2024 EXECUTION MANAGEMENT SYSTEMS SURVEY

With special analysis from



Buy-side remain largely satisfied with EMS providers despite market headwinds

Though acknowledging areas for improvement – namely among product development and cost of operation – this year's survey achieved an overall score of 5.91, just three basis points less than last year's record score of 5.94, implying general satisfaction among the buy-side when it comes to their EMS providers.

oncerns over the threat of a recession have subsided in recent months but inflation has continued to throw markets toward a correction and at times has whipsawed volatility. Despite the ongoing concerns and market dynamics, buyside respondents to this year's survey appear to remain largely satisfied with the way their EMS providers are adapting. The largest pain point, however, appears to be product development, which was the lowest scoring service area recorded in 2024 and also experienced the largest year-over-year decline in rating from last year. Buy-side firms clearly believe EMS

providers have plenty of room to improve when it comes to solution capabilities and product enhancements. The next lowest score was recorded in overall cost of operation, as cost remains a major concern as traders must deal with covering multi-asset trading and investments with limited budgets.

The 2024 edition of
The TRADE's Execution
Management Systems
Survey highlights continued
satisfaction traders and other
buy-side respondents had with
their providers over the past
year, with scores decreasing
only slightly from those
recorded in the 2023 edition of
the survey. This year's results

revealed subtle changes in nearly every category with an overall survey average of 5.91 in 2024, just three basis points less than last year's record setting overall average of 5.94.

Figure 1 shows the average scores recorded from buy-side respondents over the past three years across 13 functional EMS categories. Reliability and availability remained the highest rated category in 2024 with the exact same score of 6.38 as the previous year. Also scoring above a 6.0 (very good) were FIX capabilities (6.18), latency (6.13), breadth of broker algorithms (6.05) and client service personnel (6.01). On the other hand, product development (5.52) logged

Figure 1: Rating of EMS performance



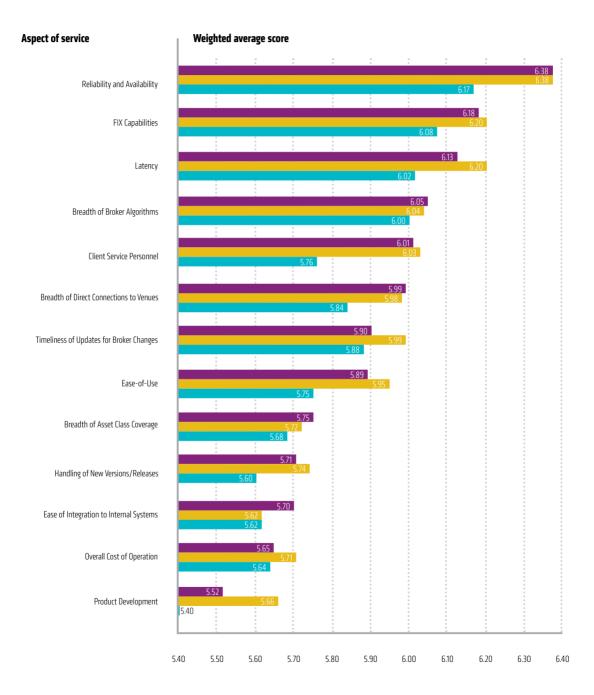


Figure 2: Respondent profile

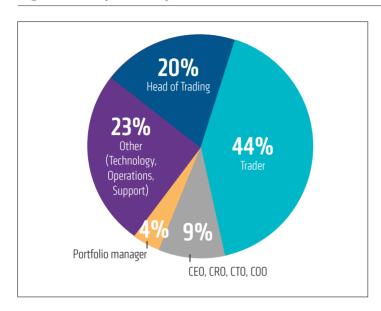


Figure 3: Most important features				
Feature	2024		2023	2022
Ease-of-Use		68.01	67.97	67.94
Client service		44.42	43.75	40.03
No. of Connections to Different Brokers	_	38.94	39.65	40.86
Connectivity and Integration	_	37.29	45.51	40.37
Integration with OMS		34.73	30.66	33.89
Breadth of Agorithmic Trading Options	A	29.62	26.95	27.57
Breadth of Direct Connections to Venues		29.43	22.85	23.92
Timeliness of Implementing Updates	_	27.79	29.49	26.25
Low Latency	A	23.03	19.73	24.75
Global Coverage	_	21.57	22.27	22.26
Breadth of Asset Class Coverage	▼	19.74	25.98	22.76
FIX Capabilities	V	12.43	13.67	13.46

the lowest score in this year's survey followed by overall cost of operation (5.65). Product development also experienced the largest year-on-year decrease (-0.14) as buy-side respondents continue to seek innovation from their solution providers.

While most categories saw

minor changes to their average scores in this year's survey, the largest increases were seen in ease of integration to internal systems (+0.08) and breadth of asset class coverage (+0.03). The increase in ease of integration to internal systems is significant given that last year this category was the lowest rated category overall. This also plays into the ongoing trend of buyside firms looking to more efficiently integrate their front-to-back transactional systems.

The TRADE focuses its survey's profile on buy-side respondents with hands on experience with trading technology. The mix of traders, portfolio managers and technology personnel provide a rich perspective on the use of EMS solutions and the impact on the overall front-office business. In this year's survey, traders (44%) and heads of trading (20%) once again made up the majority of respondents (Figure 2). Those intimately involved in the trading process often hold the authority on which EMS to use, making them an ideal audience for this survey. The next largest group comprised of those in other roles (23%) including technology, operations and support, who like traders, also offer unique insight into how these systems are working within their respective buy-side firms. Respondents were asked to select up to four of what they find to be the most important features of their EMS (Figure 3) and, staying on trend with prior years, most respondents (68%) named ease-of-use as the most important feature of their EMS. This was followed by post-implementation client service at 44.4%, number of connections to

different brokers at 38.9% and connectivity with internal systems at 37.3%. When it comes to the least important feature, respondents again noted FIX capabilities, with only 12.4% percent of respondents indicating it as one of their top four features, down from 13.7% in last year's survey as the feature is now considered by most to be table stakes. EMS vendors are therefore more likely to differentiate themselves from other providers in the areas that rank as the most important to members of the buy-side community.

The ways in which buyside firms rank the most important features of their EMS speaks to the evolving priorities and capabilities of the solutions providers in the market. Coming on the back of significant improvements in product functionality, it is not surprising to see features related to implementation and upgrades jump in importance. The most significant yearon-year increase in 'feature importance' in this year's survey was number of direct connections to execution venues, which rose 6.58%, followed by increases in integration with order management systems (+4.07%), low latency (+3.31%) and breadth of broker provided algorithmic trading options available (+2.66%). EMS features that showed the most significant declines in importance in 2024 include connectivity with internal systems (-8.21%) and breadth of asset classes covered (-6.23%). In contrast, when asked what additional

Figure 4. Number of providers used (% of resp	ondents)			
Provider count	2024		2023	2022
1	A	65	60	64
2	▼	23	31	25
3	A	10	7	9
4		2	2	2
5+	_	0	1	1

Figure 5. Average number of providers by AuM				
Total assets (USD billions)	2024		2023	2022
Up to 0.5	A	1.38	1.32	1.41
0.5-1	A	1.50	1.47	1.17
1-10	▼	1.32	1.45	1.44
10-50	•	1.48	1.50	1.59
More than 50	▼	1.59	1.62	1.73

capabilities respondents would like to see from providers, there were several calls for broader asset class coverage.

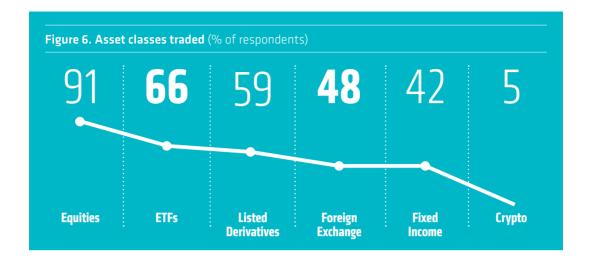
We have continued to see the buy-side reengineer the frontto-back transactional flow and consolidate systems. However, given that EMSs are like the tip of the spear into markets, and depending on the asset class, the connections to those market venues need to be very specific. Although we have seen multiple vendors continue to consolidate OMS and EMS capabilities, it is much easier to say than actually execute on the TCA playing field. Figure 4 shows that while the majority (65%) of responding firms in this year's survey do note only using one EMS, the percentages are largely in line with recent years.

When respondents were asked to indicate their method for connecting for electronic trading, 48% stated they use a single multi-broker, multi asset-class EMS, while 22%

use multiple single broker and/ or single asset class EMSs. In addition, 19% noted that they link directly to brokers from their OMS, while 9% link directly to trading venues via their internal systems.

Continuing to stay true to prior year survey results, Figure 5 shows that, in general, as firms get larger and have more complex strategies, they tend to use a greater number of EMS providers compared to smaller firms. Although the differences are not significant, the gap between the number of providers used by the largest firms and the smallest firms responding to the survey continues to narrow. This year's survey reveals that firms with more than US\$50 billion in AUM used an average of 1.59 providers, whereas those with less than US\$5 billion in AUM used 1.38 providers.

As shown in Figure 6, respondents predominantly trade equities (91%) through their execution

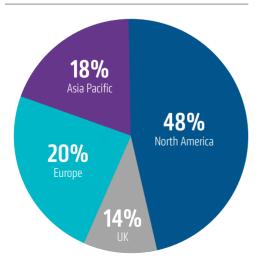


management systems. As the electronification of non-equity markets develops, we observe significant increases in the number of respondents using an EMS to trade other asset classes, with more than half of respondents noting the use of an EMS to trade ETFs (66%) and listed derivatives (59%). This represents year-on-year

increases in those asset classes of 15% and 20%, respectively. In addition, nearly half of all respondents indicated they use an EMS to trade foreign exchange (48%) and fixed income (42%), up from 21% and 22% last year, respectively. Crypto, as an asset class category was introduced to the survey as of last year, and here

we see a 2.5-fold increase in the number of respondents trading digital assets electronically, as year-on-year percentages increase from 2% up to 5%. Respondents to this year's survey had a similar geographic distribution to prior years (Figure 7). Just under half of all respondents were from

Figure 7: Region distribution



North America (48%), while the remainder was split between Europe (20%), Asia Pacific (18%) and the UK (14%). In response to whether or not firms had plans to implement additional EMS providers to their existing set up, over 67% of respondents answered that they had no plans to do so, while just 7 respondents were able to name which provider they hoped to onboard in future. Similarly, 66% of respondents said that they had no plans to change which EMS provider they were currently using. This year appears as a transition year among asset managers and EMS providers, surviving an extended inflationary run, a global political super cycle, world crises and volatile markets. Although the results in this year's survey did erase some of the gains made last year, EMS providers shouldn't be discouraged but instead take it as their clients giving them a bit of a reality check. Overall, respondents were

satisfied with their EMS providers, but they continue to be fairly consistent when it comes to what they want from their EMS, maintaining similar requests as prior years noting for example their interest in additional asset class coverage or enhancements in the system's usability and functionality, as well as improvements in TCA. In addition, firms continued to express frustration with integrating their EMS with other systems. APIs and prebuilt modular connections are making it easier to integrate multiple systems so firms who wish to do so can use multiple best-of-breed or asset class specific EMSs, as long as positions can be consolidated and aggregated further down

the technology stack.

Throughout the next year, buy-side firms will continue to expand and incorporate consolidated front-to-back transactional architectures to increase workflow efficiency while also reducing operational costs. Where and when exactly firms and vendors try to incorporate EMSs within that consolidation and where feasible, be incorporated as part of the OMS will continue to be something to watch. As previously mentioned, this is something easier said than done. AI will also continue to be something to watch in the coming year as firms and vendors alike look to utilise the technology to improve workflow efficiency in the

front-office. Many of the providers profiled in this survey note the fact that they are continuing to focus on ways to incorporate the technology into existing solutions.

This year, nine EMS vendor firms received sufficient responses from buy-side users to warrant a profile in the survey: Bloomberg, Charles River - A State Street Company, FlexTrade, Instinet Newport, LSEG TORA, Neovest, Portware Enterprise a FactSet Trading Solution, TS Imagine TradeSmart and Virtu Triton. Among the profiled vendors, four outperformed the overall survey average of 5.91: Instinet Newport, Neovest, LSEG TORA, and Virtu Triton EMS.

Methodology

Survey respondents were asked to provide a rating for each execution management system (EMS) provider on a numerical scale from 1.0 (very weak) through to 7.0 (excellent), covering 13 functional criteria. In general, 5.0 (good) represents the 'default' score of respondents. In total, over 370 individuals responded; around 560 evaluations were submitted; and 17 providers were evaluated. All evaluations were used to compile the overall market review information as well as provider profiles covering the major EMS providers based on responses received. Each evaluation was weighted according to three characteristics of the respondent; the value of assets under management; the scale of business being conducted electronically; and the number of different providers being used. In this way, the evaluations of the largest and broadest EMS users were weighted

at up to twice the weight of the smallest and least experienced respondent. In arriving at any overall calculations, the scores received in respect of each of the 13 functional categories were further weighted according to the importance attached to them by survey respondents. The aim is to ensure that in assessing service provision the greatest impact results from the scores received from the most sophisticated users in the areas they regard as the most important. Finally, it should be noted that responses provided by affiliated entities have been discarded and that other responses, where respondents were unable to be properly verified, were also excluded. We hope that readers find this approach both informative and useful as they assess different capabilities in the future. This year's analysis for the EMS survey has been carried out by Datos Insights (formerly AiteNovarica Group)

Since its launch in 2013, The TRADE's Execution Management Systems survey has captured key trends and insights into client perception. For those wishing to dive deeper into the survey's findings, we offer highly customised research reports, focussing on tailored analysis of historical and current client perception data across EMS providers, as well as actionable data to drive decision-making and strategy. Please contact Karen Delahoy at karen.delahoy@ thetradenews.com for more information about our bespoke research reports.

Bloomberg

D loomberg's multi-asset execution management **B**system – known as EMSX for equities, FXEM for foreign exchange and TSOX for fixed income, derivatives and futures - supports a wide range of both electronic and voice execution workflow and connectivity to all major broker/dealers and global exchanges, offering clients full straight-through processing (STP) services. Over the past year, Bloomberg won contracts to supply the European Central Bank with electronic trading platforms, with futures trading supported by Bloomberg's multiasset EMS, Bloomberg Tradebook ISV and EMSX. Bloomberg also saw a wide range of institutions adopting its technology stack for improved workflows, including German asset manager BayernInvest, in August. Bloomberg received 114 ratings from its buy-side clients in this year's survey, ranking the vendor second highest amongst peers in terms of number of responses.

Bloomberg's overall average score in this year's survey dropped four basis points to 5.45, maintaining its position right in the middle of the good range (5.00-5.99), indicating Bloomberg continues to consistently meet client expectations. Bloomberg's

highest score was once again in the area of reliability and availability (6.34), which achieved a 16 basis point increase from last year, albeit a little shy of the category benchmark. Bloomberg showed strong improvement in several key functional areas with the most significant year-on-year increases being in the areas of breadth of asset class coverage (+0.21), reliability and availability (+0.16) and client service personnel (+0.06).

Clients responding to Bloomberg in this year's survey were dispersed across all major regions around the world, with the majority based in Europe (49%) and North America (36%). In addition, around 40% of clients responding to Bloomberg were from firms managing upwards of \$50 billion in AUM. When asked which additional capabilities the buyside would like to see from Bloomberg, respondents cited expanded access to asset classes, better connectivity and interoperability with other systems outside of the Bloomberg ecosystem, additional TCA capabilities, enhanced customisation features, more flexibility and improved customer service and further integration of AI and machine learning technology.

BLOOMBERG RATINGS FOR EMS PERFORMANCE

Reliability and availability	i	Latenc	' personnel		Ease-c	ıf-	Handling versions/		Breadth of algorithms		Timeliness for broker	of updates changes	FIX capab	ilities	
6.34		5.84	•	5.05	A	5.42	▼	5.26	▼	5.47	▼	5.37	▼	5.66	▼

Breadth of asset class coverage		Breadth of direct connections to venues		Product developmen	nt	Ease of integration to internal systems	Overall cost of operation	Average score	
5.67	A	5.52	7	4.83	▼	5.10	5.30	5.45	▼



Charles River, A State Street Company

▶ harles River Development, part of State Street, offers an integrated order and execution management system (OEMS) - Charles River Trader - that sits at the center of the company's cloud-based enterprise investment management solution (Charles River IMS), providing direct access between buy-side clients and sell-side brokers via the Charles River Network, Charles River Trader provides OEMS capabilities from a single user interface and blotter to aid in trader productivity while giving users a complete aggregated view of all orders and execution status. Charles River also notes that the flexibility and openness of its solution enables choice by offering access to its extensive partner ecosystem easing the third-party integration process. The company counts 300 buy-side clients globally using its OEMS, of which 27 provided feedback in this year's survey. Among them, Charles River was appointed to manage the front-office operations for Perpetual Group's Australian asset management business earlier this year. Specifically, Charles River's IMS was adopted to manage the asset manager's domestic and global portfolios, order and execution, compliance, posttrade processing and front-office data.

Charles River's overall average in this year's survey stayed even at 5.01, keeping the vendor in the good range (5.00-5.99). It is also worth noting that Charles River provides its clients with a multi-faceted investment management solution which leverages the strength of the core OEMS but does not operate as a pure stand-alone EMS solution. The company's highest score of 5.58 was recorded in FIX capabilities followed by breadth of asset class coverage (5.47), reliability and availability (5.46), and breadth of direct connections to venues (5.46).

In terms of year-over-year performance, Charles River saw significant improvements across many of the functional areas measured in this year's survey with the most notable being in timeliness of updates for broker changes (+0.52), client service personnel (+0.36), ease of integration to internal systems (+0.25), and breadth of direct connections to venues (+0.17).

When asked which additional capabilities they would like to see from their EMS provider, clients responding to Charles River noted a desire for more sophistication around data aggregation and event driven automation, TCA enhancements and a desire for better algos and improved algo functionality.

CHARLES RIVER, A STATE STREET COMPANY RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency		Client service personnel	2	Ea	se-of- e		ng of new ns/releases	Breadth o	فانتكث	ker	Timeliness of up		FIX capabilities	S
5.46	5.30		4.76	A	4.8	88 🔻	4.50	•	4.80		▼	4.77		5.58	▼
Breadth of asset cla	ss		readth of direct	-		Product developm	ent	Ease of integra internal systen			Ove	rall cost of operat	ion	Average score	
5.47	•	5.	46		\	4.69		4.97			4.5	I	A	5.01	



FactSet's Portware

NactSet's execution management system, Portware Enterprise, is created to be adaptable to the workflows and requirements of complex buy-side trading operations. Contextually, Appital Insights - which went live in September 2023 - became fully integrated with FactSet's Portware EMS earlier this year, enabling the latter's asset management clients to access Appital Insights liquidity easily within their EMS. Portware is continuously enhancing its user experience, improving workflows, automation, access to liquidity and integration with third-party technologies. The system's architecture facilitates integration with one or more OMS platforms or points of order origination, eliminating the need for any manual re-keying of trade data and reducing operational risk. Portware received 23 responses from its buy-side clients in this year's survey, up from 19 that took part in 2023, yet still below the vendor's 2022 response rate of 39.

Portware recorded an average score of 5.68 this year, down just one basis point from its score in 2023, but 23 basis points below the 2024 overall survey average of 5.91. Despite this, Portware did outperform the category average in two key areas: breadth of broker algorithms (+0.28) and latency (+0.06).

When it comes to year-over-year performance, Portware experienced increases in several key functional areas assessed in this year's survey including latency (+0.33), breadth of asset class coverage (+0.31), handling of new versions/updates (+0.29), ease of integration to internal systems (+0.24) and product development (+0.08).

A majority (65%) of FactSet's clients responding to the survey were with firms managing more than \$50 billion in assets. When it came to regional distribution however, each major region was well represented with 43% from Europe, 35% from APAC and the remaining 22% from North America. Regarding additional capabilities desired by buyside clients responding to FactSet's Portware, respondent's requested better connectivity, enhanced TCA functionality, data quality checks and data cost transparency, improved asset class coverage, improved integration to data sources and external systems as well as one request for the pooling of buy-side innovations and workflows being used across the Portware community.

FACTSET'S PORTWARE RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client servi	ice	Ease-of use		ling of new ons/releases	Breadth of bro algorithms	ker	Timeliness o for broker ch		FIX capabilit	ies
5.98	6.18	5.81	V	5.31	5.40	A	6.33	V	5.60	V	6.10	V
Breadth of asset cla coverage	ss	Breadth of dire			duct elopment	Ease of integra		Ove	erall cost of ope	eration	Average score	
5.72	A	5.87		5.41	1 A	5.19		4.9	0	_	5.68	_
3.72	_	3.07		y 3.4	'	3.13	_	4.3	3	•	3.00	•
KEY STATS		Category O	ıtperforn	•		3.13		4.3	,	V	3.00	_
	3			•	, X2	+0	.33	4.3		-	0.47	7

FlexTrade

FlexTrade offers a multi-asset execution management system called FlexTRADER EMS, as well as an all-inclusive order and execution management system, FlexONE OEMS, Over the last 12 months, the company says it has continued to make significant strides in building out its FlexTRADER EMS solution. This includes, in part, a new Kepler Cheuvreux analytics API suite, a new partnership with LSEG's FXall, the launch of a new solution-FlexNIMS-to streamline new issue management as well as the creation of a new suite of apps called FlexDATA designed to deliver a complete contextual view of trade implementation. In addition, FlexTrade integrated Tradefeedr's FX pre-trade forecast data into its FlexTRADER EMS, to deliver enhanced datadriven workflows for improved trade decision making. FlexTrade received 36 ratings from its buy-side clients in this year's survey ranking the vendor fifth amongst EMS vendors in terms of number of responses.

FlexTrade recorded an average score of 5.91 this year, which despite being 14 basis points below its 2023 score of 6.04, is right on par with the overall survey average of 5.91. The company's highest score in this year's survey was in breadth of broker algorithms

(6.37), followed by FIX capabilities (6.33). Despite scoring in line with the overall survey average, FlexTrade did outperform the benchmarks in seven of thirteen categories, with the most significant being breadth of broker algorithms (+0.33), product development (+0.16) and FIX capabilities (+0.15). The company's lowest score in terms of this year's survey benchmarks was in the handling of new versions and releases (-0.37), which also records the largest decline compared with scores recorded for FlexTrade in 2023.

FlexTrade saw year-over-year improvements in three key functional areas in this year's survey: breadth of broker algorithms (+0.17), FIX capabilities (+0.07) and breadth of direct connections to venues (+0.01). Over half (58%) of FlexTrade's buy-side clients responding to this year's survey were from firms managing more than \$50 billion in assets. In terms of desired additional capabilities, buy-side clients responding to FlexTrade noted a desire for additional asset class functionality, algo wheel automation and more pre-trade analytics, better API access, more AI integration and easier interoperability between OMS and EMS across multiple vendors.

FLEXTRADE RATINGS FOR EMS PERFORMANCE

Highest score

(breadth of broker

algorithms)

Reliability and availability	Latency		Client service personnel		Ease- use	of-		ing of new ns/releases	Breadth of bro	ker	Timeliness of updates for broker changes		FIX capabilitie	es
6.30	6.19	•	6.11	▼	5.91	V	5.34	▼	6.37	A	5.86	•	6.33	A
Breadth of asset clacoverage	55	co	readth of direct onnections to ver	nues	d	roduct evelopr 68	nent	Ease of integra internal systen		0ve	erall cost of operation		verage score	
KEY STATS	<u> </u>		Category Outpo	erforn			<u> </u>		<u> </u>		- ,			_
6.3	7		21	į	5.3	34		+0	.17			-().48	<u> </u>

Most improved

(breadth of broker

algorithms)

Lowest score

(handling of new

versions/releases)

Least improved

(handling of new

versions/releases)

Instinet Newport

Tnstinet Newport, the provider's broker-neutral. **⊥** multi-asset class execution management system, provides real-time data, order entry tools, and flexible execution options designed to take traders from pre-trade strategy, through advanced order execution management, to post-trade analytics. Instinct notes that Newport is built on exchangegrade technology and is market-tested by leading firms, in addition to supporting Instinet's own high-volume global agency business. As a result, the company claims it is uniquely able to test each version of Newport with its own internal trading desk before releasing it to clients, allowing Instinet to optimise Newport for clients prior to each release. Over the past year, Instinct has added new market on close/target close analytics tools including those for pre-trade, intraday and post-trade.

Instinct had another impressive increase in its overall score in this year's survey, jumping 19 basis points from last year's score to 6.15. The company's highest score was in availability and reliability (6.81) which also outperforms the category average by a significant 44 basis points. Other noteworthy areas of performance for Instinct in this year's

survey were overall cost of operation (6.32) and client service personnel (6.50), which outperformed the category average by 67 and 50 basis points, respectively.

The vendor saw year-over-year improvements in every category in this year's survey except one, with the most notable being ease of integration to internal systems (+0.67), reliability and availability (+0.42) and ease-of-use (+0.42). The only category Instinet saw a decrease in its score year-over-year was breadth of asset class coverage (-0.32), which also happened to be the vendor's lowest scoring category (5.35).

Of Instinet's roughly 1,000 buy-side clients using Newport, 33 submitted their feedback in this year's survey with a majority (61%) from firms with over \$50 billion of assets under management. When asked what additional capabilities they desired from Instinet Newport, respondents focused on expanded asset class and market coverage, continued innovation in ease-of-use and customisation, better data capture and aggregation for OTC products, improved broker wheels and enhanced TCA capabilities.

INSTINET NEWPORT RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of- use		ing of new ns/releases	Breadth of bro algorithms		ness of updates ker changes	FIX capabilities	
6.81	6.37	6.50	6.08	5.96	A	6.38	6.13	•	6.54	A
Breadth of asset clas coverage		Breadth of direct onnections to venues	Product developn	nent	Ease of integra		Overall cost	of operation	Average score	
5.35	▼ 6	i.19	5.39	A	5.94	A	6.32	A	6.15	A
KEY STATS 6.8 Highest so (reliability a availability)	core and	Lo (bro	5.35 Dwest score eadth of assess coverage	e set	+0 Most in (ease of in	erformer: 67 nproved ntegration I systems)	X11	Le (bi	ast improved the state of the s	/ed set

LSEG TORA

T SEG TORA provides investment management technologies for approximately 250 global asset managers, hedge funds and proprietary trading firms, 38 of which responded to this year's survey. TORA'S EMS supports trading across global equities, fixed income, FX, listed derivatives and digital assets. In addition, the solution provides access to advanced functions for order management, portfolio rebalancing, pre- and post-trade TCA, allocations and commission management tools. Over the last year, TORA has enhanced its order and execution management system to allow integration with LSEG Workspace as well as LSEG FX, which provides clients with FX liquidity in over 500 currency pairs. Clients can expect TORA to continue to integrate with additional LSEG solutions going forward.

TORA achieved an overall average of 6.21 in this year's survey, which is down three basis points from its score in 2023, but still a comfortable 30 basis points above the overall survey average of 5.91. TORA outperformed the category average in all thirteen areas under review in this year's survey. The most significant of which were breadth

of broker algorithms (+0.52), product development (+0.44) and breadth of asset class coverage (+0.38).

Despite TORAs relative outperformance compared to its peers in this year's survey, the provider did record marginal year-over-year decreases in a number of categories, plus more notable declines in product development (-0.26), breadth of direct connections to venues (-0.25), timeliness of updates for broker changes (-0.20) and client service personnel (-0.20). On the other hand, TORA's year-over-year improvements helped cancel out some of the declines. The most significant improvements were seen in breadth of broker algorithms (+0.40) and breadth of asset class coverage (+0.23).

When asked about additional capabilities desired, LSEG TORA's buy-side clients responding to this year's survey did not have many requests for the provider. Those that did leave a request however, noted a desire for a mobile version of the application, improved laddering and speed of reloading the GUI, bulk algo modification across different brokers and additional customisation capabilities for the frontends.

LSEG TORA RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel		Ease-of- use		ing of new ns/releases	Breadth of bro algorithms	ker	Timeliness for broker o		FIX capabili	ties
6.57	6.35	6.32	•	6.21	6.00	A	6.57	A	6.20	▼	6.41	A
Breadth of asset cla	SS	Breadth of direct connections to ver	nues	Product developm	ent	Ease of integra		Ove	erall cost of op	peration	Average score	
6.13	A	6.12	•	5.96	•	6.00	▼	5.9	5	•	6.21	•
KEY STATS		Overall Outper	former:	Y		Category Outp	erformer: 🚖	X13				_
6.5	7	4	5	.95		+0	.40			_	0.20	5
					e	NA 1.	nproved				ast improv	, a d

Neovest

Teovest, is a wholly owned but independently operated subsidiary of JP Morgan. To enhance its offering and support its clients, Neovest made an acquisition of investment management platform, LayerOne Financial, in March of 2024. This led to the creation of the company's new solution, PortfolioOne, which covers the full investment process, empowering clients to monitor portfolios, conduct risk assessments, send orders to their brokers, perform necessary compliance checks, and manage their positions. The platform covers equities, ETFs, listed derivatives, FX and commodities. Elsewhere, in December last year, MAIA Technology and Neovest partnered to create an enhanced joint offering of new execution management capabilities for Fulcrum Asset Management, as Fulcrum's trading desk looked to leverage more derivatives strategies and its execution needs evolved. Of Neovest's approximately 600 buy-side clients using its EMS, 33 responded to this year's survey of which 76% represented firms with less than \$10 billion in AUM.

Neovest received an average score of 6.41 this year, representing a 35 basis point increase from its 2023 score of 6.06 and 50 basis points above this year's

survey average of 5.91. Neovest outperformed the category average in all thirteen areas under review, with the most notable areas of outperformance being overall cost of operation (+0.66), ease of integration to internal systems (+0.64), client service personnel (+0.62) and breadth of asset class coverage (+0.54). When it came to year-over-year performance, the most significant improvements were in breadth of direct connections to venues (+0.57), breadth of broker algorithms (+0.55) and latency (+0.47). The only area Neovest saw a year-over-year decline was timeliness of updates for broker changes, which only experienced a one point drop from its prior year rating and still outperformed the overall category average of 5.90.

Neovest has continued to focus on expanding its capabilities and allocating resources to further enhance its offering and although respondents gave Neovest high marks, they did have a few requests for additional features and capabilities. Respondent's wish list for additional capabilities included mobile trading features, quicker new development and response to new customer requests, imbedded stock locate features and updated compliance to allow easier restricted list changes.

> (timeliness of updates for broker changes)

NEOVEST RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	1	Client servic personnel	2	Ease-o	of-		ing of new ns/releases	Breadth of br algorithms	oker	Timeliness of a		FIX capabilities	
6.65	6.55	A	6.63	A	6.30	A	6.22	A	6.56	A	6.34	▼	6.71	A
Breadth of asset cla coverage	ISS		readth of direc			oduct velopn	nent	Ease of integra		Ove	erall cost of oper	ation	Average score	
6.29	A	6.	.47	4	5.9	90	A	6.34	A	6.3	1	A	6.41	A
KEY STATS			Overall Outpo	erforme	er: 🍸			Category Outp	erformer: 🚖	× X13				
6.7	1			į	5.9	90		+0	.57			-	0.0	1
								Most ii			a B 1		ast improv	

(product

development)

(breadth of direct

connections to venues)

(FIX capabilities)

TS Imagine

S Imagine's TradeSmart is a global EMS covering equities, ETFs, fixed income, FX, listed and OTC derivatives and digital assets. The company says it is enthused with the response following the launch of its TS One offering last year, which it also noted was a very important development for the company. Targeted at emerging hedge funds, TS One was designed to bring together the combined risk and portfolio analytics strengths of the legacy Imagine Software with the order and execution management capabilities of the legacy TradingScreen. Another significant development in recent months has been the fusion of TS Imagine's fully embedded data provision model across the two business units with the roll out of LSEG Refinitiv's DM1 service. Elsewhere, in November, TS Imagine announced a new module within TradeSmart OEMS and TS One which enhances best execution compliance and reporting, alongside providing traders with a view of their trading activity, real-time comment capture and best execution reporting in one dashboard. This was followed by the addition of 7 Chord's BondDroid AI within its TradeSmart EMS in June. As of late, TS Imagine has around 300 buy-side clients using its TradeSmart EMS, 48 of which responded to

this year's survey.

TS Imagine's TradeSmart recorded an overall score of 5.79 in this year's survey, a drop from its 2023 score of 6.02. However, despite the drop in its overall score, TradeSmart still outperformed the category average in a few key functional areas reviewed in the 2024 survey. Its most significant areas of outperformance, relative to the overall industry, were client service personnel (+0.17) and ease-of-use (+0.10).

In a year-over-year comparison, TS Imagine recorded decreases in most areas under review, the most notable being breadth of broker algorithms (-0.51) and breadth of asset class coverage (-0.40). These declines unfortunately overshadowed the providers gains seen in client service personnel (+0.14) and ease-of-use (+0.10).

Buy-side clients of TS Imagine's TradeSmart in this year's survey had a few additional capabilities they wished TradeSmart provided, such as new issue order workflow, an easier upgrade process, improved market data, a live summary of daily execution orders, and improved tech support. On the other hand, some clients took the opportunity to praise their provider, with one client noting "All good! TS Imagine works well!".

TS IMAGINE RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel				ing of new Breadth of b ns/releases algorithms		roker Timeliness of for broker cl			FIX capabilities	
6.32	6.09	6.18	A	5.99	5.59	▼	5.74	•	5.81	V	5.97	V
Breadth of asset cla	ISS	Breadth of direct		Product developm	ent	Ease of integra		Ove	erall cost of op	peration	Average sco	re
5.67	▼	5.72	•	5.47	•	5.60	▼	5.10	0	▼	5.79	•
KEY STATS		Category Outp	perform	er: ★ X2								
6.3	2	0	Į	5.10		+0	.14			_	0.5	1
Highest so (reliability availabilit	and	X	(ov	west scor erall cost o	_		nproved service		U	(br	ast impro eadth of b algorithm	roker

Virtu Triton

7irtu's Triton Valor is a global EMS platform with over 300 clients who use the system to trade equities, ETFs, fixed income, FX and listed derivatives across more than 50 countries and hundreds of venues. Virtu has continued to focus on expanding Triton's fixed income capabilities, including rolling out native RFQ trading to multiple venues via trading APIs, additional direct dealer streams and is working on increasing its workflow functionality in the FX space. In addition, the company notes it plans to utilise machine learning this year with the planned rollout of its ASTRO model for data driven strategy selection, stock clustering for understanding trading difficulty, and block probability scores, all of which will be integrated into the Triton workspace. Over the past year, Sumitomo Mitsui Trust Asset Management joined a growing list of buy-side institutions choosing to onboard Virtu Financial solutions across its execution business. Elsewhere. Groupama Asset Management expanded its use of Virtu's Triton Valor EMS to encompass fixed income trading. Of Virtu's over 300 buy-side clients, 145 responded to this vear's survey, ranking the vendor first once again among its peers in terms of number of responses received.

Virtu Triton once again increased its score this

year, receiving an average score of 6.40, which is six basis points above its 2023 score and an impressive 49 basis points above the survey average of 5.91. Virtu outperformed the category average in all thirteen areas under review, with the most significant being client service personnel (+0.69), which was also Virtu's highest score this year, while its lowest score was breadth of asset class coverage (5.92) - Virtu's only score that came in below a 6.00 (very good).

Despite overall outperformance, Virtu did experience marginal year-over-year declines in the areas of ease-of-use (-0.11) and latency (-0.04). These declines however, were overshadowed by the provider's year-over-year improvements. Although Virtu's clients gave the provider top marks in many of the functional categories under review, they still had a few requests when asked what additional features they wanted from the company. Respondents cited broader access to asset classes, in particular crypto and expansion with FX, mobile trading capabilities, speed trading capabilities, additional order types, improved usability of pre, post-trade and real time trading tools, additional connections to third-party RFQ platforms for FX and fixed income and enhancements in interoperability.

VIRTU TRITON RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	2	Ease-of- use	Handling of new versions/releases		Breadth of broker algorithms		Timeliness of updates for broker changes		FIX capabilities	
6.61	6.41	▼ 6.69	A	6.37	6.27	A	6.57	A	6.41	A	6.58	A
Breadth of asset class coverage		Breadth of direct connections to venues		Product development		Ease of integration to internal systems		Ov	Overall cost of operation		Average score	
5.92	A	6.52	A	6.20		6.37	A	6.2	28	A	6.40	A

