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POST TRADE FX

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Exploring ongoing issues and challenges

PROVIDER PROFILE

e-FX innovation from RBC

BUILD & BUYING

Addressing market fragmentation with modern tech stacks

INSTITUTIONAL CRYPTO

Laying the groundwork progresses



COVER INTERVIEW

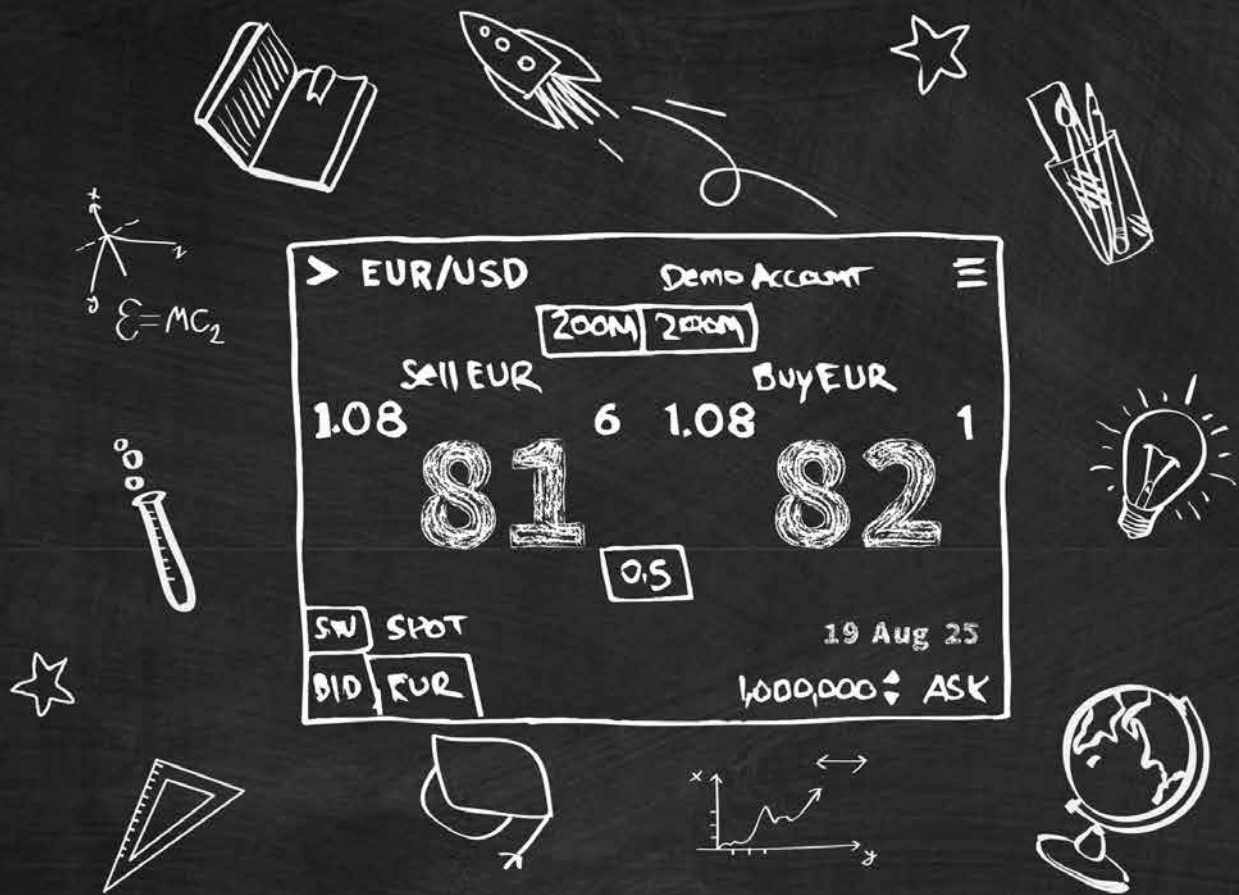
ANDREW RALICH

CEO of oneZERO

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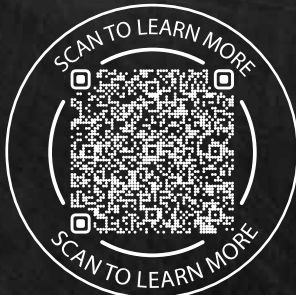
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September 2025

Post Trade FX is the focus of our special report this month. Despite continued attempts to streamline post trade processes and make them more efficient, post-trade FX workflows are still grappling with inefficiencies caused, amongst other things, by manual processes, lack of standardisation and regulatory complexities. Some of the other challenges include use of legacy technologies that cannot interoperate or integrate with newer systems, and the persistence of disconnected front, middle, and, back-office solutions. The move to T+1 settlement has also created additional issues impacting on post trade operations. However, there is reason to be optimistic that harnessing the power of emerging technologies like AI, and a stronger emphasis on data-driven decision-making may, at last, provide solutions to some of the intractable post trade problems the industry has been facing for many years.

In this edition we have also taken a close look at how the Digital Asset infrastructure arms race is accelerating. The infrastructure issues that have plagued institutional crypto adoption are finally being resolved and what started as a problem—dozens of disconnected venues with incompatible systems—is fast becoming a competitive advantage as unified solutions emerge that can navigate complexity while delivering institutional-grade reliability. Some believe that all assets will ultimately move onto digital rails, and the future of capital markets will be powered by this new infrastructure. We will wait to see about that but there is no doubt that the regulatory landscape with respect to Digital Assets seems to be shifting in way that meets institutional expectations with comprehensive frameworks like MiCA in the EU and VARA in Dubai acting as catalysts for change by setting clearer standards around custody, trading, reporting, and governance and in doing so, paving the way for broader institutional participation in the market.

Next month we turn our attention to FX execution analytics which is now moving from a retrospective toolset into a real-time, predictive, multi-dimensional framework, to explore the granular insights it can provide and the significant benefits it can deliver.

As usual I hope you enjoy reading this edition of the magazine.

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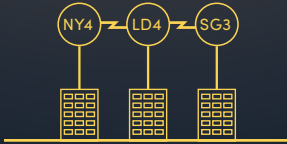


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FXSpotStream adds BNY as liquidity provider

FXSpotStream LLC has expanded its growing pool of liquidity providers by adding BNY to its no-cost-to-takers Service. BNY becomes the 19th liquidity provider on the Service, joining ANZ, Bank of America, Barclays, BNP Paribas, Citi, Commerzbank, Deutsche Bank, Goldman Sachs, HSBC, J.P.Morgan, Morgan Stanley, MUFG, NatWest, Standard Chartered, State Street, Societe Generale, UBS and Wells Fargo. This addition reflects FXSpotStream's ongoing commitment

to delivering a robust and diverse liquidity pool for its clients. FXSpotStream CEO, Jeff Ward stated: "The addition of BNY broadens the liquidity options available through our Service. In addition, as a leading participant in global FX markets, BNY's involvement reaffirms our commitment to enhancing market liquidity and providing our clients with greater depth and choice. As 2025 shapes up to be a record-breaking year for FXSpotStream, with volumes continuing to rise, we

remain steadfast in our commitment to delivering the best possible Service."



Jeff Ward

U.S. Bank joins CLSSettlement

CLS has announced that U.S. Bank National Association (U.S. Bank) has joined CLSSettlement as a settlement member and become the third settlement member to join this year, bringing the total number of settlement members to 76. CLSSettlement is recognized as the global standard in FX settlement risk mitigation across 18 of the most traded currencies, with an average daily settled value of USD7.9 trillion in the first half of 2025, an increase of 12% year-on-year.

Lisa Danino-Lewis, Chief Growth Officer, CLS said: "We are delighted



Lisa Danino-Lewis

that U.S. Bank has joined the growing CLSSettlement community. Having one of the US's largest banks by assets under management join our network is a testament to the benefits CLSSettlement provides to FX markets participants. The service not only offers funding and liquidity efficiencies through multilateral netting but also mitigates settlement risk through PvP settlement. CLSSettlement settles over USD7 trillion per day in 18 currencies for our 76 settlement members and over 38,000 third-party participants."

Partior, Fintium and Adhara collaborate

Partior and Fintium have announced the interoperability of their respective platforms, enabling banks to trade intraday FX swaps and orchestrate 24x7 Payment versus Payment (PvP) settlement for settlement-risk-free intraday liquidity management. Supported by Adhara DC Commander technology, the joint solution offers financial institutions a low-barrier, plug-and-play path and robust capability to access and operationalise the benefits of intraday FX swap market liquidity. Intraday trading requires precise

timing and careful management of FX settlement processes, including addressing Herstatt risk. "The demand for instant, 24/7 liquidity is driving a fundamental shift in banking. Our collaboration with Fintium and Adhara isn't just a proof of concept; it's a demonstration of how Partior's network enables banks to tap into new market opportunities, such as intraday FX swaps, with the security and finality they need. This is about giving banks the tools to stay agile, reduce risk, and thrive in an increasingly fast-paced

financial landscape." said Humphrey Valenbreder, Chief Executive Officer, Partior.



Humphrey Valenbreder

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Standard Chartered partners with Ant International

Standard Chartered and Ant International have announced a new collaboration to introduce an AI-Powered Treasury and FX Management Solution that integrates Ant International's Falcon Time-Series Transformer (TST) Model with Standard Chartered's Aggregated Liquidity Engine (SCALE). Expanding on a long-standing partnership in blockchain innovations, the collaboration aims to lower FX costs and enhance risk management for Ant International and its clients. This integration of the two platforms enables seamless data exchange that

leads to AI-Powered FX forecasting in real time and 24/7. "The expansion of our partnership with Standard Chartered marks an important step in our ongoing journey to leverage technology, including AI, for next-generation cross-border payment solutions. By integrating Standard Chartered's robust banking capabilities with Ant International's innovative solutions, we are able to enhance the way businesses manage their global liquidity and FX strategy, so they can experience more efficient cross-border transactions," said Kelvin

Li, General Manager of Platform Tech at Ant International.



Kelvin Li

oneZero launches Swap Curve Manager

oneZero has announced the launch of its Swap Curve Manager, an innovative solution designed to transform FX swap pricing for regional banks. Traditionally, banks have relied on external, third-party systems that limit trader control and have significant economic and technical barriers to entry. oneZero's Swap Curve Manager addresses these challenges by delivering a scalable, cost-efficient solution that returns control to traders. It supports multiple data sources enabling granular management of tiers, skews, and volume rungs.

Traders can respond faster to market shifts, spot anomalies, and capture



Andrew Ralich

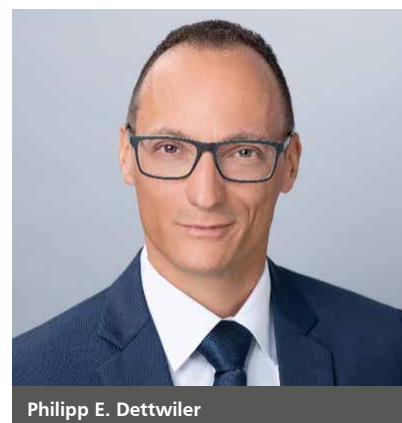
opportunities, while reducing reliance on spreadsheets and fragmented vendor tools. "We have listened to the needs of regional banks, who have long been at a disadvantage in FX swap pricing. With our new Swap Curve Manager, we are increasing transparency, lowering costs and putting advanced swap pricing tools directly into the hands of traders," commented oneZero CEO and Co-Founder Andrew Ralich. The new offering complements oneZero's established suite of FX pricing and trading capabilities.

Crypto Finance launches AnchorNote

Crypto Finance, part of Deutsche Börse Group, has announced the launch of Crypto Finance AnchorNote, a custody-native pledging solution to enable off-exchange settlement and yield enhancing services by acting as the collateral custodian. The solution deploys BridgePort as the middleware service provider for off-exchange settlement, connecting to multiple venues at once. Crypto Finance AnchorNote enables institutional clients to trade digital assets across multiple venues without moving

assets out of custody. Crypto Finance AnchorNote conveniently supports a speedy reallocation of collateral among different venues, accessible both via user-friendly UI for fast onboarding and a robust API for institutions with existing infrastructure. "With Crypto Finance AnchorNote, we are closing a critical gap between custody and capital efficiency," said Philipp E. Dettwiler, Head of Custody and Settlement at Crypto Finance. "Together with BridgePort, we are delivering an integrated solution that

allows institutional clients to operate securely, flexibly, and in real time."

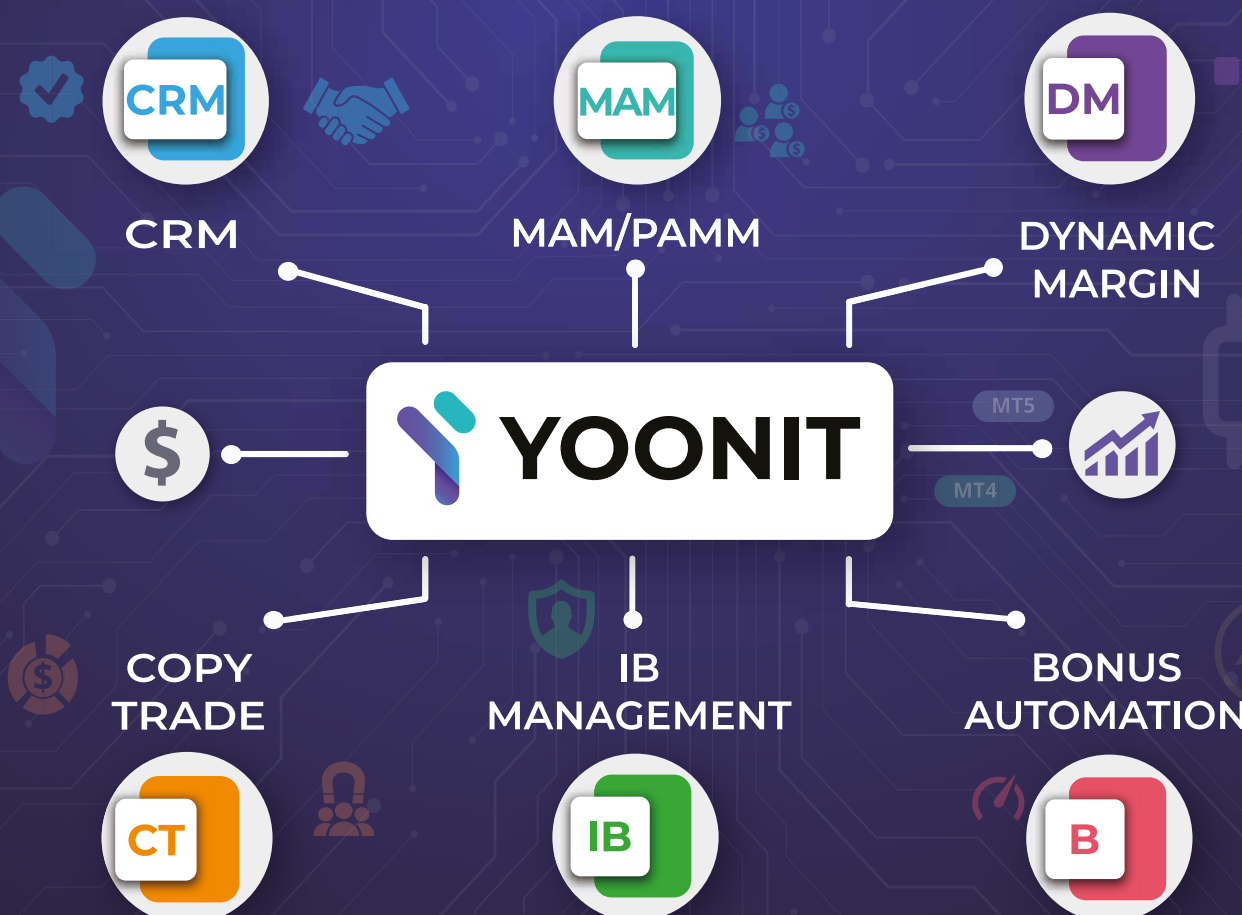


Philipp E. Dettwiler

ATTENTION ALL BROKERS

What are you doing to grow your business?

PLUGIT





Darryl Hooker was recently promoted to Head of Sales at DIGITEC. e-Forex spoke with him about why he joined the firm, the changing FX Swaps market, and how the market is expected to evolve in the future.

Darryl why did you join DIGITEC?

I joined five months ago as Head of Business Development and Partnerships. I have known DIGITEC and the people who work here for many years and have seen first-hand how their products are used by a large number of banks of all sizes.

It was a pretty easy decision for me to join DIGITEC because they are recognised as one of the leaders in FX Swaps and NDF technology and importantly are committed to innovation and market evolution. This role has allowed me to leverage my contacts and meet with banks and trading venues to capture new opportunities as FX Swaps trading workflows become increasingly automated.

How is the FX Swaps market evolving?

I started my FX career in short date sterling Swaps in London, where I

learned how to manually calculate daily points, which were often wrong! So it's great to see the automation and efficiencies that DIGITEC has created in this market.

For the following 40 years I worked in the Spot and NDF markets – so now I have come full circle. The Swaps market is following a similar automation path to Spot. It's probably 10 years behind NDFs and between 15 and 20 behind Spot - but catching up rapidly.

Driven by client demand, the availability of more data, and advances in technology FX Swaps continue to grow and the market is evolving to be more electronic. As banks focus on automation and control, they are looking to streamline their workflows - to reduce manual processes, improve accuracy, and ultimately deliver better pricing to their clients. Even to help them scale their FX business. The days of managing a Swaps desk

using Excel are long gone. Banks now demand sophisticated pricing engines, which can price along the forward curve in multiple currencies, and update automatically as market data updates. With more electronic trading there is enhanced access and transparency, but there is also increased market velocity driven by e-trading, automated workflows and the growth of matching platforms. In this market fast, accurate and robust pricing engines are essential.

More data than ever is available, and this trend will continue. But the data needs to be captured and modelled to enable improved pricing accuracy. For banks and traders to build and maintain their own curves, data like our Swaps Data Feed (SDF) allows them to improve pricing accuracy and extend currency coverage.

The Swaps market is also evolving at the interbank level, where electronic interbank platforms like 360T SUN,

EUR/USD MOD												
		Date	Days	B SwPts	A SwPts	Amount	B Rate	A Rate	Time	Min Spr	B Margin	A Marg
SP	SUSP	06. Sep	0	1.0794	1.0798	50.00	1.0794	1.0798	18:50:12			
1W	SUSP	13. Sep	7	3.41	3.56	50.00	1.07974	1.08016	16:32:34	0.00	0.00	0.00
2W	SUSP	20. Sep	14	6.94	7.03	50.00	1.08009	1.08050	19:32:24	0.00	0.00	0.00
3W	SUSP	27. Sep	21	10.20	10.60	50.00	1.08042	1.08086	17:17:57	0.00	0.00	0.00
1M	MAN	06. Oct	30	15.50	15.60	50.00	1.08095	1.08136	18:50:05		-0.03	0.00
2M	MAN	06. Nov	61	31.48	31.58	50.00	1.08255	1.08296	18:50:56		0.00	0.00
3M	MAN	06. Dec	91	47.30	47.40	50.00	1.08413	1.08454	18:33:42		0.00	0.00
6M	SUSP	06. Ma	182	101.07	106.07	50.00	1.08951	1.09041	18:43:45		0.00	0.00
9M	SUSP	06. Jun	274	145.87	158.37	50.00	1.09399	1.09564	18:43:45			
12M	SUSP	06. Sep	366	188.88	208.88	50.00	1.09829	1.10069	18:48:47			
18M	SUSP	06. Ma	547	265.50	300.50	50.00	1.10595	1.10985	18:48:47			
2Y	SUSP	08. Sep	733	330.17	375.17	50.00	1.11242	1.11732	18:48:47			
3Y	SUSP	08. Sep	1098	471.25	486.25	50.00	1.12653	1.12843	13:10:43			

D3 Sheets enables traders to streamline daily price management and automate workflows

LSEG FX Forwards Matching and 24X are live. As more volume migrates away from voice trading and onto these electronic platforms we expect to see better risk management, more efficiency and better pricing extend to the dealer to client (D2C) segment.

What have been your highlights since joining DIGITEC?

On the business development side we have continued to grow, increasing the number of clients by 13% over the last year. While we have gone live with banks of all sizes we have seen most growth in the regional bank segment, many of whom began by using our D3 Lite service before upgrading to the full D3 pricing platform.

On partnerships we have made significant progress with D3 OMS, our workflow automation platform. D3 OMS enables traders managing FX Swaps risk to connect directly to interdealer FX Swaps venues and efficiently place and manage orders on 360T SUN, LSEG FX Forwards Matching, and 24X. We expect more volume to migrate to these interbank

electronic channels, as we add new venues and onboard additional clients to our platform.

In response to client demand we have launched a new service called D3 Channels, which is live with our first client. Designed for banks where traders and eFX businesses distribute prices to clients, D3 channels allows them to establish easily maintainable, rule- and scenario-based logic that automates pricing decisions based on tier, volume band, and destination. This ensures that the system determines the exact price to be sent in response to downstream requests, alleviating pressure on traders during potentially high-stress market situations.

How do you expect the market to evolve in the future?

As the market grows we are seeing an increasing global demand for FX Swaps and NDF trading technology solutions. Technology is evolving rapidly meaning that complex workflows can be automated – what previously had to be managed by a person can be automated with the right technology and coding expertise.

The next stage of market evolution is the growth of liquidity further out along the curve. The development of algo trading is dependent upon how fast the market evolves and as liquidity is built further out than Overnight or Tom/Next. There may be a few liquidity seeking algos that will work for FX Swaps, but their impact will be low with the current limited liquidity.

Pricing models will continue to evolve as they capture data from an increasing number of related markets. Instruments like the one-month and three-month USD SOFR Futures need to form the backbone of FX swaps pricing, supplemented with market data from other assets, creating the need for a pricing model that is able to combine multiple assets into a cohesive model. For example, banks are now using our D3 pricing service to build their curves using data sources including FX Swaps and Forwards, FX Spot, STIR Futures, OIS, IRS and Cross-Currency Basis Swaps. As new data sources from different markets become available the more technologically advanced firms will subscribe to this data to give them an information and speed advantage in FX trading.



Nicholas Pratt

Reducing the operational burden: Work continues to streamline post trade FX

Nicholas Pratt

"While FX trading and notional volume continues to increase, post trade operations and processes have not changed significantly over the last few years."



Amrinder Gill

unstandardised, lacking visibility and real-time delivery.

The end result of these two trends is that the operational burden on FX firms has continued to increase, especially in the post trade world where processes are dependent on some kind of efficiency. Efforts have been underway for some time to improve post trade processing through various means.

For example, the adoption of digital technology and the use of automation could have a profound effect on operational efficiency: greater attention to risk management could improve processes further. And shortening the settlement cycle of T+1 may also bring more urgency to the post trade world which continues to develop at a slower pace than the rest of the market.

"While FX trading and notional volume continues to increase, post trade operations and processes have not changed significantly over the last few years," says Amrinder Gill, head of

post trade services, FX, London Stock Exchange Group (LSEG). "With this in mind, efficiency - including the cost of trade, processing, matching and then margin and risk of settlement, becomes more important for all market participants."

Consequently, service providers such as LSEG have looked to develop services that will help streamline post trade processes, from trade allocations and ease of give ups to multiple STP solutions to clearing and settlement via its Settlement Center service.

A lack of industry standards has not helped and efforts are underway to encourage more industry collaboration. "FX settlement remains an area where continued advancement towards standardisation and risk reduction, achieving real time settlement and payment-vs-payment (PvP) for cross border payments, is essential for the post trade ecosystem," says Gill.

"[Banking cooperative and financial messaging body] Swift's continued work on the ISO20022 standards focused on FX settlement is a key step in the right direction, with more data and transparency in the payment messages to help reduce settlement risk," says Gill. "Settlement Center continues to work with Swift and industry partners to ensure alignment with evolving standards. However, while this goes some way to help, and CLS settlement cycles for eligible currencies contribute meaningfully to minimise risk, the industry needs a more holistic move to PvP and real time settlement for all FX settlements."

Swift continues to update standards to comply with ISO 20022, moving to a more standard message format for their electronic messages, which FX post trade across the industry hugely depends on, says Gill.



Ongoing macroeconomic and geopolitical uncertainty has not helped in the effort to create a more efficient post trade FX market

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LSEG FX

"The FX trading environment has grown increasingly complex and this is largely driven by heightened regulatory and industry initiatives..."



Melissa Stevenson

"The changes are expected to bring more meaningful enrichment, compliance and harmonisation to ease cross border settlement. Additionally, the International Securities and Derivatives Association is updating their FX 1998 terms, which will help further standardise options and other FX derivatives, bringing more tradables into automated electronic trading and post trade processing," says Gill.

COMPLEX ENVIRONMENT

Efforts to make the post trade process more efficient have been hampered by the inefficiency of the

FX market structure, according to some. "The FX trading environment has grown increasingly complex and this is largely driven by heightened regulatory and industry initiatives such as MiFID II/EMIR in the EU/ Dodd Frank in the US which puts focus on investor protection, market transparency, and financial stability, says Melissa Stevenson, Head of FX product management at ION.

"At the same time, disparate and fragmented front, middle and back-office solutions continue to create challenges. These issues result in low straight-through processing (STP), a lack of real-time analytics, and reliance on manual processes. These factors all undermine efforts to improve post trade efficiency."

Client onboarding remains one of the critical pain points in post trade FX operations, says Stevenson, citing complex regulations, a reliance on manual and fragmented processes, and lack of data standards.

Some of the other challenges would

be caused by the use of legacy technologies that cannot interoperate or integrate with newer systems, and the persistence of disconnected front, middle, and, back-office solutions, says Stevenson.

"These issues directly lead to low STP, limited real-time data analytics, heavy overhead, and a reliance on manual processes, which in turn create delays, errors, increased costs and overall, reduce efficiency."

The FX market also suffers from a lack of standardisation which has hampered efforts to improve post trade efficiency. "The FX market is global, fragmented and bilateral by nature," says Stevenson. "It also lacks a unified regulatory framework and doesn't have a central exchange, all of which makes achieving standardisation difficult. This lack of standardisation, in turn, continues to impact several specific areas of FX post trade. This ranges from client onboarding, bilateral netting and payment-versus-payment (PvP) arrangements to settlement."

Stevenson cites providers such as CLSNet that are beginning to address some of these challenges by bringing standardisation and to the netting process for buy-side and sell-side participants. "At the same time, the adoption of ISO 20022 across more than 70 countries is bringing greater standardisation to the payments landscape," says Stevenson.

"This is improving STP and reducing manual intervention, which in turn reduces delays in customer settlements. Standard and enriched data also allow for improved data collection, leading to better analytics and insights."

Risk management in FX post trade processing is being improved through a number of strategies, says Stevenson. "As part of the FX Global Code changes,



Collaborative industry efforts and new post trade FX-focused products would help to smooth the path to more automation

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Reducing the operational burden: Work continues to streamline post trade FX

THE LACK OF STANDARDISATION IN POST TRADE FX OPERATIONS HAS EXACERBATED THE CHALLENGES



specifically the amended Principle 35, market participants are expected to adapt their FX environment in eliminating settlement risk through payment-versus-payment (PvP) mechanisms, reducing exposure through automated netting of FX settlement obligations using services like CLSNet and minimising gross bilateral settlement wherever possible through CLSNet or other third-party automated netting solutions providing automated netting capabilities," says Stevenson. "Internal risk controls are also being implemented, with a shift from manual to automated processes helping minimise risks related to settlement."

The move to T+1 settlement has also created new challenges in post trade FX activities, particularly the increased risk of greater settlement failures due to shorter timeframes for pre-settlement tasks such as confirmations, affirmations, and allocations, says Stevenson.

"To tackle these challenges, firms are investing in technology to automate end-to-end back-office processes. This includes exploring the use of AI to automate complex tasks such as

trade matching, lifecycle oversight, and real-time data analysis. Examples include continuous matching, predictive modelling for resource allocation, and predictive risk profiling to reduce settlement failures, such as validating SSI details," says Stevenson.

"Greater efficiency in processing can also support both current and future regulatory requirements, including accelerated settlement cycles like T+1 and even T+0. Finally, adopting PvP mechanisms and netting agreements helps mitigate associated risks."

Increased collaboration between buy-side and sell-side companies, fintechs, technology providers, and regulators is also driving standardisation and data normalisation across post trade workflows, says Stevenson. "For instance, collaborations led by bodies such as the GFXC, FXPA and FIX trading community aim to standardise best practices through the FX Global Code. This enhances the efficiency of external interoperability and internal processes, enabling businesses to deliver better customer services while also achieving more efficient and cost-effective internal processes."

The arrival and convergence of new technologies like DLT, AI and machine learning are likely to drive greater automation, transparency, efficiency and security in post trade FX operations. "AI and DLT in post trade processes can reduce the number of exceptions, minimise operational risk, and support compliance with evolving regulations," says Stevenson.

"DLT can provide a single transparent source for settlement, eliminating the need for reconciliation between different parties, which reduces both errors and settlement times. Use cases already emerging include real-time confirmation matching based on intelligent, flexible, and predictive rules, as well as analytics and predictive modelling to improve insights for resource allocation and reduced settlement failures."

Looking ahead, the post trade FX landscape is expected to evolve further in several areas, says Stevenson. "The increased adoption of AI in post trade middle and back-office workflows will help streamline compliance checks, accelerate reconciliation, and optimise settlement workflows. A stronger emphasis on data-driven decision-making is also likely to emerge, as firms focus on enhancing transparency, consolidating data, and generating better insights into client behaviours. And finally, the expansion of digital currencies, including central bank digital currencies (CBDCs) and stablecoins, will facilitate near real-time settlement," says Stevenson. "As more countries and banks issue their own digital currencies, demonstrated by the EU accelerating plans for a digital Euro, the structure of the global payment ecosystem will be fundamentally reshaped."

ELEVATED VOLATILITY

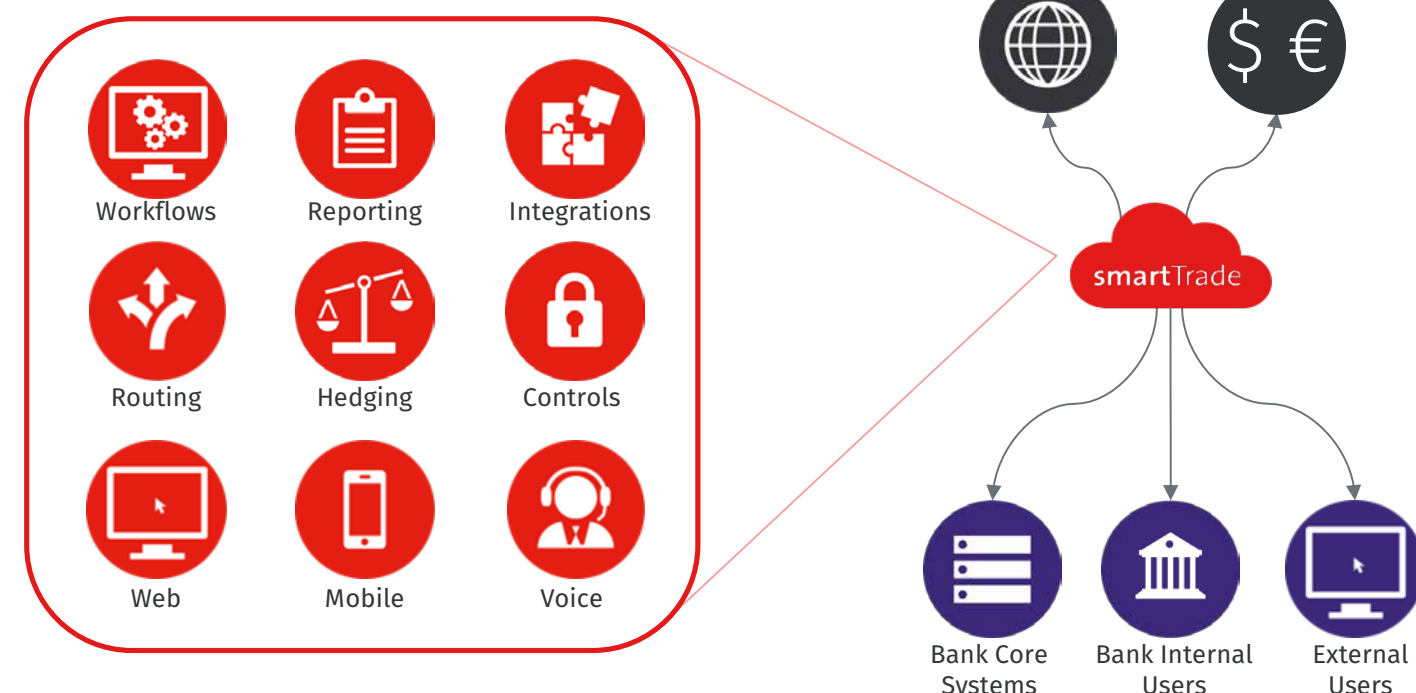
Ongoing macroeconomic and geopolitical uncertainty has not

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"API-Driven Connectivity will become the standard, creating seamless data exchange between all trading, risk, and back-office systems."



Haim Levy

helped in the effort to create a more efficient post trade FX market. But the complexity has made automation a necessity.

"Since the implementation of tariffs in April, FX volatility has remained elevated. Firms are more active in managing FX risks through hedging," says Haim Levy, director, product strategy at OSTTRA, the post trade services group and joint venture between CME Group and S&P.

"This can add trades, counterparties and currencies to a portfolio and requires firms to better optimise and reconcile their positions. Automating processes such as portfolio reconciliation and compression and collateral management is the only way firms can mitigate these risks at scale without unduly burdening the middle and back-office teams," says Levy.

When it comes to the most critical pain points in post trade FX operations, settlement risk remains one of the main issues the market is trying to solve, says Basu Choudhury, head of partnerships and strategic initiatives at OSTTRA.

"New technologies like DLT and tokenised funds are expanding the time and scope of FX transactions that can benefit from PvP protection and netting efficiencies, enabling firms to better manage capital and settle funds 24 hours a day," says Choudhury.

"While new technologies like DLT and POvP are available and the front office is constantly innovating with faster trading methods, this rising high-velocity volume is often forced onto legacy post trade systems that weren't designed for them. This disconnect inevitably pushes complexity, exceptions, and risk downstream." The second pain point facing the market is fragmented risk management, says Choudhury. "With the explosion of trading venues, getting a single, real-time view of



Basu Choudhury

"New technologies like DLT and tokenised funds are expanding the time and scope of FX transactions that can benefit from PvP protection and netting efficiencies."

credit and risk exposure is a huge challenge. Many firms still operate with siloed systems, meaning they can't see their consolidated risk, which leaves them vulnerable to unexpected events."

And third, there's persistent regulatory uncertainty. "The rules are always evolving, and a lack of clarity often forces firms into reactive, costly builds for new workflows. Post trade operations are on the frontline of absorbing this constant churn and complexity," says Choudhury.

So what is being done to improve risk management in FX post trade processing? The first step, says Levy, is to build a digital foundation. "This starts with the crucial, if unsexy, step of turning static legal agreements into structured data. It eliminates operational risk at the source and creates a single source of truth. Second, you leverage that foundation for real-time visibility. This means getting that live, consolidated view of credit exposure across all venues. This visibility is critical not just for monitoring risk, but for actively managing it. Another key tool we're seeing used here is compression," says Levy.

Once firms have that full, accurate picture of their exposures, they can net down trades to significantly reduce operational and credit risk, while also improving margin efficiency, says Levy. "In fact, the benefits of compression are a major incentive driving firms to consolidate their data in the first place."

The final step is to use that visibility for dynamic control of the various risks. "This is the powerful part," says Levy. "You can move from static limits to automated credit optimisation to use capital more efficiently. And for extreme volatility, you have vital

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Harnessing the power of emerging technology will also be critical to the task of making the post trade market more efficient

‘circuit breakers’—like a kill switch—to instantly mitigate catastrophic risk.”

Collaborative industry efforts and new post trade FX-focused products would help to smooth the path to more automation. “Our strategy is to build open, interoperable networks and data standards to smooth the path towards frictionless straight-through processing and optimised accuracy, in FX and other asset classes,” says Choudhury.

He cites OSTRA’s partnership with UK payments platform Finality as a prime example of this commitment in action. “[Finality’s] regulated wholesale payment systems allow banks to use digital representations of central bank money for instant, atomic settlements. By integrating Finality’s system with our on-demand FX PvP settlement orchestration service, we are creating a network that moves FX settlement from rigid submission windows into an era of interoperable real-time on demand interaction. And by connecting our FX settlement services with [Singapore-based blockchain fintech] Partior’s unified multi-currency network, we are actively building bridges between fiat and tokenised commercial bank money to give clients true interoperability and choice.”

Further progress could be made by leveraging the rapidly developing digital technologies such as DLT, machine learning and AI, says Choudhury. “DLT is helping market infrastructure move away from slow, once-daily settlement processes. And by integrating with regulated wholesale payment systems, it enables instant, atomic settlements, creating a far more efficient, cheaper, and faster way of operating.”

Additionally, AI and Machine Learning can analyse and predict credit risk with greater accuracy, allowing for dynamic credit management and limit rebalancing. “This proactive approach helps to manage operational, credit, and liquidity risks more effectively,” says Choudhury.

As for how the post trade FX landscape may develop in the future, Choudhury sees tokenisation as a key trend visible in not only FX but also in the wider market. Tokenisation, in which financial instruments are represented as digital tokens on a blockchain, has emerged as a way to introduce a more efficient, transparent and accessible securities market.

Some early use cases have involved stablecoins (privately run alternatives to fiat currencies), central bank digital

currencies (publicly run and regulated) and tokenised shares. But we have also seen more recent use cases involving FX.

In July, UK high street bank Lloyds and investment manager Aberdeen Investment announced a UK-first involving tokenised securities used as collateral in an FX trade. More specifically, the transaction involved tokenised units of Aberdeen Investment’s money market fund and tokenised UK gilts were issued, transferred, and securely held by FCA-regulated digital asset exchange Archax on the Hedera Hashgraph public permissioned blockchain.

The potential benefits from such use cases could be significant from a post trade perspective, including real-time settlement and much better mobility of assets.

“Tokenised assets are providing greater flexibility for firms in how they post collateral and manage their FX risks. The rise of stablecoins and tokenised commercial bank assets has the potential to improve liquidity in niche currency pairs by giving firms flexibility in how they fund those trades,” says Choudhury.

Another development is the growing adoption of application programming interfaces (APIs). “API-Driven Connectivity will become the standard, creating seamless data exchange between all trading, risk, and back-office systems. This will slash operational risk from manual data handling,” says Levy.

In addition, real-time AI Insight will make batch processing a thing of the past, says Levy. “The future is real-time telemetry on risk exposure, powered by AI that analyses massive datasets instantly. This enables firms to move from reactive problem-solving to

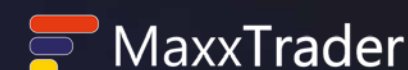
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"Achieving better operational resilience in post trade FX operations requires advanced technology, strong data governance, increased automation, and robust risk management."



John Marchese

proactive risk management," says Levy. "Proactive automated control will be based on AI instantly detecting and correcting processing breaks and performing dynamic credit optimisation, intelligently rebalancing limits across venues to maximise capital efficiency without increasing risk."

COORDINATED EFFORT

Despite some recent technological advancements, the post trade FX workflow still grapples with inefficiencies such as manual processes, lack of standardisation and regulatory complexities, says John Marchese, head of FX sales and partnerships at FactSet's FX trading platform, Portware. "Overcoming these issues requires coordinated efforts among market participants, industry groups, and technology providers, focusing on incremental improvements, identification of best practices, and standardisation initiatives," says Marchese.

He cites the various partnerships and initiatives to which FactSet has signed up. These include the alliance between Portware (FactSet's enterprise trading tool) and OSTTRA to build an

automated toolkit for trade clearing and settlement. "This allows our clients to have improved flexibility in how they trade, as well as full no touch automation when it comes to settlement," says Marchese.

Such partnerships are much needed given the extent of the work required to make the post trade FX landscape more efficient.

The lack of standardisation in post trade FX operations has exacerbated the challenge because it has led to increased operational complexity, higher costs, greater risk of errors and more compliance challenges, says Marchese. "This hampers communication with your counterparts, and raises operational risks. However, efforts to standardise are underway through work being done by industry groups such as the GFXC, FXPA, and FIX Trading Community."

These industry collaborations aim to standardise best practices with the FX Global Code, improved execution transparency via standardised FIX rejection codes, and have developed common data standards.

Meanwhile, legacy systems and workflows in post trade FX operations were often very manual and clunky, and left tremendous room for operational trade booking errors, and settlement risk, says Marchese. "These systems often struggle with scalability and performance, and present compliance and security risks due to outdated protocols."

Improving risk management in FX post trade processing is crucial to improving

the trade lifecycle for all market participants involved, says Marchese. "Automating prime broker give-ups and clearing messaging for the real-money and hedge fund communities are crucial to reducing risk and expanding their access to new pools of liquidity in the market. This empowers the buy-side trader to choose the best liquidity channel, without any concerns regarding subsequent settlement implications."

The need for more operational resilience will also be critical in what is an increasingly digital environment be achieved in post trade FX. "Achieving better operational resilience in post trade FX operations requires advanced technology, strong data governance, increased automation, and robust risk management. Embracing automated trade clearing, or leveraging a solution like CLS is a step in the right direction to improve things operationally."

Harnessing the power of emerging technology will also be critical to the task of making the post trade market more efficient, says Marchese.

"The transformation of post trade FX operations will be driven by forward thinking and innovative technology firms that will leverage AI, Machine Learning, and blockchain. While early adopters may implement these technologies in the near term, broader industry-wide adoption in years ahead will depend on appetite from all involved," he says.

As post trade FX operations adopt advanced technologies, firms must focus on effective vendor management, and invest in adaptable systems to ensure scalability and flexibility, says Marchese. "These strategic considerations, combined with industry collaboration and adaptive solutions, drive greater efficiency and risk mitigation in the evolving digital landscape."

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Laying the groundwork for institutional crypto with 3DX

By Sebastian Hofmann-Werther, Chief Revenue Officer FX & Digital, 360T Group



Sebastian Hofmann-Werther

As we enter the final quarter of the year, it seems clear how pivotal 2025 has been for the cryptocurrency sector, thanks to strong tailwinds supporting renewed optimism and growth.

Much of this momentum originates from political and regulatory shifts in the United States, where the new administration is perceived as bullish on digital assets and policymakers are gradually moving toward clearer frameworks. While many proposals are still awaiting formal approval or implementation, market sentiment appears positive. Trading volumes are on the rise, performance across leading cryptocurrencies has strengthened, and industry participants are once again signaling confidence in the sector's long-term growth trajectory.

THE STATE OF THE MARKET GLOBALLY

Other jurisdictions, particularly the EEA, seem to be accelerating regulatory and infrastructure initiatives

in an effort to remain competitive and to attract new participants. In my opinion, this means that European regulators see the opportunity to align with the Markets in Crypto-Assets Regulation (MiCAR) framework and to position the continent as a trusted hub for digital asset innovation. Asia is looking to ride the momentum too, with several financial centers exploring how digital currencies and tokenized securities can be embedded into existing capital markets. The global race now comes down to credibility and readiness.

Even with all of this wind in its sails, crypto activity worldwide still appears uneven across different market segments. Retail adoption continues to dominate headlines, driven by speculative trading, yield opportunities in Decentralized Finance (DeFi), inflation hedging, and pressures in local currencies across emerging markets.

Institutional involvement, meanwhile, has so far been concentrated in quasi-regulated offshore hubs. Activity has centered on short-term approaches, such as arbitrage and retail liquidity provision, rather than on long-term capital deployment. This dynamic has created, I think, a somewhat closed-loop ecosystem, with capital circulating among a limited set of players rather than a wider group of market participants.

For the crypto market, I believe the next stage of maturity lies in unlocking broader participation from large

institutional investors and corporate actors. This type of evolution would introduce significant new pools of capital. Early steps are already visible: public pension funds, sovereign wealth funds, and private asset managers are beginning to explore exposure through ETFs and crypto-related companies, while corporates have evaluated cases from tokenized loyalty programs to digital assets on balance sheets. Banks, too, are gradually responding to emerging demand, with some institutions already offering tailored solutions to meet growing client interest.

Against this backdrop, the crypto market looks to be moving towards a pivotal moment. One where the right infrastructure and assurances can accelerate institutional engagement and set the stage for sustained growth.

3DX WELL POSITIONED FOR INSTITUTIONAL DEMAND

The evolving macroeconomic and regulatory landscape is potentially laying the groundwork for a new phase of institutional participation in the crypto sector. Asset allocators are likely to begin with small, experimental allocations, evaluating the waters while risk frameworks are refined. Corporate treasuries, under growing internal pressure, may need to consider cases such as stablecoin payments for cross-border efficiency. Retail banks, already under pressure from digitally savvy customers, are also expected to accelerate the rollout of crypto services to avoid losing market share.

This environment calls for platforms that could conveniently bridge the gap between traditional finance and the crypto ecosystem, platforms that offer not just access, but credibility, security, and operational simplicity. 3DX is positioned to serve exactly this role, bringing together regulated infrastructure, familiar trading workflows, and the scale of an established Financial Market Infrastructure to address institutional needs.

- **Regulatory clarity:** 3DX is fully MiCAR-regulated, removing ambiguity and giving clients the confidence of a compliant framework.
- **Trusted infrastructure:** Built on 360T's proven trading infrastructure, 3DX mirrors FX-style workflows that traders already understand, while its ownership by Deutsche Börse Group provides additional credibility.
- **Seamless integration:** Institutions can leverage existing connectivity, infrastructure, and contractual relationships with 360T to access crypto trading without building from scratch.
- **Transparent pricing:** Liquidity providers benefit from a level playing field, thanks to 3DX's transparent and rules-based pricing model.
- **Robust post-trade services:** Clearstream and CryptoFinance (both part of Deutsche Börse Group) enable clients to use Delivery versus Payment settlement and secure custody, reducing counterparty risk, eliminating prefunding requirements, and offering flexible custody options.

For institutions weighing crypto adoption, working with 3DX would



3DX is fully MiCAR-regulated

significantly reduce complexity and risk by using established infrastructure. It would allow them to accelerate entry into the crypto market while maintaining full confidence in the integrity, transparency, and compliance of their trading activities.

INSTITUTIONAL PATHWAYS AND OPPORTUNITIES

I don't think institutional adoption of crypto will happen overnight. It will unfold in phases, with different actors pursuing different priorities.

For buy-side firms like asset managers and hedge funds, the next stage of crypto growth will probably come from translating strong market momentum into long-term adoption through clearer regulation. This clarity may provide the certainty institutions require to scale activity with confidence. At the same time, greater participation from banks could be vital in reinforcing trust, ensuring robust execution quality, and enabling buy-side firms to pursue more complex strategies within a secure and efficient framework.

For corporates, growth could be driven by the emergence of new treasury

use cases, particularly in payments and allocations to digital assets such as crypto. To make this scalable, bank involvement would be essential in providing liquidity, custody, and settlement infrastructure. And on the banking side, participation may be accelerated by client pressure to deliver innovative solutions and by lower capital requirements, which could support faster, more cost-effective responses to evolving market needs.

As these pathways develop, it seems to me that the common thread is the need for infrastructure that bridges traditional finance with the digital asset ecosystem. The platforms that succeed will not simply offer trading access; they will deliver trusted market structure, regulatory alignment, and smooth integration into existing financial workflows.

If 2024 was about waiting for clarity, 2025 is about acting on it. The institutions that move early will shape the market's next chapter, and the platforms that support them could define the standards for trust, transparency, and growth in digital assets.

Realising synergies in trading technology and delivering value:

Discussing oneZero's acquisition of Autochartist and its vision for the future



Andrew Ralich

oneZero is a trailblazer in multi-asset trading technology, offering liquidity-neutral solutions that enable brokers, prime brokerages, and banks to thrive in global markets. Following the firm's strategic acquisition of Autochartist, e-Forex sat down with Andrew Ralich, CEO and Co-Founder of oneZero, to discuss how this move reflects the broader convergence of analytics, automation and infrastructure in trading technology, what it means for their clients, and where the company is headed next.

Andrew, congratulations on oneZero's first acquisition. What drove the decision to bring Autochartist into the business?

We've admired Autochartist for a long time - not just for their strong analytics capabilities, but for their focus on content personalization and customer engagement. The acquisition aligned perfectly with our mission to deliver innovative, high-performance solutions that serve the full trade lifecycle. Autochartist's offering complements oneZero's core infrastructure, and together, we're building a more intelligent, and personalized, end-to-end experience for our clients - from pricing and liquidity all the way to customer engagement and retention.

As our industry matures, the need for integrated, value-driven technology stacks becomes increasingly clear, as firms must move beyond fragmented point solutions to deliver efficiency, scalability and measurable impact.

We were delighted to launch oneZero's new Market Analytics Platform that combines over 15 years of Autochartist's market analytics expertise with oneZero's robust infrastructure and 24/7 customer services. Autochartist's founder Ilan Azbel now oversees oneZero's Engagement product line, and along with the scaled team of experts he built over the years, can now leverage scaled aspects of oneZero's infrastructure to continue to innovate

on a line of products - aimed at encouraging engagement for capital markets' participants.

How did your partnership with Golden Gate Capital help make this deal possible?

Our partnership with Golden Gate Capital has been instrumental in enabling us to pursue strategic, growth-focused opportunities like the Autochartist acquisition. Their backing gave us both the financial flexibility and strategic support to move decisively when the opportunity aligned. Golden Gate has a long history of investing in technology leaders and helping them scale thoughtfully - and that's exactly what they're helping us do.

We now have two financial partners supporting oneZero's journey - Golden Gate Capital and Lovell Minnick Partners - giving us a



Recognition like being named a global Best Place to Work for the fourth consecutive year running makes us really proud

strong foundation for both organic innovation and strategic M&A. Having this level of backing allows us to think long-term, and invest in initiatives that unlock value for our clients.

With consolidation increasing in trading technology, should we expect more acquisitions from oneZero in the future?



Making the Inc. 5000 list four years in a row shows that we've been able to scale responsibly

Discussing oneZero’s acquisition of Autochartist and its vision for the future



oneZero’s new Market Analytics Platform combines over 15 years of Autochartist’s market analytics expertise with oneZero’s robust infrastructure and 24/7 customer services

Yes, what we’re doing with Autochartist reflects oneZero’s broader vision: bringing together best-in-class capabilities that, when unified, create exponential value for our clients. Integrating companies helps drive investment and growth in both companies - in this case, we are investing into the Autochartist / Market Analytics Platform while leveraging oneZero’s infrastructure

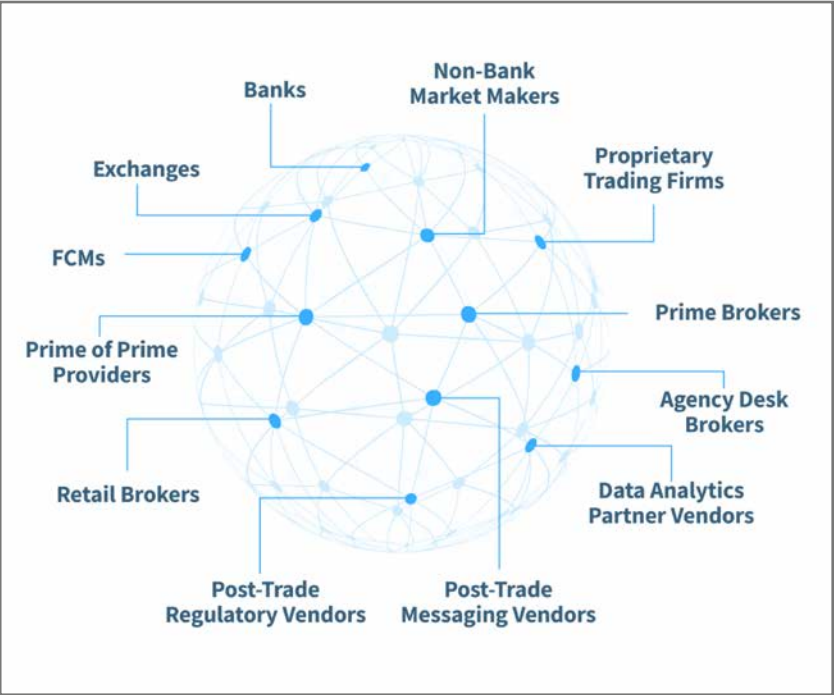
and scale to enable growth. We see real opportunity in continuing to identify firms with complementary technologies and shared values. This includes both building solutions that benefit our clients, and also a team culture that encourages innovation. So yes, we’re open to future acquisitions where the synergy is clear, and the benefit to the client is mutual and measurable.

Turning to innovation, what are some of the key product developments you’ve delivered in 2025, while also integrating the new Engagement line?

It’s been a very productive year. Under Bill Neuman’s leadership as Chief Product Officer, we’ve accelerated our roadmap and improved delivery speed, stability, and security of our core product lines.

One major highlight in product development this year has been our Swap Curve Manager, an innovative solution designed to transform FX swap pricing for regional banks. Traditionally, banks have relied on external, third-party systems that limited trader control and slowed responsiveness. oneZero’s Swap Curve Manager addresses these challenges by delivering a scalable, cost-efficient solution that returns control to traders.

On the analytics side, last December we released our Year in Review Dashboard that helps clients benchmark their performance across the oneZero EcoSystem, while tools



oneZero’s EcoSystem provides interfaces and connectivity via secure, ultra low latency network to a myriad of key partners

like Liquidity Provider Insights and P&L Insights offer deeper visibility into profitability and trading outcomes. Clients are using these to refine strategies and boost margins - some reporting up to 25% gains in profitability through smarter routing and behavioral analytics.

We also introduced Dealer Intervention Workflows to improve operational efficiency for high-touch trade handling, reducing manual overhead and increasing sales desk responsiveness.

And of course, our acquisition of Autochartist advanced our macro-analytics offering, and I’m excited to work with Ilan to unveil more of what we have planned for solutions that enable engagement in the future.

With the combined efforts on innovating and integrating new products, how did the platform hold up during the volatility in March and April, which tested many infrastructure providers?

That period was a real stress test, and I’m proud to say we exceeded expectations. Our platform handled record volumes with over 99.99% uptime. Clients had uninterrupted access to pricing and analytics, allowing them to adapt strategies in real time. It reinforced our role as a mission-critical partner to our clients.

You’ve also made some senior appointments recently, including Adam Collins as Head of Institutional Sales - Americas and EMEA. How do these moves tie into your growth strategy following the Autochartist acquisition?



The Autochartist team have immediately become part of our own tightly knit community

Discussing oneZero’s acquisition of Autochartist and its vision for the future



Adam Collins

Bringing in leaders like Adam Collins is very much part of our broader M&A strategy. When you integrate a business, you’re not just aligning technology - you’re aligning client relationships, sales structures, and go-to-market strategies. Adam’s deep experience in institutional sales will

help us ensure that our expanded product set reaches the right clients in the right way.

We’ve also added Ann Neidenbach to our Board and promoted Lynnette Yeo to SVP of Global Relationship Management. These appointments

reflect our focus on building a leadership framework that can both absorb acquisitions effectively and scale globally, strengthening our ability to deliver on the promise of consolidation: creating a platform that is greater than the sum of its parts.

oneZero has picked up several company awards this year. How do accolades like these influence your culture and drive for innovation?

Recognition like being named a global Best Place to Work for the fourth consecutive year running makes us really proud. Importantly, it also validates our ability to integrate new teams and preserve a strong culture during times of change. Awards highlight not just innovation, but also our ability to grow through M&A without losing our cultural DNA. The Autochartist team, for example, immediately became part of our tightly knit team - as we saw when our new colleagues from South Africa were able to connect with the global team at Camp oneZero in New Hampshire in May.

On a lighter note, I hear the team enjoys golf. Can you tell us about your partnership with brand ambassador Alexa Pano?

Many of us are keen golfers, and we’re proud to support rising LPGA star Alexa Pano. Partnerships like this are about building community and engagement, which is the same philosophy we’ve applied post-acquisition. Bringing Autochartist into oneZero wasn’t just about adding technology, it was about strengthening how we connect with clients, and how they connect with their customers. Engagement and relationships are the common thread - whether it’s through sport, culture, or technology.



Many of us are keen golfers, and we’re proud to support rising LPGA star Alexa Pano

We look forward to having Alexa join us at many more events in the future, and the team cheering her on when she competes, like we did when she played in her home state and oneZero HQ at TPC Boston last month.

Beyond that, oneZero has also appeared on the Inc. 5000 list of the fastest growing private companies in America again. What does that recognition mean to you and your team?

It’s a real point of pride. Sustained growth is a reflection of both our internal innovation and our ability to identify and integrate complementary businesses. Making the Inc. 5000 list four years in a row shows that we’ve been able to scale responsibly.

You’ve been expanding globally with new offices in several regions. How is this shaping the experience for your clients?

In 2025, we’ve made strategic investments in expanding our global footprint to better serve clients across key markets. By being closer to our

clients, we improve responsiveness, deepen relationships, and accelerate innovation - ensuring oneZero remains

a truly global technology partner that can adapt quickly to evolving market demands.



We see real opportunity in continuing to identify firms with complementary technologies and shared values



UNDER ILAN AZBEL'S GUIDANCE AS CEO, AUTOCHARTIST GREW FROM BEING A SUPPLIER OF TECHNICAL ANALYSIS, TO A COMPANY PROVIDING A BROAD SPECTRUM OF AUTOMATED ANALYTICS AND CONTENT BASED ON TECHNICAL, MACRO-ECONOMIC AND FUNDAMENTAL INFORMATION

We recently opened new offices in Limassol, Cyprus, and Sydney, Australia, in addition to the new oneZero office in Johannesburg, South Africa, that houses a lot of the team from Autochartist. It's fantastic to have a presence in South Africa and to be expanding the team there as we invest further in this new product area.

Finally, what can we expect to see from oneZero and the markets as we approach the end of 2025?

Firstly, we should see more value creation on the back of realizing synergies with Autochartist. I look forward to working closely with Ilan Azbel and the Autochartist team to make that happen, and to showcase

those solutions and others at the numerous conferences we'll be attending globally over the next few months. At the same time, as the markets brace for increased volatility - along with expected increased volatility in the crypto trading market - the need for a robust, reliable and high-performance platform and back-end is clear, and oneZero continues to be up to the challenge!



Awards highlight not just innovation, but also our ability to grow through M&A without losing our cultural DNA



"I LOOK FORWARD TO WORKING CLOSELY WITH ILAN AND THE AUTOCHARTIST TEAM TO SEE MORE VALUE CREATION ON THE BACK OF REALIZING SYNERGIES"

WHAT ARE CROSS-BORDER PAYMENTS?

A cross-border payment is another term for an international financial transaction. It refers to both retail and wholesale payments where buyer and seller are in separate countries. So, a simple consumer purchase of an item across borders qualifies as a cross-border payment. They also encompass complicated investments, mergers and acquisitions involving companies in different countries, and as a result can entail complex service and distribution contracts.



Kristian Gjerding

The modern payment landscape is constantly changing, and the pronounced increase in online shopping and e-commerce for both B2C and B2B markets has defined one of the most recent evolutions in transaction trends. Alongside this unstoppable rise, international or 'cross-border' payments have steadily and consistently risen at 7 to 8 trillion USD year on year, with 2022 seeing an increase to nearly 156 trillion. The UK Bank of England (BoE) estimates that this value is likely to hit 250 trillion USD by 2027.

Yet with this significant expansion comes the inevitable cross-border payment issues. International payments are often resisted by B2B and B2C organisations due to their perceived high cost, which can accumulate to thousands of pounds annually. Other challenges include tax issues, due diligence and compliance requirements, and legal issues that arise when conflict between legal systems – causing friction and delays. In this article, we explain the key issues organisations of many stripes face when executing cross-border payments, and discuss the best solutions available to optimise these transactions in order to increase revenue and save valuable time and money.

The different types of cross-border transactions can be categorised as follows:

Retail cross-border transactions:

These usually refer to person-to-person, person-to-business, and business-to-business payments. Examples include e-commerce purchases, card payments, bank transfers, alternative payment methods (aka digital wallets and mobile payments) and remittances.

Wholesale cross-border transactions:

Whole cross-border payments take place between financial institutions and are typically used to support customer needs or a business's international activities – for example, foreign exchange, securities trading or borrowing and lending.

Governments and large non-financial companies:

Institutions and organisations like these often use wholesale transactions to pay for financial market trading and the large-scale import and export of goods and services.

HOW DOES CROSS-BORDER MONEY TRANSFER WORK?

The usual scenario is that when a buyer makes a purchase, the money (or 'funds' as there is no use of physical cash) is carried from their account to

Cross-Border Payments: The issues and challenges

By Kristian Gjerding, CEO of CellPoint Digital

Cross-Border Payments: The issues and challenges

the merchant's account by a financial system. This process becomes more complicated if the funds need to cross borders, as this incurs currency conversion and therefore exchange rate fees. Foreign transaction charges may also apply. As more intermediaries and other entities get involved – for instance, domestic and international banking networks and financial system – the transaction grows even more complex.

The cross-border transaction usually involves the following steps:

1. Purchase
2. Routing and processing
3. Payment verifications
4. Transaction confirmation
5. Fulfilment
6. Settlement

HOW DO BANKS SETTLE CROSS-BORDER PAYMENTS?

Since the funds are not physical money, the term cross-border payments is perhaps a misnomer: nothing is literally transferred across borders, but accounts are debited in one jurisdiction and credited in the corresponding account in a separate jurisdiction. In some cases, a payment provider or transfer agent will use an interbank network to carry out this payment service.

HOW LONG DO CROSS-BORDER PAYMENTS TAKE?

International transactions typically take around two business days to process and settle in the recipient's account. The length of time depends on the destination of the funds, and how many intermediaries are involved throughout the process. The quickest cross-border payments tend to be credit card payments, which can be processed almost instantly, followed by international wire transfers which have a maximum transfer time of two business days.

International transfers via eWallets take between two and three business days, and like credit card payments are mostly used by e-commerce websites, online shops and organisations with subscription business models. Conventional bank transfers are the slowest form of cross-border payment, with a transfer time of three to five business days. Along with international wire transfers, this method is sought for international business purposes as the additional processing time lends greater security especially when handling large payment volumes.

THE CHALLENGES OF CROSS-BORDER PAYMENTS

Given the volume of many external remittances, they are often taken

seriously and several issues come into play, namely, cost, processing time, security, and legal concerns – among others.

1. Payment processing

Cross-border transactions can be a convoluted and time-consuming process, and can also be halted at any point – causing friction, delays and a suboptimal experience for all those involved. Often this is due to incomplete payment information, Anti-Money Laundering (AML) checks and other fraud screening measures. The transmission of international payments are not as digitised or standardised as other transactions, meaning that the solution is often manually intensive and can leave the payment in limbo for several weeks.

2. Legal issues

When companies expand across borders into foreign jurisdictions in order to achieve growth, the level of risk can increase due to the divergent legal systems in each country. Although most developed countries adhere to systems of civil law, these can vary wildly between different nations and as a result lead to drastically different interpretations in agreements for mergers and other B2B agreements. A notable example of this is intellectual property protection, which can diverge a great deal between foreign jurisdictions. The language of the contract in question also leads to issues with enforceability, as either party may struggle to decide which interpretation should have authority in either domestic or international courts. Data protection laws also vary between different countries, resulting in both compliance issues but also the costs associated with seeking the relevant domestic or foreign counsel to interpret dense legislation and provide clarity.

3. Tax issues

As with legislation, taxation also differs



Cross-border transactions can be a convoluted and time-consuming process

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between countries. A payment may have tax implications in its destination country, which requires the buyer or seller to consider which ones may apply and therefore affect the profitability or fairness of the deal. Taxation treaties have been devised throughout the years to avoid the scenario of double-taxation, but these tend to be specific to each country – meaning that recipients or payees may not be entirely exempt under those same terms.

4. Data protection

As we touched on already, the provision of data is regulated in most countries, but the specific laws vary. Banks must adhere strictly to these regulations, as, for instance, in some countries they are not permitted to share any personal or business information with their clients. In the UK and EU, General Data Protection Regulation (GDPR) applies to any company or financial institution that processes personal information for citizens, which has a serious impact on what data can or cannot be shared. Compared to the USA, for example, UK, Japan and EU member states have strict data privacy which incur severe penalties for the unlawful collection or disclosing of private information, and even prison time.

5. Operational systems

The conventional messaging format used to process cross-border payments – SWIFT MT103 – is rather limited in its capacity to transmit large amounts of information. For additional capacity, another non-automated messaging

infrastructure (MT199) will communicate with the parties involved in the transaction. Processes like these are behind the majority of inefficiencies within the transaction. The infrastructure of financial institutions can vary dramatically, but what compounds this issue is that often the legacy systems used are not compatible with changes in technology. This results in further delays for settlements and other obstacles that arise, for instance, from a lack of real-time monitoring, the reliance on batch processing and a low data processing capacity.

6. Fees & exchange rates

Payment systems that do not involve physical paper money usually incur additional costs of some kind. Payee entities (i.e. a business) often need to provide funds up front in order to access foreign currency and begin the transaction. The more entities involved in a cross-border payment, the more bank fees are charged. While a great deal of these will apply to merchant banks, they can be passed along to the purchaser as well. Many consumers will be familiar with credit card companies charging them for paying for goods in a foreign currency – the same principle as exchange rates.

The value difference between currencies is prone to fluctuate, affecting both buyer and seller who may encounter deficits if there is a rate change in the time between the initiation of the transaction and the settlement. For this reason, merchants allow buyers to use

payment service providers that calculate the best exchange rate possible.

7. Compliance issues

Due to the various risks associated with cross-border transactions, there are numerous compliance checks involved to protect payer and recipient against financial crime, fraud, sanctions and others – many of which are time consuming. The rules and processes differ for each bank or payment gateway, and this in turn leads to unnecessarily declined payments – for something as simple as a customer sharing the name with another person who has a financial criminal record. Payments that pass through various domestic bank systems may also be subject to unique checks depending on the jurisdiction. This creates even more complications, without the payment having even reached an international border.

CONCLUSION

When it comes to cross-border payments, it is increasingly becoming a sprint, rather than a marathon. As borders have become less significant for customers due to e-commerce, technology has striven to accommodate the demand across both B2B and B2C consumers. New payment platforms, like Payment Orchestrators, have since emerged to optimise the process of sending large funds overseas and across borders, no matter what market is involved.

Payment service providers can now utilise intelligent processing features, along with automated compliance screening and the capacity to support a range of transaction methods. The key to thriving in such a fast-evolving market is in the hands of those organisations that prioritise a seamless, hassle-free transaction experience.

Readers can learn more about this topic and other payment related issues by visiting: <https://cellpointdigital.com/>

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Forward-looking RBC builds on impressive e-FX foundations

A combination of legacy and innovation has propelled RBC to the forefront of electronic FX trading. Intelligent use of technology is enabling the bank to reinforce this position through effective client engagement, competitive pricing and advanced analytics.

As an international bank with a growing global footprint, RBC is now a legitimate competitor to the tier 1 US banks for FX business.

This status is the result of a consistent electronic trading strategy and a forward-thinking approach that has positioned RBC not just as a major player now but one with a sustainable business that will scale into the future.

Kevin Love, Global Co-Head of eFX Trading Products at RBC Capital Markets refers to an 'electronic mindset' that gives the bank an edge over competitors that have historically depended on manual processes.

"When I was brought on board the first objective was to develop a robust core pricing framework that would underpin



Kevin Love

the business," he explains. "How we view it internally is akin to a hub and spoke model with our eFX pricing engine sitting at the center."

RBC has an extensive distribution network across its retail, commercial, institutional and wealth management businesses which has grown further on the back of assets that have been purchased over time. To ensure that it is making the most of this broader franchise, RBC has done a great deal of work to remove any internal roadblocks to creating a single vision for its FX business and achieve the economies of scale this network affords as one of the largest banks in the world.

"By centralising execution, we have been able to minimise transaction costs," says Love. "We have internally improved the liquidity that is available to us and in turn have been able to improve the liquidity that is available to our clients. We have also built extensive external connectivity to the major exchanges via our distribution network to meet clients where they trade."

Whether clients are looking for principal risk transfer, long-dated forwards or agency algorithms, the bank is confident it can deliver.

TECHNOLOGY BUILD

RBC's technology strategy approach is based on a combination of build and

buy, which has enabled it to develop strong internal IP and more scalable solutions than would otherwise have been available.

This provides greater flexibility when it comes to client interaction through the provision of bespoke solutions and reduced time to market.

One of the bank's most significant technology projects came with its acquisition of HSBC Bank Canada when it successfully executed the largest and most complex technology transition in its history.

While RBC's scale and technical capabilities positioned it well, it still had to navigate the complexity of integrating data from numerous HSBC Canada systems and accurately transforming and mapping it to RBC's platforms.

A dedicated integration team of more than 4000 employees from across the enterprise - including 2000 technology professionals - worked on all aspects of the integration, including process and technology.

A thorough technical migration blueprint was developed that covered every aspect of product, data and system integration, as well as system enhancements and readiness. This massive conversion involved

integrating and developing technological capabilities for some of RBC's most critical and complex systems across the enterprise. Infrastructure was reviewed to ensure sufficient processing, storage, networking capacity and equipment was available for the conversion of almost 800,000 clients, over 2 million accounts and in excess of 4000 new employees.

Teams were prepared for every step with extensive business and technical dry runs, dress rehearsals and readiness activities which helped significantly in early problem detection and solutions.

"In 2021 there was an initiative to leverage the technology and resources from the equities business and apply them to FX, from liquidity provision to back-end customisation, which has become one of the key differentiators of our algorithmic offering," explains Won Kim, Head of e-FX sales at RBC Capital Markets.

CLIENT PARTNERSHIPS

RBC's focus on deep partnership and co-creation allows clients to bring their



RBC has an extensive distribution network across its retail, commercial, institutional and wealth management businesses.

strategies to life, something which is particularly valuable for those with sophisticated and specific preferences around the liquidity venues they want to access.

"As we go through this transformation, we want to make sure that we have the analytics and the insights to power client engagement and appropriate business decisions," says Love. "Data capture enables sales and trading to provide more accurate pricing and increase our competitiveness as well as

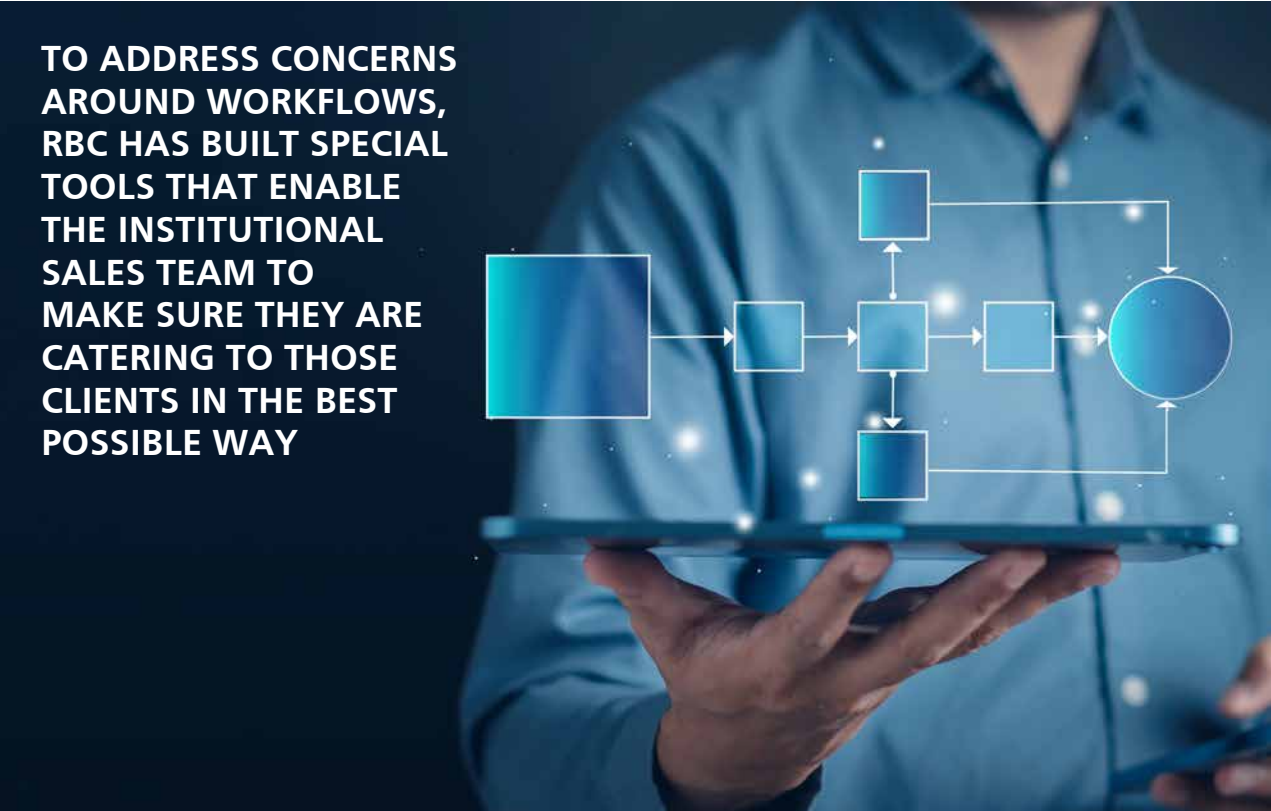
be more proactive in how we engage with clients."

With upgrades in client analytics, sales can be more proactive in helping clients manage their risk across forwards and options, making the conversation around position management more robust.

"We are showing thought leadership by engaging with clients proactively and flagging decisions they might not have realised they had to make,"



RBC's ability to partner with customers to bring their strategies to life is particularly important for more sophisticated clients



TO ADDRESS CONCERNS AROUND WORKFLOWS, RBC HAS BUILT SPECIAL TOOLS THAT ENABLE THE INSTITUTIONAL SALES TEAM TO MAKE SURE THEY ARE CATERING TO THOSE CLIENTS IN THE BEST POSSIBLE WAY

says Love. "They really appreciate this approach and also our recognition that not all clients are the same."

Corporates are largely driven by hedging decisions and how they are able to smooth their cash flows, manage financial reporting and make sure they are not making losses on FX, he adds. "Our risk solutions group are having those

conversations with the mindset that these corporates and their goals are different to those of institutional investors who are generally a bit more sophisticated."

These clients are generally measured against certain benchmarks to make sure that they have achieved best execution and are therefore focused on slippage and execution costs.

OPTIMISING WORKFLOWS
To address concerns around workflows, RBC has built special tools that enable the institutional sales team to make sure they are catering to those clients in the best possible way. A similar approach is taken on the commercial or retail sales desk where there is more focus on making payments and reducing friction in terms of how they are managing balances in their accounts.



Multi asset trading analytics gives clients both pre-trade and real time feedback

"We are able to cater to those needs by building bespoke tools for our sales desk and those clients," adds Love. "It is not a one size fits all approach and as we go down this path of electronification, we are making sure that what it important to each client is the primary consideration."

Given RBC's size relative to the bulge bracket banks, there has always been an acknowledgement of the need to be nimble and scale more efficiently. Part of that process has involved breaking down internal silos to enable teams to do more with less.

"In the electronic world we have adopted a cross-asset ability, building something once and utilising it across multiple business lines," observes Kim

This is highlighted by the Multi Asset Agency Solutions (MAAS) team within Global Markets which focuses on leveraging technology across all asset classes. A large part of this team is the multi asset trading analytics which is live across equities, futures, and FX with clients in beta stage or internal testing. This analytics suite gives clients both pre-trade and real time feedback on how assets are performing, relative to their benchmarks and early

feedback suggests it is creating a point of differentiation for RBC as one of very few banks with this type of functionality.

"Another area where we are introducing greater efficiency is by having our MAAS team use their cross-asset expertise to build foundational algos, and having our salespeople be more macro," says Kim.

"There is a lot of cross-selling internally because we partner with our wider Global Markets teams, so we are in constant dialogue with our equity sales colleagues on our mutual client names and how we can cross-sell rates or FX and vice versa."

RBC has already had a lot of success in cross-selling. "A lot of banks talk about cross-selling initiatives but we have turned this into reality consistently, which is important," adds Kim.

INTELLIGENT APPROACH
RBC is a market leader in AI research and innovation fueled by it's pioneering investment in RBC Borealis and more recently through creation of the AI and Digital Innovations Team. The Capital Markets-based team's mandate is to lead the development of the end-to-



Won Kim

end AI and digital innovation strategy across Capital Markets, partnering across lines of business, Technology, Borealis and the broader enterprise to deliver tangible client, commercial and measurable outcomes. Executive level support has been key to creating awareness and momentum around such initiatives as its propriety ATOM (asynchronous temporal model) foundation model for financial services enabling the bank to leverage unique insights and develop innovative solutions within a responsible AI framework for financial services.

Created by RBC's research institute, RBC Borealis, ATOM was securely



Aiden is RBC's award-winning, patented electronic trading platform

Forward-looking RBC builds on impressive e-FX foundations



RBC Borealis is the driving force behind RBC’s AI and data innovation

trained using large scale financial datasets including billions of client financial transactions, providing it with a unique breadth of knowledge in financial services.

ATOM is part of RBC’s Lumina data platform, which systematically collects and curates event data along all business lines and enables AI scientists to process up to 10 billion transactions per minute. As a foundation model, it has deep financial expertise that can be used across a variety of banking tasks. Several RBC products and services

currently use ATOM’s capabilities. ATOM will play a central role in RBC’s ambition to achieve between \$700 million and \$1 billion in enterprise value from AI-driven benefits by 2027 through several AI products and services across all lines of business and takes place in a responsible AI framework that meets regulatory requirements and ensures the data never leaves RBC control.

RBC’s reputation as a leader in this transformative technology enabled the bank to leverage its data scale and position it to leverage AI’s potential in

financial services. First used in 2023, ATOM has been deployed safely in several products and services to create an individualised product and client experience, thereby better meeting client needs with a tailored approach. RBC Capital Markets has also worked with RBC Borealis to develop an AI-powered electronic trading platform with the goal of delivering improved execution quality and client insights. Known as Aiden, it uses deep reinforcement learning to learn from its experiences in the market and adjust to changing trading conditions in real-time.



Electronic FX is often the first touch point for clients engaging with RBC

RBC’s use of traditional AI and machine learning techniques in its pricing engine is vital to maintaining competitiveness in FX markets. “ This gives us a great deal of confidence in our risk management approach,” says Love. “ We work closely with RBC Borealis to develop and refine this signaling and we are now looking to expand it so we can leverage the internal IP we have built to inform our equity or rates trading.”

SPOT SUCCESS

Electronic FX is often the first touch point for clients engaging with RBC. Spot trades present a much lower barrier to entry in terms of onboarding requirements and the bank’s competitiveness in this market enables it to build relationships and eventually cross-sell less liquid, high touch products that offer more value from a revenue perspective.

“ We need to make sure we are positioned to make the most of these opportunities,” says Love. “ So while we have a made a significant investment in our core FX stack, we have also been going down the liquidity chain and product set to make sure we are able to offer the whole universe of products to our clients.”

OPTIONS

Options is one of the areas where RBC has increased its capabilities. The bank has always had a large Canadian options business but in recent years has focused on increasing the number of markets it competes in, which has been successful in terms of the number of currencies covered but also the range of products available.

“ We identified a number of product areas where there was a client need and have been able to fill that gap,” says Love. “ We have also expanded our overall currency offering to make sure that we are effectively a one-stop-shop for client needs.”



Although firmly established as one of the leading international banks for FX, RBC continues to benefit from its Canadian heritage

Clients can now trade in around 50 currency pairs and RBC plans to increase this number so it can facilitate payments for an even wider range of commercial and retail clients.

REIMAGINING CASH MANAGEMENT

In April 2024, RBC Capital Markets launched RBC Clear, a cash management solution for Fortune 1000 corporations in the US that allows corporate treasurers to gain traceability and transparency of transaction lifecycles in near real time.

The platform offers a number of unique features, including streamlined onboarding through the use of existing client information and an onboarding tracker; near real-time status on payments; optionality on how clients want to be updated on transactions through a digital-first solution; and actionable data insights to ease day to day management and reporting.

One key rollout for the platform for the end of 2025 is FX capabilities, designed with the same ethos of putting clients in control of their working capital.

“ This demonstrates our commitment to the US market and the growing scale of our business,” says Kim. “ RBC Clear not only supports the cash management needs of these corporates – in the future, it will also make sure that they have access to all the functionality they need from an FX perspective.”

INTEGRATED STRATEGY

The platform is yet another example of how the different pillars of RBC are able to operate seamlessly to leverage economies of scale and build out liquidity and operational efficiency.

While RBC is now firmly established as one of the leading international banks for FX and other asset classes, it continues to benefit from its Canadian heritage and specifically the perception of Canadian institutions as being transparent with their clients.

“ This reputation is well deserved and we strive every day to maintain it by ensuring that we do the right thing by our clients,” says Love. “ It is a major reason for our success and really comes to the fore during periods of market stress. When markets are volatile and liquidity dries up, clients know they can rely on us to support their business.”

Buy AND Build: Addressing market fragmentation and liquidity in FX with modern tech stacks

By Matt Barrett, CEO of Adaptive



Matt Barrett

As FX firms evaluate their technology strategy, how should they weigh the merits of a purely build, buy, or a hybrid 'Buy+Build' approach?

When firms are deciding whether to build, buy, or combine both approaches with their tech, there are a few things to keep in mind. Off-the-shelf solutions can be a quick and cost-effective way to get started, but true plug-and-play is rare—most turnkey systems still need customisation and in-house work to fit specific needs. The skills for this aren't always available internally, and long-term maintenance can be a challenge. For firms where speed and cost are the main priorities, buying makes sense in the short to medium term. But for

the long term, building your own tech stack has big advantages: more control over core technology and IP, no vendor lock-in, and the ability to move quickly as markets or regulations change. Owning the source code lets you innovate, scale, and expand as needed, without waiting for a vendor. In a crowded market, having something truly your own can set you apart.

Ultimately, it's about balancing the need to get to market quickly and affordably with the benefits of being able to differentiate, future-proof your business. There's no one-size-fits-all answer, but those are the main trade-offs to consider.

Given current market dynamics, how do these considerations specifically impact FX firms?

With the move to T+1 settlement in North America and Europe following in 2027, the way FX firms operate is really changing. We've also seen a lot of volatility in the markets lately, often tied to geopolitical events, and there's a real shift happening in liquidity—some of the big banks are saying the market might not be as deep as it looks, partly because there are so many platforms and a lot of AI-driven trading. In this kind of environment,

it's crucial to adapt and take control quickly, and honestly, that's usually only possible when firms own the critical parts of their tech stack.

What areas of the FX vendor ecosystem are most ripe for disruption today, and why?

Two areas are particularly ripe for disruption. The first is infrastructure, driven by the ongoing shift to the cloud. Historically, the decentralized, over-the-counter nature of FX markets created a complex and fragmented landscape, where expensive intermediaries were needed to connect trading counterparties. Cloud is fundamentally changing this dynamic. Firms can leverage the cloud's scalable and cost-effective connectivity which has the potential to dramatically reduce reliance on traditional intermediaries and their high facilitation fees, enabling more direct and transparent bilateral trading. Cloud adoption also democratizes the market, lowering the barriers to entry for smaller firms that can access high-performance infrastructure without massive upfront investment.

The second area is AI and machine learning. Many people see it as a bit of a buzz word these days but it has



The FX market's unique characteristics make it a good fit for AI, ML and Cloud

huge potential beyond simple task automation. The FX market's unique characteristics - massive size, high transaction volume, decentralized nature - make it a good fit. For trading and execution, AI models can analyze immense datasets—including news sentiment and economic indicators—in real-time to predict market movements and execute trades with speed and precision. In risk management, AI can be used to detect fraudulent activity and manage market exposure by identifying correlations and volatility patterns, allowing firms to quickly adjust their positions.

Breaking down the FX value chain, which components are best suited for in-house development, outsourcing, or procurement?

For firms looking to get to market quickly and keep costs down, it can make sense to outsource the parts of their tech that aren't unique to their business—things like basic infrastructure, messaging, or clustering. But when it comes to what really sets a firm apart, like business logic or proprietary trading platforms, that's where it pays to build in-house. Developing your own trading algorithms using your own data and strategies can give you a real edge,

and these custom-built pieces become the foundation for what makes your offering different. The key is to find the right balance—think of it as building blocks—between what you buy and what you build on top, making sure everything is tightly integrated to avoid long-term maintenance issues.

Meeting regulatory requirements is critical for financial institutions. How might this impact the decision to build or outsource fintech functions?

This isn't just a tech problem—it's a business strategy decision. With regulations like DORA putting the onus on FX firms to truly vet their tech providers, the old "buy it and forget it" model is no longer working. Some top vendors offer great solutions, yet you are always relying on their roadmap and their priorities. On the other hand, when you own your code, you have direct control over your resilience and ability to adapt as the rules inevitably change but that comes at the cost of a higher initial investment and the ongoing need of maintenance. Ultimately, it's about balancing the compliance risks of outsourcing with the control and flexibility of building, and making sure you have the right expertise in place. This is a challenge every firm in the

space is facing right now.

What factors and technical considerations are important for financial institutions in the choice of suitable fintech providers for them to partner with?

There are a few key things to look for. First, you want a true partner—not just a vendor you hear from once a year at renewal. It's important to find someone at the forefront of open-source, cloud, and AI, since that's where most innovation is happening. Flexibility matters too; your partner should offer a range of support options, whether you want fully managed services or prefer more control in-house. Just as important, look for knowledge of distributed architectures and state machine replication—these are fundamental to how resilient, high-performance trading systems are now built for critical functions. Reputation is crucial. You need a partner with a strong track record who can support international operations. Check who they've worked with—if they have partnerships with leading tech firms and financial institutions that have delivered real results, that's a good sign they can help you stand out and stay ahead.

FX broker solutions:

Taking a look at how the market is evolving

Every FX broker's ecosystem is under threat of immense change not just this year but in the future as well. The advancement of technology goes hand in hand with changes in regulatory needs and the evolving demands of traders. Vasily Alexeev, CEO at UpTrader, Forex CRM & Brokerage Software provider, highlights some of the key issues involved and what's new in the forex broker solutions realm.



Vasily Alexeev

TECHNOLOGY: THE GAME-CHANGER

Industry advancements will include the integration of AI, ML, and

blockchain, words that go beyond mere buzzwords, as they have become the fundamental elements of contemporary FX brokerage services.

- 1. Artificial Intelligence and Machine Learning:** AI and machine learning have disrupted the traditional ways in which forex brokerages operate. Further, automated trading bots and AI predicting systems are some of the latest innovations in the industry that allow brokers to provide better services to their clientele.
- 2. Blockchain Technology:** The turning point for FX brokerage solutions would be blockchain.

It guarantees transparency and secured transactions, minimizing possible fraud. Moreover, it allows the transfer of quick cross-border payments at lower costs, which is most important in forex trading.

3. Cloud-Based Solutions: An increase in the number of FX brokers adopting the cloud has been recorded. On the advantages of scalability, lower operational costs, and a higher level of data security, such solutions would remove the need for a broker to make significant investments in infrastructure to extend its customer service to the rest of the world.

REGULATORY CHANGES AND THEIR IMPACT

It has become increasingly complex to understand the regulatory environment related to the FX broker business. Nowadays the authorities in most countries are tightening their best practices to keep the market fair as well as safe for investors. Important considerations include:

- 1. Increased transparency:** There is a growing demand from the regulators for greater levels of disclosures for the forex brokers.



AI and machine learning have disrupted the traditional ways in which forex brokerages operate



Today, it would be unthinkable to have a FX brokerage solution without mobile trading platforms

This implies that fees, trading conditions, and any possible conflicts of interest would need to be stated much more transparently. Consequently, FX brokerage solutions are now incorporating more sophisticated reporting systems.

- 2. Tighter KYC and AML requirements:** Every year, there is more and more pressure on compliance with KYC and AML policies. In response, Forex broker services are implementing AI-based identity verification systems, and even biometric data authentication, to meet the KYC requirements.
- 3. Global harmonization of regulations:** Well-established regulators in different regions are keen to harmonize how the industry is regulated. If this materializes, it would spell good news for everyone, but it would mean fortnightly updates to the compliance systems of international brokers

CHANGING TRADER PREFERENCES

Traders' preferences are changing and FX brokers are changing their services to adapt to these needs. Key things to note include:

- 1. Demand for mobile trading:** Today, it would be unthinkable to have a FX brokerage solution without mobile trading platforms. Traders want to be able to access markets everywhere, so brokers are investing a lot of money in mobile app development.
- 2. Focus on education and training:** Beginner traders are making it a condition for choosing a broker that provides learning materials. Forex broker solutions are solving this problem through the provision of interactive tutorials, webinars, and demo accounts.
- 3. Social trading and community engagement:** Social trading features such as copy trading and forums are getting more and more attention. This has prompted

FX brokers to incorporate these features into their platforms in a bid to reach more people and increase community involvement.

THE RISE OF WHITE-LABEL SOLUTIONS

The benefits of this development include:

- 1. Cost-effectiveness:** Substantial investments in systems and infrastructure are not needed with white-label technologies. This allows for easier establishment of the broker's forex broker solutions for new business start-up companies.
- 2. Customization options:** Modern white-label technologies enable tremendous flexibility, allowing brokers to craft their platforms to the actual needs and desires of the targeted segments.
- 3. Time-to-Market:** With white-label brokerage solutions brokers can significantly reduce their time to market. This kind of speed should



Over-reliance on forex technology can increase the likelihood of cyber attacks

be an advantage in this highly competitive trading conditions.

CHALLENGES AND RISKS

Despite the advancements in these solutions, the industry faces its fair share of challenges and risks this year including:

- 1. Cyber security threats:** Over-reliance on forex technology can increase the likelihood of cyber attacks. Because of those increased risks, brokers have to invest more in their systems and into ensuring the security of customer information.
- 2. Regulatory uncertainty:** Harmonization of regulations is a good trend. However, it also means uncertainty for brokers who have to adjust to new changes. FX brokerage solutions will have to stay ahead of these changes to regulatory compliance.
- 3. Market risks:** Increased market volatility can be both a boon and a bane. More trading opportunities will open up but so will the

chances of losing capital for both brokers and traders.

THE FUTURE OF FX BROKER SOLUTIONS

The future of FX brokers' solutions looks promising but it needs a lot of flexibility and creativity that encompasses:

- 1. Adoption of new technologies:** The addition of new AI technologies as well as quantum computing will greatly improve the methods used to develop Forex broker solutions and consequently, these innovations will ensure better performance and greater precision in the trading environment.
- 2. Sustainability initiatives:** Energy-efficient infrastructure and sustainable practices will give FX brokers a competitive edge making Environmental sustainability an imperative thing to consider for many businesses.
- 3. Focus on user experience:** Brokers that manage to develop user-friendly platforms with innovation

at the forefront will stand out in the market which would enable them to focus more on user experience.

CONCLUSION AND FINAL THOUGHTS

The FX brokers solutions market is currently experiencing significant disruptions due to technological advancements, regulation, and the changing needs of traders. Still, these transformations come with some challenges that have become a necessary hurdle for brokers to overcome as they innovate and scale. It is these changes when anticipated and matched by investments in advanced FX brokerage solutions, that allow brokers to position themselves advantageously within the ever-changing nature of this industry. The ability to remain competitive within the complex world of forex brokerage solutions will rest on a broker's ability to embrace the use of technology, adjust to regulatory change, and appreciate trader behavior. Readers can find more information about UpTrader at uptrader.io



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Bridging the liquidity gap:

How Digital Asset infrastructure is rising to meet institutional demands

By Vivek Shankar

DIGITAL ASSETS



LIQUIDITY

THE TECHNICAL LABYRINTH

2025 is bringing digital asset infrastructure breakthroughs. Bitnomial launched the fourth US clearinghouse for crypto derivatives in January, offering something unprecedented: accepting digital asset collateral to margin futures and options trading. For the first time, institutions can use their Bitcoin and Ethereum holdings as margin, eliminating the need to convert to cash and dramatically improving capital efficiency.



Vivek Shankar

In April 2025, Ripple dropped \$1.25 billion to buy Hidden Road, instantly becoming the first crypto company to own a global prime broker. This is the kind of deal that signals a huge shift in institutional digital asset infrastructure. It isn't just evolving, but is instead being rebuilt from the ground up.

One reason for this is the fragmentation problem. "Liquidity is scattered across dozens of exchanges without a single dominant platform across all trading pairs or instruments," says Sameer Shalaby, Co-Founder & CEO of VersiFi.

Meanwhile Frank van Zegveld, Head of EMEA Sales at Talos, puts the scale in perspective: Talos alone connects to over 70 sources of liquidity. "Unlike traditional markets, where trading is concentrated on a few dominant venues, the digital asset ecosystem is highly fragmented," he explains.

This fragmentation exists as the crypto and digital assets market transitions from an adolescent to a young adult state (according to Coalition Greenwich's March 2025 report), and as 65% of EU-based crypto businesses have achieved MiCA compliance. Institutions can seemingly no longer wait for market infrastructure to mature. So what lies in store for them?

The infrastructure arms race is accelerating. Traditional financial technology companies are entering the space with enterprise-grade solutions designed to abstract away the complexity. New protocols are emerging that promise standardized connectivity, while regulatory clarity is pushing exchanges toward more consistent operational practices.

Despite this rush, the market is not without its technical complexities, which runs deeper than just having many venues. "Unlike traditional markets, where data communications are standardized by the FIX protocol, no such standardization exists in digital asset markets," van Zegveld explains.

This means institutions must build custom API connections for each exchange, which "quickly becomes a drain on engineering resources to establish and maintain."

The engineering burden is staggering. While traditional finance relies on decades-old protocols that allow seamless connectivity across markets, digital asset trading requires bespoke integration work for every venue.

Each project involves painstaking work verifying API endpoints, interpreting data payloads, building authentication

Bridging the liquidity gap: How Digital Asset infrastructure is rising to meet institutional demands

"Liquidity is scattered across dozens of exchanges without a single dominant platform across all trading pairs or instruments."



Sameer Shalaby

The challenge is managing the operational complexity that comes with this integration. Institutions must navigate varying fee structures, different risk management protocols, and inconsistent settlement mechanisms across platforms.

Shalaby highlights another layer of the problem: "Accessing real-time market data across multiple venues can introduce latency and limit visibility into true market depth." When milliseconds matter, the technical overhead of aggregating data from disparate sources can mean the difference between profitable trades and missed opportunities.

Each venue requires separate risk management, as "institutions need to onboard and manage counterparty exposure on each exchange separately, increasing risk and operational headaches." The operational burden extends beyond technology. Legal teams must negotiate dozens of separate

agreements. Compliance departments must monitor different jurisdictions and regulatory requirements. Treasury teams must manage collateral across multiple venues, often requiring pre-funding that ties up capital inefficiently.

"Our focus at Talos has been on simplifying the complexity of a highly fragmented ecosystem," van Zegveld says. "We are building the connective tissue that brings together disparate venues, workflows, and liquidity sources into a one-stop solution that surpasses traditional platforms, by leveraging the unique characteristics of the digital asset class."

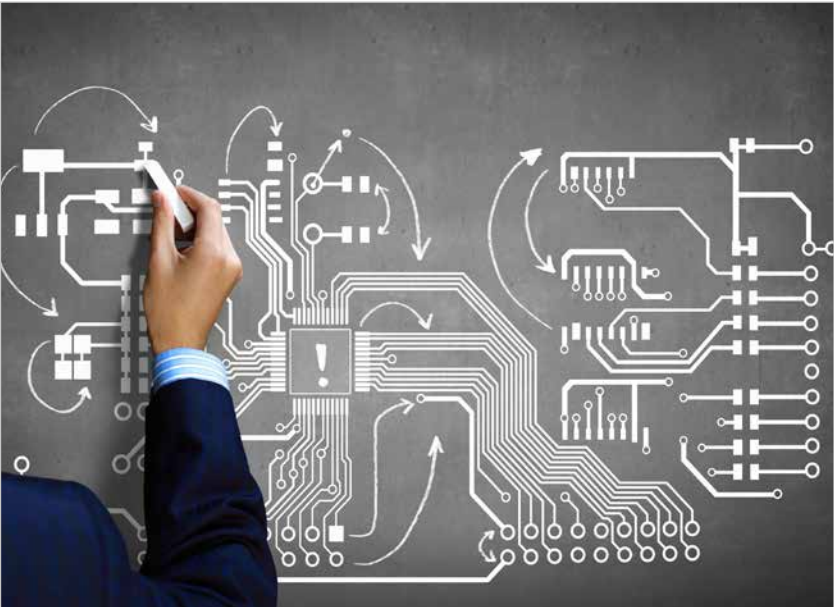
As solution providers navigate technical challenges, they're also setting the stage for a bigger transformation: the rise of prime brokerage services that can solve these connectivity and operational challenges through a single relationship.

PRIME BROKERAGE AS THE BRIDGE SOLUTION

"Currently, none of the major TradFi banks or prime brokers support crypto," van Zegveld observes. "There are emerging prime brokerage solutions, with providers offering incomplete services."

This vacuum has attracted new players who see prime brokerage as the solution to institutional crypto's fragmentation problem. "Prime brokers have emerged as the ultimate solution in institutional digital asset trading, acting as both aggregators and risk managers to help mitigate the liquidity challenges posed by a fragmented market," Shalaby explains.

Market developments bear out Shalaby's observations. Kraken launched Kraken Prime in June 2025, offering institutional clients access to



Digital asset trading requires bespoke integration work for every venue

"Unlike traditional markets, where trading is concentrated on a few dominant venues, the digital asset ecosystem is highly fragmented."



Frank van Zegveld

firm formally entered the US market with OTC digital asset swaps, enabling institutional clients to execute cash-settled swaps across a wide range of digital assets.

The value proposition is compelling. Prime brokers "give clients access to a wide network of exchanges and liquidity providers through a single account, which eliminates the need to maintain separate operational and legal relationships with each counterparty," Shalaby notes. They also "extend one credit line to the client while managing collateral and margin across exchanges to enable cross-venue margining and capital efficiency."

But the real breakthrough comes in execution capabilities. Shalaby notes that Prime brokers offer algorithmic trading capabilities with smart order routing that can source liquidity across venues to optimize execution. "This is critical for institutions seeking tighter spreads across execution venues," he says.

liquidity representing over 90% of the digital asset market across more than 20 global venues.

The platform supports asset-backed lending and seamless integration with both on- and off-platform liquidity through smart order routing.

Meanwhile, Hidden Road has scaled to impressive institutional reach, clearing \$3 trillion annually across markets with more than 300 top institutional customers. In May, the

The infrastructure van Zegveld described as incomplete is rapidly changing. "Many prime brokers partner with custodial services, ensuring secure and segregated asset storage while supporting real-time trading," Shalaby says. "They offer efficient onboarding, reporting, reconciliation, and risk management to enable institutions to scale their trading activities without scaling complexity. Whilst Kebbie Sebastian, CEO & Founder, Merge says that, "With hundreds of billions of dollars in institutional capital expected to enter digital assets this year, these digital-native prime brokers aren't just service providers - they're the infrastructure layer that will power a multi-trillion dollar market. The winners won't be single prime brokers but orchestrators who can dynamically route across this specialized ecosystem."

This institutionalization of prime brokerage services sets the stage for the next critical development: regulatory frameworks that can provide the oversight and legitimacy these growing institutional relationships demand.

THE REGULATED VENUE ADVANTAGE

As with all things institutional finance, regulatory standing has become the new competitive moat. "Regulated venues are critical to attracting and retaining long-term participation from institutional investors," Acuña-Rohter explains.

"Institutions operate under a robust set of requirements and oversight, which are embedded in their risk management, vendor management and security programs."

The regulatory landscape is shifting in institutions' favour. Van Zegveld points to comprehensive frameworks like MiCA in the EU and VARA in



Compliance remains the critical enabler

Bridging the liquidity gap: How Digital Asset infrastructure is rising to meet institutional demands

"It is not operationally, technologically, or financially feasible to connect to the dozens of venues or market makers directly."



Tony Acuña-Rohter

Dubai as catalysts for change. "These regimes are setting clearer standards around custody, trading, reporting, and governance and in doing so, are paving the way for broader institutional participation," he notes.

The market is responding predictably. "This regulatory momentum is having the effect of consolidating volume toward venues that meet regulatory expectations and institutional-grade standards," van Zegveld observes.

"It's incentivising exchanges and intermediaries to adopt best practices in areas like best execution, market

surveillance, transaction reporting and counterparty controls."

EDX Markets exemplifies this regulatory-first approach, Acuña-Rohter says. Despite operating in an environment where "spot digital asset trading and clearing are not presently governed by federal regulations," Acuña-Rohter says his venue "was designed from the ground up with these priorities in mind."

The platform performs KYC and customer due diligence for all participants and has partnered with industry-leading compliance providers for trade surveillance and transaction monitoring.

Acuña-Rohter's bet is that regulatory preparation pays off. "As regulatory clarity continues to emerge, particularly with recent movement in the US, venues like EDX that are aligned with institutional requirements will play a central role in attracting institutional participation," he predicts.

"EDX will be ready for regulation because we were purpose-built with

traditional financial market structure and regulation in mind."

The regulatory foundation extends beyond compliance and into operational integrity. EDX has implemented trading and monitoring safeguards, including trade practice surveillance, transaction monitoring, fat finger limits, price banding, and messaging throttles. "The combination of these controls protects the market against runaway algorithms, market manipulation, and operational issues associated with execution," Acuña-Rohter explains. This regulatory legitimacy creates a virtuous cycle, Van Zegveld notes. "It is having the effect of consolidating volume toward venues that meet regulatory expectations and institutional-grade standards," he says. "It's incentivising exchanges and intermediaries to adopt best practices in areas like best execution, market surveillance, transaction reporting, and counterparty controls."

He also notes that it helps institutional investors meet internal mandates for compliance, auditability, and fiduciary responsibility.

HYBRID DEX-CEX STRATEGIES

While regulated venues provide the compliance framework institutions need, they're also opening the door to hybrid trading approaches that combine traditional centralized exchanges with decentralized alternatives.

Decentralized exchanges offer institutional advantages that centralized venues can't match. "Their peer-to-peer trading mechanisms eliminate the need for intermediaries, and participants retain custody of their assets, which reduces the counterparty risk associated with centralized exchange failures or hacks," van Zegveld explains.

"These digital-native prime brokers aren't just service providers - they're the infrastructure layer that will power a multi-trillion dollar market."



Kebbie Sebastian

"And because transactions are on-chain, they are auditable in a way that centralized exchange transactions are not, and they settle almost immediately which translates into capital efficiencies." But institutions can't simply plug into DEXs with their existing infrastructure. "Institutions can't leverage these benefits at scale without the right execution infrastructure," van Zegveld warns. They need "an institutional-grade custody solution, such as an MPC wallet, that enables access controls without compromising the self-custody required to interact with a DEX."

The real opportunity lies in hybrid approaches. Van Zegveld anticipates that "many institutions will adopt a hybrid model, whereby they trade in both CEXs and DEXs simultaneously." This requires "a platform that aggregates liquidity from both into a synthetic order book to facilitate price discovery, the use of advanced algorithms or order types, and smart order routing."

2025 is delivering on this hybrid vision. The tokenization boom has created new markets worth exploring. Real-world asset tokenization has exploded

380% in three years to reach \$24 billion, with Standard Chartered projecting growth to \$30 trillion by 2034. These tokenized assets often trade on DEXs, giving institutions new reasons to develop hybrid execution capabilities.

Specialized DEX development is accelerating. Speaking to Cointelegraph, Michael Egorov, founder of Curve Finance, predicted growth in "special-purpose decentralized exchanges" that solve specific institutional problems.

"Exchanges between stablecoins of different denominations like the Euro, US dollar, and others are not yet properly solved," Egorov noted, highlighting FX as a key use case.

Compliance remains the critical enabler. Van Zegveld emphasizes that "compliance technologies that support on-chain KYT, whitelisting, and real-time risk scoring are increasingly required before institutions can get comfortable interacting with DEXs."

The strategic advantage is clear. "The ability to blend CEX and DEX execution while managing risk and compliance is a competitive advantage in a multi-venue market, allowing institutions to tap into a broader spectrum of liquidity opportunities," van Zegveld concludes.

This hybrid infrastructure sets the stage for a broader transformation: the evolution of traditional finance toward blockchain-native operations.

THE INFRASTRUCTURE ENDGAME

The infrastructure complexity that has plagued institutional crypto adoption is

finally being resolved. "Institutionally-focused solutions continue to mature and become available in the market," Acuña-Rohter observes. "Much has changed over the past decade, where institutions no longer have to build everything in-house from the ground up."

What once required custom development for basic functions like custody, connectivity, and settlement workflows is becoming plug-and-play. The institutional adoption timeline reflects this infrastructure maturation.

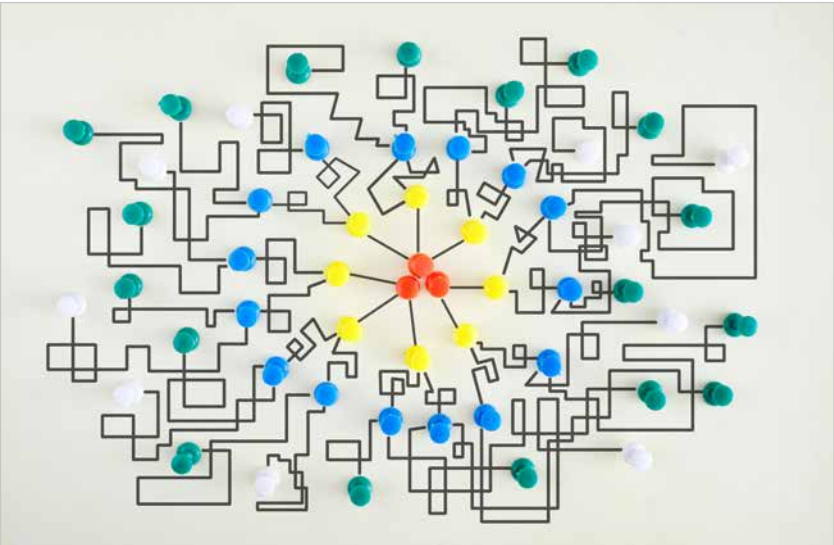
EY research shows institutions planning to scale digital asset investments over the next two to three years, with 50% expressing interest in investing in tokenized assets. The hesitation reflects the need to ensure robust operational foundations.

Van Zegveld sees this moment as the beginning of a much larger transformation. "Our vision extends beyond crypto: we believe that over time, all assets will move onto digital rails, and the future of capital markets will be powered by this new infrastructure."

The infrastructure wars of the past few years are creating the foundation for this transition. Fragmentation forced innovation in prime brokerage, regulatory frameworks, and hybrid execution platforms.

What began as a problem—dozens of disconnected venues with incompatible systems—is becoming a competitive advantage as unified solutions emerge that can navigate complexity while delivering institutional-grade reliability.

The question is no longer whether digital asset infrastructure can meet institutional demands, but how quickly institutions can adapt to the opportunities this infrastructure creates.



The infrastructure complexity that has plagued institutional crypto adoption is finally being resolved

Digital Assets Liquidity Providers:

A proposed categorization framework

By Michael Burtscher, COO, Merge



Michael Burtscher

The digital asset liquidity landscape has evolved beyond traditional market-making paradigms, necessitating a new taxonomy that reflects the complexity and adaptive nature of the market. Fundamentally, digital asset liquidity providers (LPs) are either institutional market makers or decentralized participants whose responsibility is to bridge the gap between buyers and sellers, providing market stability and improved access. This is not dissimilar to the role that LPs play in traditional financial markets. However, the digital asset ecosystem is fragmented and rapidly evolving which requires innovative solutions to their unique

problems. Digital asset liquidity often hinges on specific trading pairs, where one token might have adequate liquidity and the other does not. This is a unique challenge that digital asset LPs are looking to solve.

Given the pace at which the digital asset economy is evolving due to the emergence of new regulation, constant development of new financial products, and substantial growth in market participants, the roles LPs play in the digital asset economy are nuanced.

In this article we introduce a four-factor framework for categorizing LPs, capturing the nuanced interplay between operational models, service layers, asset focus, and regulatory positioning.

THE TAXONOMY OF DIGITAL ASSET LIQUIDITY PROVIDERS

The global digital asset market relies on a complex ecosystem of LPs that ensure efficient trading, price stability, and market accessibility. These LPs operate across centralized and decentralized platforms, catering to diverse participants ranging from retail traders to institutional investors.

Below is a detailed categorization of the LPs shaping today's crypto markets, constructed to highlight their unique roles, operational nuances, and interdependencies.

We have structured our market map based off four key factors:

1. Operational model: Institutional vs Protocol-native vs Hybrid
2. Service layer: Primary liquidity (market maker) vs Secondary liquidity
3. Asset class focus: Stablecoins, spots, derivatives, and restaked assets
4. Geographic-regulatory positioning

Our market map has six main categories:

1. Institutional liquidity providers
2. Decentralized liquidity protocols
3. Hybrid CeDeFi liquidity
4. Specialized liquidity verticals
5. Custodial vs. non-custodial LPs
6. Geo-strategic hybrids

THE FUTURE OUTLOOK FOR LPs

The digital asset economy is rapidly evolving thanks to constant innovation, regulatory developments, and the

substantial growth in institutional and retail participation. This market dynamism has seen fundamental changes in the roles LPs play.

The increase in institutional adoption and interest has pushed digital asset LPs to provide traditional prime brokerage services in which they offer sophisticated trading, custodial services, and automated market making. We will see further development and additional offerings of institutional-grade liquidity and robust risk management to continue to attract large players into the digital asset market.

Examples of this include Aave Arc, a permissioned liquidity protocol specifically designed for institutions seeking compliant access to DeFi lending and borrowing, and EigenLayer, which enables institutional restaking and composable yield strategies on Ethereum while offering enhanced risk controls and capital efficiency. Additionally, expect to see LPs experimenting with and adopting dynamic fee structures, liquidity concentration strategies, and hybrid models.

A central problem that is being tackled by LPs is the fragmented nature of liquidity across blockchains and how liquidity becomes siloed. Cross-chain liquidity solutions enable trading efficiencies, improved price discovery, and less market volatility.

An example of this is Amber Group offering JPY/KRW stablecoin pairs with embedded FX hedges. The LPs play a crucial role in enabling cross-chain development through the creation of cross-chain bridges and omnichain protocols to enable the seamless exchange of assets that fundamentally increase flexibility, scalability, and efficiency in the market.

LPs differentiate themselves through technological innovation, specifically

Institutional Liquidity Providers			
This category includes all firms that provide liquidity by deploying their own capital and employing sophisticated trading strategies, including both firms that trade directly and those that provide access to exchanges for institutional clients			
Subcategories:	Proprietary trading firms	Prime Brokers	Algorithmic infrastructure
Description:	Capital-intensive, principal risk-taking via sophisticated models across exchanges.	Offering custodial solutions combined with leveraged liquidity access; caters to regulated entities.	Providing the APIs, tools, and frameworks for smaller players to compete in automated market-making.
Examples:	Jump Crypto, Cumberland (DRW), Wintermute, Virtu Financial, SIG	Coinbase Prime, BitGo Prime, FalconX, Hidden Road Partners	Kronos Research, Kairon Labs, Hummingbot, Amber Group, AlgoTrader, Dexterity Labs
Types of businesses utilizing these services and why:	Hedge funds, high-frequency trading firms, market-making desks: <ul style="list-style-type: none">These firms need deep, continuous liquidity and sophisticated trading algorithms.These providers offer those services but often require substantial trading volumes and established relationships.	Institutional investors, asset managers, family offices: <ul style="list-style-type: none">Require secure custody, regulatory compliance, and efficient execution across multiple exchanges.Prime brokers streamline access and reduce counterparty risk.	Smaller exchanges, token projects, retail brokerages: <ul style="list-style-type: none">These businesses typically lack the resources for in-house market making.Algorithmic infrastructure provides customizable solutions for enhancing liquidity.
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Decentralized Liquidity Protocols			
This category includes protocols that provide decentralized and permissionless liquidity through automated market-making algorithms.			
Subcategories:	Automated Market Makers (AMMs)	Liquidity-as-a-Service (Laas)	Cross-chain liquidity networks
Description:	Permissionless, on-chain pooled liquidity models; decentralized price discovery based on algorithm.	Providing white-label solutions for token projects to bootstrap their liquidity pools and incentives.	Enabling interoperability via messaging and bridges, enabling assets and data transfer between otherwise isolated blockchains.
Examples:	Uniswap, Curve Finance, Balancer, SushiSwap, Kyber Network	Yearn Finance, Convex Finance, Lido Finance	LayerZero, Wormhole, THORChain, Synapse Protocol, cBridge
Types of businesses utilizing these services and why:	DeFi projects, retail traders, cryptocurrency funds: <ul style="list-style-type: none">They want to trade directly from their wallets and participate in decentralized markets.AMMs offer composability and transparency but can come with impermanent loss risk.	New token projects, DAOs, DeFi protocols: <ul style="list-style-type: none">Need to incentivize liquidity provision and manage rewards effectively.Laas helps to bootstrap liquidity and maintain participation in pools.	DeFi projects, cross-chain applications, institutional investors: <ul style="list-style-type: none">They require seamless asset transfers between different blockchains.Cross-chain liquidity enables interoperability and efficient capital deployment.
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Specialized Liquidity Verticals			
This category includes LPs that focus on specific asset classes or instruments beyond spot trading, catering to specialized market participants.			
Subcategories:	Derivatives liquidity	NFT/RWA liquidity	Fiat liquidity orchestrators
Description:	Market makers specializing in perpetuals, futures, and options; essential for managing hedging and exposure.	Providing marketplaces and financial tools for fractionalizing and trading illiquid real-world and digital assets.	Issuers of stablecoins and related providers enabling conversion between fiat currencies and cryptocurrencies.
Examples:	Deribit, BitMEX, dydX, Aevo, Hyperliquid	Blur, Securitize, tZERO, Polymath, Fraction.art	Circle (USDC), Tether (USDT), Ripple (XRP), Stellar (XLM)
Types of businesses utilizing these services and why:	Derivatives traders, institutional hedgers, cryptocurrency exchanges: <ul style="list-style-type: none">Need specialized liquidity for perpetuals, futures, and options.These providers offer sophisticated trading tools and deep order books.	NFT marketplaces, RWA tokenization platforms, real estate funds: <ul style="list-style-type: none">Require specialized liquidity solutions for illiquid assets.NFT and RWA LPs enable fractionalization and trading of these assets.	Cryptocurrency exchanges, payment processors, cross-border payment platforms: <ul style="list-style-type: none">Require efficient fiat on/off ramps and stablecoin liquidity.These providers enable fiat to crypto, and crypto to fiat conversions.
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in AI, as in virtually every industry. LPs are integrating AI and machine learning to improve predictive analytics and algorithmic optimization, an example of this is Auros deploying LLMs to simulate CEX/DEX flow correlations in real time. Given the 24/7/365 nature of digital assets, AI further enables liquidity and

provides the market with the required agility, responsiveness, and optimization for further adoption and growth. As the EU has implemented their Markets-in-Crypto-Assets (MiCA) framework, and the relatively new GENIUS Act in the USA, regulatory

Hybrid CeDeFi Liquidity Providers		
This category includes LPs that blend centralized and decentralized finance elements to offer compliant and institutional-grade access to crypto markets		
Subcategories:	Regulated DeFi Platforms	Institutional Staking/Restaking
Description:	Traditional finance firms offering regulated, compliant access to on-chain markets and asset management.	Institutions participating in governance and security of Proof-of-Stake networks, often using liquid staking or EigenLayer restaking to unlock collateral efficiency
Examples:	Archblock (TrustToken), Maple Finance, Matrixport, Syrup Finance	Figment, EigenLayer, Flashbots, Jito, Symbiotic
Types of businesses utilizing these services and why:	Regulated financial institutions, asset tokenization platforms, institutions entering DeFi: <ul style="list-style-type: none">Seek regulated and secure access to DeFi markets.These platforms provide a compliance layer and reduce regulatory risk	Hedge funds, staking pools, Proof-of-Stake projects: <ul style="list-style-type: none">Benefit from staking services to earn rewards and enhance network security.Restaking increases capital efficiency and unlocks new yield opportunities.

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Custodial vs. Non-Custodial Liquidity Providers		
This category differentiates LPs based on their approach to asset custody, with subcategories focusing on providers who either take custody of user funds or operate in a decentralized, non-custodial manner.		
Subcategories:	Custodial liquidity	Non-Custodial liquidity
Description:	LPs offering institutional-grade asset safekeeping and regulatory compliance.	Decentralized LPs who do not custody users' funds and provide services from decentralized protocols.
Examples:	Coinbase Custody, Anchorage Digital, Gemini Custody, Fireblocks, Hex Trust	Lido DAO, Rocket Pool, MetaMask Institutional
Types of businesses utilizing these services and why:	Institutional investors, exchanges, custody solutions providers: <ul style="list-style-type: none">Require safe and regulated methods for managing their digital assets.They need full regulatory compliance.	DeFi enthusiasts, privacy-focused traders, security-conscious users: <ul style="list-style-type: none">Prefer to maintain control over their private keys and assets.They want full autonomy and decentralization.

Geo-strategic Hybrids

This category includes businesses primarily focused on specific geographic regions and tailoring their services to the local market needs and regulatory landscapes.

Subcategory:

Custodial Liquidity

Examples:

Bitso, Ripio, CoinDCX, WazirX, Bitthumb, Upbit

Types of businesses utilizing these services and why:

Businesses operating in specific regions, fintech startups, remittance companies:

- These firms need localized payment solutions and regulatory expertise for their target market.

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changes are centre stage. The US and Asia are next to develop and implement their regulatory frameworks and the expectation is that with additional regulatory guidelines there will be further transparency around market activities and consumer protections that will vastly improve market confidence and stability.

Furthermore, market leading LPs have been seen to have a mix of the following four characteristics:

- Multi-chain depth: They have a mastery of layer 2/restaking liquidity (ex. EigenLayer)
- Regulatory-tech stack: They have automated MiCA / KYC checks (ex. Circle's Verite)
- Yield layer composability: Real-time exposure across staking, DeFi, and RWAs

- Adverse environment tools: MEV extraction, gas optimizers, and privacy-preserving swaps

The future of digital asset liquidity belongs to adaptive LPs who embrace innovation and flexibility. Success hinges on developing customer-centric strategies that directly address critical market pain points and maximize value across the ecosystem. As the landscape evolves, LPs must shift from rigid, traditional approaches to modular, hybrid solutions.

Agile providers who tailor their solutions to emerging market needs will capture the growing opportunity. The winners in this market will not be defined by size alone, but by their ability to evolve alongside their customers' sophisticated demands.

WHAT DOES THIS MEAN IN THE GRANDER SCHEME OF THINGS?

The digital asset market is experiencing a transformative period marked by unprecedented liquidity depth and institutional engagement and adoption.

As we progress through 2025, the market has achieved significant milestones, including a ~\$4 trillion market capitalization (CoinGecko). The approval of Bitcoin and Ethereum ETFs has catalysed this growth, with 97 active crypto ETFs filings now demonstrating the market's maturation and shift beyond Bitcoin and Ethereum.

Decentralized exchanges (DEXs) are gaining significant traction as well, with DEXs expected to capture 20% of centralized exchange (CEXs) volumes with projected trading to exceed \$4 trillion in 2025.

The stablecoin ecosystem is also emerging as a crucial bridge between traditional and digital finance with daily settlement volumes expected to reach \$300 billion by the end of the year and according to Artemis, Stablecoin supply has already exceeded \$280 billion.

This growth is underpinned by favourable regulatory developments, technological development in DeFi and AI integration that is enabling faster transactions and increasing institutional-grade product offerings.

As major financial institutions continue to integrate digital asset services and regulatory frameworks evolve and are implemented, the market is positioned for sustained growth in both liquidity depth and fiat-to-crypto service adoption. This convergence of factors signals a robust foundation for the digital asset market's continued growth and mainstream financial integration.



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