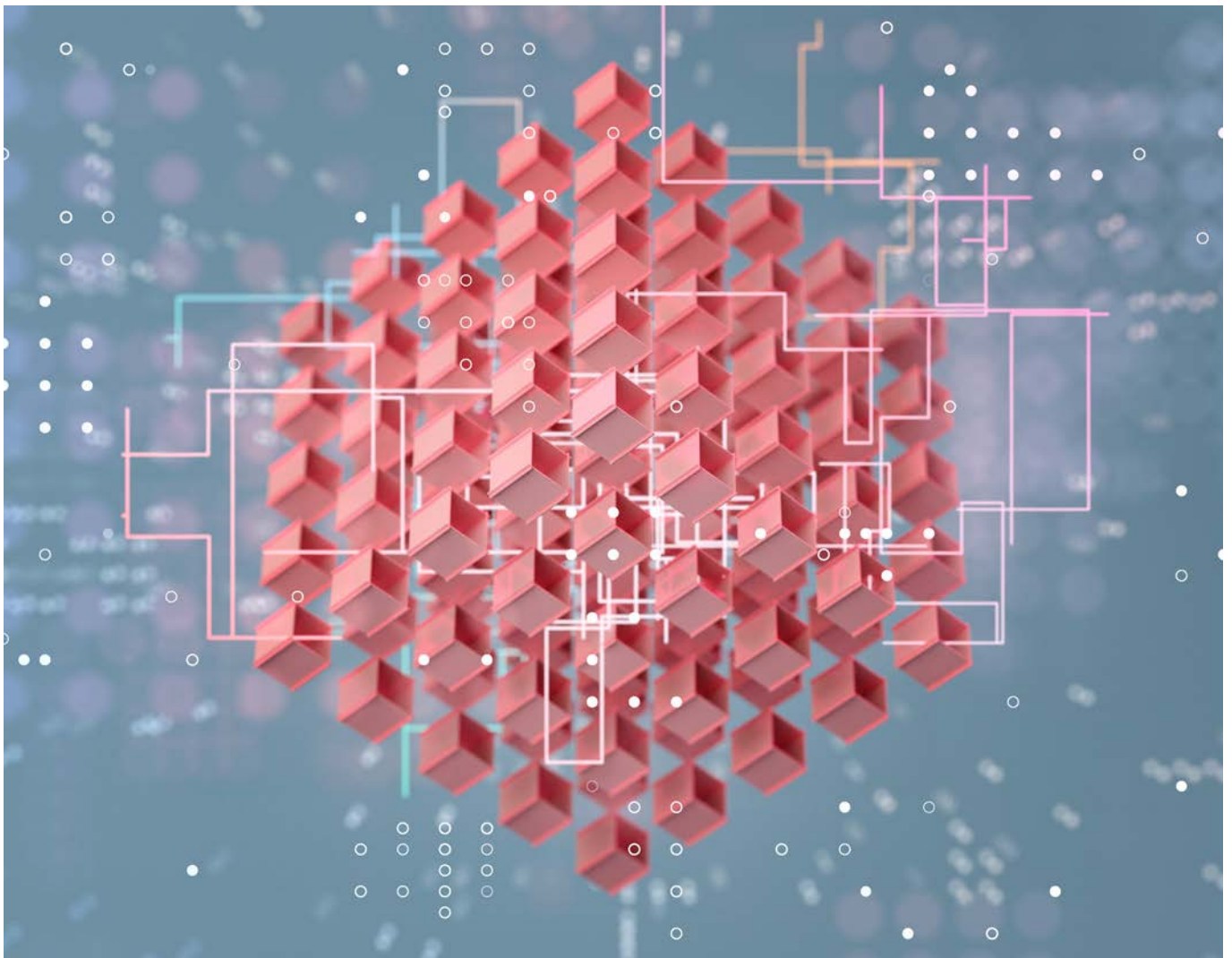


Rapid read

The case for modularity and interoperability

September 2022



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Key findings

- **Optimized**—Almost half (47%) of respondents believe their entire trade lifecycle to be significantly optimized (automated, transparent and auditable), while just under one-third (30%) reported that parts of their trade lifecycle are automated, although they have no plans right now to improve their levels of automation.
- **Front-office systems**—43% of respondents reported having a single, integrated multi-asset trading platform (albeit with limitations), while 27% have deployed modular trading platforms.
- **Greatest challenges relating to their trading technology**—40% of respondents cited their systems' inability to add support for new markets/instruments, while 30% cited a user interface that lacks integration, intuitiveness and configurability.
- **Sharing data across the front office**—47% of respondents reported that it is possible for their firms to share data between front-office applications (even though there is room for improvement), while 30% reported that sharing data across the front office is a continual struggle for them with too much daily data manipulation, normalization and management.
- **Partnering**—When selecting trading technology providers, most firms value experienced staff that understand capital markets trading and how it impacts their day-to-day operations, while pure price and technology considerations are similarly important.

Percentages in some tables and graphs may not total 100 due to rounding.

Executive summary

Anyone who has followed the financial services industry for an appreciable period of time will know that interoperability issues are a fact of life. They don't exist because of the ineptitude of the firms that experience them—on the contrary, buy- and sell-side firms are generally skillful in the development and deployment of technology to support every aspect of their day-to-day operations. Yet interoperability issues persist across the industry due to a mix of firms' histories—most capital markets firms have at some point either merged with another firm, acquired another firm or been acquired—which, from a technology standpoint, complicates things. Similarly, technology heads come and go—as do heads of operations, risk, compliance, trading and portfolio management. Firms' technology budgets and priorities also vary from year to year, which directly impacts their technology stacks, especially when it comes to interoperability.

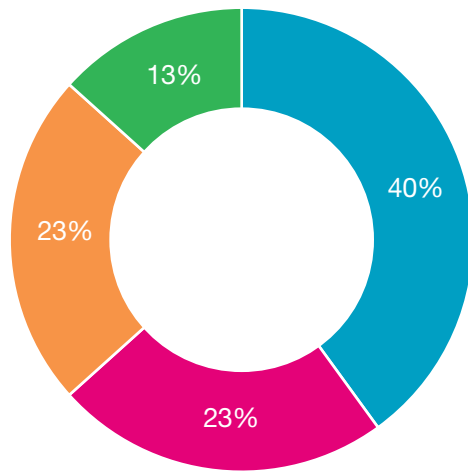
So, what is the answer? Ripping and replacing incumbent technology might be theoretically possible but, as IT directors or chief information officers would attest, with the exception of non-mission-critical technologies, it's a practical impossibility. The answer, therefore, lies in the industry's inexorable move toward modularization and widespread embracing of the open application programming interface (API) movement. Critically, simplified technology stacks and unified data models allow legacy and proprietary technologies to co-exist alongside vendor-supplied, off-the-shelf platforms, with minimal downside to the business.

This rapid read investigates the extent to which firms have optimized their entire trade lifecycles, the structure, challenges and interoperability of their front-office systems, and what they most value when looking to partner with a third-party trading technology provider. The data was gathered from firms within *WatersTechnology's* database responding to a seven-question survey.

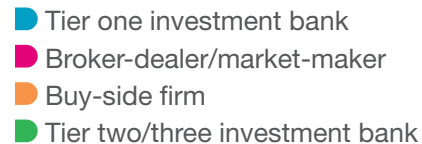
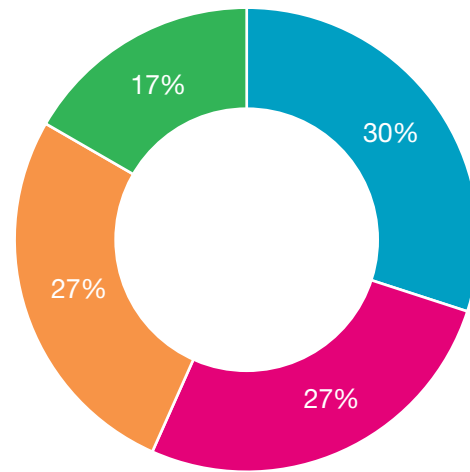
Respondents

Question 1 found that the largest constituent of respondents to the survey underpinning this paper was based in North America (40%); followed by Europe, the Middle East and Africa (Emea) (23%); and Asia-Pacific (23%); while the UK comprised 13%. Responses to question 2 reveal that marginally fewer than one-third (30%) of respondents work at tier one investment banks, while broker-dealers and market-makers accounted for just more than one-quarter of respondents (27%), a figure mirrored by the buy-side constituent.

1 Where are you based?



2 What type of firm do you represent?

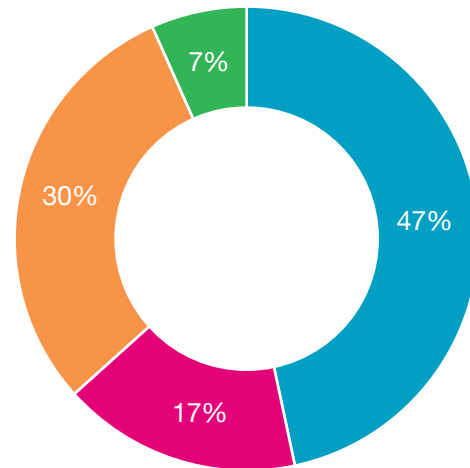


Optimization

Question 3 focused on the extent to which firms have already optimized their entire trade lifecycles from execution to settlement—in effect, their ability to straight-through process (STP) trades from execution in the front office to settlement in the back office. The results show that almost half (47%) of respondents believe their entire trade lifecycle to be fully automated, transparent and auditable, while just under one-third (30%) reported that aspects of their trade lifecycle are automated, although they have no plans to improve automation levels.

These findings are significant, given the high percentage of respondents that believe their entire trade lifecycle to be fully optimized. Obviously, the catch-all term “fully optimized” means different things to different firms, but highlighted later in this paper is the extent to which respondents’ incumbent technology appears to be anything but fully optimized in terms of interoperability, flexibility and ease of use.

3 To what extent has your firm optimized its trade lifecycle from execution to settlement?



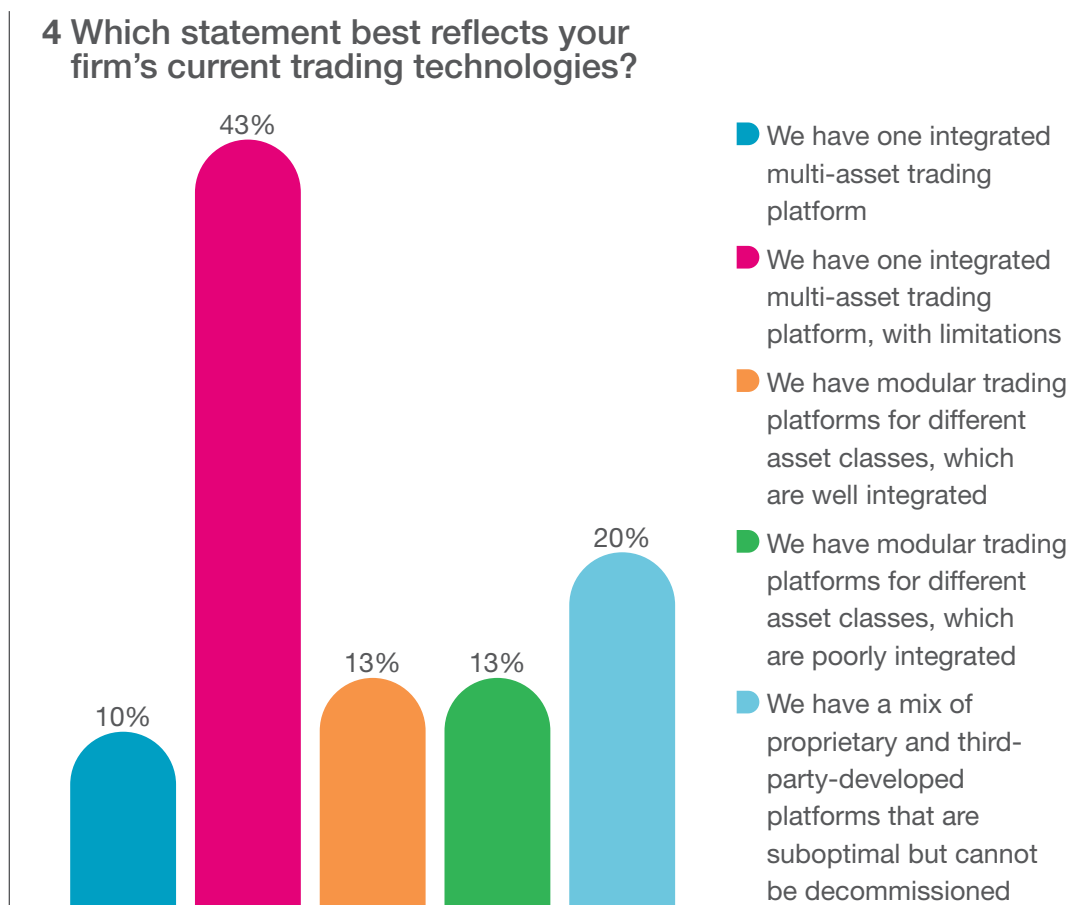
- Significantly
- Moderately – We are looking to increase STP rates
- Moderately – We have no further plans to improve automation levels
- Minimally



Crux

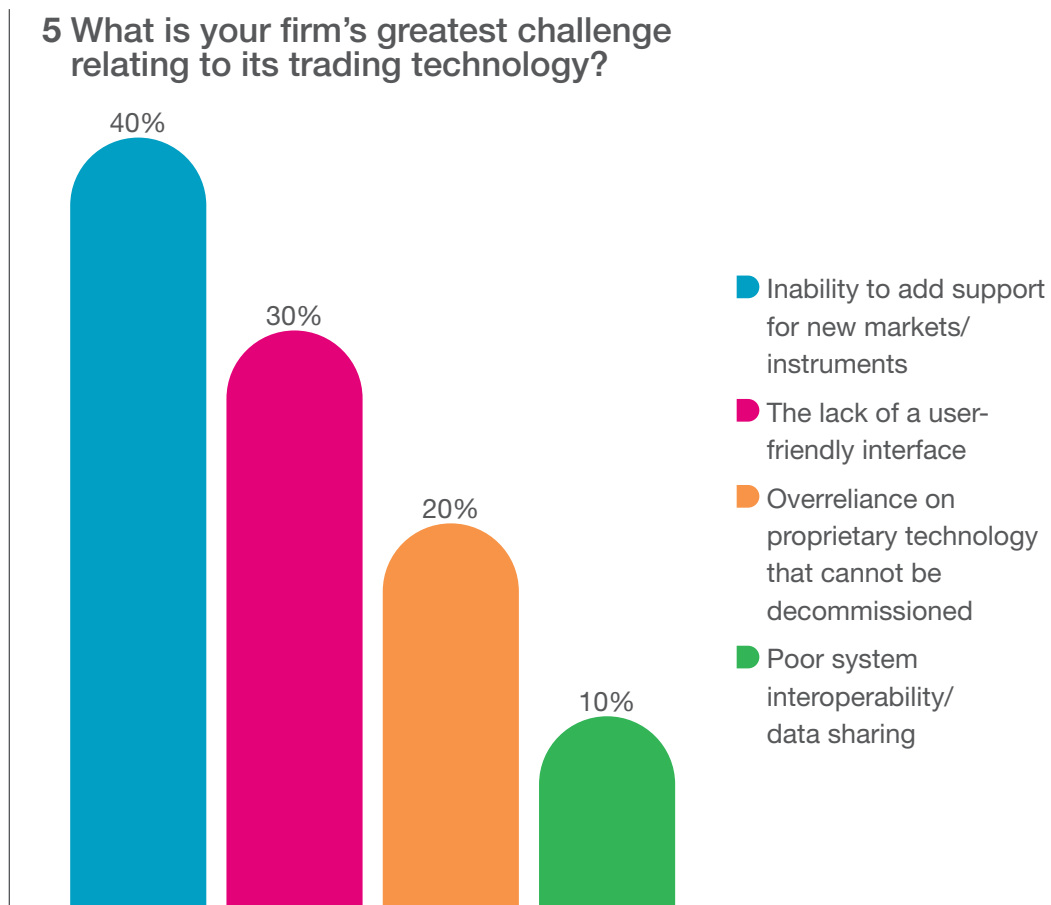
Question 4 represents the crux of the survey, focusing on the extent to which respondent firms have either developed or implemented an “all singing, all dancing” front-office platform to support their trading functions. The results show that 43% already have such a system in place—either developed internally or implemented in partnership with an external third-party specialist—although they report that their platforms do come with limitations. Only 10% of respondents have a single, integrated multi-asset trading platform that they believe is fully fit for purpose—a finding that appears at odds with that of question 3—while a similar number (13%) have a trading platform comprising modular applications that they deem similarly fully fit for purpose.

Perhaps one of the stand-out findings from the survey is that 20% of respondents have a mix of proprietary/legacy and third-party-developed platforms that they know are suboptimal but cannot be decommissioned, for reasons explained in the summary of this paper.



Challenges

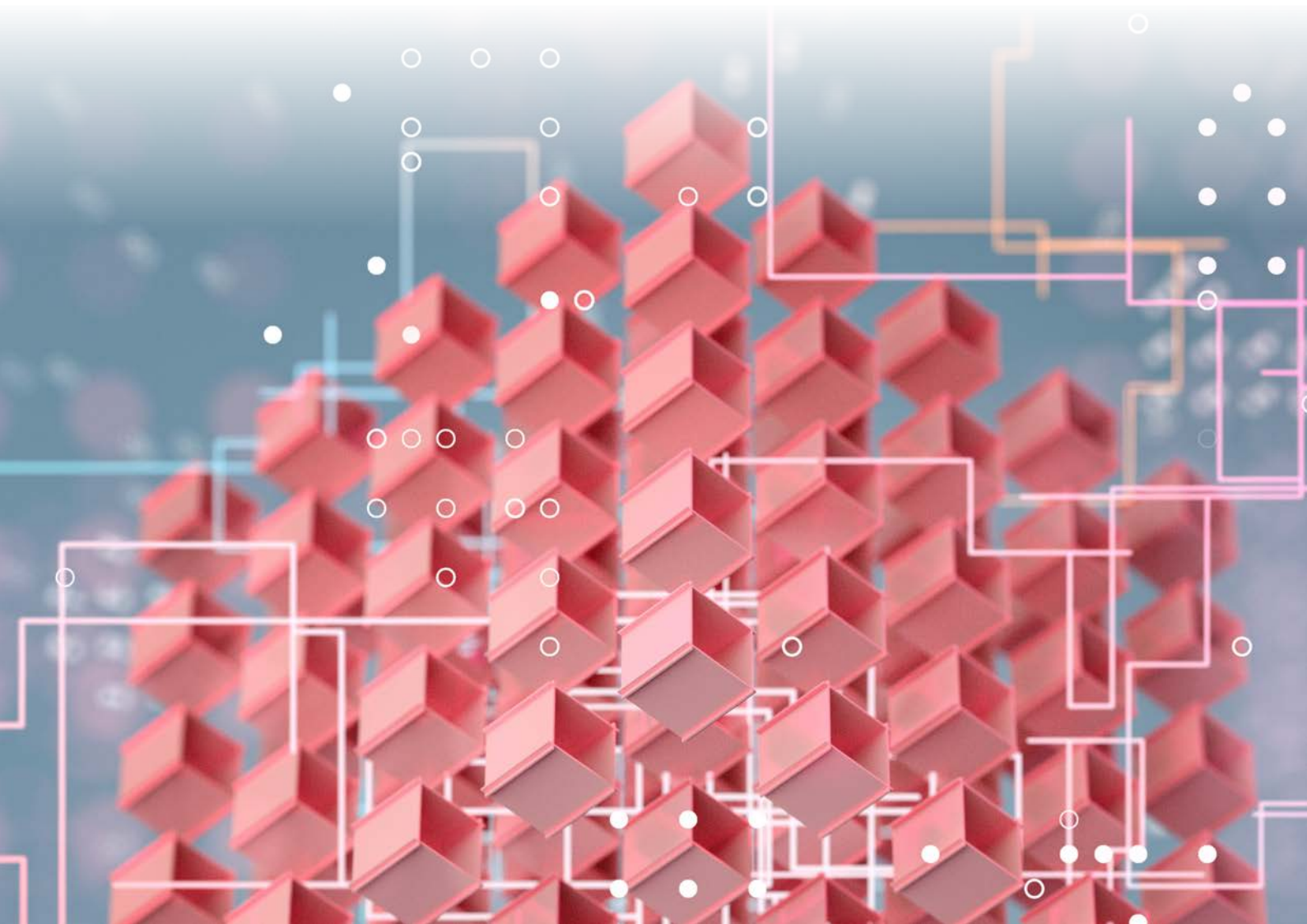
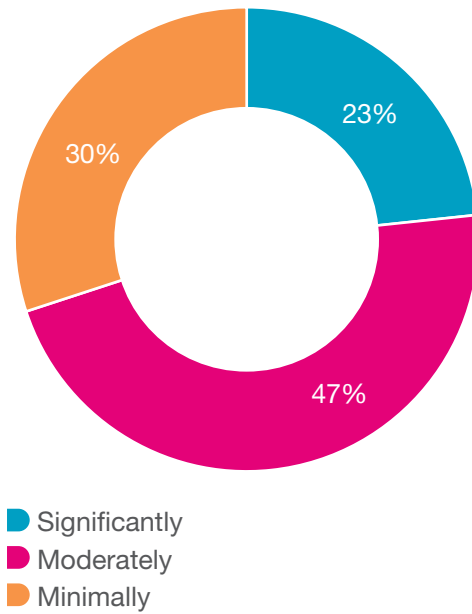
Question 5 focused on the challenges and shortcomings facing respondents in their trading technology, with 40% citing the inability of their incumbent systems to provide support for new markets and/or instruments, while 30% believe their user interface to be “clunky” and lacking integration, intuitiveness and configurability. As with many issues inherent within the financial services industry, observing the challenge is the easy part. Understanding the reason for the challenge is a different matter entirely—and this is one of those scenarios. A likely explanation is that proprietary and legacy technologies still constitute a significant portion of technology stacks within capital markets firms.



Interoperability

Question 6 revisited the issue of interoperability, this time explicitly focusing on the ability of respondents' systems to share data across the front office, with almost half (47%) describing their ability to do so as "possible, although it could be better", while a further 30% described sharing data across the front office as a continual struggle with too much daily data manipulation, normalization and management. These findings add further weight to the notion that system interoperability—which is directly contingent on the ability of applications to seamlessly share data back and forth—continues to hamstring large numbers of capital markets firms, large and small, on both sides of the industry.

6 To what extent is your firm able to share data across the front office?



Priorities and value

Question 7, the only “rank all options” question of the survey, sought to understand what exactly firms most value when looking to partner with a specialist third-party trading technology provider. The most popular first-choice option was that of experienced staff that understand capital markets trading and how it impacts day-to-day operations, selected by almost 30% of respondents, while pure technology considerations garnered seven first-choice votes. Of the second-choice votes, pure price consideration was by far the most popular option, selected by 30% of respondents.

Similar questions to this one have featured in several *WatersTechnology* surveys conducted over the past 12–18 months and, irrespective of the focus of the technology or data featured in the survey, the results have been almost identical. It is when vetting prospective technology or data providers that capital markets firms most value the experience of the provider’s staff, followed by pure technology and price considerations. The results might vary slightly from survey to survey, but what firms most value and the order of importance of that which they value never does.

7 What would your firm look for in a trading technology and solutions provider?

	1	2	3	4	5	6	7
Technological considerations	7	2	12	1	9	2	0
Experienced staff that understand capital markets trading	9	1	5	7	5	2	2
Reputation and track record of successful deployments	5	7	1	4	5	5	1
Price considerations	2	10	5	4	2	3	3
Ease of deployment/time-to-market	4	3	4	10	1	4	2
Investment transparency and a road map for future development	2	4	1	3	5	9	6
Size/scale and its ability to offer multiple solutions	1	3	2	1	3	5	16

Respondents were asked to select all options and rank them from most important (column 1) to least important (column 7)

Conclusion

It's fair to say that the results from the survey underpinning this paper indicate the existence of significant technology and operational challenges across capital markets firms' front offices, irrespective of whether they are on the buy or sell side of the industry. The challenges pertaining to data sharing, interoperability, STP, and system flexibility and extensibility are understandable, given the technology path many of these firms have been on for the past several decades. However, there is little value to be gained by looking back or simply acknowledging the industry's challenges. What is helpful, however, is looking at practical and feasible means of fixing those problems. Needless to say, no silver bullet currently exists that does that, although implementing discrete, modular applications enabled by open APIs and a unified data model is a good starting point to optimize firms' technology ecosystems, and one that increasing numbers of capital markets firms are embracing.

About Broadridge

Broadridge Financial Solutions (NYSE: BR) is a global fintech leader with \$5 billion in revenues. It provides the critical infrastructure that powers investing, corporate governance and communications to enable better financial lives. Broadridge delivers technology-driven solutions that drive business transformation for banks, broker-dealers, asset and wealth managers, and public companies. Its infrastructure serves as a global communications hub that enables corporate governance by linking thousands of public companies and mutual funds to tens of millions of individual and institutional investors worldwide. Our technology and operations platforms underpin the daily trading of more than \$9 trillion of equities, fixed income and other securities globally.



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