Markets Unstructured:

The Importance of Connectivity in the Reinvention of Markets

A Series of Three Short Papers

Paper I

From Siloed Markets to Free-Flowing Ecosystem

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 - (this paper)

"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

"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 I

Setting the scene:

- Equity and Bond markets were founded on bilateral Request for Quote (RFQ) protocols where pre-trade order information was not transparent to the market.
- Automation of markets evolved at a different pace and on different infrastructure within asset-class silos. Market technology and connectivity reflected these separations.
- Equity markets transitioned to transparent, multi-lateral trading through Central Limit Order Books (CLOBs), on national exchanges where membership and member rules governed national market integrity.
- The traditional model relied on buy-side commissions paid for the provision of valued exchange access, connectivity, and order management infrastructure. Buy-side trading interfaces and telecoms pipes were paid for by the sell-side and often provided by a third-party vendor. Messaging standards and data quality largely depended on voluntary industry coordination.
- Greater pre-trade transparency lowered barriers to entry, enabling Electronic Liquidity Providers (ELPs) to compete and offer liquidity. New trading venues emerged, and the sell-side competed to provide liquidity as Systematic Internalisers (SIs). Both relied on the ELPs to provide liquidity and ELPs did not have buy-side relationships.
- However, market fragmentation, weak data standards, and the separate sale of market data reduced data quality, increased costs and eroded market integrity with only two groups of beneficiaries.
- Firstly, incumbent exchanges appeared to have imposed unnecessary data charges leading to increased frictional costs and a reduction in visibility of overall market data, while, in many cases, using the profits to fund the growth of other non-equity businesses instead of reinvesting in the equity market. Secondly, ELPs who harnessed the power technology to clean and compile vast cross asset data sets for their own use with and further benefitted from the advantages arising from data asymmetries.
- Fixed income markets have remained focused on automating bilateral RFQ trading without transitioning to CLOB-style multi-lateral matching, but increased post trade transparency also allowed the ELPs to expand their business across asset classes.
- The ELP's increasing balance sheets and data-driven execution capabilities have allowed them to disintermediate venues and the sell-side and face the buy-side directly offering bilateral channels across multiple asset classes, competing with the sell-side SI businesses and reducing the value of sell-side order routing to traditional venues.
- Bilateral trading channels and SIs now offer greater certainty than trading on CLOBs and use of these channels has expanded across equity markets.
- The result is dispersed liquidity and fragmented revenue pools. Equity orders are now frequently executed by ELPs or SIs before reaching displayed markets where memberships and rulebooks apply. The traditional connectivity model - broker-subsidised access to markets funded by commission flow – is under structural strain.

Participants report that:

- These trends are accelerating. Execution is simultaneously becoming more tailored to individual strategies and increasing focus on price targets rather than price formation.
- Buy-side firms relying on broker sponsored models have limited control over data they receive and how they can use it, while facing growing operational complexity.
- At the same time, broker sponsored connectivity models are unsustainable with smaller buy-side firms already being cut off from solutions, forcing reconsideration, or proactively strategies, on how they connect to the market and what level of resiliency they require.
- Vendors appear able to monetise opacity rather than interoperability. Market data, connectivity, and execution economics are increasingly misaligned with best-execution objectives and market integrity.
- Buy-side firms are moving to multi asset strategies, including an increasing interest in crypto assets and tokenised securities. Siloed asset class connectivity is no longer fit for purpose and vendor pricing models are considered high and opaque.
- Buy-side firms increasingly realise they must take control of future market access. The Holy Grail is low-cost, state-of-the-art, multi-asset connectivity.

Setting the Scene

Siloed Market Evolution

Market technology evolved in asset siloes because market structure itself evolved in asset siloes. Each asset class implemented automation at a different pace and on a different infrastructure (See Exhibit 1.1).

Historically, both equity and bond trading were bilateral and manual. The buy-side (investors and asset managers) phoned the sell-side (banks and brokers) to request quotes (RFQ). Data was free as it was important to attract business but the sell-side controlled order information and used balance sheet to capture bid-ask spreads.

In equities, markets were mostly centred on national exchanges that shared a mutual interest with participants in the growthof the market. Membership of the exchange was a valued commodity, and rules governed access to liquidity and imposed reporting standards that supported domestic market integrity in the form of a holistic set of clean data for the market.

Exhibit 1.1

Traditional Siloed Trading Workflows

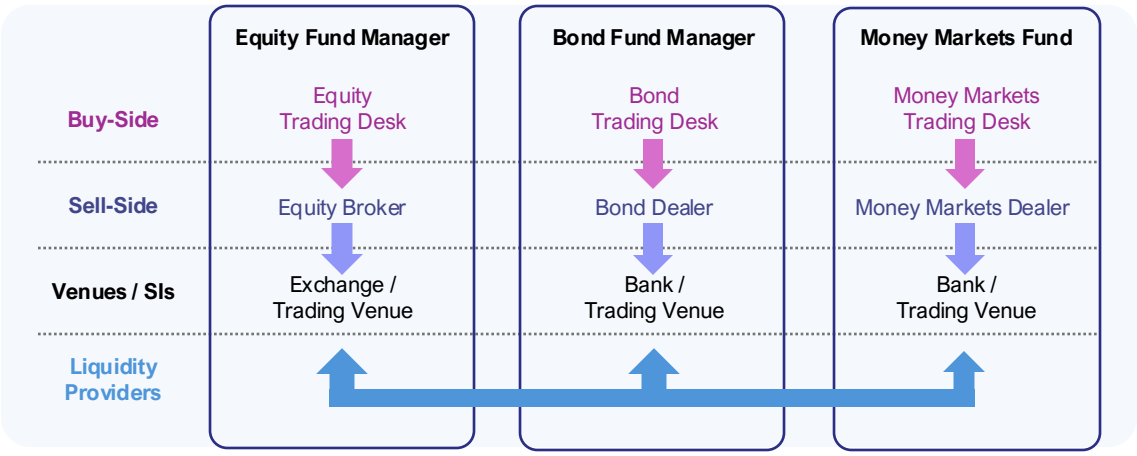
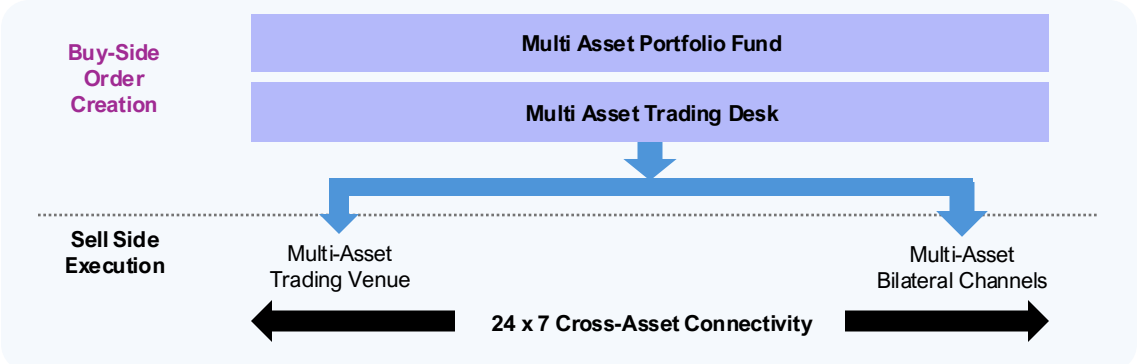


Exhibit 1.2

Free Flowing Ecosystem



Equity Electronification

Equities were the first asset class to move away from voice-based floor trading to electronic markets. In the 1990s, high liquidity and advances in computing enabled multilateral Central Limit Order Books (CLOBs) to replace trading floors, while regulation increasingly emphasized pre- and post-trade transparency. For decades, electronic market development was largely defined by this electronification of markets which has become the prevailing model of equity trading.

The sell-side built the infrastructure that enabled the shift. The buy-side paid commissions for order management and exchange access via broker memberships. In return, brokers funded execution management systems and telecom connectivity – typically provided by third-party vendors to facilitate electronic order routing. Trading venues also depended on sell-side built software to interface with their APIs and manage routing, compliance and data exchange.

Demutualisation in the late 1990s and early 2000s converted exchanges from member-owned utilities into for-profit companies, shifting incentives from collective market development to delivering shareholder returns.

As electronic trading scaled and order-level data improved transparency, barriers to entry fell for new Electronic Liquidity Providers (ELPs) pursuing efficiency gains. In the US, ATSs facilitated off-exchange multilateral trading, while Reg NMS (2005) mandated inter-market price protection, reinforcing cross-market linkages. In Europe, multilateral trading facilities (MTFs) provided pan-European competition to exchanges, and the Systematic Internaliser (SI) regime formalised rules allowing sell-side firms to offer bilateral trading services in competition with venues, subject to regulatory requirements. Competition intensified, forcing incumbent exchanges to compete for order flow. However:

- Reporting of post trade data was mandated but there were few mandated, standardised flags.
- Each venue determined its own API for sending and receiving messages.
- The market was expected to voluntarily create and adhere to certain message and data transmission protocols. FIX protocol was established and adopted but had no regulatory status or ability to mandate use of FIX message tags and standards.
- Exchanges began to commercialise market data as a standalone product separate from the trading activity it underpinned.

The result was a melee of data messages with no clear rules governing their use. Firms and vendors were forced to source and cleanse data from multiple providers to construct a complete view, while access to CLOB market data became restricted because it now had to be paid for.

The Consequences of Missing Data on Market Integrity

Policymakers appear to have underestimated the implications of not addressing the issue of data.

As new trading venues and Systematic Internalisers (SIs) multiplied, market data became dispersed across many execution points. Although transparency rules applied, there was no neutral central authority to ensure consistent data standards. As a result, data quality and comparability increasingly depended on commercial incentives.

At the same time, incumbent exchanges facing competition appeared to offset declining trading revenues by imposing unnecessary market data charges. This meant overall trading costs for participants did not decline, and rising data and connectivity expenses limited the competitive impact of venue fragmentation.

Accessing complete, multi-venue order book data became more complex and costly. Firms and vendors made commercial decisions about how much data to purchase, aggregate, and clean, leading to inconsistent market views across participants.

These data asymmetries increased both explicit costs (data, connectivity, infrastructure) and implicit costs (adverse selection and information disadvantages). Fragmentation benefited larger, well-capitalised firms able to invest in comprehensive data capabilities and technology:

- Incumbent exchanges have made significant profits but, now they no longer have a mandate to seek mutual growth for the market, have not necessarily reinvested these profits in the underlying equity market structure and may, instead, have used those profits to fund the growth of other businesses.[1]
- For those that have the skills and financial resources to obtain, clean, store and analyse huge data sets to form their own holistic view of the market, such as Electronic Liquidity Providers (ELPs), quant firms, and technology-led market makers, information asymmetry, and the speed at which to react to this, has become a significant advantage for making money as well as for transforming their role in market structure.
- Sell-side firms may have initially benefitted from the opacity of SI data but have ultimately been squeezed by market data costs imposed by the exchanges and the ability of the ELPs to compete directly for their clients.

1: Market Structure Partners, "There's No Market in Market Data", February 2025

Bond Market Electronification

Bond markets did not follow the same path. Considered less liquid, they remained RFQ-driven and bilateral, and therefore underwent a different style of automation:

Post-2008 capital rules (Basel III[2], leverage ratio[3], Volcker[4]) constrained dealer balance sheets, pushing activity toward smaller, electronically processed transactions where risk could be recycled quickly.

In Europe, MiFID II[5] did not address pre-trade transparency that might have encouraged the move to CLOBs. Instead, it focused on post-trade transparency rules that required systematic data capture and accurate, timestamped audit trails. To comply, venues had to digitise workflows previously handled by voicemail, chat, or hybrid processes-accelerating automated bilateral RFQ trading, largely via vendor trade processing workflows.

Improved pricing data (TRACE[6] in the US and MiFID II transparency in Europe) is improving algorithmic pre-pricing. Dealers are increasingly comfortable auto-quoting and auto-executing RFQs but, at the same time, increasing data transparency also enabled ELPs to expand into fixed income. All-to-all electronic RFQ platforms allowed buy-side-to-buy-side and non-bank liquidity provision without requiring exchange-style intermediation and memberships. However, these platforms merely automated existing bilateral workflows, keeping traditional market makers at the centre.

As in equities, market participants were expected to voluntarily adopt messaging protocols and standards and have typically migrated to use FIX. The same difficulties in finding a clean and holistic set of data are arising.

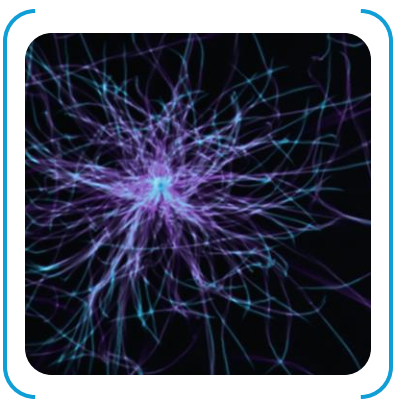
The "Bondification" of Equities

Fast forward a decade, and the power base shift is almost complete.

COVID accelerated electronification as work-from-home policies disrupted traditional voice trading.[7] ELPs by now had significant balance sheets of their own and capitalised on the opportunity to bypass the conventional trading workflow, which had originally relied on incumbent sell-side in both equities and bonds to act as intermediaries, to firmly establish bilateral relationships directly with the buy-side. Meanwhile the prohibitive cost of compiling CLOB data sets has reduced visibility and undermined trust in lit markets.

A further level of information asymmetry is emerging across asset classes with more fragmented data, increasingly uneven adherence to voluntary publishing standards and access to information, fewer rules governing who can see what and where and increasingly inconsistent transparency. Market participants appear to no longer trust lit markets, preferring certainty of execution with a bilateral ELP versus exposing their orders on a CLOB.

Rising revenues have concentrated even more economic power with ELPs, reinforcing a self-perpetuating cycle of greater investment in technology. For example: Jane Street's H1 2025 revenue is estimated at US$17.3 billion;[8] XTX reported roughly US$3.4 billion for 2024 ; and even smaller firms, such as Hudson River Trading, have grown revenue by more than 50% year-on-year[9] - achieved with only a fraction of the staffing of large banks. The traditional sell-side and operators of CLOBs are being left behind.



2: https://www.bis.org/bcbs/basel3.htm
3: https://www.bis.org/publ/bcbs270.pdf
4: https://www.federalreserve.gov/supervisionreg/volcker-rule.htm
5: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R0583
6: https://www.finra.org/filing-reporting/trace
7: "The Future Office: From Fixed to Fluid", Redlap Consulting, January 2022
8: https://www.bloomberg.com/news/articles/2025-09-02/jane-street-s-10-1-billion-trading-haul-sets-wall-street-record
9: https://www.bloomberg.com/news/articles/2025-09-02/hudson-river-trading-revenue-more-than-doubles-to-2-62-billion

Free Flowing Ecosystem

Going Full Circle

Markets effectively have come full circle. Both equities and bonds are increasingly bilateral. Rather than representing different parts of the value chain, trading venues, incumbent sell-side and ELPs are now all competing for the same flow s buy-side traders decide where and how to trade (See Exhibit 1.3).

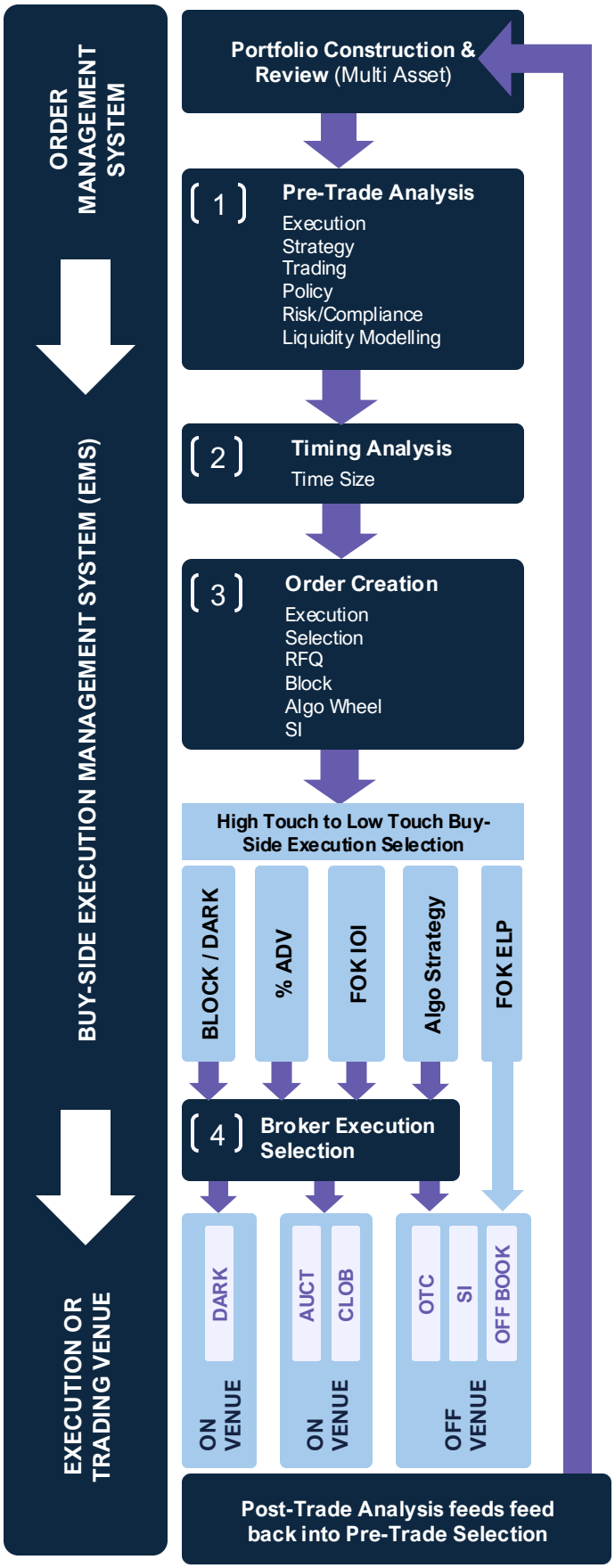
Sell-side brokers without economies of scale are being disintermediated while RFQ-style and Fill-or-Kill workflows are now becoming an equally important part of broker smart-order routers and algo wheels.

The information advantage once held by the sell-side sales trading desks has shifted to the ELPs, and both the sell-side and the buy-side, have to adapt to meet this change.

Membership of a venue is no longer sufficient to uphold market integrity across multiple liquidity pools. As data ownership, analytic capability and speed determine competitive advantage, the economic value of access to traditional trading venues continues to decline – along with the reason for issuers to list.

Exhibit 1.3

New Buy-Side Trading Workflow Waterfall



Outreach Findings

1 Markets Are Becoming Unstructured

The majority of participants (78% interviewed on both buy and sell side) believe that markets are becoming increasingly bilateral across asset classes, and this is their greatest preoccupation. However, there is also focus on preparation for tokenisation and AI from a smaller percentage (33%).

Exhibit 1.4

How do you anticipate electronic connectivity will change in 3–5 years? (All Respondents)

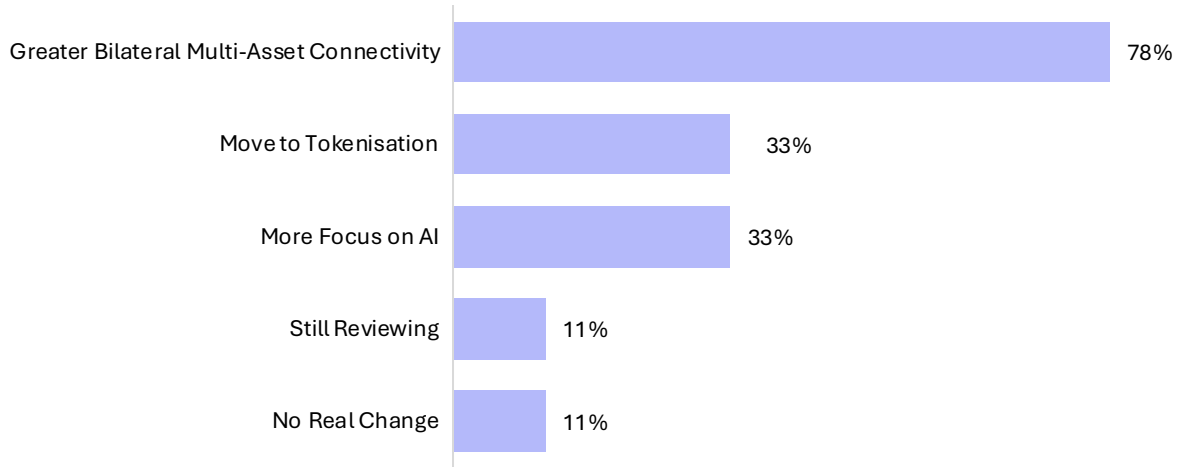
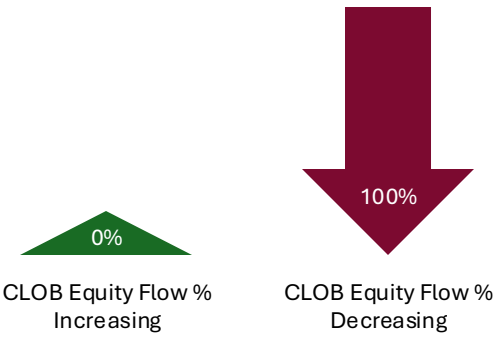


Exhibit 1.5

Do you think the percentage of your equity flow on Central Limit order books will increase or decrease in the future? (Sell-side responses only)

When sell-side firms alone were asked whether they saw the percentage of flow on order books increasing or decreasing, 100% believed there would be a decrease in the amount of flow being sent to CLOBs.



Source: *Market Structure Partners Ltd Outreach*

2 From Price Formation to Price Targets

The shift away from traditional price-formation venues, such as CLOBs, is accelerating. In our outreach, 100% of sell-side respondents expect bilateral activity to rise, and 78% of all respondents anticipate overall growth in risk trading (see Exhibits 1.4 and 1.5). 64% of buy-side respondents anticipate a decline in the proportion of activity traded on a CLOB (see Exhibit 1.6).

This signals a structural transformation: the share of equity traded on traditional CLOBs will continue to decline, giving way to liquidity models centred on locating liquidity at established price targets rather than relying solely on exchange-based price formation.

The narrative in the interviews suggests execution is simultaneously becoming more tailored to individual strategies and portfolio managers as trading grows increasingly technology-driven and expands across multiple assets, venues, and time zones. Portfolio managers now assess risk in real time and treat cross-asset liquidity as an investment opportunity,[6] requiring execution workflows that are broker-neutral, cloud-native, cross-asset, and fully distributed. These workflows must support complex functions such as multi-leg strategy execution, simultaneous cross-asset hedging, bilateral connectivity, low-latency data ingestion, and AI-driven analytics and signal generation.

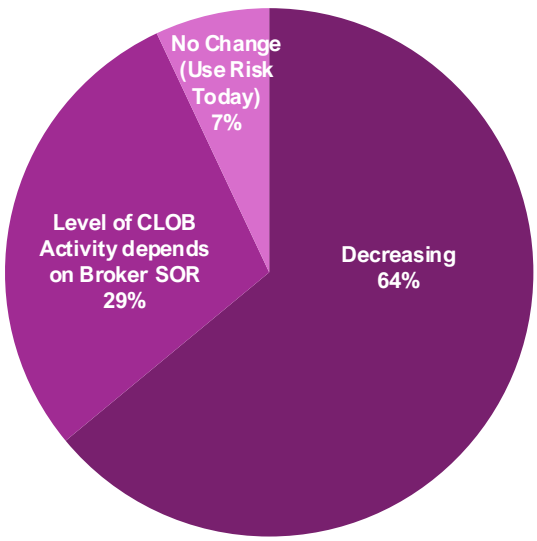
> *"Today, the primary CLOBs still matter – you can't ignore a venue doing 38% in a given name – but that share is shrinking. Bilateral and alternative mechanisms are eating into it. Connectivity will need to stay broad because no single channel dominates"*
>
> **Tier 2 Sell-Side Head of Execution**

> *"One of the major bulges has told us they plan to internalise 70% of their flow by next year"*
>
> **Head of Dealing, Large UK Asset Manager**

Exhibit 1.6

What percentage of your equity flow do you think you trade on a central limit order book now vs in the future? (Buy-side responses only)

Source: *Market Structure Partners Ltd Outreach*



3 The End of the Traditional Connectivity Club

This evolution in market behaviour exposes the limitations of the legacy model in which the buy side relied on the sell side to supply their execution technology and to use their membership to route orders to a single, static venue. Market structure is shifting from hierarchical pipelines to an interconnected ecosystem led by ELP market makers, quantitative and statistical-arbitrage funds, and ETF providers offering low-cost diversification. These participants prioritise data-driven opportunities and minimal transaction costs, increasingly favouring bilateral trading over traditional CLOBs

Simultaneously, markets are becoming more multi-asset, including crypto, and adapting to the tokenisation of instruments. This broadening of asset classes forces firms to rethink the connectivity technology required to manage execution, liquidity, collateral, and data across fundamentally different market models and settlement cycles.

Yet legacy technology on the desks of the majority remains siloed and the current economics are deteriorating. Commissions continue to compress; brokers face rising connectivity costs as venues proliferate; liquidity management demands more advanced tools such as rules engines; exchanges continue increasing overall transaction costs; and CLOB trading becomes even less economical as ELPs consolidate market share.

As broker-sponsored networks, exchange memberships, and proprietary FIX pipes erode, connectivity is evolving from a routine operational expense into a strategic dependency. Every participant must reconsider how they connect and what level of resiliency they require.

The result is:

- A marketplace that is becoming more bilateral yet more participant-agnostic; more multi-asset yet more fragmented; more data-driven yet more agent-enabled; and increasingly 24/7 and globally linked.
- Connectivity must evolve accordingly.
    - With rising EMS costs, Buy-side firms now face a strategic choice: outsource execution to industrial-scale platforms or build differentiated workflows aligned to their investment processes. Either path requires connectivity that is participant-owned rather than broker-sponsored, interoperable rather than siloed, resilient rather than fragile, neutral rather than proprietary, multi-asset (including crypto), 24/7, and globally accessible.
    - Traditional liquidity providers must evolve as well, shifting from legacy economics to modular, lightweight, cost-efficient connectivity infrastructure designed for the multi-asset trading desk of the future. The old connectivity club is over; a new, open, and more cost-effective infrastructure era is already emerging.

"Connections are increasing due to fragmentation and demand for custom SOR – we've more than 80 connections – this liquidity pool – this RFQ. Its complexity not consolidation"

Tier 2 Sell-Side Head of Execution

"Between cost pressure, regulatory push and sheer frustration, change is inevitable. People will follow the crypto model – build lightweight, modular connectivity around REST. Vendors won't keep up. All the new connections are going onto Stunnel – it's been effectively implemented in FX, now all the new equity connections are moving across".

Connectivity Consultant

"We've built our tech stack ourselves and we pay direct for it ourselves; the costs are so low that there's nothing to subsidise. Everything runs through AWS, and even with VPNs to each broker we're talking–£4k a year all-in"

Hedge Fund Trader

"The "third way" will grow - connectivity based on liquidity of the product. More liquid products will trade like FX (ghost liquidity, multiple conditional orders) and illiquid assets will need bilateral"

Tier 2 Sell-Side Head of Execution

"Connectivity still functions, but it's inefficient, overpriced, and largely misunderstood. Firms are paying $500 a month for an Ethernet cable in Equinix – and no one can justify why. Meanwhile, crypto firms are operating on a different plane: no vendors, no bottlenecks – just direct, developer-friendly APIs"

Execution Consultant

"Historically it has always been the brokers pay the bill, not clients. Most clients know this, and few are willing to pay direct. Vendors can exploit this, layering hidden charges and it's getting worse. Costs rise every year, while commissions fall – it's just not sustainable – you can't be a broker for all clients, and you can't connect to every venue."

Global Sell-Side, Connectivity Management

"Our EMS bill has risen drastically despite cleaning up connections annually. Vendors change models without any warning. Half the charges can't be explained. There's so much opacity in our bills we are now using AI to scan all our invoices and building systems to automate the invoice reconciliation."

Global Sell-Side Connectivity

"Connectivity can only be added where it's economic otherwise, we are just adding to our bottom-line costs"

Tier 2 Sell-Side Head of Execution

4 Sell-Side Economic Realities

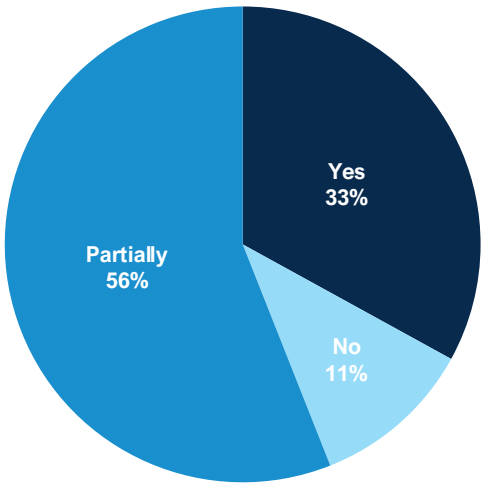
The key challenge in delivering the new trading requirements is that brokers continue to fund the connectivity infrastructure while seeing a declining share of the order flow it supports, making the model economically unsustainable for the Sell Side.

- 89% of respondents report that the sell-side currently absorb all or part of client connectivity costs which is unsustainable due to rising vendor costs, greater demand for connectivity options across asset classes and new trading methods versus falling commissions (Exhibit 1.7).
- As market dynamics continue to shift activity away from CLOBs toward more bilateral, RFQ, trading models, brokers face a need to grow the number of connection points along with a requirement for advanced trading tools to determine when, where, and how to execute. Direct lines currently remain the preferred method of connectivity, yet siloed, asset-class-specific legacy systems are no longer fit for purpose - the operational and indirect costs are too high and increasingly misaligned with client expectations.
- 67% of sell-side participants are already providing connectivity in more than one asset class (Exhibit 1.8). As automation and arbitrage expands further, this adds yet more complexity, making the current ecosystem uneconomic relative to new forms of connectivity in DeFi which can be considerably cheaper.
- With margins under pressure, many firms are beginning to "off-board" less profitable clients as they streamline their connectivity and execution footprint or alternatively internalise more flow to limit outbound connections.

> *"Equities, futures, and options are the core, but credit is catching up. Historically, banks were siloed, but now vendors' billing makes cross-asset transparency essential. Some clients only trade equities with us but sign up to futures/options packages and then don't really trade with us, which massively increases our vendor bill and because we often miss minimums, those parts of the business end up as loss leaders."*
>
> **Global Sell-Side, Connectivity Management**

Exhibit 1.7

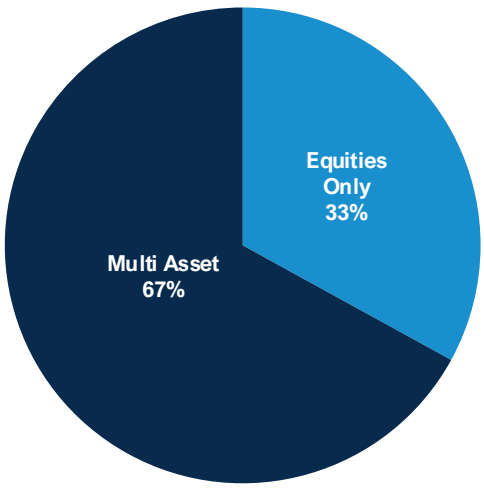
As a Broker - do you absorb connectivity costs for clients?



Source: *Market Structure Partners Ltd Outreach*

Exhibit 1.8

As a Broker – which asset classes do you provide connectivity for today?



Source: *Market Structure Partners Ltd Outreach*

- Connectivity costs are increasingly creating a two-tier market structure that favours clients with larger order flows. 89% of respondents cite a client's commercial viability as the key factor in deciding whether to subsidise connectivity (Exhibit 1.9). As a result, firms are placing greater emphasis on assessing client profitability, carefully balancing vendor connectivity expenses against the flow a client generates. Agency brokers, meanwhile, are working to aggregate bilateral liquidity sources more efficiently to help clients manage these rising costs.

This scrutiny is not limited to the sell-side. Many buy-side firms are also reducing the number of broker connections they maintain, recognising the escalating cost burden.

Effective management of these issues - whether on the sell-side or the buy-side - requires a clear understanding of connectivity cost structures. Yet this visibility is often lacking: 78% of firms report having zero or only limited transparency into these costs, making it difficult to accurately improve commercial outcomes (Exhibit 1.10).

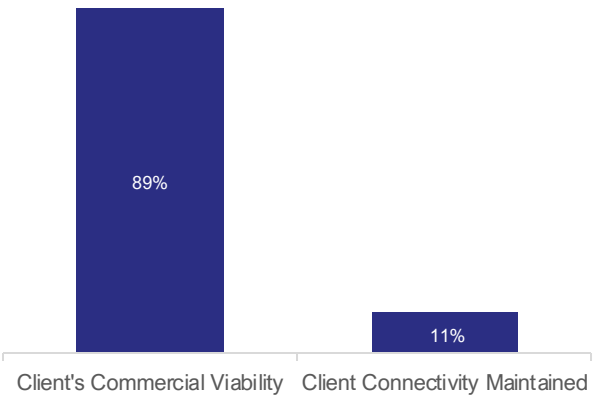
> *"We have zero idea of what our true costs are".*
>
> **Tier 1 Sell-Side Execution**

> *"Yes – selectively we pay client connectivity costs. Big, strategic, or specialist flows get help; long tail gets pushed to cheaper options or API/browser routes."*
>
> **Tier 2 Sell-Side Head of Execution**

> *"Now we actively profile client profitability including vendor costs. Some small clients' vendor costs are now 70–80% of comms. That makes the conversation unavoidable".*
>
> **Global Sell-Side Connectivity**

Exhibit 1.9

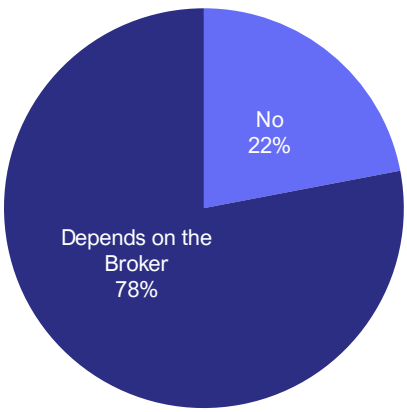
What factors drive your decision to subsidise a client's connectivity?



Source: *Market Structure Partners Ltd Outreach*

Exhibit 1.10

Are your external connectivity costs fully transparent and itemised?

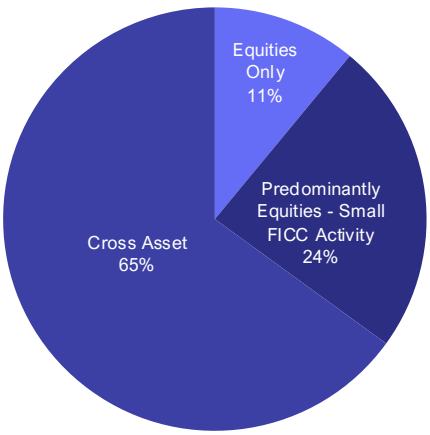


Source: *Market Structure Partners Ltd Outreach*

5 Holy Grail to Swivel Curse: The Reality of Buy-Side Connectivity

Exhibit 1.11

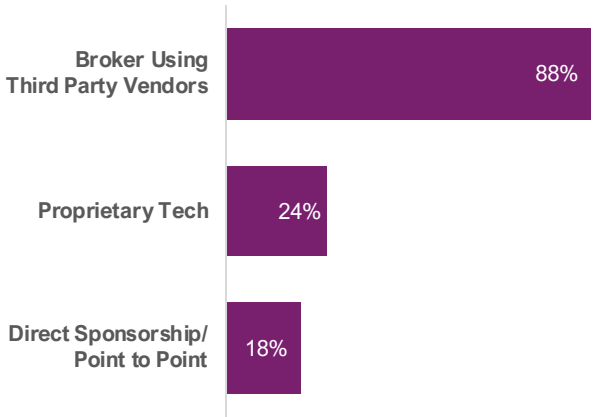
Which asset classes do you trade electronically today?



Source: *Market Structure Partners Ltd Outreach*

Exhibit 1.12

How are you currently connected to the market? (Buy-Side Respondents only)



Source: *Market Structure Partners Ltd Outreach*

For the buy side, the Holy Grail is low-cost, state-of-the-art, multi-asset connectivity. Many firms appear to be progressing toward that vision - 65% report having cross-asset connectivity (Exhibit 1.11). In practice, however, the landscape is far more fragmented. Connectivity spans multiple platforms; broker pipes are split by asset class and layered with proprietary technology; with hybrid third-party vendor solutions the main means of connecting to the market. The result is an "unholy mess," rather than the Holy Grail.

Because trading infrastructure evolved organically, the sell side's historically siloed, asset-class model has been replicated on buy-side desks. The result is the "Swivel Curse": traders moving between multiple systems with different credentials and little interoperability - creating inefficiency, operational friction, and higher error risk.

Disparities across buy-side desks remain wide. A small minority use advanced technology and manage connectivity directly, but the majority - 88% - still rely on broker access delivered through third-party vendors, though 24% are now establishing proprietary connections (Exhibit 1.12).

> *"Some banks want one pipe for FX, another for futures, a third for bonds - so suddenly even what should be a single point-to-point connection for just one bank turns into three or four separate setups depending on their legacy infrastructure. It's completely inefficient. What we end up with is this sprawling mess that shouldn't be necessary. It's not just the fragmentation - it's the unnecessary complexity that comes with it."*
>
> **Head of Dealing, Global Asset Manager**

> *"We run a single global EMS supported by a FIX vendor with broker connectivity on a per-unit, capped model. We also pay a direct EMS fee ourselves to avoid any soft-dollar perception. We've also built additional infrastructure on top. We focus on connecting where it matters rather than trying to be everywhere"*
>
> **Head of Execution, Large Global Asset Manager**

> *"Everything now runs in AWS, own FIX engine and VPNs per broker - connectivity, monitoring, onboarding, & troubleshooting is managed internally. We've built tools including a proprietary dashboard"*
>
> **Trader, Small Hedge Fund**

Who Pays and for What?

This fragmentation raises a fundamental commercial question. What was once a straightforward allocation of equity commissions is becoming structurally unstable as automation expands across asset classes. The traditional divide - broker-sponsored EMS in equities versus paid access in FICC - has fragmented into a patchwork of models shaped by access requirements and connectivity choices (Exhibit 1.13). Commercial arrangements now vary by asset class, broker, and region, with buy-side firms opting to absorb part of the cost themselves: 25% now pay directly for all connectivity (Exhibit 1.14)

> *"On the equity side, it's fully automated. Fixed income is still pretty manual - RFQ platforms, phone, using IB chat - depends on the asset and the size. For futures, we've got P2P connections in place."*
>
> **Large Global Asset Manager – Head of Dealing**

Exhibit 1.13

Do any brokers subsidise or assist with your connectivity setup or costs?

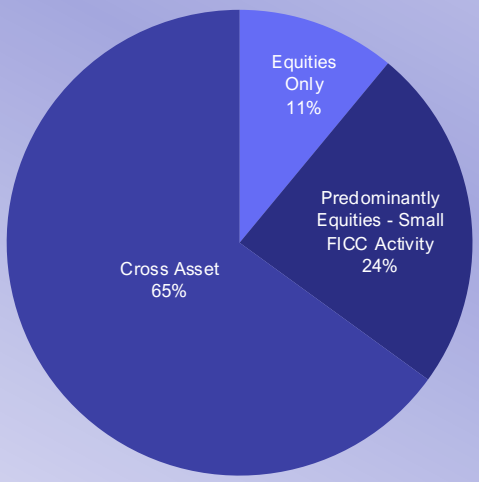
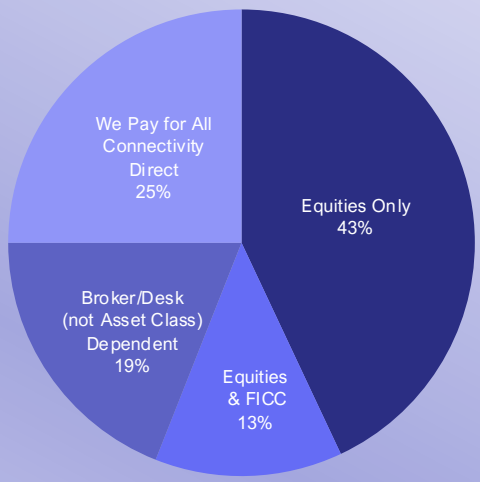


Exhibit 1.14

For which asset classes do brokers subsidise or assist with your connectivity setup or costs?



Source: *Market Structure Partners Ltd Outreach*

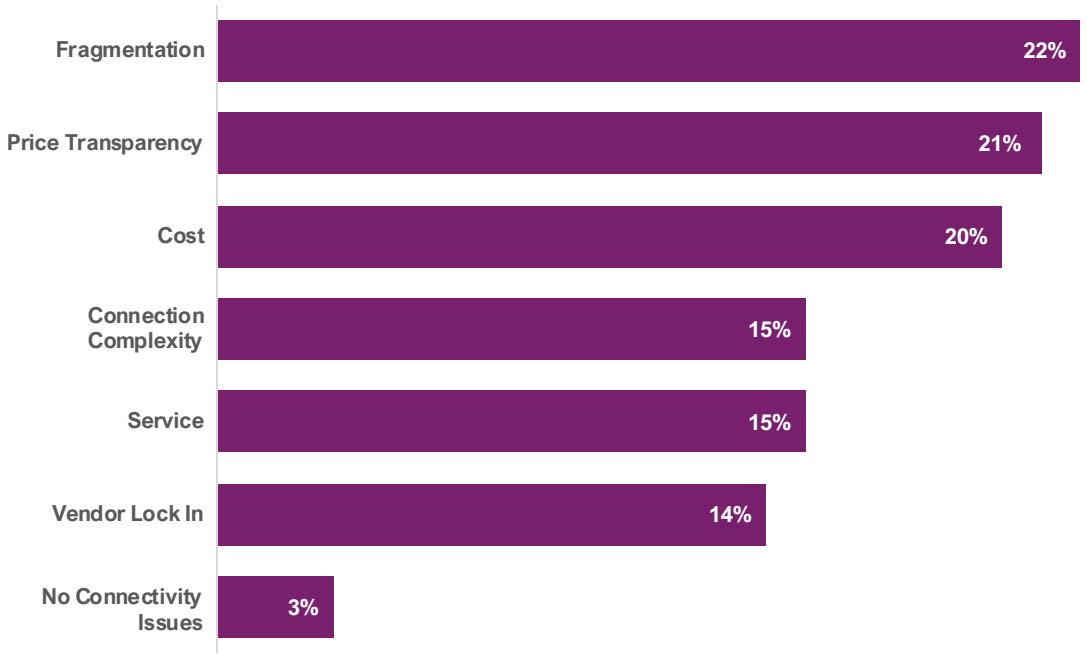
With broker sponsorship of EMS and connectivity in equities expected to decline further, the buy side faces a strategic choice: either pay directly and control how they access liquidity or narrow their broker lists and rely on whatever connectivity those firms provide. If connectivity appears "free," who ultimately benefits, and what does that mean for long-term best execution?

Smaller brokers are already signalling that the return on investment no longer justifies maintaining connectivity for certain clients. This raises a further question: does prioritising only the most profitable clients align with the principle of treating customers fairly? While commercially such decisions are understandable; but from a market-access perspective, withdrawing or limiting connectivity risks uneven access to liquidity and inconsistent execution outcomes, particularly as 64% of buy-side respondents expect a further decline in CLOB trading (see Exhibit 1.6, page 12).

> *"We've had to cut our list of brokers yet again as the connectivity costs cannot be justified – what does that do for systemic risk let alone best execution?"*
>
> **Large Global Asset Manager – Head of Dealing**

Exhibit 1.15

What are your Top 3 Connectivity Pain Points Today? (Buy-side responses only)

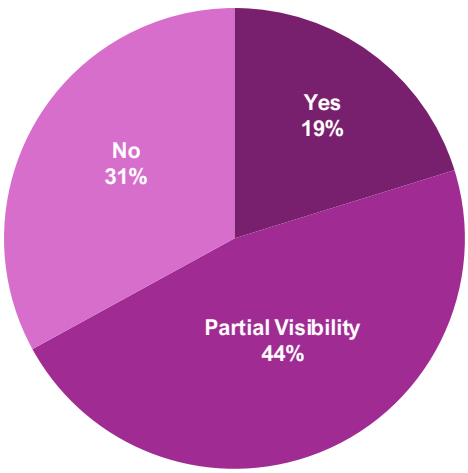


Source: *Market Structure Partners Ltd Outreach*

Exhibit 1.16

Are your external connectivity costs fully transparent and itemised internally? (Buy-Side Responses only)

Source: *Market Structure Partners Ltd Outreach*



Market fragmentation across all asset classes is becoming the critical issue as bilateral trading expands across asset classes (Exhibit 1.16). Many firms still rely on broker discretion when routing algorithmic flow, giving index-flow houses a structural advantage over traditional active managers. As markets shift towards more complex bilateral networks, firms need robust, synchronised, and flexible connectivity. Simply connecting to the sell side is no longer sufficient; effective execution now requires direct, simultaneous links to multiple counterparties and venues across assets – and then the analysis to understand when, where and how to trade.

Legacy infrastructure, however, works against this. Even connecting to banks can require separate pipes for FX, futures, and bonds, turning what should be a single connection into three or four parallel setups. With the growing number of ELPs, this quickly becomes a sprawling, inefficient architecture characterised by unclear cost allocation, rising operational overhead, increased compliance complexity, and more potential points of failure. Unsurprisingly, only a fifth of firms say they have a clear view of their connectivity costs today (Exhibit 1.13).

Coming Next:

Paper II) Connectivity Architecture Challenges & Paper III) Implementation and Governance

The subsequent Papers, II and III, in this series build directly on this analysis. Paper II examines the architecture of liquidity formation, analysing the transition from legacy broker-sponsored, asset-class-specific connectivity models to cloud-native, API-led, multi-asset infrastructures and assessing the trade-offs between performance, resilience, cost transparency and vendor dependence. Paper III addresses 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.

DISCLOSURES: This report was commissioned by iress, a leading technology company providing connectivity software to the financial services industry, specializing in trading, market data, investment management, and financial advice. However, the views and analysis in this report are those of MSP acting independently and cannot be attributed to, and may not represent, the views or opinions of the commissioning associations, either individually or collectively.

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.