

THE 2021 EXECUTION MANAGEMENT SYSTEMS SURVEY

With special
analysis from
Aite-Novarica
Group

AiteNovarica

EMS vendors urged to focus on multi-asset functionality as buy-side demand rises

Results from The TRADE's 2021 Execution Management Systems Survey show that EMS vendors are investing in their platforms to cater for increased demand from the buy-side for multi-asset trading capabilities.

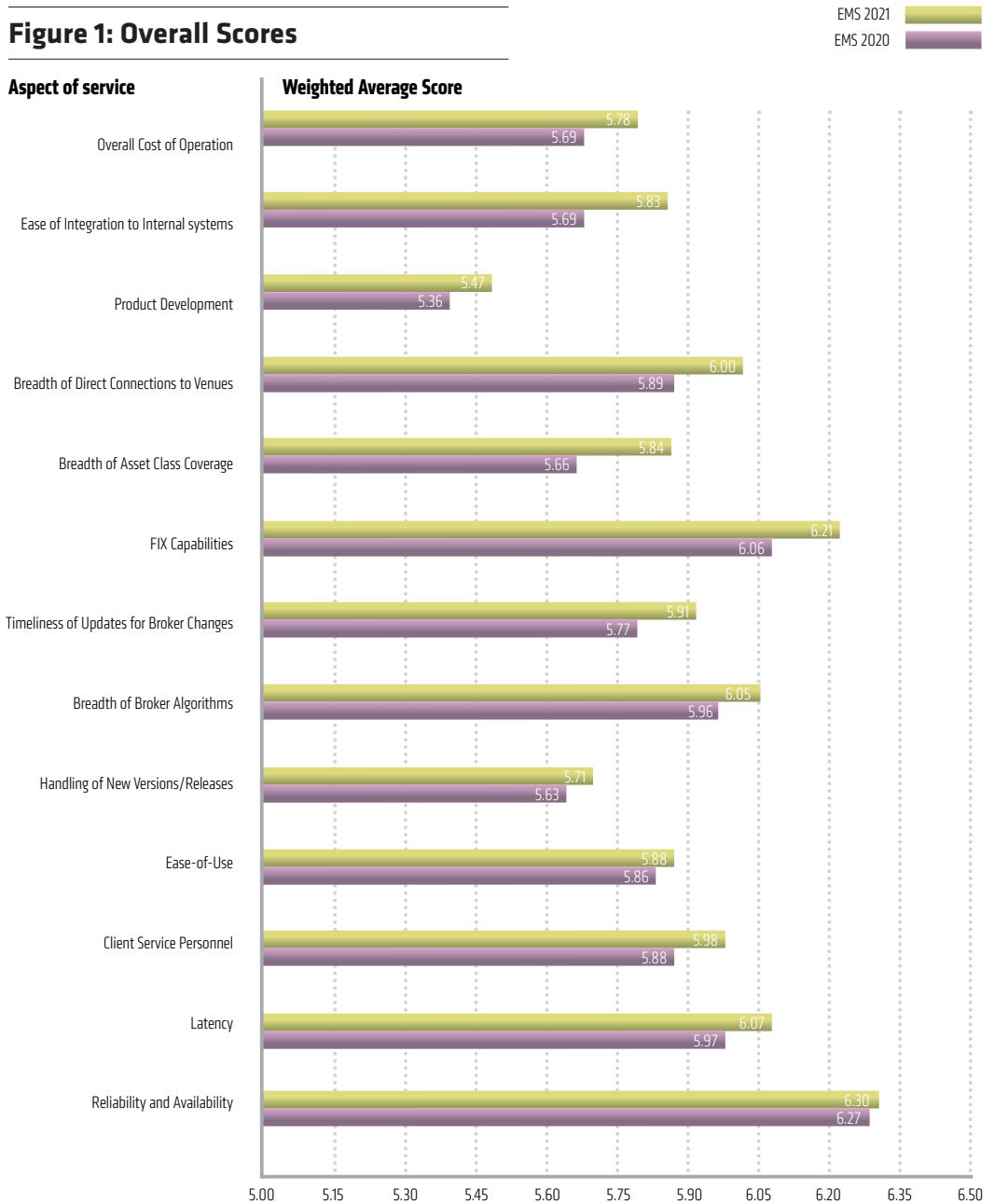
The industry standard of a great execution management system (EMS) keeps rising, pressured by the realities of a new trading environment. Having experienced unprecedented market volatility and the swift transition to remote work, providers and users are now more focused on what matters the most—improving operational efficiency and resiliency. The 2021 edition of The TRADE's Execution Management Systems survey highlights the shift in industry focus away from concerns over connectivity with brokers and venues, towards product innovation and expansion.

One major trend surfaced by this year's survey is an increasing buy-side demand for multi-asset class solutions from EMS vendors, particularly more fixed income support and offerings. Driven by a complex group of forces, including regulation, shrinking profit margins and market structure changes, adoption of fixed income EMS solutions is pushing vendors to invest more resources in this area. EMS vendors note that the implementation of fixed income capabilities involves an iterative

workflow strategy and configuration phase designed to streamline the implementation process, as vendors do not use a one-size-fits-all approach. The need to address the nuances of the fixed income market in different ways is of top importance to clients and is an area where EMS vendors will have to excel in to foster adoption and win business. Connecting seamlessly to the numerous fragmented liquidity and information sources is also paramount and on clients' minds.

Overall, survey scores have continued to rise, even though there are certainly areas where providers can do better and are in danger of falling behind. In 2021, all categories received higher average scores, with an

Figure 1: Overall Scores



increase in the overall survey average year-over-year of 5.93 from 5.82, making this year's overall average mark the highest score of the past nine years, since

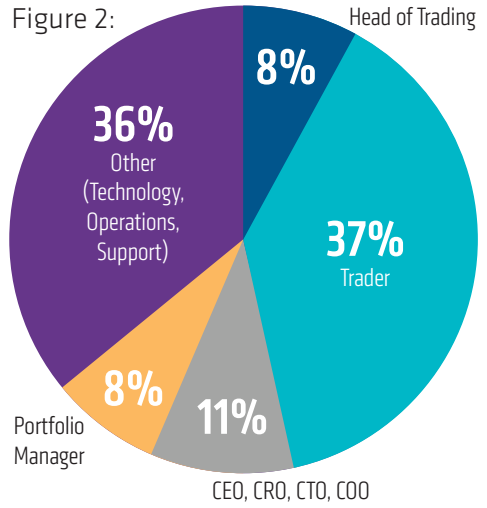
the survey commenced back in 2013. Additionally, five categories recorded an average score of more than 6.00 this year, representing notably high performance. Figure 1 shows the scores recorded over the past two years, across 13 functional EMS

categories under review by buy-side respondents.

Electrification is picking up in most asset classes. While EMS systems have evolved non-stop for the past decade, the improvements have been gradual rather than sudden. The “glow” and “grow” areas within the EMS space have been consistent throughout the past couple of years, and the survey results show that traders recognise vendors’ work to get the basics right. As in 2020, reliability and availability and FIX capabilities earned the highest ratings, with respective scores of 6.30 and 6.21. Latency, breadth of broker algorithms and breadth of direct connections to venues also scored high, showing EMS providers’ success in ensuring that their products can integrate with the wider trading landscape. Other categories score just beneath the 6.0 mark, including client service personnel (5.98), timeliness of updates for broker changes (5.91) and ease-of-use (5.88).

The most improved category is breadth of asset class coverage. Its score increased by 18 basis points from last year, indicating EMS providers’ expanding ability to cover multi-asset class trading

Figure 2:



across the board. Meanwhile, product development earned the lowest score at 5.47. This area has remained the lowest-

Figure 3: Most Important Features

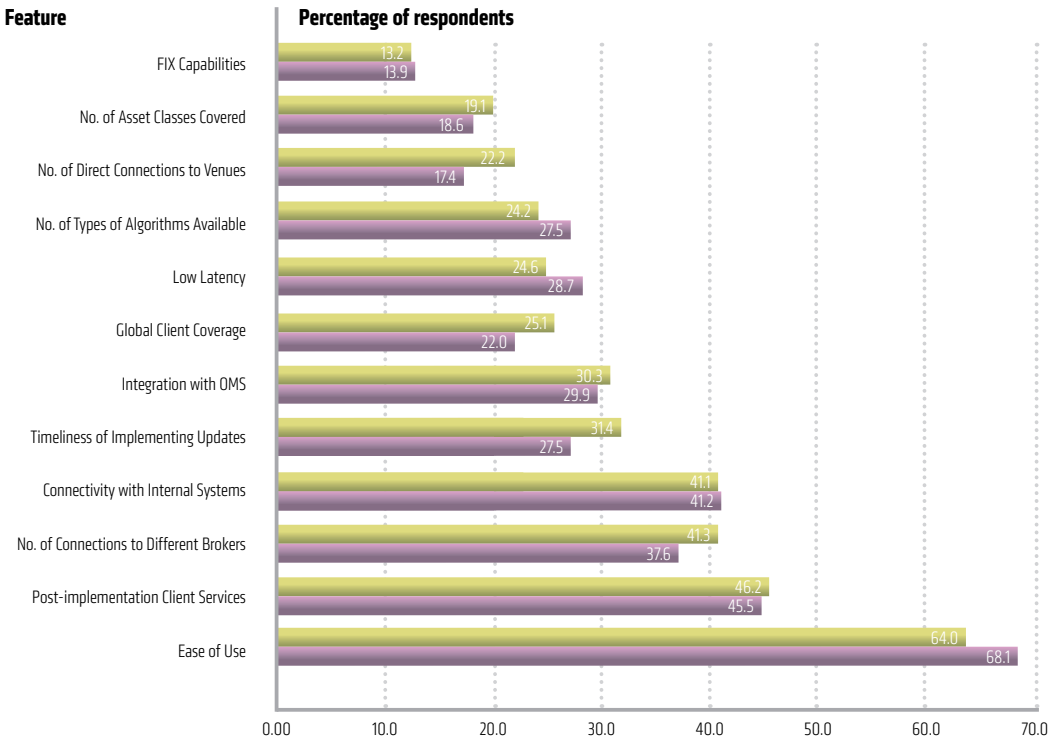


Figure 4: Number of Providers Used (% of respondents)

	2019	2020	2021
1	63	67	62
2	26	23	25
3	8	7	11
4	2	1	1
5+	1	1	1

scoring category since 2015. While still above the “good” threshold of 5.0, it is far below the survey average of 5.93, indicating that vendors seem to be having trouble innovating new solutions. The buy-side expects more when it comes to product development and those EMS providers that are able to offer innovation will likely find themselves with a competitive advantage.

The EMS survey focuses on buy-side respondents. Among those included, 37% are traders and 8% are heads of trading (Figure 2). With the decision-making authority on which EMS to use, traders are eager to provide candid feedback and express their desire for new EMS features and development. In addition, 36% of respondents include roles in technology, operations and support, providing insight from the support system within buy-side firms.

Respondents were asked to select the four most important features of execution management systems from their perspective (Figure 3). Unsurprisingly, ease of use (64%) and post-implementation client service (46.2%) ranked as the most important among this year’s survey respondents. Although ease of use experienced a slight decline from 2020, it remains a top three feature, as it has over the past four years. Number

of connections to different executing brokers (41.3%) and connectivity to and integration with internal systems (41.1%) rank as the third and fourth most important EMS features respectively.

The majority of the buy-side uses one or two EMS providers, a trend that shows little change (Figure 4). Most buy-side respondents (62%) reported using a single EMS provider in 2021, slightly down from 67% in 2020. However, the number of respondents who report using two EMS providers increased slightly (+2%). The tendency to use fewer EMS providers is partly explained by the increasingly broad offerings of vendors who have expanded their asset class coverage to non-equity classes, such as fixed-income securities.

The number of firms using three providers increased by 4%, year-over-year to 11%, a pivot after several years of decline, with 15% of firms reporting using three or more EMS providers back in 2017. It’s too early to tell if this is a solid trend in the making, but it is interesting to see that diversification is still needed for vendor selection.

Figure 5 shows the average number of providers for participants broken down by the assets under management (AuM) category. It shows the same trend, with one or two providers being the popular choice. However, drilling down to buy-side firm size and looking closely at the data reveals a slight increase in the average number of providers across all AuM categories, particularly for respondents in the US\$10 billion-US\$50 billion AuM category.

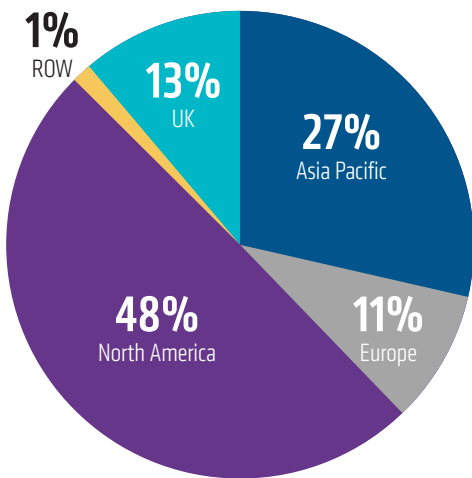
Figure 5: Average Number of Providers by AuM, 2021

Worth	
<\$ 0.5 Bn	1.34
\$ 0.5 to \$1.0 Bn	1.29
\$ 1.0 to 10 Bn	1.50
\$ 10 to \$50 Bn	1.63
>\$ 50 Bn	1.68

Figure 6: Asset Classes Traded 2021 (% of respondents)



Figure 7: Regional Distribution 2021



In this category, the average number of providers was 1.63, up by 0.22 from 2020. The figure also shows that larger buy-side firms, often with more complex strategies and more resources, tend to utilise a greater number of EMS providers.

When asked if their firms plan to add EMS providers to their existing set-up, only 9.8% of respondents answered that they had plans to do so. Less than 10 respondents were able to name which provider they hoped to onboard. Similarly, only 6% of respondents said that they had plans to change which EMS provider they were currently using.

In terms of the asset classes traded through these systems, equities continue to dominate the landscape, with 91% of survey respondents trading this class of instruments (Figure 6). Notably, a decent portion trade multi-asset classes: 51% trade listed derivatives, 25% fixed income and 36% foreign exchange. This finding aligns with Aite-Novarica Group’s research that has explored in detail the trend toward electronic and automated trading in non-equity asset classes. Like the EMS systems available to trade equities and FX, the fixed income EMS is designed to enable traders to aggregate liquidity across various sources, provide some automation of trading and layer necessary analytical capabilities into the process. However, bonds have their own unique market structure limitations that present challenges to the development, adoption and ultimate success of an EMS.

Figure 7 shows that the geographic spread of respondents in the 2021 survey

was broadly in line with last year's survey, with 48% of respondents based in North America. A slight decrease in the proportion of European respondents was observed, as was a small incline in the proportion of UK-based respondents.

Overall, this year's survey depicts a positive outlook as the industry sharpens its focus on execution quality, leaving behind some of the emphasis on compliance brought about by the introduction of the Markets in Financial Instruments Directive II (MiFID II). Still, while many areas under evaluation have performed highly, the COVID-19 pandemic has been a powerful reminder that disruption and extreme uncertainty can never be ruled out. All asset classes have experienced movements in trading as a result of the

economic turbulence this year and the ability to reallocate funds between asset classes with ease is an important quality to mitigate risk and take strategic decisions.

To fulfill customer inquiries, providers are working on initiatives that often go hand in hand with market structure developments across multi-asset markets. Workflow automation is a major result of making faster decisions and enabling better trading decisions. One industry insider described EMS as a "cockpit" for traders during the pandemic crisis, providing the technology to access analytics and liquidity. It is therefore important that EMS providers are aware of the changing trading landscape and the need for their solutions to be innovative and adaptable. Over the next 12 to 18 months, the EMS market will continue to evolve as customers and prospective clients look for greater sophistication in functionalities and more automation of manual and voice-trading activities.

This year, we profile the top 10 EMS vendors in the survey, in terms of response numbers from buy-side users, namely; Bloomberg, Charles River, FlexTrade, Instinet, Neovest, Portware, Refinitiv REDI, TORA, TS Imagine (formerly TradingScreen) and Virtu.

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 300 individuals responded; over 460 evaluations were submitted; and more than 15 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. As in 2020, analysis for the EMS survey was carried out by Aite-Novarica Group.

Bloomberg

Apart from being a data giant, Bloomberg offers an array of trading solutions with multi-asset coverage, including its Execution Management System (EMSX), fixed income trading system (FIT) and foreign exchange electronic trading tool FXGO. Bloomberg’s EMSX is built with integrated real-time analytics, indications of interest (IOIs) and trade advertisements and transaction cost analytics (BTCA). Users can manage equities, futures, options and exchange-traded fund (ETF) trades from a single, customisable workspace. Based on the annual EMS performance survey, Bloomberg EMSX is heading in the right direction, recording an increase in average score over the last six consecutive years, even though its scores are still below the survey average.

Bloomberg increased its overall average score in this year’s survey to 5.51, up from 5.37 in 2020. With this improvement in scoring, Bloomberg was ranked eighth out of the 10 providers profiled in this year’s survey, up one spot since last year. Bloomberg recorded its highest score in the reliability and availability category (6.27), a 0.19 increase from last

year. This was the only category in which Bloomberg scored higher than 6.00, a yardstick to recognise where a vendor has performed particularly well by exceeding some expectations. Bloomberg’s second-highest score went to FIX capabilities (5.97). While this marks an increase of 0.29 from last year, it’s still under the 6.21 category average across all vendors.

Bloomberg’s most improved year-on-year score was in ease of integration to internal systems (up 0.33). Year-on-year increases were also recorded in most functional categories, except in product development, which declined by 0.05.

In terms of the additional capabilities buy-side firms want from their EMS vendors, respondents of Bloomberg cited needing more integration to downstream systems, more TCA reporting, sophisticated tools for fixed income and FX, better OEMS connectivity, including more advanced post-trade allocation and trade matching functionality, better intraday technical analytics to help with trading signals, and more graphical charts to show profit and loss (P&L) from buys/sells/total, plus historical performance in baskets from previous days.

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
6.27	5.84	5.02	5.29	5.28	5.69	5.36	5.97

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
5.78	5.71	4.51	5.37	5.51	5.51

KEY STATS

6.27

Highest score
(reliability and availability)



4.51

Lowest score
(product development)

+0.32

Most improved
(ease of integration to internal systems)



-0.05

Least improved
(product development)

Charles River

Since the acquisition of Charles River in July 2018 by State Street for US\$2.6 billion, the bank has had significant time to integrate the vendor's EMS solutions into its offering. The Charles River Investment Management Solution (Charles River IMS) is designed to automate and simplify the institutional investment process across asset classes, from portfolio management and risk analytics to trading and post-trade settlement. Charles River IMS combines an OMS with multi-asset execution capabilities, creating a single integrated order and execution management system (OEMS). Compared to the average score of the other vendors profiled in this year's survey, Charles River ranked last. While its average score of 5.23 reflects an increase from its 2020 average score of 5.05, it ranked at the bottom in seven functional categories, including reliability and availability (5.66), latency (5.52) and client service personnel (4.85), falling below the category averages of 6.30, 6.07 and 5.98 respectively. Charles River's lowest score was for the handling of releases of new versions (implementation process and training) (4.21), which

underperforms the category benchmark by 150 basis points.

While much improvement is needed to increase its overall scoring, the vendor registered year-on-year increases in nine categories. Most notably, the score for latency went up by 0.77, while timeliness of updates for broker changes showed the steepest decrease, dropping by 0.57.

The vendor's highest score was in the FIX capabilities category (6.28), up 0.49 from last year and seven basis points above the category average of 6.21. Other good scores include breadth of asset class coverage within the EMS (+0.02) and breadth of direct connections to brokers and execution venues (+0.01). The eventual completion of projects delayed by the pandemic may also push Charles River's scores higher in the future.

When respondents of Charles River were asked about additional capabilities that they would like, most of the comments centered on support for multiple asset classes on the fixed income side, including better integration with Truemid, MarketAxess, LTX Trading, etc.

CHARLES RIVER 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
5.66	5.52	4.85	5.27	4.21	5.25	4.34	6.28

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
5.86	6.01	4.57	5.53	4.61	5.23

KEY STATS

Category Outperformer: ★ X3

6.28

Highest score
(FIX capabilities)



4.21

Lowest score
(handling of new versions/releases)

+0.77

Most improved
(latency)



-0.56

Least improved
(timeliness of updates for broker changes)

FlexTrade

FlexTrade offers a number execution and order management trading systems, including FlexTRADER, FlexONE and FlexNOW, across equities, fixed income, FX, bonds and listed derivatives. The past 12 months have seen several exciting developments across FlexTrade’s multi-asset EMS solutions. For example, it recently partnered with BlackRock’s Aladdin to enable clients to leverage the Aladdin platform’s broad-based OEMS capabilities alongside the vendor’s expertise in EMS. FlexTrade also collaborated with Turquoise and OpenFin, and integrated BMLL’s Level 3 data, which now embeds directly within FlexTRADER’s EMS order blotter.

The vendor received decent survey scores, scoring 5.75 overall, down from 5.91 in 2020. It ranked seventh out of the 10 providers profiled in this year’s survey. All of FlexTrade’s scores were above the default “good” benchmark of 5.0 and in two categories, the vendor received a score above 6.00, indicating performance exceeding some expectations. FlexTrade recorded its highest score in breadth of direct connections to execution venues

(6.33), outperforming the category benchmark by 33 basis points and ranking second in this category among the 10 providers profiled. The vendor also outperformed in the areas of breadth of broker algorithms (6.09) and ease of use (5.95).

FlexTrade’s lowest score was registered in overall cost of operation (5.27), which underperforms the category benchmark by 51 basis points. This metric also received the lowest score last year, suggesting that the vendor has work to do to make their costs competitive. The largest year-on-year decrease was seen in breadth of broker algorithm, which fell from 6.44 in 2020 by 0.34 to 6.09. In recent years, broker algorithms have become more sophisticated with greater selections and the buy-side’s need for better integration with these upgraded algos has increased.

In terms of desired additional capabilities from FlexTrade, respondents noted a need for more fixed income functionality, more responsive customer service when problems occur, much more quality-assurance testing before a release, cost-effective ways to connect to smaller niche liquidity providers, and pre-trade metrics.

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
5.98	5.85	5.67	5.95	5.59	6.09	5.51	5.86

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
5.72	6.33	5.44	5.54	5.27	5.75

KEY STATS Category Outperformer: ★ X3

6.33

Highest score
(breadth of direct connections to venues)

5.27

Lowest score
(overall cost of operation)

+0.10

Most improved
(breadth of direct connections to venues)

-0.34

Least improved
(breadth of broker algorithms)

Instinet

Instinet Newport is a global, broker-neutral, multi-asset class EMS that delivers an all-in-one integrated workflow to around 1,000 buy-side institutional traders. Clients can utilise Instinet's extensive network of brokers, algo racks and venues to trade 24/6 across more than 65 markets. Multi-asset trading capabilities include equities, complex order types, options, futures and spot FX trading. As an agency broker, Instinet do not trade their own book, which allows for capabilities to be focused exclusively on benefiting clients' efficiency and performance quality. Newport is now virtually carbon neutral – operating with sustainable energy via its data centres and utilising the cloud for scalable data integration.

In this year's EMS survey, Instinet once again outperformed the survey average with an average score of 6.04. While this represents a small 0.03 decrease from its 2020 average score, the vendor still ranks fourth of the 10 providers to be profiled this year. Instinet scored above 6.00 in six of the 13 categories under evaluation, meaning that in these categories, the vendor exceeded expectations and overall demonstrated continued good performance in

its EMS offering.

Instinet saw the largest year-on-year score increase in breadth of asset class coverage, rising by 0.55 to 5.77. The vendor outperformed category benchmarks in 11 aspects of service, including responsiveness and effectiveness of client services personnel (+0.47), reliability and availability (+0.29) and latency (+0.19). While Instinet had a good year by most metrics, decreases in eight categories show that the vendor struggled to match its 2020 performance. Ease of integration to internal systems experienced the most significant scoring decline—losing 0.51 and sitting at 5.84. The lowest score went to product development (5.55), which still sits comfortably above the category average of 5.47.

Respondents' wish-list for additional capabilities from Instinet included FX and futures TCA, a focus on doing the basics quickly, adoption of a simple programmatic order framework allowing traders to automate simple actions, better daily charting capabilities, full API support, more broker-neutral routing, and better integration with external market data.

INSTINET 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
6.59	6.26	6.45	6.02	5.81	6.12	5.97	6.33
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		
5.77	5.96	5.55	5.84	5.87	6.04		

KEY STATS

Overall Outperformer: 🏆

Category Outperformer: ★ X11

6.59

Highest score
(reliability and availability)



5.55

Lowest score
(product development)

+0.55

Most improved
(breadth of asset class coverage)



-0.51

Least improved
(ease of integration to internal systems)

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Neovest

Servicing over 4,000 users across more than 600 buy-side clients, Neovest is a global, multi-asset, broker-neutral order and execution management platform, connecting to more than 350 global brokers/LPs and over 130 global exchanges, covering equities, ETFs, futures, listed options and FX. The vendor's core strategy is its open platform, which allows integration and interoperation with third-party and client applications.

Neovest was a new entrant to the survey back in 2020 and as with last year, has outperformed the survey average once again, recording an overall average score of 6.04 and ranking fifth among the ten profiled providers. The vendor outperforms the category average in seven keys areas, most notably client service personnel, timeliness of updates for broker changes and overall cost of operation, surpassing the benchmarks by an impressive 65, 52 and 42 basis points respectively. Neovest received its lowest score in breadth of direct connections to venues (5.66), a year-on-year decline of 0.30, which lands 0.34 points below the category average.

Year-on-year comparisons were varied, with

significant increases in areas like timeliness of updates for broker changes (+0.35), cancelling out significant decreases in aspects of service such as the handling of releases of new versions (-0.35). However, one noteworthy category is product development, which increased 27 basis points up to 5.75, beating the category average by 0.28 points.

As Neovest expands its product capabilities, it focuses on continuously improving stability, reliability, and service. Several recently launched developments center those priorities, including asset-class expansions via the HTML5-powered FX EMS; channel expansion beyond desktop: delivering iOS app and providing interoperability with client systems through API integration; the Neovest Wheel, which automates broker allocation and continued automation of client workflows. This year's survey respondents mentioned additional features they would like to see from Neovest, including integrated P&L/accounting, a compliance module for restricted securities, proactive alerts if a FIX connection is taken down or cancelled by a broker, better integration with client's risk system, and more systematic post-trade and pre-trade allocation capabilities.

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
6.42	6.01	6.63	6.08	5.80	5.90	6.43	6.12

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
5.74	5.66	5.75	5.77	6.20	6.04

KEY STATS

Overall Outperformer: 🏆

Category Outperformer: ★ X7

6.63

Highest score
(client service personnel)



5.66

Lowest score
(breadth of direct connections to venues)

+0.35

Most improved
(timeliness of updates for broker changes)



-0.36

Least improved
(handling of new versions/releases)

Portware

Portware Enterprise is a multi-asset EMS for some of the world’s largest investment management, quant and hedge fund trading desks. The EMS enables traders to implement and streamline custom workflows, aggregate preferred data and analytics sources, automate decision making and reduce market impact across equities, fixed income, FX, futures and options. Since its acquisition by FactSet in 2015, Portware has surfaced in and out of the provider profiles featured in the EMS survey, depending on its number of responses received.

After a slight ranking drop in the 2020 EMS survey, Portware rebounded with strong 2021 ratings. The firm’s 6.26 average score lands an impressive 34 basis points ahead of the survey average, placing it second among the 10 providers profiled. The vendor recorded year-on-year increases across 11 of the 13 categories under review, the most significant being for overall cost of operation, latency and the handling of releases of new versions, which increased by 0.75, 0.75 and 0.69 points respectively. Two categories experienced slight declines—reliability and availability (-0.08) and product

development (-0.02).

Notably, Portware scored first place across six categories among the 10 profiled vendors, including breadth of direct connections to venues and overall cost of operation, which both landed 60 basis points ahead of the category average. Portware’s reliability and availability category scored highest; its 6.61 surpassed the category average of 6.30 across all vendors. The lowest score went to product development—at 5.65, still above the category average of 5.47 and ranking fifth among the 10 profiled vendors.

While it’s clear most vendors experienced sluggish progress in product development this year, Portware will need to think about how it can boost its product innovation to meet client’s ever-expanding needs to maintain its momentum. In terms of additional capabilities that buy-side firms want from Portware, some survey respondents mentioned artificial intelligence in algo selection, better TCA native to the system, global multi-asset coverage, improved fixed-income functionalities, and more algo wheel technology.

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
6.61	6.53	6.23	6.12	6.05	6.54	6.30	6.54

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
5.87	6.60	5.65	5.98	6.38	6.26

KEY STATS Overall Outperformer: 🏆 Category Outperformer: ★ X13

6.61

Highest score
(reliability and availability)




5.65

Lowest score
(product development)

+0.75

Most improved
(latency)



-0.08

Least improved
(reliability and availability)

Refinitiv REDI

In January this year, London Stock Exchange Group (LSEG) completed its transformational acquisition of data and analytics giant Refinitiv for \$27 billion, resulting in new ownership for REDI EMS. REDI started life as the proprietary EMS for Goldman Sachs and then sought to develop into an independent multi-broker platform with mixed success. The EMS went on to be acquired by Thomson Reuters Financial & Risk business in early 2017, before the firm rebranded to Refinitiv in 2018. Currently, Refinitiv REDI EMS supports trading for equities, ETFs and listed derivatives, covering markets in North America, LATAM, EMEA and the Asia-Pacific. As part of Refinitiv, REDI EMS has become even more closely aligned with the data giant's pre-trade content and analytics. More recently, the vendor has started integrating cutting-edge trading analytics alongside its execution tools, continuing with enhancements to differentiate the platform.

In the 2021 survey, Refinitiv REDI garnered sufficient responses to be profiled and scored an

average of 5.51, 42 basis points below the survey average. It ranked ninth out of the 10 profiled providers. REDI scored higher than 6.00 (very good) in two categories, earning its highest score in FIX capabilities (6.06) and a score of 6.02 in breadth of broker algorithms.

Its best year-on-year increase was in latency (5.97), up by 0.83 from 2020, and significant increases were also recorded in breadth of broker algorithms (+0.83), ease of integration to internal systems (+0.50) and the responsiveness and effectiveness of client service personnel (+0.31). REDI's lowest score was in cost of operation, which at 4.80 is classified as "satisfactory" (adequate, but undistinguished) and falls short of the category benchmark by 0.98 points.

When asked about additional features, client comments from respondents of Refinitiv REDI include more reliability, better aesthetics, remote wheel updates for managers, direct liquidity options in one clean order string, more integration with other vendors, TCA reporting and more support for multiple asset classes.

REFINITIV REDI 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
5.95	5.97	5.30	5.19	5.24	6.02	5.27	6.06

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
5.45	5.41	5.17	5.76	4.80	5.51

KEY STATS

6.06

Highest score
(FIX capabilities)



4.80

Lowest score
(overall cost of operation)

+0.83

Most improved
(latency)



-0.68

Least improved
(breadth of asset class coverage)

TORA

TORA EMS is a multi-asset front-to-back office trading technology provider, providing access to over 500 multi-asset broker algos, allowing buy-side clients to trade across a variety of asset classes, including global equities, fixed income, FX, listed derivatives and bonds, in one unified platform. The firm believes the future of trading technology is one integrated platform for all asset classes and operational areas. The system offers smart order routing, pre-trade risk controls, real-time position management and P&L tracking. Systematic trading support through APIs allows fetching and interaction among all object types of the system, including orders, executions, positions and compliance. Users can also access the TORA FIX network to connect to multiple asset class trading platforms and global brokers to access greater liquidity and improve trade execution quality. The firm has also released support for a wide variety of fixed income and FX products and instruments.

TORA achieved an overall average of 6.15, up 4 basis points from 2020 and outperformed the category average in all 13 aspects of service under

review. This strong showing places TORA third among the 10 profiled vendors. Impressive scores were achieved in client service and timeliness of updates for broker change, which outperformed the benchmarks by 0.44 and 0.34 respectively. Product development (+0.34), the handling of releases of new versions (+0.33) and ease of integration to internal systems (+0.33) were categories that also performed particularly well. In addition, TORA ranked first place in breadth of asset class coverage, where its score of 6.14, outperformed the category average by 0.31 points.

TORA recorded year-on-year increases across seven categories, the most notable being breadth of asset class coverage (+0.39) and ease of integration to internal systems (+0.27). Year-on-year decreases were recorded in six categories, including breadth of broker algorithms (-0.17) and ease of use (-0.16).

Regarding desired additional capabilities from TORA, survey respondents mentioned better mobile tools for order placement and monitoring, more predictive portfolio risk tools, enhanced pre-trade tools, and more product range covered.

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
6.46	6.23	6.42	5.94	6.04	6.10	6.26	6.35

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
6.14	6.11	5.82	6.16	5.92	6.15

KEY STATS Overall Outperformer: 🏆 Category Outperformer: ★ X13

6.46

Highest score
(reliability and availability)




5.82

Lowest score
(product development)

+0.39

Most improved
(breadth of asset class coverage)



-0.17

Least improved
(breadth of broker algorithm)

TS Imagine (previously TradingScreen)

In May this year, Investment firm Francisco Partners merged TradingScreen and Imagine Software to create a new SaaS cloud-based end-to-end trading and portfolio management software platform used for connecting investment managers to brokers, banks and exchanges. TradingScreen, a provider of trading execution and order management software and Imagine Software, a real-time risk and compliance software platform, combined to create TS Imagine. The EMS offering, TradeSmart, is a multi-broker, multi-asset class trading platform and provides a customisable graphical user interface (GUI) that integrates multiple dealers and asset classes into a single-screen format for electronic order routing.

TS Imagine's TradeSmart inched up from TradingScreen's 2020 score, receiving an overall average of 5.90 this year. This landed slightly below the survey average of 5.93, placing it sixth among the 10 profiled providers. The vendor outperformed the benchmarks in six categories, most notably in product development, which outperformed the category average by 24 basis points. Areas such as ease of use (+0.19) and client service personnel (+0.18) also

performed well.

A good year-on-year result testifies to the vendor's efforts to keep up with changes in the EMS space. TS increased its year-on-year score across eight categories, with the most prominent increase in handling of new versions/releases (+0.31) and timeliness of updates for broker changes (+0.29). The firm recorded year-on-year decreases in five categories, though many of these were relatively marginal. The most significant decline (0.34) occurred in breadth of asset class coverage, which scored 5.74, slightly below the category average of 5.84. The lowest score TS received was for overall cost of operation (5.39), down 0.31 from 2020 and ranking seventh of the 10 profiled vendors in this category.

While the results of this year's survey reveal many positive developments, there are still several areas that TS will need to focus on to improve its EMS offering. This year's survey respondents mentioned wanting the following additional capabilities from TS; greater execution counterparties, FIX allocation interface and continued refinement of existing protocols.

TS IMAGINE (PREVIOUSLY TRADINGSCREEN) 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
6.19	5.82	6.16	6.07	5.73	5.95	6.03	6.10
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		
5.74	6.12	5.71	5.69	5.39	5.90		

KEY STATS

Category Outperformer: ★ X6

6.19

Highest score
(reliability and availability)



5.39

Lowest score
(overall cost of operation)

+0.31

Most improved
(handling of new versions/releases)



-0.34

Least improved
(breadth of asset class coverage)

Virtu

Virtu Financial's Triton is a global, multi-asset, broker-neutral EMS platform. Its broker connectivity is powered by one of the industry's leading FIX networks, ITG NET. Triton's automation capabilities enable traders to segment flow and prioritise orders based on complexity. In addition to equities, FX, futures and fixed income, trades executed in Triton can be reviewed using Virtu Analytics' multi-asset TCA for performance management. Traders can also combine auto-routing with Virtu's Algo Wheel for systematic allocation to brokers. TCA can then be applied to facilitate unbiased, performance-driven broker comparison and to measure normalised performance across all Algo Wheel venues.

Historically, Virtu Financial's Triton EMS has been a top performer in EMS surveys and this year is certainly no different. Virtu has 300 buy-side clients using Triton and around one third of them responded to this year's survey. Virtu's Triton ranked first among the 10 profiled vendors, with an average score of 6.34, up by 0.14 from 2020. Virtu outperformed the survey average in all 13

areas under review, recording stellar results in product development (+0.67), ease of use (+0.58), handling of new versions/releases (+0.51) and ease of integration (+0.44).

Virtu recorded year-on-year increases across all categories surveyed. The strongest year-on-year increases were recorded in product development (+0.30), breadth of broker algorithms (+0.24) and breadth of asset class coverage (+0.24). The vendor's lowest year-on-year score was ease of integration to internal systems, up by 0.02.

"The Triton platform received stark feedback over recent years that multi-asset capabilities were lacking. This year, we responded with a marked increase in multi-asset functionality across futures, FX, and fixed income workflows," state Virtu in their provider submission to the survey. When asked which additional features they wanted from their providers, respondents of Virtu mentioned connection to back-office, auto-allocation via FIX data, an integrated pre-trade and post-trade solution, and AI or an auto-routing engine based on multiple parameters.

VIRTU 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
6.54	6.37	6.62	6.45	6.22	6.46	6.37	6.43

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
5.95	6.27	6.14	6.27	6.29	6.34

KEY STATS Overall Outperformer: 🏆 Category Outperformer: ★ X13

6.62

Highest score
(client service personnel)

5.95

Lowest score
(breadth of asset class coverage)

+0.30

Most improved
(product development)

0.02

Least improved
(reliability and availability)