

Tabb FORUM

WHERE CAPITAL MARKETS SPEAK

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Introducing the 2024 TabbFORUM 40 Innovators in Financial Markets



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The TabbFORUM 40 honors top innovators in capital markets, leaders whose blend of vision, strategy and execution sets them apart in applying technology for maximum advantage. This third annual list, researched by TabbFORUM Contributing Editor Jeffrey Kutler, recognizes the achievements and influence of 40 outstanding disruptors and difference-makers having the greatest impact at the intersection of finance and technology. Plus, a list of 10 More to Watch.



Call them pivot points, tipping points or inflection points. Whatever the chosen terminology, businesses, industries and entire economies face significant strategic challenges in a world of continual volatility and uncertainty. Crucially positioned to take on those challenges and assist others in navigating them is the financial services industry. The organizations that do it best tend to balance and successfully apply both a broad vision and an ability to focus, to set bold objectives and be agile in implementation, to commit investment capital accordingly and earn returns on those investments.

These are qualities shared by leaders in capital markets technology and innovation who are the TabbFORUM 40 honorees. They range from chief executives of the biggest exchanges and market infrastructures, to providers of high-performance systems and leading-edge tech resources that power those markets, their participating firms and investors. Virtually all scale up – be it globally, across asset classes or through diversification – to gain greater operating leverage and efficiency.

Although each individual stands out for the reasons described below, these 40 are but representative – outstanding though they may be – of an industry that is at the forefront of applied technology and consistently improving on its track record. They are integrating more and more with cloud computing, making strides toward digital-asset tokenization and embracing artificial intelligence in various forms, notably in the area of ChatGPT and large language models.

Kenneth Griffin, CEO of Citadel (and founder of Citadel Securities, whose CEO Peng Zhao is in the TabbFORUM 40), has said that companies funded by venture capital and now listed on U.S. exchanges “account for about two-thirds of our country’s research and development budget. That’s where the future is being created.”

The TabbFORUM 40 selections are the result of ongoing research, with consideration given to nominations and recommendations from the community, and are based on qualities of the individual executives including leadership, results and reputation; impact on domestic and/or global markets; achievements both recent and over the course of a career; and pure technology advances, implementations and R&D. Below the 40 are 10 More to Watch on the leading edge of change and innovation in financial markets.

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 - [Jarrod Yuster, Chairman and Chief Executive Officer, Pico](#)
 - [Peng Zhao, Chief Executive Officer, Citadel Securities](#)
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Caroline Butler, CEO of Digital Assets, Bank of New York Mellon Corp.

BNY has ranked for two years running among *Fortune's* 200 [America's Most Innovative Companies](#). The commitment comes from the top. Chief executive officer Robin Vince made clear last year that there was no easing up on technology investments. "America's oldest bank" opened a [Digital R&D Hub](#) in Dublin centered on artificial intelligence, machine learning and data analytics. This year saw announcements of relationships with [Microsoft](#), [Nvidia](#) and [Accenture](#), the last aimed at supporting clients "in transforming their operating models to utilize the power of their data to drive efficiency and growth," said chief growth officer Akash Shah.

CEO Vince has said he is realistic about digital assets being a long-term strategic play, yet BNY was first among its peers to launch a [digital asset custody platform](#), in October 2022. "As the world's largest custodian, BNY is the natural provider to create a safe and secure Digital Asset Custody Platform for institutional clients," Caroline Butler, a JPMorgan veteran who joined BNY in 2020 and was then CEO of Custody Services, said at the time. "We will continue to innovate, embrace new technology and work closely with clients to address their evolving needs."

As of February 2023, Butler was [CEO of Digital Assets](#), then reporting to Roman Regelman, CEO of Securities Services and Digital, who has since become group president of [FNZ](#). Butler co-chairs a subcommittee of the Commodity Futures Trading Commission's Global Markets Advisory Committee making recommendations on how blockchain can be utilized to meet non-cash collateral requirements. "We are particularly excited about the tokenization space now, because in the last year to 18 months, we've really seen that evolution from proofs of concepts to real use cases," Butler told [Bloomberg News](#). "There's the massive driver for our clients – institutions. They are really chasing greater utility of assets, how do you get your money to work more for you."

In September, [Leigh-Ann Russell](#), executive vice president of innovation and engineering at BP, joined BNY as chief information officer and global head of engineering, reporting to Vince.



Charles Cascarilla, Chief Executive Officer, Paxos

The U.S. cryptocurrency sector emerged as a political force this election year. Individual and political action committee donations flowed into the campaigns of candidates expected to support a favorable regulatory framework. A week before Election Day, Charles Cascarilla made a different kind of contribution. The co-founder and CEO of blockchain infrastructure pioneer Paxos posted an open letter to the Democratic and Republican presidential candidates, arguing that the financial system is sorely in need of modernization and urging them “to implement a more welcoming and clearly defined regulatory environment for digital assets. That is how we will ensure that America remains the world’s largest and most innovative economy.”

Cascarilla’s messaging has been much the same since Paxos started in 2012. Coming from an asset management and venture capital background, he saw blockchain as a disruptive technology capable of displacing and accelerating settlement systems built for an earlier, less-automated era. Paxos introduced a trading platform, itBit, serving as a demonstrable, global use case. It issues several digital-asset products including the PayPal USD (PYUSD) stablecoin. And all the while it has stressed that it is regulated – as a New York State-chartered trust company, a contrast with exchanges that have money services licenses; by Abu Dhabi Global Market’s Financial Services Regulatory Authority, under which Paxos International is issuing the Lift Dollar (USDL) yield-bearing stablecoin; and the Monetary Authority of Singapore, where, as a Major Payments Institution, Paxos will be substantively compliant with the city-state’s stablecoin framework, partnering with DBS Bank for cash management and custody.

The Global Dollar (USDG) stablecoin was announced on November 1 in Singapore.

“One of the hallmarks of Paxos is that we have always built within established regulatory frameworks,” Cascarilla wrote in his pre-election letter. But despite this “regulatory-first approach, the U.S. has become an inhospitable place for financial innovation,” falling behind such jurisdictions as Singapore, the United Arab Emirates and European Union in this regard. He complained that “Paxos and its U.S.-based peers have faced countless examples of regulatory overreach, questionable banking policies and onerous and needless legal actions, resulting in enormous costs in wasted time and money.”

Noting that more people in the world have smartphones than bank accounts,” a fact cited by financial inclusion advocates, Cascarilla said, “Now is the opportunity to rethink how innovation can unravel the layers of financial opacity, complexity and risk that are holding back our economy. Blockchain and digital assets are re-platforming the financial system to operate on the internet in a safe, secure and transparent way.”



Nadine Chakar, Global Head of Digital Assets, Depository Trust & Clearing Corp.

In 2021, Nadine Chakar was tapped as executive vice president and head of State Street Digital. Moving from EVP and head of State Street Global Markets, and having previously worked at Manulife and BNY Mellon, Chakar was to build the new State Street business servicing the digital-asset investment cycle from pre- through post-trade. In January 2023 she joined institutional-grade blockchain technology developer Securrency, in which State Street was an investor, as CEO. Chakar at the time perceived a “tipping point” as the financial industry had begun contemplating real-world-asset tokenization opportunities.

Culminating years of exploratory digital-asset projects, the global post-trade utility DTCC in late 2023 acquired Securrency, now the DTCC Digital Assets subsidiary led by managing director Chakar. As president and CEO Fank La Salla has put it, “DTCC intends to be the digital market infrastructure of the future.”

While DTCC has advanced the cause through such collaborative efforts as a Smart NAV Pilot, participation in Digital Asset’s Canton Network and a new Digital Launchpad sandbox program, Chakar and team are advocating “a change in approach,” she told Consensus Magazine. “We should focus on large-scale pilots with many participants and have experiments build upon each other incrementally to begin building a larger, interoperable digital-asset ecosystem that can power digital markets.” In May, releasing the second of two papers DTCC produced with European counterparts Clearstream and Euroclear to define a standardized, scalable infrastructure framework, Chakar said: “The industry needs to pivot and demonstrate tangible results and value generation. We have a unique opportunity to transform the financial system, but it will require collaboration across a wide cross-section of firms to build the infrastructure, standards, controls and governance to underpin digital markets.”



Bonnie Y Chan, Chief Executive Officer, Hong Kong Exchanges & Clearing

So smooth was the transition from Nicolas Aguzin, whose retirement as HKEX chief executive was set for May 2024, that he moved it up to the end of February. The promotion of Bonnie Y Chan, from co-chief operating officer, had been announced in December. A statement by the board credited Aguzin with overseeing since May 2021 “significant strategic initiatives” including establishment of London and New York offices and growth in derivatives and exchange-traded funds. Presenting half-year results in August, Chan cited further “significant strategic progress,” record second-quarter revenue and other income and profit, record derivatives volumes and a 29% year-over-year gain in London Metal Exchange chargeable average daily volumes.

With law degrees from the University of Hong Kong (bachelor) and Harvard Law School (master), Chan was a Davis Polk & Wardwell partner from 2010 to 2019. Before that, she was HKEX head of IPO transactions, Listing Division for three years. She returned as head of listing in January 2020.

Among technology landmarks, Chan announced in April development of the Orion Derivatives Platform, “significant investment into the future of our markets,” she said, a four-year project leading to “the potential of near 24-hour trading, additional order types, an industry-standard interface . . . It will also incorporate capital-efficient risk management tools, such as the Value-at-Risk model, to align clearing capitalization methods with international practices.” An Integrated Fund Platform Task Force was announced in September to support the fund distribution ecosystem, with co-head of markets Glenda So saying they “are committed to enhancing the attractiveness and competitiveness of Hong Kong” as an international financial center.



**Peter B. Cherecwich, Chief Operating Officer,
Northern Trust Corp.**

As Northern Trust’s president of asset servicing since 2017, a role that included overseeing investment management, banking and related services for institutional clients globally, Pete Cherecwich got into a blogging habit. He wasn’t interrupted by the September 10 announcement of his promotion to chief operating officer.

On that day, apropos Cherecwich’s digital-assets leadership, he looked “beyond the hype” of tokenization, writing that it “can serve as the great equalizer, democratizing investment opportunities and granting more immediate access to data and marketplaces to a broader swath of investors. No longer confined to limited, segregated or compressed data streams and marketplaces from a single provider, tokenization unlocks a vast array of asset classes previously only available to institutional investors and high-net-worth individuals.”

Two days later, September 12, the Chicago-based bank announced the formal launch on its Matrix Zenith platform of The Northern Trust Carbon Ecosystem, which provides “a digital lifecycle management capability for voluntary carbon credits,” Cherecwich explained. “The seamless and secure settlement experience is designed to give project developers and institutional buyers confidence in their carbon credit transactions, with Northern Trust as the custodian.”

Cherecwich and Northern Trust were responsible for an early blockchain proof of concept, a private equity platform that was transferred in 2019 to Broadridge Financial Solutions. The bank invested with Standard Chartered’s SC Ventures in the Zodia crypto custody start-up, and in 2022 it formed a Digital Assets and Financial Markets group, bringing together an interdisciplinary team under EVP Justin Chapman, who was previously global head of market advocacy and innovation research.

Chapman called the carbon ecosystem “the latest milestone in our asset-servicing innovation journey. It supports key digital-asset lifecycle events from asset creation, trading, pricing and custody to reporting. Leveraging blockchain technology, Northern

Trust Matrix Zenith integrates with our core traditional asset servicing infrastructure to support digital and traditional assets side-by-side.”

Cherecwich, who came to Northern Trust from State Street Corp., officially became COO on October 1. EMEA president Teresa Parker is president of asset servicing, having deferred her previously announced retirement. Steven Fradkin, a former president of asset servicing among other senior positions, was named vice chairman.



Michael Chin, Chief Executive Officer, Duco

Founder mode at the enterprise data automation innovator Duco lasted a decade, until last January, when CEO Christian Nentwich made way for Michael Chin. “It has been a huge privilege to lead Duco from the first few lines of code to becoming a global, mission-critical company with a great brand,” Nentwich, still a company director, said in the [announcement](#). “Ten years on, I am very happy that we have found, in Michael, an experienced operator to take us to the next level.”

He is deeply rooted in capital markets and trading technology. In 2001, after holding senior trading positions at J.P. Morgan, Chin joined TradingScreen as president and global head of sales. He was CEO of ultra-low latency solutions developer Mantara from 2010 until after its 2013 sale to Deutsche Bank. He joined Thomson Reuters in 2014 and was global head of trading there and in its Refinitiv incarnation until being named CEO of Broadway Technology in 2021. At Broadway, which had been selling its high-performance TOC platform to buy- and sell-side leaders since 2003, Chin succeeded founding CEO Tyler Moeller, who took the title of chief innovation officer. Chin stayed in place for a few months after Bloomberg LP acquired Broadway in October 2023.

Chin viewed Duco as “very strongly positioned at the intersection of data, automation and AI, all major growth areas particularly in financial services and insurance.” The company had entered into a more aggressive growth phase since its 2021 acquisition by Nordic Capital. In February, Duco acquired [Metamaze](#), an AI and no-code provider of intelligent document processing technology. Chin said the ability “to bring together all unstructured and structured data in a single platform and manage it through its full lifecycle” would be “highly transformative for areas like post-trade operations in financial services . . . It is a massive step forward towards Duco’s vision of reducing the time spent on data-related work in operations and finance teams by 90%.”

In July, Duco announced the launch of its [end-to-end reconciliation capability](#) for unstructured data, the “first major milestone” in the post-Metamaze-merger integration, Chin said. With the integrated platform, clients “can now ingest, transform, normalize, enrich and reconcile structured and unstructured data in Duco, automating data processing throughout its lifecycle.”



Whit Conary, Chief Executive Officer, Kezar Markets

Startup waves go in cycles; mergers and consolidations then set in. The [2022 combination](#) of Level and Luminex did not literally fit the mold, because the two alternative trading systems were different. Level ATS was sell-side focused, founded in 2006 by a consortium of banks. Luminex Trading & Analytics was “by and for the buy side” – owned by several prominent asset managers and launched in 2015 as a trusted venue for institutional block trades. At the time of the merger agreement, Level CEO Whit Conary stated the rationale: that clients of both would benefit from having “more choices and the ability to interact with a larger liquidity pool if they choose, while minimizing market impact.”

The post-merger integration of these complementary business models was “seamless,” according to Conary, now heading what has been rebranded as [Kezar Markets](#), with both ATSs operated by broker-dealer Kezar Markets. “The talent pool on two sides of the house had different skill sets,” Conary noted in a TabbFORUM Market Structure Wave [interview](#). “One tech team was more front-end based, the other more matching-engine based.”

“We are working very hard at maintaining the integrity of what Luminex and Level each built, making sure over time that there are other sources of liquidity for both parties.

If you don’t get buy side-to-buy side, you trade with a trusted counterparty elsewhere. We’re trying to build that ecosystem where both the buy and sell side can exist together and trade with each other. We don’t take away the buy side-to-buy side part but give them optionality to be able to trade.”

In the industry for over 40 years, Conary was a founder and owner of Boston Stock Exchange floor brokerage and specialist firm Ward, Conary & Murphy, and senior vice president in institutional sales at Moors & Cabot. Conary, who was involved in the launch of Level, observed on [LinkedIn](#) that electronification notwithstanding, “the act of buying and selling has never changed; what has changed is the application of technology. We have always developed creative trading solutions, building products and services to fit even the most niche needs. Kezar’s unique ‘one-stop’ equities trading ecosystem offers both the buy- and sell-side communities, unique products to stay current in today’s capital markets.”



Christopher R. Concannon, Chief Executive Officer, MarketAxess Holdings

MarketAxess in [September and the third quarter](#) continued its long run of performance improvement. Chris Concannon, who succeeded founder and executive chairman Richard McVey as CEO of the bond e-trading pioneer in April 2023, commented, “We delivered 27% growth in total credit average daily volume compared to the prior year, driven by strength in U.S. high-grade (+36%), emerging markets (+19%), Eurobonds (+27%) and municipals (+49%).”

Portfolio trading ADV of \$1.1 billion helped drive “estimated market share of U.S. high-grade and U.S. high-yield TRACE to 20%, its highest quarterly level in 2024,” added Concannon, who was Cboe Global Markets president and chief operating officer before assuming that role at MarketAxess in 2019. “We are continuing the roll-out of [X-Pro](#) to our global client base which, we believe, is important to the success of our high-touch strategy.”

Partnership with BlackRock, which classified \$3 trillion of its \$11.5 trillion of assets under management as fixed-income at the end of the third quarter, has been a recurring theme in MarketAxess’ nearly quarter-century growth story. A 2013 alliance with the investment management giant, itself a major technology presence on the buy side with its Aladdin offering, was instrumental in the success of MarketAxess’ Open Trading protocols and their role in advancing all-to-all trading. In the [second quarter](#) this year, when MarketAxess reported average daily credit volume of \$13.7 billion, the Open Trading share was 34%. (It was 35% in September.) The share had more than doubled since 2018, when the two firms expanded their Open Trading relationship into [Asian credit markets](#).

They announced [another step](#) in September “to seamlessly integrate MarketAxess credit trading protocols, pricing and data into BlackRock’s Aladdin order execution management system . . . The new connectivity will provide common clients of Aladdin and MarketAxess with an enhanced trading experience through integration of select MarketAxess credit protocols natively within the Aladdin platform.”

In August, MarketAxess and Intercontinental Exchange’s [ICE Bonds](#) said they would “connect their respective liquidity networks to bring greater efficiency and access to deeper liquidity in fixed-income markets to the institutional and wealth management spaces.”



Dante Disparte, Chief Strategy Officer and Head of Global Policy, Circle Internet Financial

Circle’s image as a crypto-asset mainstay is wrapped up in the [USDC](#), which, it underscores, is the opposite of “unregulated, non-transparent stablecoins [that] take risk with their reserves” and have represented the darker side of the cryptocurrency phenomenon. Being in business for more than a decade sends a certain message about Circle’s financial and operational soundness, as does having BlackRock and Fidelity among its investors, as should a decision to move from Boston to New York ahead of an anticipated IPO. Dante Disparte gives voice to those qualities in service to the brand and, by extension, to other responsible and regulated players.

“We are dedicated to empowering those often left behind by traditional financial systems with Circle’s technologies and infrastructure,” Disparte said when releasing a [Global Impact report](#) in September. The report “brings to life Circle’s mission of raising global economic prosperity through the frictionless exchange of value, marking significant progress towards a more open financial system.”

Circle's chief strategy officer and head of global policy regularly makes the rounds in media and policymaking venues. That logically has taken Disparte to Europe, where on July 1 he and co-founder and CEO Jeremy Allaire celebrated Circle's becoming the first global stablecoin issuer to achieve compliance with the EU Markets in Crypto-Assets (MiCA) regulation by way of an EMI (Electronic Money Institution) license from France's banking authority ACPR. Disparte called it "a significant step forward, not just for Circle, but for the entire digital financial ecosystem in Europe and beyond. As digital assets become increasingly integrated into the mainstream financial landscape, it is essential that we establish robust, transparent frameworks to promote trust and adoption." The licensing "further reinforces our commitment to building a more inclusive, compliant future for internet finance."

Traditional financial institutions "are only going to work with regulated infrastructure," Allaire recently told Bloomberg. "We've already positioned ourselves toward that end."

Circle is taking an inaugural board seat on the Illicit Virtual Asset Network ([IVAN](#)), which brings together governments, law enforcement agencies and industry partners from around the world to identify and counter emerging threats or criminal activity.

Disparte, who has a New York University MSc degree in risk management and formerly worked on the Diem Association cryptocurrency project, said in October that he expected a stablecoin law within months in the U.K., which will presumably want to avoid falling too far behind the Continent.



Carlos Domingo, Chief Executive Officer, Securitize

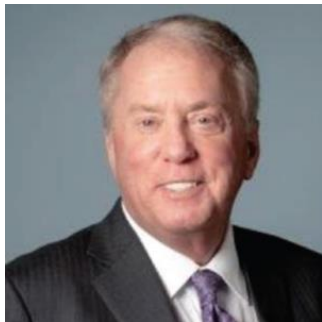
A former CEO of research and development for telecommunications giant Telefonica, and with a computer science PhD from Universitat Politècnica de Catalunya in Spain, Carlos Domingo embarked on what has come to be known as real world asset (RWA) tokenization in the middle of the last decade as a co-founder of SPiCE VC. In 2017, Domingo and Jamie Finn, also with a telecom and entrepreneurial background, co-founded Securitize Inc. (They are, respectively, CEO and president.) The Securitize Markets platform rocketed to prominence with the March 2024 launch on the Ethereum blockchain of the BlackRock USD Institutional Digital Liquidity Fund ([BUIDL](#)), which by July had surpassed \$500 million.

"Tokenization of securities could fundamentally transform capital markets," Domingo commented, as "traditional financial products are being made more accessible through digitization. Securitize is proud to be BlackRock's transfer agent, tokenization platform and placement agent of choice in digitizing and expanding access to its investment products."

BlackRock concurrently led a \$47 million strategic investment in Securitize, with Hamilton Lane, ParaFi Capital and Tradeweb Markets joining in. [Hamilton Lane](#) and [ParaFi](#) subsequently announced tokenizations with Securitize.

Securitize got to this point methodically and somewhat circuitously, becoming an SEC-registered transfer agent in 2019, issuing the first credit-rated security token in Japan in 2021, and making other progress through offices on four continents. In 2022, in a pioneering and “democratizing” digital private market offering, Securitize’s asset management unit launched a fund tokenizing an interest in KKR’s Health Care Strategic Growth Fund II on the Avalanche public blockchain. Securitize officially began [tokenized securities issuance in Europe](#) in July 2023, and the following month it acquired digital-asset wealth platform [Onramp Invest](#).

“Tokenized securities need to thrive on public, permissionless blockchains to unlock the potential of blockchain technology,” Domingo said in September, when Securitize announced its [selection of Wormhole](#) for cross-chain interoperability. The partnership “will help enable sub-second, sub-penny transactions and move us into an increasingly cross-chain ecosystem, showcasing yet another example of how public blockchains enable new use cases that had previously been unavailable.”



Terrence A. Duffy, Chairman and Chief Executive Officer, CME Group

Before the FTX cryptocurrency exchange imploded two years ago, its now incarcerated CEO Sam Bankman-Fried pitched to the Commodity Futures Trading Commission a direct, or “non-intermediated,” clearing model that he argued would constructively disrupt the derivatives market structure. CME chief executive officer Terry Duffy went before the [House Agriculture Committee](#) and ripped that proposal to shreds. He viewed it as “glaringly deficient” and a “significant risk to market stability and market participants,” playing fast-and-loose with built-in loss-sharing and capital safeguards and failing to account for extreme tail risks.

Chalk one up for the incumbents – Intercontinental Exchange executive Chris Edmonds also spoke at the hearing, where Duffy represented the gravitas of the premier global derivatives market organization and his own perspective from being in top CME board and management positions since before the turn of the century.

Amid what Duffy termed “escalating uncertainties [that] drove an increased need for risk management across all asset classes,” it was hard to find a weakness in [second-quarter results](#), as “for the first time in more than a decade, our volume and open interest grew in every asset class, with overall average daily volume up 16% in commodities and 13% in financial markets.” And the [third quarter](#) was the best in CME history, “with records across volume, revenue, adjusted operating income, adjusted net income and adjusted earnings per share,” Duffy added.

New competition was bearing down in the form of [FMX Futures Exchange](#), which Howard Lutnick’s BGC Partners initiated and began SOFR futures trading in September. Ten investment banks and market makers own equity in the parent FMX Holdings, and the exchange’s clearing partner is London Stock Exchange Group’s LCH.

Duffy's reaction: "We are in a strong position today to compete with anybody." And perhaps strong enough to make a run at U.S Treasuries clearing as that market prepares for a clearing mandate imposed by the Securities and Exchange Commission. The sole incumbent there is Depository Trust & Clearing Corp.'s Fixed Income Clearing Corp., with which CME has a [cross-margining arrangement](#).



Shawn Edwards, Chief Technology Officer, and Vlad Kliatchko, Chief Executive Officer, Bloomberg LP

Partnership and teamwork are essential in the vast Bloomberg data and information enterprise with its more than 9,000 technologists. Those elements are personified in the leadership of Shawn Edwards and Vlad Kliatchko. Both joined in 2003 and have served as head of engineering. Edwards has been CTO since 2008. The executives' close working relationship endured through Kliatchko's ascent to chief product officer – overseeing product, data and engineering functions – in 2022, and to CEO in August 2023.

At inception four decades ago, the Bloomberg Terminal was built on a technology stack that the founders could not buy off the shelf. That origin story and culture gave rise to a long tradition of cutting-edge R&D of the sort associated with high-tech and other industrial engines of innovation.

BloombergGPT, a "50 billion parameter large language model, purpose-built from scratch for finance" unveiled in March 2023, did not spring full-blown from a crash course in generative artificial intelligence. The model – drawing on a massive document archive accumulated over 40 years – resulted from a collaboration of the Machine Learning (ML) Product and Research group with AI Engineering. It was only the latest example of AI, ML and natural language processing applications (NLP) that had been emerging over more than a decade and making their way out to more than 350,000 financial professionals on the global network. "BloombergGPT will enable us to tackle many new types of applications, while it delivers much higher performance out-of-the-box than custom models for each application, at a faster time-to-market," Edwards said at the time.

The GenAI beat goes on. Analysts can use AI-Powered Earnings Call Summaries, available since January, to decipher complex financial information and extract insights on topics addressed by corporate management teams. The tool was subsequently released on mobile apps with the Document Search {DS} function. Other product highlights include an expansion, with new contextual features, of Intraday BVAL (IBVAL) Front Office, which delivers credit market pricing as fast as every 15 seconds; and on the Enterprise Data side, Company Financials, Estimates and Pricing Point-in-Time connects a broad range of datasets from multiple sources, enabling the linking of traditional company data to alternative data and other more esoteric information.

Named in July to Constellation Research's inaugural Artificial Intelligence 150, Edwards said, "This award underscores the fact that we have a dedicated team of more than 300 AI researchers and engineers that is thoughtfully considering how AI can best be implemented to add value to our financial products."



Adena T. Friedman, Chair and Chief Executive Officer, Nasdaq

After taking Nasdaq’s reins in 2017, Adena Friedman began talking up a “pivot to technology.” It was no minor course correction for an exchange company that had embraced automation from its start in the 1970s. In previous roles, including in corporate strategy and as chief financial officer, Friedman had much to do with acquisitions and other actions that established Nasdaq as a leading global operator of financial market infrastructure and seller of technology to others. Bolder moves were to follow, from innovation-driven cloud computing and artificial intelligence initiatives to the 2021 acquisition of anti-fraud vendor Verafin and, two years later, a \$10.5 billion deal to buy Adenza – consisting of the AxiomSL and Calypso brands – from Thoma Bravo. By early this year, Friedman sounded every bit the high-tech CEO cheerleader with the motto “Integrate. Innovate. Accelerate.” Embedded in those [“strategic pillars”](#) were hard targets such as \$80 million in net expense synergies from Adenza, fully realized in 2025; and at least \$100 million in Financial Technology division incremental revenue through cross-sell opportunities by 2027.

As of the [second quarter](#), Nasdaq said in July, it was exceeding 70% of its net expense synergy goal; generative AI capabilities were released in Verafin and the [BoardVantage](#) governance offering; and 11 cross-sells were completed since the November 2023 closing of the Adenza transaction.

“Nasdaq’s strong financial and operational results were underpinned by broad-based growth across our three divisions and another quarter of double-digit Solutions growth,” Friedman commented. “We continued the momentum in our Financial Technology division (whose [third-quarter revenue](#) jumped 56% from a year earlier) as financial institutions remain focused on resilience, risk management and infrastructure modernization . . . We are delivering on our integration targets ahead of schedule, we have exciting AI-driven innovation within our products, and we are starting to see results in cross-sells through our One Nasdaq strategy.”



Thomas P. Gallagher, Chairman and Chief Executive Officer, Miami International Holdings

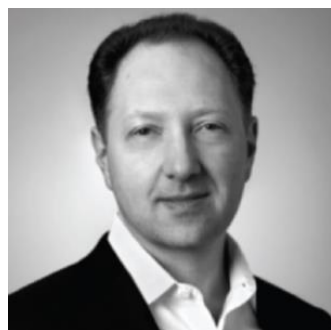
Miami International Holdings’ MIAX complex, which has grown organically and on home-

grown technology to reach a 14% U.S. options market share, is going physical. The August launch of [MIAX Sapphire](#), the company's fourth national securities exchange for multi-listed options, is to be followed by the 2025 opening of a trading floor in Miami, the first such venue in that fast-rising financial center and a literal fulfillment of the name of the parent company, which calls Princeton, New Jersey, home. Chairman and CEO Thomas Gallagher was a founding partner of the Princeton law firm Gallagher, Briody & Butler. He became chairman of Miami International Holdings and the MIAX Exchanges in 2008 and has led the company full-time since 2012, when the first of its electronic options exchanges launched.

In the holding company structure, MIAX Sapphire joined Miami International Securities Exchange (MIAX), MIAX Pearl and MIAX Pearl Equities, MIAX Emerald, MIAX Futures (rebranded from [Minneapolis Grain Exchange](#)), MIAX Derivatives Exchange (the LedgerX business formerly owned by FTX Group), the Bermuda Stock Exchange and Dorman Trading.

The Bermuda exchange recently selected Sweden's [Vermiculus Financial Technology](#) to deliver its VeriClear microservice-based clearing, settlement and depository system. MIAX Futures implemented VeriClear last year, with Gallagher saying it reflected how "our relentless focus on providing the futures industry with best-in-class technology has been the cornerstone of MIH's growth strategy."

In August, Gallagher said that a newly announced [\\$100 million investment](#) from Warburg Pincus would help "expand strategic partnerships in financial futures and proprietary products and will also provide capital to pursue acquisitions in the U.S. and internationally to accelerate our continued growth." The funding is expected to support construction of the trading floor, expansion in futures (including development of new matching engine and clearing technology) and, internationally, "the development and trading of new proprietary and other financial products."



Roman Ginis, Chief Executive Officer, Imperative Execution

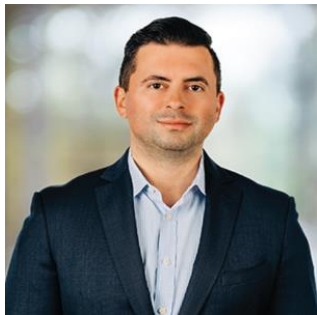
"Conventional exchanges match orders," Imperative Execution says. Its IntelligentCross alternative trading system "matches orders to achieve an optimal experience for both sides of the trade – getting the order done while moving the price as little as possible."

Six years into the platform's run, the pioneering artificial intelligence technology developed under founder and CEO Roman Ginis is as impactful as ever. A new Intraday Optimization model, the ATS [reported in May](#), exceeded expectations in delivering more liquidity to Midpoint book subscribers along with continued reduction in market impact. The "leap forward" in technology, Ginis stated, incorporated "our machine learning in real time to adapt even faster to opportunities for our subscribers' orders due to nuanced changes in individual stock behaviors. The net result: more liquidity, plus less impact, equals better performance," as the platform evaluates market conditions and self-

optimizes quickly and continuously tens of millions of times per day. It's the predictive "skate to where the puck is going" metaphor in action.

Based on second-quarter numbers, IntelligentCross boasted 354 million average orders per day, \$21 billion in average daily trade value (both sides), market impact 76% lower than the exchange average, and better prices than on the exchanges 2.4 million times a day versus the NBBO (National Best Bid and Offer) – while being the only ATS offering a displayed order type.

"Investors should not have to choose between liquidity and performance," said Ginis, a Caltech computer science PhD and former Point72 and UBS quant trader. "We are always looking for ways to deliver scale and yet still minimize market impact. 'More' and 'better' are things we're striving for all the time."



Eugene Grinberg, Chief Executive Officer, SOLVE

At its September debut, SOLVE Px may have seemed to be another of a slew of financial-market applications touting artificial intelligence under the hood. In fact, SOLVE has been working with AI, machine learning and natural language processing since CEO Eugene Grinberg co-founded the fixed-income market data and analytics company with Gerard Nealon in 2011. SOLVE Px is a predictive pricing platform offering buy- and sell-side customers

"unprecedented visibility into next-trade pricing data on over 900,000 municipal bonds," said the [announcement](#).

This was but the latest SOLVE product used in the fixed-income investment ecosystem for trading and investment insights. SOLVE platforms on the whole, leveraging proprietary Deep Market Insight, were providing price transparency data on over 20 million daily quotes and more than 1.25 million securities across asset classes.

"One of the unique challenges in the municipal bond market is the sheer number of outstanding CUSIPs and the lack of pricing transparency on the vast majority of them," explained Grinberg, who has bachelor's and master's degrees in electrical engineering from New York's Cooper Union and previously held executive positions at Red Pine Advisors (acquired by Houlihan Lokey), Duff & Phelps and ACA Capital.

"This makes valuing specific munis very time-consuming, and market participants do not have the confidence that they have all the relevant information to make sound relative value decisions," Grinberg continued. "By tapping into our unparalleled quotes data and leveraging AI's ability to see in many dimensions, SOLVE Px lets front-office municipal bond professionals price munis with confidence and identify investment opportunities."

SOLVE Px was officially released after a year of testing and consideration of user feedback. Gregg Bienstock, group head of municipal markets, elaborated: "We leveraged our deep muni market relationships as we developed our predictive pricing that delivers predictive prices for the buy and sell sides and at the trade size that makes sense to our

clients. This is just the beginning as we move to expand this offering with tools for relative value and as we move to other asset classes.”



Alasdair Haynes, Chief Executive Officer, Aquis Exchange

Call him a contrarian, maverick or classic entrepreneurial disruptor, Alasdair Haynes went against the grain when he founded Aquis Exchange in 2014 – attacking the London Stock Exchange-dominated status quo, with home-grown technology, a subscription pricing model and pan-European ambitions. He still relishes being in “challenger” mode.

Aquis’ CEO is well rooted in the U.K. financial community, having worked at HSBC and UBS before strengthening market-technology credentials as international head of Investment Technology Group and chief executive of Chi-X Europe (now part of Cboe Global Markets). He has shared peers’ concerns about the state of the capital markets, how they are regulated, and subpar IPO activity. “I don’t think [the government] want to see competition. I think they’re much more focused on traditional ways of doing things,” he told the City A.M. news outlet last year. Reacting to a speech by then-Chancellor of the Exchequer Jeremy Hunt, Haynes said, “It’s always ‘we’ do this, ‘we are going to make the London Stock Exchange into the Nasdaq of Europe.’ Well, is that actually the job of the chancellor and the government?”

Yet he said in an [eToro podcast](#) in August that he is “extremely bullish” about U.K. and European prospects. He believes the U.K. market “hasn’t been invested in because it hasn’t had a stable government for a number of years.” It will benefit going forward from being “stable with a significant majority.”

Aquis is chipping away, claiming a first-half market share of 5.20%, up from 4.68% a year earlier, as [net revenue rose](#) 3.5% year-over-year, to £10 million.

Announcing a three-year strategic investment plan for Aquis Technologies, Haynes said, “Aquis is now considered a major and credible global player in the provision of regulatory-grade exchange technology . . . We have decided to adopt a more proactive strategy, building out our product suite across asset classes and furthering our significant technology and competitive advantage.” An [Aquis-Cboe joint venture](#) is a contender to provide the EU’s equity consolidated tape with what Haynes termed “a cost-efficient, robust business model that integrates advanced complementary, proprietary technologies, [also] designed to deliver fair compensation for data contribution, aligning the interests of contributors and consumers.”

On November 11, SIX Group of Switzerland announced an [agreement to acquire Aquis](#) in a cash deal implying an enterprise value of approximately £194 million. “As part of SIX,” Haynes said, “we have an exciting opportunity to accelerate the development of our business and compete more effectively on the European stage, while retaining our entrepreneurial spirit.”



William Hult, Chief Executive Officer, Tradeweb Markets

Tradeweb launched in the 1990s with government securities as its entry point. The now diversified trading platform leader has lately posted double-digit growth percentages that would satisfy many a start-up. [Second-quarter revenue](#) rose 30% year-over-year, to \$405 million; net income 34%, to \$136 million; average daily volume 48%, to \$1.9 trillion. [September ADV](#) jumped 68%, to a record \$2.63 trillion, capping Tradeweb's "best quarter ever, with record volumes in multiple asset classes," said CEO Billy Hult. "As the leading electronic trading marketplace for U.S. Treasuries and a global leader in swaps, we remained focused on growing market share while also benefiting from rates market volatility around central bank moves."

The prior quarter saw "strong organic growth complemented by continued investment in our multi-asset-class, global business," with record ADVs in rates, money markets and credit, and an 18.8% fully electronic U.S. high-grade share of TRACE activity. "Markets continue to become increasingly interconnected, and our technology is helping to make that possible," noted Hult, who has worked for Tradeweb since 2000 and was president before succeeding the long-serving Lee Olesky as CEO in January 2023. Tradeweb became "the first electronic trading platform to connect repo and IRS [interest rate swap] markets, and we expanded our partnership with [FTSE Russell](#) to produce benchmark U.S. Treasury closing prices."

Tradeweb has meanwhile been acquiring and investing: It bought [r8fin](#), with its algorithmic-based execution technology for U.S. Treasuries and interest rate futures, last January; and electronic marketplace operator [ICD](#) (Institutional Cash Distributors) in August. The latter brought in corporate treasury professionals as Tradeweb's "fourth client channel," in addition to institutional, wholesale and retail. Tradeweb took part in a \$47 million, BlackRock-led funding round for asset tokenization innovator [Securitize](#), and took a minority interest in fixed-income-focused blockchain infrastructure developer [Alphaledger](#). An accompanying commercial product development agreement with Alphaledger reflects "our continued efforts to strategically place bets on technology that helps to advance our business," said Hult.

Thomas Pluta, who was president under Hult, departed in September. Amy Clack, formerly of Wells Fargo's Corporate and Investment Banking unit and, prior to that, Credit Suisse's chief operating officer for Investment Banking and Capital Markets, joined Tradeweb in August as chief administrative officer.



Paul Humphrey, Chief Executive Officer, BMLL Technologies

In [Setting a New Standard for Data Quality](#), an October 1 post on the website of BMLL Technologies, CEO Paul Humphrey reflected on a 10-year journey to be the “golden” Level 3 historical data and analytics resource for capital markets. Level 3 on a global scale “was always the goal,” he wrote. Global coverage “enabled us to address the shortcomings of Level 1 and Level 2 data historically provided by real-time providers.

“For decades, the historical market data industry was the ‘exhaust’ of the wider market data industry . . . It received little to no investment as those traditional providers sought revenue from the pre-trade and real-time world.”

Humphrey went on to explain how BMLL overcame the challenges posed by that data in quantitative and algorithm-driven environments, so that “the quality of our Level 1 and Level 2 data is unmatched by any other vendor; we are competing with heavyweight incumbents, and we are gaining great traction.”

With BMLL having added “nanosecond unconflicted OPRA options data going back five years” to its vast multi-asset-class data store, “big data doesn’t frighten my team,” asserted

Humphrey, whose past positions include interim CEO of Euronext London, CEO of electronic broking and information at Tullett Prebon and global head of e-commerce at ABN Amro.

Humphrey was celebrating a [\\$21 million investment round](#) led by market maker Optiver. Existing investors FactSet, Nasdaq Ventures and IQ Capital’s Growth Fund participated, along with CTC Venture Capital. Optiver is using BMLL’s historical Level 3, 2 and 1 data to power algo development, execution analysis, surveillance, market validation and market structure insights. Humphrey pointed out, “Firms no longer need to own, engineer and store large data sets when high-quality, curated historical data is available and ready to use. The global trend of firms hiring quants and having them spend 80% of their time cleaning and organizing poor-quality data has its days numbered, certainly if firms want to save significant time and costs. Instead, firms can differentiate themselves by what their quants do with the data, and the products they build, using this quality data in order to gain a competitive advantage.”



Brian Hyndman, President and Chief Executive Officer, Blue Ocean Technologies

BRUT, one of the electronic communications networks that in the late 1990s put a high-tech jolt into equities trading, was acquired by Nasdaq Stock Market in 2004. BRUT's president, Brian Hyndman, moved onto a bigger, global stage as Nasdaq's senior vice president of transaction services. While there for more than 10 years, and in later roles including advising the cryptocurrency and digital-infrastructure company Paxos, Hyndman believed in the inevitability of round-the-clock trading.

That vision for equities has yet to be fully realized, but Blue Ocean Technologies, which launched an alternative trading system in 2021, has led a push in that direction with its after-hours – that is, 8:00 pm to 4:00 am New York time – “exchange-like experience.” This had a natural appeal to investors in Asia wanting to trade U.S. securities during their daytime. Blue Ocean met considerable early demand from South Korea, helped along by a 2022 strategic partnership with [Samsung Securities](#). Hyndman, who joined Blue Ocean as president in 2021 and became CEO the following year, told the [Korea Herald](#) in May that 40% of the trading volume facilitated by Blue Ocean ATS was from Korea, 30% from elsewhere in Asia-Pacific, and the rest from other places including the U.S. and Middle East.

As part of another strategic relationship, the [Tokyo Stock Exchange](#) took a 5% stake in Blue Ocean. That validated the business model and “will contribute to our overall business growth, technology and infrastructure development while providing new trading choices and transparency for local Japanese investors,” Hyndman said in August 2023. A partnership this year with [GTN Group](#) gave Blue Ocean “the ability to expand in both APAC and the Middle East . . . in line with our mission of accessibility in markets all over the world,” Hyndman said.

There was further momentum stateside as firms including Interactive Brokers, Robinhood Markets, Charles Schwab Corp. and Webull trumpeted 24-hour trading, each of those leveraging Blue Ocean. A Bermuda-based venture, [24 Exchange](#), which is seeking a U.S. license, posts on its website an April 2024 *Financial Times* report that the New York Stock Exchange was surveying market participants on the merits of round-the-clock trading. The NYSE is making plans to go to 22 hours, five days a week on its [NYSE Arca](#)



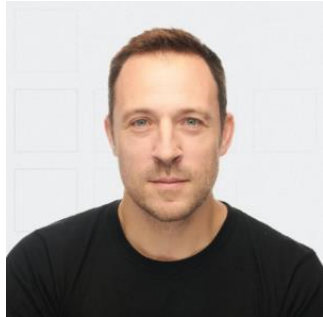
Brad Katsuyama, Chief Executive Officer, IEX Group

Ten years have passed since Michael Lewis' *Flash Boys* spotlighted a plucky band of disruptors out of Royal Bank of Canada who wanted to counter the excesses of high-frequency trading with greater transparency and fairness for investors. Three of the founders of IEX, which launched as an alternative trading system in 2013 and gained exchange status in 2016,

remain in leadership roles: CEO Brad Katsuyama, chief operating officer Ronan Ryan and chief technology officer Rob Park. Over time, IEX and its technologies – notably the playing-field-leveling Speed Bump; and the price-protecting Signal, which powers the order types known as D-Peg and D-Limit – have made their mark on the trading landscape. Per a [research piece in September](#), IEX is “now a top-three displayed venue and still first in performance . . . IEX now delivers 1 of every 10 stable near-side exchange trades, despite being just 4.2% of On-Exchange-At-NBBO volume.”

This year, Katsuyama has bolstered the brain trust. [Bryan Harkins](#), most recently executive vice president and head of markets at Cboe Global Markets – also formerly of BIDS Trading, Bats Global Markets, Direct Edge and Trumid – came to IEX as president. He “brings tremendous leadership experience across a number of asset classes, which is extremely valuable given IEX’s potential for growth both now and into the future,” Katsuyama said, while Ryan as COO will focus on corporate development, strategic planning and long-term initiatives.

According to a June announcement, former Cboe Digital president [John Palmer](#) joined “to build out new markets,” and he was later appointed head of options to lead the forthcoming [IEX Options](#), reporting to Harkins. “IEX spent the last decade innovating to build technology that is designed to protect liquidity providers, and we have now added a team of leaders with deep multi-asset expertise that can help guide IEX through our next stage of growth,” Katsuyama said.



Anton Katz, Chief Executive Officer, Talos

Hedge funds and high tech mesh in Talos’ back story. Anton Katz was formerly head of trading technology at AQR Capital Management. Before that he was director of software at Broadway Technology (later acquired by Bloomberg), where Ethan Feldman was a colleague. After setting out together to form a crypto hedge fund, they decided instead to turn their computer science backgrounds (Katz has a degree from MIT, Feldman has two from Cornell) and industry expertise toward creating a fully integrated, institutional-grade trading platform for the fast-emerging digital-asset marketplace. Since Katz, now CEO, and chief technology officer Feldman founded their startup in New York six years ago, Talos raised venture capital, with [Andreessen Horowitz](#) leading Fidelity Investments, Galaxy Digital, PayPal Ventures and others in a Series A round; and integrated dozens of liquidity providers and other key market entities into its expanding, international ecosystem.

The building blocks have included partnerships, such as with [Deribit](#) as an entrée into crypto options trading; with [Uniswap Labs and Fireblocks](#) “to bring decentralized liquidity and on-chain settlement to professional traders and institutions”; and an integration with [CME Group](#) making a broader range of trading strategies available across the DeFi-TradFi divide.

And there have been acquisitions: systematic-investment technology provider [D3X Systems](#) in 2023, which brought “additional and powerful pre-trade and post-trade tools

for our clients to design portfolios and manage risk,” Katz said; and in 2024 [Skolem](#), to “position Talos to set a new standard for the digital-asset OEMS [order execution management system] and PMS [portfolio management system] – one that incorporates DeFi end to end.”

In October, Talos unveiled a new PMS “seamlessly integrating all of its portfolio management tools” with its flagship OEMS, the [announcement](#) said. “The Talos platform now offers institutions real-time risk monitoring for spot and derivatives, leveraging the risk technology recently added through Talos’s acquisition of [Cloudwall](#).” Katz added: “Digital assets are entering a new era of maturity, and our clients’ needs are expanding beyond execution into all aspects of investment management.”



Swamy Kocherlakota, Chief Digital Solutions Officer, S&P Global

When S&P Global acquired Kensho Technologies in 2018, the buzzy artificial intelligence startup reported to the chief financial officer, Ewout Steenbergen, who had enterprise-wide responsibility for strategy and digital infrastructure. Today, a bigger and ever-more technology-forward S&P Global has a chief digital solutions officer, executive vice president Swamy

Kocherlakota, who is the executive sponsor of Kensho. The “AI and innovation hub” has offices in Cambridge, Massachusetts, where Harvard PhD Daniel Nadler founded it in 2013; and in New York and Washington, close to its financial industry and government client bases.

Kensho products such as Extract, NERD and Scribe, as well as those of other divisions, are available on [S&P Marketplace](#). An indication of how deeply AI now permeates the enterprise is [Marketplace Generative AI search](#), developed by Kensho with S&P Global Market Intelligence, which chief AI officer and Kensho CEO Bhavesh Dayalji said last February “revolutionizes the way we serve our customers and enables them to discover new datasets in a seamless and intuitive way.” The May acquisition of [Visible Alpha](#) enhanced the Capital IQ Pro research offering under Adam Kansler, president of the Market Intelligence division, who was president of the IHS Markit Financial Services division before the 2022 S&P-IHS merger.

There were executive changes on November 1 when S&P Global Ratings president [Martina Cheung](#) succeeded Douglas Peterson as S&P Global president and CEO. Saugata Saha, president of S&P Global Commodity Insights, heads Market Intelligence, replacing Kansler, who stays on until March as special advisor. Eric Aboaf from State Street Corp. will be CFO as of February; Christopher Craig became interim CFO when Steenbergen left the company last March.

Kocherlakota’s role did not change. A Michigan State University computer science PhD, he joined S&P Global after serving as global head of technology operations and infrastructure at Visa. Before that he was head of global infrastructure engineering and architecture at BNY Mellon. He looked back on seven years with S&P Global [in a July LinkedIn post](#):

“Our revenue has more than doubled, from \$6.26 billion in July 2017 to \$12.8 billion in 2023. Our market cap has also experienced a significant increase, rising from \$39.47 billion to \$145.8 billion . . . Our team members have continuously adapted to new technologies and trends, such as Cloud, Agile, RPA [robotic process automation], Data Science and AI, DeFi/MetaVerse and GenAI . . . While we have accomplished a great deal, it feels like we have only scratched the surface.”



Jim Kwiatkowski, Chief Executive Officer, LTX

Few financial and investing processes, from the business-as-usual through to the technological cutting edge, go untouched by Broadridge Financial Solutions. One hotspot within the \$6 billion-in-revenue fintech leader is LTX, the corporate bond trading platform that operates as a division of the broker-dealer Broadridge Business Process Outsourcing.

Broadridge partnered with Jim Toffey, who founded Tradeweb Markets in 1997, to launch LTX in 2020. Unlike fixed-income venues of that prior generation, LTX was able to build artificial intelligence into its execution model from the get-go, so it was well-positioned to go further down that road under Jim Kwiatkowski, who joined in 2021 as chief revenue officer and was [promoted to CEO](#) the following year. (At that point, Toffey succeeded Art Certosimo as LTX board chairman. Certosimo, a Broadridge senior advisor, remains an LTX director and represents Broadridge on the board of digital trade finance platform [LiquidX](#), where Toffey transitioned from CEO to executive chairman in 2023.)

In June 2023, LTX seized on OpenAI’s ChatGPT-4 to introduce the [BondGPT](#) application, to simplify workflows and bond selection and portfolio construction processes. “By increasing the use of data and applications like BondGPT, market participants can inform and expedite vital pricing decisions, facilitate counterparty selection and broaden liquidity access,” Kwiatkowski explained at the time. A second-generation “enterprise version,” BondGPT+, came out a few months later, taking into account feedback and suggestions “to incorporate clients’ own data as well as a range of new features,” the CEO said. “The result is that BondGPT+ not only meets our clients’ enterprise requirements, but also sets a new standard for generative AI solutions in the financial industry by providing a single natural language interface for seamless access to much of the data used by busy fixed income professionals.” When GenAI-powered [list trading functionality](#) was announced in June 2024, LTX said more than 90 leading asset managers and more than 35 dealers had joined its platform, with over \$39 billion in the [Liquidity Cloud](#).

On the R&D front, LTX said in January that it was awarded [four patents](#), including one for the RFQ+ trading protocol. In October, TD Bank’s TD Securities Automated Trading [joined LTX](#), “making our platform even more valuable to our growing network of buy-side clients,” said Kwiatkowski, who before coming to LTX was global head of transaction sales at the London Stock Exchange. He had the same title previously at FXall, Thomson Reuters and Refinitiv.



Stephan Leithner, Co-Chief Executive Officer, Deutsche Börse AG

When former Goldman Sachs and UniCredit banker Theodor Weimer became Deutsche Börse CEO in 2018, supervisory board chairman Martin Jetter said, he “was faced with the task of leading Deutsche Börse out of a period of deep uncertainty.” The ensuing “annual growth of net revenues and EBITDA of an average of 13% speaks for itself,” Jetter [said in March](#) when Weimer set his retirement for year-end, making way for deputy CEO Stephan Leithner. They are the Germany-based exchange and market-infrastructure operator’s co-CEOs during the October-through-December transition.

The financial momentum, carrying into this year’s [second quarter](#) (net revenues rising 19% to €1.45 billion, EBITDA 16% to €848 million) is not the only measure of Weimer’s legacy. A crowning strategic initiative was the creation last year, with the acquisition of investment-management technology company SimCorp, of the [Investment Management Solutions](#) segment. Also consisting of the STOXX and DAX indexes and the ISS shareholder advisory business, Investment Management Solutions, reporting to Leithner, became a major growth driver.

Leithner was a McKinsey & Co. partner before starting a 15-year run at Deutsche Bank in 2000, where he was initially responsible for building the capital markets and M&A business and was an executive board member from 2012. He was a partner at venture capital firm EQT from 2016 to 2018, then took charge of pre- and post-trading as a Deutsche Börse executive board member. As of June 1, [Stephanie Eckermann](#), also a former McKinsey partner, was promoted to head of the newly formed Post-Trading division, comprising Securities Services, Fund Services and the Clearstream subsidiary.



Brad Levy, Chief Executive Officer, Symphony Communication Services

Whether in terms of its reach or functionality, Symphony and its infrastructure occupy a unique niche that is difficult to neatly categorize. Founded in 2014 and led since 2021 by former Goldman Sachs and IHS Markit executive Brad Levy, Symphony bills itself as “the largest global community in financial services,” a connector for messaging, workflows, collaboration and innovation serving more than 1,000 institutions (including the 10 leading investment banks by revenue and eight of the top 10 asset managers). Over 600,000 users are on the platform, which, Symphony says, is powering more than 2,000 community-built applications and bots.

Organically and through acquisitions – including [Amenity Analytics](#) in natural language processing (NLP) and [Cloud9 Technologies](#) in trader voice and electronic communications – Symphony has assembled and integrated a suite of advanced technologies that can help users in their drive for operational efficiencies, in improving data management and analytics, and in completing critical projects such as the move to

T+1 securities settlement.

A leading-edge example is voice transcription and analytics capabilities announced late last year, resulting from Symphony's [partnership with Google Cloud](#). With the latter's generative AI platform, Vertex AI, Symphony's Cloud9 voice product was enhanced with speech-to-text fine-tuning and NLP. The system thus goes beyond tracking for compliance purposes with the ability to extract product and contextual insights from unstructured data.

The "journey with Google Cloud" since 2021, Levy said, "has been a true partnership on many fronts. We are confident that by tapping Google Cloud's AI capabilities for voice analytics, Symphony will be able to offer the more than 1,000 institutions we serve with top-notch service that will create further efficiency and innovation in financial markets."

It was announced in May that Symphony would establish a [hub in Belfast](#), supported by an investment by Invest Northern Ireland. It will initially fill 17 jobs with the intention of growing "much larger," president and CFO Ben Chrnlich said. Symphony employs over 500 in New York, London, Paris, Singapore, Tokyo, Hong Kong, Sophia Antipolis, Tel Aviv, Stockholm, Vietnam and Belfast.



David Mercer, Chief Executive Officer, LMAX Group

LMAX launched in 2018 as a high-performance foreign exchange platform, diversified into digital assets and has adopted, in CEO David Mercer's words, "the vision of building the leading cross-asset marketplace." The financial technology and institutional execution company reported gross profit for the [2024 first half](#) of \$60 million and a record \$3 trillion in total trading volume for the group, which consists of LMAX Exchange, LMAX Global (brokerage) and LMAX Digital. The last proved its staying power following the "crypto winter" as crypto trading volumes rebounded to their strongest level since the second half of 2021.

FX non-deliverable forwards ([NDFs](#)) were made available to trade in London and Singapore, after LMAX Exchange was licensed by the Monetary Authority of Singapore and located a matching engine there. "We recognize the significant potential that remains untapped in the Asian FX market and will continue to broaden our product suite, expand our distribution capabilities globally and build the leading institutional FX marketplace," Mercer said.

In October 2023, LMAX acquired the FX business of [Cürex](#), a New York-based execution services and data analytics company. A year later it broadened out from spot FX and NDFs by buying swaps matching service [FX HedgePool](#), saying they "have a shared vision of bringing greater transparency, efficiency and fairness to the FX ecosystem, whilst providing greater market access to institutional grade liquidity."

Mercer, who built out LMAX following a management buyout and in 2021 sold a minority stake to [J.C. Flowers & Co.](#), announced in May the appointment of [Chris Knight](#) as

managing director. Knight has been in capital markets over 30 years at firms including XTX Markets and Standard Chartered, and most recently as president of ACI Australia.



Jennifer Nayar, President and Chief Executive Officer, Sterling Trading Tech

One of Sterling Trading Tech’s first announcements this year, in January, was “a significant benchmark in its international growth by offering the STT order management system to [KBFG Securities America](#).” The relationship with a unit of Korea’s KB Financial Group reflected STT’s international growth as a technology partner in a world where “the concept of a regular trading day is kind of behind us now,” as president and CEO Jen Nayar said in a [Best Execution interview](#). KBFG is leveraging STT’s OMS to offer U.S. equities and access to Blue Ocean ATS for trading outside of U.S. market hours. KBFG Securities America president Eric Lee said it was a strategic goal for 2024 “to offer our international user base the ability to trade U.S. equities 24x5 through our existing banking platform. Sterling offered the API infrastructure and order management system to seamlessly integrate to make this possible, which led to a much faster time to market.”

In March, STT said it was concentrating on [Korea, Hong Kong and Singapore](#) for expansion in Asia – both locally and cross-border for Asian entities operating in the U.S. – of its OMS and Risk & Margin offerings. It noted that order queuing allows traders to place orders at any time and receive international orders in real time outside of U.S. trading hours.

“The perception in many markets is that OMS and Risk offerings are commoditized,” said Nayar, who joined STT in 2022 after having most recently served as CEO of Vela Trading Technologies (now part of Exegy). “Our perspective is that these systems can be used to enhance efficiencies, competitiveness and profitability, while covering regulatory requirements . . . What sets us apart in the industry is our multi-asset OMS, delivering 24x5 capabilities, and our Risk system, built with unmatched regulatory features to provide a distinct competitive advantage.”

STT, which has customers in more than 20 countries overall, has since built up local business development and client services in Asia. The company also hired [Vedant Gaur](#), formerly of Barclays and Open Origin, as sales director to focus on OMS and Risk & Margin, and added fixed-income support to the Risk & Margin service.



Jamil Nazarali, Chief Executive Officer, EDX Markets

It is two years since EDX Markets got off the ground, with Jamil Nazarali from Citadel Securities, a key member of the digital-asset trading venture’s founding ownership consortium, as CEO. By June 2023, EDX was handling products including Bitcoin, Ethereum, Litecoin and Bitcoin Cash; was making plans to launch a

clearinghouse; and raised funding from several [new strategic investors](#) including Miami International Holdings, DV Crypto and GTS.

In May this year, EDX took what Nazarali described as “the first step in the international expansion of our digital asset business” with the launch of the EDXM Global [settlement platform](#) in Singapore. It was “built on cutting-edge technology, rigorous compliance and an unwavering commitment to customer service,” the CEO said. “By mitigating counterparty risks, EDXM Global empowers our members to navigate the complexities of trade settlement while reducing counterparty risks.”

Writing [on the website](#) about the EDX ultra-low latency matching engine, a brand refresh and other recent accomplishments, Nazarali said: “We believe we have a unique opportunity to set the precedent for centrally cleared trading venues in the digital asset space – and we don’t take that responsibility lightly. We will remain ever vigilant in our efforts to usher in a new era where institutional participation in crypto is the norm, and where leading institutions have access to deep liquidity, transparent markets and cutting-edge technology as never before.”

EDXM Global expects to go live in first-quarter 2025 with a co-located Tokyo venue for “secure, efficient and low-risk trading for [perpetual futures](#) contracts” in Bitcoin and Ether initially, and other cryptocurrencies to be added. That will be overseen by Singapore-based EDXM Global CEO Kai Kono, formerly of Standard Chartered-backed Zodia Custody, and chief compliance officer Rakesh Madamanchi, who was head of compliance at Blockchain.com. Both executives also worked in traditional finance and banking. Nazarali expressed confidence in Kono’s leadership and said clients can expect “a safer, more streamlined experience that reduces costs and improves both capital and operational efficiency.”



Marcus Perrett, Chief Technology Officer, Instinet

Chief Technology Officer since March 2023 of Instinet, the venerable institutional brokerage owned by Nomura Group, Marcus Perrett also has a record of academic achievement. Citations of his on a [Google Scholars](#) page include several relating to field-programmable gate arrays – the University College London engineering PhD was an FPGA developer and firmware engineer early in his career – and “Systems and methods for providing real-time pre-trade risk assessment,” a patent application.

A self-styled “original fintech” and “the original ECN,” in business since 1969, Instinet has a thoroughly modern tech stack and product menu, with [execution services](#) across the trading lifecycle, BlockCross and BlockMatch offerings and Newport [technology solutions](#). An optimization innovation, Micro Adaptive Sequencer, was rolled out over the last two years as the foundation of a next generation of algorithms. Input models are built using various techniques including traditional statistical forecasting and machine learning; a neural network fair value model takes in recent and immediate trading and quoting data for a given security, as well as related reference securities.

Perrett joined Instinet in 2019 and was head of Edge and IT manager for Europe from 2021 until he was promoted to CTO. Before Instinet, Perrett was strategic advisor and CTO of CobaltFX. He previously spent six years with Fixnetix, the last three as CTO, until after its 2017 sale to DXC Technology (which sold that business to Options Technology in 2021).



Cynthia E. Sachs, Chief Executive Officer, Versana

With JPMorgan, Bank of America, Citi and Credit Suisse as founding investors, Versana set out in 2022 to bring real-time, digitalized data quality to syndicated loans, a multitrillion-dollar asset class that had not electrified as quickly as some others. By March 2023, as Deutsche Bank, Morgan Stanley, U.S. Bancorp and Wells Fargo joined the investor group in a \$40 million capital raise, Versana was well on its way.

“While we’ve achieved a good deal of success in a relatively short period of time,” founding CEO Cynthia Sachs [wrote then in a blog](#), “we’re cognizant that Versana is still in its infancy and that we have a long, yet incredibly exciting road ahead. Between the tireless work of our fantastic team, extraordinary response from over 150 market participants and now solid commitment from eight leading banks, we’re even more confident that the future of the loan market is exceptionally sunny and bright.”

This September came further validation as [Barclays](#) joined the ownership who’s who as part of an additional \$26 million funding. Becoming the 10th bank to commit to the platform, Barclays provided a boost for Versana’s global expansion plans. The bank’s involvement “as an investor, subscriber and agent data contributor is a huge win for the global syndicated loan market,” Sachs asserted.

Back in June, JPMorgan achieved [straight-through processing](#) on Versana, “a first for the syndicated loan market,” the platform operator proclaimed, and “the most tangible evidence of asset class transformation” since Versana’s launch.

Sachs, whose past experience included spearheading the creation of Bloomberg’s BVAL fixed-income pricing business, said the STP milestone is “clear evidence of the loan market’s digital transformation, materially reducing friction for all participants.”



Travis Schwab, Chief Executive Officer, Eventus

Trade surveillance and related risk control and compliance requirements are pervasive, global and cut across asset classes. That is how Eventus and its Validus platform are engineered, and the Austin, Texas, company founded in 2015 by Travis Schwab has caught the wave. In June, pointing to a 25% increase in the client base over the past year, [the CEO said](#), “We’ve never been in a better position as a company. Our retention rates remain close to 100%, we are growing across asset classes and geographies, our platform

continues to perform at the highest levels with new functionality rolling out consistently, and we are profitable.”

Schwab said Eventus has succeeded at replacing legacy providers “because our sole focus is our clients and the delivery of best-in-class trade surveillance and financial risk solutions, such as algo monitoring . . . Our experience as market practitioners gives us the ability to partner with each and every client – whether they are a start-up exchange, global trading firm, broker-dealer or tier 1 bank.”

And the challenges of crypto markets are good for his business. “Our digital asset clients are at the forefront of the industry, particularly with the launch of margined futures and spot bitcoin exchange-traded funds in 2024. Eventus is uniquely positioned to support our clients’ growth as they incorporate these offerings into their platforms and expand their businesses to multiple asset classes,” [said Schwab](#), formerly CEO and chief compliance officer (CCO) of broker-dealer RGM Securities, whose parent was acquired by DRW Holdings in 2017. Before that, he was managing director of global buy-side sales and CCO at Trading Technologies, and co-head of North American eBrokerage sales at Calyon Financial.

Recently announced Validus users include the new [Abaxx](#) commodities marketplace in Singapore and the [Bitnomial Exchange](#), the latter building on a strategic partnership dating back to 2021. “Our extensive experience in digital assets globally, combined with internal markets and regulatory expertise and a best-of-breed solution, all played a role in [Bitnomial]’ selection,” Schwab said.



Michael Sobel, President and Co-Chief Executive Officer, Trumid

An original member of Trumid founding CEO Ronnie Mateo’s leadership team in 2014, Mike Sobel was named president in 2016 and co-CEO in 2021. Sobel has been instrumental in Trumid’s rise to a top three rank among fixed-income trading platforms, stressing customizability for users, protocol flexibility, and data and analytics for “an engaged community of users, connected through technology.” The years-long electrification trend is progressively magnified by a network effect “driving liquidity and the velocity of the asset class,” as Sobel said [late in 2023](#). He is a former managing director and head of the high-yield bond trading desk at Barclays, and was a Lehman Brothers vice president before that.

With 900 buy- and sell-side institutions in the client network, Trumid reported average daily volume for [September](#) of \$6.8 billion, up 78% year-over-year and 37% from the previous month. For the third quarter, ADV rose 68% and market share 25% from a year earlier. Each of the trading protocols – Trumid RFQ, Portfolio Trading (PT), Attributed Trading (AT) and Swarms – were performing at record levels. RFQ and PT were unveiled over the last year and a half, as were the PT Pricer analytics tool and Trumid AutoPilot for RFQ. For clients utilizing the latter feature, 80% of RFQ trades are auto-executed.

“Trumid’s clients are having success here and benefiting from the integration between our

workflows,” Sobel said after the RFQ and PT integrations last year. “Network engagement continues to grow quickly and achieve new records, with more than half of our active institutions trading in multiple Trumid trading protocols.”

Trumid and Tradewell Technologies [announced](#) October 31 an integration resulting in Tradewell users gaining access to the RFQ and Swarms liquidity pools, while Tradewell users contribute to, and benefit from, corporate bond liquidity in the Trumid client network. “Connecting with Trumid’s valuable market data and distinct pools of fixed-income liquidity is important for our clients,” said Tradewell chief revenue officer Peter Griffith, “and many are already live with Trumid RFQ and Swarms.”



Jeffrey C. Sprecher, Chair and Chief Executive Officer, Intercontinental Exchange

So sprawling is Intercontinental Exchange that its business activities are a virtual map of global capital, commodity and derivative markets and the data and technology that power them. And the company that sprouted from a regional power market that Jeffrey Sprecher bought in Atlanta in the 1990s exerts a visionary influence on the world that it has helped to define.

According to Citadel founder and chief executive Kenneth Griffin, CEO Sprecher “has just had a remarkable history of being a transformative leader in the U.S. capital markets. We were an early user of ICE’s product in the energy markets. We’re obviously a very important user of ICE’s clearinghouse capabilities around the world. And today the New York Stock Exchange really does epitomize one of the pinnacle capital markets in the entire world.

“But watching what ICE is doing in the mortgage market is incredibly fascinating,” Griffin continued in an [Inside the ICE House](#) podcast earlier this year.

He was referring to ICE’s \$11.9 billion acquisition last year of mortgage technology provider Black Knight, now consolidated in a division that contributed \$1 billion of ICE’s \$5.7 billion total revenue in 2024’s first half. Sprecher [explained the rationale](#): “ICE has steadfastly adhered to our founding principle, demonstrated throughout our history, that applying technological innovation and digitization to traditionally analog businesses can make markets more efficient and transparent for all participants. Our team is well-positioned and ready to apply our proven playbook across the U.S. mortgage ecosystem to help improve the homeownership experience for millions of American families.”

ICE is thus in a position to produce national “first look” [mortgage performance statistics](#) and other “[mortgage monitor](#)” insights.

Elsewhere on the technology front, ICE introduced an ultra-low latency [trans-Atlantic data service](#); completed a multi-year upgrade of its New York Stock Exchange and equity-market data systems (“It’s one of the most highly utilized, highly efficient and highly regulated pieces of technology in the world,” said Sprecher); formed a [NYSE Tech Council](#) of senior technology leaders to promote thought leadership and best practices;

and established an [AI Center of Excellence](#).

ICE's Climate and Index teams collaborated on a [suite of indexes](#) "to track advancements in the repricing of climate risk in bond markets for researchers and investors," ICE Data Indices head Preston Peacock said in September. And a multi-asset-class [climate transition risk solution](#) "provides emissions estimates and portfolio analytics across various fixed-income asset classes, covering Scope 1, Scope 2 and Scope 3 emissions for municipal bonds, mortgage-backed securities and real estate."



David Taylor, Chief Executive Officer, Exegy

In pure technology terms, Exegy is built on supercharged FPGA (field-programmable gate array) systems, which it took into capital markets with a [development framework](#) specifically designed for ultra-low latency financial applications. In a [STAC benchmarking](#) this year, collaborating with AMD, Exegy said it achieved "a record-breaking actionable latency of up to 13.9 nanoseconds for the execution of a trade," the lowest "tick to trade" latency in the test.

This level of performance is traceable to research conducted by David Taylor at Washington University in St. Louis, where he earned B.S., M.S. and D.Sc. degrees in computer science, and which he carried into Exegy as chief technology officer for 18 years prior to his March 2023 [promotion to CEO](#).

Also strategically critical were acquisitions: [Vela Trading Systems](#) in 2021; and [Enyx](#), bringing the core technology for the finance-industry-oriented nxFramework, in 2022. Exegy was in a position to help solve traditional build-or-buy dilemmas, then-CEO James O'Donnell said: "We now offer a full portfolio of low-latency trading products, and our FPGA specialists can assist customers in creating comprehensive solutions based on the leading technologies from both companies."

Two new hires accompanied the September introduction of new branding and a [client success initiative](#) that the company said "signifies the successful integration of Enyx and Vela with Exegy." Yewande Sobola, global head of solutions consulting, and Thomas Gallo, vice president, head of client success, both came from Pico. Sobola has also worked at Trading Technologies and G-Research, Gallo at Virtu Financial and ITG.

Integrating "three major capital markets technology players," Taylor said, "we brought together not only the technology, but also the cultures and processes that enable us to bring the most value to our clients . . . We are rolling out a new look and feel of the brand, which embodies the unification of the three companies."



Igor Telyatnikov, Chief Executive Officer, AlphaPoint

Co-founded by Igor Telyatnikov, AlphaPoint was early into the digital-asset space and a proponent of institutional-grade infrastructure. On its [10th anniversary](#), in November 2023, AlphaPoint said it was supporting over 150 customers across more than 35 countries, with \$1 trillion-plus traded and billions of assets deposited on the platform. Financial industry users included CME Group, XP Securities, RBC, Scotiabank and Guardian Life. “The next 10 years will see exponential growth in crypto adoption worldwide,” CEO Telyatnikov said at the time. “Our solutions make it easy for partners across financial institutions, government and startups to build the digital-asset products and solutions that will drive and power mainstream integration.”

While AlphaPoint has expanded its product set to include liquidity provisioning, a next-generation brokerage platform and secure wallets, its brand name has typically been subsumed under others’ because its technology is white labeled. The government of El Salvador’s adoption of bitcoin as legal tender put a spotlight on AlphaPoint when the national digital wallet, Chivo, was launched in September 2021. “AlphaPoint integrated the entire ecosystem of the wallet including the mobile application, mobile point-of-sale processing, merchant website portal, call-center support software, and administrative console,” as recounted in the company’s [case study](#). “Our build focuses heavily on wallet stability and uptime, scalability and social impact, while also integrating third-party user verification services leveraging machine-learning facial recognition and authentication tools.”

“No one else has attempted to execute a project of this size . . . The Chivo application is currently supporting millions of Salvadorans, many for their first time accessing financial services,” said Telyatnikov, who was previously managing director of Cvetlo, an early-stage fintech, adtech and online media venture firm.

In May, AlphaPoint said Bancolombia Group would launch its [Wenia exchange](#), handling digital assets including the COPW peso stablecoin, on the AlphaPoint Exchange platform. AlphaPoint also announced a partnership with [Polymesh](#) as its “blockchain of choice” for real-world-asset tokenization. “Regulated assets, in particular, require unique blockchain capabilities to operate in a compliant way,” Telyatnikov explained. “Integrating Polymesh into our platform will help AlphaPoint to power more tokenized asset marketplaces worldwide by simplifying the tokenization process and eliminating the need for complex smart contracts.”



Edward T. Tilly, President, Clear Street

Uriel Cohen (chairman), Sachin Kumar (chief technology officer) and Chris Pento (chief executive officer) founded prime brokerage Clear Street in 2018 with a vision to bring capital markets into the future on a modernized, multi-asset-class ecosystem with “horizontally scalable technology.” In a [review](#) at the five-year mark, Pento cited healthy growth across “our business, product and people,” a \$435 million [Series B funding](#), and increases of 500% in institutional clients and 300% in daily transactional volume over the prior year.

The work and momentum continue. Clear Street, now a \$2.1 billion enterprise, in 2024 launched futures clearing services, acquired the [Fox River](#) algorithmic trading business from Instinet, sought a place on the London Metal Exchange’s open-outcry Ring, and rebranded CenterPoint Securities (a 2020 acquisition) as [Clear Street Active Trading](#). And now there is a change at the top.

Pento, a former Knight Capital Group managing director, is [moving on at year-end](#) to an executive and partner role at White Bay, co-founder Cohen’s family office. Ed Tilly, a 30-year industry veteran who served a decade as CEO of Cboe Global Markets, resigned in September 2023 and became Clear Street’s president in July 2024, rises to CEO.

“We’ve successfully scaled the business and generated significant revenue, all while developing a product suite tailored to the complexities of today’s markets,” Pento declared. “This is the right moment to step away from my day-to-day operational role so that I have more time to partner with Uri on our next round of opportunities.”

Said Tilly: “In a landscape dominated by legacy players, Chris had the vision to combine a cloud-native tech platform with non-bank prime brokerage and a relentless customer-centric focus. That’s a winning combination that we are repeating and scaling across markets, client types and geographies. We look forward to Chris’ ongoing guidance as he and I work closely together for the rest of the year, and then as he continues his presence on our board and assumes his new role at White Bay.”



Fredric J. Tomczyk, Chief Executive Officer, Cboe Global Markets

There was no reason to expect Fred Tomczyk, plucked from the board of directors upon the sudden September 2023 [resignation of Edward Tilly](#), to order radical changes as Cboe’s new CEO. A director since 2019 who was president and CEO of TD Ameritrade Holding Corp. from 2008 to 2016, Tomczyk did put a strategic review into motion. It contributed, through expense management and other factors, to “another strong quarter, with record net revenue of \$514 million, diluted EPS of \$1.33, and adjusted diluted EPS of \$2.15, up a robust 21% from the second quarter of 2023,” Tomczyk [said on August 2](#). It was time to complete the integration projects remaining from a long string of domestic and international trading-venue acquisitions, and to exploit what he termed “core strengths.”

In April, the company said it would wind down the [Cboe Digital Spot Market](#) and integrate digital-asset operations into the existing Global Derivatives and Clearing businesses. Tomczyk said this would leverage “our core strengths in derivatives, technology excellence and product innovation” and “enable greater optimization and strategic alignment for our business across geographies and asset classes, further supporting our long-term growth strategy.” It held onto Cboe Clear Digital, which facilitates clearing of bitcoin and ether futures, under unified leadership with the pan-European Cboe Clear Europe central counterparty.

Cboe has also announced an expanded collaboration with [FTSE Russell](#) to develop products such as cash-settled index options tied to the FTSE Bitcoin Index and FTSE Ethereum Index; and acquisition of a 14.8% stake in [Japannext](#), which Tomczyk said “expand[s] our presence beyond our ownership of Cboe Japan” and reaffirms Cboe’s commitment to that country. An investor in [Globacap](#), Cboe is reportedly partnering with the London-based company on a private-markets trading platform.



Jarrod Yuster, Chairman and Chief Executive Officer, Pico

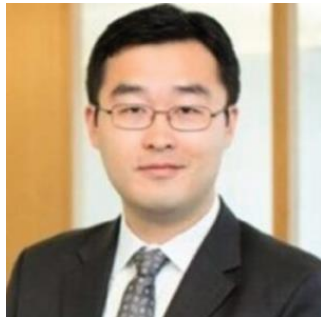
Educated in electrical engineering (B.S. degree from Yale, M.S. from Columbia), Jarrod Yuster worked his way to Wall Street via semiconductor maker Intel. He was global head of electronic trading at Merrill Lynch before founding Pico in 2009, initially intending to build an independent trading firm. “We realized that the technology business was the real business,” the CEO said in a [Benzinga interview](#), and Pico has since assembled a global ecosystem on a mission “to assure the speed, transparency and operations” for well over 400 clients in the financial markets.

A case in point was Pico’s [July announcement](#) of a partnership to connect its PicoNet to Blue Ocean Technologies’ alternative trading system and its after-hours trading capacity. Said Yuster: “This partnership empowers our clients, especially in the APAC region, to manage risk in real time during local market hours, reinforcing our commitment to providing cutting-edge connectivity solutions.” The Pico technology infrastructure ensures high-quality data and connectivity services to support trading activities and strategic decisions, the company said.

Key landmarks for Pico were the acquisitions of performance analytics specialist [Corvil](#) in 2019 and trading and market-data software company [Redline Trading Solutions](#) in 2022. Seeking “greater efficiency in market infrastructure services and data consumption,” Yuster stated, “financial institutions want a trusted and globally comprehensive technology partner who understands their business, the market landscape and how to apply technology solutions. Combining Redline’s premier ultra-low latency trading and software solutions with Pico’s broad infrastructure, cloud and data offering, and industry leading Corvil Analytics, positions Pico uniquely to address these client needs and market challenges.”

The Corvil 10.0 software release leveraged years of artificial intelligence and machine

learning research for proactively and in real time “correlating performance-impacting events, unusual events and extreme events that influence trading outcomes and infrastructure performance,” according to an [April announcement](#). As explained in a mid-year review of Exchange Driven Change Initiatives ([EDIs](#)) impacting client connectivity, “Pico’s broad range of products all include some kind of interaction with trading venues infrastructure and systems, including Pico Raw and Historical Market Data, Corvil Analytics, Redline Software and Network Connectivity. All of these offerings have extensive venue coverage globally, ensuring Pico is uniquely positioned to manage and support these EDIs.”



Peng Zhao, Chief Executive Officer, Citadel Securities

The Citadel hedge fund is closely identified with founder and CEO Kenneth Griffin, who is not shy about opining on matters economic, political and, especially when it comes to Citadel’s new Miami headquarters, civic. On an Intercontinental Exchange [Inside the ICE House podcast](#), Griffin recalled Citadel’s choice of South Florida for a relocation amid the pandemic

emergency: “In five days, we built sufficient technological capacity to have handled the entire order flow of the U.S. equity market . . . Can you imagine anywhere else in the country being able to do that in five days?”

Peng Zhao, CEO of market maker Citadel Securities, which Griffin formed in 2002 and is ever more aggressively spreading its global multiproduct wings, has a distinctive, if lower-key, profile of his own. Their working partnership has spread into joint philanthropy: “Citadel’s Griffin, Zhao Help Pandas Make a New Home in San Diego,” [Bloomberg headlined](#) this summer. “I regularly visited the Beijing Zoo to see the pandas as a child, and it is an honor to play a role in protecting this majestic species,” Zhao commented.

Zhao joined Citadel in 2006 after earning a statistics PhD from the University of California at Berkeley. He describes the mission of Citadel Securities, which he has headed since 2017, as “solving market problems.” The high-tech operation rode its sizable, in some segments reputedly dominant, market share to a reported 81% rise in first-half net trading revenue, to \$4.9 billion, on pace for a full-year record.

“It used to be that some of the largest bodies of research were done in academia,” Zhao says in a talk to interns, [posted on YouTube](#), whereas today, much is done in the industry. “The market is in a sense the most brutally honest and direct judge of the quality of your work . . . I find that exhilarating.”

“He’s passionate about everything in life,” Griffin said. “From The Asian American Foundation [of which Zhao is a founding board member] to changing market structures in the United States and abroad, Peng just brings passion to everything he does every day.”

10 More to Watch on the leading edge of change and innovation in financial markets

- [Jonathan Birnbaum, Chief Executive Officer, OpenYield Trading](#)
 - [Vanessa Fernandes, Head of Digital Asset Solutions, State Street Corp.](#)
 - [Dmitri Galinov, Chief Executive Officer, 24 Exchange](#)
 - [Amar Kuchinad, Chief Executive Officer, Copper.co](#)
 - [James H. Lee, Chairman and Chief Executive Officer, TXSE Group](#)
 - [Brandon Mulvihill, Chief Executive Officer, Crossover Markets Group](#)
 - [Eric Noll, Chair and Chief Executive Officer, FusionIQ](#)
 - [Louis Scotto, Chief Executive Officer, FMX Holdings](#)
 - [Leslie Spiro, Chief Executive Officer, interop.io](#)
 - [Andrea Remyn Stone, Chief Executive Officer, Zema Global Data Corp.](#)
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Jonathan Birnbaum, Chief Executive Officer, OpenYield Trading

Fixed-income markets seem to present no end of opportunities for creative fintech entrepreneurs. Eyeing the costs and other pain points of small-ticket transactions, OpenYield, which [printed its first trade](#) in March, bills itself as “a low-cost, equity-like marketplace for bond trading.” Said Jonathan Birnbaum, founder and CEO of the registered broker-dealer and alternative trading system: “The bond market is primed for its next chapter. The rise of interest rates has catalyzed the demand side for fixed income, while the rise of electronic trading and pricing algos has transformed the supply side liquidity. Meanwhile, the experience of interacting with the bond market for investors and advisors hasn’t changed, leaving much to be desired. We’re on a mission to make bonds cheap and easy to trade and are excited about the opportunity to build generational capital markets infrastructure.”

As of its opening, OpenYield had onboarded algo-enabled market makers such as Flow Traders and TD Securities Automated Trading, as well as Apex Clearing. It was announced in August that OpenYield was the first ATS on the [RBC Clearing & Custody](#) platform. Generating a high volume of tickets necessitates having “a trusted clearing broker who is both highly reliable and tech-forward . . . We view this clearing relationship as the start of a broader collaboration across their leading fixed-income franchise,” said Birnbaum, whose background includes serving as COO of Domain Money, where he designed a retail crypto and equity investing platform; as general manager at SoFi, scaling a retail brokerage business; heading fixed-income execution at Bridgewater Associates; and as U.S. credit trading COO at Morgan Stanley.



Vanessa Fernandes, Head of Digital Asset Solutions, State Street Corp.

State Street Digital was formed in 2021 to pursue opportunities related to blockchain and cryptocurrency technologies. It was led by Nadine Chakar, currently in a digital asset role at Depository Trust & Clearing Corp. The September [announcement](#) of Vanessa Fernandes’ appointment as the new head of [Digital Asset Solutions](#) came on the heels of a strategic agreement with infrastructure provider [Taurus](#) that strengthens State Street’s servicing proposition for the digital asset lifecycle. Based in New Jersey

and reporting to chief product officer Donna Milrod, Fernandes is partnering “with business leaders across product, technology, operations, as well as the chief commercial office to drive the overall execution of State Street digital asset strategy,” the bank said.

Fernandes was until recently managing director and global head of digital experience at BNY Mellon; she has also had senior roles at Itaú Unibanco, including chief information officer and CEO of digital assets. She said she was looking forward to collaborations across State Street “to further integrate digital capabilities into our core offerings and build a stronger, more future-focused foundation for our clients.”

State Street is looking to leverage Taurus custody, tokenization and node-management solutions to automate the issuance and servicing of digital assets. Milrod said the agreement “underscores our ongoing commitment to further establishing ourselves as leaders in this growing asset class and . . . enhances our ambition to deliver to our clients an amazing digital asset experience.”



Dmitri Galinov, Chief Executive Officer, 24 Exchange

Blue Ocean Technologies’ after-hours [alternative trading system](#) gave the round-the-clock trading bandwagon a push, firms including Charles Schwab and Interactive Brokers jumped on, and in October, the New York Stock Exchange was making plans for its NYSE Arca market to trade all U.S.-listed stocks, ETFs and closed-end funds during [22-hour weekday sessions](#). “Looks like NYSE got 24 Exchange bug,” Dmitri Galinov posted on LinkedIn. “This is a great validation of 24 Exchange’s innovation to move equities market forward.”

Galinov’s Bermuda-domiciled trading venture, currently with a [foreign exchange](#) product set, bakes “24 hours” into its business model, brand name, and an exchange application filed with the Securities and Exchange Commission. “U.S. markets are the most liquid markets in the world,” Galinov said in a recent [CNBC interview](#), “so if I am an international company, I would be much more likely to list on the NYSE if it had trading around the clock.” Although he conceded that retail-driven volumes may at first be too thin to attract institutional traders, he believes that “as the volume migrates to a 24-hour curve, the institutions will come.”

Galinov had a hand in some of this century’s renowned institutional e-trading businesses: as global head of buy-side direct market access, Lava Trading (2002-05); director of strategy, Direct Edge ECN (2005-07), which later merged with Bats Global Markets; and head of Credit Suisse Advanced Execution Services liquidity strategy and Crossfinder dark pool (2007-12). He founded, and from 2012 to 2018 was CEO of, the FastMatch FX ECN, which Euronext [acquired in 2017](#) and renamed two years later as Euronext FX.



Amar Kuchinad, Chief Executive Officer, Copper.co

A 1996 Harvard graduate (AB in applied math), Amar Kuchinad learned the institutional trading ropes over a decade and a half with Credit Suisse and Goldman Sachs. He left Goldman, where he was head of U.S. credit portfolio trading, in 2012 for a 15-month stint as a senior policy advisor at the Securities and Exchange Commission. Applying that added perspective from the regulatory side, Kuchinad got in on the electronification of bond

trading by developing Electronifie, a platform launched in 2015 and sold in 2017 to Trumid, where Kuchinad stayed for two more years as chief strategy officer.

Most recently with investment manager Pretium, Kuchinad was tapped as global CEO of Cooper.co, which according to an [October announcement](#) deemed his “proven experience combining capital efficiency and effective risk management” as “highly relevant” to its digital-asset custody and trading business. Copper’s ClearLoop is the largest global network for off-exchange settlement of digital assets, this year processing a monthly average of 20 million trades with a notional value of \$100 billion. Kuchinad succeeded Dmitry Tokarev, who remains on the board of the six-year-old enterprise as founder director. Lord (Philip) Hammond of Runnymede, a former U.K. chancellor of the exchequer, became a senior advisor in 2021 and has chaired the board since 2023.

“His skill sets and experience,” Hammond said of Kuchinad, “provide the perfect complement to Dmitry’s technical strengths as we deploy our industry-leading technology to support global financial institutions to trade and safeguard digital assets of all kinds.”



James H. Lee, Chairman and Chief Executive Officer, TXSE Group

“With the best business climate in the nation and as the top state for corporate relocation and expansion projects, Texas is the future hub of capital markets that will help cement our economic power on the global stage,” the Lone Star State’s governor, Greg Abbott, [said recently](#). He and allies are determined to turn Dallas into “Y’all Street,” a bigger-than-Texas-size financial center. The expected opening next year of the

Texas Stock Exchange “will make it really the financial heartbeat of the entire country,” Abbott [told Bloomberg](#).

The TXSE founder and CEO, University of Texas MBA and BBA James Lee, has been an M&A banker (First Boston and Lehman Brothers), co-founded e-brokerage Momentum Securities, owned one of Texas’ oldest investment advisory and fund management firms (Ascendant Advisors Group), chaired the Teacher Retirement System of Texas board of trustees and is managing member of private investment group JHL Capital Holdings.

Lee has assembled an [executive team](#) “of business, market structure and policy leaders” who, he said, “have tremendous expertise in the markets as well as broader experience building and leading companies that have propelled their industries.” Among them are chief technology officer Rick Yoder, who was director of software development at Intercontinental Exchange Data Services; lead architect Jonathan Ross, who was CTO at Knight Capital Group, Getco and Nasdaq; and head of technology operations Adrian Falcone, formerly of Members Exchange. Ex-Texas Governor Rick Perry, Rick Roberts, a former SEC commissioner, and Alex Bussandri, global head of strategy at Citadel Securities, are TXSE directors. Mark McCombe, vice chairman of BlackRock, is a board observer. Citadel and BlackRock are investors in TXSE.



Brandon Mulvihill, Chief Executive Officer, Crossover Markets Group

Tightly focused on meeting institutions' liquidity requirements as an execution-only crypto ECN (electronic communications network), Crossover Markets' CROSSx boasts sub-20 microsecond matching engine latency and millions of messages-per-second throughput – “first and fastest” versus typical crypto exchanges.

“We can bring the best practices from equities and FX into crypto with an ECN,” CEO Brandon Mulvihill explained in July to [Markets Media](#). “CROSSx is not a counterparty to trades and does not hold assets or coins.” CROSSx was 30 to 50 times faster than most institutional crypto exchanges, according to the Crossover Markets co-founder, a former global head of FX Prime Brokerage at Jefferies and executive at FXCM. As of late October, 99% of trades were matched in under 10 microseconds as billions of quotes per day from liquidity providers were being processed.

The platform launched in March 2023, with backing from strategic investors including Flow Traders and Two Sigma, plus Gate.io and several other retail brokers. A \$12 million [funding round](#) this June was led by Illuminate Financial and DRW Venture Capital, as Mulvihill observed a changing digital-asset market structure: “Prime brokerage and central clearing models are advancing, creating fungibility and exposing execution venues that hold clients captive.” Effective November 1, amid surging demand from retail brokers, and cognizant of other fee pressures, Crossover [waived commissions](#) for taker clients trading USDT/USD and USDC/USD stablecoin pairs. “To further support our retail broker clients, we felt it best to eradicate commissions on the funding element for taker participants,” Mulvihill stated.



Eric Noll, Chair and Chief Executive Officer, FusionIQ

A provider of wealth management solutions to a broad range of financial institutions and advisors, reaching some 115,000 investors on the cloud-based FusionIQ One platform, FusionIQ said in October that it was entering “the next stage of its growth strategy,” fueled by a fundraising and a [leadership transition](#) under Eric Noll. The longtime financial markets and technology executive came in as CEO and chair of a board with new directors Erik Oros, chief

investment officer of Gideon Strategic Partners and a former Actinium Capital managing partner; Timothy Powers, CEO of multi-family office OakRidge Management Group and a former JPMorgan executive director; and Scott Ganeles, CEO at iAltA, a Tradeweb Markets director, and recently a senior partner at Westcap, who founded the fintech companies Carson Group and i-Deal, which had successful exits.

“We see an unprecedented opportunity to accelerate growth by delivering digital transformation that opens wealth to greater numbers of people,” Noll commented. “By eliminating friction in the marketplace, the FusionIQ One platform is providing efficient, effective processes that drive down costs and create growth for wealth management enterprises.”

Noll, who was CEO since 2018 of Stone Ridge Capital Partners, has a c.v. that reads like a tour through financial market infrastructure, trading and technology innovation: manager, strategic planning, Chicago Board Options Exchange (1990-93); assistant vice president of strategic planning and new-product development, Philadelphia Stock Exchange (1993-94); managing

director, Susquehanna International Group (1994-2009); executive vice president, Nasdaq OMX Transaction Services (2009-13); president and CEO, ConvergEx Group (2013-17). A public governor on the board of the Financial Industry Regulatory Authority (FINRA) since 2020, Noll was [elected chair](#) in 2022.



Louis Scotto, Chief Executive Officer, FMX Holdings

Howard Lutnick, chairman and CEO of BCG Group and of Cantor Fitzgerald LP, has been the vocal front man of FMX Futures Exchange. FMX obtained Commodity Futures Trading Commission approval in January; achieved a \$667 million post-money valuation with Citadel Securities, Goldman Sachs and J.P. Morgan among its [strategic backers](#); and opened for trading of SOFR futures on September 23. U.S. Treasury futures are to follow in first-quarter 2025. Lutnick, not for the first time taking competitive aim at futures exchange leader CME Group, is FMX Holdings chairman.

FMX's CEO, Louis Scotto, had been BCG Group's executive managing director for the Americas and global head of FMX UST (formerly known as Fenics UST). He has more than 40 years of experience in financial markets. In the early 1980s, he was head of technology at Garban (predecessor of ICAP) and president of Garban Computer Systems. In 1985 he joined Mabon Nugent, where he was general partner and chief administrative officer, and moved in 1992 to Liberty Brokerage, rising in 1999 to global chief operating officer. After Liberty's 2000 merger with Tullett, Scotto was chief operating officer, later becoming group CEO of Collins Stewart Tullett, global CEO of Tullett Prebon and CEO of Tullett Prebon Americas. He joined BGC Group in 2011.



Leslie Spiro, Chief Executive Officer, interop.io

Application-integration and interoperability vendor interop.io is the product of the merger announced in May of [Finsemble and Glue42](#). Leslie Spiro, CEO of Glue42, is interop.io's CEO; Finsemble CEO Dan Schleifer is president of the combined organization, which, they say, "will deliver even faster on the innovation and industry leadership that has driven growth and customer success in each firm." Clients use the platform, [io.Connect](#), "to build and deploy highly intuitive front ends that combine different applications and functionality into a single, harmonized smart desktop."

"Capital markets require advanced, automated workflows from application to application, and from user to user," said Spiro, a software development and trading systems veteran. "Only interop.io has the technology stack to deliver this. We provide the most innovative desktop and web interop technology that can follow users as they move from desktop to browser to tablet."

Schleifer, who was left with Finsemble after his ChartIQ business was bought by S&P Global in January 2023, said, "We believe the industry needs one firm that is the standard bearer for interoperability and advanced workflow automation," and the shared vision is to deliver "a best-in-class solution with demonstrable ROI."



Andrea Remyn Stone, Chief Executive Officer, Zema Global Data Corp.

An enterprise data management and analytics provider for the commodity and energy sectors, Zema Global Data Corp. announced in September what it called the “transformative” acquisition of [Morningstar Commodity Data](#). Transformation was already evident in Zema’s change of name from ZE PowerGroup and, in July, the concurrent announcements of a growth equity investment from [FTV Capital](#) and the appointment of Andrea Remyn Stone as CEO. Dr. Zak El-Ramly, founder and former CEO, remains actively involved as chairman.

Stone was most recently CEO of the London Stock Exchange Group’s data and analytics division (formerly Refinitiv) and had prior roles with Bloomberg, S&P Global, Dealogic and ION. She was a 2022 TabbFORUM 40 honoree. She described the Morningstar deal as “a significant milestone in our evolution as we look to add complementary capabilities to meet the growing demand for increasingly complex data and analytics accelerated by the global energy transition. Morningstar Commodity Data will bring a new and dynamic customer base in financial services as well as expertise with real-time data to Zema, providing an opportunity for us to expand our offering and offer enhanced services to better serve an expanded client base.”

***Jeffrey Kutler** is contributing editor of Global Association of Risk Professionals’ GARP Risk Intelligence site. He served as editor-in-chief from 2008 through 2019. Before joining GARP, he had senior editorial roles at Institutional Investor, Securities Industry News and American Banker.*

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