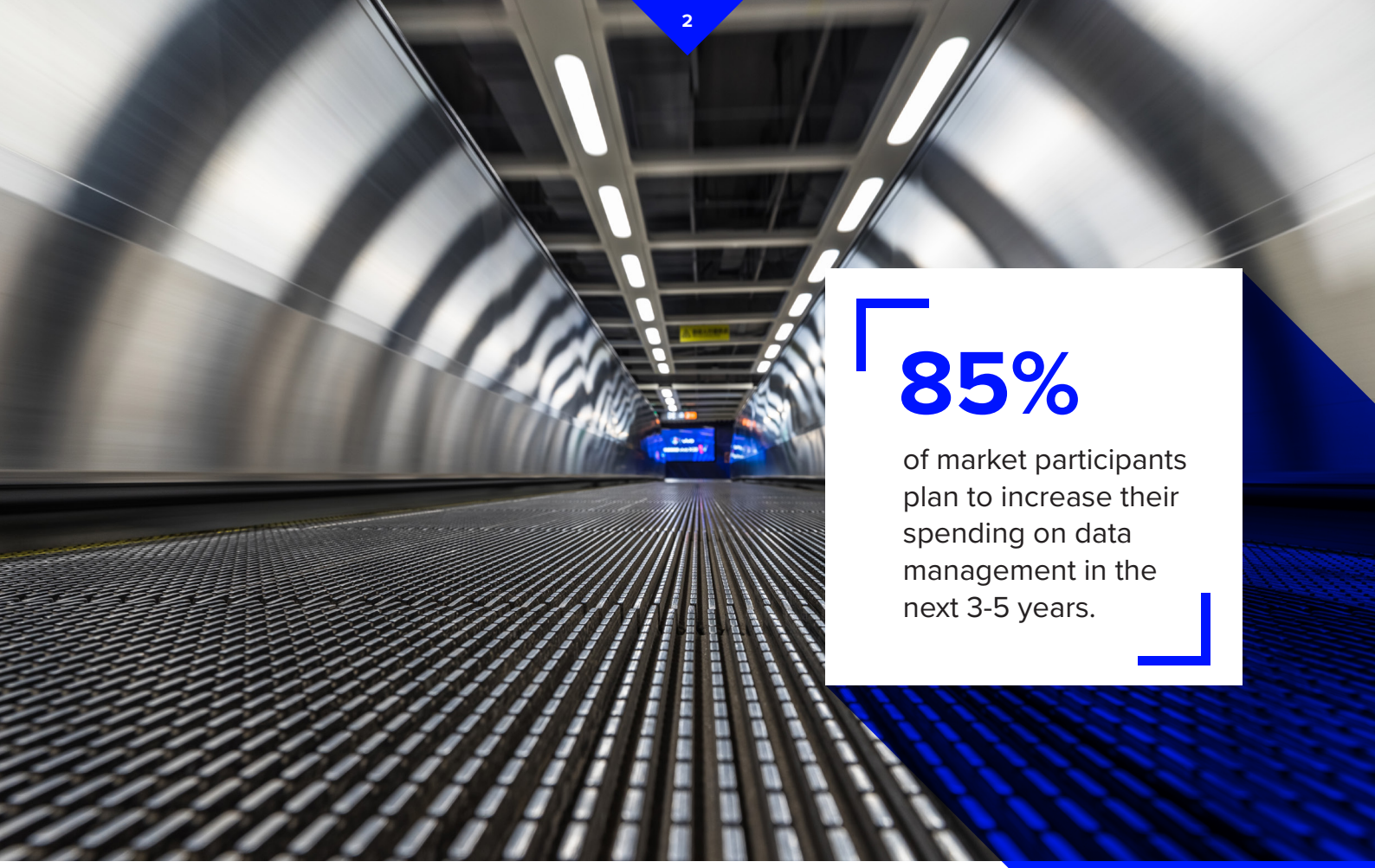
REFINITIV®
DATA IS JUST
THE BEGINNING™
DATA-FIRST THINKING
THE FUTURE OF TRADING: REDEFINING DATA



85%

of market participants plan to increase their spending on data management in the next 3-5 years.

EXECUTIVE SUMMARY

With more information available than ever before, traders are not only expected to find the right data but also make sense of—and ultimately act on—it. Add in unstructured data, the explosion of alternative data, and the need to be sure you're getting information you can trust and an already daunting task becomes even more complex.

While our first *Future of Trading* report examined technology, this second report explores the data that keeps markets moving. Learn why 85% of those surveyed plan to increase their spending on data management in the next 3-5 years, and gain a deeper understanding of how that will change future workflows.

We now invite you to read the 'The Future of Trading: Redefining Data.' Kevin McPartland, Head of Market Structure & Technology at Greenwich Associates, discusses findings from an online survey of 107 market professionals, globally, which were analyzed by firm type, region and generation.

We look forward to sharing these findings and others as we continue to give you a glimpse into the desk of the future. This includes our final report, which will explore how relationships between trading professionals are evolving.

Michael Chin
Managing Director and Global Head of Trading Proposition, Refinitiv

INTRODUCTION

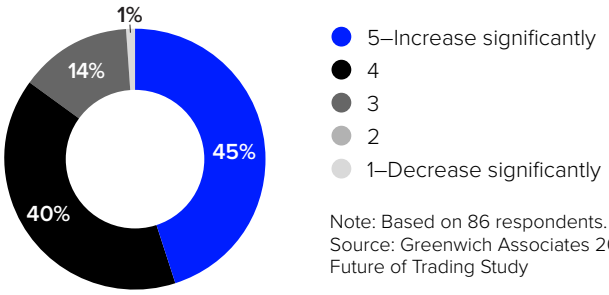
The future of trading is rooted in data.

On one hand, this is nothing new. Trading has always been about information. Those with the best information and the wherewithal to use it are the most successful. The quantity, source and form of the information has, of course, changed over the last century. A printed newspaper delivered by horse has been replaced with depth-of-book data delivered by low-latency microwaves—but information is still king.

On the other hand, both the availability of data and the growth of the tools to use it have changed everything. The research in Part 1 of this Future of Trading series[2] showed that market participants believe artificial intelligence (AI) will have the biggest impact in the next three to five years. The deployment of true AI, whether machine learning or one of its other permutations, is possible only with—you guessed it—data.

Given that, 85% of the banks, investors and capital markets service providers in our study stated that they plan to increase their spending on data management technology in the next three to five years. This includes everything from cloud storage environments to data lakes to real-time market data management tools. Putting in place the technology, workflows, compliance, and analytics tools needed to action data is increasingly more challenging than finding the needed data in the first place. This also explains why data analysis is seen as the most important skill needed to work on a trading desk going forward and, furthermore, why 57% of capital markets professionals expect to spend more time analyzing data going forward. This trend is driving the rise of quants and traders who can code – a trend we'll examine in the next report in this series.

INVESTMENT IN DATA MANAGEMENT TECHNOLOGY IN NEXT 3–5 YEARS

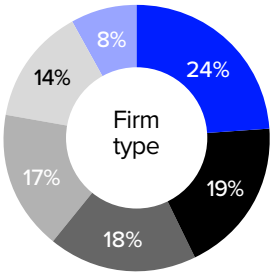


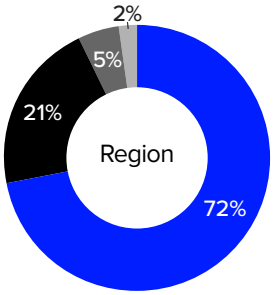
Note: Based on 86 respondents.
Source: Greenwich Associates 2019 Future of Trading Study

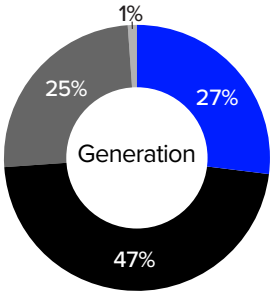
Methodology

In April 2019, Greenwich Associates conducted an online study with 107 capital markets professionals globally. The study examined the technology trends, the data explosion and the skills required to be successful in capital markets in the future.

RESPONDENTS





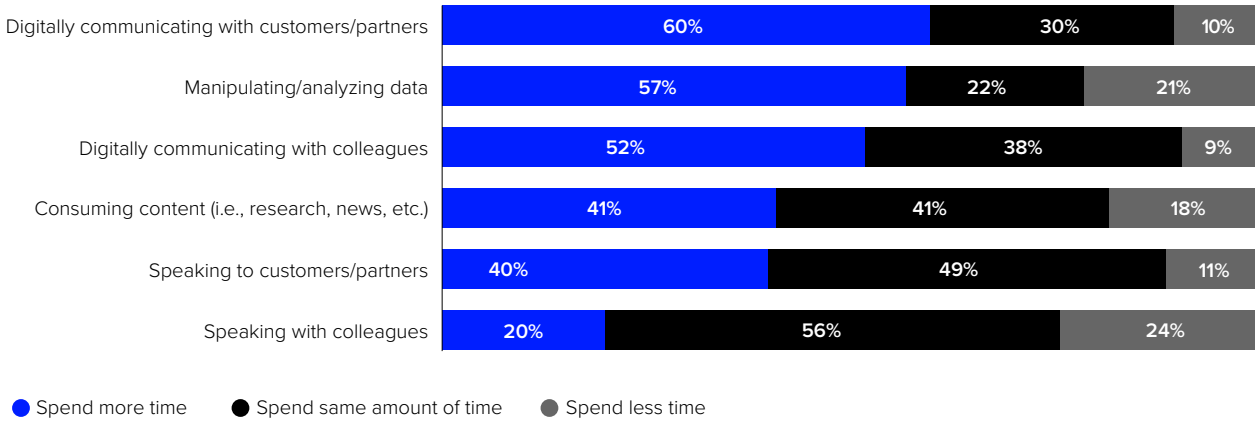


2 https://www.greenwich.com/market-structure-technology/future-trading-technology-2024

Spending more time with data will mean different things to different people and firms. Sell-side trading desks will examine customer trading patterns more systematically to help with relationship management, use execution algorithms that include an AI component to source liquidity, and digitally communicate with clients even more than they do today (which also results in new data to be analyzed for future interactions). Asset managers and hedge funds, which are already up to their necks in data, will continue their focus on finding investment opportunities, more accurately pricing illiquid assets and managing all forms of risk. To that point, and as examined in previous Greenwich Associates research[3], quantitative analysis will continue to permeate even fundamentally driven funds, with "quantimental" increasingly becoming the way forward.

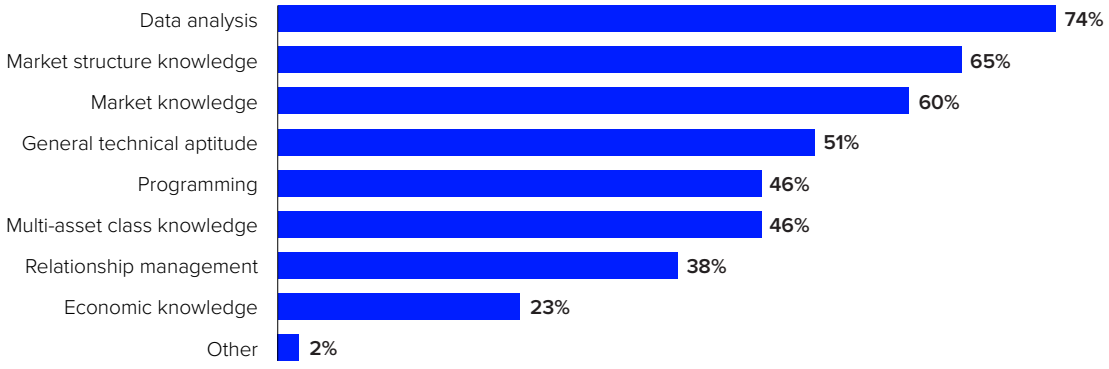
> Data analysis is seen as the most important skill needed to work on a trading desk going forward.

EXPECTATIONS FOR CHANGES IN TIME SPENT ON DAY-TO-DAY ACTIVITIES IN NEXT 3–5 YEARS



Note: Based on 107 respondents. May not total 100% due to rounding.
Source: Greenwich Associates 2019 Future of Trading Study

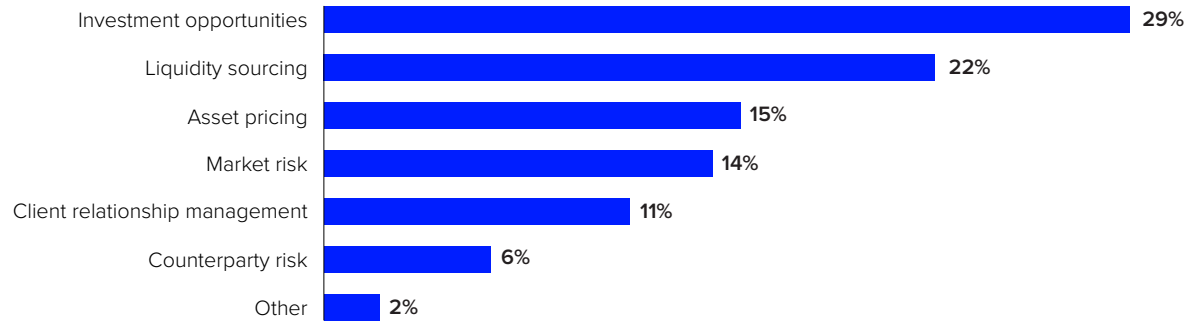
IMPORTANT TRADING DESK SKILLS IN NEXT 3–5 YEARS



Note: Based on 107 respondents.
Source: Greenwich Associates 2019 Future of Trading Study

3 https://www.greenwich.com/benefits-and-future-quantitative-investing

MOST USEFUL INSIGHTS EXPECTED FROM DATA/ANALYTICAL TOOLS IN NEXT 3–5 YEARS



Note: Based on 99 respondents.
Source: Greenwich Associates 2019 Future of Trading Study

And for everyone else—exchanges, trading venues, technology and data providers—productizing the data they already have, determining what new sources of data can be added to those products and using data to support their internal business objectives will all be in focus. The bottom line for trading and trading-related businesses in 2024—everyone needs a data strategy.

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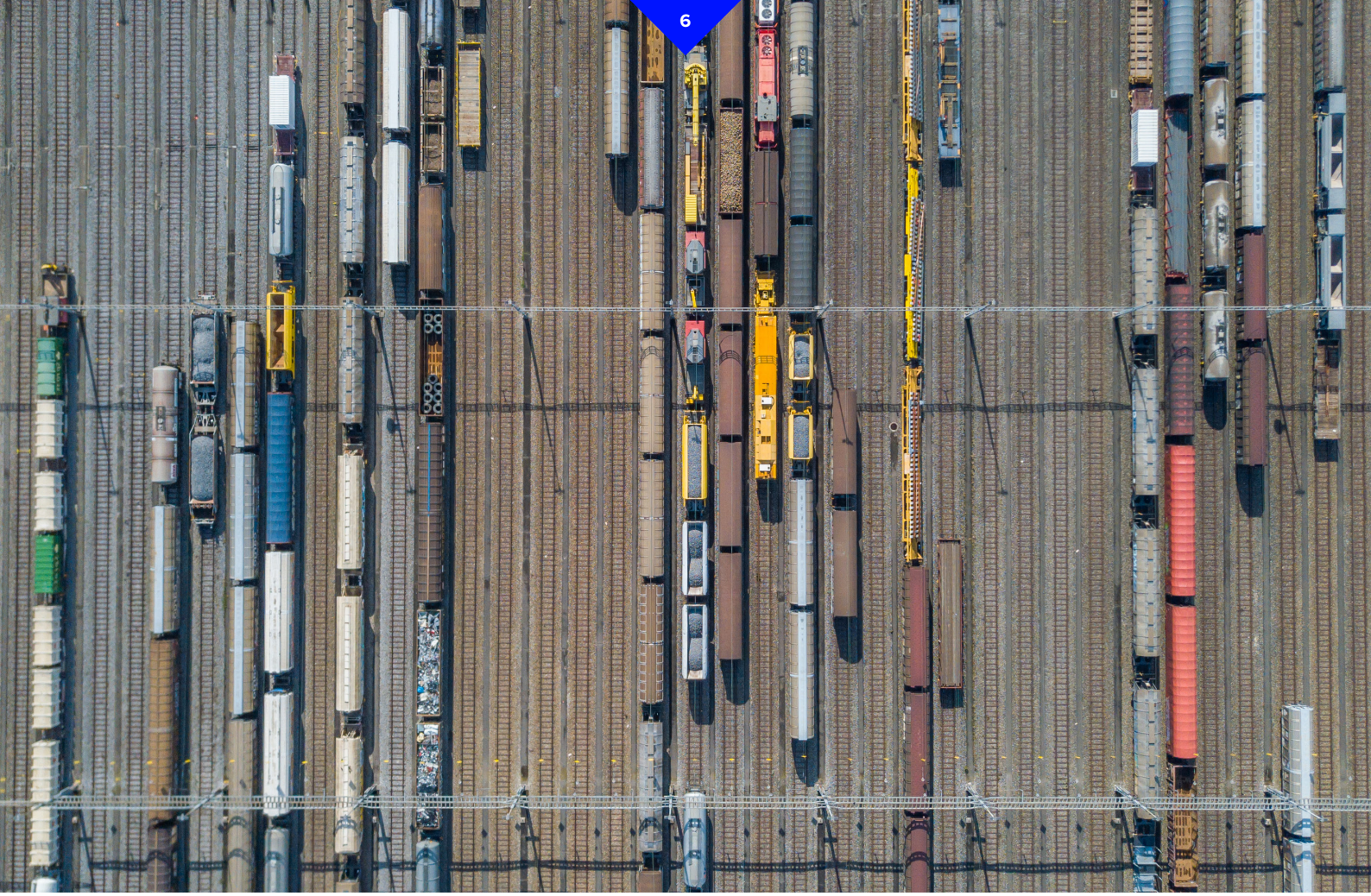
Defining Market Structure Knowledge

Market structure knowledge was seen as the second most important skill for traders in the future, behind only data analysis. But what does that really mean?

At Greenwich Associates, we define market structure as “the impact of regulations, technology innovation and behavior changes on the market and its participants.” In practice, this means that traders need to understand how current regulations, technology and behaviors impact trading and how proposed or expected changes to any or all of those things could impact their business.

For instance, if a customer calls and asks why their buy order for a U.S. equity was executed on a certain exchange or at a certain price, the broker-dealer needs to understand the nuanced details of order-routing requirements and the rules of each individual exchange or trading venue. And in a market with over a dozen places to trade, this is no small feat.

Looking forward, while technology certainly will continue to streamline trading, in many ways it will make it more complex and harder to understand—particularly when things go wrong. As such, understanding how the market works is more critical than ever.



DEFINING DATA WITH A TRADING MINDSET

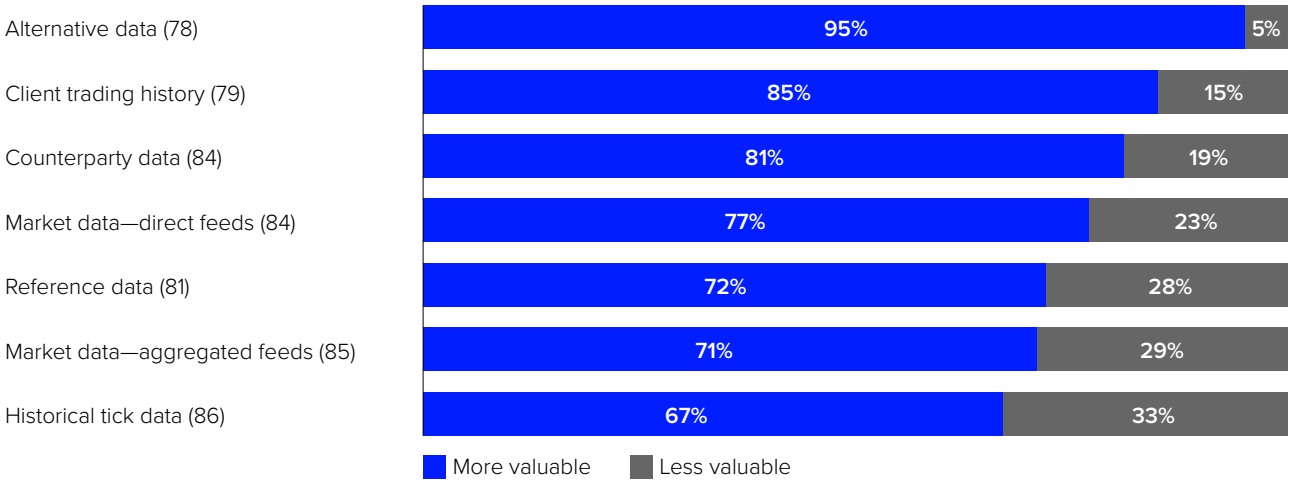
Data is a blanket term than encompasses an increasingly wide range of information utilized by capital markets firms. Market data is well known and broadly used by these firms and includes prices at which securities/instruments can be bought or sold and details of recently completed transactions. It also includes reference data, which provides detailed information about individual securities, instruments and counterparties. It is impossible to trade in institutional markets without access to high-quality market and reference data for the market in which you are trading: Think stock prices and corporate bond terms.

Market participants, particularly traders, still believe in the increasing value of market data in particular, with direct feeds growing in importance over consolidated feeds. The quantity and velocity of market data will continue to grow alongside trading volumes and the number of tradeable instruments, while tolerance for errors and acceptable latency for delivering that data will drop. As such, large investments in market data infrastructure by those up and down the value chain must continue for the foreseeable future.

95%

of respondents believe alternative data will become more valuable to the trading process in the next three to five years.

ANTICIPATED VALUE OF DATA TYPES TO THE TRADING PROCESS IN NEXT 3–5 YEARS



Note: Numbers in parentheses represent respondents.
Source: Greenwich Associates 2019 Future of Trading Study

Looking forward, such data, while critical and complex, will feel increasingly commoditized to market participants who see value in datasets that until recently were either nonexistent or hugely underutilized. An overwhelming 95% of respondents believe alternative data will become more valuable to the trading process in the next three to five years. Alternative data includes data that may provide trading or investing signals once analyzed alongside market movements but has not been considered relevant to trading or investing until recently. A common example is the use of mobile phone GPS data to gauge foot traffic at a specific retailer in an effort to predict revenue changes.

Greenwich Associates research in the first quarter of 2019[4] found that the financial services industry is spending $300 million on alternative data, not including the cost of analytics tools, cloud computing environments and the other elements needed to put that data to work. While nothing to sneeze at, our data shows that spending here still pales in comparison to the $1.4 billion spent annually on consolidated market data feeds and the $17 billion buy-side trading desks spend on technology overall each year. We believe this points to a strong uptick in spending on alternative data in the coming years.

The use of alternative data in trading and investing is not just another passing fad—more proof that spending can only increase. Not only does the world produce data in ways we never would have imagined before, but now market participants also have the tools they need to make sense of what is often unfathomable amounts of completely unstructured information. Using the aforementioned mobile phone GPS example, only with the tremendous storage and compute power provided by the cloud and the use of AI to continuously examine the data can investors make sense of the movements of hundreds of millions of people in real time—and then invest accordingly.

Lastly, alternative data is only useful if traders and investors trust the source and the quality of the data is verifiably high. Execution algorithms can automatically execute trades based on what they "see" in the market, but risk managers will never allow such automation based on data from a questionable source. The entry of several large fintech firms into the space has further legitimized even the most unique and unstructured data. That, of course, is no guarantee that money-making correlations can be found in every new data set; but it does instill confidence in the market that the data is trustworthy and accessible.

4 https://www.greenwich.com/equities/buyers-guide-alternative-data

74%

of market participants believe data analysis will be the top skill needed on the trading desk in 3-5 years.

MORE THAN CRM

The value of a client's trading history is also expected to grow. This data isn't hard to find—every bank has it. The expected increase in "communicating digitally with customers" will only increase its availability. But putting this data to work is non-trivial.

In the past, client trading history would include only client orders that were ultimately executed by the desk. Calls and emails that didn't lead to real business were often lost and/or forgotten. Today, the same tools used for analyzing unstructured data are being applied to every single client interaction, not just those that led to concrete business. Phone calls are run through natural language processing (NLP) engines to determine sentiment and to look for key words. Electronic requests for quote are stored even when the trading desk loses the order. Every major and minor news story from around the world can be rapidly checked against client portfolios and past indications of interest to automatically generate trade ideas that would have been impossible to unearth without the computer's help.

In addition to the technical complexities inherent in putting this data to work, customer privacy concerns must also be addressed. Using a client's data to better service that client is one thing, but using one client's data to help another—even without disclosing names—is likely out of compliance. Things also get sticky when aggregating trading activity from dozens of clients to look for trends. Generally, if the underlying names of the firms are not disclosed and only aggregate results are used, no one's privacy is jeopardized. But with data privacy front and center in financial markets and the technology industry more broadly, some investment and trading firms are left feeling that the reputational risk of entering this grey area just isn't worth the potential return.

DATA SOURCING

While financial firms generate a tremendous amount of data in the course of doing business, the vast majority of the data they need (and want) to move forward still has to come from the outside. As a case in point, Greenwich Associates data from a February 2019 study found that buy-side trading desks, on average, spend 55% of their technology budgets on market data terminals and data feeds, equating to $1.5 billion annually. Clearly, the return on investment is high—otherwise, dedicating more than half of the budget to data would not be feasible, especially with management fees that get lower and lower each month.

Market participants believe that the large financial markets data aggregators will continue to act as the primary source of data for trading desks. Finding, ingesting, normalizing, aggregating, and then redistributing data around the world with near 100% accuracy, with up-time and latency sometimes counted in the microseconds, is no small feat. And the largest financial institutions often prefer to get most, if not everything they need in a single place. So even as the importance of alternative data grows and the sources of that data diversify, the largest data providers will still act as the market's de facto aggregators. Meeting those requirements requires scale and expertise that is often hard for smaller firms to accomplish.

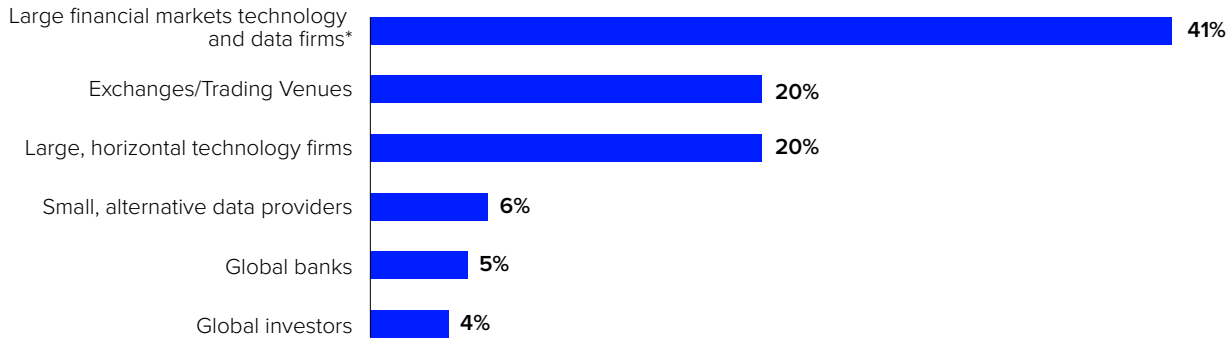
That said, cloud computing and easier access to data has allowed smaller firms to find their niche—whether it be for certain data types or certain markets—by offering "boutique" services to a focused group of users. While a small few will grow to the size of the incumbents, all help the industry push forward new ideas and increase competition to be sure the end user continues to see additional value from what they receive.

It is impossible to talk about data sourcing without discussing exchanges and trading venues. The bids, offers and last trade prices so sought-after by trading desks are the result of trading done on these platforms, making them the true source of so much of what the market consumes.

This ties back to the expected increase in value of direct data feeds in the coming three to five years. As more over-the-counter markets, such as corporate bonds, government bonds and foreign exchange, adopt electronic trading, the amount of data generated by trading venues will see increasingly exponential growth. The growth will come from not only the sheer volume of transactions and offers to trade on any given day, but also from the number of trading venues facilitating these interactions around the world.

> Buy-side trading desks, on average, spend 55% of their technology budgets on market data terminals and data feeds, equating to $1.5 billion annually.

PRIMARY SOURCE OF CAPITAL MARKETS DATA IN NEXT 3–5 YEARS



Note: Based on 98 respondents. *e.g., Bloomberg, Factset, Refinitiv
Source: Greenwich Associates 2019 Future of Trading Study

THE FUTURE OF DATA IN TRADING

Success in trading is rooted in data. Finding it, analyzing it and putting that analysis to work allows traders on the buy and sell side to achieve best execution and ultimately meet their broader business goals. Data coupled with transaction cost analytics (TCA) then allows those same traders to measure the results using analytics, with that data then fed back into the process as it starts again.

This virtuous cycle also allows for increased automation industrywide. Auto-responding to a request for quote or executing a trade with no human intervention requires tremendous amounts of data to enable the computer to make decisions that, until recently, were left up to the humans. Every time that automated task occurs, more data is captured about the situation in which the trade was executed and whether or not it achieved the desired outcome, which makes the machine even "smarter" the next time around. To that end, we expect automation to be a huge source of new data going forward, leading to only more automation.

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Where Market Data Comes From

Greenwich Associates data shows that most market participants expect large financial market data aggregators to continue acting as their primary data source. It is important to remember, however, that market data originates from bids, offers and/or trades between banks and broker-dealers or banks, broker-dealers and investors. Exchanges, trading venues and market data aggregators keep track of these millions of transactions, ultimately making them consumable by those same market participants. So while only 5% of those in this study believe they will begin ingesting data directly from banks, the majority actually will—simply through an intermediary.

CONCLUSION

None of these data-related challenges are easy, of course. Putting in place the right people, partners and processes to achieve these goals is wrought with complexity and trade-offs. In fact, in the next and final piece of research in this series, we'll examine the human element of the future of trading and examine the impact of technology on data not just on the industry, but on the careers of those that keep the markets moving.

Thankfully for the industry, however, the amount of quality choices available to solve these and other data-related problems is as high as it has ever been. What is considered normal today would have been seen as leading edge only five years ago. This fact should instill excitement in everyone about what the next three to five years will bring.

Refinitiv is one of the world's largest providers of financial markets data and infrastructure, serving over 40,000 institutions in over 190 countries. We are new market pioneers with 167 years of confidence. We provide leading data and insights, trading platforms, and open data and technology platforms that connect a thriving global financial markets community – driving performance in trading, investment, wealth management, regulatory compliance, market data management, enterprise risk and fighting financial crime.

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