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PET Project

A consortium of banks led by Societe Generale is teaming up to solve data management issues in the post-trade space using a privacy-enhancing technology—or PET—called confidential computing. The project still has a long way to go if it's going to succeed.

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Never Forget

September 11, 2021, marked the 20th anniversary of the devastating terrorist attacks in New York; Washington, DC; and Pennsylvania. Included in the nearly 3,000 people killed on that day were 16 colleagues and friends of the *WatersTechnology* and *Risk.net* family. On page 26 you can find the tribute that we put together for those we lost.

We chose not to print this in the September issue of the magazine because we didn't want to go live with the tribute until the day before the anniversary to give family members and friends as much time as possible to pen their own remembrances. As we explain in "9/11: the promise we're trying to honor" on page 41, we tried to reach at least one family member for every one of the 16—we were not successful. For some of those who we did connect with, the wound was still too deep for them to contribute a remembrance, which is absolutely understandable. It's important to note, though, that the memorial you see in this magazine is also available online (waterstechnology.com/7874671) and if family members do come forward with their own remembrances in the future, we will absolutely add them to that story.

So it is that in the October issue we're marking the anniversary of that tragic day. I apologize if that's a bit jarring, as it's mixed in with our regular technology and data coverage. But I do hope that you take the time to read the stories of those we lost, even if they are strangers to you. They say you die twice: once when you take your final breath, and then again the last time someone says your name. I'll keep on saying those names for as long as I'm the editor of *WatersTechnology*. wt

Anthony Malakian
Editor-in-Chief

THOSE WE LOST

Sarah Ali
Oliver Bennett
Paul Bristow
Neil Cudmore
Melanie de Vere
Michèle du Berry (Beale)
Elisa Ferraina
Amy Lamonsoff
Sarah Prothero (Redheffer)
David Rivers
Laura Rockefeller
Karlie Rogers
Simon Turner
Celeste Victoria
Joanna Vidal
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After lengthy fight, Bloomberg's Figi recognized as official US data standard

The Figi is free to use, and becomes the second reference data standard alongside Cusip, authorized for financial instrument identification by the American National Standards Institute. By Rebecca Natale

Data giant Bloomberg has succeeded in gaining US accreditation for its reference data standard, the Financial Instrument Global Identifier (known as Figi) by the Accredited Standards Committee X9, a non-profit organization endorsed by the American National Standards Institute (ANSI). The accreditation makes the US the second country to formally adopt the standard after Brazil became the first in July 2020, putting Figi on the same level as Cusip, the main identifier that has served the American and Canadian securities markets for more than 50 years.

Approval puts Figi on the same level as Cusip

The ASC X9 committee, which is responsible for developing standards for the financial services industry, voted to adopt the Figi in early August. X9 is affiliated with ANSI, which represents the US as an International Organization for Standards (ISO) member. Under the committee, Figi is titled ASC X9.145-2021. Figi becomes the first X9 data standard to incorporate the Massachusetts Institute of Technology (MIT) open-source license, in which the data created and identified within the standard is available to the public and free to use.

Steve Meizanis, global head of symbology and Legal Entity Identifier services at Bloomberg, says that he hopes that cost-effectiveness and flexibility will entice market participants to use the identifier in regulatory reporting and rule-writing, not necessarily as a replacement for existing identifiers—which include Cusip, the International Securities Identification Number (Isin), and Sedol—but as an alternative in situations where permanence or uncovered asset classes are an issue.

"The purpose of the Figi is not to replace an existing identifier scheme. We understand the cost involved with replacing that. But working in conjunction, we provide, on the equity side, for example, levels of granularity [that] Cusip does not," Meizanis says.

The 12-character alphanumeric code, once issued, is permanent; other identifiers sometimes change in reaction to corporate actions that companies take. The Figi also now extends to previously uncovered securities, crypto assets, and loans, in addition to traditional equities, derivatives, and corporate and government bonds.

Kaiko, a market data provider in the blockchain-based digital assets industry, was recently approved as a certified provider of Figi for crypto assets. Meizanis hopes that more companies will try to become certified providers. Currently, Kaiko and Bloomberg are the only two, with Bloomberg acting as the registration authority under the Object Management Group, a standards consortium that adopted Figi in 2014 and which has created several ISO-accredited standards.

Now that Figis are accepted alternatives to Cusips, end users must determine the degrees to which they'll incorporate them. Figi may save them money in the long term, but they would have to weigh those savings against the operational cost of adding a new entity to their systems, let alone switching over entirely. Cusips, Isins, and Sedols are typically tightly interwoven with firms' infrastructures due to legacy technology practices and prior lock-in to specific identifiers forced by respective data providers.

Cusips carry licensing fees for end users based on the number of unique identifiers accessed, stored, maintained, processed, or otherwise used by or for the benefit of a customer. For example, an end-user who uses Cusip numbers for up to 40,000 securities throughout four or more business lines in three or more regions would pay $441,000 in licensing fees. Using Cusips for up to 20,000 securities throughout two lines of business in two regions would amount to $94,500.

"Cusip serves a critical role in the financial markets, a position earned over the course of decades delivering proven results and forming trusted partnerships with the global financial services industry. In fact, Cusip was created in direct response to an industry need and gained widespread adoption long before it ever became an X9 standard. We will continue to do our part to foster efficient markets with the widely adopted—and globally recognized—industry standard Cusip identifier," says a spokesperson for Cusip Global Services.

An unlikely victory

Bloomberg has tried to push Figi as a standard for years, and its accreditation journey has not been smooth. In 2019, a technical committee of the ISO, TC 68, voted against the identifier. Following the TC 68 defeat, the Figi was registered with another ISO technical committee, ISO IEC/JTC 1, and was waiting for that committee to initiate a ballot. JTC 1 is a joint technical committee that specializes in standardization in the field of information technology. The vote with the second technical committee, however, never happened. wt

FactSet, Microsoft collaborate on voice-activated analytics

The data vendor has deployed machine learning across its ETF and fund screening datasets, and plans to interoperate with other big tech firms in the future. By Josephine Gallagher

How many clicks does it take for you to find what you're looking for online? Five? 10? More? What if you could find exactly what you wanted with no clicks at all?

This was the idea behind FactSet's voice-activated analytics, developed in collaboration with Microsoft. Trading firms have stockpiles of data at their disposal, but finding what they need quickly remains a challenge, says Chris Ellis, head of strategic initiatives at FactSet.

In a demo for *WatersTechnology*, the voice-enabled technology processed the search request: "BlackRock ETFs (exchange-traded funds) launched in the last two years with an expense ratio between 50 and 100 basis points with a weight in Germany greater than 2%." It served up matching results in roughly eight seconds.

"What we're doing with FactSet smart search is allowing the user to just say in English what they want, give them the answer, and then give them the link to where there's more information. So, it's one part an answer to their question, and another part [is] providing them the navigation tools to go down the rabbit hole and do a much deeper dive into the analytics," Ellis says.

The model can recognize both specific and generic verbal search requests

Voice integration

In September, the data vendor will roll out an integrated version of the voice-controlled technology across its ETFs and funds datasets, designed to help traders, portfolio managers, and analysts verbally query the data within the application. In February, FactSet announced its integration with Microsoft Teams, whereby Teams users can access and share the vendor's financial news and content within the Microsoft communications and collaboration platform. As an extension of that partnership, FactSet is leveraging Microsoft technology to help build out its voice-activated search tools.

Microsoft provides the underlying natural-language processing technology that recognizes the human voice and translates it to text via a speech API. This function is available to FactSet users across its data and analytics platform via the vendor's web or desktop application.

For the ETF and fund screening datasets, FactSet has developed a more integrated and advanced voice-activated capability. On top of the Microsoft speech API, FactSet has built a layer of machine-learning technology that applies meaning to industry lingo (for example, "expense ratios" and "ETFs"), then formulates how search requests are understood and how results are generated.

"We've not only taught the engine how to interpret specific requests, we use our knowledge of finance and of the fund and ETF ecosystem to say, 'If you put in a qualitative request, instead of a purely quantitative request, we're going to interpret that in an intelligent way, but then still give you the keys to the car to go in and change it to what you want,'" Ellis says.

The model can recognize specific and generic verbal search requests. For instance, a specific request might include different components like the name of an issuer, such as in the case of the BlackRock request; the fund's launch date; the expense ratio; and the weighted average market cap.

A qualitative or generic search request might include general adjectives like "new," "low," or "large." An example Ellis provides is "new ETFs with low fees that invest in large companies." In this instance, FactSet's model will allocate default rules for what "low fees" might equate to, such as fees lower than 15 basis points; or what a "large company" might be, such as one with a weighted cap of $10 billion or more. These default settings, however, can be adjusted and customized by users.

Schooling the bot

Building machine-learning models for understanding speech and financial language is not without its challenges, according to Mike Marley, product manager for search and lookup technologies at FactSet. The most difficult part, Morley says, is training the model to recognize and comprehend the various different ways in which a person might phrase a question or make a search request. This involves teaching the machine to accurately interpret multiple sentence formations and syntax.

FactSet has been building the model for more than two years and Ellis says a huge portion of that time was used to train the technology with sentences from beta users for the ETF and fund screening application.

"It's a solvable problem to say, 'Here are 50 different questions; we can answer those.' But you have to be able to answer the questions based on how it's being asked, and there are so many different variations and different ways to ask those questions," Ellis points out.

Companies race to tackle widening cybersecurity talent gap

More realistic job requirements and in-house training programs could boost recruitment in face of increased cyber threats. Rebecca Natale

The already sizable shortage in cybersecurity professionals globally has swelled by about 400,000, according to an upcoming report by the International Information Systems Security Certification Consortium, or ISC2. The non-profit organization, which issues the widely sought-after Certified Information Systems Security Professional (CISSP) qualification to cybersecurity professionals around the globe, found that the number of cybersecurity roles required to adequately staff and defend companies is lacking by roughly 3.5 million, up from 3.12 million in 2020.

Cyber defense teams need to remove barriers to attracting more recruits

The number doesn't mean that 3.5 million cybersecurity jobs are open, however. In the US, there are slightly more than 460,000 cybersecurity job openings today—mostly advanced positions, according to CyberSeek, an online project supported by the National Initiative for Cybersecurity Education, part of the National Institute of Standards and Technology in the US Department of Commerce.

With Covid-19 upending life as we knew since last year, the cyber-threat landscape has gone from bad to worse. According to international police organization Interpol, cyber criminals exploited the disruption in worldwide communications channels to unleash malware, spyware and Trojan horses through phony interactive coronavirus information materials. At the same time, hospitals, medical facilities and public institutions were targeted with ransomware. To offer an even more recent example, Apple last month urged iOS users to make emergency software updates to their devices after security researchers uncovered a vulnerability that allowed spyware from the Israeli NSO Group to be installed without a single click.

The war between cyber criminals and cyber defense teams is a numbers game. How many troops can each side recruit? How much money can they afford to spend? And how much money do they stand to gain?

Unfortunately for defense teams, there's little to gain but vast amounts to lose, whereas the reverse is true for attackers. Banks and asset managers, which are ripe with sensitive data such as investors' net worth and their corresponding credentials, are prime targets. And financial institutions face regulatory fines, reputational damage, and additional investigative and data recovery costs if they leave themselves vulnerable. According to a recent IBM study, the average cost of a data breach in financial services last year was $5.72 million.

Too many barriers

One of the most persistent barriers to tackling the expanding cyber talent gap is the unrealistic job requirements listed for even entry-level roles. Clar Rosso, CEO of ISC2, would like to see that change. Rosso, a newcomer to the cybersecurity realm herself, left a career in the accounting world as a CPA only a year ago.

She tells *WatersTechnology* that her organization has recently been talking to a global advisory firm about how ISC2 could assist them with cybersecurity education and training. The company was looking to fill 70 related job roles—from entry level all the way up the chain—and each one required a CISSP certification, which requires a minimum of five years' experience.

"We think one of the things that's really important is that the security team itself work with human resources on defining what the true needs are in the organization, what is the kind of role you're trying to fill, and then appropriately list out the qualifications for that role, because not everybody needs to be a CISSP," she says.

The advisory firm isn't alone in asking for that qualification. According to CyberSeek, there are 16,000 more positions requesting the CISSP designation than there are certificate holders—106,370 versus 90,334.

"It has to mean—I have no evidence for this, but just intuitively—that whoever's writing that job description doesn't know what it is," Rosso says.

A widening battlefront

Though the space is undeniably in need of experts, some firms have reasoned that the smartest thing they can do to combat the gap is to 'start 'em young'. In 2011, IBM launched P-Tech, recently rebranded as IBM SkillsBuild, as a high school-level program for students to begin taking cyber courses and gain field experience. More than 150,000 students in 28 countries have joined the program over the past decade.

Soren Mortensen, global director of financial markets at IBM, isn't surprised that the number of positions needed to adequately defend companies' digital operations has risen over the last year, but he says the number—whether it's 3.1 million, 3.5 million, or more—is largely arbitrary. All one needs to know, he says, is that attackers outnumber defenders: "How long is a piece of string?" wt

MarketAxess builds out flagship e-trading platform for loan market

Platform operator plans to extend its all-to-all corporate bond trading expertise to the loan market, which lags other fixed-income instruments in both tech adoption and the level of transparency. By Nyela Graham

MarketAxess is planning to expand Open Trading, its electronic corporate bond trading platform, to include leveraged/syndicated loans in early 2022. Open Trading is currently used by more than 1,000 buy- and sell-side firms acting as liquidity providers, and utilizes an all-to-all trading protocol, which enables the buy side to trade among one another or with the sell side in an anonymous pool and with no limits on the number of dealers trading firms can interact with simultaneously. The release will mark the first instance of all-to-all trading applied in the loan market.

The move will bring all-to-all trading to the loan market for the first time

As the vendor builds out Open Trading's loan capabilities, it is drawing upon its success in the bond market—MarketAxess recorded a monthly trading volume of $499.6 billion in July 2021—to replicate similar features for users.

"What we have here at MarketAxess is dovetailing off of the enhancements that we provide to clients on the bond side and bringing that to the loan side," says Howard Cohen, head of leveraged loans. "We are trying to use the existing blueprint that [we] have set up on the bond side, and use that to facilitate change, improve liquidity, [and add] transparency in the loan space."

Cohen sees the loan market—which is less uniform and even more bespoke in nature than bonds—as orphaned from the electronification happening within the wider bond market, which has prevented its level of technology adoption from maturing alongside other fixed-income products. Fixed-income trading overall, however, still relies largely upon a combination of phone calls, chat messages, and interpersonal relationships, despite the introduction of new electronic protocols for bond-trading, such as request-for-quote (RFQ), used by Tradeweb and Bloomberg, for example; central limit order book, used by CME BrokerTec; and all-to-all, used by MarketAxess.

Cohen says MarketAxess won't sit in between the buyer and seller, and will instead hire settlement banks to settle the post-trade workflow that is unique to loans. Settlement time in loan markets is estimated to be up to 19 days, according to the Loan Syndications and Trading Association (LSTA).

"These are the sort of the idiosyncrasies that need to be ironed out. And that's why it's not just a plug-and-play and taking what the team is doing on the bond side and Ctrl+C, Ctrl+V," he says.

MarketAxess's leveraged loans multi-dealer trading platform and Bank of America's single-dealer platform, Instinct Loans, are currently the only two loan trading platforms on the market, though neither utilizes an all-to-all mechanism. Instinct Loans allows clients only to trade with BofA, while MarketAxess's leveraged loans platform relies on the RFQ protocol in a many-to-many environment. Kevin McPartland, head of research for market structure and technology at Coalition Greenwich, estimates that together they account for 1-2% of secondary market activity.

A June 2021 report from Coalition Greenwich found that e-trading in the syndicated loan market is growing after 18 months of an "e-trading tailwind" in the fixed-income market, in large part spurred by office and trading floor closures caused by Covid-19. McPartland says that emerging technology projects specific to loans—such as the multi-dealer Project Octopus for collateralized loan obligations—are steps in the right direction for the nascent market.

From manual and opaque to 'exchange-like'

Greenwich's research indicates that market participants see the syndicated loan market as the second biggest market ripe for opportunity to reap efficiency gains from technology used in corporate bonds. It was ranked last for its current adoption of technology, with 23% of participants rating it "largely manual."

A step for improving any market often centers on the level of transparency available. Unlike in the bond market, loan trading isn't subject to mandated reporting via Trace—the Trade Reporting and Compliance Engine overseen by the Financial Industry Regulatory Authority (Finra) for over-the-counter instruments—which means there's little to no view into where loans are currently trading and where they have traded in the past.

"Where more data allows for more electronic trading and the more electronic trading there is, the more data there is, on and on we go by mass," McPartland says. "That's exactly what happened in corporate bonds."

An all-to-all approach offers loan constituents anonymity, which Cohen says is an important feature to customers who trade illiquid instruments, as firms will look to cobble together a big trade without alerting the rest of the trading world, or will try to wind down large positions without raising attention that could impact price. wt

Sinara

The Modern Commodities Trading Lifecycle

How Technology is Transforming Business Processes

Sinara explains how it is leveraging its software expertise to overhaul and modernize business processes that have traditionally been focused around outdated and less efficient manual touchpoints

One of the companies taking part in London Metal Exchange's LME Week in October is Sinara, a firm that has undertaken a lot of work around metals trading systems at different stages of the trade lifecycle.

Sinara has also built systems that handle trading processes for agricultural products—for example, agricultural futures, the management of wheat contracts and trade financing.

Hamish Adourian

Commodities traders are waking up to the fact they can leverage technology advancements to digitalize the commodity trading lifecycle. Technological innovations enable a more connected value chain with more communication and collaboration, smarter decision-making, faster implementations, better access and greater flexibility. But essentially, innovations in technology allow them to improve business processes and increase value. Software specialists such as Sinara are using technology to help transform and modernize a set of business processes that, even now, tend to be quite paper- and phone-driven, or have many manual touchpoints.

The Start of the Trade Lifecycle

Whether placing a buy or sell order, the process can be improved from the very start of the commodities trade lifecycle. Traditionally, you might place an order over the phone with your broker—for so many tonnes of copper, for example. But, according to Hamish Adourian, head of sales and marketing at Sinara: "Brokers and exchanges are under a lot of pressure to modernize business processes. There is a whole new generation of traders coming in who expect new web and mobile apps, and brokers and exchanges are trying to bring in these sorts of digital tools," he explains. "For the more established companies already dealing with high volumes of financial transactions, the challenge is in managing those while also transforming their technology to keep up with the competition coming from fintech startups."

For these startups, there is a lot of interest in bringing commodities onto exchanges that traditionally have been traded over the counter. They are looking for more efficient, digital ways of trading these commodities where there has previously not been a lot of transparency, until now.

"No one really knows what the volumes are, and there's no established price," says Adourian, "in the way that there is for exchange-traded metals like copper or aluminum, for example. So there are lots of challenges in bringing those sorts of commodities into the new digital marketplace."

Collateral Management

Using collateral efficiently is an important aspect of starting the process for trading commodity derivatives. Investors and brokers want to minimize margins so they have collateral free to do more trades. "But market pressure to reduce margins must be balanced with the regulatory pressure for higher ones," Adourian argues. "That's where different pricing algorithms and models such as value at risk have come in to try and improve collateral allocation," he adds. "And companies are exploring how they can implement that in their trading systems."

Reducing Settlement Times

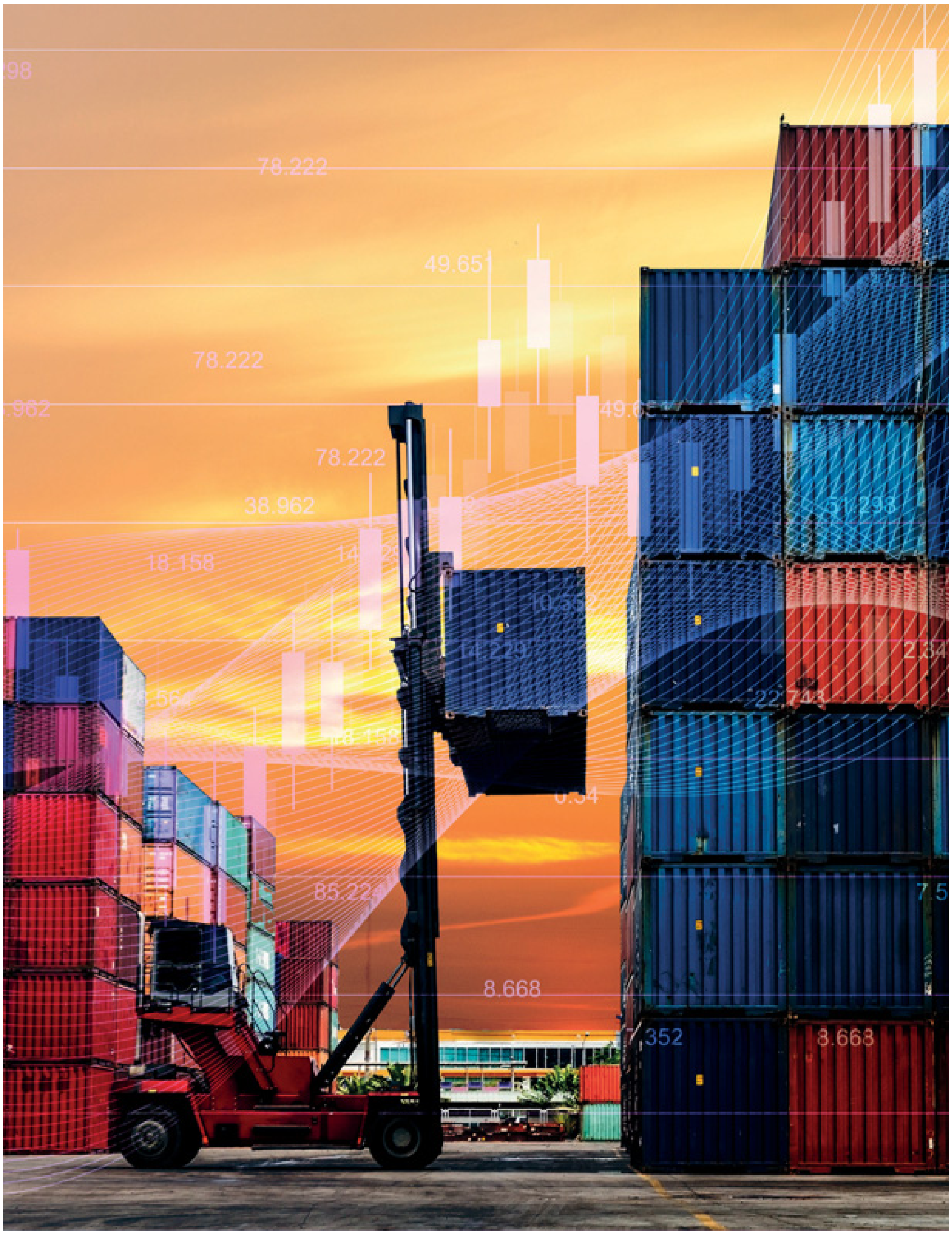
Due to manual or paper-based processes, settlement is an area in which there have traditionally been long delays. Intense market volatility in early 2020 because of the Covid-19 pandemic particularly highlighted the problems caused by delays in settlement times, meaning traders were left unclear about individual trade status or their overall positions.

"Trade execution to completion can often span a period of several days," says Adourian. "Getting funds and ownership transferred, especially if you're in different countries, would require actual paperwork to be sent. So there's a lot of pressure to reduce settlement times. One really important area in which Sinara is seeing a lot of interest is technology to do this in a fast and secure way, where trust is still preserved between the buyer and the seller."

Proving Ownership and Provenance

For the purposes of trade financing, it has been challenging to prove ownership of more established commodities, where there has been a lot of paper-based activity in the past. "Companies want to make the title of their commodity digital and then securely transfer that to a bank, so they can take out business loans against it more quickly," explains Adourian. "There's a lot of work going into transforming that kind of business process and a lot of interest in creating new technologies that can support that."

And then there is the environmental, social and governance aspect for trade financing. Some banks will only consider giving a loan based on a commodity



if they can be assured its provenance is completely safe. Maintaining the virtual paper trail of where a commodity comes from becomes very significant. "If you are buying anything that has been mined, in particular—like gold—they want to be sure the working conditions of the miners are safe and legal, for example, says Adourian. And, with green contracts being introduced, there is also the carbon footprint to watch out for.

"For instance, a commodities trader may need to prove that their aluminum has been smelted using low-carbon processes. So companies are looking at ways of showing that to the marketplace and reassuring traders their commodities are safe." Companies such as Sinara are helping to provide the technology to deliver all of these new business initiatives.

Delivery and Secure Release

The end of the commodities trading lifecycle is the more physical aspect of delivery. A trader might have bought some wheat, which is stored in silos in France or Belgium, for example, and wants to securely release it and have it delivered to another warehouse or location for consumption. Managing this in a secure way requires thoughtful solutions.

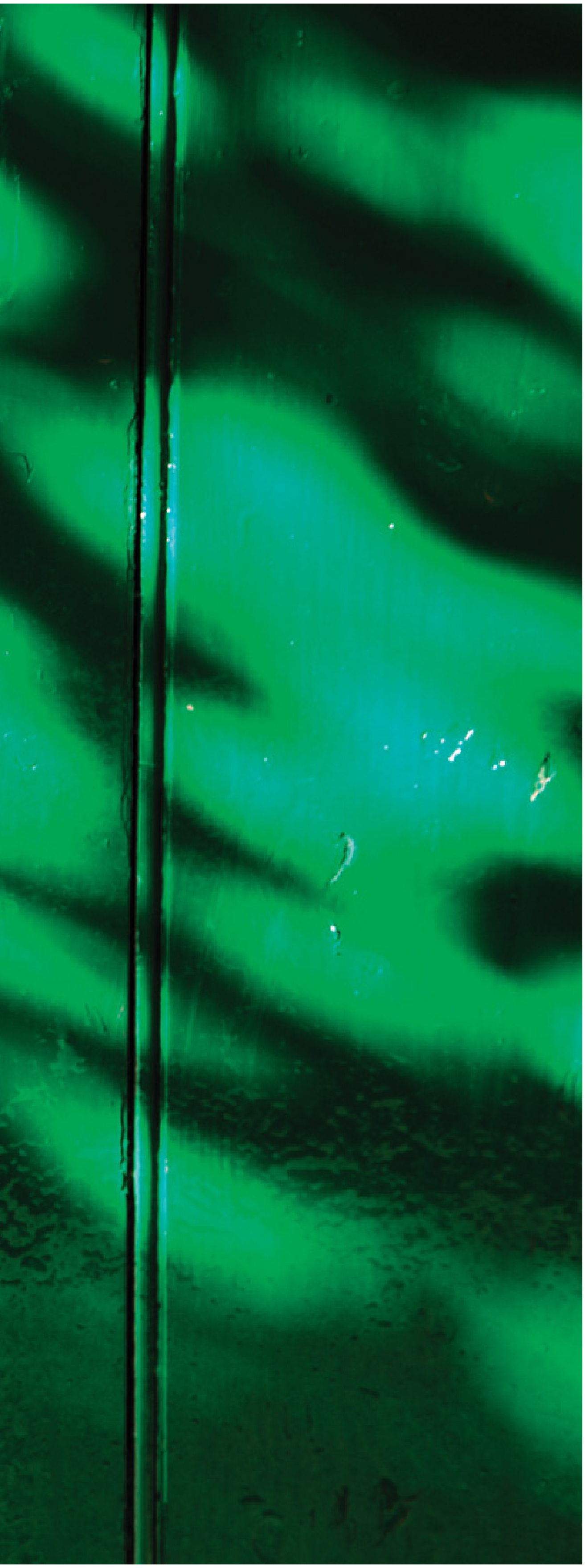
"The process needs to be hacker-proof, so the warehouse can be absolutely sure it is releasing the commodity to the right person and the right delivery company, and that it's going to the right place. And all that needs to be tracked. There are now digital tools to manage that process in an efficient way, whereas in the past they would have to send signed paperwork back and forth and it took quite a long time to be able to release the commodity," says Adourian.

No Need to Build From Scratch

Sinara works with businesses to really understand the requirements, and then build a software solution that can support them in whatever area they are seeking to address—be it improving business efficiency or building something new for the market. Whether it's a new web tool, new mobile app, new pricing tool or a new algorithm, for example, Sinara has a pre-built set of components for the derivatives trading lifecycle, which it can use to speed up the delivery of these new solutions. Adourian adds: "We are not building from scratch, even though these are still bespoke solutions, and businesses get all the benefits of that."

Sinara will also, where needed, work with the business to integrate any new solution with the IT systems already deployed and in use.

Sinara has one caveat about the available technologies for managing commodities trading. "There is a lot of talk about how blockchain technology can help with solving lots of these issues, such as maintaining digital paper trails, provenance, and so on. That's all well and good, but businesses should be careful about buying into a technology and then only afterwards starting to think about how to shoehorn the technology into the solution they want to build. They should first think about the business process and what it is they need to achieve, and then consider whether blockchain is what they need. There may be other technologies that might offer better and more cost-effective solutions rather than jumping on the blockchain bandwagon." wt



Bank consortium led by SocGen seeks to cure post-trade data ills

A project led by Societe Generale that uses privacy-enhancing technologies to solve data management issues hopes to sign up five banks and launch as a legal entity.
By Jo Wright

Banks maintain reference data at considerable cost and to no competitive advantage in order to perform functions such as know-your-customer (KYC) checks. As this information overlaps with that of their peers, ideally banks would be able to cross-check the data with each other. Does company X have a politically exposed person (Pep) on its board, for instance? Or does the legal entity identifier (LEI) we associate with company Y match the one you have on record?

In reality, however, this data is too sensitive to share with competitors. It is also sometimes governed by data privacy laws such as the General Data Protection Regulation (GDPR).

In recent years, privacy-enhancing technologies (PETs) have offered an enticing promise: to enable financial institutions to compare notes on encrypted data, and perform computations and reconciliations without breaching client confidentiality or allowing their peers to peek into their secrets.

A consortium of banks led by Societe Generale (SocGen) says it has successfully proved this concept and produced applications enabling users to reconcile data using PET. The consortium, known as Danie, now hopes to become formalized as a legal entity later this year.

Currently, Danie is a loose association of nine banks that operates under a memorandum of understanding. The banks have signed up to the same set of terms and conditions that allow them to share and reconcile the data, says Mark Davies, a partner at consultancy Element22 in London.

"But the goal is to have this legal entity of which the banks will be part owners and governors. So it will be an industry-owned and governed consortium that then uses the technology to build out the applications, the roadmap, and everything else," Davies says.

Element22 is the operator of the Danie consortium. A start-up called Secretarium, founded by two former SocGen technologists and grown in SocGen's incubator, is supplying the tech.

Danie began life as a blockchain project. In 2018, SocGen, via its global business service unit, joined a consortium called Massive Anonymous

"Because all the operations that Secretarium does are happening in an encrypted environment but on decrypted data, we have much more flexibility in terms of operations than we would with pure cryptographic protocols. It's also orders of magnitude faster."
Bertrand Foing, Secretarium

Distributed Reconciliation (Madrec), alongside UBS, Credit Suisse, Barclays and Belgian bank KBC. Madrec was intended to benchmark data quality by comparing it among the consortium's members, and with data supplied by vendors including Six and what was then Thomson Reuters.

Bertrand Foing
Secretarium

Madrec piloted a solution on the Ethereum blockchain that could reconcile its members' encrypted and anonymized LEI records in real time. The idea was that members could help each other ensure that their records were up to date without giving away sensitive information such as client data or relationships, and without having to pay an intermediary vendor.

SocGen, however, didn't agree with how Madrec should be structured once it became a legal entity, and broke away in late 2019 to pursue its own solution, which became Danie. Danie's initial use case was also to benchmark reference data quality on third parties, using LEIs as a matching key and allowing reconciliations to be performed; each member sent its list of anonymized and encrypted LEIs to Danie for reconciliation within minutes. Like Madrec, it was based on tech that provided both robust cryptography and secure hardware for a neutral platform for collaboration between parties that do not trust one another.

Strictly in confidence

However, Secretarium is not a blockchain company but rather a PET called confidential computing—an execution environment that is a physical piece of hardware known as "trusted enclave." In Secretarium's case, the hardware is Intel's Software Guard Extensions (SGX), a set of instructions built into a CPU that allows users to partition off regions of the CPU—the enclaves—as a kind of black box, so that data can be decrypted within a secure environment but remains invisible to the operating system.

Confidential computing is not the only PET offering the opportunity to perform computations on data without having to do so in the clear. Homomorphic encryption and secure multiparty computation are also being developed for use cases in finance and beyond. But the Intel tech, which is relatively new, is more scalable and suitable for a use case like Danie, says Bertrand Foing, one of Secretarium's two founders.

"Because all the operations that Secretarium does are happening in an encrypted environment but on decrypted data, we have much more flexibility in terms of operations than we would with pure cryptographic protocols. It's also orders of magnitude faster," Foing says.

Performance is key to Danie because its potential members want to be able to submit millions of records into the platform asymmetrically, and have outputs provided almost instantly, he adds.

Danie has run successful proofs of concept on Secretarium, the first in March 2020 with 22,750 LEIs and 15 data fields, and the second in June 2020 with 200,000 LEIs and around 30 data fields. According to SocGen, banks were able to identify between 5% and 10% of errors within seconds.

Since then, Secretarium has built two apps—Datalign and Semaphore—both available from the same web application user interface, which is intended to be as user-friendly as possible and require no coding skills. Participants can drop their file in the web app, the data format of each field is verified, and finally it's uploaded to the Danie reconciliation service.

"Participations are kept anonymized, and data remains encrypted at all times. Depending on how large your dataset is, it takes seconds to a few minutes to get a report showing if you are in full consensus with your peers, and where you have anomalies," says Anthony Ta, project director and innovation and watch leader in SocGen's corporate and investment banking unit.

"The major difference when comparing Secretarium to other venues is that no one knows whose data is being processed or what data is being processed, and there is no way our data can be monetized," Ta says.

The Datalign app uses LEIs as matching keys, allowing participants to benchmark their datasets linked to LEIs (names, addresses, and codes such as Bank Identifier Codes, or BICs).

"To reconcile the data, we use one matching key, the LEI. And thanks to this LEI, we can measure all the data linked to it: regulatory data, personal data, companies data," Ta says. "For example, if I want to measure the BIC code of a bank based on its LEI, I just have to fill in the BIC code provided by the client, then send this LEI to the platform. Then I can see if this data is in consensus with my peers or potentially in error."

That's just one data field, Ta adds. "In the proof-of-concept we did with the other banks, it's up to 30 data fields, and we managed to get, in less than a

minute, a report showing all the discrepancies we have, data field by data field, LEI by LEI."

Semaphore uses the same idea but for KYC data, such as risk flags or information on Peps. If one bank notices it has not recorded a Pep associated with a particular company, for instance, that becomes the impetus to check that its records are up to date.

Davies says Semaphore is not a replacement for a bank's KYC processes, but rather a way to efficiently find outliers in the data and fix them. "You can check your homework against others, anonymously and securely," he says.

Many firms refresh their KYC data on a cycle of one to three years, he adds. Data on high-risk counterparties is checked annually, medium-risk data once every two years, and low-risk data can go three years or more with no one checking that it's up to date.

"That might mean that you don't look at a company from a KYC or anti-money-laundering perspective at all for three years. If during that three-year period other members of the community identify it as having a Pep associated with it—maybe there's a new director or new CEO who's politically exposed—Semaphore reconciliation can tell you that you're an outlier," Davies says.

Critical mass

Possibly the biggest challenge Danie faces is getting the critical mass it needs to make sense of the use-cases. While nine banks have gone through Danie's approvals process, loaded data into Secretarium and actively reconciled data, only SocGen has gone public with its involvement. The consortium is hoping to get five banks signed up in order to establish the legal entity, which in itself is expected to draw in more banks once it becomes official.

Joining any consortium with competitors involves performing intensive legal and information security checks internally, not to mention the parallel work the consortium must do to onboard members. And for a project like Danie, which involves the sharing of sensitive and often highly regulated data, the compliance checks are multiplied.

"In the proof of concept we did with the other banks ... we managed to get, in less than a minute, a report showing all the discrepancies we have."
Anthony Ta, Societe Generale

Internally, banks must obtain validation from the business, their compliance and legal departments, as well as their cybersecurity and IT teams, Ta says. "So it depends on how big your company is, for instance. And that's why one of the challenges in collaborating with other banks is the level of maturity regarding technology: Some banks might not have experts in this technology," he says.

Another issue is that Danie has attracted interest from banks that are headquartered in Europe, the US, and Southeast Asia, jurisdictions with very different attitudes toward and legislation around data sharing. In a bid to stay as neutral as possible, the consortium has chosen to deploy most of its services in Switzerland, where the country's main infrastructure provider is more than half-owned by the government.

Ta says SocGen itself is still exploring the technology with its compliance and anti-money laundering department, as well as with French regulator the Autorité de Contrôle Prudentiel et de Résolution, to make sure it can share data with other banks, especially on client transactions.

Ta and Foing say five is the optimal number of banks required to launch Danie. Any fewer than that and the quality of the data would be diminished as there would be less chance that members share clients or have overlaps in their LEI data, for example, which makes pooling data in this way somewhat pointless.

Mark Davies
Element22

Also, the fewer banks there are, the easier it is for other members to make inferences about whose data is whose, Foing says.

"Some of the fields that these banks are reconciling are very low entropy," he says. In cybersecurity, low entropy data provides lots of potential to predict generated values—in other words, it makes it easier to guess what has been encrypted. "And some of the legal entities they are willing to process are located in geographic areas that provide too much information to competitors. That is a privacy problem that encryption itself cannot solve, so the big challenge we have with a low number of banks is that we need to apply a big layer of differential privacy in the processing to ensure that every output the banks get out of this data-pooling service has sufficient entropy and doesn't reveal any sensitive information."

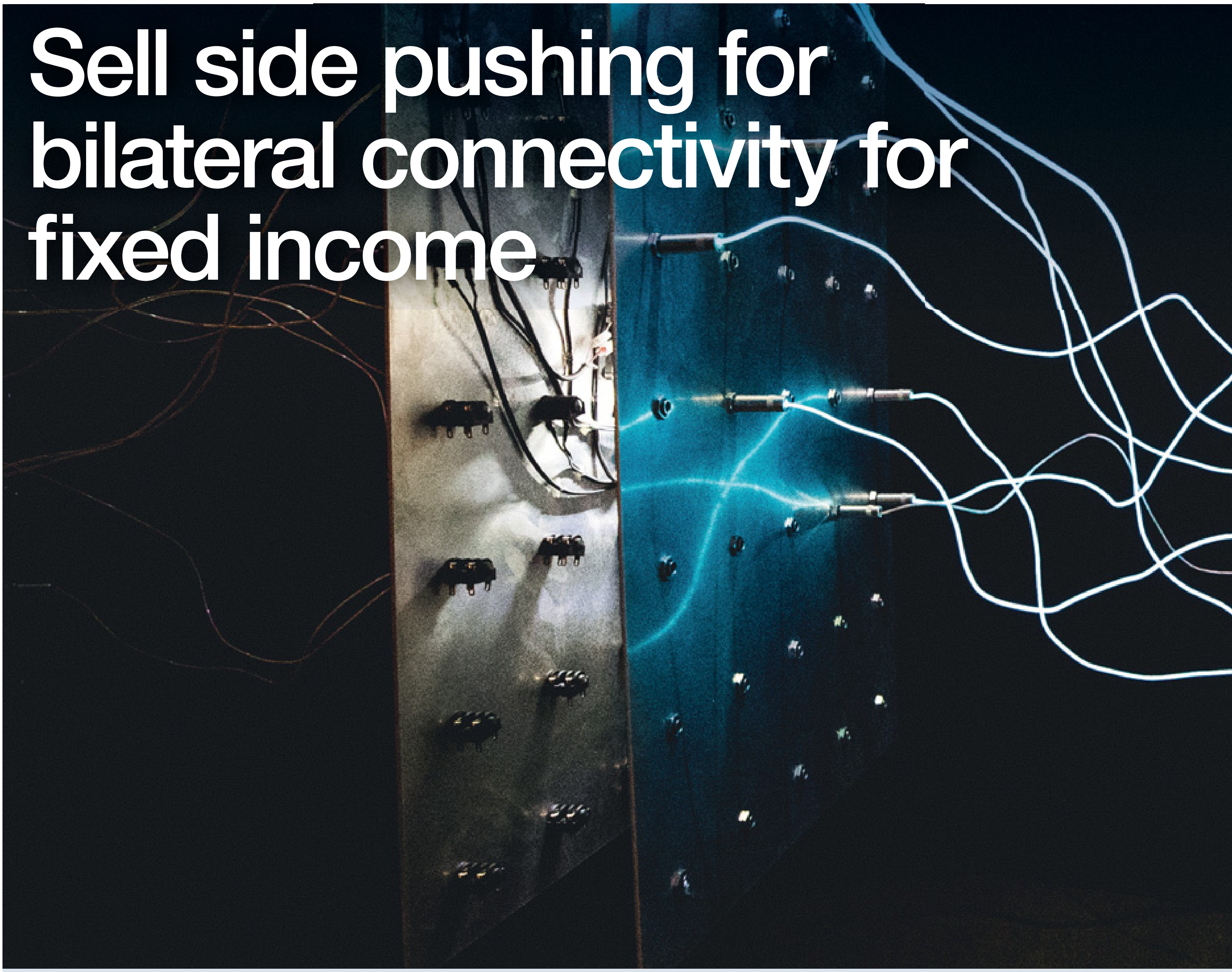
Foing says this is a "teething problem" that will only persist while Danie remains small.

"It's this first step—having them sign a legal agreement and start creating a legal entity—that is the most difficult. As soon as this milestone is reached, then we'll see more banks want to join," he says.

Prospective members can see the benefit of the tech, he says, and are struggling with KYC processes. "But these collaboration tools that we provide only have value when a good number of banks are participating. Unless we have at least five banks using the platform, it's going to be hard to convince new banks to be the first to join and to do the hard work that would benefit others. But as soon as we get those five banks, then we get straight to 10 or even 15, because so many of them are in the position of wanting to join," Foing says. He adds that SocGen's buy-in has been very helpful in driving interest in the project.

If Danie can set up the legal entity, there are many possible use cases that haven't been explored yet, Ta says. Danie could, for example, be used to benchmark corporate actions data from data vendors. "We could also use this kind of technology to provide confidential legal data with anonymization or encryption to a third party but not in the clear," he adds. wt

Sell side pushing for bilateral connectivity for fixed income



Fixed-income liquidity providers, battling tighter margins, want to execute directly with clients, but are buy-side and tech firms willing to absorb the connectivity costs? By Hamad Ali

Sell-side firms are increasingly seeking bilateral connections in more liquid fixed-income markets with their buy-side counterparts, as bank trading margins are hit by the costs of execution on electronic venues, sources tell *WatersTechnology*. Now, while more liquidity providers are keen to shift their trading volumes away from venues, the challenge they face is convincing the buy side to commit to the tech lift of these connections.

A trader at one UK-based asset manager says banks are starting to push for direct connections with the buy side, as execution fees and other market structure trends compress already thin margins. "They are being very vocal in telling their clients, such as us, that the costs are unsustainable, that the cost will be passed on to us. And then at the end of the day, it's the end-client that suffers," he says.

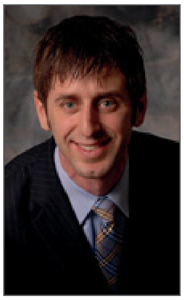
Automation in slower-to-electronify fixed-income markets is generally welcomed by most participants, at least in concept. And the electronic venues—such as Tradeweb, MarketAxess and Bloomberg—have become rich sources of liquidity, and other value-added services. "They are not just focused on matching the buyer and seller anymore. There is a tremendous amount of data and analytics they do underneath to help the users of those platforms understand what their interactions are like per counterparty, who tends to respond faster and who is good in certain sectors," says Kevin McPartland, head of market structure and technology research at Coalition Greenwich.

However, these venues charge fixed fees and commissions, and liquidity providers bear most of these costs. "As more trade volume flows through, that means more fees to pay, which again can go straight to the profit margins of some of those trading desks," McPartland says.

A Coalition Greenwich report says market structure trends, such as the transition from voice to fully electronic execution, are making the economics of executing fixed income on multi-dealer platforms increasingly unsustainable. The venues can counteract margin erosion by charging fees and are capturing a wider share of the value generated by fixed-income execution, the report says. Plus, they can charge for data generated by their activities. The sell side, however, bears the brunt of costs without being able to remediate them.

McPartland says both liquidity providers and buy-side firms are increasingly interested in alternatives to current request-for-quote (RFQ) trading models; for the banks, a popular suggestion is to interact with clients directly, streaming prices into the execution management systems (EMSs) and order management systems (OMSs) of asset managers via APIs.

"In recent months, over the past year or so, there has been a lot more talk—not just in Treasuries, but in corporate bonds as well—about whether dealers can do those connections directly to clients



Kevin McPartland
Coalition Greenwich

without a middleman, into their order or execution management system, to allow them to interact with those clients directly without anybody having to pay a toll," McPartland says.

For the buy side, there are potential benefits to aggregating direct connections to the major liquidity providers, as well as venue connections.

"If I requested a quote from 20 banks, the price I get back from a JP Morgan won't be as good as if I had just gone to them directly and asked for a price," says the trader. "I am not fulfilling my best execution requirement if I just go

to JP Morgan. If anything, I am probably leaking information to them that I am looking to do something they can't help me with. So, the problem at the moment is being able to disseminate that information of what a JP Morgan wants to do at any point in time to the clients who want to see that."

> "When we first went to the market with this idea last year to 18 sell-side firms in a working group, one of the first things they raised was a desire for direct connectivity." **David Nicol, LedgerEdge**

To build or not to build

McPartland says the buy-side firms that have built these connections so far are the largest ones, "who have the staff and the wherewithal to do that. I think over the long run, a lot of it will not be sustainable, because it will be onerous to manage all those direct connections."

Jim Switzer, senior vice president and global head of fixed-income trading at AllianceBernstein, says his firm built connections to two dealers around the end of 2019, and will be going live with three more in the coming months.

Others, however, say they are aware of interest from the sell side but haven't built anything at this point. Stuart Campbell, head of trading at BlueBay Asset Management, says most of the major Wall Street banks have asked him if his firm would connect with them bilaterally. However, he says, he would prefer to have his firm's OMS provider, Charles River, supply connections.

"Rather than me having to build something myself, which could take a lot of development work and maintenance, I'd much rather it's built for me by a vendor that I'm already using, such as Charles River. Once they show me a solution that may work, then perhaps I'll take those direct feeds in from the banks," he says.

Campbell says BlueBay is working with Charles River, "to help me consolidate those prices and see them pre-trade."

Sharon Ruffles, head of fixed-income dealing at State Street Global Advisors (SSGA), says her firm has discussed direct connectivity with some banks. She says the interest is confined to mature markets like US Treasuries, which are more liquid and transparent. "As a buy-side firm, I would have to be pretty sure that the price I am going to get is the best price available," she says. "To some extent, the less liquid the security is, the more chance of variance in that price."

Joram Siegel, managing director and head of fixed-income outsourced trading at Cowen, says his firm is exploring direct connectivity. "We are consuming most dealer prices and axes through close to a dozen third-party providers and evaluating liquidity in a highly systematic way. We are also talking to dealers about streaming prices and executing directly, but this is still in the early stages of its evolution," he says.

Cowen uses Tora for its OEMS. Siegel says the firm would gladly connect to the banks through Tora, but adds that the necessary capabilities on the sell side are not yet fully developed.

Siegel adds that direct connections will never entirely replace the multi-dealer platforms. "One of the main benefits of the incumbent platforms is that they offer multi-party RFQ functionality, which is one of the easiest ways to prove best execution," he says.

"While direct connectivity has great efficiency benefits for both sides of the trade, it requires a more robust market dataset and technology infrastructure to satisfy this requirement," Siegel says.

Heavy lifting

McPartland points to the spot FX market, which has long been electronic, as an object lesson in understanding how venues might be disintermediated. Unlike the fixed-income markets, where most electronic flow is executed by a few multi-dealer platforms, FX market participants interact with liquidity providers on single- and multi-dealer platforms, as well as via APIs into EMSs, with a range of execution protocols.

But in fixed income, where automation has lagged, neither buy- nor sell-side firms may be set up to easily enable direct connections and streaming quotes.

SSGA's Ruffles says if her firm were to directly connect with banks, she would encourage SSGA's OMS provider to set up Fix connections with the sell side. The firm would also need a repository into which it could receive prices streamed from multiple banks in real time, and from where it could evaluate those prices.

"That would work well for developed government bond markets," she adds.

Ruffles says firms need to consider whether their OMS provider is sophisticated enough to stream pricing data in real time from multiple banks and can run analytics on that data and make decisions based on it.

Susan Joyce, a trader and head of fixed income trading market structure at AllianceBernstein, agrees the build is a lot of work. "First, we have to come to an agreement. Then we set up a user acceptance testing connection and a production connection. And depending on where we host that and how we set that up, there may be a monthly cost associated with that hosting. Then it's about agreeing the trading protocols," she says.

AllianceBernstein has compiled trading protocols necessary for direct connectivity, Joyce says. "We have a book that, essentially, we wrote on what we think the trading protocol should be. And sometimes we provide that to the dealer, and they can use that when they code up to it," she says.

> "One of the main benefits of the incumbent platforms is that they offer multi-party RFQ functionality, which is one of the easiest ways to prove best execution."
> **Joram Siegel, Cowen**

The bank sometimes has its own protocols, "so there's some tweaking involved," she adds. "Ultimately, we agree on those, we code up to it, we do some testing—all in, it's usually about three weeks of development work, and then two weeks of testing."

AllianceBernstein built its OMS and EMS in-house. Switzer says none of the EMSs on the market quite fit the bill for the firm. "For us, it was build versus buy, and there was nothing to buy out of the box. So, for us, it was, 'Let's build it all.'"


Joram Siegel
Cowen

The in-house EMS can route to multiple venues and dealers simultaneously. Switzer says the firm is connecting to dealers that offer the widest range of fixed-income instruments.

"If you are a very specialized dealer in just one asset class, you are going to be at the back of the line, because we are going to code up to those with impact in every class so that we can use that Fix feed," he says. He wants to ultimately connect AllianceBernstein with eight to 10 dealers.

Vendors step in

Some buy-side firms are looking to tech vendors to address inefficiencies they see in fixed-income market structures. Fidelity and some 20 other buy-side firms, as well as 18 sell-side firms, have backed LedgerEdge, a new corporate bond trading platform. LedgerEdge wants to launch as a multilateral trading facility in the EU this year, and as an alternative trading system in 2022.

The vendor uses distributed ledger technology and privacy-enhancing technologies to prevent information leakage when an investor reveals their trading intention and other investors profit from that by buying or selling an asset ahead of them.

"When we first went to the market with this idea last year to 18 sell-side firms in a working group, one of the first things they raised was a desire for direct connectivity," says David Nicol, co-founder and CEO at LedgerEdge. "They said that in connecting directly to customers, they are looking to control the flow of data to these customers on an individual basis. They are looking to have a disclosed, known relationship with those clients, and they are looking for a reduction in the cost of the overall trade."

LedgerEdge plans to use DLT to give users control over their information and to whom they can reveal it.

"Our hypothesis is that market participants are reluctant to put orders into a market when those orders will be visible to other parties," Nicol says. "They would rather control exactly who gets to see their information, either based on the name of a counterparty or based on what their counterparty is showing into the market."

The vendor is currently integrating the platform with some major OMS and EMS providers.

SSGA's Ruffles says the concept behind LedgerEdge is very interesting. "Each client will have a node [in a blockchain], and the sell side will be able to connect directly to the client via that node. So, they can send different prices to different people. If I am a predominantly index-based long-only asset manager, I might get one price from the counterparty; a high-turnover hedge fund would get a different price," she says.

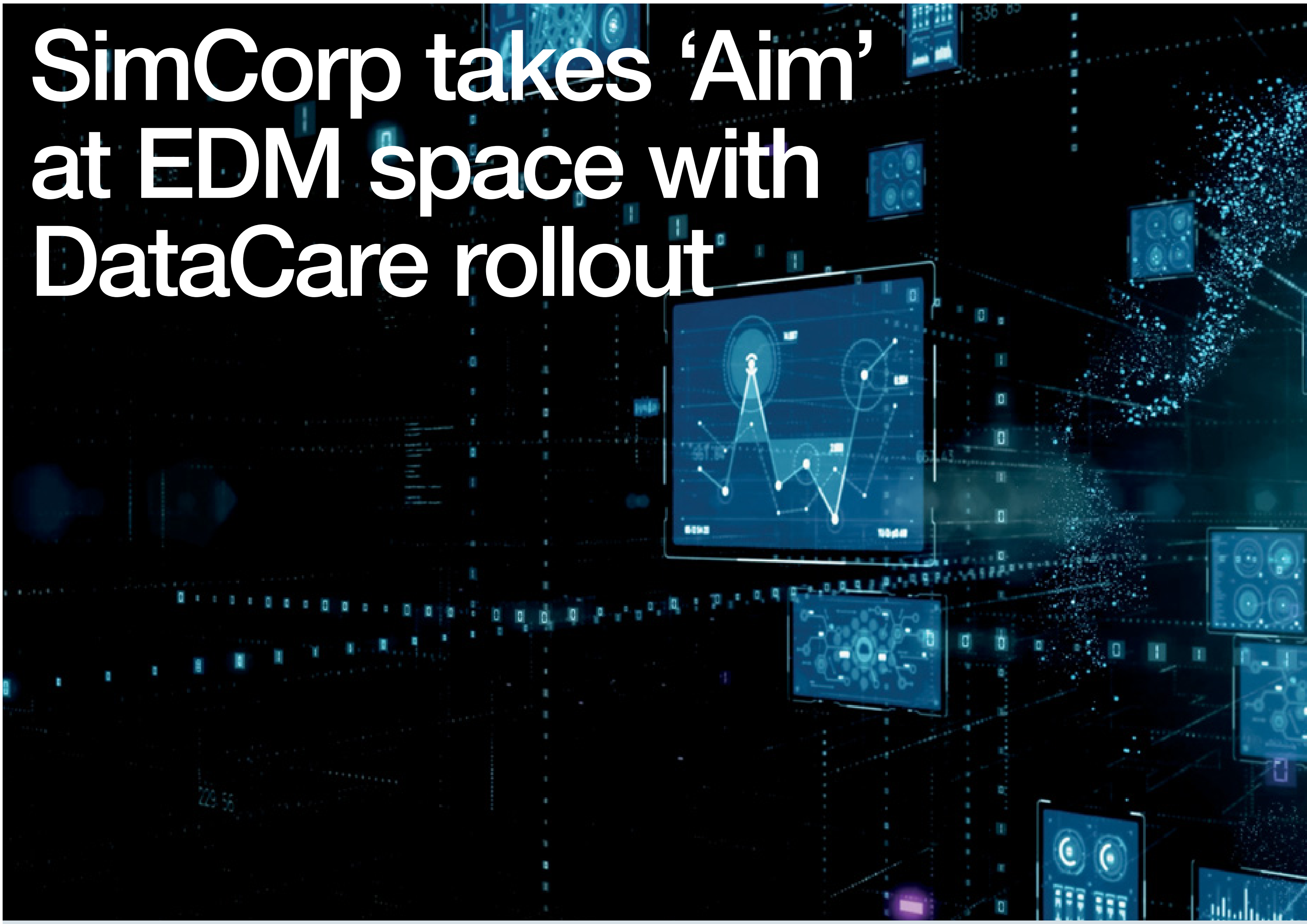
A vendor solution would be desirable, says AllianceBernstein's Switzer, but it would need to have broad-based support among both the buy- and the sell side. It should also be administered by a neutral third party.

"If you have the top 25 dealers, and dealers 10 through 25 say, 'This is a great idea! We are in!' and dealers one through to five are out, it isn't going to work. You need broad acceptance by the top guys. An industry solution is going to come from the market leaders," Switzer says.


Jim Switzer
AllianceBernstein

He says he hopes that as fixed income evolves, an industry-wide commercial solution could emerge to create an economy of scale of these connections. He calls it the "creation of an interstate highway or network that will allow this connectivity to happen." wt

SimCorp takes 'Aim' at EDM space with DataCare rollout



Since launching DataCare in April 2020, SimCorp has signed up eight clients, including Zurich Group Investment Management. By Wei-Shen Wong

Trading and investment software provider SimCorp has several solutions available, but it is best known for its front-to-back investment management offering, SimCorp Dimension.

However, since its $60 million acquisition of Aim Software in 2019, SimCorp has been making a bigger push into the data management space. The vendor has fully integrated Aim Software as its enterprise data management (EDM) solution, dubbed SimCorp Gain. Now, it is pushing the data management envelope further with DataCare, its cloud-hosted managed service offering for market and reference data management.

DataCare was developed in collaboration with global buy-side organizations and is a multi-asset, end-to-end solution for all aspects of financial data management. It runs on SimCorp Gain, and aims to fill a gap in the market by combining business operations, data advisory, change management, and multi-asset class coverage in a single data management platform.

Guillaume Rondy, vice president and global head of the data and communications offer line at SimCorp, says DataCare faced the same issue as the company's other products, such as digital client communication and reporting solution SimCorp Coric.

"People don't really know [about it]—in the same way we have a bit of the same issue with reporting, where we've got really strong reporting solutions but the market still sees us as this front-to-back system," he says.

But things are slowly changing as firms' approach to data evolves. Rondy says financial institutions wanted full control of data in the past, and many built in-house systems as a result. Now, these firms want a more standard data management setup that is quick and easy to operate and comes with a more reasonable price tag.

"Data is very important. But what's more important is the outcome of the data management process. Now that people have been running it, they appreciate that it's not rocket science," he says.

Unlike the sell side, where the calculations can be complex, the buy side has an easier time of it dealing with end-of-day data and intraday data cleansing, for example, which might suit a standardized data management platform.

Since launching DataCare in April 2020, SimCorp has attracted eight clients, which Rondy says is encouraging. "That's really good momentum to have eight customers signed in 18 months. It's not for everybody, and we fully appreciate that," he adds.

Virginie O'Shea, CEO and founder of Firebrand Research, says Aim Software had been around for a while and specialized in supporting the requirements of European asset and wealth management clients.

"The offering was lightweight and reasonably priced, and therefore it picked up a lot of clients that were otherwise wary of a larger data management platform implementation. Post-acquisition, the focus seems to be on running a fully managed data service for these clients—taking away the heavy lifting for data support and enabling these firms to reduce the size of their operations teams accordingly," she says.

She notes that managed services have been "slow to take off" in the past, but as the number of data management tasks an investment operations teams must handle has grown, these offerings are "gaining a little steam."

She adds, though, that "the buy side is much more comfortable with these kinds of arrangement than the sell side, so though it will be a bit of a slog due to the long sales cycle, they should do well if they keep their flagship clients happy."

Holistic approach

Zurich Group Investment Management, the investment management arm of Zurich Insurance Group, is one of SimCorp's first DataCare customers.

Ruchir Verma, head of global services, investment management at Zurich Insurance Group, says getting the right value from data requires people who can understand it, analyze it, and make the most out of it. He says Zurich's investment management unit often found that workdays were not long enough for them to do all they could with their data.

"There were many factors that prompted us to look for change, but the most important one was that we were struggling with capacity constraints to build out new capabilities. We have a great team of data, technology, and business experts—a highly valuable combination of skills—who were spending their time on monitoring, collecting, and preparing data, and we needed to free up quality time for them to focus on data analytics and harnessing insights," says Verma.

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Ruchir Verma, Zurich Insurance Group

> “The vendor will need to consistently invest in the managed services side and the technology side for DataCare—this isn’t an area that can be neglected due to the rapid evolution of investment data requirements over time—just look at the growth of ESG for proof.”
> **Virginie O’Shea, Firebrand Research**

Before transitioning to DataCare, the investment management unit was using an on-premises EDM solution with the software, infrastructure, and value chain managed within the team. Customizations and developments just added complexity to the underlying software, while delivering the same output. This inefficiency and additional complexity ultimately drove the unit to use SimCorp’s DataCare solution.

Now that it has transitioned to a fully managed data-as-a-service offering, Verma says the team no longer spends time on processes, the underlying software, or technical changes. “Instead, we are focused on helping the business get the best possible outcomes,” he says.

DataCare’s change management and data advisory features make it a holistic EDM service, according to Verma. “The change management element is important as it allows us to roll out changes at a very fast pace. For example, if we have new data types that need to be onboarded, regulatory changes that require new attribute sets, or changes to vendor feeds that need to be implemented, these changes—which are all time critical in nature—are all managed by SimCorp as part of the DataCare service,” he says.

Meanwhile, the data advisory service feature in which SimCorp has specialists available in a range of asset strategies and data types to help firms keep up to date with industry, regulatory and market changes, delivers the right support, particularly in a continually evolving landscape, he says.

“For example, environmental, social and governance (ESG) datasets are still changing shape, and having a vendor who can advise on how to manage and incorporate these changes, and ultimately remain one step ahead, is extremely valuable,” Verma says.

‘Out of the box’

SimCorp’s DataCare offering appeals to two types of firm, Rondy says. The first are those that are less mature in their data management journey, and that perhaps currently manage their data using spreadsheets or a proprietary or third-party accounting system.

The second group consists of firms that have set up a traditional data management system but are struggling as they discover it requires more resources, time, and money than anticipated to maintain, upgrade and support.

Virginie O’Shea
Firebrand Research

Guillaume Rondy
SimCorp

“If you’re going to have to implement the software, run it, operate it, and make sure you’re always up to date with whatever your business needs, that’s a big ask,” says Rondy.

Instead of going to the trouble of implementing and running a system, then finding that it’s getting too expensive to manage, he says firms can opt for a more “out of the box” system based on a service-level agreement.

“The people I’ve just described have gone through the pains of building [a system] themselves or with a vendor and realize, ‘OK, every year I’ve got to add more people to it,’ so it becomes a people problem because technology hasn’t kept up. It is something we are very conscious of, so we are deploying technology behind it to enable our service to be more efficient. But if every single customer has to do that, then there’s a lot of wasted effort,” says Rondy.

Many asset managers and pension funds have also grown in size, sometimes through acquisitions of firms that may already have their own system. So which system stays and which system goes?

This is where an as-a-service offering can make a difference, Rondy says.

Continual investment

Firebrand Research’s O’Shea believes DataCare will require ongoing investment from SimCorp if it is to continue helping firms stay ahead.

“The vendor will need to consistently invest in the managed services side and the technology side for DataCare—this isn’t an area that can be neglected due to the rapid evolution of investment data requirements over time—just look at the growth of ESG for proof. This will have to be an equal focus for the vendor as the offering grows—if they hope to become a serious contender in the EDM managed services space, they will have to prove to clients and prospects that they will be investing for the long haul,” she says.

Particularly when it comes to the buy side, O’Shea says compatibility and integration with other tools such as data governance and data quality toolkits are increasingly important, along with the ability to support as many datafeeds as possible.

“The rapid adoption of new sources for ESG is a case in point—vendors need to consistently keep up with client demand to retain an edge in this market. The increasing burden of compliance requirements on the buy side will also add to the list of requirements that vendors must manage—reporting, dashboarding for operational risk management, APIs—there’s a long wish list for improvements,” she says.

SimCorp has hired 30 people across five global locations to build out DataCare, providing around-the-clock services in data operations, advisory, and change management.

Rondy says the firm is investing in the Gain offering that underpins DataCare in order to improve the service it provides to customers. It is also looking to increase DataCare’s scope. “Historically, it was security and price only to start with. We’re now adding corporate actions data because we realize we can actually operate this with our teams. We are also adding ESG data, so we’ll do ESG data management-as-a-service. For existing customers, it’s a pretty easy add-on,” he says.

SimCorp is in the process of signing agreements with several large ESG data vendors to process their data. wt

Alt data's second inning: Brace for a long M&A game

The alternative data sector is still relatively nascent, and as such, buy-side firms have struggled with how best to incorporate these non-traditional sources of information. While experts say that there will be continued M&A in the market, how those deals go down—and for what reasons—will vary. By Max Bowie

Alternative data—information collected usually from industries outside the financial markets to provide traders and investors with exclusive and early insight into companies, their stock, and potential investment decisions—has been the hot topic among quants and data scientists in recent years. Demand for new insights has only intensified as the Covid-19 pandemic has disrupted the accuracy and value of traditional market indicators.

But despite demand for more alternative data, its providers—which usually focus on one core dataset, or a small suite of products derived from the same core data—are facing a quandary: How do they continue to grow their business? Can they continue hawking a single dataset to a wider audience? Do they need to develop other datasets—or merge with another provider already offering other data to broaden their appeal? Or do they need to be snapped up by larger vendors with existing distribution networks or private equity firms looking to create greater value by rolling them up with other start-up alt data providers facing the same issues?

Evan Schnidman, founder and managing partner of data advisory firm EAS Innovation, who sold his previous company, natural-language processing software vendor Prattle, to Liquidnet in 2019, says we're already seeing evidence of consolidation among providers in the alt data space, and has been predicting the need for a roll-up among data providers serving the buy side since before he sold Prattle.

He believes this because point-sourced solutions are difficult for asset managers to deal with, as they might have 40 or more vendors for their alternative data needs.

"Because there are so many players in the market, we've forced something of a race to the bottom, where firms have to spend so much on integrating these data sources, they can't spend much on content," Schnidman says. "If vendors can combine forces and offer a more integrated solution, they can achieve more pricing power, shorten sales cycles, and grow revenue at a faster rate. This strategy can even attract more attention from private equity firms who say, 'You've already done the hard work; now we can roll you up with some other organizations,'" he says, adding that he believes there is still plenty of potential for more consolidation among providers.

Prattle was one of three companies acquired by Liquidnet—along with buy-side analytics provider Otas Technologies in 2017 and research aggregator RSRCHXchange also in 2019—to form a new business unit called Investment Analytics, which combines their technologies to deliver unique pre- and intra-trade analytics and insights.

"The thing driving this consolidation trend is the need to own the underlying data assets, and the need to be able to do something proprietary and unique," Schnidman says.

This may be a reason behind global asset management giant BlackRock's recent acquisition of staff from Ark Data, a start-up provider of a "community" platform for alternative data vendors and consumers—helping alt data providers to package their data to potential clients, much like Crux Informatics, and helping clients to assess and ingest alt datasets.

Sources say Ark was in the process of fundraising, and that BlackRock—which is building out its own cloud-based data and analytics offering, Aladdin Studio and Aladdin Data Cloud, in partnership with Snowflake—saw in Ark "an aligning of interests," and made an offer to acquire the key people behind Ark but not any specific technology assets.

Those key figures are founders Rich Newman, who previously led the Open:FactSet Marketplace of alt data at FactSet, and Tim Gavin, who worked with Newman in FactSet's content and technology solutions division, having joined the vendor via its purchase of his company Code Red, which developed research management software. In addition, BlackRock also hired Bryan Lenker, a 17-year FactSet veteran who was most recently director of Open:FactSet channel partners.

While a BlackRock spokesperson declines to provide further details of how the Ark team will contribute to its own cloud data efforts, one source familiar with the situation says, "The way to look at the transaction is not to think of it as an acquisition where BlackRock acquired Ark's business and technology, but as an acquisition of know-how and intellectual property."

Though that's a new way to approach M&A in alt data, Ark isn't the first alt data company—or even the first alt data aggregator—to experience consolidation. These deals have thus far been driven both by buyers wanting to capitalize on the success of alt data, others looking to fill a specific need or gap, and others still who haven't been able to take full advantage of the growth of alt data. Still others have been squeezed out of a growing market, such as location data provider Thasos Group, which was acquired last year by Market Service Inc., a holding company that also owns AggData, another location data provider that provides information on the location of retail shoppers to predict impact on businesses. Even Bloomberg has gotten in on the act, and last December bought Second Measure, a provider of anonymized consumer transaction data used to predict company performance.

Among aggregators, Canadian alt data marketplace Quandl was acquired in 2018 by Nasdaq, which is now incorporating the platform into its new cloud-based Nasdaq Data Link offering. And with exchanges already actively buying environmental, social, and governance (ESG) data specialists, it's likely that more exchange purchases of alternative data aren't far off.

> "We're in the second inning of alternative data. The first was identifying and cataloguing data. But now people are calling us and saying they don't have enough data scientists, and they want companies to provide more analysis, and they want to know who else is using that dataset."
> **Scott Hall, AltHub**

Scott Hall
AltHub

Chris Petrescu, founder and CEO of CP Capital, who has previously served as a data strategist at quantitative investment firm WorldQuant and head of data strategy at ExodusPoint Capital Management, says Nasdaq's acquisition of Quandl was a statement that exchanges—which generally aren't known for innovating, given their monopolistic positions—see data as a key asset.

"I think this trend has already been underway for some time, starting in 2015 when Standard & Poor's bought SNL, which provided sector-specific fundamental data. Since then, there have been smaller and larger acquisitions, culminating in the S&P–IHS Markit deal, which is enormous," Petrescu says.

He echoes Schnidman's point that consolidation will make data sourcing and management easier for end-user firms, and also makes it easier for vendors with limited datasets to branch out into new areas and develop new products using acquired data, technology and expertise. "It's almost always a question of buy vs. build: Could you build something yourself? Yes, but can you also get a company's client list and its data?" Petrescu says.

To repeat Schnidman's earlier comment: Alt data M&A is about the proprietary underlying data that these firms collect, and what they do with it that makes it unique.

Putting the 'U' in USP

There are two ways that alt data providers can offer something uniquely valuable, says Bruce Fador, CEO of data and fintech management and sales consultancy Fador Global Consulting Group: Either achieve the Holy Grail of doing something that no one else can figure out how to do, or find a new and better way to approach traditional, "mundane" datasets—i.e., by making alternative data "less exotic"—because "outlier" alt data providers don't yet have wide enough market penetration. But even though he warns that trying to sell a company can get expensive—for example, an investment banker's fees can be costly, especially for startups without huge revenue streams—he says a lot of data and analytics providers are actively in play.

A good example of a company bringing a new approach to old data challenges is Estimize, which was acquired in May by quantitative and alt data research firm ExtractAlpha. Estimize captured crowdsourced estimates data from individual professional and retail investors, weighting them based on past success, to deliver scores frequently more accurate than Wall Street consensus estimates.

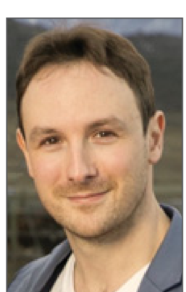
Having just gone through the acquisition and integration process, ExtractAlpha CEO Vinesh Jha echoes Fador's warnings, but says that if you can take the pain, you can achieve the gains.

"It takes 10 times longer, 10 times as much paperwork, and three times as many lawyers as you would want. But from an operational perspective, we were able to combine sales and technology teams. There were some things being done separately that we could bring together and save costs," Jha says. For example, with almost identical prospect bases, ExtractAlpha was able to cross-sell to Estimize's clients, and vice-versa, and to find new value in—and hence, more ways to monetize—existing data by looking at it in different ways.

And it's not just data providers feeling the urge to merge: Advisory firms that help startup vendors to identify those unique factors and position themselves to attract financial firms are also combining forces. For example, alt data advisory and sales services firm AltHub recently merged with Invisage Alpha, a UK-based provider of an artificial intelligence (AI) sales enablement and modeling platform, which AltHub will use to automate the data discovery and integration processes for data vendors and clients.

AltHub CEO Scott Hall says he expects to see more interest in "refiners" and "enablers"—the terms he uses to describe companies like AltHub or Crux Informatics that perform the data processing and transformation that enables alt data to be combined with and used alongside traditional datasets, compared to data owners or data marketplaces—as firms demand greater insights off the shelf.

Bruce Fador
Fador Global Consulting Group



Chris Petrescu
CP Capital

"We're in the second inning of alternative data. The first was identifying and cataloguing data. But now people are calling us and saying they don't have enough data scientists, and they want companies to provide more analysis, and they want to know who else is using that dataset. So, in the next inning or two, you'll see companies like us get more traction to satisfy that 'dating game,' and alt data will become more refined so it looks like other types of data," Hall says.

And at the same time that buy-side firms are searching for more insights, private equity and venture capital firms are also showing more interest in companies operating in the alt data world—particularly those that Hall calls "refiners" and others providing tools to make alt data easier for firms to use.

"They're buying in to the fact that these datasets are more in demand," along with the services provided by those who make firms' "alt data journey" possible by making the data usable out of the box, he says. "Before data can be delivered to a buyer, it goes through several steps that are not done well in the industry. You have to link the data back to something in the public markets, and that's a lot of work. We've had to build our own security master tables."

Schnidman, who sat on both companies' advisory boards, says he's "thrilled" that they're merging, creating a single business of complementary skillsets. "I had suggested that they do some projects together, and they ran with it," he says, adding that he played a similar role in last year's acquisition of institutional ownership data and analytics provider Passiv.AI by Astrocyte Research, a provider of fund flows data and market risk and volatility forecasting tools.

Someone else thrilled about the companies merging is Barbara Matthews, a former senior counsel to the US House of Representatives' Financial Services Committee and financial attaché to the European Union for the US Departments of State and the Treasury. Matthews had enlisted AltHub to help with strategy and sales support for her company BCMstrategy, which quantifies the effectiveness of public policy decisions and measures public policy risk.

"Today, firms assess public policy exposure by talking to experts. So it's all based on opinion. In contrast, our process takes political science as its starting point and measures not content but action levels," says Matthews, who was granted a patent for her process two and a half years ago after realizing she could automate that process. "Every day, we identify the delta between rhetoric and action—i.e., what governments are actually doing. That's the opportunity value."

BCM generates its policy risk scores, but also needed to develop its own lexicon of public policy language as training data for its process. The vendor has secured strategic relationships with the likes of Bloomberg and Dow Jones, but—with only three staff, including Matthews—the company enlisted AltHub to identify how to make its data more sophisticated and accessible, and to help it reach more of its target audience of global macro and sector-specific portfolio managers. But Invisage was able to bring additional insight that helped BCM's development efforts.

"AltHub and Invisage suggested mapping the patented PolicyScope data to industry sectors. After I mapped the data, they suggested we backtest the daily data against common volatility measures like the Vix (Cboe's Volatility Index) and mapping the data to industry sectors to demonstrate how far in advance our data anticipates market volatility. Invisage has just completed the backtest, and we look forward to sharing the results with the market," Matthews says.

The Robinhood Effect

However, the changes underway in the alt data market signal that perhaps capital markets have only limited use for alt data, and that alt data providers will need to target new market segments if they want to grow beyond their current clientele. For example, Nasdaq says its new Data Link service will target "all segments of the investing public" and allow "more people to access information," suggesting that the service is aimed more at retail investors and their brokers, rather than traditional institutional contributors of exchange order flow.

Interest from retail investors in access to more sophisticated data and analytics is driving providers of data and tools—such as the Miax International Securities Exchange, which recently described flipping the model for its Virtual Trading Floor hub of data and analytics—to focus on winning a higher volume of lower-value investors, rather than pursuing a smaller number of high-spending client firms.

This "Robinhood Effect" is simple: Why spend time and money wooing five hedge funds for $1 million deals when through word of mouth you can attract 5 million retail investors for $1 apiece, John Smollen, executive vice president and head of exchange-traded products and strategic development at Miax parent Miami International Holdings, recently told *WatersTechnology*.

This app economy and focus on the burgeoning market for retail traders with disposable income has led to one challenge affecting companies eyeing the next stage of their growth: outside funding—and specifically, its accessibility in an arguably overvalued market.

To date, startups have thought little about selling off equity stakes to fund important growth phases, like staff expansions, product development, marketing campaigns, and even M&A activity. But, as Schnidman points out, it's hard to raise funding for anything significant—such as rolling up alt data providers into a larger and more valuable entity—when valuations can be significantly over-inflated (often a direct result of interest in a company quickly outpacing its ability to generate actual revenues).

"There is still a big opportunity for larger companies that have reached 'escape velocity,' but it's hard to find financing for earlier-stage companies, especially when they are expecting valuation at 30 or 40 times revenue," Schnidman says.

There's another funding challenge facing alt data startups: their size. Schnidman says that even though more private equity firms have come to him looking for leads on potential acquisitions in the past year than in all of the past five years put together, private equity firms often find the deals on the table to be too small for their taste.

"When I have pitched a rollup to PEs, the response has been that many of these companies are simply not big enough. Most alt data companies are hovering below $5 million in annual recurring revenues, and most PE funds are looking for an anchor asset doing at least $20 million in annual recurring revenues so they can throw debt behind them," he says.

For some, consolidation itself may be a route to funding deals, rather than the other way around, says ExtractAlpha's Jha. "There are lots of interesting companies out there doing one thing really well. But I don't know if they can make enough of a business out of just that for a venture capital firm to say, 'This is the next big thing,' and invest," he says. "If companies have the same clients, it makes sense for them to consolidate and to be part of larger datasets, or to get access to a platform with new features."

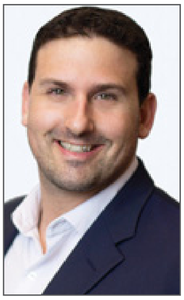
Brad Schneider, CEO of Nomad Data—which recently raised $1.6 million in seed funding from a group of venture capital firms led by Bloomberg Beta, the data giant's venture arm, and angel investors—says traditional synergies associated with mature markets don't necessarily transpire in fast-growing sectors like alternative data, which may deter potential buyers, as may the challenge of integrating complex datasets. Schneider sold his previous company, Adaptive Management, to data "wrangler" and integrator Knoema.

However, he says alt data presents interesting opportunities for banks, such as Jefferies, which in 2016 acquired ITG's research arm (formerly Majestic Research) and renamed it M Science.

"A lot of these companies are starting to look like boutique research firms. Banks realize they need to differentiate their services with new research, and that it can increase revenues and sales," Schneider says.

Follow the money

Yet revenues—and specifically, profits—remain elusive for many alt data providers, says David Riley, head of business development at Alqami, which helps financial firms identify and assess alt datasets, and also helps alt data sources productize and package their data in a way that financial firms can easily consume. And that revenue challenge is an obstacle to funding and M&A activity.



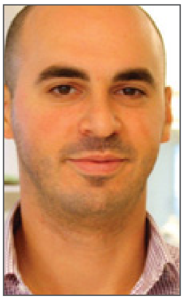
Evan Schnidman
EAS Innovation

"There is willingness of private equity investor capital to come into this space, but mostly the revenue growth isn't there to justify acquisitions. Yes, there's a lot of money being spent on alternative data—multiple billions of dollars per year. But most of that is being spent with companies that are independent. Big banks, governments and corporates are not big in alternative data yet. Once they get into this space, we'll see revenues go up," Riley says.

And once alt data becomes a more visible and reliable revenue source, this will not only make startups more attractive to equity investors, but could also drive greater M&A by larger data vendors who will need to be able to offer alt data to those larger bank clients. But winning those larger deals takes time, and revenues won't materialize overnight.

"With a lot of these large banks and asset managers, the investment cycle is longer, and to get any big money behind a decision, they have to do it as part of a budget cycle, and demonstrating how this adds to the bottom line and justifying the cost is very difficult," Riley says. "They need to go through a rigorous investment case to get budget, which can take 18 months or two years, and after that, you still have to navigate the landscape of providers," Riley says.

This is not only frustrating for firms eager to get started using alt data, but also for vendors desperate for money to start rolling in. Hence M&A between startups and larger "traditional" vendors who want to add data to their offering—and already have existing relationships with those clients, so they can bypass the lengthy sales and due diligence processes—could provide a win-win-win for all parties.



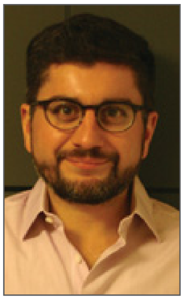
Leigh Drogen

Schnidman says that while consolidation is inevitable, with larger data companies likely to snap up alt data startups, what's not inevitable is any guarantee that they'll be able to monetize their new acquisitions. In some instances, legacy companies may simply struggle to integrate more innovative startups because they are so dissimilar, both in terms of culture and their technology stack, or even the personalities (and egos) of those involved—so a key skill of anyone trying to buy and roll up compa-

"There are lots of interesting companies out there doing one thing really well. But I don't know if they can make enough of a business out of just that for a venture capital firm to say, 'This is the next big thing,' and invest."
Vinesh Jha, ExtractAlpha

nies, or play matchmaker, is recognizing not only technologies and tools that will work together, but also if leadership and staff will work well together.

"Each company is somebody's baby, so you have to be respectful. You each come in with different priorities, so you have to reconcile those," Jha says. "In our case, Leigh [Drogen, founder and CEO of Estimize, who is now pursuing a new venture in a different sector of financial markets] and I trust each other and have known each other for many years. And we're small companies, so there wasn't a big culture clash."



Vinesh Jha
ExtractAlpha

And while management squabbles or M&A distractions can hamper a firm's ability to capitalize on acquisitions and continue its growth trajectory, in other cases, a buyer's ability to monetize a new acquisition may simply come down to hitting the ceiling of its addressable market, says Drogen.

"One of the lessons of the past decade was that the institutional equities market for alternative data was smaller than we all thought it would be, because discretionary asset managers and hedge funds never quite grasped how to generate alpha from this data in a systematic way. What ended up happening was that they used the data in an ad-hoc way … to validate their thesis," he says.

Alternative clients

That's why alt data companies are already casting their nets wider in the hope of snaring a broader base of clients.

AltHub's Hall says independent research houses are known to be looking at using alternative data more widely as an input to research, and says there are rumors that sell-side firms are looking at building or buying alt data marketplaces to sell data and signals to buy-side clients trying to figure out how to build research operations focused on alternative data. In addition, he says corporations using data to provide competitive insights—which don't have fiduciary responsibilities associated with their use of the data, and don't have such demanding requirements of the data itself—represents a big market for alternative data.

Rich Newman
BlackRock

Petrescu believes a lot of the future growth in the market will come from companies outside the capital markets, such as for competitive intelligence and company analysis for corporate clients.

"For example, advertising technology tracking companies have been selling to corporates for far longer than they've been selling to hedge funds," he says, adding that alt data companies often start in the corporate sector and pivot into capital markets—with mixed success—but that the "real dividends" could come from expanding into the much broader non-financial sectors.

Schnidman echoes this sentiment. "In the last six months before we sold Prattle, our fastest-growing market segment was corporates—especially the investor relations community within corporations," he says, adding that while this sector may not generate as much revenue per client as buy-side firms, the sheer number of potential corporate clients makes it an attractive market for vendors of any data or tools that can provide competitive insights and business intelligence. "I spend a lot of time talking to corporates because they spend a lot of time focused on optimizing how they communicate with investors, and thus determining how investors are measuring company performance."

Covid and beyond

In the end, the future of the alt data industry may be shaped by the competing values of a company's founder, leadership, and investors. It seems inevitable that in such a competitive market, most won't survive as independent providers of one or two alt datasets. "So, your choices are to focus on building value in the short term and maximizing the outcome of a sale, or to roll the dice, combine with someone else, and hope that one plus one makes three," Schnidman says. "It depends what you are optimizing for—money right now, or long-term growth?"

It may also be shaped by how things change as we emerge from the grip of the Covid-19 pandemic, which has compressed investment timelines and prompted traders to focus on short-term datasets rather than historical trends that played out during "normal" times.

BCMstrategy, for example, has only been collecting data for two years, which traditionally would have been too small for financial firms to base decisions on. "We expected we would need at least three to five years of data to satisfy the needs of capital markets," says BCM's Matthews. "But Covid has changed the game for how decisions are made and how much historical data people want. Markets seek to implement more robust nowcasting, which means they place a higher priority on near-term data. Our datasets are particularly positioned to provide perspective on near-term decisions using near-term public policy data, which is often a material risk driver during the pandemic."

Alqami has also noticed the difference. "The challenge about history is that the last 18 months are meaningless from a five-year backtesting requirement," Riley says. "Some funds are re-assessing how they test data because the old models don't work."

This has provided a short-term boon for companies that otherwise might have faced a much tougher 2020 and 2021, as during an unfamiliar climate, financial firms turned to unfamiliar datasets, whereas competition may have caused more attrition in normal circumstances, says Christine Short, vice president of research at events data vendor Wall Street Horizon.

"Everyone is trying to get information that gives them an edge, and are trying to take advantage of more retail money in the market. So what started out as looking like a precarious position turned into a big win for these companies."

But the climate could easily turn precarious again. Now, as alternative data enters its second inning, and as the volatility created by Covid inevitably settles, so may demand for some alt datasets, which may force M&A whether companies like it or not. wt

9/11: the colleagues we lost, and the years that followed

On September 11, 2001, *Waters* magazine, one of the two publications that gave their name to Risk Waters Group, held its first-ever conference at Windows on the World in the North Tower of the World Trade Center. It was an exciting and stressful time for the editorial, sales and events teams. The magazine was eight years old, and there was a youthful exuberance about the company, imbued by its staff, who were mainly in their 20s and 30s. Some were just starting families. Several flew over from London, the company's head office.

It has been 20 years since that day. Of nearly 3,000 people who were killed in the terrorist attacks, 16 were members of Risk Waters, and another 71 were delegates who had arrived to catch the morning presentations or settle in before participating in panel discussions scheduled for later in the day. Another 72 restaurant staff were already well into their shifts, having arrived early for breakfast preparations.

Peter Field, chairman and CEO of Risk Waters Group who had flown over from London for the conference, had planned to arrive before *Waters* magazine editor David Rivers gave his opening remarks at 8:30 am. But before Field left his hotel that morning, he noticed he was unable to receive emails, which delayed his arrival while he tried to resolve the issue over the phone with the IT team back in London. At 8:46 am, as the first plane hit the North Tower, Field was arriving at the subway station beneath the building. By the time he was above ground and outside, the second plane had struck the South Tower. He scrambled for cover.

The memories from that day are still fresh for Field.

"I don't think I really see it very differently to how I did then," he says today. "Obviously, I block it out to some extent—I've had to, to get past it. The horror isn't there, but all the memories are there, and I'd prefer not to think of that too much. I pay my respects by thinking about it now, but come September 12, I put it to one side until next year, and I don't think that will change year after year. I don't see much significance in 20 years, or any anniversary, because I spoke with Neil Cudmore's dad a few weeks ago, he said he thinks of his son every day. That's the way it gets you."

Jared Kotz, who worked in delegate sales for *Waters*, was at Windows on the World that morning. He was helping the event manager, Paul Bristow, who was over from London, set up the stand that showcased the various publications under the Risk Waters umbrella. Kotz was slow to arrive because he took time to tend to an injured bird he'd found on the street. By the time he got to the 106th floor, Bristow had most of the stand ready to go, but there was one batch of publications missing. Kotz, who rode his bike to the World Trade Center, offered to go back to the Lafayette Street office to grab the magazines, which would also afford him time to check on the bird. He was outside when the first plane hit.

"Paul is responsible for my being alive because he got there early and pulled all our marketing materials out of the boxes and placed them in the displays, a job I was slated to do," Kotz says. "If he hadn't done that work, I would have still been there when the plane arrived. I needed an excuse to leave and go rescue that bird and Paul's efforts allowed me to make the choice that took me out of harm's way."

These are just two of the stories of chance that led some to safety that day. Sadly, there are more stories of tragedy than luck, as you will read in the remembrances throughout this article. While it will likely offer little or no solace to those who lost a family member, friend or colleague, the people at *Waters* (now known as *WatersTechnology*) and *Risk* are still producing journalism and hosting conferences, two decades later. Most importantly, friendships are being forged all the time and new relationships are being struck up.

Tony Gibson, former publishing director and board director of Risk Waters, was in London on 9/11. He says no one ever talked publicly about what transpired after those terrible events because—rightly—the focus was on the families of those who were lost. But he hopes people don't take that silence to mean those who died were ever forgotten.

"David ... I knew very well. For him, *Waters* was in his blood. How would he have felt if the company had collapsed? Neil, I spent hours on the phone [with every week], and I even convinced him to move to New York from Hong Kong. How would he have felt if we hadn't continued?" Gibson says. "We still remember them. And I hope they would be proud that we've kept what was such a major part of their life still going."

In the aftermath

Nat Knight, the former regional director for the Americas with Risk Waters, would normally have been at an event like the Waters 2001 Financial Technology Congress, but he was in Chicago. Like many around the world, all he could do from that distance was hope.

"I remember waiting for my first meeting and seeing on a small TV the first plane crash into the towers, and failing to understand the effect this would have," he says. "My meeting was canceled and I went back to the hotel. I tried calling several of my colleagues who were supposed to be at the event, but everyone's cell went straight to voicemail. As the day unfolded, I finally managed to contact the New York office, who were relieved to hear I wasn't there, and the truth slowly dawned: While I hoped they had got out, it was fairly clear they hadn't. I still feel sad that their lives were taken away from them, and often think, 'What if we had held the event on another day…?'"

Hope can be a powerful drug. In the immediate aftermath, Gibson remembers a delegate calling and saying he got out. Perhaps others had, too? Many held on to that hope for several more days—even weeks—as false reports of survivors came in. The internet was young and buzzing, while official information was released slowly.

"The level of communication back then, and awareness and knowledge, was so far below what we have today," Gibson says.

It was up to the London office, led by Gibson and Celine Connell, former publishing director and board director with Risk Waters, to field the frantic calls from loved ones. Due to the confusion and lack of real-time information, those in London had just as much news as those in New York, which created problems.

"To some extent, in New York we were not better informed than people in London," Field says. "People would come to New York because they thought they'd find out more, but they were disappointed that we knew no more than they did."

Shut out of the office on Lafayette Street after downtown was closed off, staff in New York did what they could, traveling "around the city, checking hospitals and medical centers, posting 'missing' pictures

Oliver Bennett *By Joy Bennett, mother*

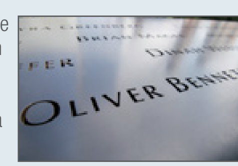


Photo: Alex Towle

Oliver Bennett, my son, was killed in the World Trade Center terrorist attacks on September 11, 2001.

He worked for Risk Waters as a financial journalist and was attending a conference on that day.

When he was killed, we as a family, along with school and university friends, set up a charity in his name to support young entrepreneurs—www.olibennett.org.uk. The charity is thriving, 20 years after his death, and we have supported 150 young people aged 18 to 29 in their ambition of setting up their diverse businesses.

As a family, this has given us enormous energy to keep Oli's memory alive, and we hope that the young people we support will benefit in their own efforts from what we knew as his enthusiasm and creativity.

One of our trustees recently set up an anonymous online art auction to raise funds, which was hugely successful and financially rewarding. This can be found on "Oli postcards." The art is donated by artists both famous and more amateur.

We miss Oli daily—his humor, laid-back approach to life and his intention to return to London that October, which never happened. Twenty years is a long time, but our grief is as painful now as it was then, as we approach the 20th anniversary of his death.

On reading this, some people still at Risk Waters will remember Oli as he was, as a 29-year-old starting his life, which was cut short by this atrocity. Others will sympathize with our personal loss. Whichever, Oli's name will be remembered.

"Grief is the price we pay for love"—an inscription in the memorial garden in Grosvenor Square remembering all 67 British victims of the attack.

Joy (mother) Adrian (father) and Justin (brother) Bennett. Chris and Robbie, his nephews, who never knew him.

Melanie de Vere *By Ruth de Vere, sister*

Photo: Alex Towle

Melanie is a much-loved daughter, sister, auntie and friend who lost her life at age 30 in the North Tower on September 11, 2001, alongside a number of other Risk Waters colleagues who were attending a breakfast meeting that fateful morning.

The events of that day had a huge impact on her family and close friends, and there were some very dark days. But 20 years on, we are now able to look back at Melanie's short life with fondness, remembering the good times and wondering what she would have achieved in life had she not been caught up in the events of that day. We are sure she would have married, had children and achieved her dreams and aspirations, of which there were many.

Melanie had an enthusiasm and energy for life, which shone through in both her professional and private life. She will be remembered for her friendship, loyalty, humor and fun-loving approach to life. She was a great person with a fabulous smile who did not deserve what happened to her on that day, and would have loved the opportunity to continue her journey through life.

We are comforted that in her short life she didn't waste any time and lived it to the full, as endorsed by the huge turnout for her memorial, with many fun stories and experiences shared by family and friends. Unfortunately, we could not have a funeral for Melanie as no remains have ever been found, but as a family we spend time reflecting on each anniversary and have had the opportunity to visit Ground Zero in New York on a number of occasions.

on walls, desperately seeking any clue to our colleagues' whereabouts," Field says.

Ben Ray, Waters' group publishing director at the time, was one of the key conduits on the ground in New York for families looking for any information. He says it would be several months before he was able to properly grieve because each day there was so much to do. "I think adrenaline was my biggest driver at that time, after perhaps the first couple of days of confusion which was flowing from the usual media sources. Reports of walking wounded and evacuations to New Jersey proved false and the penny dropped for me when I decided to go and visit some hospitals and the city morgue. They were completely empty."

He continues: "I stayed in the office all day, taking calls from family members and friends and then over the next days went through dead colleagues' phone messages and got back to family members and friends. That wasn't easy, but relatively speaking I held the easier end of the line. I recall clearly several of the calls or later in-person meetings with family members. There was a mix of panic, anger, frustration, and also compassion and level-headed pragmatism. Some of the anger was directed at me but you can't judge that emotion—it is unfiltered, raw and you have to respect and let it come."

In London, Gibson handled inquiries about delegates, while Connell spoke with families of staff. Gibson remembers, though, that "everybody wanted to help—everybody wanted to help." And they did, in something of a "shift" arrangement, tackling day-to-day tasks, and then manning the phones or helping in other ways. Connell pays tribute to everyone on staff, "who, after the events of that appalling day, rallied and nobly labored away in horrendous circumstances as they watched and waited, in the midst of their own grief and despair."

As days went by, what was left of hope dwindled. "I did a town hall on the Wednesday, Thursday, and even on the Friday. I still said we hoped we'd have news on the Monday," Gibson recalls. "That is naive with hindsight, but it is genuinely what we believed. I think Monday was the last day we did a daily briefing."

Attention slowly turned to the company, and the more than 200 employees who worked at Risk Waters, according to Field. "For the first couple of weeks it was pretty chaotic, but at some point we had to get on to the business, otherwise people would've lost their jobs, as well. It's not the same as losing a friend, a child, or a partner, but it focuses the mind," he says.

There were still deadlines to hit, and there were still events on the docket. Just a few weeks after the attacks, Gibson and Connell boarded a plane to New York to attend a Risk event.

"I remember driving away from my home to go to the airport and looking back at the house and thinking: we're going to New York right after September 11—am I mad? Will I ever see this again?" Gibson says.

Building a company

Risk Waters Group was created in 1999 when *Risk*—the publication founded by Field—acquired *Waters* magazine. As Kotz remembers, the two organizations were still integrating in 2001. Just like any

Karlie Rogers *By Keith Rogers, father*

Photo: Alex Towle

This year marks the 20th anniversary of the terrible 9/11 terrorist attacks in the USA. Twenty years since Karlie boarded her plane to New York City and never came back.

She was early into work in the North Tower on that Tuesday morning in New York. Enjoying that lovely Manhattan morning with its now infamous beautiful cloudless blue sky as she crossed the plaza and entered the building.

She started welcoming delegates into the Waters conference as they arrived on the 106th floor. Without knowing it, she inadvertently saved one man's life that morning, politely turning him away as he attempted to enter without a ticket. He now calls her his guardian angel, and he and his wife and their two lovely daughters are eternally grateful that she did. This year, they will have enjoyed 20 years of family life as result of her actions and they say they are all totally indebted to her. Her legacy to them.

At 8:46 that morning five hijackers flew American Airlines Flight 11 into the north façade of the World Trade Center, North Tower (1WTC), severing all escape routes above the 90th floor and igniting a fire that would be impossible to put out. Karlie, all her colleagues and all the delegates attending perished.

At 26, she was just starting out on a life that should have been filled with adventure, love, laughter, fun and undoubtedly the patter of little footsteps. She was madly in love with her boyfriend Will and he took her to Heathrow on the Saturday afternoon to catch her flight and saw her off. He was never to see her again. Never to share that life with her. In the time that has passed since that day he has traveled the world, wanting to be alone. Eventually putting down roots and a life for himself in Australia. He married and now has two lovely boys.

For us as a family in the 20 years since that day, a lot has happened.

We have raised money for Yeovil Hospital (where Karlie was born) which bought them much-needed special heart monitor machines for newborn babies which, we hope, have helped to bring many of the next generation born in these 20 years safely into this world. A legacy to all of them from Karlie.

We also raised money for the charity fund for all those brave New York first responders who rushed to the burning WTC towers on that terrible day and sadly never made it back out. Back to their homes and to their families. Hopefully this has in some small way helped those grieving families to get through these 20 years. A legacy from her.

We have met with many brave people who worked tirelessly on the pile in New York City for the year following the collapse. Many of them in those 20 years since have succumbed to terrible illnesses as a result of working and breathing the toxins present in the rubble. Thanks to their efforts and the advances of science they have managed to find and identify the remains of lost loved ones and returned them to the grieving families with the dignity they rightly deserved. Unfortunately, in these 20 years, we have not been one of those families.

In the natural way of things there have been many new additions to our family. None of this generation met Karlie, but hopefully over time their parents and grandparents will make sure that they know all about her and make sure that in the next 20 years she is not forgotten.

This year, her family will meet again in September at the memorial gardens in Grosvenor Square and talk about her, about those marvelous times we had with her. Tell stories to those that never met Karlie and strangely laugh a lot, because that was her way. Laugh and have fun. But that is what will be so heart-breaking: in those little pauses in between, we will stand silently and realize again that Karlie and those times are gone, gone forever, and we will all shed tears. Our legacy to her.

Fly high our lovely girl, your family, friends and the rest of the world have been robbed of 20 years of your beauty, mischievousness and just downright fun and love.

Simon Turner *By Elizabeth Turner, wife*

In August 2001, Simon and I had decided to holiday in Dorset; I was six months pregnant, and Simon was always flying in his new position as publishing director for *Waters* magazine. A staycation was the order of the day at the cottage of Dinah Webster and her partner Neil Cudmore, colleagues of Simon's at Risk Waters. Yet there I was on our first day of sunshine, traveling from hardware store to hardware store, because Simon wanted to fix the ring mark he had made on one of Dinah's tables.

This experience summed up Simon and the family that he worked with at Risk Waters—Dinah and Neil weren't just colleagues, they were some of Simon's dearest friends. Dinah loved the luxuries in life and the last thing Simon wanted to do was damage anything of hers. He was very caring and respectful of his relationships; he set very high standards, for others and for himself, so he couldn't forgive himself until he had sorted the problem. Working at Risk wasn't just a job to Simon, it was a pleasure, a privilege and a team of people that he loved and took great pride in working with.

When Simon and I first met in 1997, he had been working at Risk for several years, beginning his career as a salesperson, before becoming publisher for *Energy, Power, Risk Management* magazine—what became *Energy Risk*—finally being promoted to board director and publishing director of Risk's newly acquired New York magazine, *Waters*.

Those who knew Simon in the industry would remember a gregarious, sociable extrovert and his job complemented all these qualities. He loved networking at any event or in any country. He loved meeting people, whether they were new employees at Risk or competition from other magazines. He loved creating innovative content with the team around him—nothing like the magazine they were building had been conceived of before in the energy markets—enjoying his own success but more importantly the success of his team.

When Simon left school at 18 years old, he didn't go to university but joined the King's Troop, so beginning a lifelong love of the army. After three years, he decided to leave and join civvy street, but remained committed to the military, becoming a member of the Honourable Artillery Company (HAC), part of the Territorial Army. He remained active in the HAC until 2001, when he realized that to maintain the highest of standards he expected of himself in his job—and upon discovering he was about to become a father—something had to give. But he carried with him the discipline, structure and teamwork into the rest of his life … for better, and for worse!

I know from my own hard worn personal experience that Simon had very high standards: I remember one evening being told by him, as he packed to travel for a conference in New York, that I didn't iron his shirts to a satisfactory level! Needless to say, he ironed his own shirts from there on.

As his wife, though, I recognized that if you worked for Simon these high standards could be harder to navigate. Some of his colleagues highlighted that he was tough to work for and that his expectations often seemed out of reach, and that he had no issue with articulating his disappointment when things weren't the way he wanted. I know that reaching the position of Sergeant Major and the characteristics that got him there often crossed over into his style in the publishing industry, which wasn't necessarily the leadership style that employees had signed up for.

Photo: Alex Towle

But the other aspect of Simon which many colleagues also saw, as did his family and friends, was his heart. Simon didn't care where you came from, he only ever had a deep respect for the individual. He would talk to the receptionist and the delivery men in the same way he would a FTSE 100 director.

He cared about each person in his team, and he took time to show that consideration professionally and personally. One of his team told me that Simon was the toughest boss he had ever worked for, yet he also knew he was the only one who'd ever completely had his back. Another told me how she had arrived at work on her birthday to find a little bottle of champagne and a cupcake with a candle waiting on her desk.

Simon's happiest times were spent in the Risk offices just off Marylebone High Street. The area suited his love of good food, good wine and an artisanal high street. Celine Connell, Tony Gibson, Dinah, Neil and Henry Perks were his closest friends, as well as his colleagues.

The Prince Alfred by the office doors only contributed to the team-building that Simon loved, and was largely at the center of, and I remember how sad he was when the business, growing from being a small independent to a more robust player in the industry, moved offices to Haymarket House in 1999. Although Simon recognized Risk's success and he was committed to being a part of the move forward, I know he felt it was the end of an era—one where he had been extremely happy.

By spring 2001, Simon and I were expecting our first child, and both enjoying successful promotions in our respective careers. Simon had been invited to become a board director at Risk, and to take on the role of publishing director for Waters. He was nervous about the prospect and confessed to me that he couldn't believe that he would be chosen for such a position considering he had no university education. Simon couldn't recognize the skills and talents that he did bring to the business and it took a lot of convincing for him to accept that view. But he relished the prospect of leading the publication and developing the team.

He traveled every month to New York to show the team he was committed to them and their future. He would spend hours at home in the evenings reading the magazine before it went to print, scouring its contents for accuracy both in word and design. He only ever wanted the magazine to be printed when it was perfect. His team will have known he had all their best interests at heart, but I can imagine it was tough at times as they developed their new, cohesive team.

The Waters conference scheduled for September 11 was being hosted by Simon. He flew out the night before and in true Simon style he booked into his favorite, cheap hotel, The Pickwick Arms, as he preferred to spend his travel allowance trying different restaurants in New York.

Simon loved life and all it had to offer, but on this particular evening his flight was late, so he missed dinner with his colleagues as he needed to prepare for the next day's conference. It was important to him as it was a big part of the networking for this new magazine. He had told me it would be the last conference he would attend abroad before our baby was due.

His army influence meant Simon would have been at the conference extra early to prepare everything in good time. His suit would have been dry cleaned and his shirt ironed within an inch of its life. He would have been excited at the prospect of meeting all the delegates, and mindful of supporting his team so they too felt confident for the event. He would have thought through every eventuality to make sure his team and all the delegates enjoyed the conference. And the venue was perfect … the Windows on the World restaurant in the World Trade Center, Manhattan.

Unlike others at the conference, as far as I know Simon didn't make any phone calls after the planes hit the towers. All I know is that Simon would have not wanted to call me as I was seven months pregnant, and he wouldn't have wanted to worry me. He probably had no idea that every camera in the world was focused on them. I also know that, with his army training, he would have done everything in his power to work out if there was a way to get all his team and every delegate out of that building; and finally, in possibly facing the realization there was no way out, he would have turned his attention to calming everyone around him, and providing love and support in any way that he could.

In July 2001, Simon and I took a trip to celebrate his 39th birthday before he became a dad for the first time. He wanted to visit the Somme in France. While he paid his respects at the Canadian memorial park, where you can still see the trenches carved out in the ground, I asked Simon why it was so important to visit this area. Simon replied that he had always wondered what he would have done if he had had to face death like all these soldiers in the First World War. He said that he hoped he would find bravery and courage in the face of death. I feel sure he did.

When I remember Simon I think of his love for life—a good job done, delicious food, excellent wine, laughter, and the love of friends and family.

Our son, William Simon, was born on November 14, 2001. As I am, Simon would be exceptionally proud of the man William has become.

office dynamic anywhere, things could get "testy," he says. "But once people got to a bar after work, things were more gregarious."

Over the year that followed, Field remembers people left the company because the sense of loss was too great. Kotz says "it was just grief" in the office. For some, moving on would be easier than for others. "New people came in and got to work and the business of publishing continued," he says.

Neil Cudmore *By Jim Cudmore, father*

The most enduring memories I have of Neil are the 10 days I spent with him and Dinah in Hong Kong in November 1999 not long before they departed for New York to take up new posts in the Risk Waters offices there.

Before I flew out, Neil asked me to get a good bottle of brandy at Duty Free because it was so expensive in Hong Kong. I remember on the first evening, sitting with him on the balcony of their apartment watching the sun go down over Lamma Island, listening to a James Taylor CD (*You've Got a Friend*) and enjoying a few brandies.

Photo: Alex Towle

Of the many things that we did during my stay, I particularly remember playing golf with him at Clearwater Bay and getting a ferry with a couple of Neil's friends to play at the Nansha Golf Club in China where the Cudmore team came away victorious! Also, a challenging hike over the Dragons Back on a very hot Sunday morning with Neil, Dinah and some of their friends before a welcoming beer at a local bar. Neil and I had a very enjoyable meal at Stanley Thai not long before I departed Hong Kong and on the evening of my departure, Neil and Dinah accompanied me to the airport transit express train where we said our goodbyes.

Sadly, it was the last time that I would see them. I have always felt that on that awfully tragic day 20 years ago, I lost not only a son but a future daughter-in-law.

Family members eventually came by the office to remove personal items from desks or reclaim luggage from hotels.

One thing that indelibly sticks with Kotz is that the smell of the attacks—the acrid smoke—didn't leave the city for a long time.

"In the coming weeks I learned what war smells like," he says. "I decided to see a psychotherapist and the one I chose had an office overlooking the pit and so I would sit and look at the site as I tried to process my PTSD and watch as the firefighters would line up to honor those whose remains were recovered."

Some sought out help. Some handled the grief inwardly. As weeks turned into months, funerals and memorial services were held. At some point, memories blurred about the "office culture" before and after 9/11.

"I find it hard to say what the office dynamic was like before, because it was just an office dynamic. It was a very friendly place, and we were always working closely together because you were always working to deadlines, so you socialized a lot, and we were all fairly young. It was a communal thing. I was on the phone almost every day probably for two hours to New York. So there was a lot

Sarah Ali Escarcega *By her sisters, Maryam and Hannah*

Photo: Alex Towle

An Englishwoman in New York

So, how does a feisty little girl born to first generation immigrant parents in South London end up in the bustling and heady metropolis known as New York?

She was born Sarah Bibi, the middle of three sisters, and became the ever peacemaker.

She was friendly, popular and everyone wanted to be her friend.

At the age of 17, she joined the Virgin Megastore in Oxford Street as a Saturday girl—manning the information desk—and her love of music was born. One of her favorite childhood songs was "As Tears Go By" and she loved Sting and The Police. She would tell her little sister to come up after school because "Spandau Ballet were coming in today. You want to see Tony Hadley, don't you?!"

Having completed her degree in business and marketing, her talents and work ethic saw her progress up the corporate ladder. The world became her oyster, and she was soon riding the waves of her success. One of the highlights of her career was getting Reuters, when she headed marketing for their Australian equities business, an exclusive stand on the only corporate ship docked in Sydney harbor during the Sydney 2000 Olympics.

She loved traveling, and one of her most memorable trips was when that same "little" sister arranged a trip on Concorde for her. "Okay, that was amazing, we are quits now," she said upon return. "But I still want my Madonna picture disc from way back."

From London to Tokyo. From Sydney to New York. The ultimate jet setter!

Sarah touched so many lives with her magic: It was once met, never forgotten. Testimony shows this by the hundreds of tributes sent to my parents from people she met, however briefly. She was one of those rare people that manages to connect with everyone they come into contact with. She was always kind, generous and so non-judgemental. Doubt she even knew the words "I told you so!"

There are too many "Sarah" stories to tell, like when mum was calling her once in Japan and asked her, "What is that noise in the background?" Sarah replied: "Oh, that's just an earthquake, nothing to worry about." She was always making her family and friends laugh, from the funny voices she would put on, to the hilarious retelling of her adventures. Like the time she dressed up as one of the Spice Girls in a black PVC outfit, but couldn't then sit in the taxi because it was so tight—so she had to lie down!

She met the man of her dreams in London, summer of 2000; their whirlwind romance across time zones brought her back from Sydney to marry him in London, before moving with him to New York. Once she reached New York, it was like she had found her true home, without realizing it. She absolutely loved being there and we knew she would have no trouble settling in. After moving there in late April 2001, by the summer, she was itching to get a job. Enter Neil Cudmore, of Risk Waters, who was so impressed by her he offered her a job immediately. She'd only been with the company two weeks prior to that fateful day.

She is the shining star in our lives that has dimmed
She is the backbone of our family that has bent
She is the laughter that has quietened
She is the beating of our hearts that has slowed

Most of all, she is all the best of memories in our existence that will forever grow stronger.

Amy Lamonsoff *By Wendy Mceneany, sister*

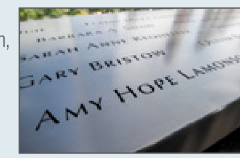


Photo: Alex Towle

What was most special about Amy?

She was very free-spirited and very open. When she walked into a room, she lit it up. Her smile lit it up because she had beautiful dimples, which my daughter has. You could just feel it—she had that force and that presence.

How do you look back on that tragic day now?

I know it's been 20 years, but it's always yesterday for me. And it has felt that way every day for the last 20 years. It was a shock to us because Amy had never been to Windows on the World [in the North Tower of the World Trade Center]. Neither of us had, even though we're native New Yorkers. She was there because she was a corporate events planner and planned the event.

So as a family, we didn't know she was there. I just knew that her office was a few blocks away. As I'm watching this—because I'm at work—the other planes were taken down and phone lines were going out, and then once they announced that they were evacuating Lower Manhattan, you just started getting a feeling.

I had to get home. I wanted to hear from my sister and make sure everybody was okay. I was driving home and watching all the ambulances and helicopters going into Manhattan—I was about 30 miles out from where I was working on Long Island—and I get home and we had spotty phone service. I remember calling and leaving her a message saying, "Hey, when you guys get back, please give me a call." I was watching the TV because she lived just on the other side of the Brooklyn Bridge and something just didn't feel right.

It's weird when I look back on it—I was worried because her office was so close, with the debris and the chaos that happened afterward. So I was watching TV and I don't see her and I'm starting to get really, really anxious. I started calling my dad and that's when I found out that she happened to be in the building and I remember collapsing; I know I hit the floor.

Today, what immediately comes to mind when Amy pops into your head?

How much she didn't get to do, and how short her life was. And the good she would have been doing, especially in these times. I feel for that. She was very political, very involved. She would be knocking door-to-door to register people to vote. She would be marching on Washington. She was very much that kind of person.

And she loved her job. She had friends in London—she made friends with them and visited them. And when we had her memorial, they came out for it.

What are some of the stories you tell your children about their Aunt Amy?

My daughter, Alix Kate, was two-and-a-half years old, so she does have memories of her aunt. But every time my daughter twirls her hair, that's my sister; my sister was a hair-twirler. Every time my daughter smiles, she really resembles my sister. She always did. When she was born everybody said, "Oh my God, she looks just like Amy!" We also named my son Austin after Amy: A for Amy; A for Austin. He was due to be born on September 18, 2002, but he couldn't wait to make his debut, and he was born August 28. Just in time for us to mark the one-year anniversary.

It's always a topic that's open to talk about. I never want anybody to think you can't talk about her. People say, "Never forget." Well, I always want her to be alive in my children's minds.

What are some memories of yours from when you two were growing up?

I am five years older than her and we both loved The Beatles. I remember that we had Beatles posters all over our walls. Of course, there were funny and wonderful things that we did when we were kids, but something that hit me was when I had to tell her that John Lennon was shot dead, she was so young and the devastation—she was very, very smart and always had so much sympathy and compassion. She was very bright.

That specifically, I remember, "Oh my gosh, I have to go in here and tell her this happened." It's not a fun memory. It's just one of those things where you have to spring this on a little kid, knowing what her reaction would be.

But I also remember taking her to see Duran Duran. I took her and her friend and it was the best day of their lives. And then I took her to see Power Station, as well, and that was fun. If she wanted to go to any concert, I'd take her to anything she wanted to go see, but Duran Duran was a big one for her. She was big into music.

Who was there to help you manage your grief?

Outside of my own family, my neighbors were phenomenal. I remember in the first two years, I would get cards from a Brownie troop. People who I had no idea who they were, they were making things and sending things. I have an afghan blanket that was hand crocheted with hand-written tags over each square with victims' names on it. It meant a lot. It was total strangers just reaching out to you and it really did mean a lot.

Laura Rockefeller *By Pauline Coutts*

Sometimes it's the simplest memories that make you smile when you think back to the time before 9/11.

This is true of my memories of Laura Rockefeller, who worked at many of the conferences and events the company ran. I did not know Laura well, but she made a lasting impression that has remained with me.

I first met Laura when I was on a trip to New York and was asked to help first thing at a conference at the Roosevelt Hotel next to Grand Central Station. Laura was there early as usual to help with the setup and registrations. The first speaker hadn't yet arrived and as it turned out had gone to the wrong hotel—and then promptly refused to come to the Roosevelt.

Some of the attendees were rather annoyed, as they had arrived early specifically to hear this speaker, some having traveled from London for the event. While the producer frantically tried to make alternative arrangements, Laura dealt with the situation very calmly and competently. When I returned later that day she was still there, making sure everything ran smoothly until the last delegate had left.

We ended up sitting outside the empty conference room chatting about her life in New York, enjoying a glass of wine together as she wound down after a tiring day.

Photo: Alex Towle

On another occasion she joined a few of us for dinner at a downtown apartment where one of the founding Risk directors was staying. Laura noticed a piano in the corner of the room and promptly sat down to play. She was note-perfect. It was a fun evening, full of laughter.

And that was what our colleagues were doing on September 11: working hard, building their careers, but also having fun and enjoying each other's company.

At this time of year, we will always remember them, and reflect on our individual experiences on that day and the days and months which followed.

Anyone who worked for Risk Waters at the time will have lots of good memories of the people who tragically died on that day. It was a relatively small company, so the staff all knew each other well and spent a lot of time together, both at work and socially.

Laura was a true professional, someone who could be counted on to do a great job, was wonderful company and I am sure would have been a fantastic friend.

Pauline Coutts, HR director at Risk Waters, 1995–2005

of flow between us, but I didn't think anything of it," Gibson says.

"Once September 11 happened, I think it just made us all feel a bit more vulnerable. It was a fun company, and I don't think that changed after, but I think we were just more fragile."

Ray notes the sales team had to be completely rebuilt, and they had to prove quickly that they could build a viable business model for the publication if it was going to carry on.

"Putting the losses aside I reached the 'what now?' phase and decided it was to carry on with Waters. The team we put together post 9/11 stayed together for the next seven years or so. I wouldn't say we were carrying a candle for the dead, but there was absolutely a sense of purpose and we could all rely on each other to do the things we needed to get done. I felt I could trust everyone on the team absolutely—that's very powerful," he says.

Postscript

In 2003, Risk Waters Group was acquired by Incisive Media, which was headed by Tim Weller.

Weller had known Field for several years. Field didn't necessarily want to sell, and even got cold feet at the last minute, but today he acknowledges that 9/11 had "some influence" on his decision to sell, though there were other nuanced reasons, too.

Looking back on the acquisition, Weller says one thing that was evident as an outsider was the "extraordinary graft" of those who worked for Risk Waters.

"What we found was an unquestionable resilience of the team," he says. "I have no idea how they dealt with it all. And I think there was a certain duty to give them focus and allow them to creatively execute stuff. Those folks who took over—it's just amazing to carry on producing and creating and saving the brand."

While the magazine that David Rivers edited has been acquired several times—today, we are part of Infopro Digital, a much larger organization—what Rivers and his 15 colleagues created endures.

Waters was named after founding editor Dennis Waters, and it was Dennis who convinced David to join him in 1990 at what was then Waters Information Services (the precursor to *Inside Market Data*). David would become the founding editor of *Waters* magazine. (And we'll use first names to avoid confusion, as Waters and Rivers are easily entwined.)

Dennis has always spoken fondly of David, but part of what Dennis remembers when he thinks of September 11 is the community those 16 individuals were helping to create. It's a community that was growing and helped to birth an event that would bring people together at Windows on the World on that bright, blue morning.

"The people who were at this event, didn't work [in that building]. These were people who were part of a community of IT professionals in the financial markets—that's what they had in common, they were a community of people who had similar problems, who were dealing with similar technologies, they were trying to adapt their organizations to change. That's why they were there, but it's not like they were there every day," Waters says. "So there was this attraction point for members of that community to come together there on that day."

When *WatersTechnology* or *Risk* hold events today, or when our readers browse an article on our websites, they are witnessing the continuation of the energy and enthusiasm of our 16 colleagues, and are part of the same community that brought those 71 delegates together. We will never forget them. wt

THOSE WE LOST

Sarah Ali Escarcega	Melanie de Vere	Sarah Prothero (Redheffer)	Simon Turner
Oliver Bennett	Michèle du Berry (Beale)	David Rivers	Celeste Victoria
Paul Bristow	Elisa Ferraina	Laura Rockefeller	Joanna Vidal
Neil Cudmore	Amy Lamonsoff	Karlie Rogers	Dinah Webster

Celine Connell

Contribution from Celine Connell, former publishing director, board director, Risk Waters

Simon came into the office one day with the most garish red trousers I had ever seen. I asked him whether he was wearing them as a bet. He laughed. He was incessantly ribbed each time he was decked out in those scarlet slacks, but he continued to wear them for years to come. That was Simon. He could be obdurate but he didn't take himself too seriously and he loved a laugh, regardless of whether it was at his own expense. When I was selling him my car, he wanted me to sign a contract with more clauses than the Brexit treaty. I politely declined to sign but I wasn't offended. He was meticulous on detail and I'm sure his own mother would have been offered the same terms as myself. He was always forgiven for his little idiosyncrasies because he was my chum and so terribly caring and kind.

Celine, second from right, with Simon Turner, far right

Dinah was glamorous and vivacious. She owned grape scissors and once sent a courier home to pick up a blouse that she had forgotten to pack for a company night out. This was the early 1990s, when procuring a courier was really, really opulent. Dinah truly believed in living life to the full and was very much in the present, and she always remembered my birthday with a card, inscribed with a thoughtful remark.

Neil was a truly decent and kind person: salt of the earth. He had incredible empathy and I remember a long email and phone call listing various antidotes for "bad backs," following a flippant remark made to him about my back spasms. Dinah and Neil hosted me, several times on three continents over the years and each occasion was warm, fun and somewhat tipsy.

Karlie's smile was all-consuming. She was the consummate professional with an enormous amount of spunk and expert frankness. Karlie was respected and liked by her team, her customers and her managers, yet she remained modest and unpretentious in all her interactions. I had the pleasure and privilege of meeting her parents, Angela and Keith, so I know where her sublime personality was formed.

I remember Elisa's beaming smile and her sense of fun. She was smart and witty and she was also equipped with a spectacular can-do attitude. Nothing was ever too difficult, and her clients were always singing her praises.

Oli was sharp and terribly droll and ever so decent.

Behind Paul's easy-going and cheeky persona was an extremely capable professional who never seemed to be phased by any work-based adversity.

Sarah was incredibly detail-orientated. She was unbelievably efficient and organized, and I often joked with her that she'd have us all in uniforms next.

David always graciously greeted and welcomed staff when they visited our New York office. He returned calls promptly and openly shared his abundant knowledge and contacts. In a competitive and sometimes ruthless environment, David's humanity and affable nature was clearly evident.

Michelle oozed confidence and competency, yet it was always apparent that her two young children were her primary concern.

Melanie was such a respected member of staff, extremely capable and revered, she was recently promoted and at the cusp of what would have been a flourishing career.

Every time I met Laura she was cheerful and resourceful and never seemed phased by the many issues and complications that surfaced at conferences.

As a growing and global company, regrettably I only had a nodding acquaintance with my other colleagues Amy Lamonsoff, Sarah Ali Escarcega, Celeste Victoria and Joanna Vidal, who lost their lives on that September Tuesday, 2001.

I would also like to pay tribute to all my colleagues, who after the events of that appalling day, rallied and nobly labored away in horrendous circumstances as they watched and waited, in the midst of their own grief and despair. The workplace is the new village, and our village lost 16 friends on that awful day, notwithstanding the 71 conference delegates who were also killed. I reflect often about my friends and colleagues whose futures were halted all too suddenly and far too prematurely. Certainly, as I strolled along Dublin's Sandymount Strand with my godson William, Simon's son, I lamented the horrific circumstances which culminated in Simon not meeting, holding or even touching this wonderful young man. Since 2001, clearly in our village, there are so many similar instances of pain at things that will never happen. But there are also many instances of pleasure and hope.

You move on because you have to and not because you want to. Over the past 20 years, I have often thought of those we lost and of their loved ones. I know they are missed, I know that they will not be forgotten and I know they will be remembered.

Ní fheicfimid a leithéid arís.

Tony Gibson

Contribution from Tony Gibson, former publishing director, board director, Risk Waters

Tony Gibson, bottom left, with, among others, Simon Turner, bottom right

Occasionally, I dig up a beer bottle top in our back garden and remember fondly that I was lucky enough to have had David Rivers and Simon Turner, drinking beer, at my 40th birthday party in the summer of 2001. Twenty years seems like a long time, but also only yesterday.

In September 2001, I was working at Risk Waters alongside Simon and in daily contact with David, as well as Neil Cudmore, Dinah Webster and so many of our staff who fell victim. They were friends built through daily contact and the endless time we spent together on business trips, as well as the bonds that bind when working in a developing media company.

Travel was easy before September 11, and New York was almost next door to London. We had a vibrant office on Lafayette Street. Every evening, a crowd gathered at the Mekong, our local watering hole. It was a happy office, fueled by reporting on the tremendous speed of development in financial technology. David, Neil, Dinah and Simon were always at the heart of this activity, buoyed by the community, excitement and togetherness that events bring and their own welcoming personalities. Our events team and journalists always gave their all, and the inaugural Waters Financial Technology conference was planned as a flagship.

I had first come to know Neil and Dinah in Hong Kong, and felt like I moved with them to New York, Neil often telling of the crane he'd had to hire to get Dinah's favorite piece of furniture in through an upper window in their Murray Hill apartment. Dinah always bubbled, all the time wearing a vibrant silk scarf. The office was her family.

Simon, with his responsibility for *Waters*, was a frequent visitor to New York, always finding a very "affordable" hotel the rest of us refused to stay in. He had taken me to a dinner at the Honourable Artillery Company, his territorial army regiment, showing me a painting set in the Falklands he featured in. It was the back of his head, but he was sure it was him.

I often think, where would our 16 staff be now? It is hard to answer but I am confident they all had strong paths ahead and I know many would now be among my closest friends. They are much missed.

I should add a note of thanks to all the staff of Risk Waters at the time and my pride to be working with them. The shock and horror of the event itself and the loss of friends, colleagues, delegates and others was hard to deal with—but the desire of everyone to help as the news unfolded was a reminder of the good.

Peter Field

Contribution from Peter Field, former Risk Waters Group CEO

Photo: Alex Towle

I'll never forget their names: Amy Lamonsoff, Celeste Victoria, David Rivers, Dinah Webster, Elisa Ferraina, Joanna Vidal, Karlie Rogers, Laura Rockefeller, Melanie de Vere, Michelle du Berry, Neil Cudmore, Oli Bennett, Paul Bristow, Sarah Ali Escarcega, Sarah Prothero and Simon Turner.

These were my colleagues, murdered 20 years ago on that nightmare day of September 11. They included Britons, Americans and one Australian. Some I'd known for years, a few had only recently joined the company in New York. They were mostly in their 20s and 30s, lively, sociable and ambitious people who deserved to continue enjoying their lives for many more decades.

Memories of them continue to come back to me frequently, sometimes triggered by a face in the street that resembles one of them, or, less pleasantly, by another terrorist incident or disaster.

On September 11, I arrived at the subway station beneath the North Tower of the World Trade Center minutes after the hijacked plane had rammed into the upper floors. I still had time to run out into the street, and then run again from falling debris from the second plane smashing into the south tower. My 16 colleagues and the 65 delegates and exhibitors at the Waters conference on the 106th floor of the North Tower did not have any such options.

The worst moment of the attacks that day was watching in disbelief as the north tower, with the Waters conference at the top, crumbled to the ground. The Risk Waters office in SoHo afforded a horribly clear view of this. All of us were devastated by what we witnessed.

But I also recall how soon after the shock everybody began reassuring each other. We consoled ourselves with the thought that our people must have had time to find a way out, given that it was more than one and a half hours since the plane had first hit the tower. This camaraderie sustained us through the difficult days that followed.

During those days we, like countless other people in and around New York, waited anxiously for news, believing, or willing ourselves to believe, that survivors—the walking wounded—would emerge somewhere or somehow. Waters' staff tramped around the city, checking hospitals and medical centers, posting "missing" pictures on walls, desperately seeking any clue to our colleagues' whereabouts. Sadly, those efforts were to be in vain.

In the London office, there was a similar collegiate spirit. Everyone knew the members of staff who had traveled from London for the conference. There were close friendships and a few relationships among these colleagues. All were suffering varying degrees of loss.

The London office phones were manned day and night to maintain contact with loved ones of the missing staff and to offer help of any sort. Lack of firm information from the US authorities about the fate of those who didn't escape from the towers caused a lot of frustration. The reason for this, sadly, became clear only later.

Bittersweet memories were evoked by the memorial services for individual victims around the UK and in New York. Parents and children alike were mourned.

At the company's own London service, in the beautiful Wren church of St Bride's, Fleet Street, there was an especially moving tribute to each of the Risk Waters people who died. One by one, as the victims' names were read out, current members of staff came forward into the aisle to represent them until there were 16 gathered in a group, a physical representation of the impact of the loss.

I also recall how Risk Waters' losses appeared to affect Tony Blair, the then-UK prime minister, when he paid a private visit to our London office soon after the attacks. His shock at the company's losses was visible to all. He shook hands with and spoke to every member of staff. He kept remarking how young everyone in the company was.

US politicians reacted with remarkable swiftness to ensure that victims' families would not suffer economic hardship, as well as to obviate the likely legal fallout from the attacks. The September 11th Victim Compensation Fund (VCF) was created only a week and half later, on September 22. This paved the way for the work of the special master of the fund, Kenneth Feinberg, who over the next few months had the terrible task of answering, thousands of times, the awful question—replicated in the title of his later book—what is life worth?

Our own Risk Waters WTC Foundation was set up to offer more immediate help to bereft families. With donations from Risk Waters and banks, brokers and individuals, funding totaled nearly $500,000—enough to give some support to family members of Risk Waters and delegates to our conference who were able to prove financial dependence on a victim. The foundation was wound up in 2006, donating the remaining $36,000 to the London Bombings Relief Charity Fund.

The people who deserve the most recognition are ones who were most affected: the relatives of the victims. They formed the September 11 UK Families Support Group in May 2002, at an inaugural meeting supported by Risk Waters. They've done sterling work over the past 20 years, working closely with government and helping families of the 67 British victims deal with the trauma of the attacks of 2001.

The group set up the September 11 memorial garden in Grosvenor Square in 2003, and organized the very moving memorial service there on the 10th anniversary of the attacks in 2011, attended by Prince Charles and prime minister David Cameron. Family members laid white roses at the memorial as the names of their loved ones were read out.

For the 20th anniversary on Saturday, September 11, 2021, a similar act of remembrance will be observed in a private service in the memorial garden in Grosvenor Square. White roses will again be laid on the inscription stone within the garden as the names of the victims are read out by family members. There will also be one minute's silence during the service.

David Osborn

UK Metropolitan Police family liaison coordinator, Risk Waters

On the morning of September 11, I had been giving evidence in a murder trial at the Old Bailey. In an era before smartphones, I was unaware of the events unfolding in New York, and returned to my office at Scotland Yard that afternoon to find it packed with people surrounding a television, watching a live news feed from America.

As it happened, I was working on the same floor as the team overseeing the force's family liaison officers—the people who do the vital, human job of forming a relationship with families who have lost loved ones in violent and unexpected circumstances, including mass disasters. First, conveying the dreadful news, then making sure the family are sensitively supported, looked after and given timely information as an investigation unfolds.

I knew the team well from my time conducting murder investigations and, drawing on my own experience working with bereaved families throughout my career, I'd had a hand in creating the job of family liaison coordinator.

Although the events were in New York, it was obvious that there would be British people affected. A "casualty bureau" was quickly set up, with phone lines manned 24/7 for anxious relatives to call. It soon became clear that many UK families were deeply concerned about relatives there. I offered to help.

I was not immediately attached to the team, and instead watched helplessly as the family liaison office struggled to get to grips with the enormity of what was unfolding in New York, and the devastating impact on UK families. What stands out in my mind, even at this distance, is the frozen look on the face of the constable who walked into my office on September 14, returning from a visit to a company called Risk Waters, who told me that the company had lost perhaps 264 staff and delegates at a conference, many of them London-based.

That afternoon I was sitting in Risk's Haymarket office with Pauline Coutts, the director of human resources, listening to their horror story unfold for myself.

As I write about my experience of September 11 in the paragraphs below, I am conscious that I didn't lose anyone in it that I loved. My narrative is not a comparison to that of the 35 UK families I responded to who each lost a loved one, but I write to provide a narrative from a different perspective on those days and weeks that followed. To those who lost their loved ones I still send my heartfelt thoughts. Many of your faces and our conversations remain etched in my mind. You faced your experience in the spotlight of the world's media and with wall-to-wall coverage. I can't ever imagine what that was like for you.

Supporting the investigation

A police casualty bureau is responsible for recording the names and details of those reported missing. While every person who submits an inquiry will get an officer allocated to them in the ensuing investigation, immediate families are of course prioritized. Businesses are generally responded to later, on the assumption that their employees' families will already have made contact with the police and are being directly supported. But the case of Risk Waters was unique in so many respects; they clearly needed their own dedicated response, and someone to act as the fulcrum between them, their affected families and the investigation in New York.

By the time I arrived at Risk Waters, staff had already taken the initiative and called every company on their delegate list. Publishing directors Celine Connell—who took responsibility for liaising with employees' families, many of them her own staff—and Tony Gibson, who took it on himself to try and track down each of the 242 delegates who'd said they would be attending. Every individual was noted on a spreadsheet as "Did not attend" (144), "Not accounted for" (68), and "Awaiting information" (30).

That was a huge help. But the machinery of a major criminal investigation needs verifiable facts, too; names, phone numbers, hotel details, who precisely had spoken to whom that day and when, and so on. While it was known that around 40 delegates had registered in advance and 20 speakers were on the agenda, no one knew who had actually made it to the conference at the time of the attacks.

That first afternoon, late into the night, Pauline and I worked line by line through an alphabetical list of names of those who could be missing, trying to verify what was known about each of them. Everything had to be checked and cross-checked, so that the families weren't inadvertently passed false hope, and the job of identifying the missing stood chances of early success.

The process of working through a long list of names unfortunately takes time, especially so when faxes and pagers still preceded widespread email and mobile communication—but, slowly, we made progress. I was deeply conscious Pauline had no way to shield herself and her own grieving. Every now and then she would need a break, to step outside.

While the loss of staff at Risk Waters was primarily a tragedy for their families, it was hugely affecting for their colleagues, too. Risk was a relatively small company in terms of staff numbers, and everyone knew everybody else. The mood within the building was of stunned disbelief. Those that had traveled for the conference weren't colleagues based in another country, they were friends they sat next to each working day, friends they laughed with and drank with—friends whose desks were still full of reminders of their presence, starkly visible within the office.

Day after day, as we sat together in a meeting room at Haymarket House, I was aware of the significant demands I placed on Pauline and her young support team, including Claire Mason, Suzanne Peacock and Sian Johnson, and I often wonder whether others know how much they gave so that the families of those lost at the conference received the best possible care from Risk Waters, even at a time when the company itself was reeling from its collective trauma. I am grateful that my connection with Pauline at this time of year endures still.

Reflecting

The early days of any disaster are focused on the belief that there will be survivors, even while news coverage shows the seeming impossibility of it. Here, the hopes were that loved ones would be found safe in the underground voids below the towers, unconscious in hospital, or walking the streets with amnesia. To share with families that their hope was in vain, that within a few days, investigators in New York were already working on an "assumption of death" policy, is among the hardest things that my family liaison colleagues had to do.

In time, the rescue operation became a recovery operation. DNA samples from toothbrushes and hairbrushes had to be sensitively sought from grieving families, and identification forms giving the smallest identifying features had to be filled in. In compiling the smallest of identifying details, visits to dentists and GPs were standard. Nothing would have prepared families for these questions.

And nothing on this scale had ever been anticipated or prepared for by UK police. There is no single policy applied to mass disasters or murder investigations, and new protocols were being developed almost daily in conjunction with different UK and international agencies.

Travel plans for the families that wished to go to New York, arrangement of flights and hotels, memorial services, both private and national, visits to offices, return of possessions, referrals to professional support services and other agencies like the Red Cross, victim support, local authorities and bereavement agencies—and of course the confidential and respectful repatriation and transfer of those lost to their final resting place—all fall to family liaison officers, as they supported each family as they needed or wished it to be.

Media strategies that met the desire of each family needed to be established as the press clamored, sadly often insensitively, for details. Some families wished to actively use the media in the hope of focusing the search for their missing loved one; others wanted nothing to do with them.

The worn blue notebook I still keep from those days records the frequent calls to each of my officers, one assigned to each bereaved family, to check their needs were met—and to ensure the officers themselves were getting the specific support they needed from their own line managers and constabularies, because the investigation placed huge demands on them. With the time difference in

Photo: Alex Towle

New York, it became routine for me to be making and receiving calls with American colleagues late into the night, so that updates could be passed to families as soon as possible, especially when any identification was made. Weekends became just another working day; my phone rang ceaselessly, irrespective of the hour, every call was answered. On the rare occasions that I was out with my own family in the weeks after the attacks, we took two cars, in case I had to leave them and head back to the office.

As the weeks went by, I think I met all of the bereaved families that my FLOs were working for, either in their homes or at memorial services. I was honored to deliver to some the urn of ashes from Ground Zero and the folded American flag offered to each family, and was humbled and moved by their kindnesses to me, when all I wanted as a father myself was to wish that this moment wasn't happening to them.

Seven weeks after September 11, I took a few days out from my office. Before I joined the police, I had always wanted to be a farmer, and in need of a mental break I went with my old farming employer and friend, godfather of my eldest son, to his cottage tucked remotely away, miles from anywhere, in the hills of the tiny Welsh hamlet of Abergwesyn. The local milkman, a good friend when we visited, was curious why we were there in the dark depths of November; telling him of my involvement in the response to the New York attacks without mentioning any names of those I had been involved with, he told me how a family he had known since childhood, who used stay in a caravan on his parents' farm, had lost their daughter in the attacks. Inwardly, I recognized the name as a member of Risk's London office. Sometimes the world is incredibly small.

This year, as always, I will reflect and remember the humbling experience of the more than 200 families I have met through tragedy. I will remember that scream that is like no other when they learn they have unexpectedly lost someone through violence. I will also remember their tears and their bravery, their confusion and their own compassion to police officers who work so closely with them, and I will remember, too, the people I met who operated in the background to support the bereaved. I will think of Pauline and her team.

I will also remember the many family liaison officers of 9/11 and other disasters I worked on, who saw so much, gave so much, and held so much, and who did what they could, sometimes at great personal cost, because sitting beside those who are inside the deepest depths of distress is simply the right thing to do. Because although 20 years have passed since 9/11, some things don't get left behind.

In memoriam

On September 11, 2001, 16 staff members of Risk Waters Group lost their lives in the World Trade Center attacks. Later that year, Waters magazine and Risk magazine published tributes to those who died. We reproduce those tributes below.

Sarah Ali Escarcega
Freelance Marketing Consultant

Sarah Ali Escarcega joined Risk Waters in August. Bright and motivated, she had a track record of impressive marketing positions at several top financial information companies, and had until April headed marketing strategy for Reuters' Australian equities business.

She was friendly and enjoyed working with people, and her intelligence shone through in any conversation. In fact, she made such an impression on Neil Cudmore (Risk Waters senior vice-president for the Americas) in her interview that he asked her if she could start working on a temporary basis the next day.

Sarah was still new to Manhattan on September 11. She had moved to the city a few months earlier after her wedding to Rogelio Escarcega. Restless living in the city without a job, she quickly seized the opportunity to join Risk Waters. In just her first month she had already proved herself, and was in the process of discussing a permanent position.

Oliver Bennett
Staff Writer, *Risk* magazine

Oliver Bennett—Oli to everyone who knew him—was a staff writer on Risk magazine, and his intelligence, hard work, enthusiasm and sense of fun would have ensured a long and successful career in journalism.

Oli joined Risk Waters in June 1997 to work as a producer in the conferences division. Just over a year ago, he was persuaded to move to New York and to write for Risk. Such transitions are not easy, but Oli was soon firmly established as a member of the editorial team.

Oli's wry outlook on life and sly grin were infamous, signs of his quiet observation of the world around him. And it sometimes surprised people when the modest Oli showed his true self: a funny and caring character with a profound sense of life's worth.

A single and independent character, Oli was professional, fun-loving and eager to take on new challenges.
Oli was a sincere and loyal friend who never shied away from giving honest advice. This is a credit to his strong personality. One of the finest confidants a friend could ever have, Oli will be sorely missed.

Paul Bristow
Conferences Producer

Paul was a manager's dream—dependable, responsible and always calm in stressful situations. While he constantly delivered first rate events and new ideas, he was also forthright with views on how he thought the business could be improved. Moreover, he was so protective of his colleagues that one director jokingly called him the "shop steward for the conferences division."

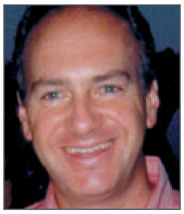
A true team player, both in the office and on the football pitch (where he did some of his best work), Paul made sure that his enthusiasm and brilliant sense of humor kept all around him amused.

Paul's life in New York suited him perfectly, with the fiancée, job and life that he genuinely deserved. He will be terribly missed.

Neil Cudmore
Sales Director, *Waters* magazine

Neil brought happiness and friendship to those around him. He will continue to be talked about in offices and bars on three continents. Many a lasting friendship has come about because of him.

Neil enjoyed the finer things in life. If he hired a car, it was usually a sports car. But, above all, he enjoyed the simple things: fishing trips with his family and friends or a beer and a story or two after work. He had recently moved out of Manhattan with his partner, Dinah Webster, to Long Island where he was enjoying having more space.



Neil had enjoyed a successful career in publishing in London, Hong Kong and New York. But Risk Waters was the company he came back to after breaking away for a while and we like to think it was because he liked the people and felt most at home working for Risk Waters. Over the past two years, Neil had especially enjoyed building the revenues and circulation of *Waters* magazine.

Neil's respect for others and unselfish regard, meant that he graced all around him. Neil was the mediator and the generator—admired by all who knew him for his undeniable compassion and sincerity.

Melanie de Vere
Publisher, Waters Reference Products

For the people closest to her, and even for those who only knew her from seeing her around the office, the lasting impression of Mel must be her constant smile. She always seemed to find the positive side to every situation and had a warmth of character and enthusiasm for life that could not be matched. She could hardly contain her excitement when she spoke about her new role at Risk Waters, which would see her dividing her time between her life here—with her boyfriend and family—and her new responsibilities in New York.

Mel's leadership skills were outstanding. Her bubbly personality and cheeky sense of humor made her a fantastic manager and a real pleasure to work with.

Michèle du Berry (Beale)
Director, Risk Conferences and Courses

Michèle joined Risk Waters Group at the end of 2000 as director of conferences. Before her arrival, the conference team was warned that their new boss was a highly experienced businesswoman who wouldn't stand for any nonsense and who was going to turn the department around. Naturally this news was greeted with a mixed response!

When Michèle arrived, however, everyone quickly discovered that while she was a consummate professional and obviously very knowledgeable about the conference industry, she was also very approachable, funny and kind. She had a great sense of humor and loved to go out with her team after work.

A mother of two, Michèle was devoted to her children and always bought them presents whenever she went away. Despite not having been at the company very long, Michèle had already had a profound effect on the conference department and her efficiency, intelligence and good-natured personality will be sorely missed by everyone she worked with.

Elisa Ferraina
Senior Conferences Sponsorship Coordinator

Elisa was one of the most vibrant members of the conference department. She moved around the office like a whirlwind. Elisa was above all extremely efficient and was loved by all her clients for her hard work and bubbly personality. She came into her own when the conferences she helped to organize were up and running, when she worked tirelessly, literally from dawn 'til dusk, to ensure all the sponsors and exhibitors were kept happy.

Always laughing and smiling, Elisa was never short of words and liked to speak her mind.

Amy Lamonsoff
Events Manager, North America

Amy had many special qualities and was a woman of distinct style and substance. But important to her above all were the people in her life. From this grew her intense interest in traveling to new areas, taking a stand on most political issues, constantly exploring new ideas in music, film, books, fashion and politics, and always enjoying time with her friends and family.

Amy brought her many qualities to her professional life, in which she took great pride and saw as a reflection of her personal life. She had a smile so big it could light up the whole office and we were lucky enough to be greeted with that every morning.

Amy was dedicated to her job and was a great perfectionist. She was always positive, had a kind word to say to everyone and was the type of person you knew you could always rely on in a crisis. Amy was also deeply considerate of others in her personal and professional life—her recent $300 tax refund was promptly contributed to charities.

Sarah Prothero (Redheffer)
Conferences Operations Manager

Sometimes just being in Sarah's company would make you gasp for breath! She was a tornado of energy and enthusiasm when the rest of us would need to stop for air. When you were caught up in the tornado you just had to go with it and know you could sit down and laugh about it later.

The faith and trust Sarah placed in her team made us a unique force and we count ourselves so very fortunate to have met such a youthful and vibrant spirit.

Dedicated, professional and caring are just a few of the qualities that she brought to the workplace. Sarah could be relied upon to bring humor to any situation and had an enviable habit of turning difficult situations around. How many people could organize dinner for 400 at a Michelin-starred restaurant in Paris and make each and every one feel as if the evening had been arranged just for them? Sarah could.

David Rivers
Editorial Director, *Waters* magazine

David was more than just an editor. He was the voice of Risk Waters' New York publications, and the guiding hand behind *Waters* magazine, the technology newsletters and the market data reference products. David left Dow Jones in 1990 to start *FX Week*. Two years later, he launched *Waters* magazine, then took on the New York-based newsletters and reference products.

David would arrive at work in a whirlwind of energy and only alight at his desk to hunch over his e-mail. The ultimate multi-tasker, David's eye was always on the products. His edits were strong but he had a clear vision of what he wanted: concise, focused and interesting stories.

David also brought a distinctive style to the content and design of his publications, particularly *Waters*. To him, the magazine's graphic design set it apart from its competitors as much as its content did.

We all learned a lot from him—not just about this industry but what it means to be a journalist.

Laura Rockefeller
Freelance Delegate Coordinator

People who knew Laura often spoke of her kindness and her sweet disposition—she was an incredibly gentle, genuine and sincere person. A warm and compassionate woman, Laura knew how to put people at ease and nothing was too much trouble.

Laura originally joined Risk Waters as office manager for the company's old New York office, on 34th Street. Laura also worked part-time for conferences as an event liaison officer. This enabled her to pursue her great passion—acting.

Laura's stories of her unusual roles were favorites in the office.

Karlie Rogers
Divisional Sponsorship Manager

From the day that Karlie was interviewed we knew that she would be as a shining star. Karlie's only experience prior to joining Risk Waters was that of working in a sandwich shop, but in a few years she had worked her way up from telesales to global head of sponsorship sales. Karlie watched the company grow and we watched her grow. To become global head of sponsorship was a staggering achievement for someone so young and it made Karlie's friends and family immensely proud.

An absolute pleasure to work with, Karlie was always the consummate professional, but with a wonderful personal touch. She was bright and intelligent with a wonderfully optimistic outlook on life. Everything she set out to do she achieved.

We will always remember Karlie's warmth, her bubbly personality and her infectious laugh. Her honest and direct approach to dealing with people endeared her to those around her. Not only was she a great manager, Karlie had this wonderful way when things were not going right of jumping right in and simplifying a situation, but her team loved and respected her and will miss her tremendously.

Simon Turner
Publishing Director

Simon had a long involvement with the army, in particular the Honourable Artillery Company, of which he was an active member and where his abilities and enthusiasm won him a great deal of praise, respect and affection. This military background gave him a keen eye for detail and a certainty that there was a right way of doing things. All those who have worked closely with him at Risk Waters will have experienced and been challenged by his dedication and determination to see a task through to its conclusion. His contribution to Risk Waters has been enormous in many different areas and his skills took him from sales executive to board director.

As a loving husband and father-to-be, Simon's pleasure and eager expectation of the birth of his first child this month was apparent.

For his friends and colleagues Simon will be best remembered for being Simon—that combination of enthusiasm, social ability and steadfast, considerate friendship. As the chaplain at the Honourable Artillery Company says: "I am sure that wherever Simon is now he will have already arranged the first cocktail party."

Celeste Victoria
Conferences Telesales Executive

Celeste joined Risk Waters after working as a presenter on a public access cable channel, where she campaigned on behalf of the disadvantaged in New York. She was one of a kind, and immediately made an impact on all her colleagues with her unstinting good humor, and interest in what others were doing.

A wonderful and unique woman. Celeste's smile would brighten anyone's day, and no matter how difficult the situation she found herself in she was always happy. Celeste's grace, charm and charisma were just some of her wonderful qualities.

Celeste was one of those rare individuals who was untouched by any trace of cynicism. Celeste's work colleagues were fortunate in that she was the type of person that liked to help other people and take charge of difficult situations, no task was ever too big.

Joanna Vidal
Event Coordinator

Jo left an indelible mark on everyone she met, however short or long the meeting. She radiated a light that literally shone through her smile, which she always wore. She lived her life with energy, enthusiasm, hope and vitality, and she cared deeply for those around her,

Working with her was always a delight and a bonus because she was honest and relaxed in her approach. She brought a personal, caring and human touch to her job that somehow felt slightly out of place in the tough world inhabited by investment bankers. She exuded true warmth and humor in every situation—something not all of us could manage—and few things were impossible with Jo's help.

Dinah Webster
Advertising Manager

Dinah was the longest-serving member of Risk Waters' staff. She joined Risk magazine in 1989, transferred to Hong Kong in 1995, and then moved to New York early in 2000 to work on Waters products. In New York she became engaged to Neil Cudmore, a colleague whom she'd met in Hong Kong and who had also moved across to New York.

The one virtue almost every client mentioned was her professionalism. She was successful in what she did because she made clients feel at ease. They enjoyed meeting her and many of them became her friends. Dinah was always willing to take on anything asked of her and go anywhere on business she was asked to go. She took everything in her stride and never got flustered. Dinah could be stubborn but you could never get upset with her, said a former colleague, who also recalled that Dinah brought a touch of glamour and class to the office.

Enormous fun to be with, Dinah loved to cook for her family and friends. Many former employees still recall her amazing meringue-topped mince pies that she made for the London office at Christmas when the company was still quite small. Naturally, Dinah insisted they be washed down with champagne.

9/11: the promise we're trying to honor

As a company, Risk Waters was 14 years old on the day it lost nearly a tenth of its workforce in the World Trade Center attacks.

A mix of nationalities, some were based in New York—others had traveled from London. All of them are remembered, and missed: Sarah Ali Escarcega, Oli Bennett, Michelle du Berry Beale, Paul Bristow, Neil Cudmore, Mel De Vere, Elisa Ferraina, Amy Lamonsoff, Sarah Prothero, David Rivers, Laura Rockefeller, Karlie Rogers, Simon Turner, Celeste Victoria, Joanna Vidal, Dinah Webster.

Twenty years on from the devastation wrought that day, we set out to honor our colleagues by building an enduring memorial, sharing memories from the loved ones of staff who lost their lives, as well as their colleagues and those involved in the company's response.

We have often said we wouldn't forget our friends and colleagues, and we wanted to live up to that promise—we hope we have. In doing so, we hope we have also preserved something of our company's history.

To the families who lost loved ones, from everybody at the company, we offer our deepest respect and sympathy. To former colleagues who wrote, some for the first time, on their memories of that day and its aftermath, our heartfelt thanks for being a part of the project, and for helping us reach out to family members.

We did our very best to get in touch with every family member: trying phone numbers and email addresses two decades old in some cases, calling employers, and scouring social media. The last thing we wished to do is intrude on private grief; but we did want to make good on our promise never to forget our friends and colleagues. We are indebted to the September 11 UK Families Support Group for their immensely kind help.

If our message didn't reach you, from the bottom of our hearts, we are sorry. But the project is intended to be a permanent memorial; please, if you'd like to contribute, don't hesitate to get in touch: Tom.Osborn@risk.net // +44 207 316 9965. We also welcome all and any feedback on the project, from those who worked with or knew our staff.

Human Capital

Broadridge adds FinTech veterans to LTX leadership team

Ted Bragg and Jim Kwiatkowski have joined LTX, a Broadridge Financial Solutions subsidiary offering a new, AI-driven digital trading platform for corporate bonds. Bragg and Kwiatkowski join the LTX leadership team, working closely with LTX chief executive Jim Toffey.

Bragg has over 30 years of executive leadership experience in global markets and will be responsible for enhancing LTX's trading capabilities. Most recently, he served as vice president and head of fixed income at Nasdaq.

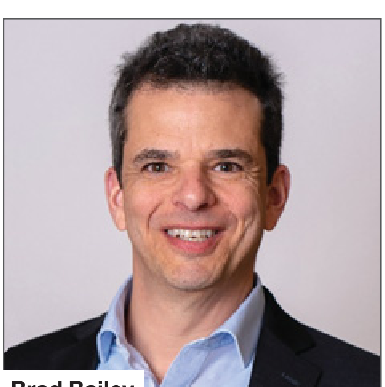
Kwiatkowski also joins LTX with over 30 years of industry experience. Most recently, he was managing director and global head of transaction sales at the London Stock Exchange.

Prime brokerage startup Clear Street taps Celent's Bailey

Veteran technology analyst Brad Bailey has joined Clear Street, a recently launched prime brokerage running on cloud technology, as head of market intelligence, a newly created role.

Bailey will work closely with the firm's leadership, marketing, and product development teams to develop unique industry research and to drive value for its professional trader and institutional clients.

Bailey was most recently research director for capital markets at Celent, which he joined in 2015 after almost seven years at Knight Capital, acquired by Virtu Financial, where he was director of business development and corporate strategy.


Brad Bailey


Ed Tilly


Michael Yesudas

SunTec recruits IBM's Yesudas as chief technology officer

Pricing and billing company SunTec Business Solutions has appointed Michael Yesudas chief technology officer, responsible for technology and engineering functions, including platform engineering, product engineering, and release engineering.

Yesudas joins from IBM, where he was a distinguished engineer and the CTO of IBM Sterling and AI Applications Expert Labs.

He will join SunTec's leadership team and will be based in the US.

HKEX nabs Citadel's Buckley as head of exchange operations

Hong Kong Exchanges and Clearing has appointed John Buckley head of exchange operations and transformation, starting in December. In this new role, Buckley will manage all exchange operations and lead the strategic development of this part of the business. He will also lead efforts on modernizing systems and operations.

Buckley has been chief operating officer in Asia at Citadel for the past three years. Previously, he spent seven years at JP Morgan in senior positions including Apac chief risk officer, Apac chief financial officer, and Singapore interim senior country officer.

He will report to HKEX president and chief operating officer Calvin Tai, and join the management committee.

WFE elects new board, Cboe's Ed Tilly to serve as chairman

Cboe Global Markets chairman, president and chief executive Ed Tilly has been appointed chairman of the World Federation of Exchanges, the global industry group for exchanges and clearinghouses around the world. Tilly was previously vice chairman of the WFE from 2018 to 2021.

As WFE chairman, he will work with chief executive Nandini Sukumar and board and members to advance the organization's mission to foster well-functioning capital markets, reinforce systemic stability, support developing markets, create best practices and standards, and educate on the role of exchanges and clearinghouses.

Tilly was elected by the WFE membership during its 60th annual meeting, hosted by the Shenzhen Stock Exchange, which was held virtually.

Ten directors of the board were elected alongside Tilly.

Stavrou to lead Australia, NZ business at Northern Trust

Northern Trust has promoted Leon Stavrou to oversee business in Australia and New Zealand. Stavrou will be responsible for the overall strategic direction for Northern Trust's business providing solutions to corporate and institutional clients across the region.

He reports to the firm's Apac head, Angelo Calvitto.

Stavrou was most recently a global services executive responsible for Northern Trust's asset servicing operations across Australia and for ensuring the provision and development of the firm's range of asset servicing solutions to clients across Asia-Pacific. He succeeds Calvitto, who stepped into his new role in June.

Stavrou previously held managerial

BLACKSTONE VETERAN JOINS CANOE AS CTO


Vishal Saxena

Data management fintech Canoe Intelligence has appointed Vishal Saxena chief technology officer. He will use his experience in team building, process optimization, software development, project management and alternative and private investments to support Canoe's client base and strengthen its product and technology strategy.

Before joining Canoe, Saxena was a managing director in Blackstone's Technology and Innovations group. Prior to joining Blackstone, he led various software development teams at S&P Capital IQ, where he was director of data technology.

Saxena's hire follows Canoe's completion of its Series A extension funding led by clients, Blackstone and Carlyle Group, and a new partnership with State Street.

roles at National Australia Bank's asset servicing unit.

Swift snares Hunter as chief executive of the Americas, UK

Swift, a provider of secure financial messaging services, has hired John Hunter as chief executive of the Americas and UK region. Hunter will concentrate on strategic customer relationships, with a focus on enabling the industry to create new services based on Swift's underlying infrastructure.

He was most recently managing director at JP Morgan Chase, leading its global clearing business. His previous positions include senior product marketing manager at Adobe Systems and payments segment manager at Hewlett-Packard.

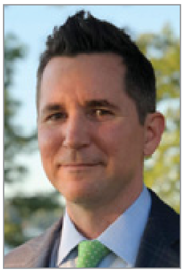
Gresham eyes next stage of growth with senior hire

Gresham Technologies, a global fintech provider of real-time solutions for data integrity and control, banking integration, payments and cash management, has appointed Julian Trostinsky as global director of customer success. Trostinsky will help build out Gresham's consulting practice, managed services, delivery, and support capabilities.

He joins from Duco, where he was vice president of strategy and solutions engineering and led the build-out of Duco's global services division.

Gresham recently acquired Electra Information Systems to create an independent provider of reconciliation and related data services.

Transcend recruits pair of financial industry veterans


Jason Arboreen


Leon Stavrou

Transcend, a global provider of analytics and automation for collateral, liquidity, and funding processes, has hired Jason Arboreen to help grow its prime and securities finance solutions.

Arboreen has more than 20 years of financial industry expertise, most recently as executive director at JP Morgan.

Transcend has also hired Patrick Tessier as derivatives product manager to lead the expansion of its end-to-end centrally cleared derivatives solution, CCP Central. Tessier brings 20 years of cleared derivatives operations and technology experience. He is a former managing director at Citibank.

Talos adds Ludlow as head of product design

Talos, a technology provider for the institutional trading of digital assets, has hired Ant Ludlow as head of product design. Ludlow will lead the design of Talos's product suite, which supports institutional investors through the full crypto trading lifecycle.

With a recently completed Series A funding round, Talos is currently embarking on a significant expansion of its product set.

Ludlow joins Talos from Bullet (part of 6point6), a product design and change accelerator that he founded.

Six Financial Information adds Popat for product management

Shai Popat has joined Six to head the exchange's content and product management division.

Popat joins from Ice Data Services, where he was most recently vice president of trading solutions, and where his previous roles include global head of real-time solutions and global head of commercial strategy.

MSCI hires McDonald as global head of ESG and climate

MSCI has hired Melissa McDonald as global head of ESG and climate indexes. McDonald will work with the firm's global product, client coverage, research, and technology teams to ensure products meet investor needs.

She previously served as global head of product, equities, and responsible investment at HSBC Global Asset Management. She has also held various senior leadership roles at Axa Investment Management.

Based in London, McDonald will report to Diana Tidd, global head of index and chief responsibility officer, and Remy Briand, global head of ESG and climate. wt

Cloud: Capital markets' Swiss Army knife

The best uses of the cloud so far have been as an enabler of performance and innovation. The best uses yet to come could reshape AI. So, Max warns, if you think cloud is about cutting costs, you're thinking about it all wrong.

We've all seen it before: someone comes up with a brilliant idea that's ahead of its time. They gleefully demonstrate it to the market, but decision-makers don't see its full potential, so their vision becomes a hammer looking for a nail. As a result, instead of trying to shift a stagnant base, they shift their own model, and let potential paying clients steer the product in the direction of whatever their most pressing need is at that particular moment. And over time, sometimes the vision gets lost in pragmatism and becomes a plain old hammer.

Cloud isn't so much a hammer looking for a nail; it's more a Swiss Army knife with a bunch of weird attachments that you can't figure out what they do—because you haven't yet encountered the problems that these are designed to solve. And that's because those problems are still a few years away. But before we look forward to those challenges, let's first take a look back.

The 2000s saw the birth of grid computing—a massive architecture of interconnected compute resources—which evolved into "grid-as-a-service," and ultimately into the catchier-named "cloud". After about 10 years, the cloud was well understood—if not widely adopted beyond web and data hosting. Nasdaq was an early adopter that sought to capitalize on cloud's potential and to entice and reassure financial clients, creating a financial markets-dedicated service dubbed FinQloud with Amazon Web Services. Though Nasdaq exited the venture, it regrouped with AWS in 2020 to build a new market data cloud.

Some innovators saw greater potential early on: for example, one FinQloud client, Tradier, set out to build a brokerage-in-a-box entirely in the cloud, a model that others such as Clear Street—a startup prime brokerage founded by former Knight Capital execs—are taking to the next level today. And as early as 2012, derivatives pricing and analytics provider Numerix was leveraging the cloud to serve clients' complex pricing requirements, harnessing the ability to "burst to cloud" during resource-intensive periods each week or month, such as for calculating credit value adjustment, where compute requirements would surpass existing resources.

But back then, while firms were all indirectly using cloud already because their suppliers were busy using it, they still resisted it publicly. What persuaded financial firms to shift storage and compute processes *en masse* to the cloud wasn't a collective visionary realization of the future needs that data processing would require, but rather the promise of significant cost reductions over their existing spend on in-house infrastructure: more power and storage without increasing—and possibly even while lowering—their budgets.

But the industry shouldn't pat itself on the back just yet. First, firms need to be just as critical of cloud as they are of their internal tech spend. A simple "lift and shift" won't automatically reduce costs. To take advantage of what cloud offers from a cost perspective, firms need to review their usage carefully. The beauty of cloud is its elastic and on-demand access to resources—the ability to spin up additional compute power on the fly when you need it and shrink it back down to normal levels when you don't. If you think that having the full resources of the cloud at your disposal means you can leave the lights on 24/7, then no, your bills won't go down.

Instead, weigh decisions not against today's requirements, but against what that elastic nature will allow you to do in the future that most can't even conceive of today. Plan for beyond just "infrastructure for the now," says Christine Johnson, CEO and founder of data platform startup Ingenii.

"There will be a massive technological convergence over the next three to five years between quantum computing and artificial intelligence that will allow you to compute simultaneously on a single machine and deliver more power than we can comprehend. If you're a hedge fund manager wanting to research multiple datasets that would ordinarily take weeks, that's huge," Johnson says. "That ability to consume massive amounts of data in parallel is going to lead to the evolution of AI. And you can't do that on clunky old architectures—you have to be in the cloud and using quantum."

Finally, we're seeing the full potential of those early visions of cloud coming to fruition, and potentially being surpassed. The next stage in cloud's development will open new doors for firms willing to walk through them, who are prepared to look at cloud as more than a cost play. wt

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