

THE 2022 EXECUTION MANAGEMENT SYSTEMS SURVEY

With special analysis from
Aite-Novarica Group

AiteNovarica

Challenging market conditions leave the buy-side wanting

A record number of results for The TRADE's 2022 Execution Management Systems Survey found vendors are failing to keep pace with buy-side demand in challenging market conditions, with calls for a greater focus on APIs, multi-asset capabilities, automated workflows and interoperability.

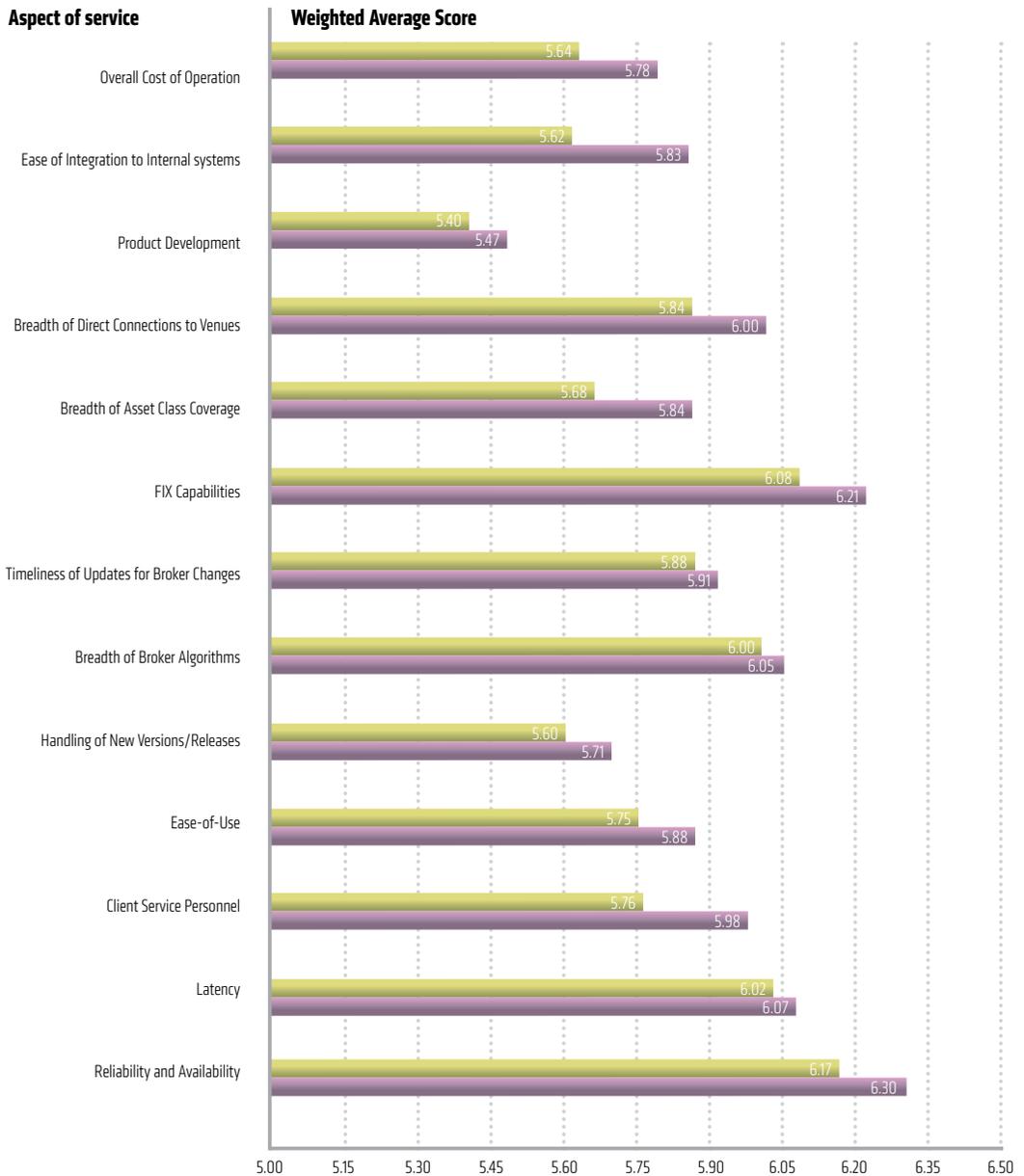
The market dynamics of the past 12 months has made for a challenging trading environment and based on the ratings of this year's EMS survey, buy-side traders suggest their vendors failed to keep pace, as they ranked their execution management systems lower scores across all 13 functional service areas under review. The TRADE received a record number of submissions in 2022, with 395 buy-side participants providing over 600 ratings across the major providers of execution management systems. Yet demands in this space are high, with calls for a greater focus on APIs, multi-asset capabilities, automated workflows and interoperability. The two lowest scoring categories were product development – which includes innovation, communication, planning and delivery – and the handling of releases of new versions, including the implementation process and training, suggesting slower release of new functionality and poor execution on that delivery. The largest year-over-year drops across the key categories were recorded

in ease of integration with other internal systems and adoption of interop standards and perhaps surprisingly, the responsiveness and effectiveness of client service personnel.

The 2022 edition of The TRADE's Execution Management Systems survey highlights the ways in which buy-side firms continue to hold their EMS vendors to a higher standard, never ceasing to move the bar ever higher. This year's survey results revealed frustration from the buy-side regarding the progress they feel their EMS vendors have made towards enhancing the capabilities of their offerings. Their demands hone in on the further need for innovation

Figure 1: Overall Scores

EMS 2022 
 EMS 2021 

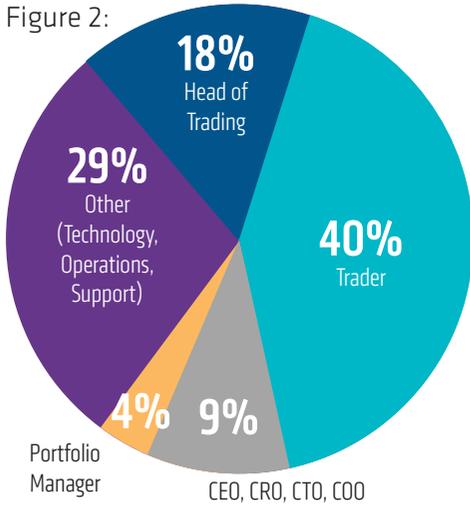


in areas such as asset class coverage, execution efficiency and enhanced interoperability, to name a few. In general, providers have acknowledged the need for

innovation and progress on these fronts, but it has been easier said than done, with some faring better in this year's survey than others.

Survey scores fell across the board this year, indicating there is certainly room for improvement

Figure 2:



in the area of execution management. With all categories receiving lower average scores than last year, the overall survey score dropped to 5.80 in 2022, 0.13 lower than last year’s overall average score of 5.93 and 0.02 lower than 2020’s score of 5.82. Figure 1 shows the scores recorded from buy-side respondents over the past two years across thirteen functional EMS categories.

Once again, reliability and availability (6.17) and FIX capabilities (6.08) earned the highest ratings, despite both categories experiencing a 0.13 decrease from their score in last year’s survey. In addition, latency (6.02), timeliness of updates (5.88) and breadth of connections (5.84) all also scored above the overall survey average of 5.80, signaling that EMS providers continue to exceed expectations in these areas. On the other hand, product development (5.40) remained the lowest scoring category with respondents continuing to signal to providers that they desire and expect further innovation in execution management.

All thirteen categories surveyed by The TRADE in 2022 unfortunately recorded year-on-year

Figure 3: Most Important Features

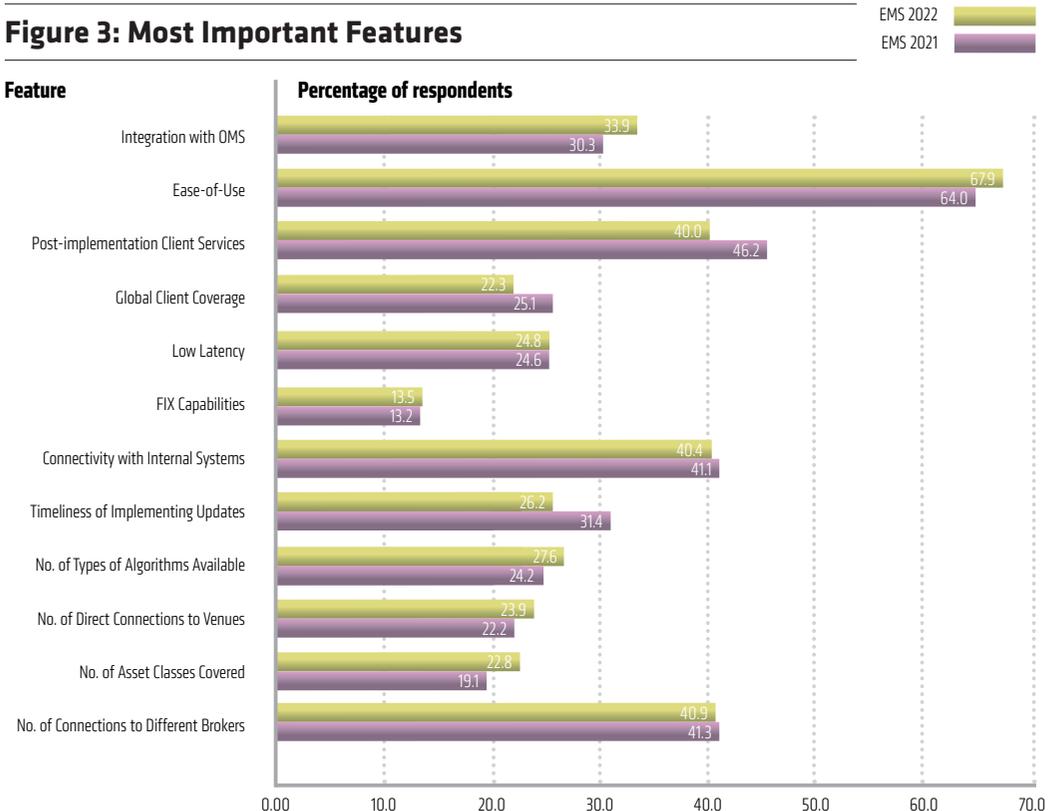


Figure 4: Number of Providers Used (% of respondents)

	2020	2021	2022
1	67	62	64
2	23	25	25
3	7	11	9
4	1	1	2
5+	1	1	1

declines in their average scores. The smallest of which was seen in timeliness of updates to broker changes, which only decreased 0.03 from its score in 2021. On the other side of the coin were client service personnel and ease of integration to internal systems, both of which saw their score drop 0.21 from last year. This reverses a several year trend of increasing scores for both categories and highlights possible areas of frustration among users that perhaps feel providers have dropped the ball.

The TRADE focuses its surveys on buy-side respondents, with traders (40%) and heads of trading (18%) making up the majority of respondents in this year's survey (Figure 2). This is up from 2021, where these two groups of respondents made up 45% of the total. 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 those in other roles (29%), including technology, operations, and support, who 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). This year 67.9% of respondents selected ease-of-use as the most

important feature of their EMS, up from 64% last year. This was followed by breadth of direct connections to brokers and execution venues at 40.9%, connectivity with internal systems at 40.4% and post-implementation client service at 40%.

The most significant year-on-year increase regarding which features were considered the most important among respondents in this year's survey was with ease-of-use, which rose 3.99% in 2022. This was followed closely by increases shown in number of asset classes covered (+3.64%) and integration with OMS (+3.56%). Post-implementation client service (-6.12%) and timeliness of implementing updates (-5.18%) experienced the most significant decreases from last year's survey. In line with prior years, the area that the least amount of respondents indicated as being one of the most important was FIX capabilities, with only 13.5% of survey respondents selecting the feature.

The vast majority of the buy-side continue to use just one or two EMS vendors, a trend that is unlikely to change anytime soon as firms engage in platform consolidations and as offerings continue to expand on their respective coverage and capabilities, decreasing the need for additional solutions. In Figure 4, it is shown that most respondents indicated they use one EMS provider (64%), which is up slightly from last year, while the number of respondents who use two EMS providers (25%) remained the same. The remaining 12% of responding firms in 2022 indicated they use three or more providers for

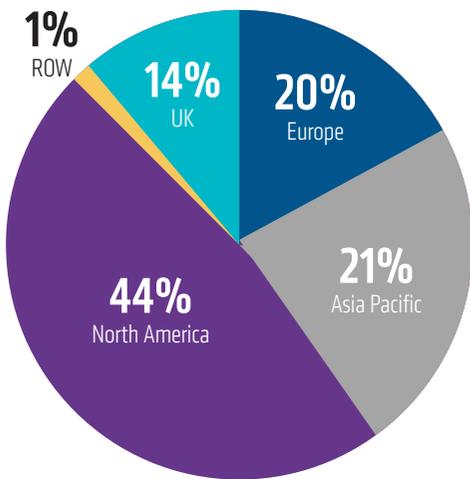
Figure 5: Average Number of Providers by AuM, 2022

Worth	
<\$ 0.5 Bn	1.41
\$ 0.5 to \$1.0 Bn	1.17
\$ 1.0 to 10 Bn	1.44
\$ 10 to \$50 Bn	1.59
>\$ 50 Bn	1.73

Figure 6: Asset Classes Traded 2022 (% of respondents)



Figure 7: Regional Distribution 2022



execution management.

Figure 5 looks again at the average number of EMS vendors used by clients, but broken down by their assets under management (AUM). The trend remains the same, with firms of varying size using on average between one and two providers. The data also shows that, generally, as firms get larger and their strategies more complex, they tend to use a greater number of EMS providers. In this year’s survey, responding firms with more than US\$50 billion in AUM used an average of 1.73 providers – up 5 basis points from 2021, however instead of

adding additional EMS, firms tend to lean towards replacing an existing system with another or working with their provider to improve a solution to meet their current needs.

Equities continue to dominate when it comes to the asset classes traded through these execution management systems, with 91% of respondents indicating they do so (Figure 6). A higher percentage of respondents this year indicated that they trade multiple asset classes: 55% trade ETFs, 55% trade listed derivatives, 33% fixed income and 40% foreign exchange, up from 54%, 51%, 25%, and 36%, respectively, in 2021. This falls in line with the continued trend towards electronic trading in asset classes outside of equities, particularly fixed income, but active participation trading non-equities electronically is much lower than the percentage of volume traded electronically. Considering the growing electronically traded volumes and specialty trading solutions for non-equities growth in both the number of EMS used per firm as well as asset

classes traded is much lower and growing at a much slower pace than we would have anticipated.

The geographic distribution of respondents in this year's survey is shown below in Figure 7. Nearly half of all respondents were from North America (44%), which represents a 4% drop from 2021. Asia Pacific also experienced a decline (6%) in representation this year, while Europe and the UK experienced an increase of 9% and 1% respectively.

Without question, the declines recorded in this year's survey largely erased the gains from last year. The positive spin for EMS providers, however, is that this affords them increased room for improvement across the board as they continue to enhance their solutions to meet the demands of the market. Competition among providers, it seems, will only get stiffer as users look to an

EMS that offers a wide range of capabilities while at the same time not necessarily looking to add an additional system to their existing workflow.

Over the next year or so, there are two areas of operational development that are expected to have the most momentum and were also cited by many respondents in this year's iteration of The TRADE's EMS Survey as being top of mind. First, we are likely to see expansion into wider asset class coverage as historically analog, over-the-counter markets such as fixed income adopt modern, electronic workflows. Secondly, as the buy-side continues to take more control of its trading in its own hands, resulting in their internal eco-systems growing in complexity, seamless interoperability functionality for incumbent EMS solutions will be essential to compete.

This year, ten EMS vendor firms garnered sufficient responses from buy-side users to warrant a profile in the survey: Bloomberg, Charles River, FlexTrade, Instinet, Neovest, Factset's Portware, SS&C Eze (RealTick), TORA, TS Imagine and Virtu Triton. Among the profiled vendors, five outperformed the overall survey average of 5.80: FlexTrade, Neovest, TS Imagine, TORA and Virtu Triton.

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, 395 individuals responded; over 600 evaluations were submitted; and more than 20 providers were evaluated. All evaluations were used to compile the overall market review information as well as ten 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 Aite-Novarica Group.

Bloomberg

Bloomberg’s multi-asset execution management system offers a single trading hub with full integration to deep liquidity, advanced analytics, TCA, alerting capabilities, market news and automation. The EMS offering – 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. Bloomberg received 122 ratings from the buy-side this year, up significantly from 80 in 2021 and ranking second highest amongst peers in terms of number of responses.

Bloomberg’s overall average in this year’s survey decreased 0.15 to 5.36, which scores 45 basis points below the survey average of 5.80, yet remains firmly within the Good range (5.00-5.99), indicating the vendor consistently meets the expectations of clients. Bloomberg’s highest score was once

again recorded in reliability and availability (6.09), followed by latency (5.73) and FIX capabilities (5.66). Although Bloomberg experienced marginal decreases across most categories in 2022, the company recorded year-over-year improvement in key categories such as timeliness of updates to broker changes (+0.11), product development (+0.09) and ease-of-use (+0.02).

When asked which additional capabilities the buy-side would like to see from their EMS vendors, clients responding to Bloomberg were not short of demands, requesting further multi-asset capabilities; flexibility; additional APIs and data collection support; improved interface and customisation; mobile applications with the ability to sync immediately; access to foreign markets; desktop interoperability; cryptocurrency and digital asset expansion; integrated pre-trade capabilities; better speed and usability; and more flexible reporting and compliance alerts.

BLOOMBERG RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.09	5.73	4.91	5.31	5.19	5.59	5.47	5.66

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
5.49	5.34	4.60	4.87	5.40	5.36

KEY STATS

6.09

Highest score
(reliability and availability)



4.60

Lowest score
(product development)

+0.11

Most improved
(timeliness of updates to broker changes)



-0.49

Least improved
(ease of integration to internal systems)

Charles River, A State Street Company

Charles River Trader is the company's order and execution management system (OEMS) and an integrated component of their cloud-based investment management solution (Charles River IMS). Charles River OEMS provides a single user interface and offers auto-routing of orders, pre-trade liquidity analysis and TCA data, as well as post-trade data presentation and reporting tools. Charles River has over 300 buy-side clients currently using its OEMS, only 22 of which provided feedback in this year's survey.

Charles River's overall average in this year's survey decreased by 58 basis points to 4.65, which scores 1.16 points below the survey average of 5.80. This Satisfactory rating (4.00-4.99) implies that clients perceive the offering as adequate, but undistinguished. However, it is worth noting that Charles River is leveraging the strength of the core OEMS with full integration to their IMS and not operating as a pure stand-alone EMS solution. The company's highest scores were recorded in FIX capabilities (5.12) and ease of integration to internal systems (5.11), yet these fall short of the category benchmarks by 0.96 and 0.51 points respectively.

Key feedback for Charles River is their score for client service personnel, which focusses on the responsiveness and effectiveness of staff.

In terms of year-over-year performance, significant declines were recorded in 12 of the 13 functional categories under review, most notably in FIX capabilities (-1.16) and breadth of direct connections to brokers and execution venues (-1.02). In contrast timeliness of updating in response to broker and venue changes increased to 4.48 (+0.14). Interestingly, this same category is where Charles River experienced the largest year-on-year decline in last year's survey.

When asked which additional capabilities the buy-side would like to see from their EMS vendors, clients responding to Charles River noted expanded fixed income workflows across various asset classes; integrated data and analytics for both pre and post trade; additional API connectivity and data analytics; greater focus on multi-asset capabilities; more automation capabilities; better OMS integration; an easier way to configure in-trade visualisations; and improved integration with external data providers.

CHARLES RIVER, A STATE STREET COMPANY RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
5.01	4.79	3.98	4.69	4.16	4.78	4.48	5.12

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
5.04	4.99	4.09	5.11	4.14	4.65

KEY STATS

5.12

Highest score
(FIX capabilities)



3.98

Lowest score
(client service personnel)

+0.14

Most improved
(timeliness of updates to broker changes)



-1.16

Least improved
(FIX Capabilities)

FactSet's Portware

Portware Enterprise is FactSet's EMS, created to be adaptable to the workflows and requirements of complex buy-side trading operations. 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.

FactSet's Portware lost some ground this year, despite the strong gains it made last year, receiving an average score of 5.78 in 2022, which lands marginally below the survey average (-0.02) and represents a decline of 0.48 from 2021. Despite the drop in ranking, Portware outperformed the category benchmarks in several areas, most notably breadth of broker algorithms (+0.36) and FIX capabilities (+0.28), where the company scored 6.36 in both. These two categories also happen to be Portware's highest scores. The company's lowest score was in product development (5.31).

Portware experienced a year-on-year decline across all categories compared with its strong performance

in 2021, with the most significant areas being overall cost of operation (-0.78), ease-of-use (-0.72), as well as handling of new versions/releases and breadth of direct connections to venues, both of which dropped 0.64 from last year.

FactSet is looking to leverage a cloud strategy to support product innovation, client service and delivery, and Portware's migration to AWS is an integral part of that strategy. The company says this would bring clients infrastructure that is scalable, modern and highly available; a global presence that drives performance and enables comprehensive data sovereignty options and robust security capabilities. Regarding additional capabilities requested by buy-side clients responding to FactSet's Portware, some mentioned further automation functionality, improved OMS integration, additional asset classes, utilisation of data contained with the EMS for internal analysis, improved order and portfolio visualisations, additional order level communication between EMS and brokers, interoperability with various systems, product expansion and better daily production support in certain regions.

FACTSET'S PORTWARE RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.12	6.02	5.60	5.40	5.42	6.36	5.78	6.36

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
5.58	5.96	5.31	5.70	5.59	5.78

KEY STATS Category Outperformer: ★ X4

6.36

Highest score
(FIX capabilities)



5.31

Lowest score
(product development)

-0.18

Most improved
(FIX capabilities)



-0.78

Least improved
(overall cost of operation)

FlexTrade

FlexTrade is a pioneer in execution management and offers three buy-side EMS solutions - FlexTRADER EMS, FlexONE and FlexNOW. Over the past year, FlexTrade has focused on building out their multi-asset solution, desktop interoperability, as well as launching its machine-learning-driven real-time market impact analytics. FlexTrade received 35 ratings from the buy-side this year, up from 19 in 2021 and ranks sixth amongst EMS vendors in terms of number of responses to the survey.

We see a strong showing from FlexTrade in this year's survey, as the vendor increases their average score by 0.41 points to 6.17. FlexTrade outperforms the survey benchmarks in all thirteen categories under reviews, most notably in breadth of broker provided algorithmic trading options (+0.51) as well as in the key area of product development (+0.84), achieving the highest scores in these categories across all providers profiled in this year's survey. The company's highest score was in breadth of broker algorithms (6.51), followed by FIX capabilities (6.34) and latency (6.28). FlexTrade's largest year-on-year improvements were in product development (+0.80)

and timeliness of updates to broker changes (+0.72) and client service personnel (+0.56). The vendor's lowest score was again registered in overall cost of operation (5.87), however, the company did improve their score here +0.61 from last year. The company only saw a year-on-year decline in one category, breadth of direct connections to venues (-0.19).

In their provider submission to the survey, the vendor states "following on from the feedback from The TRADE's EMS Survey 2021, FlexTrade has initiated a project to allow instant, zero-touch ATDL broker onboarding to reduce the time to market for clients." In terms of desired additional capabilities from respondents this year, clients noted a need for further fixed income trading and broker connectivity; multi-asset class expansion; improved implementation of customisations and 24-hour coverage; full integration with OMS; aggregation of crossing networks; expanded coverage of products and broker algos; better OTC coverage, client user forum, and faster roll out of new functionalities; and more intraday trading analytics supporting trading decisions.

FLEXTRADE RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.23	6.28	6.23	6.13	5.93	6.51	6.23	6.34
Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score		
5.91	6.15	6.24	6.10	5.87	6.17		

KEY STATS

Overall Outperformer: 🏆

Category Outperformer: ★ X13

6.51

Highest score
(breadth of broker algorithms)



5.87

Lowest score
(overall cost of operation)

+0.80

Most improved
(product development)



-0.19

Least improved
(breadth of direct connections to venues)

Instinet Newport

Instinet Newport is the company’s multi-asset class EMS for institutional traders. Newport provides real-time data and order entry tools that take traders from pre-trade strategy, through order execution management, to post-trade analytics. Multi-asset trading capabilities include equities, options and futures. Instinet continues to make improvements to their solution, with initiatives in workflow automation, API capabilities and so-called blotter scraping. Instinet is also placing much focus on their ESG strategy, and state that the platform is now virtually carbon neutral. Newport serves around 1000 clients on the buy-side, 26 of which submitted their feedback in this year’s survey, down from 55 respondents in 2021.

In this year’s survey, Instinet underperformed the overall survey average for the first time with a score of 5.73, 0.32 lower than their 2021 average. The vendor fell short of the survey benchmarks across 10 of the 13 categories under review. Despite some lower scores than expected, Instinet remains firmly within the Good range (5.00-5.99) and achieves high ratings in key categories such as reliability and

availability (6.23) and client service personnel (6.11), outperforming the category averages by 6 and 35 basis points respectively.

Instinet saw year-on-year decreases in all categories in the 2022 survey, with the most significant being in breadth of asset class coverage (-0.50), which coincidentally was the same category which the company saw its largest increase last year. Notable declines were also seen in ease-of-use (-0.41) and FIX capabilities (-0.38). The company’s lowest score was once again in product development (5.22).

There seems to be particular demand from clients for increased asset class coverage, as this area scored 41 points behind the category average and decreased by 50 basis points year-over-year. Respondents’ wish-list for additional capabilities from Instinet included additional functionality for automation, closer integration with other market data platforms, enhanced FX capacity, access to foreign markets, additional API capabilities and internal functionality and more real-time analytics integrated into the order management process.

INSTINET NEWPORT RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.23	5.94	6.11	5.61	5.60	5.86	5.88	5.96

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
5.28	5.61	5.22	5.53	5.59	5.73

KEY STATS Category Outperformer: ★ X2

6.23

Highest score
(reliability and availability)



5.22

Lowest score
(product development)

-0.09

Most improved
(timeliness of updates to broker changes)



-0.50

Least improved
(breadth of asset class coverage)

Neovest

Neovest is a global, multi-asset, broker-neutral order and execution management system that services more than 600 buy-side clients, it covers equities, futures, options, FX, ETFs and some commodities. Neovest prides itself on a fast onboard time (typically under a month), scalability, having all asset classes available in one multi-channel platform and sourcing renewable energy for 100% of their power needs.

Neovest received an average score of 6.09 in the 2022 survey, resulting in a third place ranking among the ten firms profiled this year. The company exceeded expectations in the majority of the areas covered in the survey, receiving a score above 6.00 (Very Good) in nine of the thirteen categories, with the highest being client service personnel (+0.60). Other high scoring areas for Neovest were the handling of new versions/releases (+0.55) and timeliness of updates to broker changes (+0.47). The company's lowest score was in product development (5.70), yet this still surpassed the category benchmark by 29 basis points.

The firm's most significant year-on-year score increases were in handling of new versions/releases

(+0.36), breadth of asset class coverage (+0.27) and breadth of broker algorithms (+0.26). There were however, several areas where Neovest decreased its score from last year, most notably client service personnel (-0.26), overall cost of operation (-0.25) and reliability and availability (-0.21).

Neovest has seen strong growth among its client base, seeing some clients grow from just a few users to over 40. The company has continued to focus on customer service, with the majority of new business driven by those who have used Neovest in the past and requesting to bring it into their new shop. From a technology perspective, Neovest continues to focus on modernising its technology and developing its product strategy based on their core client base, hedge funds. This year's survey respondents mentioned they would like to see some additional features from Neovest, including enhanced cross-asset capabilities, the ability to export real-time data, expanded breadth of direct connections, better alerts and chartings functions, and more flexibility regarding free text fields in the ER/AR.

NEOVEST RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.20	6.09	6.37	6.04	6.16	6.16	6.35	6.30

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
6.01	5.83	5.70	5.96	5.95	6.09

KEY STATS

Overall Outperformer: 🏆

Category Outperformer: ★ X12

6.37

Highest score
(client Service Personnel)



5.70

Lowest score
(product development)

+0.36

Most improved
(handling of new versions/releases)



-0.26

Least improved
(client service personnel)

SS&C Eze EMS (RealTick)

Eze EMS, formerly RealTick, is a global, multi-broker execution management system providing trading support for equities, ETFs, futures, options and crypto. The system serves over 820 clients on the buy-side and offers a comprehensive array of order types to support sophisticated trading, as well as lists and program trades, pairs, spreads, brackets, conditional and multi-step orders. Additionally, the EMS' patented Neutral Account Staging allows traders to automatically route aggregated orders to brokers based on user configurable parameters. SS&C's OEMS trading solutions combines the trading tools of Eze EMS with the pre-trade compliance, position checking and allocation automation of Eze OMS.

This year, SS&C Eze EMS recorded an average score just below the overall survey average at 5.75, yet the company outperformed the survey benchmarks across four key categories, including breadth of asset class coverage (+0.64) and breadth of direct connections to venues (+0.39). In fact, breadth of asset class coverage (6.32), ranked first out of all providers profiled in this category. This

was followed by its score of 6.23 in breadth of direct connections to venues, where it ranked second among profiled providers. SS&C however scored lower than the category average in the remaining nine functional areas. The company's lowest score was in overall cost of operation (5.27), followed by handling of new versions/releases (5.32), which fell short of the benchmarks by 36 and 28 basis points respectively and highlight potential areas for improvement. In contrast SS&C recorded significant year-over-year increases across all categories.

Within the last year, SS&C Eze was the first to add digital asset trading functionality out of all tier 1 execution systems and the company continues to partner with more crypto execution venues, providing clients with an institutionalised crypto trading network. When asked if they desired any additional capabilities from SS&C Eze, survey respondents cited improved reliability, enhanced multi-asset capabilities, easier connectivity to the PMA and a robust mobile trading application.

SS&C EZE EMS (REALTICK) RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
5.94	5.88	5.73	5.62	5.32	5.64	5.66	5.99

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
6.32	6.23	5.42	5.72	5.27	5.75

KEY STATS Category Outperformer: ★ X4

6.32

Highest score
(breadth of asset class coverage)



5.27

Lowest score
(overall cost of operation)

+1.69

Most improved
(reliability and availability)

+0.24

Least improved
(FIX Capabilities)



TORA

TORA offers an all-in-one approach. It's cloud-hosted, front-to-back PMS, OMS and EMS solution is a multi-strategy and multi-asset platform, supporting a variety of asset classes such as equities, ETFs, fixed income, foreign exchange and listed derivatives. In August 2022, the acquisition of TORA by the London Stock Exchange Group closed, which will result in TORA's technology being incorporated into LSEG's trading and technology group. At present TORA has approximately 175 buy-side clients using its EMS, 67 of which provided feedback in this year's survey, ranking TORA fourth highest amongst peers in terms of number of responses.

TORA achieved an overall average of 5.98 in this year's survey, which lands 0.18 points above the survey average of 5.80. The vendor outperformed the survey benchmarks in all 13 categories under review, most notably in key areas such as client service personnel (+0.34) and product development (+0.25), as well as breadth of asset class coverage (+0.27) and ease of integration to internal systems

(+0.31). TORA's highest rating was in reliability and availability (6.36), which was also the company's highest rated category in 2021.

In terms of year-over-year performance, TORA achieved a slight year-on-year increase in just one category, latency, which increased by four basis points from last year. The remaining categories recorded decreases compared to last year's strong showing, with the most pronounced being in client service personnel (-0.31), handling of new versions/releases (-0.27) and timeliness of updates for broker changes (-0.26). Despite these declines, these scores are still above the respective category averages.

Regarding additional desired capabilities, client feedback from survey respondents rating TORA mentioned a more user-friendly interface for placing orders, better reliability, algorithmic orders independent of brokers, the ability to trade directly from the charts, enhanced asset class coverage with the EMS, additional API capabilities, more UI flexibility, improved internal functionality and more IT support on projects.

TORA RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.36	6.26	6.11	5.81	5.77	6.09	5.99	6.13

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
5.96	5.92	5.66	5.93	5.77	5.98

KEY STATS

Overall Outperformer: 🏆

Category Outperformer: ★ X13

6.36

Highest score
(reliability and availability)



5.66

Lowest score
(product development)

+0.04

Most improved
(latency)



-0.31

Least improved
(client service personnel)

TS Imagine

TS Imagine’s TradeSmart EMS is the integration of capabilities from TradingScreen and Imagine Software. TS Imagine has over 500 buy-side clients currently using its EMS. The company has gone through a period of accelerated growth since the merger, resulting in full front-to-back capabilities across risk, portfolio and order and execution management. TradeSmart is an all-asset class EMS, that provides interoperability for streamlining workflows, accessing liquidity and improving pre-trade data and post-trade analytics. TS Imagine received 77 ratings from the buy-side this year, up significantly from 26 in 2021 and ranking third highest amongst peers in terms of number of responses.

TS Imagine’s TradeSmart continued to show improvement in this year’s survey with an average score of 6.04, a 0.14 increase from last year, ranking the vendor fourth among its fellow profiled providers. The firm outperformed the category average in all thirteen areas under review, with its highest score in reliability and availability (6.25). This was followed closely by

strong performance in client service personnel (+0.47), product development (+0.42) and breadth of direct connections to venues (+0.35). TradeSmart’s lowest score was in overall cost of operation (5.72).

In a year-on-year comparison, TS Imagine increased their score in every category except one, ease-of-use, which only declined 0.01. The firm’s most significant increases were in overall cost of operation (+0.33), latency (+0.30) and ease of integration to internal systems (+0.27).

While the results of this year’s survey reveal continued success for the vendor, client feedback around additional capabilities was still plentiful, with respondents calling for: the ability to see intraday and interday P&L of trade, better electronic capabilities to handle multi-leg futures and options, improved API connectivity, trading cost analysis, reporting improvements, mobile applications with immediate syncing capabilities, additional OTC and centrally cleared instrument integration and connections with new issue platforms.

TS IMAGINE RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.25	6.13	6.23	6.06	5.85	6.08	6.15	6.13

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
5.97	6.19	5.82	5.96	5.72	6.04

KEY STATS Overall Outperformer: 🏆 Category Outperformer: ★ X13

6.25

Highest score
(reliability and availability)



5.72

Lowest score
(overall cost of operation)

+0.33

Most improved
(overall cost of operation)



-0.01

Least improved
(ease of use)

Virtu Triton

Virtu Triton is a global, multi-asset, broker-neutral, dedicated EMS platform that supports a variety of asset classes such as equities, ETFs, fixed income, FX and listed derivatives. Its broker connectivity is powered by ITG NET. The platform features native integration with the company's Virtu Trade Analytics, Data and Reporting platform. Virtu recently completed the global migration to their rebranded front end and rearchitected back end, Triton Valor and in the last twelve months have focused on expanding their multi-asset capabilities, automating tools and optimising performance. The automation capabilities of Triton enable traders to segment orders and prioritise them according to complexity, leaving them free to focus on harder-to-trade names. Triton currently has over 300 clients on the buy-side, 123 of which provided feedback for this year's survey.

Virtu Triton remained the number one provider among those profiled in this year's survey with an overall score of 6.29, which is down 0.05 from last year. The vendor outperformed the category

benchmarks in all areas under review, recording top scores in client service personnel (+0.83), ease-of-use (+0.59), overall cost of operation (0.58) and the handling of new releases (+0.57). Breadth of asset class coverage was the company's lowest rated category and the only one below 6.0 (Very Good).

Despite a stellar performance in this year's survey, Virtu recorded declines across a number of categories. The most significant year-on-year decreases were in breadth of asset class coverage (-0.20), ease of integration to internal systems (-0.14) and ease-of-use (-0.12). Virtu's largest year-on-year increases were in FIX capabilities (+0.09) and breadth of direct connections to venues (+0.07).

When asked what additional features they wanted from Virtu, respondents cited additional FX capabilities, more real-time analytics, better historical performance analytics built within the EMS, AI functionality, continued development of pre and post trade analytics, more functionality for automation, full API integration with different platforms, and pair and basket trading with additional flexibilities.

VIRTU TRITON RATINGS FOR EMS PERFORMANCE

Reliability and availability	Latency	Client service personnel	Ease-of-use	Handling of new versions/releases	Breadth of broker algorithms	Timeliness of updates for broker changes	FIX capabilities
6.51	6.35	6.59	6.34	6.18	6.45	6.31	6.53

Breadth of asset class coverage	Breadth of direct connections to venues	Product development	Ease of integration to internal systems	Overall cost of operation	Average score
5.75	6.33	6.08	6.13	6.21	6.29

KEY STATS

Overall Outperformer: 🏆

Category Outperformer: ★ X13

6.59

Highest score
(client service personnel)



5.75

Lowest score
(breadth of asset class coverage)

+0.09

Most improved
(FIX capabilities)



-0.20

Least improved
(breadth of asset class coverage)