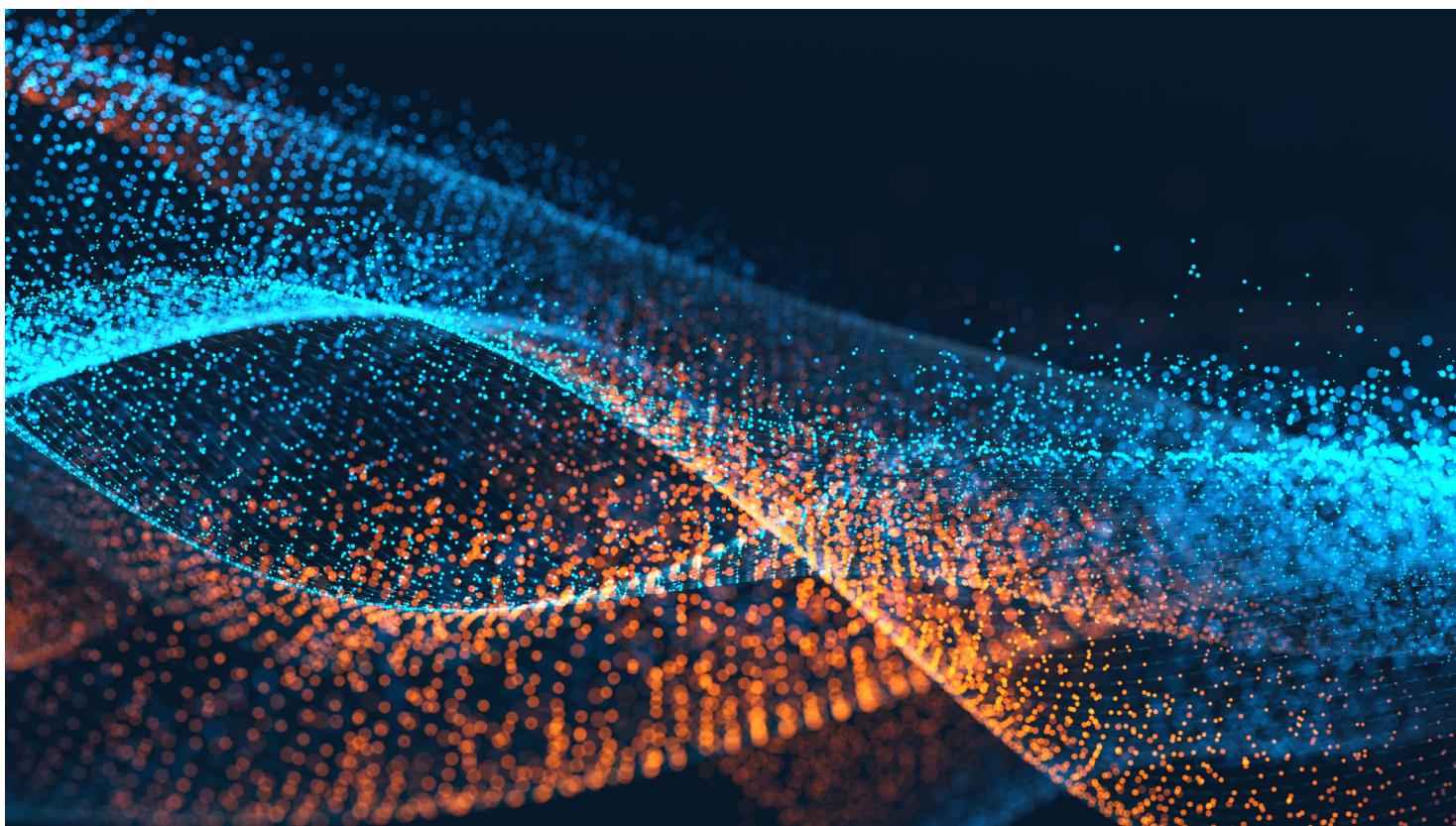


Coalition Greenwich

A division of CRISIL

Transforming Today's Fixed-Income Markets



Q4 2022

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77%



of buy-side firms employ a mix of fundamental and quantitative investment methodologies and want better data analysis tools

59%

of respondents consume streaming dealer prices through a vendor solution



Executive Summary

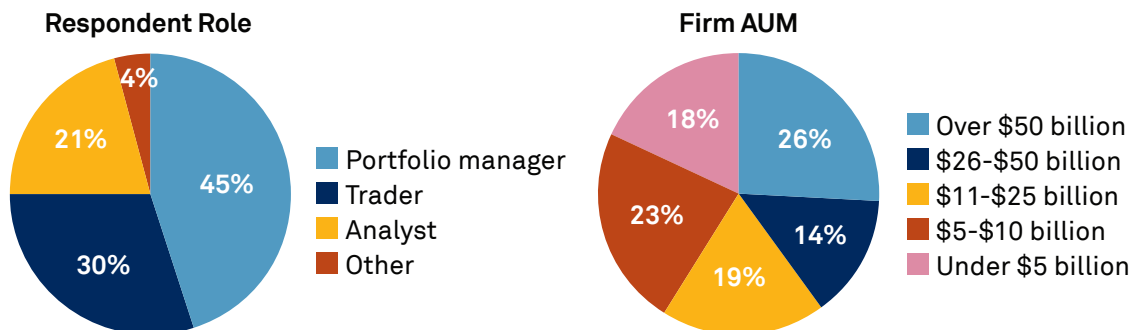
The need for more and better analytics to deal with fixed-income data has arrived. As the volume of information linked to bonds has grown, investment firms are looking for new and improved ways to manage that information and gain insights from the data they consume.

One area that has benefited from the onset of innovative tools is pre-trade analytics. Buy-side firms are turning to evaluated pricing and advanced technology to help them find liquidity and navigate a host of macroeconomic factors, including enhanced volatility, higher rates, inflation, and other frictions.

This report focuses on our recent study, which was designed to foster a better understanding of the evolving role of data and technology being used by buy-side investment firms.

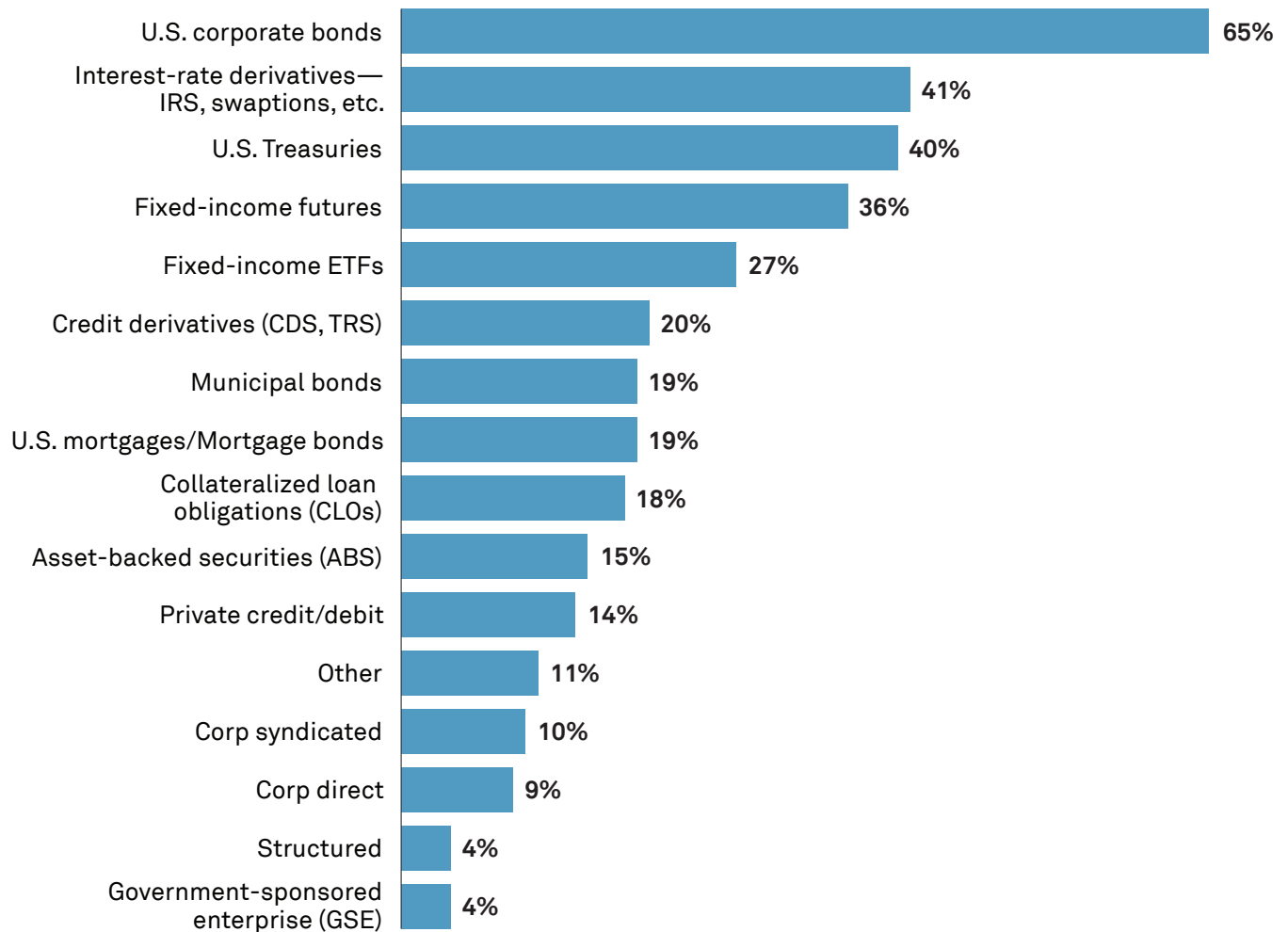
METHODOLOGY

Between July and August 2022, Coalition Greenwich conducted a study to better understand the evolving role of data and technology in fixed-income investing across the buy side. Study participants included portfolio managers, traders and analysts from 111 firms in North America, Europe and Asia-Pacific. Additionally, qualitative discussions were held with a dozen buy-side market participants to evaluate trends and future strategy. Participating firms were mostly large, experienced shops with \$50 billion in AUM or higher. Medium- and smaller-sized shops were also well represented.



U.S. corporate bonds dominated respondent portfolios, despite the number of non-U.S. firms that participated in the study. Other areas of focus included mainstays such as interest-rate derivatives, U.S. Treasuries and fixed-income futures, as well as growing areas like fixed-income exchange traded futures (ETFs).

Products Being Traded by the Respondents



Note: Based on 111 respondents.
Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

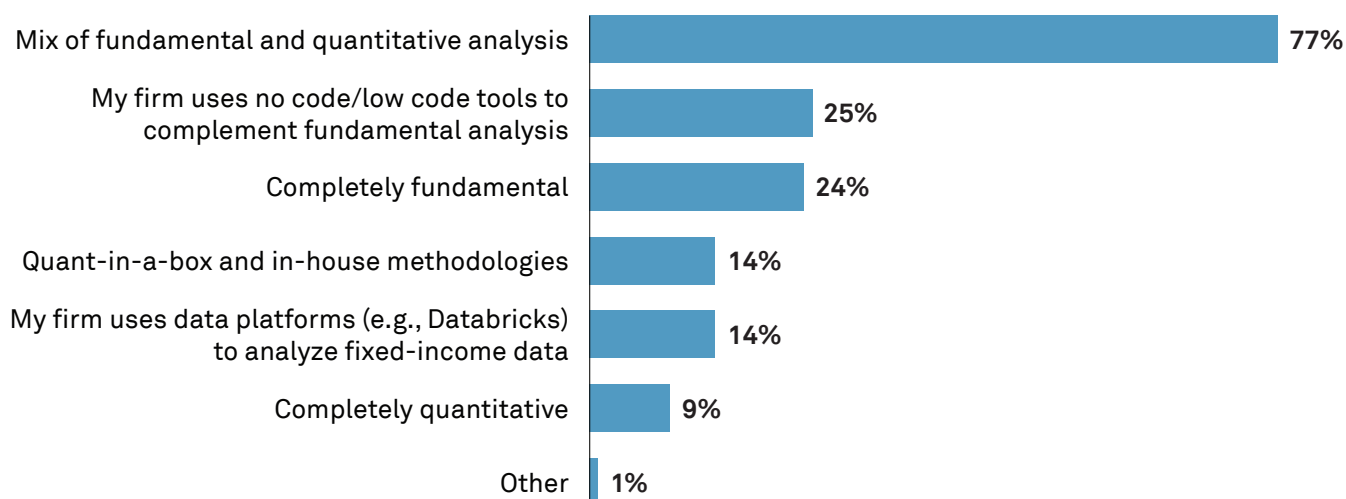
Introduction

As volumes of fixed-income data continue to grow, the need for more analytics and data science has increased. Investment firms are most often employing a mix of fundamental and quantitative fixed-income strategies to take advantage of additional information and advanced technology. One area that has benefited from the exponential increase in fixed-income data is the adoption of more pre-trade analytics, including better pricing tools. Improved technology, such as the adoption of the cloud and greater use of application programming interfaces (APIs), has fostered more predictive measures and fast-paced analysis—important developments during periods of unusual market activity and volatility.

Quantimental Strategies Go Mainstream

As volumes of data continue to grow in relation to fixed-income markets, the need for more analytics and data science has grown. Participant firms are most often employing a mix of fundamental and quantitative fixed-income strategies to take advantage of additional information and advanced technology. According to one trader at a major U.S. investment firm, the doubling of the size of credit markets has resulted in more electronification and, in turn, more data. This trader believes the key to navigating markets is having the right tools, since “the data piece is everything” and the buy side must handle unique information.

Firm’s Fixed-Income Data Analysis Methodology



Note: Based on 111 respondents.
Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

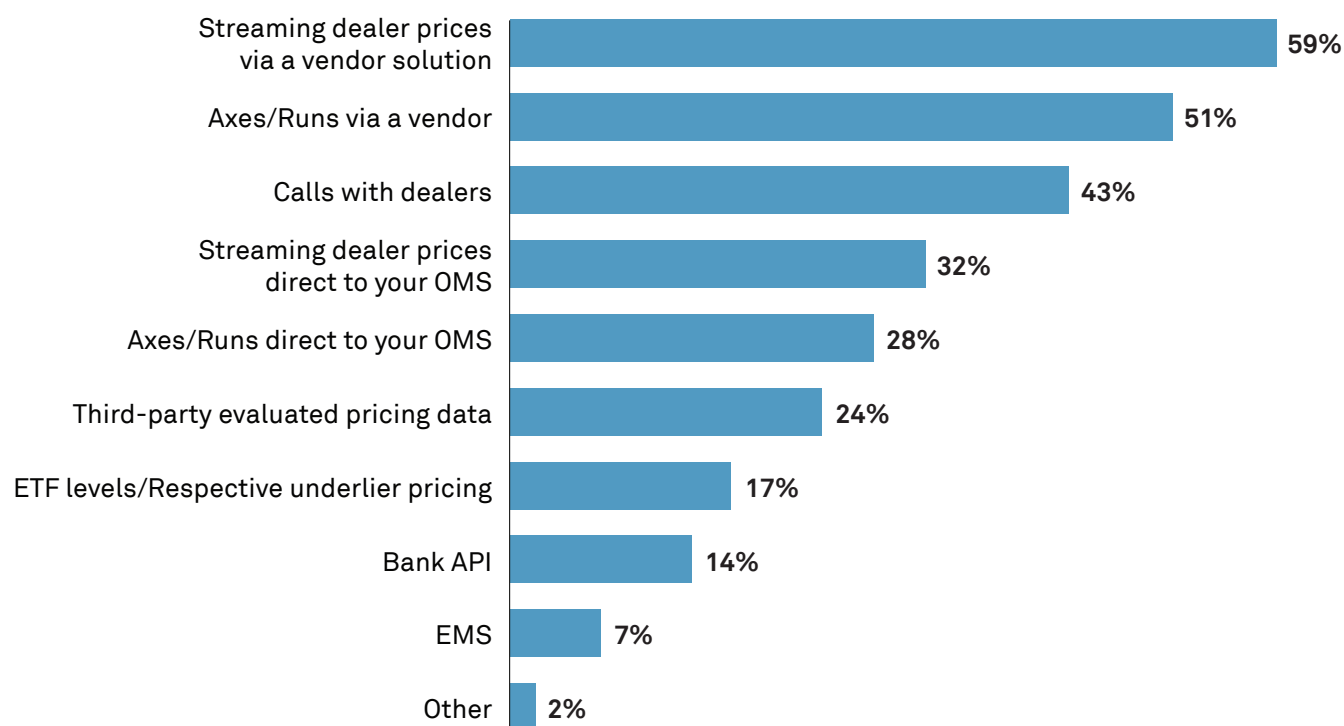
However, several traders we spoke with believe good communication skills and relationships are the right foundation to take the next technological steps of addressing market liquidity. Realistically, front-office staff at firms that are traditionally fundamentally focused will need to understand what they can get out of the data—something that works well with no code/low code. Working alongside coders and data scientists will augment the trader’s role and ability to consume and analyze information.

The key to navigating markets is having the right tools, since “the data piece is everything” and the buy side must handle unique information.

Sources of Pre-Trade Information Increase in Importance

One area that has benefited from the exponential increase in fixed-income data is the adoption of more pre-trade analytics and better pricing tools. Nearly 60% of respondents indicated they consume streaming dealer prices through a vendor solution. Meanwhile, over half receive axes and runs via a third party. Although 24% of respondents answered that they consume third-party data, it is important to note that in many instances these prices are embedded in the algorithms generating streaming dealer prices and axes/runs. While APIs have made the transfer of large amounts of data possible and more practical, a significant number of buy-side professionals are still relying on and preferring to interact with their counterparties via traditional methods such as voice.

Primary Sources of Pre-Trade Pricing Information

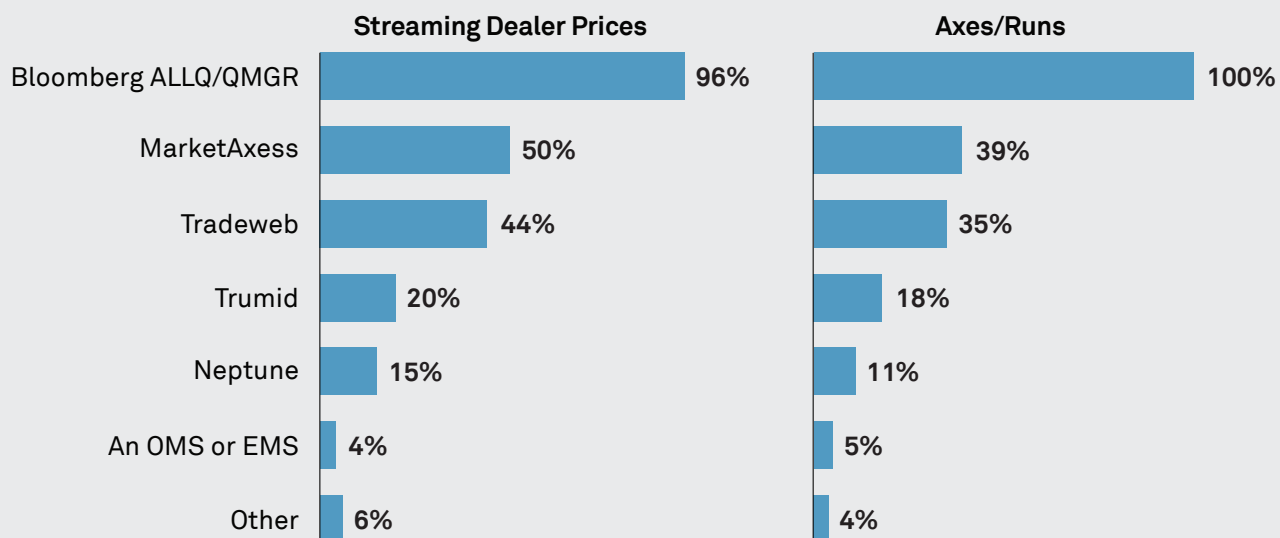


Note: Based on 111 respondents.
Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

Buy-Side Vendor Usage

Buy-side investors predominantly look to a small group of providers to source streaming dealer prices, axes and runs. However, traders agree fragmentation continues to be an issue, prompting innovation in ways to stitch all the pieces together, such as the use of order management systems (OMSs), execution management systems (EMSs), third-party evaluated prices and analytics providers, and other types of aggregation tools.

Vendors



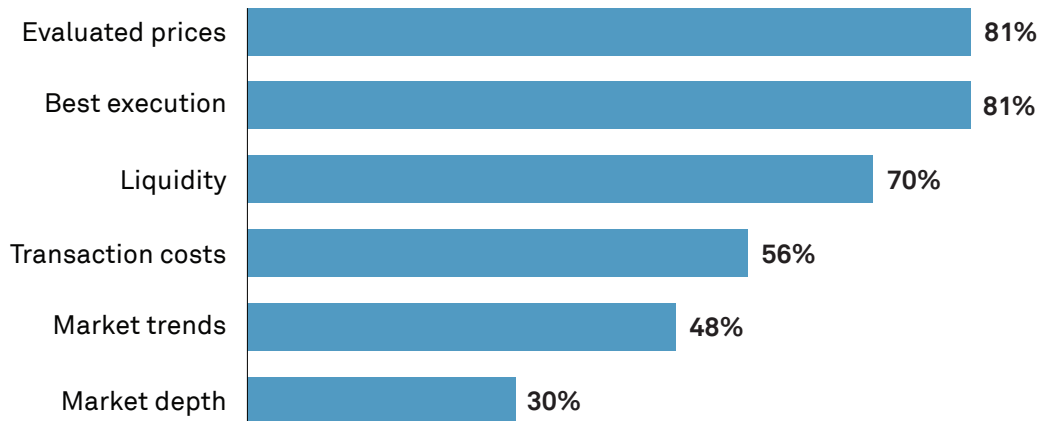
Note: Based on 82 respondents for streaming dealer prices and 57 for axes/runs.
Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

Digitization of Information is Growing

As one portfolio manager puts it, data standardization and interpretation have been huge efforts with an ongoing discussion in which market participants take a little step forward each year. The range of use of evaluative pricing has grown. About one-quarter of firms in the study use evaluative pricing from a third-party provider. Among these buy-side firms, consuming evaluated prices for pre-trade pricing, fostering best-execution practices, developing liquidity analysis, and estimating transaction costs have become part of their pre-trade execution decision-making process. The use of evaluated prices to uncover market trends and depth is developing.

Data standardization and interpretation have been huge efforts with an ongoing discussion in which market participants take a little step forward each year.

Use of Analytics by Category

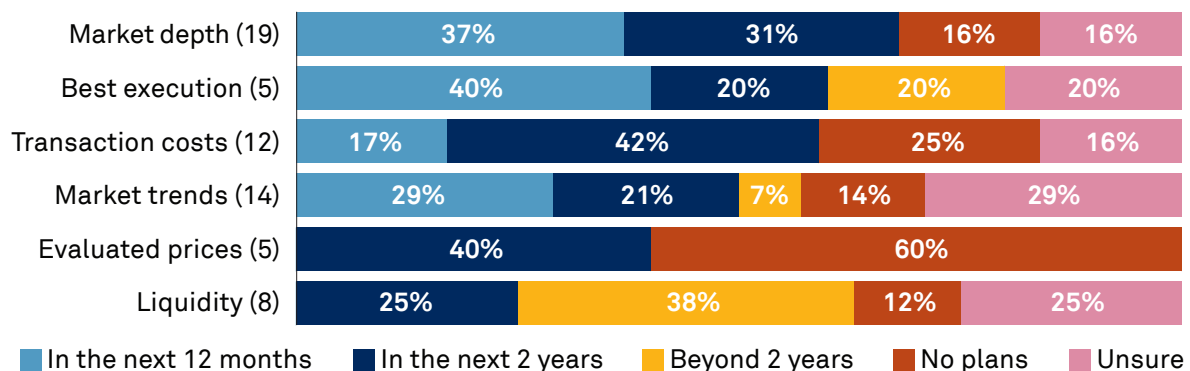


Note: Based on 27 respondents.

Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

For those firms that have not yet adopted some or all of these analytical processes, many will focus on using best execution, market depth and market trend indicators in the next 12 months. This is an intuitive finding, as markets continue to act in unpredictable and volatile ways. According to a trader at a European hedge fund, this year's changes in the market's condition have been "shocking." New challenges combined with different working conditions, including hybrid work and work from home, have forced investors to create new ways to find liquidity and use information and technology.

Future Use of Analytics for Pre-Trade Execution Decisions



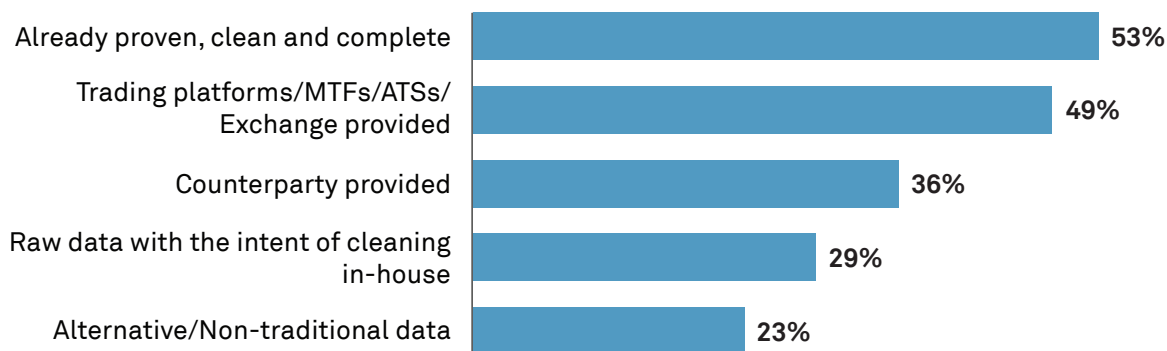
Note: Numbers in parentheses represent number of respondents.

Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

Impacts of Data Sourcing

Although most study participants employ both fundamental and quantitative strategies, the use of clean, proven data was important to 53% of firms when searching for new fixed-income data sources. Nearly half of respondents turn to data providers such as trading platforms and exchanges. Fewer than one-third set about the task of dealing with raw data in-house. The use of alternative data continues to be an exciting trend, and almost one-quarter of buy-side firms are exploring such data sets, which include unstructured data from non-traditional sources (e.g., social media, credit card companies).

Important Characteristics—Fixed-Income Data Sources



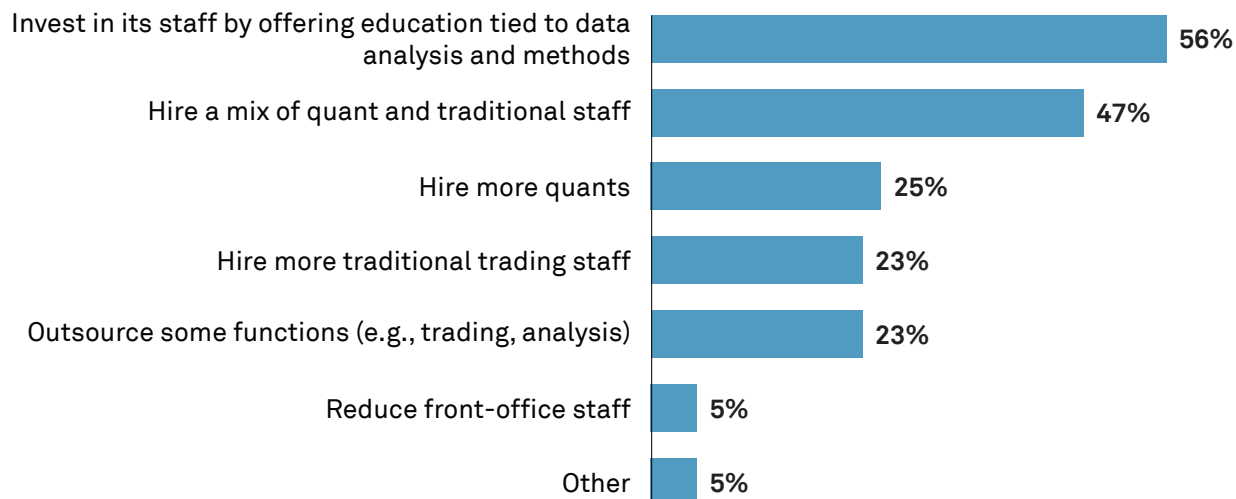
Note: Based on 111 respondents.

Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

Data is also influencing front-office staffing decisions. Over the next one to two years, buy-side front offices are set to hire a mix of quantitative and traditional staff. Although the need for data consumption and analysis continues to grow, this finding makes practical sense. The majority of firms are set to provide education tied to data analysis and methods for their staff. However, traders will still need to trade and focus on markets.

The rise of outsourced fixed-income trading and analysis is a trend worth keeping an eye on, as buy-side margins continue to become compressed and efficiencies are sought after—particularly as the market for quantitative skill sets has become expensive and harder to come by.

Firm's Front-Office Staffing Decision Over the Next 1–2 Years

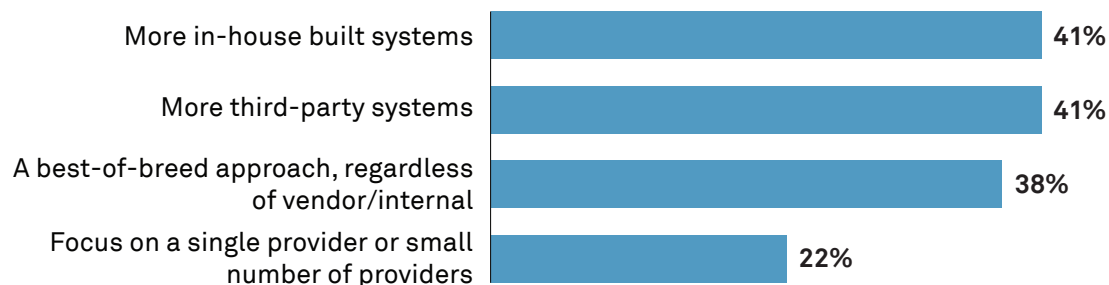


Note: Based on 111 respondents.
Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

Hybrid Approach to Technology as Firms Look to Build, Buy and Integrate

Buy-side investors were split when it comes to building more in-house systems versus using a third party, as many are opting to use a best-of-breed approach regardless. Interoperability has been a key theme as of late, and system openness is driving users to make decisions concerning technology spend and provider preferences. As one U.S. trader explains, there is a keen focus on workflows ... and how they can be improved. The whole build versus buy bifurcation “was so three years ago.”

Approach Toward Technology Use in the Near Future



Note: Based on 111 respondents.
Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

Perhaps unsurprisingly, the majority of participating firms chose better data integration as a top area where they would focus tech spend and effort—a result that is consistent with challenges around a growing number of data points and sources. Execution management was a second highly-ranked area, which is, of course, driven by data aggregation and has risen in importance as market complexity grows. Lastly, the ongoing need to have systems speak to each other rises in importance relative to other areas that are more “equity-like,” such as algorithmic trading, auto-execution, smart order routing, and expansion into other new protocols.

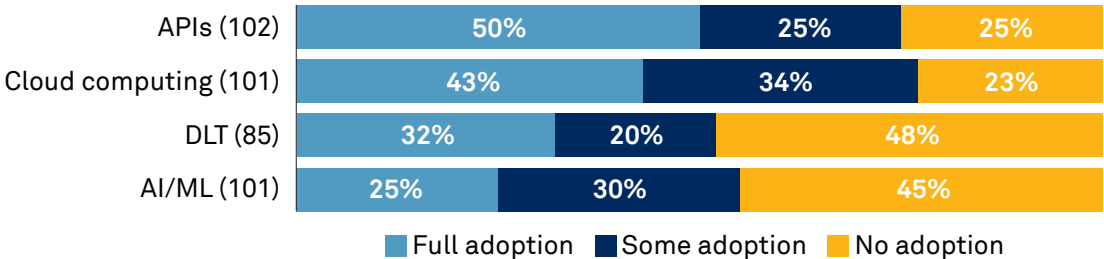
There is a keen focus on workflows ... and how they can be improved. The whole build versus buy bifurcation “was so three years ago.”

What’s Next?

The current adoption of technology is most prevalent in the cloud and the use of APIs, as roughly three-quarters of participants have fully or partially adopted technology in these areas. One U.S. portfolio manager remarked that the cloud enables the “brain”—or portfolio optimization—which sits in the middle of market connectivity tools and data aggregation. Because of the cloud, it is possible to dynamically analyze the portfolio and react to changing market conditions accordingly.

Although distributed ledger technology (DLT) and artificial intelligence/machine learning (AI/ML) are lagging other areas, at least half of respondents are partially employing these technologies, indicating the importance of this growing area.

Current Adoption of Technology



Note: Numbers in parentheses represent number of respondents.
 Source: Coalition Greenwich 2022 Market Structure & Trading Technology Study

One U.S. portfolio manager remarked that the cloud enables the “brain”—or portfolio optimization—which sits in the middle of market connectivity tools and data aggregation. Because of the cloud, it is possible to dynamically analyze the portfolio and react to changing market conditions accordingly.

Key Takeaways

- **A whopping 77% of buy-side firms in the study employ a mix of fundamental and quantitative investment methodologies and are demanding more and better data analysis tools.** The push toward more consumption of unique data has driven traditionalists to look to using no code/low code to manage swaths of fixed-income data. Although traders may not be coding for hours a day as they carefully monitor the market, improved knowledge of what can be done with data has been a game changer in enhancing skills on the desk. Traders are now sitting side-by-side with data scientists and coders.
- **Sources of pre-trade information have increased in importance with nearly 60% of respondents indicating they consume streaming dealer prices through a vendor solution.** The digitization of information has been a key finding in this study, including the standardization and interpretation of data. For instance, about one-quarter of study participants use evaluative pricing from a third-party provider for pre-trade pricing, best execution, liquidity analysis, and estimating transaction costs as part of their pre-trade execution decision-making process.
- **The need for clean and complete data sets is paramount with the growth of fixed-income information. As a result, there will be a hybrid approach to technology in the next one to two years, as firms look to build, buy and integrate (BBI).** Buy-side investors were split when it comes to building more in-house systems versus using a third party, as many are opting to use a best-of-breed approach regardless. Interoperability has been a key theme as of late, and system openness is driving users to make decisions concerning technology spend and provider preferences.
- **The push to the cloud and use of APIs are driving changes in fixed-income markets.** The current adoption of technology is most prevalent in the cloud and the use of APIs, as roughly 75% of participants have fully or partially adopted technology in these areas. Although DLT and AI/ML are lagging other areas, at least half of respondents are partially employing these technologies, indicating the importance of this growing area. Looking forward, it is possible to imagine much faster data consumption driving dynamic portfolio optimization, automation and more efficient workflows.

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