as to how the cancellation and netting process works. There are never any concerns about missing anything,” the person says, referring to so-called novation netting, in which offsetting transactions are cancelled and replaced with a new, net transaction.

“But because they need to reduce their messaging volumes, the ASX is no longer going to tell the market how those trades have been cancelled. They’re just going to expect that participants in the market will work it out themselves.”

The executive also worries that the ASX proposal will introduce further reconciliation points in a system that was designed to require far fewer reconciliations than Chess.

The exchange denies that the changes—which it says are supported by regulators—shift more work to users and expose them to additional risks.

“We are not putting operational risk on our customers but are proposing to do things a different way than we have done historically over the past three decades,” Tim Hogben, chief operating officer at ASX, tells *Risk.net*. “Customers are still going to get all the information they need. They are just

going to get it through different means and different workflows.”

He argues the changes are necessary to ensure the new system can scale “so we never have to talk about capacity again”. They will allow the Chess replacement to handle 15–20 million trades a day and ultimately up to 40–50 million, he says. Chess has the capacity to cater for 7 million trades per day over multiple consecutive days. It is unclear what the new system would be able to handle without the changes.

ASX decided to revisit the design of the DLT system after experiencing a major spike in trading volumes in March 2020, when activity exceeded previous peaks by more than seven times, the exchange said in its consultation.

The Australian Securities and Investments Commission has also expressed “significant concern” about an outage at the exchange on November 16. ASX has said the incident was caused by a software glitch during the rollout of its updated platform for equities. ASIC is investigating the incident, which includes assessing whether ASX has sufficient technological resources to operate its markets.

### Dividing opinion

A spokesperson for the exchange provides further defense of its suggested changes. He says ASX received around 30 responses out of a total of approximately 70 “relevant stakeholders”, which includes vendors, clearing and settlement participants, alternative market operators and industry associations.

“The less than 50% submission rate could reflect a general satisfaction with the proposals being consulted on and/or confidence that an overall view will be accurately captured in the submissions made by the vendors and industry associations,” the spokesperson says.

He adds that the feedback included confidential comments in support of ASX’s efforts to “reduce the number of messages” it sends and “scale to much higher volumes”.

But for some market participants

the envisaged changes to the netting process are a bigger concern. ASX determined that, as volumes increase, netting will take increasingly longer and will at some point exceed the time available for overnight processing. It decided the best option would be to calculate netting on a continuous basis as trades are registered and novated to its clearing house, ASX Clear.

Paul Conn, president of global capital markets at vendor Computershare, argues that continuous netting could undermine “settlement discipline” by enabling a short position to remain open and unchecked for an extended period without either a penalty or the risk of being closed out “through a buy-in arrangement, for failing to deliver [securities]”.

“These are two mechanisms that can be used by a settlement system operator to encourage on-time settlement and enforce settlement discipline,” says Conn, who helped develop Chess when he held senior roles at ASX earlier in his career.

In a blog published on March 15, he also wrote that the planned changes raised certain questions, including: “Will the proposed new workflow create a global precedent for netting pre-settlement obligations on a distributed ledger? Or might it be a consequence of a technology that may not readily scale up to ‘net’ peak trade volumes?”

Several other exchanges and market infrastructures, including the US Depository Trust and Clearing Corporation, are developing DLT platforms to handle post-trade processing.

ASX plans to release completed code for the Chess replacement at the end of June. More recent comments by Hogben chime with this timeline: he says the exchange is on track to complete “customer-facing functionality” in June, with testing starting after that.

ASIC did not respond to a request to comment about the proposed changes. ASX’s other regulator, the Reserve Bank of Australia, declined to comment. [wt](#)

# BMLL partners with quants for HFT regs

Researchers from a Paris university are using the provider's data and coding environment to build models for more efficient regulatory approaches. By [Jo Wright](#)

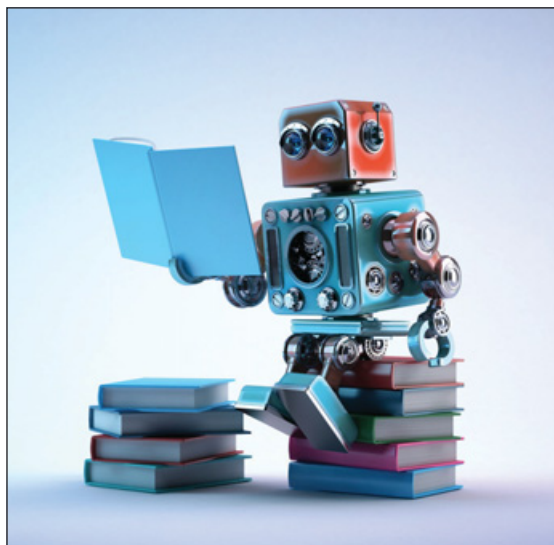
**B**MLL Technologies has partnered with a team of quantitative researchers from the Paris-based Ecole Polytechnique, providing the academics with order book data for their research, which takes a statistical approach to markets regulation.

Mathieu Rosenbaum is a senior professor at the school, where he holds the Analytics and Models for Regulation chair. His research focuses on statistical finance, mainly modeling market microstructure, and looking at ways to help financial regulators adapt to high-tech markets.

"We are trying to regulate very technological, very clever, very advanced, very scientific market participants. So we believe that we should also adopt a financial engineering approach to regulation," Rosenbaum says of his research.

BMLL is providing the quants with "Level 3" data, the use of its Data Lab platform, and access to its data scientists. Data Lab is a cloud-based Python environment where users can access the data, as well as analytics libraries. Rosenbaum and his team have been working with BMLL data since the first quarter of this year.

Level 3 data is what BMLL calls data that goes beyond the top of the order book. "It's every single message coming out of a public exchange. It's not just seeing what the best price is, what a trade is; it's every single insertion, deletion and cancellation message that comes through an exchange on any given day. That is a vast amount of data," says Elliot Banks, the company's chief product officer. Banks says BMLL's dataset weighs in at a hefty 15 petabytes. In comparison, Netflix's data warehouse is 60 petabytes.



“We are trying to regulate very technological, very clever, very advanced, very scientific market participants. So we believe that we should also adopt a financial engineering approach to regulation.” **Mathieu Rosenbaum, Ecole Polytechnique**

BMLL takes in the data as a disparate dataset from exchanges, and puts it into different products, one of which is Data Lab. Data Lab is aimed mainly at market participants who want to use it for best execution, to understand the market as an exchange participant, or for alpha generation.

The Ecole Polytechnique quants, however, are looking to use the data in models they build to understand market microstructure—the complex interactions of price discovery, trading behavior, and trading venue structure—in a high-frequency trading (HFT) context. A microstructural

approach looks at all the mechanisms that play a role in price formation, the way the market functions at its core, plus all the actors and events that influence this process.

"As academics and researchers, we can find a way to look at data and say, 'OK, what is the impact of making that choice, if I choose to have a given tick [the minimum variation of prices]—1c or 5c, for example—how will that change the markets? How can I decide when to interrupt continuous trading and trigger an auction?'" says Marcos Carreira, a PhD candidate in Rosenbaum's program and former technical modeling officer at the Brazilian exchange B3. "So we have good models that tell us what the behavior of investors is supposed to be, and then we can go and get data to see if the model fits reality. And then we can take our conclusions to the regulators so they can look at the different possibilities of organizing the markets."

More traditional approaches to markets might ignore these events, which happen so fast they are measured in microseconds and milliseconds, such tiny slivers of time that only computers can understand them. Many academics in the past, for example, have been largely focused on valuation, looking at the fair market prices of securities, and projecting returns. But these approaches cannot explain how the market might change instantly with new information and new customer orders.

"If you were interested in long-term problems, you might neglect or not really care about them, but in fact what is happening at the microstructure level has an impact on everything. Even long-term volatility is connected to what is happening at that level," Rosenbaum says.



In the HFT world, market-makers' behavior is highly dependent on volatility, a topical area of study in the past year. Rosenbaum himself, along with a colleague, developed a groundbreaking model for "rough volatility," solving a long-standing puzzle in options markets. But he and his team are also working with regulators on other projects, which is where they hope the BMLL data will make a difference.

"We need to understand some very specific events—Brexit, the Flash Crash—and it would not make sense for us to do some quick and dirty statistical study. You need to take the time to have full information from the data, and this is where BMLL data comes into play," Rosenbaum says.

### Regulators going quant

The regulatory and supervisory world is a traditional, even hidebound, place. However, regulators are starting to use emerging technologies to become more efficient at keeping markets safe and fair.

"In the past, the only academics that regulators were talking to were well-established economists. But that is changing. In the case of extreme volatility, for example, the job of the regulator is to understand what happened, and how they can mitigate the effects of it. Well, you need more than a simple economics model to do that, you have to dig into the data and use complex mathematical models, you have to get people able to do that, and this is where we could collaborate with them," Rosenbaum says.

Rosenbaum's team collaborates with regulators such as the French markets regulator, the Autorite des marches financiers (AMF). Late last year, Rosenbaum and others published a paper co-authored with AMF managing director Philippe Guillot in which they laid out a new matching design for financial transactions in an electronic market. The mechanism, which they dubbed Ahead (which stands for "ad hoc electronic auction design"), allows



**Mathieu Rosenbaum**  
Ecole Polytechnique

market participants to trade between themselves at a fixed price and trigger an auction when they are no longer satisfied with this fixed price.

The researchers said in the paper that they proved that Ahead worked better than the central limit order book (Clob), the standard approach that many exchanges use. Since HFT became more widespread, there has been a debate that Clob is a suitable matching mechanism.

While Rosenbaum could not divulge the details of projects that he and his team are working on with the regulators using BMLL data, he says they're developing similar kinds of research questions to take to the regulators. With the Level 3 order book data, for example, the Ecole Polytechnique quants could calibrate an order book model to assess and validate the toxicity of order flow. The Level 3 data is necessary because "if you want to investigate



The university's academics are researching statistical approaches to markets regulation

HFT strategies, you have to look at flows at least at Level 3," he says.


Ever since HFT has come into the public consciousness via events like the Flash Crash, there has been a lot of debate in regulatory circles about whether or not it is good or bad for markets. But, Rosenbaum says, HFT is such a wide field, with such a multiplicity of strategies, that to tar it all with the same brush is not helpful to regulators.

A financial engineering approach could distinguish between trading firms' individual strategies.

"Proprietary trading firms, HF market-makers, and even asset managers, are not just putting order books at the bid or the best ask, or putting in market orders. Their strategies are complex, and you need to consider at least two or three levels down into the order book. So we use data to classify the order flow, and whether this order flow is stabilizing the market, or, on the contrary, this order flow is destabilizing the market," Rosenbaum says. "And from a regulatory perspective that is very interesting, because it's not just saying, 'OK you are putting in a lot of orders, so you are good, or you are bad.'"

Carreira says that besides the Level 3 data, BMLL's Data Lab was attractive to the research team partly because it functions in a centralized workspace. If he were to leave the program, for example, the rest of the team could still access his code. It wouldn't be lost in a folder or on a device somewhere. More critically, it also gives centralized access to the dataset, meaning future researchers can repeat his work, allowing them to test and reproduce his results.

He adds that he feels the BMLL data is of high quality. The data the team uses must be able to accurately present a picture of events. A researcher, for example, might want to do a relatively simple study, and match up the price of a transaction that occurred at a particular time and the bid/ask at the moment of execution. Two exchanges might record that data very differently.

"I've worked with market data directly from exchanges, but the ability to work in a well-structured Python environment like BMLL, with data correctly classified and labelled, and the ability to summon snapshots and events on the order book with just a few lines of code, means that my time is spent on features and dynamics instead of reconciling timestamps and identifiers," Carreira says. 

# BNP Paribas AM turns to machine learning for carbon emissions

The asset manager is using machine learning to estimate carbon footprints for companies that do not report emissions. By [Hamad Ali](#)

**B**NP Paribas Asset Management is using machine learning to estimate carbon emissions for companies that do not report their carbon footprint.

Raul Leote de Carvalho, deputy head of the quant research group at BNP Paribas Asset Management, says its modeling of carbon emissions will provide estimates for some 10,000 companies. The model's approach was inspired by a paper authored by researchers at the University of Otago in New Zealand, detailing how machine learning can be used to improve the prediction of corporate carbon emissions for risk analysis by investors.

"We have been consulting with them and discussing this approach for a couple of years during our research phase," Leote de Carvalho says.

To model carbon emissions, the fund is using different types of machine learning, such as elastic net, XGBoost, and random forests.

"The model is built by finding the factors that can predict the emissions of companies that [have] already published data—this is our training dataset—which are then used to come up with carbon emissions estimates for the companies that currently do not publish their carbon emissions," he says.

The models use factors such as the scale of operations of the company, which can predict emissions. For example, if the factor was company size and there were two oil companies with one producing significantly more oil, that company is likely to emit more carbon, even if it isn't reported.

The gaps in the data, as well as the



“We often need to have a quality assurance process, where you actually have analysts who really know the industry and they look at the data by geography to see if the data is relevant. Because sometimes what we find is that you will have companies that are under-reporting, or not setting the right parameter of reporting.” **Axel Pierron, Sustainalytics**

lack of a standard approach to reporting carbon emissions data, make some in the industry cautious about the potential of machine learning at this stage.

Axel Pierron, associate director of client relations at Sustainalytics, says the full benefit of machine learning and artificial intelligence (AI) will be more important once there is a high degree of exposure of carbon emissions by companies.

Pierron says a machine learning approach is highly dependent on the quality of the underlying data. “That is

where I am still a bit hesitant. I think it's a very useful tool—I already see its usage—but we still have that issue of data quality,” he says.

He stresses the need for a human to qualitatively assess the data. “That is why there is so much demand for people [with] any ESG expertise and competency, because there is that need to re-work on the data,” he says.

## Indirect carbon emissions

Some types of data are harder for machines to assess than others. BNP

Paribas' model will first be used to estimate Scope 1 and 2 emissions, with work also in the pipeline to make estimates on Scope 3.

Scope 1 emissions cover direct emissions by a company from owned or controlled sources, such as company facilities or vehicles. Scope 2 relates to indirect emissions from the generation of purchased electricity, steam, heating, and cooling consumed by the company.

Scope 3 emissions cover all other indirect emissions in a company's value chain, including upstream and downstream activities. Leote de Carvalho says Scope 3 can even represent the most important measure for some sectors. One example is the auto industry, as a sizable proportion of the emissions from makers of internal combustion engine vehicles come from consumer use of their products.

"Scope 3 is the most complex and difficult to estimate because of the interdependencies it implies. We are unaware of anyone in the industry currently accounting for Scope 3 because it is difficult to estimate, and good estimations are not yet available—as far as we know," says Leote de Carvalho.

But he says BNP Paribas is working on it. "We plan to have a different version of the methodology for the estimation of Scope 3 emissions, which will probably also rely on supply chain data at least in a second stage of the modeling," he says.

He says the value chain nature of Scope 3 means BNP Paribas has a greater chance of creating a better model for it for a given company by taking into account its supply chain, at least for some industries.

### Mixing in supply chain data

The company's supply chain data about companies comes from two sources: Exiobase, for estimating emissions and resource extractions by industry, and Bloomberg's supply chain data. It is focusing mainly on ESG and sustainable investing, with natural resources being one of the first areas of focus.



“We plan to have a different version of the methodology for the estimation of Scope 3 emissions, which will probably also rely on supply chain data at least in a second stage of the modeling.”

**Raul Leote de Carvalho, BNP Paribas Asset Management**

"We are using these databases to see not just the companies in which we invest, but through the supply chain, what our current position really is. And we are working on this project at the moment, and we plan to have something in 2021. That is something we are working on, and something that most likely will be used in the fund we plan to launch this year based on eco-systems," says Leote de Carvalho.

He says BNP Paribas plans to launch a fund based on natural resources, with an aim to invest in companies that are doing the best in terms of reducing resource consumption and minimizing waste. "We plan to use the data we are currently calculating to better estimate the exposures of the companies to water consumption and forest consumption, and the way they use it," he says.

Graph databases are one way BNP Paribas analyzes its supply-chain data, as they can provide a deep dive into a company's different relationships. "Scope 3 might actually be the first

example where we combine machine learning and the use of graph databases," Leote de Carvalho says, adding that the machine learning methods that will be used for Scope 3 will probably be the same as for Scopes 1 and 2. The difference is in predicting the variables to be used. For Scope 3, some variables will be related to the emissions from companies in a supply chain, which will also likely be industry dependent.

"There is the potential for double counting," he says. "In the case of automakers, Scope 3 emissions of a maker of internal combustion engine vehicles will also be counted as Scope 1 for the company that bought or leased those cars for their own business. This ensures that companies feel responsible for their emissions across their entire supply chain."

Sustainalytics' Pierron says that when estimating Scope 3 emissions, the important consideration is consistency, so that there can be a fair comparison between participants. He warns that when trying to measure Scope 3, companies could have different reporting parameters within the same industry at different times. For example, one company might not report its carbon footprint outside of its home market, while another does.

"We often need to have a quality assurance process, where you have analysts who really know the industry and they look at the data by geography to see if the data is relevant. Because sometimes what we find is that you will have companies that are under-reporting, or not setting the right parameter of reporting," he says.

Sustainalytics also provides Scope 3 data, and there are other vendors in this space, Pierron says. However, he says understanding emissions for Scope 3 is a "very challenging exercise," and a number of corporations now understand that ESG data is becoming more important for their investment strategy. "Therefore, some of them may tend to minimize their level of emissions," he says. [wt](#)



**Axel Pierron**  
Sustainalytics

# Bloomberg's new data retention policy vexes buy-side firms

Impacted users will have to pay extra costs to retain communications data for longer than two years. By Josephine Gallagher

**B**loomberg is planning to shorten the default data retention period for which communications data will be accessible via its Terminal and messaging platforms to two years, frustrating some clients that will now need to change their data arrangements and absorb new costs to meet minimum legal and regulatory data retention requirements. Previously, Bloomberg has provided access to five years' worth of data to subscribers of these services.

In an email sent to customers on March 15, which *WatersTechnology* has seen, Bloomberg writes that from July 15, 2021, communications data "will be retained and accessible for only two

years via the Bloomberg Vault Terminal Search (BVTS) function or other Bloomberg Vault Core Compliance Tools (BVCC)." Communications data created after July 15 that is more than two years old will be deleted from the vendor's systems unless a client subscribes to its Vault Premium service.

Buy- and sell-side firms are required by the UK's Financial Conduct Authority (FCA), the Monetary Authority of Singapore, and European regulators via the second Markets in Financial Instruments Directive (Mifid II) to retain

records of their electronic communications for a minimum of five years, rising to seven years if requested by some EU national competent authorities. Some firms also retain communications data for several years to meet internal legal and governance obligations.

Bloomberg's policy update means that buy-side chief operating and compliance officers must decide whether to subscribe to the Vault Premium service, use a third-party data retention solution, or store and manage their communications data internally.





“It’s caused quite a bit of consternation in the COO and CCO world,” says a head of compliance at a European asset manager with more than \$5 billion under management. “We have a five-year record-keeping obligation for the Financial Conduct Authority, and Bloomberg is now saying they’re only keeping it for two years. They may be offering to keep it for five years for an additional fee, but a lot of firms are scrambling around saying, ‘We’ve been relying on Bloomberg chat messaging, and now

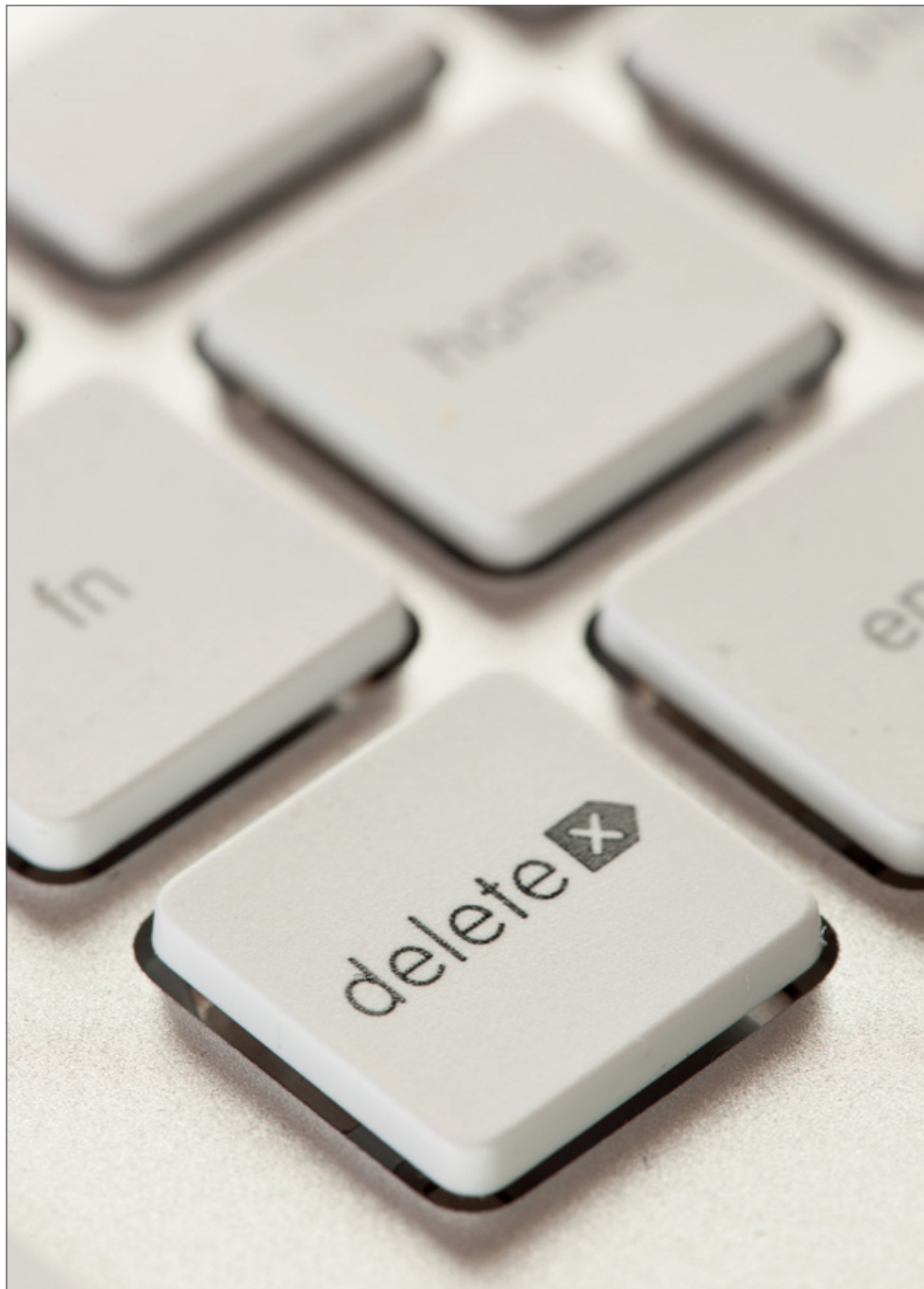
they are giving us less than what the FCA expects.”

Bloomberg’s email goes on to say, “If your firm has a data retention requirement beyond two years, please contact your Bloomberg representative to discuss options.” The compliance head says this is disingenuous because Bloomberg is aware that “everyone has a retention period of more than two years.”

However, Nader Shwayhat, global head of Bloomberg Vault compliance solutions, says the vendor doesn’t know

what proportion of its clients will be impacted by the policy changes or how many will not require a minimum of five years’ data retention. He says it is up to the customer to know their own regulatory obligations.

“They have to know, and we’re talking about firms global in scope. It’s not as simple as ‘the buy side’—the buy side is segmented in many different ways, and their jurisdictions all depend on their local registration and the local government upon which they are mandated and governed, if at all. There are many



firms that do not fit the profile of a typical hedge fund,” Shwayhat says.

With the policy update due to take effect in just three months—though firms won’t technically be impacted for two years—Bloomberg customers, subject to the changes, face three options, each of which comes with a price tag: subscribe to Bloomberg’s Vault Premium solution, where pricing begins at \$1,000 a month; opt to

take data out of the non-premium Bloomberg Vault, where charges start at \$50 per gigabyte extracted subject to a minimum \$3,000 per extraction; or sign up to a compliance service where transcripts of communications data are delivered daily via FTP for customer download, which will require the purchase of new data storage or a third-party data retention solution.

“

“It’s caused quite a bit of consternation in the CIO and CCO world. We have a five-year record-keeping obligation for the Financial Conduct Authority, and Bloomberg is now saying they’re only keeping it for two years.” **Head of compliance at a European asset manager**

While the Vault Premium package costs a minimum of \$1,000 per month, Shwayhat says the total price will vary depending on factors such as surveillance requirements (that is, trade reconstruction capabilities), the data retention period (ranging from three years to indefinitely), and the types of datasets stored. For example, in addition to Bloomberg communications, clients may ask the vendor to store their Twitter, Slack, or Microsoft Outlook communications, as well as phone call recordings or trade data.

### A matter of communication

Shwayhat says Bloomberg has spent the past several weeks carrying out phone inquiries and outreach campaigns to clarify which clients will be impacted by the changes, and if so, how.

He says firms will not feel the effects of the changes until two years after the policy update. Data captured from July 15 onwards will be available via the Bloomberg Terminal, messaging platform, and monitoring systems for two years. From July 15, 2021, any communications data created after that date and older than two years will be deleted, and will no longer be available in Bloomberg systems unless the client is subscribed to Vault Premium.

Data captured up until July 14 this year, however, will remain subject to the old policy agreement and will be stored for five years.

Shwayhat says firms that already subscribe to Vault Premium, third-party services that archive communications, or the daily Bloomberg FTP file service will be unaffected.

But there is a cohort of firms that have relied on Bloomberg to store communications data within the Terminal or other Vault compliance and administrative systems for the five-year retention period to meet legal and regulatory obligations, says the head of compliance at the Europe-based asset manager. They say multiple CCOs and COOs have been airing their frustrations to one another in mailing groups since the March announcement.

One CIO at a tier-two European asset manager, and a head of compliance at a European asset manager with more than \$15 billion under management, spoken to for this article, say they are still trying to figure out how they will be affected.

Bloomberg says it is not cutting the amount of storage available but is reducing the amount of “courtesy storage” that has until now been included in the price of its platforms. It is understood internally within Bloomberg that there is still work to be done in order to better communicate the policy changes to clients, as well as to make clear distinctions between the Vault compliance tools referenced in the email, the courtesy data storage, and Vault Premium.

When asked how clients have responded to the policy changes, Shwayhat says, “Customers that already have those [data retention systems] are not impacted and they just had a lot of clarifying questions to confirm that. But customers that do not have an existing data retention solution, their response has been muted.”

On March 24, Bloomberg sent a second email to clients clarifying that if they are a user of Vault Premium they will not be impacted by the changes.

Bloomberg could not provide the proportion of firms that have so far decided to subscribe to Vault Premium, pay to extract their data, or opt to receive a daily compliance file.



**Nader Shwayhat**  
Bloomberg

## Déjà vu

Policy updates such as this one are not entirely new to Bloomberg or its customers. In 2010, the vendor sent clients a similar email informing them that its retention policy was changing from infinite storage to five years, and that any firm wishing to store its communications data for longer than five years would have to subscribe to its Vault service. One former Bloomberg Vault employee says hundreds of new customers signed up to avoid the burden of organizing and storing the data themselves.

“It’s a giant, expensive pain in the butt to take a USB drive with 10 million messages,” says the former employee. “Because when you

“**This is all part of a review process we go through to keep up with the evolution of the industry, the regulatory landscape, and the explosion of data volumes, storage, and requirements over time. As you can imagine, data in 2020 is not the same as data in 2010.”**

**Nader Shwayhat, Bloomberg**

download it, you’re going to have to account and check that what’s on the USB is fully in your system and your IT people will have to immediately take care of searching and re-indexing it. It’s a whole IT headache.”

They say transferring this amount of data to internal systems is a massive operation that can take months to ingest, format, make searchable, and reconcile with communications metadata. Additionally, firms will have to retrieve the stored data from Bloomberg, develop the functions to query it, and absorb the cost of extracting it in large volumes from Bloomberg systems.

Others agree that data extraction is becoming an increasingly challenging option to contemplate.

“The current price begins at \$50 per gigabyte to extract the data,

with a minimum of \$3,000 per extraction. We’re talking gigabytes, but the world is in terabytes and petabytes these days, so that can be punitive unto itself,” says a senior executive at a regulatory reporting vendor. “You’re suddenly in a world where you have to pay a massive premium to store [data] to meet your obligations, and you’re going to have to pay a massive premium to get it out. You’re stuck.”

The head of compliance says the company has been downloading copies of its communications data from Bloomberg for several years. While this is a challenging compliance strategy that involves a lot of technical lift, he says it wanted to prevent a situation where it was “completely beholden to Bloomberg” for the data, and to avoid being caught out by any future policy changes that could result in unexpected costs.

A Bloomberg spokesperson says clients can, at no additional cost, use the core compliance tools provided as part of their Terminal subscription to search and self-extract data at any time. They say that records can also be downloaded via the daily FTP download. However, if a client wishes to extract large volumes of multi-year data from Bloomberg systems, there is also a paid extraction option.

“If a client would prefer to have Bloomberg perform an extraction on their behalf, we do charge for this service, at what we understand to be a competitive rate,” the spokesperson adds.

Shwayhat says the policy review is a response to the increased amount of data that has been generated over the past 10 years, which has meant that systems required to manage it have had to keep pace.

“This is all part of a review process we go through to keep up with the evolution of the industry, the regulatory landscape, and the explosion of data volumes, storage, and requirements over time,” he says. “As you can imagine, data in 2020 is not the same as data in 2010.” [WT](#)

# The looming data storage wars

Anthony Malakian first looks at the data storage space, explaining that fees are likely to increase for buy- and sell-side firms in the near-term, so trading firms need to start preparing for that now.

Last November, Google announced that it would no longer allow users to store photos and videos for free on its servers. As a columnist in *USA Today* put it, “Google turned its back on consumers Wednesday and says *we’ll all* have to start paying as of June 1st.” (Emphasis my own.)

Indeed. How dare those dirty bastards at Google not provide this service for free for the rest of time—don’t the execs at the Silicon Valley giant work for us, after all?! Ah, shit ... no ... that’s right ... Google is a for-profit, public company, and it made a calculated decision to start charging for a service that costs money to provide.

Those execs are betting that customers like the service enough (and/or that they’re lazy enough) that they’ll simply pay a couple extra dollars a month to get a hundred extra gigs of storage. Fear not! The six different angles of your head in a cool hat can stand the test of time!

I can understand why people who are financially strapped are upset—they’re making ends meet as best as they can already without having to pay Google’s parent Alphabet (a company that did quite well for itself during the pandemic) more money for a simple service.

But there’s not a gun being held to anyone’s head, either. There are free (or cheaper) alternatives out there, or users can show better discipline in deciding which photos/videos are actually worthy of saving until the apocalypse happens.

Either way, Google will either feel the wrath of users, or users will pay Google for the service, and profits will continue to go up (which, by

the way, will allow for more research and development of new products and services—some of which might be made available for free ... for a certain period of time, anyway).

This brings me to another massive tech company that is both at times beloved and reviled by users and the capital markets community—Bloomberg.

Last month, Josephine Gallagher broke the news that the vendor is planning to shorten the default data retention period for which communications data will be accessible via its Terminal and messaging platforms from five years to two years.

There’s a fair amount of complexity to this story that I won’t get into here (you can read about it on page 14), but suffice it to say, not everyone on the buy side applauded this decision by Bloomberg.

Now, just like with Google, I have no clue whatsoever whether or not this decision by Bloomberg execs is a good one, or a misstep that they’ll have to reverse or “enhance” at a later date. What I do know is this: Even though it’s getting cheaper to store data, the amount of data that regulators require trading firms to keep, and the amount of data that trading firms want to keep for trading/risk/stress testing/customer relationship/surveillance purposes, are both rapidly rising.

So Bloomberg decided that it would start charging to keep data past two years. In 2010, the vendor made a similar move, informing users that its retention policy was changing from infinite storage to five years, and that any firm wishing to store its communications data for longer than five years would have to subscribe to its

Vault service. And you know what, it might one day decide that two years is too long, too. Or, there could be another revolution in the data storage space that makes keeping an endless heap of data for the rest of time feasible, and Bloomberg and Google (and others) will once again allow users to store data for free for forever.

What I do believe, though, is that Google and Bloomberg are not going to be alone in making these types of moves around data storage, and trading firms better start to plan for that in the future in how they budget and sign contracts—this shouldn’t be something that catches people totally off guard.

As social media once taught us, if you’re not paying for a service, you’re the product. That’s the decision that tech firms of all stripes will continue to ponder: Why are we providing this for free? What do we gain? Are we better served charging customers for this? Will there be a backlash? Can we survive that backlash?

Vendors are going to continue to make these calculations, and there absolutely will be other companies like Bloomberg that will come to the same conclusion—our clients like our service enough that they won’t leave over an issue like this (or, they’re simply lazy or overburdened and will just sign the check).

But this is the finance industry, and people might want to stop being shocked by companies looking to grow profits and cut their own costs. This will not stop with Bloomberg.

Or, maybe I’m wrong, and you think I’m a shill for Big Tech. I’ve got thick skin. ... Let me know what you think: [anthony.malakian@infopro-digital.com](mailto:anthony.malakian@infopro-digital.com). **wt**



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# Hammer, meet nail

While Christopher Giancarlo says distributed ledger technology could have helped prime brokers better monitor their risk exposures to Archegos Capital Management, Anthony Malakian (and others) are not so sure about that.

If you are a subscriber of this magazine, I assume you already know that *WatersTechnology* and *Risk.net* are sibling publications owned by Infopro Digital (and before that, Incisive Media and Risk Waters). While 98% of *Risk.net* stories would not be of interest to our readers—and vice versa—every now and again the reporters at *Risk* hit on tech and data, and how they relate to managing risk and regulation.

So it is that last month they published a story about how distributed ledger technology (DLT) could have helped prevent the ripple effect that resulted in Archegos Capital Management's \$20 billion default—according to Christopher Giancarlo.

Giancarlo, you might remember, previously led the US Commodity Futures Trading Commission (CFTC). During his time at the CFTC, the interwebs started referring to him as “Crypto Dad” because of his advocacy of cryptocurrencies, which are underpinned by distributed ledgers such as blockchain.

Because he's the former chairman of a major regulatory body and he likely still has some clout on Wall Street, saying that DLT could have helped to better monitor the risks that stemmed from Archegos' heavily leveraged bets is worthy of repeating. As such, we also decided to run the story (see page 23), as *Risk.net* and *WatersTechnology* will cross-publish stories every now and again.

I have opinions and biases, but I truly try and block those out when I decide which stories to chase (or, in this case, poach). As I've written about plenty of times before, I am not a fan of DLT, though there are some instances where the tech might—I repeat: might—be the best tool for the job. So when I first read the Giancarlo take, my initial reaction was, “Oh great, another example of

using DLT to solve all of Wall Street's woes!” But, because of Giancarlo's standing in the industry and because the term “Crypto Dad” was in the headline, which made me giggle, we published the story. I figured people would be interested in what he had to say.

On Twitter, though, I noticed someone I respect, industry veteran Brennan Carley, wrote this about the article: “No, no, no, no!” and proceeded to explain that “DLT could not have provided better monitoring of the risks that led to the Archegos implosion.”

Another person I respect, Virginie O'Shea, who has (in my opinion) the best takes on DLT and blockchain, joined in, writing, “I continue to be amazed by how people assume DLT or technology of any type will solve problems without regulation and data standards.”

This is one of those rare times when I absolutely love Twitter—smart people discussing a subject intelligently, but very succinctly. And I also agree with what they wrote. Additionally, I agree with some of the emails I received after we published that story. So let me present the counterargument to what Giancarlo posited.

The first major issue that I, personally, have is that Giancarlo very much has a dog in this fight. Since leaving the CFTC, he set up a think tank to promote the idea of digitizing the US dollar. Last week, it was also announced that he signed on with Baton Systems as an advisor; Baton is using DLT to solve problems in the post-trade/payments arenas. While Giancarlo is the former head of the CFTC, in my mind, he's today very much a tech exec with a product to sell.

But, as the Big Lebowski would say, well, you know, that's just, like, my opinion, man. I've never met Giancarlo, so I have no clue as to his inner thoughts

on DLT beyond what he says in public, and there's no reason for me to think that he doesn't believe what he's saying. But the way that we just report on what Giancarlo says about DLT reminds me a lot of how media outlets (again, us included) reported on all of Blythe Masters' thoughts on blockchain a few years ago.

On top of that, here's what Carley wrote on Twitter (semicolons mark a new tweet): “The market and regulators didn't lack visibility of Archegos' positions because of some missing magic technology; The market and regulators didn't have visibility of Archegos' positions because Archegos traded OTC swaps, which neither counterparty had an obligation to disclose; Without a mandate to disclose, no bank, asset manager, or family office is going to voluntarily expose their positions on ANY ledger for the world to see; On the other hand, if there were a regulatory obligation on either the banks or Archegos to reports those positions, that could be facilitated by any number of industry utilities (my friends at LCH and the DTCC could do it, too); It doesn't require any distributed technology, just a decent database, a defined set of data/reporting standards, and (most important) a regulatory mandate to report. Let's stop assuming that technology magically solves these problems.”

This is what O'Shea was saying: DLT or any other piece of technology are just tools, but they can't solve anything “without regulation and data standards.”

Someone else emailed me (I'll keep them anonymous, as I always do with private emails), writing this: “It's a new shiny toy, but you need the right data to get to the right people. The essential issue is NO one prime broker has the consolidated positions of a client. And unless you have the prime brokers submit all the data for all the clients into





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“It’s a new shiny toy, but you need the right data to get to the right people. The essential issue is NO one prime broker has the consolidated positions of a client. And unless you have the prime brokers submit all the data for all the clients into a central reporting mechanism, nothing changes. Obviously, that’s very sensitive data, but there are solutions that can aggregate that and show risk and issues versus the actual positions themselves. S3 Partners has [that type of] solution, sans the DLT mumbo jumbo, for example.”

**Anonymous**

a central reporting mechanism, nothing changes. Obviously, that’s very sensitive data, but there are solutions that can aggregate that and show risk and issues versus the actual positions themselves. S3 Partners has [that type of] solution, sans the DLT mumbo jumbo, for example.”

And still someone else wrote me this: “Blockchain is just basically a (not very good) database,” but if you were going to use a DLT for the purpose of measuring risk exposures for prime brokers, a regulator will still need to define the workflow around who, what, when, where, and how to report this information. Additionally, standards need to be defined around how a firm represents a swap and the symbology used (no small feat), and all of those workflows and protocols need to be continuously updated as the market evolves.

Furthermore, someone needs to write the code to update the ledger, “or do we really expect every market participant to become an expert on coding this stuff and having to hire their own IT team to do it?” they say. “The dirty secret of blockchain is that it is only transparent if you are willing to do a lot of work yourself (i.e. you can’t just pick up a blockchain and look at it with a green visor on—you need to write code, and it’s some pretty hairy/cryptographic code, at that). And, finally, someone needs to audit it to make sure it is all correct and not vulnerable to fraud, etcetera.” **wt**

*This is an important debate because I feel DLT proponents have an outsized voice, while contrarians often feel they’re shouting into a stiff wind. Have some thoughts? Think I’m misguided or missing something? Email me: [anthony.malakian@infopro-digital.com](mailto:anthony.malakian@infopro-digital.com).*



# ‘Crypto Dad’ Giancarlo says DLT could have aided in Archegos

The former CFTC chair says managing collateral by using distributed ledger technology would enable the better oversight of risks. By Luke Clancy

**C**hristopher Giancarlo, former top regulator and now blockchain champion, says the risks associated with Archegos Capital Management’s \$20 billion default might have been better monitored if the collateral in its trades had been managed using distributed ledger technology (DLT).

“A distributed ledger, which all market participants would be on, is the way you could have a comprehensive view of any institution’s activities and all markets, whether it be a clearinghouse, or a prime broker’s exposure to markets,” says Giancarlo. “The regulators could be ‘nodes’ on that system.”

Archegos, a family office headed by former hedge fund manager Bill Hwang, ran into trouble on March 26, when its leveraged bets on a concentrated portfolio of Chinese and US stocks turned sour. Its use of total return swaps allowed Archegos to escape regulatory scrutiny of its holdings. In addition, it opened positions with several prime brokers who may not have been aware of the extent of credit lines extended to the lightly regulated family office.

Distributed ledger technology creates an official, master version of a record of data by a group of participants. The technology also forms the basis of the blockchain system, which underpins cryptocurrencies such as bitcoin.

The information held on the distributed ledger can be accessed with pre-set levels of permission for certain users, and is updated in real time. Advocates of the technology, including Giancarlo, believe it could enable regulators to better monitor the use of collateral and build-up of leverage.

“[The technology] could be useful in situations like this, where you’ve got a family office that is using many different prime brokers,” Giancarlo says.

Giancarlo has been dubbed “Crypto Dad” for his long-standing embrace of cryptocurrencies and the technology they use. Last month, he joined Baton Systems, a DLT provider working with banks including Citi and JP Morgan on new methods of margin processing.

Giancarlo previously led the US Commodity Futures Trading Commission between 2017 and 2019. Before that, he spent 15 years on Wall Street in over-the-counter (OTC), interdealer broker markets. After Giancarlo’s departure from the CFTC, the regulator exempted family offices from oversight measures on two occasions.

Archegos’s use of multiple prime brokers allowed the family office to accumulate highly leveraged positions. In 2016, the CFTC expressed concerns about another practice said to contribute to the build-up of leverage—margin financing—whereby clearing members lend money to their clients to post as initial margin.

Giancarlo thinks DLT would improve the management of collateral, in particular the use of rehypothecation, where firms pledge securities that have already been used as collateral. The practice is allowed but within strict limits.

“This is where I think DLT will be a game-changer because collateral will be verified on a consensus basis, and the chance of collateral re-pledging, double-pledging, triple-pledging will be minimized, potentially to zero,” Giancarlo says.



**Christopher Giancarlo**

Left holding the can with defaulted margin calls, banks including Credit Suisse and Nomura are now billions of dollars out of pocket as a result of Archegos’s over-sized bets. Regulators are scrambling to understand how the family office was able to build its positions, and are under pressure to put in place measures to guard against similar blow-ups in future.

At the core of Archegos’s investment strategy was its portfolio of total return swaps. These are contracts where one party receives the total return of an underlying asset, often a basket of equities, in exchange for set payments.

In Europe, total return swaps are reported to authorities under the Securities Financing Transaction Regulation. In the US, firms are not required to report comprehensive data on total return swaps to regulators, but this will change from November when firms will be required to comply with security-based swap reporting rules.

Giancarlo says national regulators such as the CFTC currently lack a real-time system to globally track trading flows. A DLT-based system could help authorities share information, to help build up a picture of cross-border exposures.

“The CFTC looks at an enormous amount of data, but it’s mostly data by either US firms or in US marketplaces. The CFTC doesn’t see daily data about what a US bank, or even a foreign bank trading in the US, may also be pledging in Singapore or Japan,” Giancarlo says.

“Regulators have various pieces of the puzzle, but the degree of sharing of that data is completely idiosyncratic, and to the extent it’s shared, it’s not on a real-time basis. There really is no comprehensive data set in any asset class,” he adds. [WT](#)



# Bridging the gap: Broadridge looks front-to-back with acquisition of Itiviti

The deal signals a transformative move for Broadridge into the front-office space to help clients simplify their front-to-back technology stack. But some industry observers are skeptical about how it will achieve this. By **Wei-Shen Wong**

**W**hen Broadridge Financial Solutions announced at the end of March that it was buying Itiviti from Nordic Capital for \$2.5 billion, the price tag caught some off guard. The fact that it was Broadridge acquiring the Swedish trading platform provider surprised others. But this is the way the market is moving: Large banks, large exchanges, and large vendors are all trying to figure out how they can create their own front-to-back ecosystem for users.

Banks used to say that they weren't technology companies; now the biggest ones have innovation labs, fintech sandboxes, or venture capital arms. Exchanges were simply marketplaces; today they're swallowing up major tech and data providers. And the largest vendors used to believe in closed-off systems; today, interoperability is becoming the name of the game. All of these shifts in mindset are being driven by the idea of front-to-back.

During an analyst call announcing the acquisition, Broadridge CEO Tim Gokey noted that "the front-end and back-end exist as two separate functions," but Itiviti would help Broadridge to bridge that gap, allowing users to simplify their tech stack and operating models. In an interview with *Waters Technology*, Vijay Mayadas, president of capital markets for Broadridge, says the company already has a "strong footprint in the post-trade world," and it does have front-office products—most notably through its acquisition of Paladyne Systems in September 2011—but Itiviti will allow Broadridge "to create a full front-to-back solution for capital markets firms."

A strategy executive at a data and software solutions provider who has had experience working on the buy side says that while trading firms certainly want

a more complete offering, rather than having to stitch together tools on their own, they prefer to see internally developed innovation, rather than innovation through acquisition.

"A lot of clients probably look at the way they're using technology and want to see their providers listening to them to address their challenges," says the executive. "They'll say, 'I need you to be developing the tool I already have from you to meet my requirements or my evolving business. I don't necessarily want you to tack on a completely new system that covers something else. I want you to innovate in the space that I selected you for originally.'"

Achieving front-to-back integration takes time, and the devil is in the details. Ion Group has had challenges integrating Fidessa; IBM wasn't able to make its





Algorithmics acquisition work in the long run. While the dream is to get to a true front-to-back offering, industry experts say it's just that—a dream.

"If you ask Broadridge and they talk about trade lifecycle, sure, it's all beautifully said, but the front-office scene is very different from the back office, and I just don't see them being able to convince their back-office customers to start using their front-office tools, and vice versa," says the former head of a trading platform provider.

Still others say front-to-back can be achieved if the right strategy is put in place. The strategy executive says providers like SimCorp and BlackRock have succeeded in making a play for that front-to-back solution. "For SimCorp, it worked really well in certain target markets like Europe, where best-of-breed

**“If you ask Broadridge and they talk about trade lifecycle, sure, it's all beautifully said, but the front-office scene is very different from the back office, and I just don't see them being able to convince their back-office customers to start using their front-office tools, and vice versa.”**  
**Former head of a trading platform provider**

didn't resonate so well due to the complexity of integration. They sort of put the fear of God into people that integrating systems is so hard," the executive says.

BlackRock, on the other hand, "was going out to clients telling them, 'Hey, you've got 10 or 15 different systems

covering risk, portfolio management, compliance, trading, and reporting, and all these different things. We're going to draw a box around that, and [BlackRock's portfolio management platform] Aladdin is going to cover all those things,'" the executive adds.

Marcus Consolini, partner at independent strategy consulting firm Quinlan & Associates, adds that M&A isn't done in a bubble. Itiviti itself merged with buy-side trading technology provider Ullink in 2017, and it's likely that the two are still working on integration projects. "I bet some of that integration is still going on," he says. "You go down the layers and that's quite intensive. But that's what happens in an acquisition environment around technology—it's not avoidable."

A source familiar with Itiviti's inner workings says that while front-to-back is the goal, this deal will also allow Broadridge to expand its global footprint, as Itiviti—especially thanks to the Ullink pairing—has a "reasonably complete" front-office operation in the EMEA and Asia-Pacific regions.

They add that when bolting on a new offering where there aren't naturally existing synergies, integration projects tend to take a longer time. They draw parallels between this deal and what FIS Global is looking to do with its capital markets profile, most notably with its SunGard acquisition, and, to an extent, what Temenos and Finastra are doing in the core banking space.

"They have a long way to go, though, before being able to achieve those levels of integration, and in the short term, I don't expect the clients of either business to feel the benefit of the buyout," they say.

So it's possible nothing will change for clients, and Itiviti will be left to run operations without much interference. "Itiviti has a clear and reasonably well-defined product development and strategic roadmap, and I expect them to stick to that plan. Integrating directly with Broadridge's middle- and back-office technology doesn't really fit that plan in the sense that it yields no overt, immediate benefits for either of the companies or their clients," they add.

## Idea factory

Broadridge's Mayadas says although that integration roadmap is long and extensive, the top priority is to ensure clients have a seamless experience. "Mission number one is to ensure that the integration between the brokerage platforms and Itiviti's platforms is as seamless as possible. Today, clients still do work integrating Itiviti into our equities platform. We want to make that process as simple as possible for our clients, and that's step number one," he says.

The aim is to have that process available to clients in a much more standardized, off-the-shelf integration than have the client orchestrate the process.

Mayadas says the firm has "a lot" of product ideas around front-to-back integration, and these ideas are driven by the market's thirst for data.

"If you think about large capital markets firms, they have lots of different types of databases, they have different sources of truth around transaction data, and they have to do a lot of reconciliation across all the different systems," he says.

One idea—which Mayadas notes is a longer-term investment—is to create a common data warehouse that has one set way of describing transaction data and trade data, and all the different systems would be mapped into that way of describing trade data.

"So firms now have a single source of truth around their transactions and would be able to manage positions and transactions on a real-time, global basis. This is something Broadridge has been working with clients on for a while, but only in the post-trade world. The ability to now do that in front-to-back is very compelling," he says.

Another idea is to bring some of the functionality that historically has only existed in the post-trade world into the front office.

Mayadas says there is demand for firms to take certain datasets and calculations out of the back office and into the front office to drive a more real-time view of things such as risk, margin, settlement status, and so on. This need—and more importantly, want—is more pertinent in asset classes that are traded algorithmically and are highly electrified.

**"Mission number one is to ensure that the integration between the brokerage platforms and Itiviti's platforms is as seamless as possible. Today, clients still do work integrating Itiviti into our equities platform. We want to make that process as simple as possible for our clients, and that's step number one."**  
**Vijay Mayadas, Broadridge**

Exchange-traded derivatives (ETDs) and equities are examples of this. This is also where Itiviti comes into play. The company is known for three main things: its Nyfix network connectivity solution, its Tbricks exchange derivatives trading platform, and its order and execution management system (OEMS). About 60% of its \$250 million revenue comes from the OEMS and Tbricks. The remainder comes from Nyfix.

In the ETD world, Mayadas says real-time information on margin, clearing status, and cash movements on an ETD trade is important. "Traders have been trying to figure out how to bring that data into the front office so they can make trading decisions in real time based on cash projections related to trades that will clear, and margin projections related to trades that will clear and settle," he says.

That is one of many examples that Broadridge will be building out over time, he adds.

## Infrastructure is not sexy

In November 2017, Itiviti merged with multi-asset trading technology and infrastructure provider Ullink. The marriage saw Ullink integrate its buy side-focused solutions with Itiviti's portfolio of sell-side trading solutions. Ullink brought to the merged entity its Nyfix network connectivity, which it bought from the New York Stock Exchange in 2014.

Together, they brought to the table high-touch, low-touch, market-making, and connectivity solutions. Itiviti's OEMS picked up new business thanks to Bloomberg sunseting its sell-side execution and order management (Sseoms) business.

Quinlan & Associates' Consolini, who was formerly head of Asia at Ullink before the firm merged with Itiviti, says Broadridge made a smart move.

"They knew they were missing a very big part of this food chain—they were missing that EMS/OMS playground that gets so much attention. And the reason it gets attention is that it's sexy. When you're going out to clients, you want to talk about trading environment, you don't really want to talk about the pipes. The pipes aren't so sexy, but the pipes are fundamental," he says.

The pipes are important as they connect the brokers and asset managers and exchanges worldwide, which were Ullink's specialty, and which are now part of the whole Itiviti package.

Consolini says this is the bigger reason Broadridge made a move on Itiviti. "I think they're looking at the infrastructure stuff because Itiviti is so infrastructure-focused. For example, a lot of their clients are literally exchanges, and that is because you're building the gateways for the order flow and connectivity into the exchanges. So for Broadridge that will be great; they suddenly have access to these infrastructure clients, as well as a bigger and broader range of the broker-dealer and asset management space," he says.

Although Nyfix contributes the smaller chunk of revenue to Itiviti—about 40%—sources believe this could be what Broadridge was really after.

Medan Gabbay, chief revenue officer at multi-asset OMS/EMS provider Quod Financial, believes that the Nyfix piece is "infinitely more valuable" to Broadridge than Itiviti's OMS, as it's a stickier product.

Whether or not one Fix connectivity provider has a better product vs. another certainly matters, but having critical mass matters more, which, Gabbay says, Itiviti has. "You need to have enough of a percentage of market value. The Fix network globally is [Bloomberg's] EMSX, [Refinitiv's] Autex, followed by Nyfix, and then the only reason to use other Fix networks are because OMSs force it."

This all has to do with how Fix networks work, which Gabbay compares to how cloud technology works. It's like a standard message that goes into the cloud, and then it connects with someone on the other side.



**Vijay Mayadas**  
Broadridge



“Let’s say I have a buy-side client on Nyfix, and a broker on Nyfix. The broker will pay roughly \$400 per month, per client, for that buy-side [client] to be able to see them over the Nyfix network. When that client sends an order, Nyfix will ask, ‘Who are you sending it to?’ and they’ll say, ‘Broker code A123,’ and the order will magically appear on the endpoints destined for A123,” Gabbay says.

If the broker is on a different network, but the buy-side client is on the Nyfix network, the client will send the order to Nyfix, and the broker will pay Nyfix \$400 for the privilege of receiving that order. That order will then go on a connection between the Nyfix network and the secondary network—which will also charge the broker \$400—for that broker to receive it, Gabbay says, thus doubling the cost for the broker. As a result, they’re more likely to just use Nyfix, EMSX, and/or Refinitiv.

### Perfect timing?

Beyond the front-to-back aspects of this deal, the price tag raised eyebrows for others. A former head of a trading platform provider says Broadridge paid “way too much” for Itiviti. Rumors began in October 2020 that Itiviti was up for sale. Back then, Bloomberg reported that Itiviti’s owner, private equity firm Nordic Capital, was considering selling it for some \$1 billion.

Broadridge’s \$2.5 billion offer—valued at 10 times Itiviti’s recurring revenues of approximately €210 million (\$250 million) in 2020, according to Broadridge—has left some sources skeptical of the splurge.

“They plan to get \$20 million revenue synergy in 2025. ... How do they justify this as a lucrative deal? I have no idea,” says the source.

They say most deals of a similar caliber have been done at smaller multiples, but last year the cost of M&A has been trending upward.

“We used to see deals in the three- to five-times revenue multiple in the capital markets and fintech business, but somehow in the last year, the number has crept up. This one is 10 times, which is insane,” they say.



For example, in July 2018, State Street announced it was acquiring Charles River Development for \$2.6 billion, about 8.67 times CRD’s 2017 revenues of \$300 million.

Also in July 2018, SS&C Technologies bought Boston-based OEMS provider Eze Software for \$1.45 billion, valued at about five times Eze’s 2017 revenue of \$280 million.

Though those acquisitions were mainly in the buy-side OMS space, some sources raised concerns that Broadridge spent so much on Itiviti, leaving less capital for Broadridge to innovate, much less spend on integrating Itiviti into its business.

Mayadas is adamant that the acquisition won’t affect Broadridge’s capability to innovate. “It’s an all-debt transaction, and obviously we got a very attractive rate because interest rates are so low. In no way is it going to impede our ability to invest organically because we invest organically from the P&L, and we continue to have capacity to do M&A,” he tells *Waters Technology*.

He adds that Broadridge is very selective in its M&A targets and has a very disciplined approach. “We are very focused on tuck-in acquisitions that are synergistic with our product set. Itiviti was much more a transformative acquisition, a significant move into the front office, but we continue to have capacity to do our more standard kind of M&A deals,” he says.

As of its latest quarter earnings ended December 31, 2020, Broadridge has cash and cash equivalents of \$365.6 million. Its current ratio—which measures a firm’s ability to meet short-term obligations—stands at 1.37.

And perhaps the sale was also due to good timing, Consolini says.

“We know there’s now disassociation between the economic situation and the market situation. And we know that everybody’s trying to get real heavy emphasis in anything in the technology space because of what we’ve seen with the Covid-19 pandemic. The timing was perfect for them to get a premium in the marketplace. Is there logic around that pricing? Not by where I stand,” he says.

However, Consolini says, that doesn’t mean there wasn’t a logical argument that justified getting the sale over the line.

### The Paladyne question

Broadridge’s acquisition of Itiviti is not its first foray into the front-office space. Back in September 2011, it bought buy-side solutions provider Paladyne Systems, whose integrated front-, middle-, and back-office platform served hedge funds, asset managers, fund administrators, and prime brokers.

However, since that acquisition, sources say they haven’t heard or seen Paladyne anywhere in the market. “Paladyne had a very early start to the buy-side OMS business and it’s literally

nowhere to be found,” says a capital markets consultant.

The consultant stresses that Broadridge is not a technology company, but rather is a “processing company.”

“They contain the technology, but all they do is proxy and shareholder services. It’s a services business and they’re not known for cutting-edge technology. It remains to be seen how they will improve Itiviti,” the source says.

Several sources familiar with the Broadridge/Paladyne deal say it got off to a rough start, but not because Broadridge was under-investing in the buy-side specialist.

Rather, it took some time to learn how the asset management community works.

At the time of the acquisition, which was for approximately \$76.5 million, sources say Paladyne was pulling in about \$20 million to \$25 million in revenue. Considering this was Broadridge’s big breakthrough into the buy-side market, the sell-side giant viewed Paladyne as the right company to invest in, but hit a snag initially when it failed to renew contracts from big prime brokers, as Paladyne’s business was largely relationship-driven with prime brokers to drive order flow.

When Broadridge brought in Eric Bernstein to run its investment management solutions division, the vendor started to solidify its strategy on the buy side.

“There will always be limitations of what you can do when you buy these companies for these high valuations in terms of what you can invest, but Bernstein’s vision is not to buy companies strictly for cash flow; the idea is to actually buy solutions to piece together to make better solutions,” says a senior executive at a vendor that focuses on the buy side.

The executive says Broadridge always intended to invest in Paladyne and use it to build out its buy-side operations. The source contrasts Broadridge’s strategy with that of Ion Group, which, they say, “buys companies for cash flow.” And because Itiviti offers a “toll-keeper” business model where more transactions and connections equal more revenue (Nyfix), Broadridge will need to con-

tinue to invest in the connections and pipes that connect into hedge funds and asset managers.

“It’s not selling pure software and seats; it’s actually selling trade volumes through its whole Fix connectivity business,” they say. “For Broadridge on the asset management side, [the Itiviti deal] is moving them from selling just pure seats to people, to actually getting some variable revenue components depending on transaction volumes. If you provide better service and connections, and if you can increase the trading volumes through these pipes, you make more money—you just need to increase flow. But to do that, you do need to invest in innovation.”

The source says they believe Bernstein has a clear strategy for growing the company’s investment management presence.

“I think Bernstein is doing some interesting things in terms of which vendors he’s choosing to piece together and what he’s trying to do—he’s buying the right type of companies. There’s actually thought to it; it’s not just buying random cash flow streams. There’s a method to his madness,” the source says.

Others say Paladyne’s quietness could be due to the overall compression and market pressure.

Broadridge’s Mayadas clarifies that Paladyne is still alive and well and has been rebranded as Broadridge Asset Management Solutions (Bams), its buy-side business segment. Broadridge has integrated other businesses into that, such as Revport—formerly known as Bonaire, which Broadridge bought in 2013—a fee and invoice billing software for asset managers.

He adds that historically, the market for Bams comprised medium-sized to smaller hedge funds, but that is changing. “Over time, we’ve managed to grow into servicing much larger hedge funds and some of the largest hedge funds in the world have signed up now for Bams,” he says.

Mayadas says users could benefit from the Itiviti acquisition via the integration of the Nyfix network into the Bams Fix connectivity layer.

“Bams has provided a bunch of solutions to the buy side. They have an OMS, they have a portfolio manager, and so on. They also have a Fix engine that

can integrate into Nyfix to make the buy-side integration experience more seamless,” he says.

## Playbook


It is still early days, and the acquisition is far from complete—Broadridge has a target of the fourth quarter of 2021—and it is still subject to regulatory approvals.

For Itiviti, perhaps nothing much will change for now. And maybe that’s a good thing.

Quod Financial’s Gabbay believes this is not a bad deal for Itiviti. “This isn’t like the Ion purchase. ... They’re probably not going to get ripped apart by Broadridge. They’re going to maintain investment. They’re probably going to maintain objective and trajectory. They seem like reasonable owners, other than the pressure of having made the purchase, and what they do with it next,” he says.

However, there could be risks in the form of senior personnel leaving Itiviti. Multiple sources say Itiviti’s CEO Rob Mackay has done a great job boosting the firm’s profile and prepping it for a successful sale for Nordic. Now that the job is done, some believe he may move on to another venture. Mackay was not available for comment, though he spoke glowingly of the deal on LinkedIn.

The source familiar with Itiviti’s inner workings says, “I expect elements of Itiviti senior management to inevitably move on, including the CEO. Itiviti is reasonably streamlined now, but there are still areas where the belt could be tightened further. Broadridge is a behemoth in terms of personnel compared to Itiviti. Broadridge’s corporate governance structure is akin to a Microsoft or Oracle—meaning, kind of messy and not strictly delineated along lines that make total sense—hence why they’ll likely just leave Itiviti alone for the time being to be Itiviti. How the long-term vision proceeds from there is anyone’s guess.”

Still, this is a big move for Broadridge that puts it right in the front-office space, and it’s not likely to be its last, Consolini says. “Itiviti gives you the pipes and glue to get all of the connectivity together, and then you keep going in acquisition mode and look for other opportunities in the marketplace,” he says. “As a strategy, I think it completely makes sense.” 

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# OTC FX options market gears up for faster electronification



The share of electronic trading in the market remains low, but a host of factors promise to change that for good.

By [Natasha Rega-Jones](#)

**G**ood things are meant to come to those who wait. Those waiting for greater electronification of over-the-counter (OTC) foreign exchange (FX) options have been waiting unusually long, but good things are finally on the horizon.

The \$297.5 billion market is dominated by voice trading. The reasons include the products' inherent complexity, lack of standardization and low volatility, as well as the market's relatively small size.

Some hurdles to electronic trading of OTC FX options are structural and are likely to persist, but the market is growing, paving the way for wider electronification. The appeal of electronic platforms is also increasing thanks to newer developments, such as the best execution obligation in Europe's Mifid II, cost pressures on firms, and recent technological advances.

"The electronification of OTC FX options is way behind where most of the market thought it would be by now," says Tod Van Name, global head of FX trading at Bloomberg. "But we've definitely noticed that over the last couple of years, there's been a real increase in client appetite to trade options electronically and increased offerings to meet demand."

Pritesh Ruparel, head of OTC options business at derivatives broker Sudden Financial, picks out the same two trends, adding: "We're going to see this space evolve very quickly over the next few years."

In total, we spoke to eight banks, four trading venues, and one broker for this article. The conversations indicate that interdealer trading in OTC FX options is still largely done via voice, but in the

dealer-to-client market, a sizeable share of activity is now electronic.

For now, clients are treading carefully, entrusting mostly smaller tickets to electronic platforms and leaving big ones to voice, as suggested by trading figures from six of our sources. While the percentage of OTC FX options traded electronically with clients ranges between around 66% and 90%, in volume terms that proportion is 10% to 40%, depending on the firm asked.

But electronic trading is advancing. The turnover of OTC FX options traded electronically stood at 31% of total volumes in 2019, up from 26% in 2016, according to triennial surveys by the Bank for International Settlements (BIS).

In a more recent sign of growth, the Foreign Exchange Contact Group,





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**“We’ve noticed a whole plethora of different clients increasingly trading electronic options and a lot of that is driven from regulatory requirements and people needing to prove best execution.” Ian Daniels, Nomura**

which comprises industry and European Central Bank representatives, noted in November that electronification of the FX options market was increasing and a rising number of banks were providing electronic pricing of the products.

### Speed bumps

However, the Foreign Exchange Contact Group also said that the degree of electronification was still “relatively low.”

“This is largely because the complexity and lower liquidity of FX options leads clients first to seek to understand the

market conditions better before trading,” reads the summary of the group’s November meeting.

“Moreover, unlike for spot FX, there is less need for immediate execution in FX options, as the spot market risk for OTC options is hedged at the time of the trade, making trade execution less time-critical and reducing the need for electronic execution,” it continues.

Some of these explanations for the slow pace of electronification were also mentioned by our sources for this article.

FX options are a more complex product than spot FX or FX swaps, with multiple components to consider when trading—such as strike price, tenor, spot reference, and the amount of delta the trader wants hedged.

“The options market is a much more negotiated marketplace,” says David Wilkins, head of global electronic FX sales at Goldman Sachs, who also heads up fixed income, currencies, and commodities execution services for Emea. “It’s not so much a click-and-deal situation like you have with swaps or spot. There’s more of a negotiation around the different pricing aspects of the product, which people are typically happier to do over chat.”

The various combinations possible within a single OTC FX options prod-



**Ian Daniels**  
Nomura



**“FX options are typically traded delta-neutral in the market, which helps to facilitate voice trading as the price isn’t moving around that much.”**

**David Leigh, Deutsche Bank**

uct mean they are less standardized, too. And the more bespoke a product, the better it lends itself to voice trading, as a salesperson can walk a client through the combinations available to help them find one that best suits their risk profile.

“It’s not always a situation where a client wants to trade exactly X strike, exactly Y amount and exactly Z tenor—which lends options trading more to a discussion with a trader rather than a click-and-trade situation,” says David Leigh, global head of FX spot and electronic trading at Deutsche Bank.

“For example, perhaps the dealer has an axe which closely matches the desired exposure for a slightly different expiry,” Leigh says.

The complexity of FX options largely explains why their prices move around much less than spot or swap prices, which gives rise to another reason for the prevalence of voice trading. Since the best price stays available longer, traders do not need to hit it the moment

it pops up, reducing the need for fast-paced electronic trading.

The low volatility of FX options prices is effectively even lower in common delta-neutral strategies. These often seek to profit from implied volatility and are structured to neutralize the spot price risk, which would otherwise be a major driver of the FX option’s price. As the option is rendered insensitive to the underlying spot price, the price of the option changes much more slowly in these strategies.

“FX options are typically traded delta-neutral in the market, which helps to facilitate voice trading as the price isn’t moving around that much,” Leigh says.

He gives an example: The price of a standard vanilla option, such as a euro/US dollar 20 delta, would not usually move at all during a sales call, whereas the underlying EUR/USD dollar spot rate would move 10 to 15 pips in the same amount of time.

However, Mark Suter, founder and executive chairman of Digital Vega, which operates multi-dealer platform Medusa FX Options, points out that there are other options strategies, too. In directional strategies, for instance, options prices are very sensitive to underlying spot prices and traders would therefore benefit from fast-paced electronic trading.

He notes that DigitalVega accounts for around 19% of electronic FX options flow and says many of its clients do not execute delta-neutral options trades.

The final soft spot in the current appeal of electronic trading is the much smaller size of the OTC FX options market, compared with the OTC FX spot and FX swaps markets. That matters because, simply put, the more a firm trades, the more it cares about saving time and effort through electrification.

“If a client is only trading a few tickets a day, then there isn’t necessarily an efficiency saving for them from going electronic. The workflow efficiencies just aren’t the same [as in spot],” Leigh says.

As the Foreign Exchange Contact Group noted in November, even the top 10 FX banks have daily tickets in FX options in the order of hundreds, compared with hundreds of thousands of tickets for FX swaps and spot.

### Supply and demand

But the OTC FX options market is expanding, edging closer to the critical mass of activity that justifies going electronic. In US dollar terms, the market grew 17% between 2016 and 2019, the BIS data shows.

The average trade size is also increasing, says Suter: While a few years ago it was around \$5 million to 20 million, the average ticket today is \$50 million to



**David Leigh**  
Deutsche Bank

## Bells and whistles

Banks and platforms are taking advantage of the latest technologies to improve the experience of electronic trading for their FX options clients.



In February, HSBC launched a new chatbot called Sympricot that uses artificial intelligence (AI) to give clients instant pricing and analytics for FX options.

Using natural language processing, the chatbot analyzes information from different sources on pricing and liquidity, digitizes it, and then distributes it to clients in the form of event weightings, relative value analytics, and volatility time-series charting among other metrics.

For instance, clients could search for “six-month euro/US dollar risk reversal” within the chat box and receive a range of quotes back. They can also analyze volatility surfaces and historical data before executing. If they find a price they want to trade on, electronic execution is facilitated automatically through the chat box.

“A lot of options pricing is very manual across the industry, which creates latency and thus limits the ability to service your client electronically,” says Allen Li, a senior FX options executive at HSBC. “The fact that pricing is done manually also means there is a risk of mistakes, so we wanted to get into the chat box and build something that can help turn a manual process into an automated one.”

Crédit Agricole is currently working on a functionality within its single-dealer platform to enable clients to analyze the risk in their FX options portfolios.

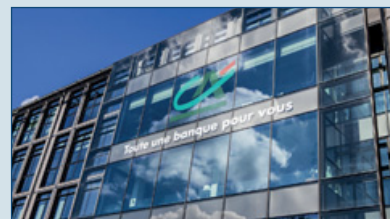
“For example, as a client, you might want to look at the risk in your book in order to work out whether you actually want to do this trade or look at the flow that’s going through and see if you’re being given a lot of vol already and that you need to update your appetite,” says Neil Maddocks, global head of FX options and precious metals at Crédit Agricole.

UBS is replacing its single-dealer options platform with one similar to Crédit Agricole’s and is planning to make it live in the next six months. TPricer will not only enable clients to trade both vanilla and exotic FX options electronically, but it will also provide pre- and post-trade analytics and tools to help clients manage their overall options positions. For example, clients will be able to see how well a product stands up to back-testing and find the cheapest time to execute.

“Our strategy at UBS is to help our clients come up with the optimal trade to express their view and assist them post-execution in monetizing that trade,” says Chris Churchman, global co-head of FX options at UBS.

Goldman Sachs will shortly release a new options pricing suite to clients through its re-engineered Marquee Trader platform. The platform will offer risk management and other tools.

Digital Vega’s new platform, Hydra, offers OTX FX options users indicative options pricing alongside portfolio, risk, and credit management tools.







\$200 million and some trades can be as big as \$1.5 billion.

Some say new regulation has played a part in the market's growth—specifically, the requirement for investment firms executing client orders to obtain the most favorable terms for the client, including price. The best execution rule is contained in Mifid II, which came into force in 2018.

“We’ve noticed a whole plethora of different clients increasingly trading electronic options and a lot of that is driven from regulatory requirements and people needing to prove best execution,” says Ian Daniels, head of electronic FX distribution for Emea at Nomura.

“Previously, you needed to ask five different banks for their options quotes over the phone, capture them, trade on the best price, and go back to your call logs to prove what happened. That’s a very time-consuming and manual process, so people are increasingly trading options electronically to streamline that process,” he explains.

Suter at Digital Vega also highlights this advantage of electronic trading—particularly on multi-dealer platforms—over voice: “The user has almost instant access to multiple competitive streaming prices in a single user interface where comparison is much easier.”

Another tailwind for electronification comes from firms’ desire to cut costs, he argues.

For example, in the asset management industry, which is among the main users of FX options, fee income has been falling for years. According to Morningstar data on US funds, in 2019 investors paid lower fund expenses than ever before, saving an estimated \$5.8 billion in fees that year alone.

“The big focus for active market participants now is cost-saving and automation ... hence, greater demand for electronic trading,” Suter says.

Similarly, Adrian Averre, head of electronic FX derivatives trading at BNP Paribas, suggests that electronification cuts down on costly operational errors.

“When you execute something electronically, the potential for mis-booking or mis-inputting is massively reduced, which consequently leads to much lower manual intervention downstream,” he says.

Lastly, technologies required for electronification of OTC FX options, such as artificial intelligence (AI) and the application of data science, have improved significantly in recent years. As a result, both the electronic pricing and the electronic trading of these complex products are becoming easier.

“The big focus for active market participants now is cost-saving and automation ... hence, greater demand for electronic trading.”  
Mark Suter, Digital Vega

For example, while in a spot FX transaction a market participant would typically buy or sell an FX rate such as EUR/USD, a EUR/USD options transaction often requires not only keeping an eye on the underlying FX rate but also the underlying cost of premium and implied volatility.

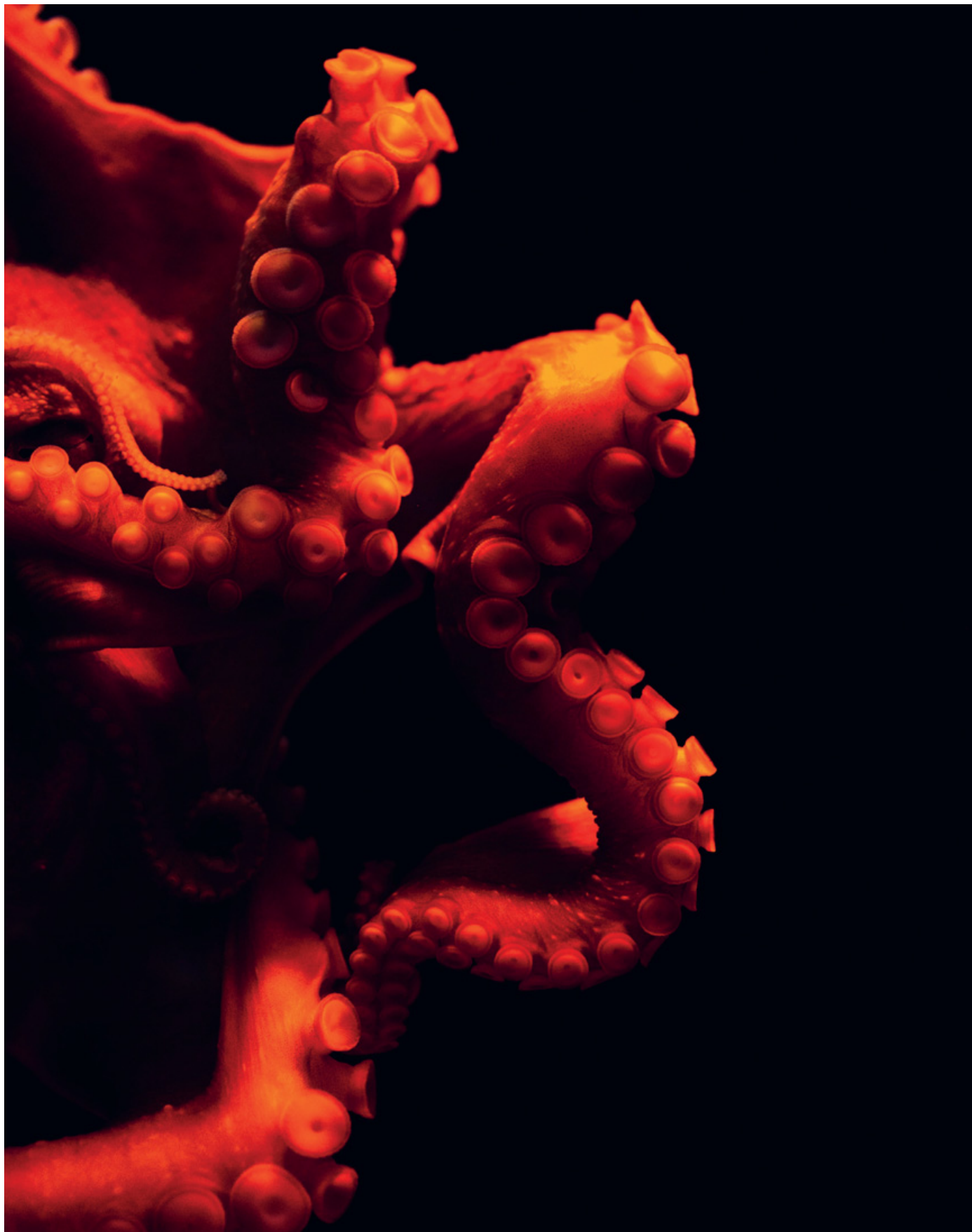
“In order to efficiently auto-price a specific option, a market-maker would need access to real-time—and extremely accurate—multiple input feeds covering spot rates, forward rates, deposit curves, implied volatility, holiday calendars, and credit add-on where relevant,” says Suter at Digital Vega.

Luckily for proponents of electronification, technology is catching up with these requirements just as demand for electronic trading of FX options is rising.

So it seems it takes both time and good timing for good things to happen. [wt](#)



**Mark Suter**  
Digital Vega





# Sink or swim: Citi, BofA ink 'Octopus' deal

Sources say the initiative is designed to fend off higher fees and disintermediation in case established multi-dealer platforms start trading CLOs and syndicated loans electronically. By **Max Bowie** and **Anthony Malakian**

**C**iti and Bank of America are building a data and execution platform that would combine the collateralized loan obligation (CLO) and syndicated loan trading efforts of its members into a new multi-bank trading platform, with the working title Project Octopus. *WatersTechnology* broke the news about the project on April 7, and it was later confirmed in a press release by the banks on April 12. Sources say the move is a bid to prevent existing fixed-income platforms from cornering the nascent electronic CLO market and charging what the banks see as high fees for trading and market data.

The consortium plans to set up an independent company with staff and management that will operate a multi-dealer platform to consolidate CLO and syndicated loan trading of the banks involved, avoiding a “middleman” platform that would disintermediate their relationships with their buy-side clients and leave the banks subject to whatever fees the platform might charge.

“Electronic trading in the CLO and loan market is still nascent, but given the current search for yield, the surge in electronic trading in fixed-income markets broadly, and technology already starting to take hold in these markets, these suggest that change is coming,” says Kevin McPartland, head of market structure and technology research at Greenwich Associates. “While it’s far from a guarantee, some of the biggest success stories in fixed income have come from consortiums—MarketAxess and Tradeweb, to name only two.”

However, successful initiatives that began as bank-backed consortiums aren’t always seen as being successes for the banks once those initial participants

liquidate their investments and move from being shareholders to customers. To be successful in terms of generating revenues and profits, these platforms charge transaction fees, as well as fees to subscribe to the market data generated from those transactions, which represents the benchmark price for those fixed-income asset classes.

“It’s a bunch of banks that are very big in the CLO loans space, which—rather than let that market go to platforms like a MarketAxess or Tradeweb, as

**“It’s a bunch of banks that are very big in the CLO loans space, which—rather than let that market go to platforms like a MarketAxess or Tradeweb, as other asset classes have—decided to create their own consortium.” Source with knowledge of the project**

other asset classes have—decided to create their own consortium,” says one source familiar with the project. The source adds that the banks are unhappy about the fees charged by those trading platforms for participation in other asset classes, and about being disintermediated from buy-side clients by the platforms. “They want to have a consortium that is fair and—though they won’t say it out loud—is controlled by them. They don’t want the genie out of the bottle again,” the source says.

Tradeweb and MarketAxess were founded in 1997 and 2000, respectively, with support from major bond-trading

banks. However, the banks ceded their investments. Thomson Corp. bought Tradeweb in 2004, then sold stakes to 10 major dealers in 2008. Tradeweb went public in 2019. MarketAxess went public in 2004.

Project Octopus originated with Citi and Bank of America, and sources says they have since approached five other banks with large footprints in CLO trading. While the participation of other banks has not yet been announced, if Octopus enlists only three out of the five it will command a 50% share of the CLO market, the source says.

The initiative started life as an internal project within Citi, which enlisted low-code software provider Genesis Global to build a multi-dealer platform that could support broad industry participation. This platform is currently undergoing testing, and the banks plan to unveil the initiative imminently, sources say.

Prior to a version of this story running online at *WatersTechnology.com*, Genesis declined to comment, while Citi and Bank of America did not respond to requests for comment.

Citi made a strategic investment last year—an undisclosed sum—in Genesis “to accelerate Citi’s digitization journey,” said Nikhil Joshi, managing director, global head of spread products technology and head of markets technology for North America at Citi, in a Genesis press release. A further \$45 million Series B funding round completed last month also included Citi, as well as existing investors Illuminate Financial and Tribeca Early Stage Partners, and was led by new investors Accel GV and Salesforce Ventures.

Citi already operated a successful CLO trading and analytics platform,



**“This kind of data is not difficult to transport, and could be delivered via any channel—over the cloud, through a portal, or on-screen. The question is whether it will package and distribute it to aggregators, or only make the data available via its own platform.” Data executive**

Citi Velocity, while Bank of America launched its Instinct platform for electronic trading of syndicated loans in 2016, and the other banks involved also have their own single-dealer CLO platforms, according to sources. But a crucial part of the Octopus agreement is that the banks involved plan to switch off their proprietary platforms and migrate all CLO trade flow to Octopus.

“That means this will immediately have critical mass,” which—along with technology—has been a gating factor for consortium-led initiatives in the past, the source says. “The unique thing is they’ve already built the technology, whereas in the case of many other consortiums, they never get their shit together in terms of technology. That’s not the case here.”

In addition to mitigating the impact of trading fees for participants, Octopus also plans to create a revenue line from selling its market data, which—while perhaps not high-volume—based on its participants would effectively be the benchmark dataset for the CLO market.

“These structured deals are not going to throw off a ton of data to start with, so any data may be more referential at the start—it certainly won’t be real-time streaming data,” says one experienced data industry executive, who suggests

that capturing and distributing its data would not be a burdensome component of Octopus’ plans. “This kind of data is not difficult to transport, and could be delivered via any channel—over the cloud, through a portal, or on-screen. The question is whether it will package and distribute it to aggregators, or only make the data available via its own platform.”

The other question, this data executive says, is how the banks will look to grow the platform if it reaches critical mass in the CLO and syndicated loans arenas—if successful, will it look to encroach on other asset classes already traded via other platforms, such as treasuries, eurobonds, currencies, rates, and futures? “Then you’d be talking about ‘real’ data that [by cutting out the middleman and their fees] could really impact your bottom line in terms of costs,” the executive says.



Once Octopus creates the independent entity that will run the platform, it will hire management and staff. While not naming any of the others potentially involved, the source says they will be experienced executives with “battle scars” and the knowledge to prevent mistakes that may have hampered similar efforts in the past.

### CLO market ‘ripe’ for change

Tradeweb confirms that it does not currently trade CLOs, but declined to comment on the new initiative, or on whether it has any plans to introduce CLO trading on its platform.

MarketAxess, which has offered electronic trading of leveraged loans since 2016, says it welcomes the competition—especially if Octopus plans to facilitate trading of CLO tranches as well as (or instead of) the

underlying loans—because it will increase transparency in a market that is opaque and illiquid but has great growth potential.

Howard Cohen, head of leveraged loans at MarketAxess, who joined the platform last year after almost 14 years as a loan portfolio manager at Morgan Stanley, says he sees growing demand from CLO clients for MarketAxess to introduce trading in CLO tranches. He says the platform is looking at adding this, though probably not this year.

Cohen says CLOs represent “fantastic growth potential,” and are in a virtuous cycle this year driven by rising interest rates, increased exchange-traded fund inflows, and higher issuance levels. “There is more product to trade and more customers. So the runway for this product is in really good shape,” he says.

S&P Global Market Intelligence is also predicting a bumper year for CLOs after a contraction in 2020 marked by volatility, loan downgrades, and higher defaults, leading to lower issuance. Overall, between 2008 and the third quarter of 2020, the outstanding balance of CLOs more than doubled to \$845 billion.

However, Cohen warns that the market still suffers from a lack of transparency, liquidity, and any Trace-style tape as exists in the bond markets.

“The loan market is ripe for electrification. I liken it to the bond

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“The loan market is ripe for electrification. I liken it to the bond markets 20 years ago before Tradeweb and MarketAxess.”

Howard Cohen, MarketAxess

markets 20 years ago before Tradeweb and MarketAxess,” Cohen says. “The juggernaut we’ve built on the bonds side has brought benefits in terms of transparency, liquidity, and information that people would also like to see us bring to the loans space. So we want to jump on that, and probably that’s why the dealers want to, as well.”

He says that while Octopus may be a move by the dealers to “protect their turf,” it nevertheless should promote competition and benefit customers.

“We’re the only electronic loan trading platform on the planet where the buy side can access liquidity from multiple dealers. Now, that’s a good and a bad thing, because the buy side may want more than just one choice. So I think a couple more venues is a good thing so that the buy side can have some comparison,” Cohen says. “If this provides liquidity in tranches and underlying loans, it’s a step forward. And to the extent that this will provide competition and liquidity, that’s only a good thing.” **wt**

### Opinion: Bank tech is a flat circle

Two of my all-time favorite movies and TV series both involve the concept of time being a flat circle, the theory of which states that all things are repetitions of past things and particular events must occur for time to move forward. The movie is Denis Villeneuve’s absolutely brilliant *Arrival*, and the TV series is the third season of Nic Pizzolatto’s *True Detective* (though many people look at season one as being the time-is-a-flat-circle package, I think season three is a more perfect encapsulation of the concept). When executed well on-screen, the results are equal parts beautiful and haunting. At the conclusion of *Arrival*, I went on a two-hour walk to collect my thoughts, and I’ve watched Season 3 of *True Detective* three times, start to finish.

The idea of circular time crept back into my head after Max Bowie and I broke the news about Project Octopus. (Project Octopus ... why does everything coming from Wall Street have to sound like something out of a Bond film?).

The two vendors that the banks are looking to get ahead of—according to sources—are Tradeweb and MarketAxess. And here’s where the flat circle gets placed down. Tradeweb and MarketAxess were created by dealer-led consortiums. After they survived and proved effective, they were sold, and the dealers cashed out. The companies then grew and, in the natural process

of things, raised prices. The dealers complain. They partner once again to build a new platform that they can control. Rinse and repeat, ad nauseam.

As Howard Cohen, head of leveraged loans at MarketAxess told us, there is “fantastic growth potential” in the CLO market, and the vendor is indeed looking to expand its presence in the space. S&P Global Market Intelligence is predicting a bumper year for CLOs after a contraction in 2020 marked by volatility, loan downgrades, and higher defaults, leading to lower issuance. Overall, between 2008 and the third quarter of 2020, the outstanding balance of CLOs more than doubled to \$845 billion.

Cohen welcomed the competition that could come from Project Octopus, as more players in the space will help the market to evolve electronically more quickly. And there’s reason to think that Project Octopus will ultimately get off the ground and running.

Sources tell Max and me that the key piece of this consortium will be that the banks involved will switch off their proprietary platforms and migrate all CLO trade flow to the new system. While it sounds like Citi, which has its Velocity platform, made the first move when it started working with Genesis—in which it is an investor—Bank of America, which runs the Instinct platform for electronic trading of syndicated loans, is also joining the project. If they land three more of those other five major dealers, it will be open waters for Octopus.

—Anthony Malakian



# Human Capital



## Symphony picks Brad Levy to replace David Gurlé as CEO

Brad Levy will take over as CEO of financial information workflow platform Symphony on June 1, replacing founder David Gurlé, who will remain a board director.

Levy joined the company last year as president and chief commercial officer after eight years at IHS Markit, including roles as partner, CEO of MarkitServ, and global head of information. He also spent almost 18 years at Goldman Sachs in roles including managing director and global head of principal strategic investments.

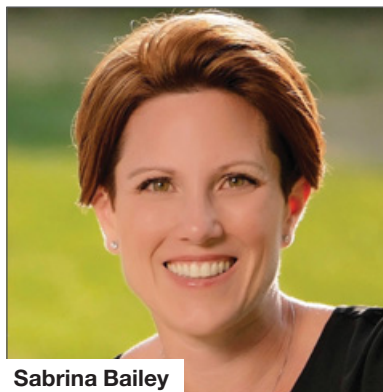
Chief financial officer Benjamin Chrnich will become president in addition to his existing duties.

## Broadway appoints Michael Chin as CEO

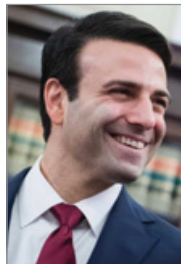
Front-office solutions provider Broadway Technology has named Michael Chin as CEO as part of its long-term strategic growth plan.

As part of the executive team expansion, Broadway co-founder and board member Tyler Moeller will become chief innovation officer.

Chin brings more than 30 years of fintech experience to his new role. Most recently, he served as managing



Sabrina Bailey



Heath Tarbert



Lisa O'Connor



Michael Chin

director and global head of trading at Refinitiv, prior to which he was president and CEO of trading solutions provider Mantara.

Moeller will continue to focus on innovation, as well as expanding Broadway's TOC platform.

## CFTC's Tarbert rejoins private sector at Citadel Securities

Heath Tarbert, former head of the US Commodity Futures Trading Commission, has joined market-maker Citadel Securities as its new chief legal officer, having resigned from the derivatives regulator, according to media reports.

Tarbert had served as CFTC chair for 18 months.

Prior to joining the CFTC, he held roles in international relations at the US Department of the Treasury. Previously, he was a partner at law firms Allen & Overy and Weil, Gotshal & Manges. According to LinkedIn, Tarbert left his post as vice chairman of the board at the International Organization of Securities Commissions in March.

## Sameer Jain joins Nomura as CIO for wholesale

Nomura has hired Sameer Jain as chief information officer for its global wholesale business. Jain will oversee the bank's wholesale IT and operations, and will join the wholesale and CAO division executive committees.

Jain previously worked at Barclays in several senior roles, including group chief technology officer, chief information officer and head of change. He was also director and global head of credit derivatives technology at UBS.

Jain will be based in New York and reports to Jonathan Lewis, chief administrative officer and Nomura

Europe CEO, and Steve Ashley, head of the wholesale division. He reports locally to Yo Akatsuka, president and CEO of Nomura Holdings America.

## Sabrina Bailey joins LSEG Wealth Solutions

London Stock Exchange Group has hired Sabrina Bailey in the US to lead its wealth solutions business, part of the data and analytics division.

Bailey joins from Northern Trust, and brings more than 20 years of experience in wealth management, including leadership roles at Mercer and Willis Towers Watson.

Joe Mrak, group head of wealth solutions, has decided to pursue other interests, following a transition period through 2021.

## Ex-SEC director joins Coinbase as head of capital markets

Brett Redfearn, former director of the US Securities and Exchange Commission, joined Coinbase, a leading US cryptocurrency exchange, as vice president of the capital markets division ahead of the company's IPO, Reuters has reported.

Redfearn was most recently the director of the SEC's trading and markets division, and prior to that spent 13 years at JP Morgan.

Similarly, former SEC Chief Jay Clayton was named non-executive chairman of asset manager Apollo Global Management in February, and more recently joined the advisory council of cryptocurrency firm One River Digital Asset Management.

## Rathbone hires Stephen Wood to lead business change

Stephen Wood has joined Rathbone Brothers, a UK-based investment manager, as senior business change





manager. He assumed the role in April and is currently hiring a business change manager to work in his team.

Wood was previously global head of enterprise deployment at financial desktop solutions provider OpenFin.

### **Andrew Robson named CEO of MackeyRMS and InsiderScore**

Andrew Robson is the new CEO of the combined businesses MackeyRMS, a provider of SaaS-based research management tech, and InsiderScore, a provider of data analytics.

Robson will lead the expansion of investment data, analytics, and software solutions for investment managers across North America, Emea and Apac. He is also responsible for consolidating the MackeyRMS, InsiderScore, and InFilings platforms under a new corporate brand.

Robson joins after serving five years as president and chief revenue officer at Earnest Research.

### **EOSE appoints Dan Marcus as strategic advisor**

EOSE, a provider of market data solutions, has appointed Dan Marcus as a strategic advisor. Marcus was formerly head of strategy and business at Tradition and senior legal counsel at the London Stock Exchange.

He will join EOSE's advisory board, which includes KPMG's Asset Management Advisory team, headed by Daniel Page. He is also CEO of business consultancy MarcX Limited.

### **Credit Benchmark appoints Thomas Gilligan as CCO**

Credit Benchmark, a provider of credit-based analytics, has appointed Thomas Gilligan as chief commercial officer in New York. Gilligan will head the firm's global commercial team, with

## **BMLL HIRES INDUSTRY VETS JOHNSTONE, ELLIS**

Historical data and analytics provider BMLL Technologies has hired Masami Johnstone as senior client advisor and Simon Ellis as head of strategic partnerships.

Johnstone was previously managing director and head of information services at FX settlement services provider CLS Group, prior to which she was head of buy-side sales and head of institutional quant research at Euronext. She is also the founder of BlissFintech, which advises financial technology firms on business development strategies.

Ellis spent the past 17 years as a management consultant, serving in contract



**Masami Johnstone**

roles at client firms including TickSmith, where he was director for Europe, the Middle East and Africa, and TIM Group, where he was global sales director.



**Dan Marcus**

responsibility for global go-to-market strategy and distribution channels.

Prior to joining Credit Benchmark, Gilligan was head of Americas equity sales at IHS Markit and a founding member of the IHS Markit alternative data committee. He joined IHS Markit in 2012.

### **Miax nabs Andy Nybo to head industry comms**

Andy Nybo has joined Miami International Holdings, operator of the Miax family of options exchanges, as senior vice president and chief communications officer, a newly created role involving liaising with media, analysts, and the industry.

Nybo was most recently managing director of TP Icap-owned Burton-Taylor International Consulting, prior to which he spent a decade at Tabb Group as partner and global head of research and consulting.

At Miax, he reports to chairman and CEO Thomas Gallagher.

### **Former CFTC chair joins Baton**

Christopher Giancarlo, former chairman of the US Commodity Futures

Trading Commission, has joined post-trade solutions provider Baton Systems as a senior advisor.

Giancarlo is senior counsel to law firm Willkie Farr & Gallagher and co-founder of the Digital Dollar Project, which promotes development of a US central bank digital currency. He is also chairman of Common Securitization Solutions, a joint venture between Fannie Mae and Freddie Mac, among other board and director roles.

### **HKEX names ex-Swift exec to head post-trade change**

Hong Kong Exchanges and Clearing (HKEX) has appointed Lisa O'Connor as managing director and head of post-trade change, responsible for clearing and settlement initiatives, including using new technology to expand the exchange's post-trade services.

O'Connor was previously global head of capital markets strategy at post-trade messaging utility Swift, where she held a number of senior positions.

She reports to Glenda So, head of post-trade at HKEX. [wt](#)



**Andy Nybo**

# History repeating?



While the jury's still out on Broadridge's acquisition of Itiviti, Wei-Shen believes it warrants a look into some moves from years past.

**B**roadridge Financial Solutions has more to do before its \$2.5 billion acquisition of Itiviti from private equity owner Nordic Capital is closed. For one, it's still waiting on regulatory approvals.

Currently, there are more questions than there are answers as to how it will use Itiviti to get a step closer to its aim of bridging the gap between the front and back office (*see page 24*). From what sources tell me, there are three businesses that will be interesting to keep an eye on: its Nyfix network connectivity solution; its Tbricks exchange derivatives trading platform; and its order and execution management system.

To read the tea leaves, though, I think it's important to look to the past.

It could be that the Itiviti brand may disappear into the background as Broadridge subsumes those businesses. On the surface, it might seem this happened with one of Broadridge's previous acquisitions—Paladyne Systems, which it bought in September 2011.

It was big news, but sources say that Paladyne has seemingly faded away since then. Vijay Mayadas, president of capital markets at Broadridge, explains that Paladyne is still alive and well, and has been rebranded as Broadridge Asset Management Solutions (Bams), its buy-side business segment.

While some may argue against that—especially since the senior managers that built Paladyne are no longer with the company—a strategy executive at a data and software solutions provider isn't surprised.

“With any major acquiring company, the parent brand is the enduring one, and that's what acquiring companies want to have happen; they want their brands to be the one that's growing, and not the smaller firm,” they say.

And then there's the story of Itiviti.

Itiviti has an interesting origin story. It is the recombination of two companies—Orc Group and

“Once that was done, a decision was made to then focus on making that platform a great fit for Apac [Asia-Pacific], and sales teams were tasked with selling that product, and the take up was improving due to the product being better,” they say.

After that, Itiviti's focus moved elsewhere. According to the source, this resulted in Itiviti deciding to let go of “legacy and expensive” staff, about six months ago. “They didn't need these people anymore, so they parted with the company,” they say.

Are these cuts red flags, or are they part of how businesses grow?

The first question any employee in an acquired company asks is, “What happens to us now?” Broadridge has a lot of experience acquiring and integrating tech companies, though Itiviti—thanks to its front-office tools and pipes that connect the sell side to the buy side—is a unique beast. Looking at the bright side, here's what one source with knowledge of Broadridge's broader buy-side strategy had to say about the deal, and specifically, Eric Bernstein, president of Broadridge's Bams unit.

“I think Bernstein is doing some interesting things in terms of which vendors he's choosing to piece together and what he's trying to do—he's buying the right type of companies. There's actually thought to it; it's not just buying random cash flow streams. There's a method to his madness,” the source said.

We'll simply have to see if that ends up being the case with Itiviti. **wt**

“**Sources worry that now Broadridge has entered the frame, Itiviti CEO Rob Mackay may pursue another venture**”

CameronTec, which led to the combined entity being reintroduced as Itiviti in January 2016.

The group went through mergers and separations, and then mergers again—with Ullink being the most recent. Sources worry that now Broadridge has entered the frame, Itiviti CEO Rob Mackay may pursue another venture. In March 2019, Mackay took over from Torben Munch, who departed the previous December.

A source familiar with Itiviti's inner workings says Mackay was “very focused” on tidying up the company and making it as capital effective as possible, and was “presumably being mandated” with priming up Itiviti for a potential new owner.

Before Mackay joined, the source says some work was done to Tbricks to make it compliant under Mifid II requirements.

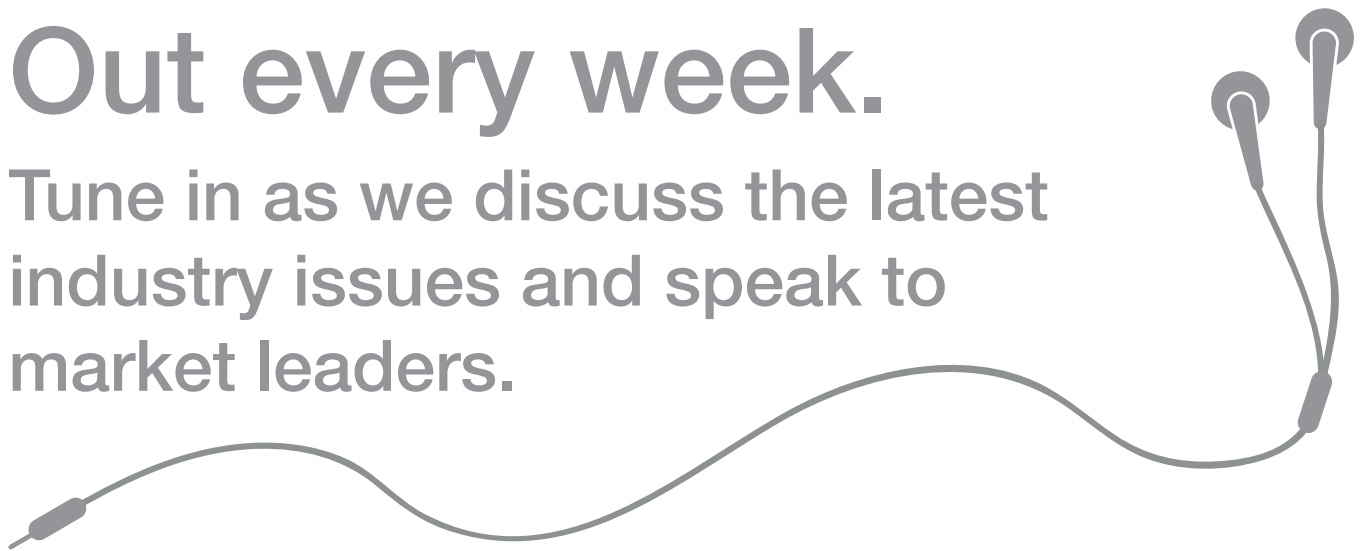
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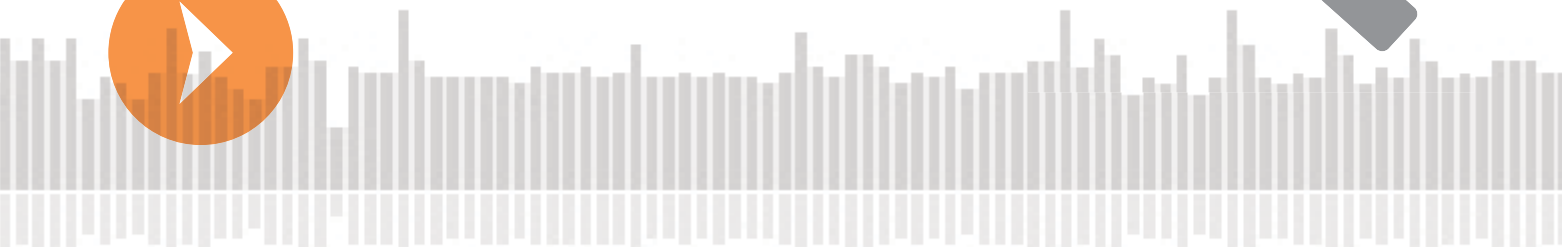
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