Markets Unstructured:

The Importance of Connectivity in the Reinvention of Markets

A Series of Three Short Papers

Paper II

Rewiring Connectivity: The Structural Shift Underway

Market Structure Partners

March 2026

INTRODUCTION TO THE *Markets Unstructured* SERIES OF PAPERS

Market structure is becoming unstructured. It is no longer organised around the transparency and rule frameworks of a small number national exchanges, which were once the gatekeepers of domestic market integrity. Instead, it is shaped by control over data, speed, balance sheet capacity, and connectivity. Price formation is shifting from public venue-centric exchanges to a dispersed, network-driven ecosystem with no single arbiter of integrity or access rules.

Policymakers anticipated regulatory change would lead to asset classes converging toward transparent, multilateral Central Limit Order Books (CLOBs) modelled on equities. In practice, two decades of competitive dynamics, combined with restricted access to data and a reduction in data standards have skewed economics, reduced market confidence and permanently changed market structure. The result is a reinvention of markets with deeper information asymmetry, increasing frictional costs and a reshaping of liquidity economics.

Trading behaviour reflects these shifts. Equity markets are exhibiting signs of "bondification": orders that once interacted transparently on lit books are increasingly executed bilaterally through internalisation, RFQ mechanisms, and other off-venue channels. Equity liquidity is fragmenting rather than consolidating and bond markets remain stubbornly RFQ. Investors increasingly seek to minimise information leakage and market impact in an environment defined by proliferating liquidity pools, uneven visibility and speed advantages.

Connectivity - the infrastructure that transports, processes, and displays high-density message traffic – is now systemically important for all asset classes. Once regarded as operational plumbing linking buy-side firms to brokers and exchanges, it now determines access to a growing number of dispersed liquidity pools.

In this networked market, competitive advantage depends on data ingestion, analytics, capital deployment, and seamless access to liquidity channels across asset classes - not just routing to and from a single asset class venue. As price formation decentralises, the central governance question emerges: who upholds transparency, fairness, access rules and integrity when there is no single visible order book, or venue rules, anchoring the system?

Market Structure Partners (MSP) examined this transition through interviews with 30 global participants across the buy side, sell side, and connectivity providers. The findings, presented in three short papers, analyse changing liquidity formation, its impact on connectivity models, approaches to changing connectivity architecture, and governance reform. They conclude that sustainable market growth depends on interoperable, stakeholder-controlled networks capable of delivering portable, auditable data across asset classes and liquidity models.

Policymakers who treat connectivity as core infrastructure and the quality of data that flows through it as a prized asset, will set the right conditions for growth. Meanwhile participants that grasp, and act upon the magnitude of change will shape the next phase of global trading and their role within it.

Paper I

"From Siloed Markets to Free-Flowing Ecosystem"

Reviews the changing shape of market structure and looks at sustainability of current access models as participants respond to structural shifts in liquidity and price formation.

Paper II - (this paper)

"Rewiring Connectivity: The Structural Shift Underway"

Looks at the infrastructure challenges faced by firms and the actions being taken to reshape their financial market connectivity.

Paper III

"From Vision to Execution: An Industry Action Plan"

Examines how the analysis from this report can be turned into an action plan to facilitate the transition of market stakeholders to the next generation of market infrastructure to support market growth.

Executive Summary: Paper II

Paper I of this three-part Markets Unstructured Series explained how liquidity is dispersing and increasingly moving to multiple RFQ channels, pitching trading venues, traditional sell-side intermediaries and automated market makers against each other as their value propositions all start to merge. This second paper examines the challenges of the technical and commercial transformation required to underpin these changes in market structure and the implications for market access, competition, and execution outcomes.

- What was once a simple network of point-to-point interaction, using dedicated circuits paid for by the sell-side, to route flow in a linear direction from buy-side via sell-side intermediaries towards a few trading venues is becoming a fragmented, complex "network of networks," driven by increasing competition to interact with investor flow. This shift increases technical complexity, as firms must manage multiple connections, APIs, and workflows with different latency, cost, and resilience needs.
- Access to liquidity is, therefore, increasingly tied to technology investment and who is prepared to pay for what and for whom. As the urgency to invest increases, unpicking the current commercial and technical model is a challenge:
    - A few technology providers dominate, and connectivity costs are rising despite falling underlying infrastructure costs. Pricing is often disconnected from economic reality, sustained by vendor lock-ins, bundled pricing and rebate structures.
    - Sell-side providers, who previously paid for clients' connectivity are becoming more selective, linking their willingness to continue to pay to client profitability as order flow shrinks.
    - Connectivity is becoming tiered, widening the gap between participants and reinforcing disparities in access, market structure and potentially in execution quality.
    - Both buy and sell-side firms face a constrained choice between connecting to fewer liquidity pools or paying more for broader access and then choosing between less stable or more resilient solutions.
    - Buy-side firms that no longer qualify for sell-side sponsorship must take up the reins and invest to find other solutions, but the current commercial arrangements are opaque and switching suppliers is difficult.
- Firms want to change. Advances in APIs, cloud, and platform-based architectures are enabling "connectivity as a service"- including broker-agnostic access, centralised routing, and scalable integration. However, these developments primarily transform the application layer rather than the underlying network. Further adoption remains constrained by legacy infrastructure, constrained budgets, and entrenched vendor incentives.
- Technology alone, therefore, cannot fix all these issues and investments cannot be optimised without structural reform to meet the industry's needs. These include better cost transparency, clearer delineation between the roles of all market participants and the vendors that underpin the infrastructure, as well as expanded regulatory focus beyond the historic focus on traditional on-exchange CLOB trading.
- Most importantly, future transformation is not just about the physical network layer but also depends on the data that travels through the pipes which needs to be standardised, interoperable, and AI-ready—enabling fairer access to liquidity, greater competition and a more efficient, unified market.

Outreach Findings

1 Connecting In to Connecting Out

Connectivity in today's trading landscape remains anchored to the legacy assumption that sell-side firms and execution venues own the technology stack, and that buy-side participants must route their orders to market by "plugging into" each broker or venue's proprietary network, creating a fragmented and infrastructure-intensive environment.

Despite falling hardware costs, total connectivity spend continues to rise. Firms must maintain multiple lines, counterparty-specific infrastructure, and ongoing cross-connect and colocation arrangements. As a result, what appears to be a simple connection is, in practice, a multi-domain routing problem - where traffic traverses multiple networks, carriers, and control layers. Performance is determined not by a single link, but by how effectively traffic is routed across this "network of networks," with direct implications for latency, determinism, and ultimately execution quality.

Most buy-side participants still rely on Order Execution Management System (OEMS) connections to brokers (and paid for by the brokers) to reach the market (Exhibit 2.1) resulting in a fragmented architecture of broker-specific connections. Each counterparty often requires dedicated infrastructure, reinforcing duplication and limiting flexibility. As costs rise, liquidity disperses and brokers are less inclined to sponsor connectivity. Firms face a constrained choice: reduce the number of counterparties they access or increase direct investment in technology to regain control over routing and execution.

This model is also commercially misaligned. Connectivity pricing remains elevated, despite declining underlying costs, and is sustained by vendor lock-ins, bundled pricing, and rebate structures. These dynamics concentrate control among a small number of providers, may limit competition, and weaken incentives to pass efficiencies to end users.

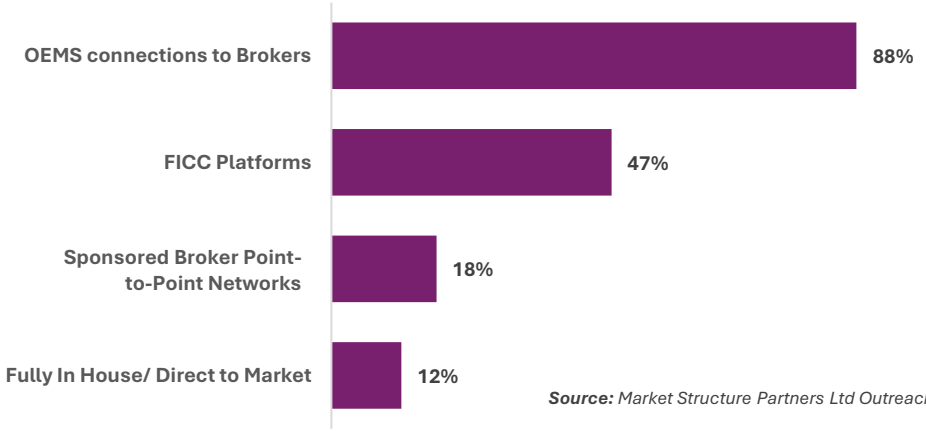
> *"If your client has PT, Algo and High Touch – you've got 3 lots of connectivity for three different regions – that's 9 separate connectivity costs per client. But market connectivity costs explode the minute clients want bespoke bilateral routes - 6 ELPs across 10 clients and you've suddenly bought 60+ connections – that's just not sustainable"*
>
> **Head of Connectivity, Tier 2 Sell-Side**

> *"Connectivity is still a mess – slow, expensive, and bottlenecked by vendor backlogs. EMS platforms are overwhelmed, trying to manage endless customisations while controlling everything top-down"*
>
> **Connectivity Consultant**

> *"We're evaluating the tech stack currently. API makes a ton of sense, especially for new asset classes and more flexible workflows. That doesn't mean ripping out the entire stack overnight - replacing core infrastructure isn't trivial - but we will keep investing in the decision and routing layer, expanding automation, and taking more control where it improves execution. What we won't do is sink time and money into rebuilding a full algo stack in-house just for the sake of it."*
>
> **Head of Execution, Large Global Asset Manager**

Exhibit 2.1

Which Connectivity Partners do you use? (Buy-side only)



Source: *Market Structure Partners Ltd Outreach*

Connectivity Communication

Today's prevailing form of messaging between market participants is based on data exchange across the internet and private networks, by breaking data into packets and routing them to specific addresses, thereby ensuring reliable, ordered delivery between computers.

As equity markets became electronic, participants voluntarily coalesced around The Financial Information Exchange (FIX) Protocol, a non-proprietary protocol to send real-time messages. FIX relies primarily on using standardised tag values that represent specific data elements, but customisation is also possible. It operates on two levels: the session layer, which manages connectivity and reliability, and the application layer, which handles trade data like orders and executions.

This has worked remarkably well for the industry, and, over time, FIX has also become widely used across asset classes, also acting as the industry standard for electronic trading in fixed income, including government bonds, corporate bonds, and derivatives and now moving into Digital Assets and Carbon Trading.

However, the lack of mandated use of FIX, or any other protocol, and no single body to enforce appropriate use of tags, can lead to data inconsistencies and result in poor interpretation of data. As liquidity disperses to an increased number of alternative liquidity sources, how tags are used is becoming critical to locate addressable liquidity.

These messaging frameworks and protocols work regardless of the type of underlying hardware being used.

Connectivity Hardware Choices

Historically, connectivity was mostly run on leased telecommunications lines or dedicated circuits between individual participants, which became known as point-to-point connections.

While connectivity is still often described as point-to-point, this typically now reflects a logical session construct rather than true end-to-end physical connectivity. In practice, market access is better understood as a tiered model (see Exhibit 2.x) where each tier reflects a different combination of transport, connectivity method, and commercial structure, with corresponding trade-offs across performance, cost, scalability, and control.

Ultra-low latency typically requires co-location, specialised hardware, and even techniques such as processing partial data packets, while "low latency" in many institutional contexts still implies close physical proximity. For many firms it is now a trade-off between their latency relative to the competition and the economic value of speed. Firms have to balance the cost of being slow (missed execution, adverse selection) against the cost and risk of being fast (infrastructure spend, technical fragility, and trade-offs in resilience, governance, and security). The challenge being that as more trading is automated, the more the complexity is increasing.

"Managed FIX Networks are very expensive but valued for security/redundancy. No one wants to rely solely on VPN or cloud-based encrypted sessions."

Tier 2 Sell-Side, Head of Execution

"A cross-connect is literally an ethernet cable between two servers in a datacenter. The cost of that physical wire is a couple of pounds, and once it's in place the cost is zero. There's admin and tracking, but it's hardly worth £6k a year – but that is what they can get away with, not because it is really the cost."

Consultant

"Most FIX networks these days are VPN-based - lots of these are software-based VPNs, which are essentially free. You need experienced people to set them up... but once they are up, why is there any on-going charge? This is near 100% profit margin".

Consultant

"FIX is often assumed to be a standard, but the reality is as its voluntary - every firm has a patchwork of different systems, different connections, different formats meaning each implementation has its own quirks. So setting up a new broker connection isn't just plug-and-play - it requires customization, testing, and a lot of back and forth

Execution Consultant

"We've looked at alternatives and we're actually adding leased lines back due to the quality of SOR and latency issues - the point is making sure you have the right connectivity access for the type of flow."

Tier 2 Sell-Side Head of Connectivity

Explaining Connectivity Tiering Choices

Tier 0: Leading Edge (Ultra-Low Latency)

Specialised hardware (e.g., FPGA, custom silicon) and advanced communications infrastructure (e.g. microwave, millimetre wave, new fibre routes) designed for ultra-low latency. Primarily used by HFT firms and electronic liquidity providers. Delivers the lowest possible latency, but with very high cost, technical and operational complexity.

Tier 1: Direct Dedicated Connectivity (Leased Lines & Co-location)

This tier delivers low-latency, deterministic performance, typically combining co-location with dedicated circuits to provide guaranteed bandwidth and service levels. It underpins latency-sensitive trading, although true ultra-low latency is generally confined to Tier 0 environments. Despite being characterised as "direct," these connections are not always single-domain and may traverse multiple carriers. They are expensive to scale, with performance increasingly dependent on hardware and architectural optimisation.

Tier 2: Provider Networks (Hub-and-Spoke Models)

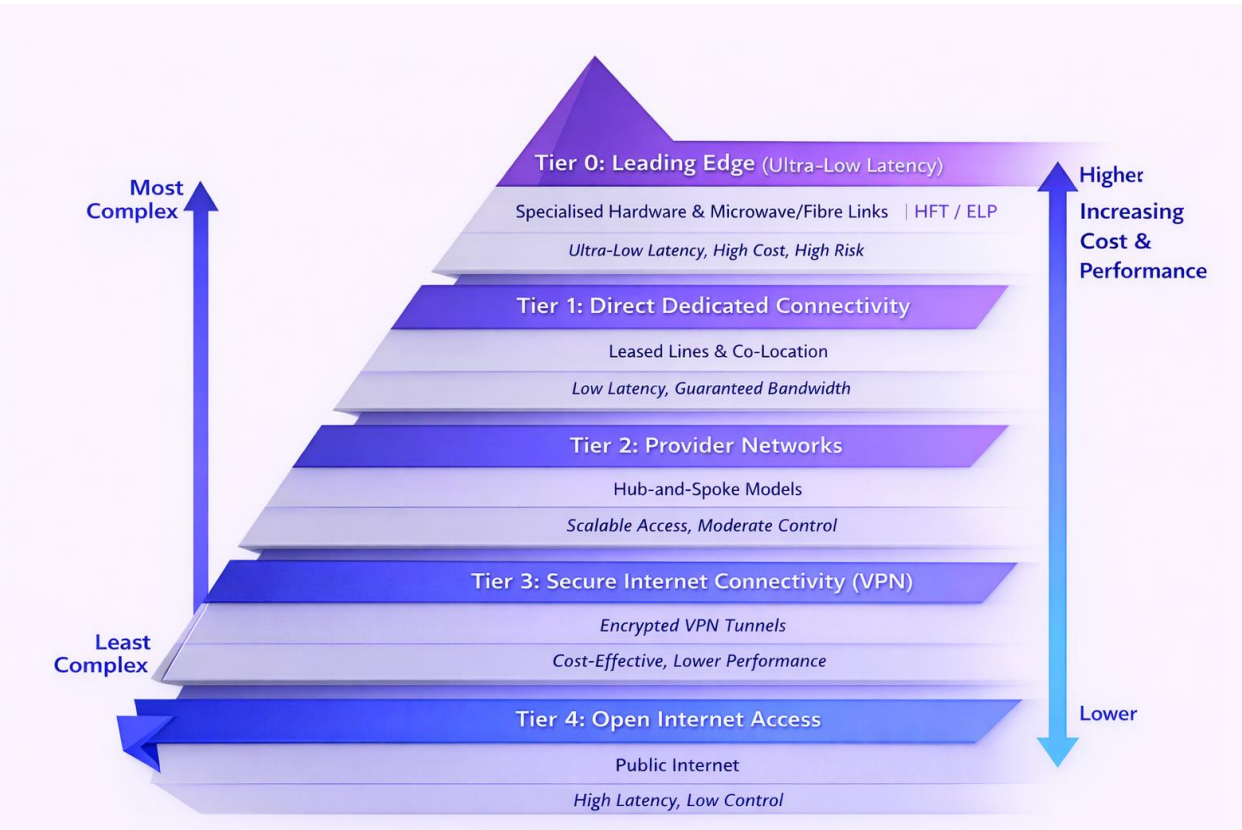
Provider networks enable scalable access to multiple counterparties through a single connection, abstracting routing and interconnection complexity. Connectivity is delivered as multiple logical sessions or, in some cases, via provider-managed aggregation. This improves efficiency and reach but introduces commercial dependency and reduces control over routing. Latency is typically predictable and consistent, though not traditionally optimised for speed.

Tier 3: Secure Internet Connectivity (VPN)

VPN connectivity provides encrypted access over the public internet and is widely used as a cost-efficient solution for less latency-sensitive workflows but with no guarantees on latency, jitter, or bandwidth, making it suitable where performance is secondary to cost and accessibility.

Tier 4: Open Internet Access

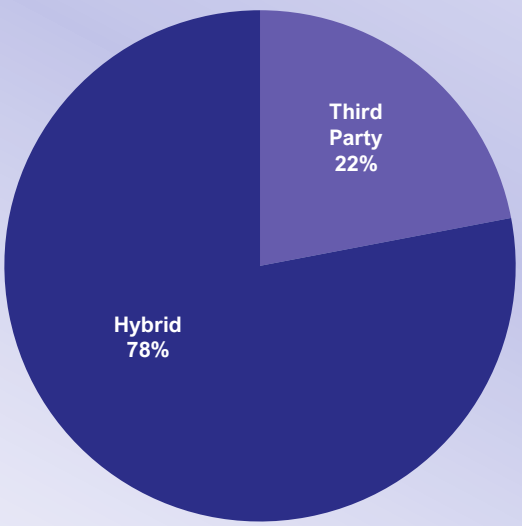
Direct internet connectivity provides maximum reach at minimal cost, but with highly variable performance and minimal control over routing or congestion. As such it is limited to non-critical workflows, retail access, and use cases where execution speed is not a primary constraint.



2 The Unsustainable Status Quo

Exhibit 2.3

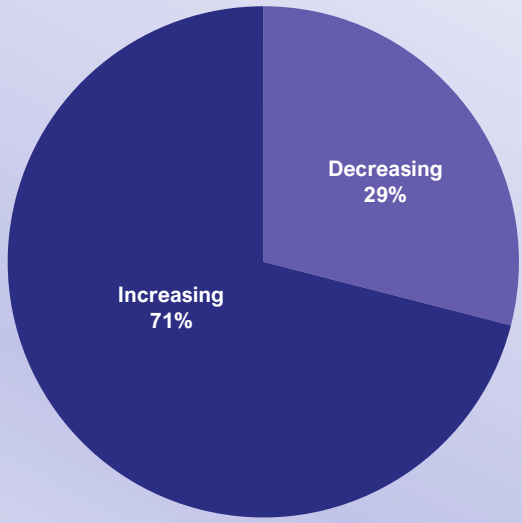
What is your primary form of connectivity today? (Sell-side respondents only)



Source: *Market Structure Partners Ltd Outreach*

Exhibit 2.4

Is the number of venues you are connected to increasing or decreasing? (Sell-side respondents only)



Source: *Market Structure Partners Ltd Outreach*

With trading automation advancing unevenly across asset classes and organisations, the reality is the sell-side has felt obligated to offer a myriad of hybrid client solutions across managed FIX Networks, leased lines, direct APIs or cloud links to meet client requirements dependent on activity, asset class or specific workflows.

While latency-sensitive, high-volume flow, still relies on dedicated managed FIX networks due to security and redundancy concerns, these are considered expensive. The sell-side are under pressure to maintain connectivity offerings but increasingly are opting for more cost- efficient means or – alternatively streamlining what they provide and to whom.

At the same time, outsourcing to third-party providers is increasing, reflecting both cost pressure and the growing complexity of maintaining connectivity infrastructure (see Exhibit 2.3)

These pressures are expected to intensify. Seventy-one percent of sell-side respondents expect to connect to more venues (Exhibit 2.4), which not only serves to increase costs but also deepens fragmentation.

This disproportionately impacts smaller participants, who lack the scale to absorb rising infrastructure costs. The result is an increasingly tiered market, where access to liquidity - and therefore execution quality - is determined by technology investment rather than market participation alone.

> *"All electronic flow handled is handled by a third party on dedicated hardware. We have 8–9 inbound connections today, most flow is via OMS/EMS networks – preferably BBG as it's the cheapest – it's only the large buy-sides who can be prescriptive about connection method."*
>
> **Tier 2 Sell-Side, Head of Execution**

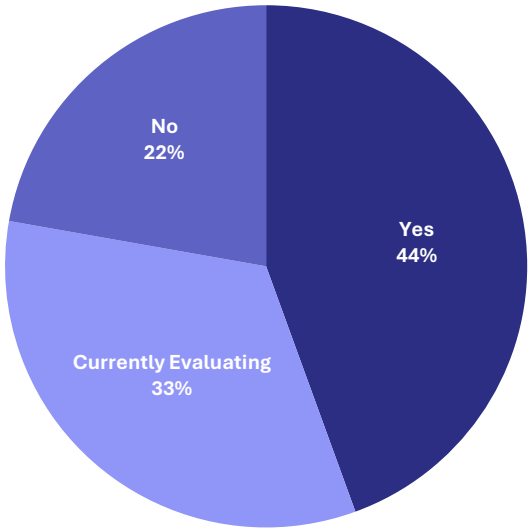
> *"Hybrid. Core connectivity we outsource and manage, but anything that's genuinely our IP - our algos for example - we build ourselves and keep tight control of".*
>
> **Tier 2 Sell-Side, Head of Connectivity**

> *"We are going through the techstack to support the different businesses with different needs – but trying to streamline what we offer – internally as well as to our clients to benefit from preferred pricing."*
>
> **Tier 2 Sell-Side, Head of Connectivity**

> *"Internalisation by larger brokers will also reduce smaller clients' ability to access SI/off-book flow unless they can bring more volume."*
>
> **Large Global Sell-Side, Head of Connectivity**

Exhibit 2.5

Are you planning significant changes to your connectivity infrastructure in the next 3–5 years?



Source: *Market Structure Partners Ltd Outreach*

Meanwhile, highly automated ELPs are gaining share, and increasingly facing the buy-side direct, leaving traditional brokers unsure where to invest to remain competitive. Forty-four percent of all firms interviewed already plan to change their connectivity infrastructure, with another third evaluating their options (Exhibit 2.5). The challenge is incumbent vendor arrangements often prevent meaningful change and efficiency gains through lock-ins, slow development cycles, and lengthy onboarding. Industry technology budgets have been curtailed for the last decade creating inertia to risk change without guarantees that the cost will deliver meaningful benefit.

As a result, many firms are looking to extend their current set up rather than to undertake radical strategic change. Others postpone modernisation because migration is disruptive - even though automation is expanding into tokenised assets, crypto, and other workflows where legacy stacks are outdated or poorly integrated. Structural change is therefore not optional, but inevitable (Exhibit 2.6)

> *"We'll invest to get off the legacy EMS transaction charges - more on cloud and connectivity. We'll also spend on SI readiness so we can internalise retail flow cost-efficiently and get proper real-time monitoring – we have to, to compete with the ELPs"*
>
> ***Tier 2 Sell-Side Head of Connectivity***

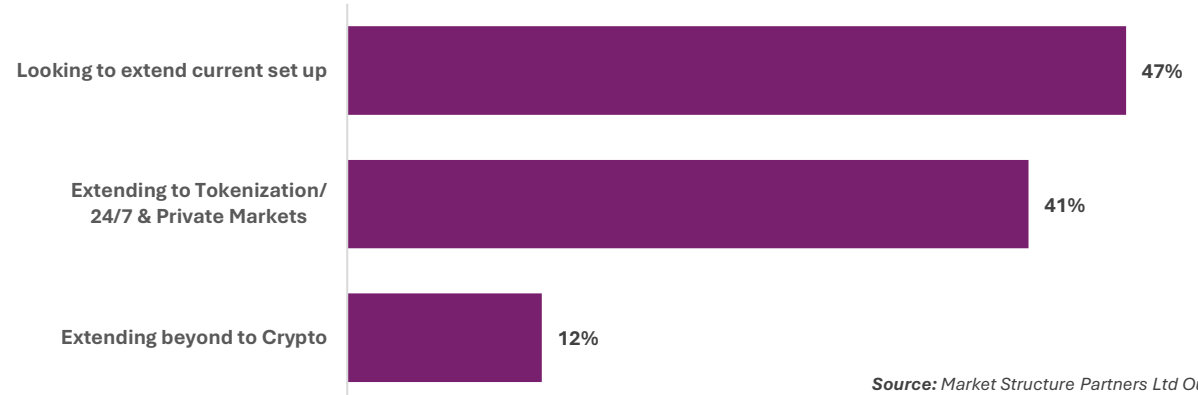
> *"Hub & Spoke is still a major part of what we offer clients, but the rebate system distorts everything, no one really knows who pays whom or how much - all it does is encourage maximum connections increasing the cost."*
>
> ***Tier 1 Sell-Side Head of Connectivity***

> *"The key is not trying to rip everything out at once. Nobody is going to replace their entire trading infrastructure overnight. What we need is a hybrid approach, where legacy systems coexist with more modern, API-driven models. REST, WebSockets, and event-driven architectures are the future, but the challenge is convincing firms to run them alongside their existing infrastructure rather than sticking with the old way of doing things."*
>
> ***Connectivity Consultant***

> *"We're in a situation where the financial industry has settled into an imperfect equilibrium - everything sort of works, so nobody wants to change it, even though we all know it's inefficient. Firms are reluctant to manage two technologies at once, which makes it hard to introduce new models. Meanwhile, crypto exchanges are moving ahead with modern technology and gradually integrating FIX, while traditional financial institutions refuse to integrate modern APIs"*
>
> ***Connectivity Consultant***

Exhibit 2.6

How do you anticipate your electronic trading offering will change in the next 3-5 years? (Buy-side responses only)



Source: *Market Structure Partners Ltd Outreach*

3 Future Connectivity as a Service

Connectivity is no longer just the ability to send orders - it has become the nervous system of modern markets, carrying validated data, decisions, and risk signals.

Rising costs, growing complexity, and regulatory pressure are pushing the industry toward broker-agnostic, application-level connectivity, where a single multi-port server can reach any broker, SI, ELP, MTF, or venue without bespoke infrastructure.

Reflecting this shift, the sell side is accelerating API investment: 67% plan to deploy cloud APIs as interoperable, API-led architectures become essential for multi-asset connectivity and strategic decision-making (Exhibit 2.7). However, access to these capabilities remains uneven. Without structural change, the benefits of modern connectivity models risk accruing primarily to well-resourced participants, reinforcing existing disparities.

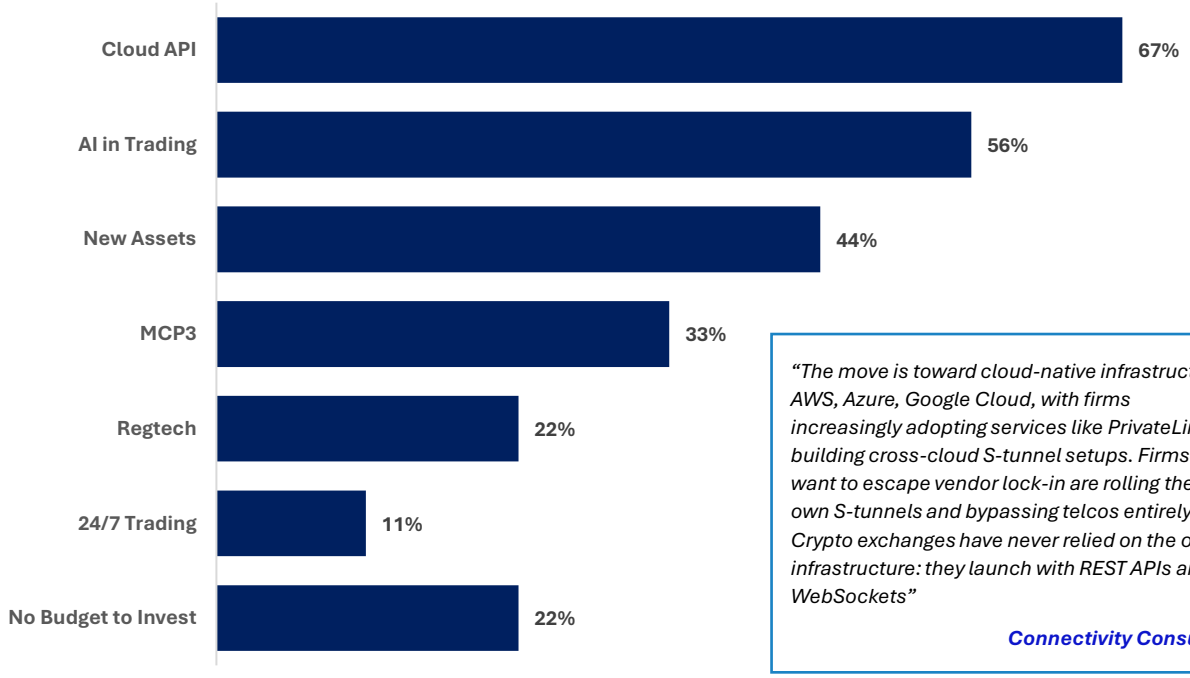
> *"It's not a technology problem - it's a mindset problem. People don't like change, and there's a reluctance to embrace modern, automated solutions."*
>
> ***Connectivity Consultant***

> *"Now everything runs in AWS, with our own FIX engine and VPNs per broker - everything from connectivity, monitoring, onboarding, and troubleshooting is managed internally."*
>
> ***Trader, Hedge Fund***

> *"Connectivity in capital markets is shifting as exchanges move to the cloud, removing the need for leased lines, co-location, and central hub networks, and making public internet reliability the key dependency now"*
>
> ***Tier 2 Sell-Side Head of Connectivity***

Exhibit 2.7

Are you preparing your connectivity infrastructure for any of the following? (Sell-side only responses)



Source: *Market Structure Partners Ltd Outreach*

> *"The move is toward cloud-native infrastructure: AWS, Azure, Google Cloud, with firms increasingly adopting services like PrivateLink or building cross-cloud S-tunnel setups. Firms that want to escape vendor lock-in are rolling their own S-tunnels and bypassing telcos entirely. Crypto exchanges have never relied on the old infrastructure: they launch with REST APIs and WebSockets"*
>
> ***Connectivity Consultant***

But this is just the start. As markets move toward T+1/T+0, continuous settlement, tokenised assets, and a global, always-on, multi-asset marketplace, connectivity must evolve quickly. Shorter settlement cycles will require real-time automation across order, execution, and post-trade workflows, while buy-side demand converges on 24/7, multi-asset, tokenised trading. Connectivity must adapt to each asset class's optimal workflow rather than "equify" them - recognising that current vendor solutions may not meet future needs for all asset classes.

Cloud Changing Connectivity

Cloud infrastructure has introduced new deployment and operating models, enabling rapid provisioning, elastic scaling, and global reach at lower cost. However, it has not fundamentally changed how connectivity between market participants operates. While its efficiency benefits are increasingly recognised, interoperability between cloud providers remains limited in practice—effective connectivity typically requires counterparties to be co-located within the same cloud environment. Where this is not the case, firms still rely on traditional network constructs. As a result, performance-sensitive workflows such as trading remain constrained by latency, integration complexity, and cost, and often continue to depend on on-premises infrastructure.

What is changing is not the underlying network, but the delivery and control layer. Connectivity is increasingly being repackaged as a cloud-delivered, API-enabled service rather than a set of physical connections (see Exhibit 2.8).

- A single connection replaces multiple point-to-point integrations.
- Routing, onboarding, and session management are handled within the platform.
- APIs and self-service tooling provide visibility, configuration, and control at the application layer.

This shift reflects a broader transition from physical connectivity to access, where the value lies less in the network itself and more in how access, control, and interoperability are delivered.

Cloud Connectivity

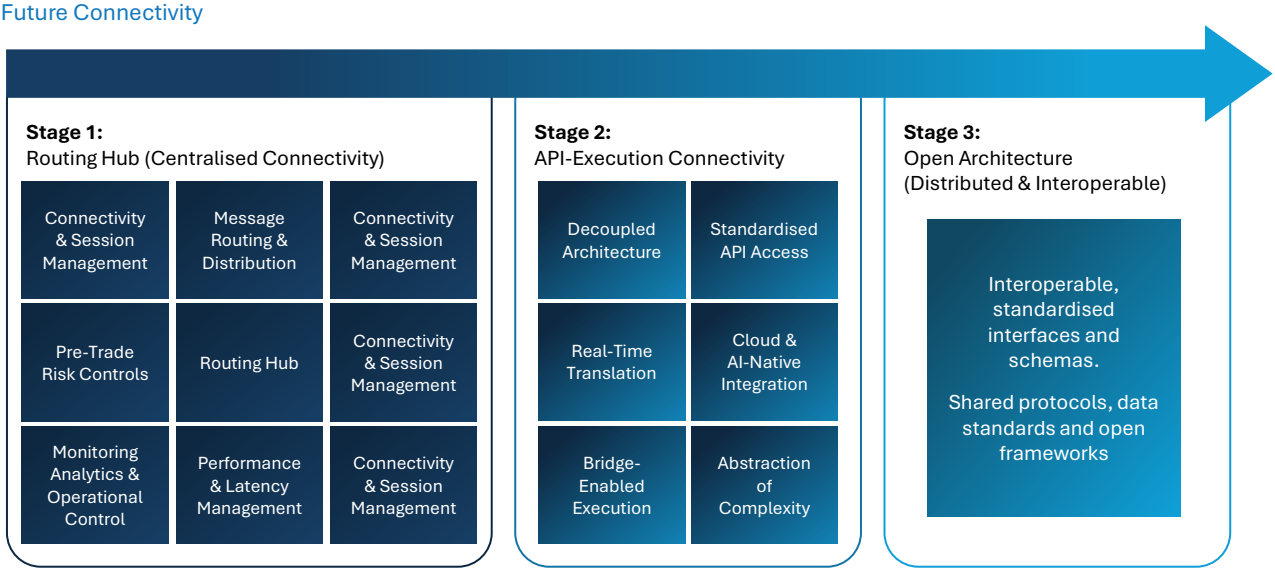
- Offers lower-cost, globally accessible infrastructure
- Suitable for backups, smaller participants, and non-latency-critical workflows
- Provides built-in security controls, telemetry, and resilience
- Not a one-size-fits-all solution
- Predictable latency can be hard to achieve
- Performance variability is common
- Integrating cloud with on-prem trading systems introduces interoperability challenges

> *"Connectivity is not just physical its also logical - mapping efficient/lower latency routes or managing data protocols. You need to consider service levels for routing networks and liquidity connectivity - instrument types, trading styles or workflows – trading RFQs on a corporate bond or post trade transaction reporting won't require the same quality of service as executing an algo trade for Nvidia on Nasdaq"*
>
> ***Vendor***

> *"Now you have cross cloud connections – that's a gamechanger – the reasons why Cloud didn't work are disappearing – combine that with the advances AI is bringing in software and all of a sudden – connectivity starts to look very different"*
>
> ***Vendor***

Exhibit 2.8

Future Connectivity



4 Getting AI-ready

Connectivity can no longer be treated as background plumbing. It now determines whether firms can actually reach liquidity, interact with prices, and participate competitively in the market.

Firms no longer connect to a single venue; they connect into a fragmented network of streaming prices across a variety of different assets. Connections, lines, endpoints, and integrations have expanded into a complex mesh of routes, vendors, and infrastructure dependencies. This complexity now directly shapes execution quality, market visibility, resilience, and competitive positioning. There is a clear economic trade-off: invest heavily to access broader liquidity or connect selectively and accept incomplete market coverage. Not all workflows require low latency, so the challenge is determining where it matters and when.

The current model is not sustainable at scale. It drives fragmentation, performance variability, and operational complexity while concentrating power among a shrinking number of providers. Larger firms can fund broader, faster, and more resilient connectivity; smaller participants increasingly depend on intermediaries to reach liquidity they cannot access directly. Meanwhile, dominant incumbent vendors have limited incentive to support change that undermines existing economics. Without intervention, the result is a more intermediated, less transparent, and more unequal market structure.

Rising data volumes, storage needs, power consumption, and infrastructure demands further strain the model. The integration of AI into trading systems raises the bar again. AI-driven workflows are highly sensitive to data quality, sequencing, jitter, and connectivity consistency. Weaknesses in any layer will degrade model outputs and decision-making - creating the practical pressure for change that has so far been absent.

AI-native trading requires consistent data, standardised protocols, and precise timestamping to ensure accurate sequencing, reliable outputs, and regulatory traceability. These are no longer enhancements; they are minimum operating requirements. Any deficiency across connectivity, data, or control layers will directly impact performance, visibility, and risk management.

It will require delivering market data and execution access more efficiently, so firms can maintain resilience without continuing to multiple infrastructure. That speaks to a broader market need: reducing the hardware, power, and data centre footprint required to support modern trading – making access cheaper through greater standardisation where possible and improving visibility of what has happened where and when. The objective should not be to force everything back onto lit venues, but to better understand the true market more accurately.

This widening gap between infrastructure, data and system demands underscores the need for both architectural reform and industry alignment. The next phase will be defined by connectivity frameworks capable of supporting AI-native trading - where determinism, interoperability, and real-time data integrity are essential, not optional, for the future of trading.

> *"OPRA data is becoming incredibly expensive, because its not just that OPRA has grown to 45 or 90 lines – if you want resiliency that's 180 lines, which means you now need X number of servers. And it is just not having the servers – it's the power and the storage space – no one is even beginning to think about that"*
>
> ***Vendor***

5 The Importance of the Right Foundations

Connectivity-as-a-service and clean, standardised data are now the base requirements. The industry can no longer sustain fragmented workflows, opaque pricing, poor data quality, and legacy silos. Progress depends on four pillars:

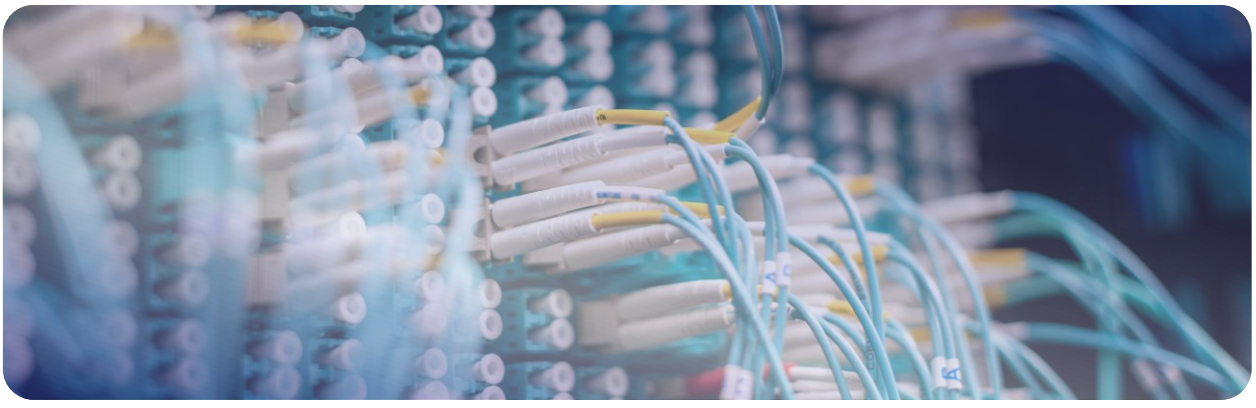
- **Transparency:** clear, consistent pricing, particularly in fixed income where EMS costs remain opaque.
- **Standardisation:** mandated, enforceable standards such as FIX, with consistent, flexible APIs (aligned where possible to FDC3-style cross-asset models).
- **Interoperability:** portable data, integrated pre- and post-trade tooling, seamless onboarding, and unified, real-time information across the trade lifecycle.
- **Cultural change:** reduced vendor lock-in, dismantling silos, and shifting from entrenched partnerships to more flexible, open structures.

Together, these will enable scalable, efficient, and more competitive future market access.

Ultimately, connectivity must become a reusable service layer rather than a bespoke build for every counterparty. Sell-sides will need to operate as API-first providers with clean onboarding, self-service diagnostics, automation, and strict interface contracts. Firms are already exploring alternative lightweight encrypted channels such as TLS*/Stunnel to reduce cost, simplify architectures, and enable multi-asset, API-driven, AI-enabled execution. These models also help the sell side manage rising bilateral connectivity costs as clients seek more flexible, transparent options. Cultural resistance and concerns about suitability for sensitive flow remain, though stronger governance, templated configurations, and centralised PKI5 may help mitigate these risks.

Buy-sides will need greater ownership of their technology stacks to improve market visibility and execution performance, as well as meet T+1 and operational resilience regulations, such as Europe's Digital Operational Resilience Act (DORA) requirements.6 The recent rise in outsourced dealing desks may initially appear cost efficient but potentially also introduces conflicts of interest at a time when regulatory demands for transparency, traceability and accountability are only increasing.

* *TLS (Transport Layer Security) is a cryptographic protocol that secures data transmitted over a network, ensuring privacy, data integrity and authentication between computers.*



Coming Next:

Paper III) *From Vision to Execution: An Industry Action Plan*

The final Paper III in this series addresses future implementation and governance, proposing portable data standards, participant-controlled connectivity, enhanced resilience and supervisory oversight. Together, the three papers trace the transition from siloed markets to networked execution, from broker-funded access to participant-owned architecture, and from fragmented data pipelines to interoperable, auditable infrastructure capable of supporting a 24/7, multi-asset trading environment. Connectivity is no longer operational plumbing but a core determinant of market access, transparency, resilience and competitive advantage.

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The authors of this report are Niki Beattie and Rebecca Healey. In relation to this report, Niki Beattie, has been an Independent Non-Executive of one of the firms mentioned in this report and a Non Executive Director of the sponsor of this report. Between 2017 and 2022, she was Independent Chair of XTX Markets and a Non-Executive Director of iress from 2014-2025. She was also the author of the report “there’s no Market in Market Data”, published in February 2025 and cited in this report. Rebecca Healey serves as Co-Chair of FIX EMEA, a member of the FCA’s Secondary Markets Advisory Committee (SMAC), ESMA’s Securities and Markets Stakeholder Group (SMSG), and ISO TC 68 Strategic Leadership Team.