

The 2016 Asian Algorithmic Trading Survey

Recognising excellence in the delivery of algorithmic trading solutions

Featuring

- **Market review**
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Going its own way

New players take centre stage as Asia picks its own path

By Robert Kay

Five years ago, when TheTrade Asia first published a Survey of Asian providers of algorithmic trading services, the results looked like the main survey 'writ small'. The providers in Asia were the banks that had dominated the industry, first in the U.S. and then in Europe. They were adapting to the Asian environment, with greater or lesser success, the systems and processes that had served them well previously. However, as business inside the Asian region grew in importance that process began to look less and less like the optimum way forward. New clients required different services

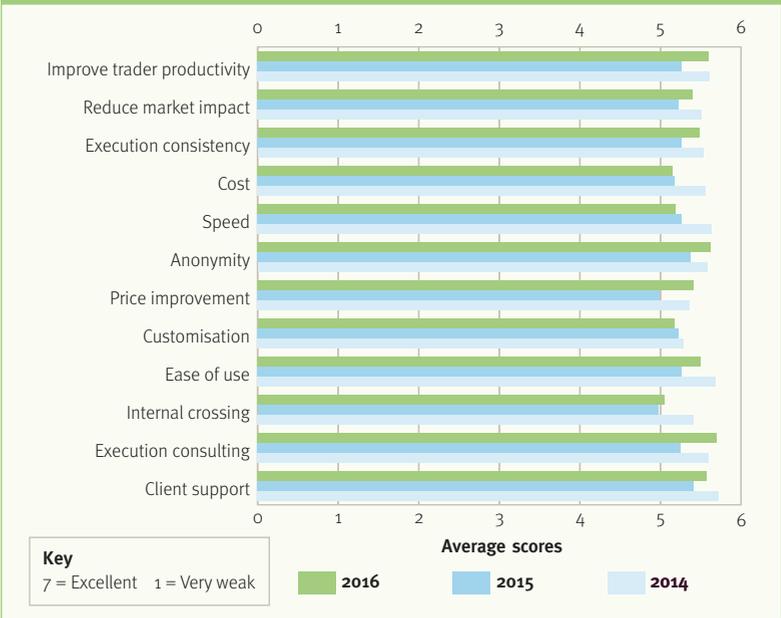
and already had relationships with a range of brokers, local and regional as well as global. 2016 to some extent sees the culmination of that evolution, with different providers appearing not only as performing well, but also winning business from more traditional players. As global investment banks set different priorities for future investment in people and technology, it may be that Asia will, by choice or circumstance, forge a new path in terms of development of algorithmic trading. If so, some of the providers at least seem more than capable of leading the charge.

Market review

New clients required different services and already had relationships with a range of brokers, local and regional as well as global.

In terms of actual scores, 2016 saw an overall improvement. The average score was 5.41 across all questions and all respondents compared with 5.37 in 2015. However, this remains lower than the scores seen in the global survey published earlier in the year in TheTrade. Figure 1 shows the evolution as well as the scores for individual categories. In a number of areas, including important elements such as Price improvement, Anonymity and Trader Productivity, scores in 2016 returned to levels seen in 2014. As such 2015 might be regarded as a temporary anomaly. However, scores for Cost,

FIGURE 1: RATING OF ALGORITHM PERFORMANCE



Source of all charts: The TRADE Asia Annual Algorithmic Trading Survey

FIGURE 2: REASONS FOR USING ALGORITHMS



Speed and Internal Crossing, scores remain little changed from a year ago. Clearly not all clients are satisfied with all aspects of service, though in general higher scores do correlate to the more important functional components. So in Asia, as elsewhere, providers do seem to be concentrating on delivering best in the areas most critical to their clients. Figure 2 shows how priorities have changed for Asian clients. Again to some extent the numbers suggest a return to the position in 2014. However it is worth noting that Anonymity, for long a key part of Asian trading expertise is now seen as noticeably less important than it was, and appears to be on a declining trend. On the other hand clients do regard the ability of algorithms to Reduce Market Impact as an important feature of different provider capabilities. While keeping trades anonymous is one way to lower the market impact cost incurred it is by no means the only way. As clients become more familiar with the nature of the algorithms they are working with, they appear to be coming more concerned about the outcome, than the method taken to achieve it.

FIGURE 3: AVERAGE NUMBER OF PROVIDERS USED BY AUM

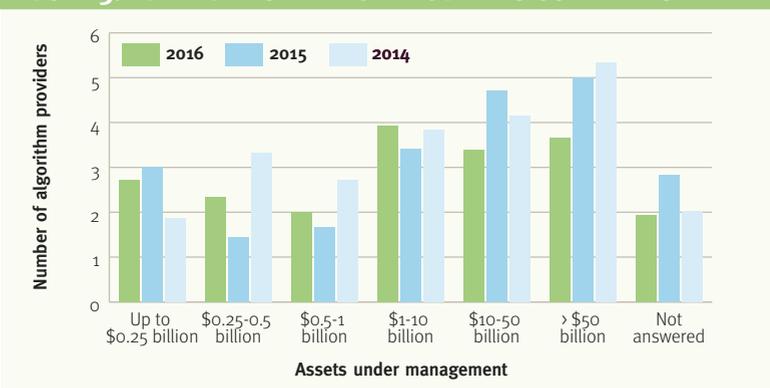
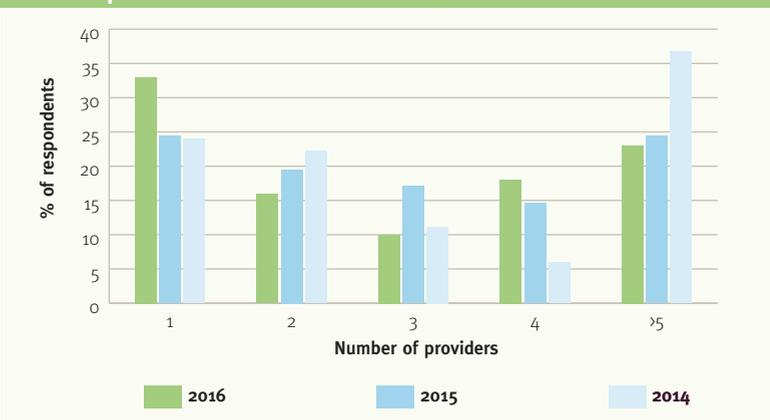


FIGURE 4: NUMBER OF PROVIDERS USED



In Asia, as elsewhere, providers do seem to be concentrating on delivering best in the areas most critical to their clients.

Figures 3 and 4 look to the number of providers being used to execute trades using algorithms. What is interesting in these results is that the number of respondents using five or more

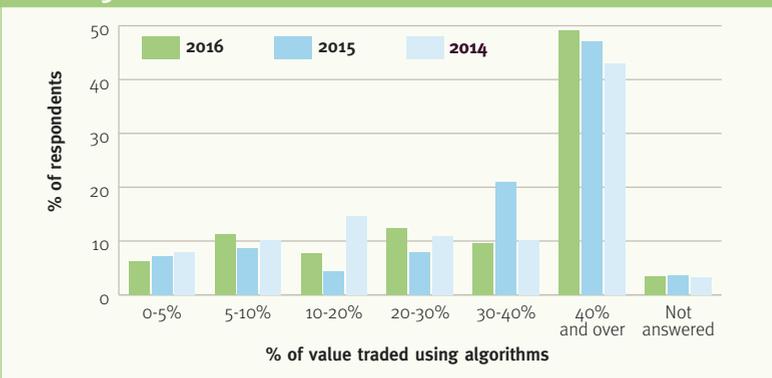
providers has once again declined and appears steady at around one-quarter of institutions. Meanwhile there continues to be a focus back towards firms using a single broker, now at

Market review

one-third of respondents. Again it may be that in the early stages of business evolution, clients look to experiment with many providers. As their business matures they recognise that some brokers are probably better than others, or they simply prefer working with them. That leads to a concentration back with fewer providers. However, for the very largest institutions, where all business is spread across a large number of brokers, they may all be used for algorithmic as well as other non-electronic trading. As was the case in 2015, there does appear to be a loose correlation between assets under management (AuM) and the number of brokers being used. However the split seems to be around \$1 billion AuM. Above this level there is a greater willingness to use three or more providers. Below that and the number of providers is typically lower.

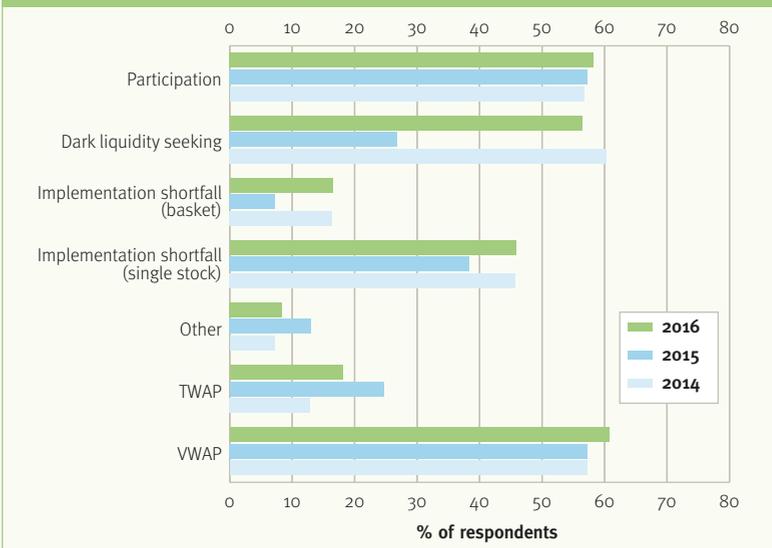
Figure 5 shows the proportion of respondents using algorithms for varying levels of their trading activity. The number of institutions using algorithms for more than 40% of their trading is now around 50% of the total. This level, though still growing slightly,

FIGURE 5: ALGORITHM USAGE BY VALUE TRADED



The number of respondents using five or more providers has once again declined and appears steady at around one-quarter of institutions.

FIGURE 6: TYPES OF ALGORITHMS USED



seems to have plateaued. So it would be fair to say that roughly half of the buy-side firms have bought into using algorithms for by far the largest portion of their trading activity. The number using algorithms for less than 5% of trading is now quite small. Probably for such a small proportion of trading, the cost of keeping algorithmic trading capabilities current, as well as the evaluation of different providers, probably does not make commercial sense. For the rest the average of around 15% of trading being done with algorithms seems fairly stable, albeit with some year by year variations.

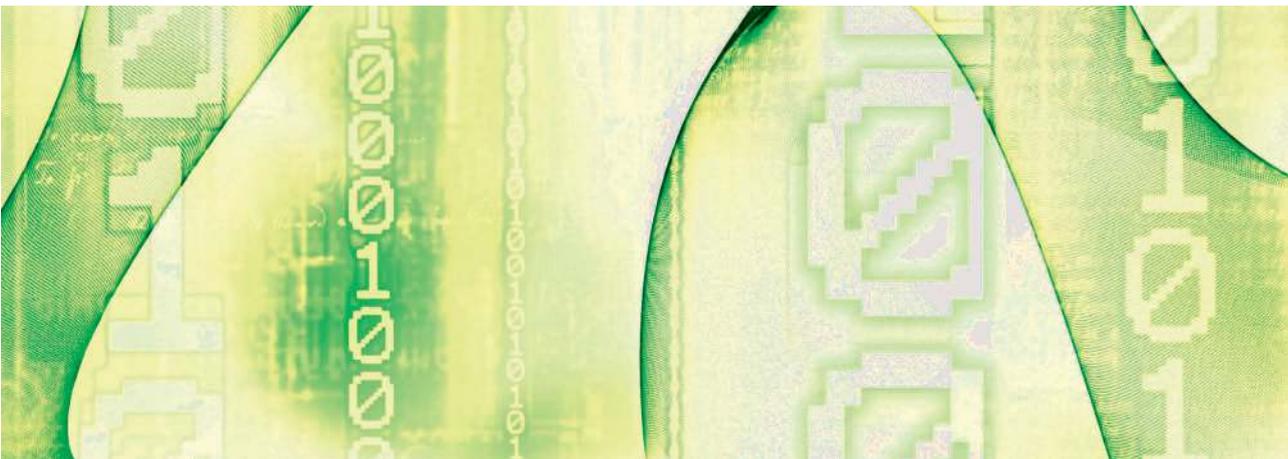
Finally Figure 6 shows the usage of different categories of algorithm. As was the case in the overall

The big gain between 2015 and 2016 was in the use of dark liquidity seeking algorithms.

industry survey, usage of VWAP algorithms in Asia remains consistent. In the case of Asia the level, at 60% is high and well beyond the 45% usage of this type seen in other regions. By contrast the use of single stock implementation shortfall algorithms remains lower than elsewhere, though this year did see its popularity increase. The big gain between 2015 and 2016 however was in the use of dark liquidity seeking algorithms. This probably reflects the greater availability of these tools in the region but also implies

that concerns about anonymity of trading have not disappeared completely; rather that clients are looking at new ways to achieve the same goal.

In terms of providers, the responses suggest that UBS, Credit Suisse and Bank of America Merrill Lynch remain the most important. However this year saw significant increases in responses for Societe Generale, Instinet, Macquarie and CIMB. None of these would be regarded necessarily as traditional powerhouses of algorithmic trading and their growing role may be illustrative of a new approach being adopted both by Asian clients and by different providers looking to develop new opportunities. ■



The 2016 Broker Roll of Honour

Functional capabilities

METHODOLOGY

Survey respondents were asked to provide a rating for each algorithm provider on a numerical scale from 1.0 (very weak) to 7.0 (excellent), covering 12 functional criteria related to algorithmic trading capabilities in Asia. In general 5.0 is the 'default' score of respondents. In total 20 providers received responses and the leading banks obtained dozens of evaluations each yielding thousands of data points for analysis. Institutions were also asked to highlight the aspects of service that they considered most important to their evaluation of service provision and provide some details concerning the scale of their business and the extent of their use of algorithms.

Each evaluation was weighted according to three characteristics of the respondent; the value of assets under management; the proportion of business done using algorithms; and the number of different providers being used. In this way the evaluations of the largest and broadest users of algorithms were weighted at up to three times the weight of the smallest and least experienced respondent.

In arriving at the overall Roll of Honour the scores received in respect of each of the 12 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.

This year we are focusing the Roll of Honour mentions only in the six most important categories as identified by respondents. In addition we are profiling a number of the leading providers based on the level of responses received. Finally TheTrade also recognises that as the business continues to mature, for key client groups in key areas of service, many leading providers are considered almost equally capable. As such we are again offering digital accreditation for providers, confirming that they meet the relevant standards of performance across a broad base of clients, even though their scores may not merit inclusion in the Roll of Honour. Providers have been notified of the situations where they qualify for such digital accreditation.

REDUCING MARKET IMPACT

ROLL OF HONOUR

Bank of America Merrill Lynch
CIMC
Credit Suisse

Reducing Market Impact is arguably the key priority of any trading capability. Along with Ease-of-Use it attracted the most mentions of any service component of the Survey. It also gained considerably more mentions this year than in 2015, when it ranked sixth. In terms of scores among the major providers, there was a range of 1.70 points. This was, by a wide margin, larger than the variation in any of the

1 Roll of Honour recipients are listed in alphabetical order throughout the survey.

other core top six categories. It also has the highest standard deviation across the results of the leading providers. Clearly clients believe that they can identify differences in capability based on analysis of execution outcomes.

Scores in general were higher than a year ago, up by 0.18 points. Even so they remained weak among the key categories, lower than any other and down one place in terms of rank compared with 2015. Among the Roll of Honour winners the scores for BAML were better by more than a full point. CIMB scores were essentially unchanged from a year ago, but based on more than twice as many responses. Credit Suisse scores were up by more than 0.50 points. Overall the Roll of Honour names saw a dramatic improvement in their performance. Winners from last year all posted declines, but the reason for the

change in rankings was the improvement of this year's winners, rather than failings from those who were successful in 2015.

EXECUTION CONSISTENCY

ROLL OF HONOUR

Bank of America Merrill Lynch
CLSA
Societe Generale

Overall the results for Execution Consistency were up by 0.22 points compared with 2015. This performance was better than the Survey as a whole and brought scores up to a very respectable level. In terms of importance this category increased from obtaining 8.86% of mentions in 2015 to 11.37% this year. Along with Market Impact this was the largest gain recorded in the Survey. Clients are demonstrably focused on the core

attributes of algorithmic trading when they evaluate their own priorities. Among the different major providers the range of scores was a little over 1.10 points. The lowest score was very close to the default level of 5.0 (Good) representing satisfactory service. The best score was a little above 6.0 (Very Good). The standard deviation of the results, at 0.34 was consistent with the other five key service areas.

Delivering consistent execution is a vital element of any algorithmic trading suite. Traditionally it has been harder to deliver in Asia than in some other more homogenous markets. Societe Generale had many more responses than a year ago. Maintaining a strong level of scoring in that situation is highly creditable. As in the case of reducing market impact, BAML saw an exceptional turn round in scores compared to 2015. Then it was among the lowest of the major players, whereas this year it fully merited its position in the Roll of Honour. Meanwhile CLSA scores very well across all its clients with outstanding results from some.

PRICE IMPROVEMENT

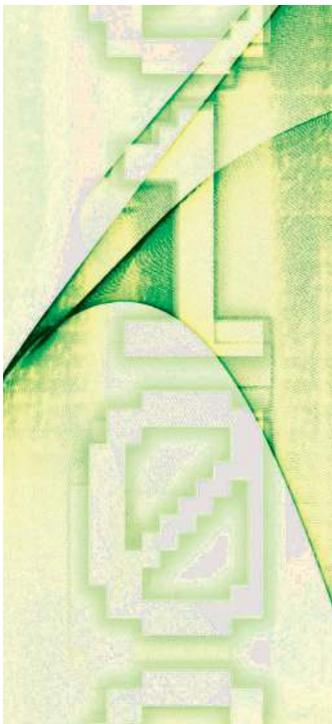
ROLL OF HONOUR

Bank of America Merrill Lynch
Credit Suisse
UBS

Although the gain recorded in its scores compared to a year ago was lower here than in some other



Broker Roll of Honour



categories, BAML performance was again transformed. Its gain of more than 0.9 points placed it comfortably among the leading providers. Credit Suisse recorded a gain of more than one point as well, and actually achieved the best score in the category. Meanwhile UBS saw good improvement from what was already a competitive position in 2015. Among last year's winners by contrast scores were lower for both Instinet and ITG but in both cases remained generally competitive.

Price Improvement ranked sixth of the key categories in terms of importance. Of course it remains relevant to clients and achieving

better execution is the legitimate objective of all automated trading capabilities. However, in Asia as elsewhere, it is hard to verify, even with ever more sophisticated and timely cost analysis tools and statistics. Interestingly the perceived differences between the various leading providers were the smallest of all questions. This suggests that scores here may reflect as much the general overall perception of services as actual differences that clients have witnessed in terms of performance. Standard deviation among different players' scores was also very low. Scores themselves did show a marked uptick from 2015 levels. Last year this area of service averaged a score of less than 5.0 (good), one of only two categories to do so. The gain of 0.41 points was good, but still leaves this among the weaker aspects of service provision taken as a whole across all respondents and all providers.

ANONYMITY

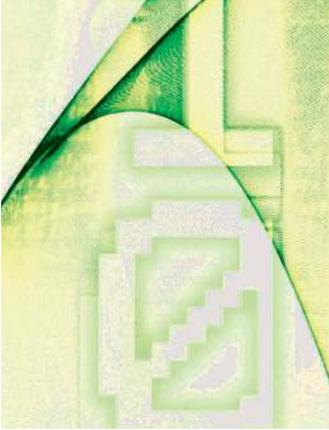
ROLL OF HONOUR

CIMB
Goldman Sachs
Instinet

Anonymity saw a marked decline in relative importance while remaining one of the top six categories when clients consider overall algorithmic trading capabilities. Whereas a year ago nearly half of respondents

placed it in their top four, in 2016 this had dropped to a little over one-third. Anonymity is a characteristic that tends to be demonstrated in a negative way i.e. a trade is clearly made visible to the market with resultant increased impact, so anonymity has not been maintained. That makes the high scores all the more impressive. It is interesting to note that in this segment CIMB results stood out even compared with the other Roll of Honour names. They averaged better than 6.0 (Very Good) the only provider to achieve this. Both Goldman Sachs and Instinet recorded better scores than in 2015, though their gains were relatively modest. Both Morgan Stanley and UBS saw declines in their scores, the former more than the latter. However they both are still generally competitive with other leading providers.

In terms of overall results, the picture is very good. At 5.62 Anonymity scores were better than any of the other key service categories and across the entire Survey ranked second. They also posted solid gains against a year ago data, up by 0.25 points. The range of score among leading players was in-line with the Survey overall at 1.28 points. In this case all major banks scored at least 5.10 points and the majority of scores were in a quite narrow range. Excluding the particular case of CIMB, the standard deviation of other scores was the lowest in the Survey.



EASE-OF-USE

ROLL OF HONOUR

Deutsche Bank
Instinet
Societe Generale

Overall the Survey in 2016 was not especially successful for Deutsche Bank. However, in the Ease-of-Use category its scores were exceptionally strong and well up on the level seen in 2015, even with significantly more responses. Instinet and Societe Generale also saw higher scores and they too enjoyed an increase in overall response rate, with a growth of more than 100% in terms of the number of clients offering assessments. Last year's winners kept a competitive profile in terms of the results achieved but failed to quite maintain the relative levels of a year ago. Ease-of-use is partly about the technology, partly about the training and support and also reflects familiarity of the user with any particular system. As such it

is quite subjective. Even so it continues to consistently attract mentions as a key priority in evaluating competitors. This year once again nearly half of all respondents placed it in their top four.

As with other core categories, scores for Ease-of-Use showed solid improvement year on year. The gain of 0.28 points was comparable to the best of other key areas. It reflected a general gain in scores achieved by some major providers as well as the fact that as a key priority it is a focus for all. Unsurprisingly given its critical role, the range of scores was very narrow, scarcely above one point among the leading players. In such a situation it is hard to achieve any general level of sustainable competitive advantage, though constant innovation should work to the benefit of all clients over time.

TRADER PRODUCTIVITY

ROLL OF HONOUR

Citi
Macquarie
UBS

Improving trader productivity is still at the heart of much algorithmic trading adoption and increasing usage. The fact that more clients are doing more business in Asia using algorithms suggests that this core requirement is being well satisfied by providers as a group. The fact that the average score of 5.60 was

the third highest in the Survey also implies a generally high level of customer satisfaction. It is encouraging to note the very significant gains seen in scores which were fully 0.44 points better than in 2015. Throughout the five years of the Asian survey, Trader Productivity has gained a little over 10% of all client priority mentions. It consistently ranks as a key priority and may be expected to continue to do so.

UBS managed to improve its scores in 2016, even from the very solid level achieved a year ago when it ranked in the Roll of Honour. Neither Goldman Sachs nor Societe Generale was able to match that performance, though in both cases their scores remained highly competitive. As a result of its consistency UBS managed to repeat its Roll of Honour position. Both Citi and Macquarie saw their scores increase somewhat against the level seen in 2015. As a result of these gains, as well as higher numbers of responses, both firms fully merit inclusion in the Roll of Honour this year. While productivity may not always be easy to measure in a very granular way, the current environment clearly shows that more trades are being done, with the same or sometimes fewer resources in most buy-side firms. As such it is easy to conclude that productivity as a whole is gaining from the greater use of algorithms by more institutions, in Asia as elsewhere around the world. ■

2016 Provider Profiles

BANK OF AMERICA MERRILL LYNCH

BAML was the big winner in the Survey in 2016, winning three Roll of Honour mentions out of the six that represented a theoretical maximum. This was based on a very consistent level of scoring that saw BAML beat the Survey average in all twelve categories and obtain a score of better than 6.0 (Very Good) in two of them. Responses were more than 50% higher than a year earlier coming from a range of very large hedge funds and long only managers primarily based in Hong Kong and Australia. In 2015 the overall score for BAML failed to meet the 5.0 (Good) default level. This year it improved by more than three-quarters of a point, in the process going from last quartile to first. BAML clearly has the capability to do even better in the coming year based on its performance and the breadth of its client base.

CIMB

Perhaps the biggest surprise, though not necessarily given the results from a year ago, was the performance of CIMB. The bank, which has invested heavily in all aspects of electronic trading came to some prominence in the 2015 Survey based on their results. However at that stage the number of responses was relatively modest compared with the major players. 2016 saw a considerable increase in responses. Not only did numbers increase but they included a range of asset managers including some household names as well as a broad cross-section by location. Scores were well ahead of the average in all but one category and in eight CIMB bettered 6.0 (Very Good). The only area of weakness was Internal Crossing. Based on the combination of scores and responses, CIMB fully merited its two Roll of Honour mentions.

UBS

UBS received the second highest number of responses and was comfortably ahead of the overall Survey average score. Only in Customisation did UBS fail to match the average category score and elsewhere its results were very consistent, ranging between 5.40 and 6.03. Its scores for Price Improvement in particular were ahead of those seen a year ago, while as far as Trader Productivity was concerned, UBS managed to achieve one of the very few repeat Roll of Honour rankings. The bank continues to perform very well across a wide range of different clients and maintains a very strong reputation. However the number of areas where it is truly outstanding are more limited as competitors begin to match its standards.

SOCIETE GENERALE

In 2016 Societe Generale received a small number of excellent scores. Its success was constrained by the limited data on which to make an assessment. That has changed dramatically in 2016. The bank received more responses than any other provider from a group of clients that were varied by both size and location. The total weight of responses was not the highest, but the growth year-on-year was nonetheless impressive. In terms of scores it is not surprising that these did not quite manage to maintain the excellent levels of the 2015 results. Even so Societe Generale managed to beat the average score in nine of twelve categories and was comfortably ahead of the overall average. In two areas, Execution Consistency and Ease-of-Use, the bank achieved well deserved Roll of Honour status.

CREDIT SUISSE

In 2015 Credit Suisse received the highest number of responses and the largest proportion by weight. However scores were somewhat disappointing. Despite receiving more responses in 2016, Credit Suisse ranked third of all providers. The results however showed a very solid turnaround from prior year's levels. All categories recorded gains and the overall average was up by more than 0.70 points, ending well ahead of the overall Survey outcome. Indeed such was the improvement and consistency in scoring that Credit Suisse beat the category average in ten of twelve aspects of service. Roll of Honour mentions covered two areas where scores were exceptional and it is clear that Credit Suisse is close to being back to its best levels in terms of customer perception of its capabilities.

INSTINET

Along with other market leaders Instinet saw a significant growth in the number of responses in 2016. In 2015 Instinet managed to score generally at a high level, without recording very many exceptional areas of performance. Overall in 2016 scores saw a slight fall compared with a year previously. However Instinet was still able to outscore the overall average quite easily and beat the Survey category score in two-thirds of the twelve aspects of service. Two areas, which were not important enough to be in the Roll of Honour categories, offered Instinet some of its best scores, in each case beating 6.0 (Very Good). These were Client Support and Execution Consulting. Overall a year in which Instinet more than maintained its market position while performing at a very good, if rarely distinctive level.

Provider profiles

CLSA

CLSA managed to just make the top ten providers in terms of number of responses. It had banks, asset managers and brokers among its respondents, which also came from a number of markets, though fewer from Australia than some of its competition. Response numbers were well up on 2015 levels. However scores were lower than a year ago on average by around 0.25 points and in some categories by a little more. Last year scores were high and so in spite of a decline CLSA was able to outperform the Survey average in nine of twelve categories as well as comfortably beating the overall score. Execution Consistency was one area where even though scores were down, the performance was still good enough to merit Roll of Honour inclusion.

GOLDMAN SACHS

2016 was not an especially good year for Goldman Sachs in terms of scores. The figures were below 2015 levels, with the overall decline being 0.26 points. The firm managed to beat the Survey average in seven of twelve aspects of service but would expect to do better. Similarly its overall average was only marginally ahead of the Survey as a whole. Response numbers were certainly higher than a year ago, but even here growth was not as robust as that recorded by some other providers. One area where Goldman did perform better than in 2015 was Anonymity and the improvement in its score resulted in a Roll of Honour mention. Even so in most years Goldman would expect to be named in more than one out of six categories.

MACQUARIE

Macquarie grew responses by more than any other provider except Societe Generale. Unfortunately the scores achieved failed to match the business development for the most part. The firm did well in terms of Trader Productivity where scores were noticeably better than in 2015 and sufficient to make the Roll of Honour. Overall however results were not as good as a year ago and Macquarie only beat the Survey average in four categories. In the areas of Internal Crossing and Latency, scores failed to achieve the 5.0 default level. In conclusion a slightly disappointing outcome, but Macquarie is clearly an important regional player and has the base of business from which to expand further in the months ahead.

CITI

Unlike most providers, Citi saw very little change in response numbers compared with 2015. In relative terms therefore it fell behind. While overall scores did improve by 0.12 points that was also less good than the performance of some competitors. The net effect was that Citi achieved a single Roll of Honour ranking and its average score was below that of the Survey as a whole. Citi beat the category score in half of the dozen categories including three out of the six most important. Citi maintains a solid franchise of business in Asia and performed well enough; only in Customisation did its score fall below 5.0. However there is little to suggest that it is creating the foundations from which it could push on further.

DEUTSCHE BANK

Deutsche scored exceptionally well in the area of Ease-of-Use and fully justified its Roll of Honour position. Otherwise the 2016 results must be considered somewhat disappointing. Although response numbers were higher than a year ago they remain behind most key competitors and some regional providers. Scores were down by 0.15 points overall compared with 2015. Category scores were below 5.0 in three cases including Reducing Market Impact, the most important priority for clients. Overall Deutsche failed to match the overall Survey average, which in 2015 it comfortably surpassed. While the bank maintains relationships with a number of important clients, at present it seems to be doing little to position itself to expand. Indeed it may come under some pressure to retain its current position.

ITG

ITG recorded disappointing scores in 2016. A year ago the firm was close to the overall Survey average and performed quite well in a number of areas. This year however scores were down by an average of 0.33 points. As a result ITG was well below the Survey average and well behind most key competitors. In five categories out of twelve it failed to achieve the default acceptable score of 5.0 (Good). It failed to beat the Survey average in any of the twelve aspects of service. While the number of responses it received was higher than in 2015, the growth was less than that seen by most other providers. Overall a disappointing year and one from which ITG needs to bounce back if it is to maintain its market presence. It clearly has the capacity and credibility to recover but needs to recognise that clients are not as happy as it would wish.

MORGAN STANLEY

This was a disappointing Survey for Morgan Stanley. Response numbers were essentially unchanged from a year ago. Similarly scores barely moved compared with 2015. As a result the relative position of the firm declined quite markedly. While Morgan Stanley continues to enjoy a high level of credibility in the business and in the region, the Survey results suggest that clients believe there is a lot more that could be done. Morgan Stanley failed to beat the Survey average in any of the twelve categories. While scores fell below 5.0 in only two categories, this suggests a consistent position of perceived underperformance compared to its rivals. Morgan Stanley can and should do better, but even with its reputation and brand, it needs to start moving forward relatively soon.

J.P. MORGAN

J.P. Morgan performed the least well of any of the fourteen profiled names. Its average score was below the 5.0 (Good) default level of satisfactory performance and it failed to meet that standard in seven of the twelve aspects of service covered in the Survey, including two of the six core priorities. This represents a continuation of the decline in perception first noted in 2014 and was in spite of the bank attracting a good deal more responses than twelve months ago. Scores were lower in ten of the twelve categories as well. As with some other providers in the 2016 Survey, J.P. Morgan obviously has the resources, client base and credibility to recover its position. As long as it does not do so however, that can only encourage both its traditional and non-traditional competitors. ■