



# The 2018 Execution Management Systems Survey

# EXECUTION BEYOND COMPLIANCE

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MiFID II may have changed the game when it comes to execution management, but trading efficiency will always come first.

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In last year's Execution Management Systems Survey (EMS), The TRADE examined if compliance was becoming the new battleground as the introduction of MiFID II across Europe drew closer. EMS providers were working hard to build up their front-office compliance capabilities before the start of the year and that work has continued well into 2018 in response to the needs of their buy-side clients.

The introduction of new rules for firms to demonstrate best execution for all transactions was of course a major game-changer for buy-side traders, who must now be more aware of their regulatory obligations at every step of the trade process, especially when it concerns execution. However, traders will invariably act on instinct and will want their performance to be judged on more than its compliance merits.

The 2018 edition of the EMS Survey was conducted around six months into the MiFID II regime and the compliance element will have played a large part in how respondents have rated their EMS providers as enhancements will have come into effect.

Figure 1 shows the scores seen in the survey in each of the past five years for the 13 categories respondents were asked to review. Overall scores remained at a good level in this year's survey, with all 13 categories under scrutiny scoring above 5.00 (a good, or "default", score), while the overall survey average rose to 5.56, the highest level at any time during the last five

years and a 0.08 improvement on last year.

Almost all of the areas of service ranked by respondents showed improvement on last year's results, with only three categories showing an incremental decrease so small as to be largely insignificant. There were noticeable increases in scoring within the breadth of broker algorithms and overall cost of operations categories – up 0.22 and 0.24 respectively on last year. Systems cost was always going to be an important factor for respondents this year as expenditure on dedicated compliance systems has increased substantially over the past two years in the run up to MiFID II, and respondents seem to have acknowledged vendors' efforts to accommodate this. The highest-scoring category this year was for reliability and availability, always one of the keystones of a successful EMS, at 5.91, although this has been a consistent level of scoring over the past five years.

The product development category, which suffered a dip in score in the 2017 survey, also returned to a more respectable score, although it was still the lowest-scoring aspect of service in this year's survey. Clearly, compliance mandates have distracted vendors from innovating their front-office products in execution terms, although it would be reasonable to expect them to turn their attention back to this area now that MiFID II is firmly bedded in.

As has been the case in previous years, the majority

Figure 1: Overall Scores

Aspect of Service	Weighted Average Score				
	2014	2015	2016	2017	2018
Reliability and Availability	5.86	5.95	5.93	5.92	5.91
Latency	5.33	5.57	5.69	5.62	5.62
Client Service Personnel	5.52	5.49	5.58	5.53	5.53
Ease-of-Use	5.58	5.54	5.60	5.54	5.53
Handling of New Versions/Releases	5.01	5.18	5.26	5.19	5.29
Breadth of Broker Algorithms	5.45	5.70	5.59	5.62	5.85
Timeliness of Updates for Broker Changes	5.12	5.29	5.48	5.42	5.50
FIX Capabilities	5.32	5.75	5.72	5.78	5.86
Breadth of Asset Class Coverage	5.11	5.15	5.35	5.45	5.52
Breadth of Direct Connections to Venues	5.14	5.30	5.41	5.54	5.65
Product Development	4.80	4.92	5.21	4.98	5.15
Ease of Integration to Internal Systems	4.78	5.45	5.36	5.35	5.40
Overall Cost of Operation	5.13	5.35	5.33	5.24	5.48

of responses to this year’s survey came from traders or head traders, as shown in Figure 2, accounting for 60.7% of submissions; hardly surprising given this group are the primary users of the system. There were fewer responses from portfolio managers or C-level executives this year compared to 2017, possibly due to attention being diverted towards compliance obligations.

When it comes to the most important features of an EMS, consistency is the name of the game, with the majority of features considered by respondents maintaining similar numbers to those recorded in last year’s survey. Respondents were asked to cite four of their most important features relating to EMS functionality. The most noticeable movement was a 10.2% decrease in respondents citing connectivity with internal systems as one of the most important features, perhaps due to the increasing sophistication of technology interoperability, or because systems have been in place for long enough to have truly bedded in to the technology infrastructure.

There were two new features included for review in this year’s survey – ease of use and integration with OMS (order management systems) – for respondents to consider. Ease of use was clearly the most important

Figure 2: Respondent Profile

Job Title	% of Total Responses				
	2014	2015	2016	2017	2018
Head of Trading	23.6	22.9	18.6	18.1	21.1
Trader	35.0	35.6	37.7	40.7	39.6
CEO, CRO, CTO	16.6	13.6	10.2	11.7	10.7
Portfolio Manager	8.9	9.3	9.8	13.5	11.5
Other (Technology, Operations, Support)	15.9	18.6	23.7	15.9	17.0

element for respondents, with 70.1% selecting it as a crucial element, indicating that trading desk personnel just want to work with systems that work.

Meanwhile, just under 30% of respondents said integration with OMS was a key feature, although due to the burgeoning trend for integrated order and execution management systems that can offer a holistic workflow, it is hard to gauge the significance of this result – it may simply be those firms using separate

Figure 3: Most Important Features

Feature	% of Respondents (*)				
	2014	2015	2016	2017	2018
No. of Connections to Different Brokers	45.2	51.7	34.9	40.1	41.9
No. of Asset Classes Covered	28.0	21.2	24.7	29.9	23.3
No. of Direct Connections to Venues	24.8	22.0	19.1	19.1	16.7
No. of Types of Algorithms Available	33.8	22.9	26.0	25.3	23.4
Timeliness of Implementing Updates	28.0	23.7	24.7	26.2	21.5
Connectivity with Internal Systems	56.7	49.2	45.6	47.2	37.0
FIX Capabilities	14.6	21.2	14.9	15.7	14.4
Low Latency	19.1	24.6	20.9	24.1	24.4
Global Client Coverage	24.2	28.8	27.4	24.1	24.1
Post implementation Client Service	37.6	41.5	41.9	41.4	39.6
Ease-of-Use	N/A	N/A	N/A	N/A	70.1
Integration with OMS	N/A	N/A	N/A	N/A	29.6

(\*) Each respondent named up to four important features

Figure 4: Number of Providers Used

# Providers	% of Respondents				
	2014	2015	2016	2017	2018
1	65.1	59.3	56.3	34.0	55.9
2	18.9	26.3	30.7	36.0	30.0
3	11.8	6.8	8.4	15.1	10.7
4	3.0	5.1	2.8	8.8	1.9
5+	1.2	2.5	1.9	6.1	1.5

systems are prioritising an EMS that sits well alongside their OMS of choice.

One of the most interesting findings of this year's survey can be seen in Figure 4, which records the number of EMS providers respondents use. There has been an evident shift over the last 12 months for buy-side firms to consolidate the number of providers they use, with over half of respondents having now selected an exclusive EMS provider of choice, while just under one-third of respondents indicated they are using two providers for EMS.

Figure 5: Average Number of Providers by Size

Size of Respondents	% of Respondents				
	2014	2015	2016	2017	2018
< \$0.5 Bn	1.43	1.23	1.55	1.67	1.39
\$0.5 to \$1.0 Bn	1.50	1.51	1.50	2.01	1.38
\$1.0 to \$10 Bn	1.66	1.73	1.67	1.82	1.60
\$10 to \$50 Bn	1.37	1.92	1.67	2.21	1.81
> \$50 Bn	1.81	1.74	2.06	2.38	1.99

The trend shown in last year's survey for multiple providers has been reversed and this may have been a case where buy-side firms were evaluating their options ahead of the MiFID II go-live date, particularly among those firms that were using three to four providers in recent years.

Almost 83% of respondents in this year's survey said that they had no plans to onboard additional EMS providers from those they were already using, while 80% said they were not considering replacing their current provider(s) altogether. Of those that did say they were

Figure 6: Asset Classes Traded

Asset Class	% of Respondents				
	2014	2015	2016	2017	2018
Equities	96.8	92.4	85.6	85.3	91.9
Listed Derivatives	59.2	63.6	56.7	54.6	57.8
Fixed Income	26.1	35.6	20.0	25.4	25.6
Foreign Exchange	36.3	41.5	33.0	35.4	34.4
Other	3.8	5.1	4.2	3.5	3.3

Figure 7: Types of EMS Used

Type	% of Respondents				
	2014	2015	2016	2017	2018
Single Multi Broker/Multi Asset	38.1	47.5	47.0	50.7	51.5
Multiple Single Broker or Single Asset Class	23.3	33.1	29.8	31.0	30.7
Links from OMS to Brokers	26.0	37.3	22.8	25.7	27.8
Direct Links to Execution Venues	12.6	20.3	12.1	13.3	13.3

planning to either replace or supplement their existing provider, several commented that they were looking to improve the analytics capabilities, improve stability and efficiency, and greater transparency on elements such as trading venue charges and price increases. Costing was also a major factor for those reviewing their EMS provider and may prove to be a deciding factor for those looking to switch.

Leading on from the results of Figure 4, the average number of providers by size of respondents (shown in Figure 5), further underlines the predilection of buy-side firms to shrink the number of EMS provider relationships they hold, regardless of their assets under management (AuM). Firms at the larger end of the AuM scale are still more likely to employ multiple EMS providers, however, the averages for respondents in the \$10-50 billion and more than \$50 billion in AuM have now both slipped below two providers for the first time since 2015.

Looking at the asset classes traded by respondents in this year's survey (Figure 6), there were a few minor shifts, such as a small increase in the number of firms trading listed derivatives, while there was an increase in those active in the equities space, which rose to just

## 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) to 7.0 (Excellent), covering 13 functional criteria.

In general, 5.0 represents the 'default' score of respondents. In total more than 250 individuals responded; more than 400 evaluations were submitted; and more than 15 providers were evaluated.

The evaluations were used to compile the seven Provider Profiles covering the major 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 capabilities were further weighted according to the importance attached to them by respondents to the Survey. 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 most important.

Finally, it should be noted that responses provided by affiliated entities are ignored and a few other responses, where the respondent was not able to be properly verified, were also excluded.

under 92%, a return to the levels seen in 2015. As with the results in Figure 7, which illustrates the types of EMS used by respondents, there was not much change on last year's results, with respondents providing almost exactly the same results, with fluctuations minor enough as to be considered inconsequential.

Overall, the picture portrayed by the 2018 EMS Survey is that of a movement back towards execution focus that goes beyond compliance. MiFID II has certainly made it's mark on the front-office, and will continue to do so, but with vendors having adjusted their systems accordingly, traders will want to get back to focusing on what really defines their role going forward: quality execution.

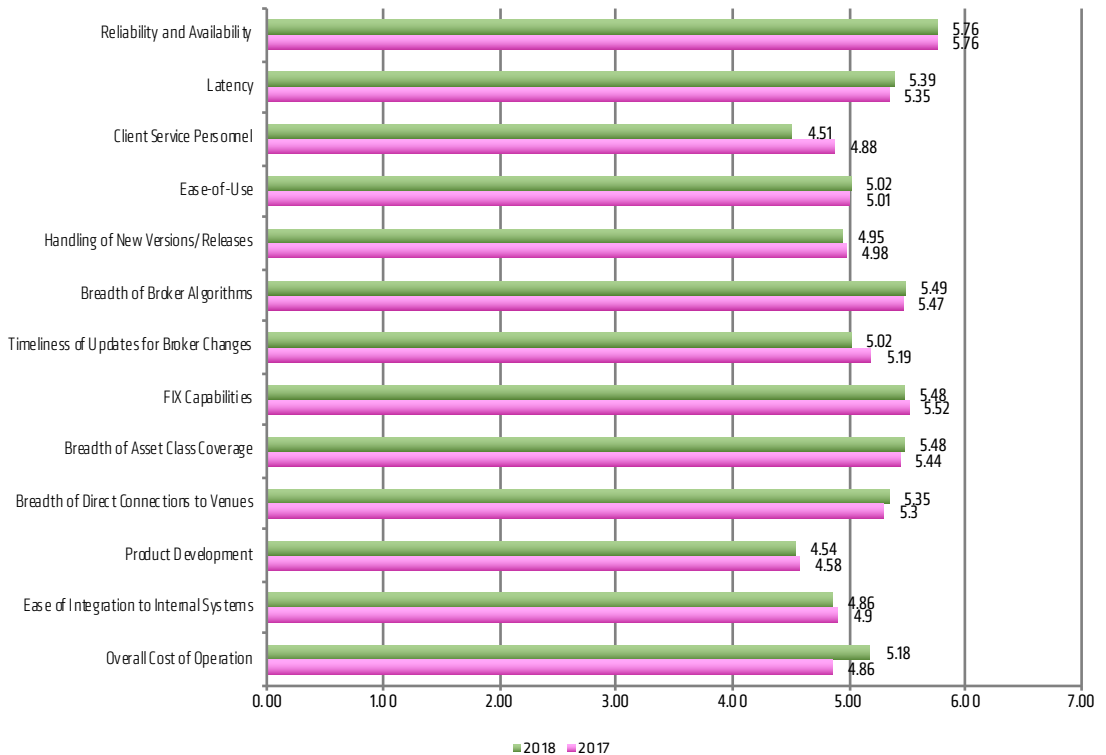
# Bloomberg

Bloomberg saw its number of responses decrease by 28% from 2017, although the data giant still drew the highest response numbers across all providers for the second year running, confirming its position as the largest provider based on survey responses. The firm recorded largely similar scores year-on-year, with an overall average of 5.16; however this was well below the survey-wide average of 5.56.

Compared with the previous year, the vendor scored consistently in 10 of the 13 categories under review, with some very minor fluctuations in scoring, although the firm was unable to outperform the survey average in any category. Bloomberg's highest score (5.76) was attributed for its reliability and availability, although this was one of the lowest scores achieved in this area by the major providers profiled. Bloomberg's biggest area of improvement was for

its overall cost of operations, which increased 0.32 year-on-year.

Bloomberg drew responses from a variety of market participants in this year's survey, not particularly surprising given its wide range of services and products, as well as its global reach and brand strength. In terms of size, respondents were primarily large organisations, managing more than \$50 million of assets, with an even number of small-to-mid-sized firms comprising the rest of the respondents. There was also a healthy mix of users across different asset classes, including listed derivatives, fixed income and foreign exchange as well as equities. One piece of good news for the firm was that almost two-thirds of respondents said that they had no plans to replace Bloomberg as their EMS provider over the next 12 months.



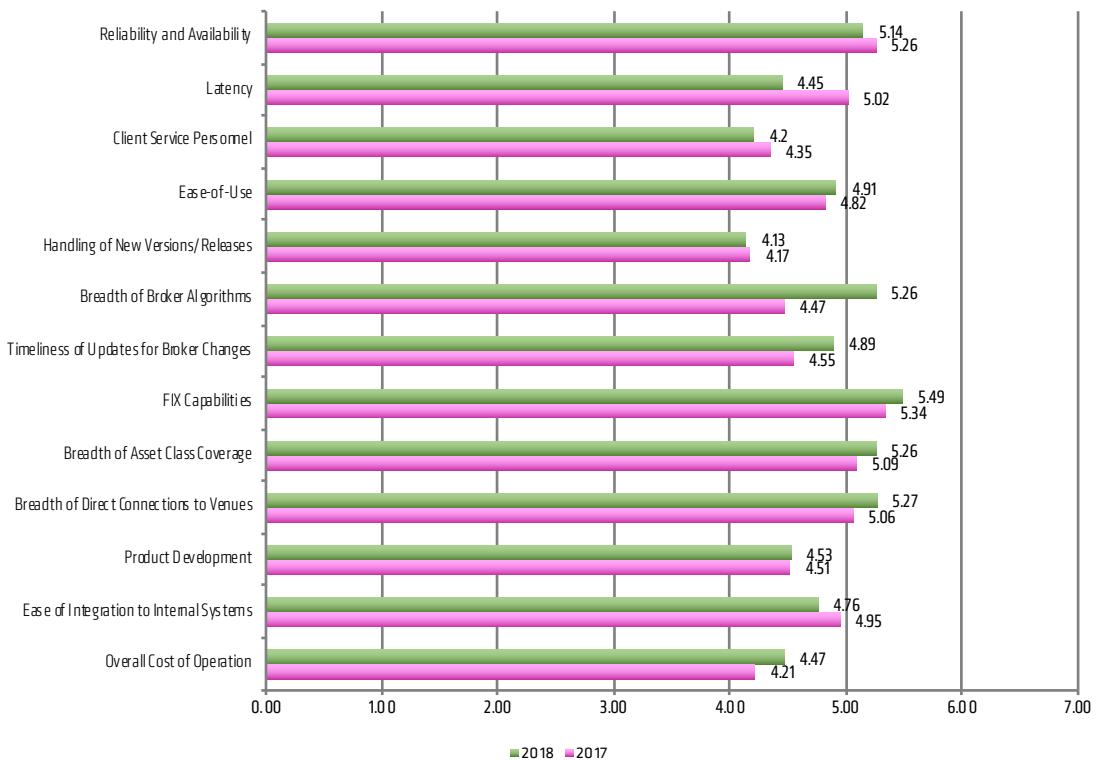
# Charles River

The acquisition of Charles River by State Street in a \$2.6 billion in July this year was a landmark deal in the EMS space, not least because of the size of the fee involved. Charles River has been one of the foremost vendors in the front-office space for a number of years through its solutions portfolio, and the EMS survey mainstay saw a 12% increase in the number of responses it received year-on-year for the 2018 edition.

However, there will be plenty of work ahead for Charles Rivers' new owners according to its scoring this year, as the firm recorded the lowest average score of all the major providers profiled (4.83), well below the survey-wide average of 5.56. The vendor failed to score above 5.00 in eight of the 13 categories under review, lagging behind its competitors in

almost every area. Despite these low scores, Charles River did record increased year-on-year scores in eight categories, most significantly in the breadth of broker algorithms category, which increased by 0.79 on last year's score.

Around two-thirds of respondents for Charles River manage more than \$50 million of assets, spread evenly across North American and the United Kingdom. Respondents were mainly from the institutional and long-only sectors, with a variety mix of activity across listed derivatives, fixed income and foreign exchange. The majority of respondents did not plan to onboard additional EMS providers or switch providers entirely; however given how respondents have scored Charles River, State Street may have work ahead of them to keep the system's user base happy.



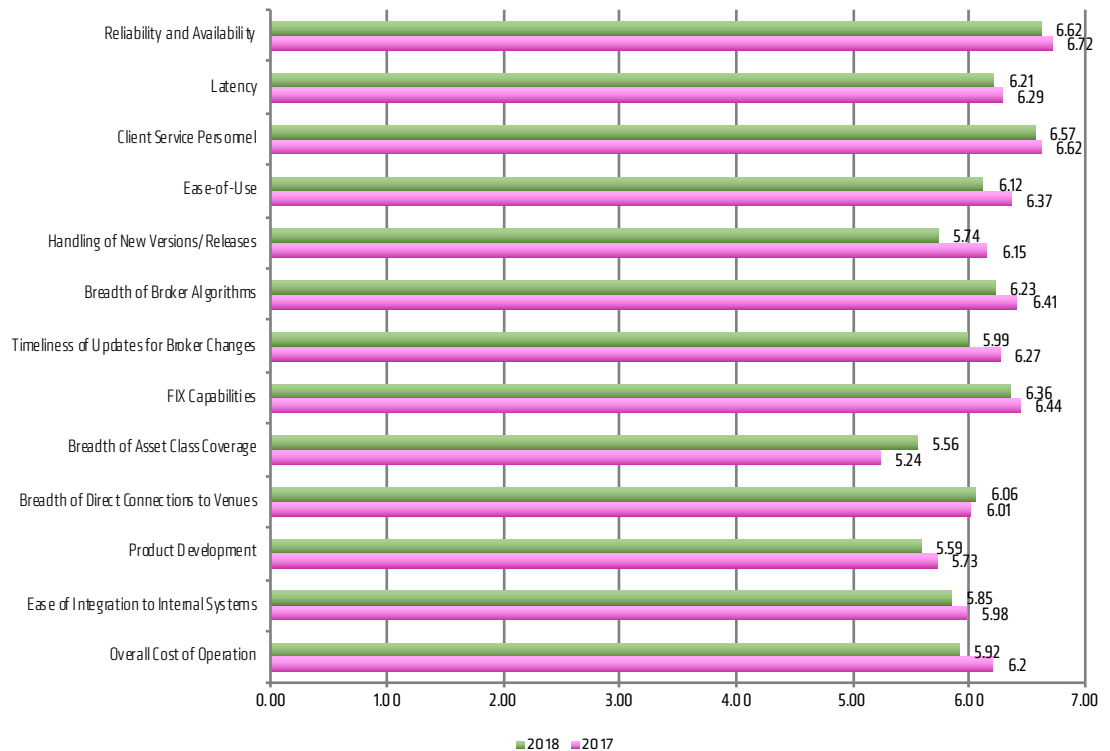
# Instinet Newport

For the third year running, Instinet Newport recorded the highest average score for all major providers profiled in the survey, although this did decrease slightly year-on-year, from 6.19 in 2017 to 6.06 in this year's survey. The firm was one of only two major providers to break the 6.0 mark for its overall average. Instinet Newport saw a decreased number of respondents in this year's survey, with respondents down 28% year-on-year.

Instinet outperformed the survey average in all 13 categories reviewed, recording the highest scores of all the major providers in this year's survey for its reliability and availability, latency, client service personnel, timeliness of updates for broker changes, FIX connectivity, breadth of direct connections to venues, and overall cost of operations. The firm also recorded improvement for its breadth of asset class coverage,

which increased 0.32 year-on-year, although respondents weren't too impressed with its ability to handle new versions/releases, as the firm's score dropped by 0.41 year-on-year.

Respondents for Instinet came primarily from the mid-to-large AuM range, with around three-quarters of respondents located in the United States. Around half of respondents used Instinet to trade listed derivatives, while only a few respondents said they used the system for either foreign exchange or fixed income activity. There were no respondents for Instinet that indicated they were planning to adopt other EMS providers in the next 12 months, suggesting that Instinet has cultivated a dedicated and satisfied user base, although Instinet should be wary of complacency given the saturated nature of the EMS space.





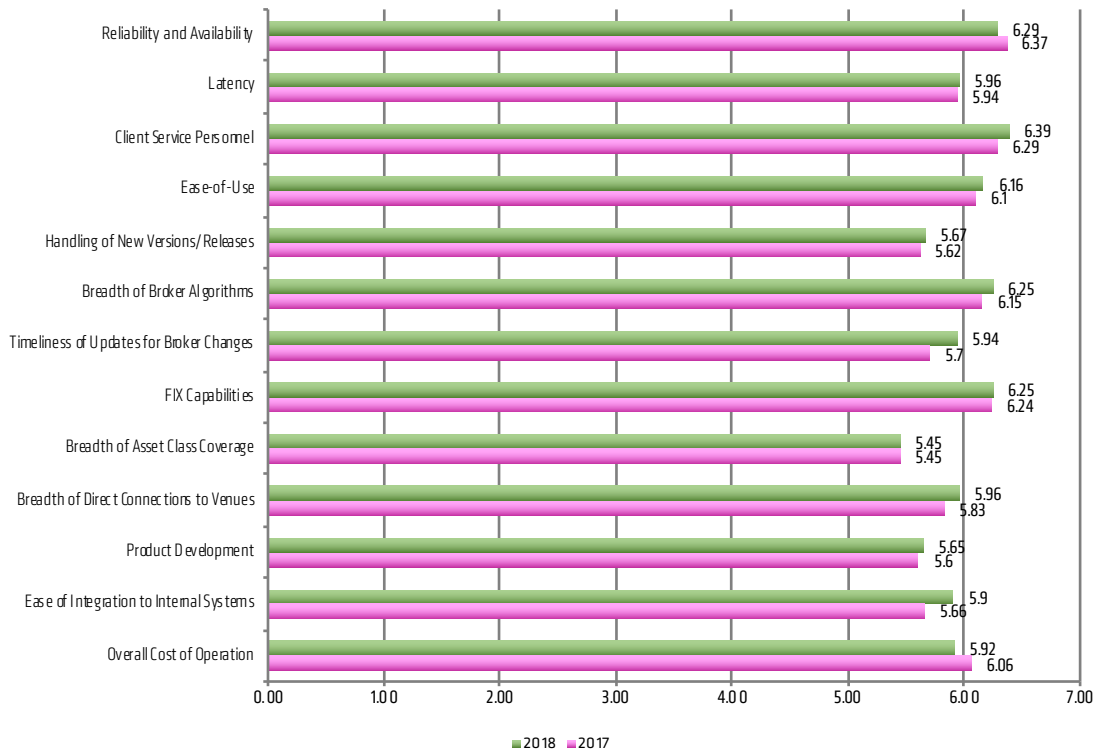


ITG recorded the largest increase in responses for this year's survey of any provider, recording a 40% increase from last year, with only Bloomberg and TS drawing more responses in total. The vendor recorded the third-highest average score among the major providers profiled in this year's survey (5.98), comfortably outscoring the survey-wide average and recording a minor improvement on its showing in last year's survey.

The vendor received year-on-year increased scores in 11 of the 13 categories under review from respondents, with its capabilities in the reliability and availability, and overall cost of operation judged to have declined since last year. While many of the improved scores were incremental compared to the previous year, ITG posted a strong showing compared to its competitors, clocking up the highest ranking in

the ease of use (6.16), breadth of broker algorithms (6.25) and ease of integration to internal systems (5.90) categories. ITG also outperformed against the survey average in every category.

Respondents for ITG were some of the most varied of any of the providers in this year's survey. The majority of respondents came from the United States, where the firm's client base is strongest, but there were also entries from the UK, Canada, Australia, Hong Kong and other European nations. Just under half of respondents for ITG manage more than \$50 million of assets, while the remainder was mostly comprised of mid-sized firms. While there were some firms that indicated they are considering adopting other providers, three-quarters of respondents said they had no plan to replace ITG as their EMS provider over the next 12 months.



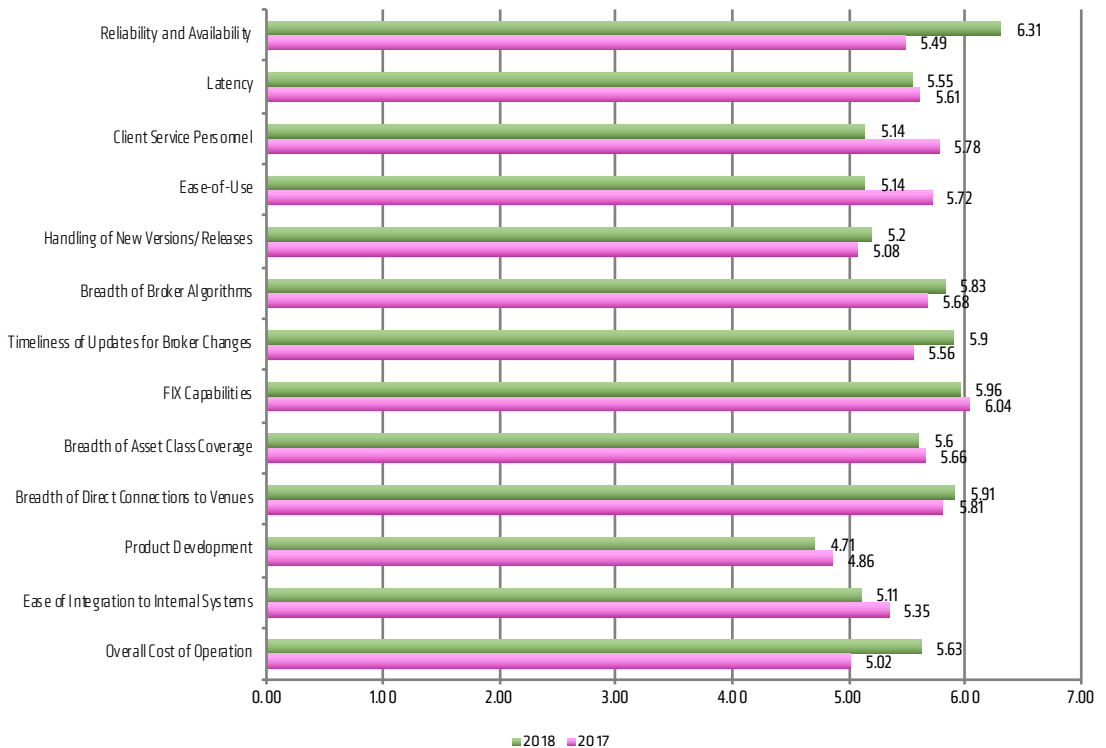
# Thomson Reuters REDI

Thomson Reuters REDI has retained its position as one of the major EMS providers profiled measured by levels of respondents, despite seeing the most significant decrease in responses year-on-year (43.5%). Over a year since the integration of REDI into the Thomson Reuters front-office portfolio was completed, the vendor's significant client base has had ample time to review how the planned interoperability between REDI's trading tools, Elektron's market data and Eikon's pre-trade content and messenger functionality has worked out.

Respondents seem to be generally satisfied with the performance of Thomson Reuters REDI in this year's survey, handing out an average score of 5.54 (up 0.03 on last year), although this was still only enough to place it in the middle of the major providers profiled and just under the survey-wide average (5.56). Thom-

son Reuters REDI outscored the survey average in five of the 13 categories under review. Respondents were impressed by the solution's reliability and availability, which scored 6.31, a 0.82 increase year-on-year, although there were significant year-on-year decreases in the client service personnel and ease of use categories (down 0.64 and 0.58 respectively). Of most concern to the vendor will be respondents' rating of its product development capabilities, which scored 4.71, the only category in which the firm failed to achieve a score over 5.00.

Thomson Reuters REDI respondents were primarily based in the United States, with others from the UK, Hong Kong and Singapore, and just over half coming from the hedge fund space. There were no respondents for the firm that were planning to replace the system in the next 12 months.



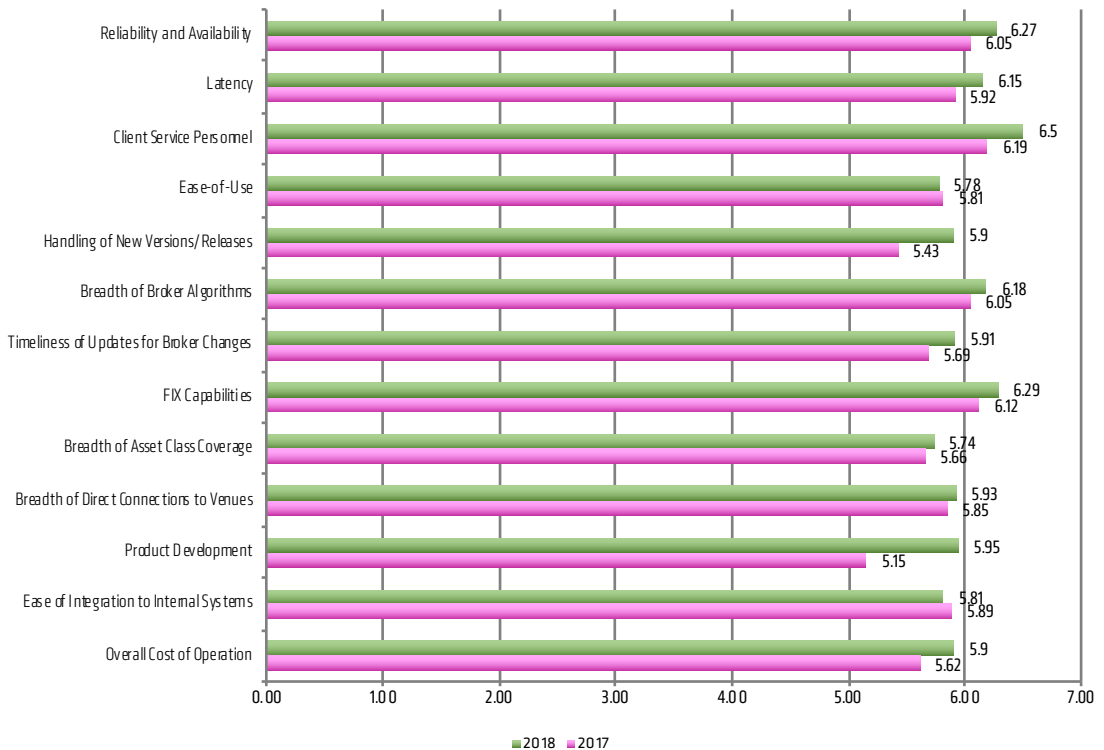
# TORA

TORA may have seen increasing numbers of responses within previous years' surveys, but that trend was reversed this year, as the vendor recorded a 18.5% decrease compared to the 2017 edition. The firm has made efforts to upgrade its integrated order and execution management system both in the run-up to and post-MiFID II, adding portfolio and trading analytics from OTAS Technologies (now part of Liquidnet) and launching an artificial intelligence-powered algo wheel for buy-side traders, which has gone down well with this year's respondents.

TORA was one of two major providers profiled in this year's survey to outscore the survey average in every category under review, chalking up an overall score of 6.02, which again was higher than the survey average (5.56) and an increase on its overall rating from last

year's survey (5.80). The vendor recorded the highest scores in three of the 13 categories reviewed by respondents in this year's survey – handling of new versions/releases (5.90), breadth of asset classes (5.74) and product development (5.95) – a testament to the firm's approach to building out its front office capabilities.

TORA has continued to build on its core client base in the APAC region, with half of its respondents coming from Japan and over one-quarter from Hong Kong and Singapore. The majority of responses for TORA were from small-to-mid sized hedge funds, with a minority showing from institutional respondents, continuing a trend seen in last year's survey. None of the firm's respondents said they were considering replacing TORA with another EMS provider in the next 12 months.



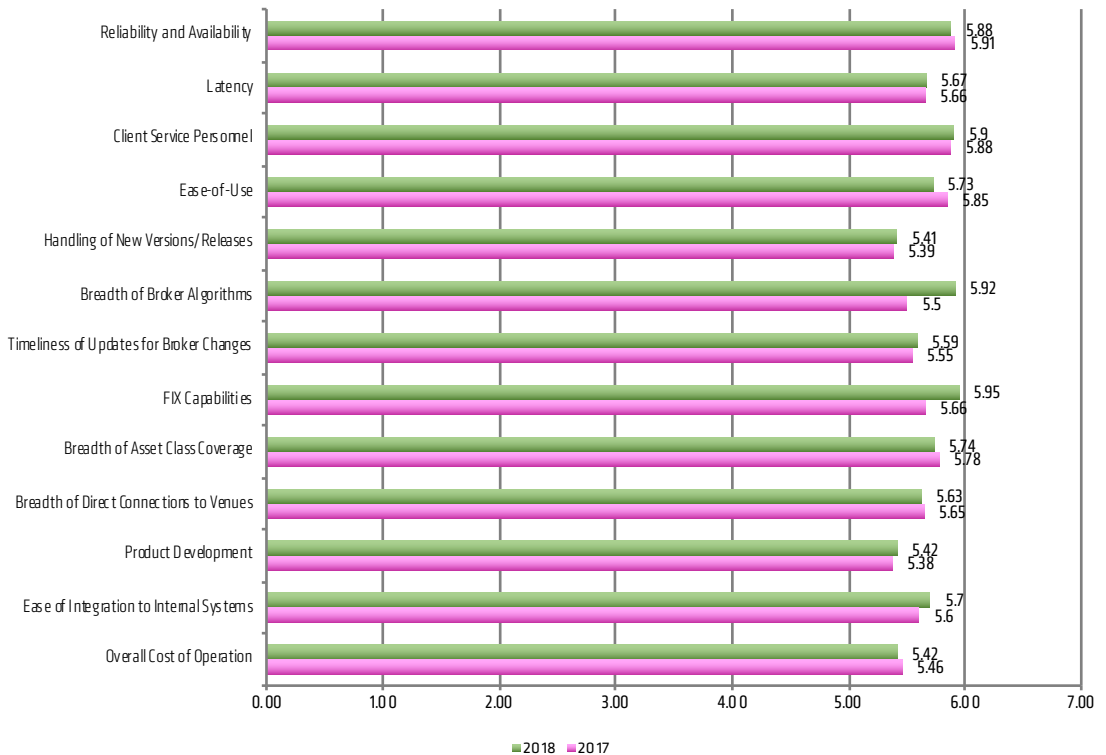
# TS

TS (TradingScreen) recorded the second-highest number of responses to this year's survey, behind only Bloomberg but this was down almost 30% year-on-year. Although execution has been the staple of TS's business for many years, it has recently pivoted towards the more holistic, combined order and executive management system offering, while also expanding its access to liquidity through partnerships with venue operators such as Liquidnet.

Over the past two years TS has maintained respectable scores within the EMS survey and this year was able to show incremental improvements in almost all categories reviewed by respondents. The vendor's overall score this year increased to 5.69 – up from 5.64 last year – which was above the survey-wide average (5.56) and the fourth-highest of the major providers

profiled. The vendor also outscored the survey average in 10 out of 13 categories. Although TS did not receive a score higher than 6.00 in any of the categories this year, respondents did score the vendor higher in eight of the 13 categories compared to last year, and while there were areas where TS did receive decreased year-on-year scores, these were almost all insignificant (less than 0.1).

Respondents for TS were split equally from a range of AuM brackets, with around half managing at least \$10 million of assets, with most coming from the hedge fund and institutional markets. The breadth of TS's asset class coverage also showed in the survey results, with a strong showing from firms trading listed derivatives, foreign exchange and fixed income in addition to equities.



## Other providers

In addition to the seven providers profiled, a further 22 providers received at least one response but not enough to earn a profile, and there were several respondents which use their own proprietary capabilities.

Among these secondary group of providers there were several strong names that have featured in previous EMS survey profiles but earned fewer than 10 responses in this year's edition: Eze Software, Fidessa, Flextrade, Itiviti (including Ullink), Morgan Stanley Passport, Portware and UBS. These firms, while not having garnered enough responses to carry a meaningful sample size, still received interesting results from respondents.

Eze Software recorded largely average scores from respondents, either just above or below the 5.00 mark, with an overall average of 5.40, below the survey-wide average. The vendor scored well among its respondents for its FIX capabilities, breadth of broker algorithms and direct connection to venues. Having been acquired by SS&C in a \$1.45 billion deal earlier this year, there is improvement work to be done for Eze's new owners to bring the system up to the level of its competitors.

Fidessa recorded a poor showing in this year's survey, and although this was based on a small sample of respondents, the firm's users are clearly critical of its execution capabilities. The vendor received an average score of 4.62 and only exceeded a score of 5.00 in just two of the 13 categories reviewed. Respondents were very critical of Fidessa's handling of new versions/releases both in terms of scoring and additional comments made within their submissions for the survey.

Flextrade, often one of the main providers profiled in the EMS survey, saw a significant fall in its response numbers this year, but was still able to record some very healthy scores according to respondents. The vendor scored highly in the breadth of direct connections to venues, latency and breadth of broker algorithm categories, outscoring the survey averages in 11 of the 13 categories reviewed by respondents.

Itiviti completed its acquisition of Ullink in March this year, taking ownership of an established front-office systems provider to round-out its technology offering. The few respondents for Itiviti were not generous with their scoring, as the firm racked up an

average of 5.00, with most of its category scores hovering around that mark, although there were some lower scores for its reliability and availability, and overall cost of operation.

Morgan Stanley Passport received a mixed bag of scores from its small number of respondents in this year's survey, with scores either very high or very low. As such, it's overall scores across the categories under review evened out, with most clocking in at around 5.50. However, respondents did agree that the firm did well in terms of its overall cost of operation, awarding almost a perfect score (7.0), albeit from a very small sample size.

Portware is another firm that has been profiled as a major provider in recent years but suffered a sharp decline in respondent numbers this year. Having been acquired by FactSet three years ago, the vendor will be disheartened that its small number of respondents rated the firm under 5.00 for product development, handling of new versions/releases, and client service personnel. However, respondents were impressed with Portware's breadth of broker algorithms.

UBS recorded an average showing in this year's survey, with a small number of respondents handing out an overall average score of 5.19, well below the survey-wide average. The bank mostly recorded scores between 5.00 and 5.50 across the categories under review, but respondents were critical within the client service personnel, FIX capabilities, breadth of asset classes and product development categories.

