

Q2 2020

FISD Alternative Data Council: A Guide to Alternative Data



CONTENTS

- 2 Introduction
- 2 Understanding the Market Participants
- 4 Why Asset Managers Use Alternative Data
- 5 Competitive Landscape of Alternative Data
- 6 Example of Alternative Data
- 7 Sourcing Alternative Data
- 8 Buying Alternative Data
- 8 Evaluating Alternative Data
- 9 Integrating Alternative Data
- 11 Obstacles to Alternative Data
- 12 Conclusion
- 13 Appendix—Alternative Data Ecosystem
- 14 Appendix—Glossary of Terms



Brad Tingley is an analyst on the Firm's Market Structure and Technology team.

THERE IS NOW AN ARRAY OF ALTERNATIVE DATA THAT CAN PROVIDE INSIGHT INTO THE POTENTIAL PERFORMANCE OF A STOCK, SECTOR OR INVESTMENT STRATEGY

FIRMS' BUDGETS FOR ALTERNATIVE DATA RANGE FROM LESS THAN \$100,000 TO OVER \$5,000,000

Introduction

Alternative data has been around since the advent of the ticker tape. However, the term has gained prominence over the past decade. An increase in adoption is making it less “alternative” and more an essential part of portfolio construction for institutional investors. These underutilized and unique data sources can add critical explanatory power to both quantitative and fundamental investment models. Until recently, the adoption of alternative data has been confined strictly to the realm of quantitative hedge funds and some bold active managers. Now, alternative data is beginning to go “mainstream,” with increasing demand from fundamental and hybrid asset managers. This guide is intended to help new alternative data vendors get up to speed with this growing ecosystem.

While usage is becoming more common, alternative data supply is still in a nascent stage. Increasingly, alternative data users are frustrated with suppliers simply trying to monetize the data exhaust generated by their daily operating activities. In fact, only 38% of hedge funds and asset managers are looking for raw, unprocessed data—and even more surprisingly, only 17% are not looking for any additional supporting services. Therefore, while it may present more hurdles than initially anticipated, the opportunity is within reach for alternative data suppliers to tap into a total addressable market of nearly \$4 billion (with buyers whose budgets are growing by over 50% year over year).

Understanding the Market Participants

In order to understand the alternative data ecosystem, it is critical to understand the broad array of participants in the space.¹ From consumers/purchasers, such as broker-dealers, hedge funds and asset managers, to data vendors/aggregators to the analytics/data management firms, the data supplier's role in the marketplace is greatly impacted by the needs, objectives and mindsets of the co-inhabitants of the alternative data landscape. This paper highlights the role of the buy side.

¹ <https://www.siiia.net/Divisions/FISD-Financial-Information-Services-Association/Programs/Alternative-Data-Council>

The buy side today has access to information and data that would have been unheard of even 10 years ago. In the past, buy-side portfolio managers/traders have relied primarily on research and information provided from market-data aggregators as well as their sell-side trading counterparties. Now, the buy side has access to more real-time information than ever before, and as a result, alpha is harder than ever to identify. This is where alternative data steps in.

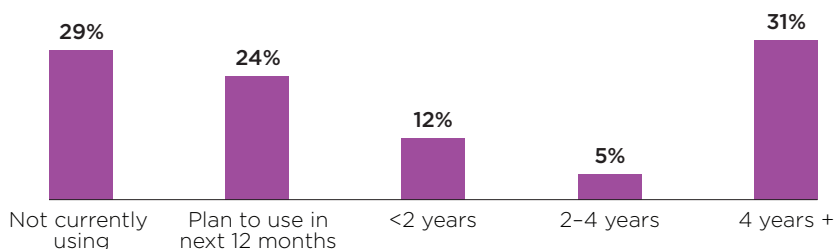
Many say that investing is all about acting on your gut feel. But, even when a portfolio manager is guided by gut feel or old-fashioned experience, the portfolio manager is synthesizing the information available to them and distilling it down into their decision. Perhaps 20 years ago, fundamental investors would have relied only on public company earnings statements as the data input for their models. Today, even the most fundamental, long-only mutual fund relies on data more than ever.

A firm's investment style can shape how it utilizes alternative data. Fundamental managers may pull in insights derived from alternative data to confirm signals generated from their more traditional models, while quantitative managers are more likely to use alternative data as an input into an algorithm that trades directly. The early adopters of alternative data were the most sophisticated quantitative hedge funds, which had the expertise and resources to take in the often unstructured data and incorporate its signals into their investment models. Now, usage is expanding to more traditional asset managers, as active managers struggle to generate excess returns in comparison to their passive competitors.

Across the industry, about 50% of investment managers are currently using some form of alternative data, with another quarter planning to start incorporating alternative data in the next 12 months, according to Greenwich Associates data. Among current users, most have been implementing alternative data into their models for over four years. But few firms consider themselves to be high-level users, which we define as subscribing to multiple alternative data sources that form a key part of their investment model. These "power users" of alternative data have it deployed across multiple strategies or have specific investment strategies built entirely around alternative data. These firms will often want the data in raw format, in order to extract as much alpha as possible from the signal within an optimized portfolio-construction process.

About 50% of investment managers are currently using some form of alternative data, with another quarter planning to start incorporating alternative data in the next 12 months.

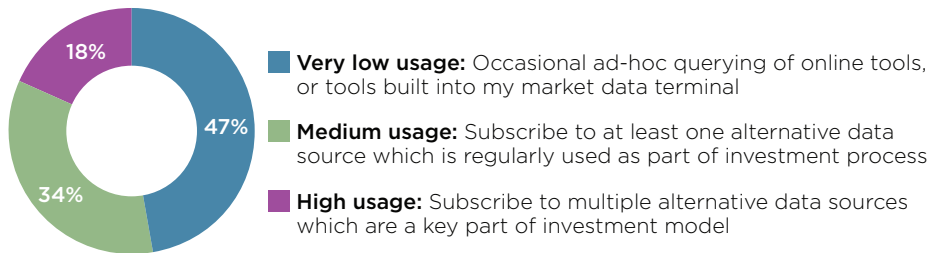
LENGTH OF TIME USING ALTERNATIVE DATA



Note: Based on 42 responses.
Source: Greenwich Associates 2019 Alternative Data Study

More firms are at the low-usage end of the scale, with occasional ad-hoc querying of online tools or using datasets built into their market data terminal. This has more to do with experience than usefulness of the data—nearly all firms that have been using alternative data for less than four years claim very low usage. We define medium usage as subscribing to at least one alternative data source that is regularly used as part of the investment process. As the market evolves, this level is where most institutional investors will be positioned—or perhaps somewhere between medium and high usage—subscribing to multiple sources but only using one or two per strategy.

USE OF ALTERNATIVE DATA



Note: Based on 38 respondents.
Source: Greenwich Associates 2019 Alternative Data Study

Why Asset Managers Use Alternative Data

Regardless of investment style, all institutional investors have their performance evaluated by their returns relative to a benchmark. Some of the more popular benchmarks across the industry include the S&P 500, Russell 2000 and the Bloomberg Barclays Global Aggregate. With their performance being judged based upon broad market indicators, active portfolio managers on the buy side are consistently looking for an edge. As the industry has gotten more and more competitive, errors in pricing have become less prevalent and have presented less opportunity for outsized returns—thus this edge has been harder to find.

The search for “alpha,” or return in excess of market risk (i.e., beta) has been the perennial quest of institutional investors. The three major sources of alpha have traditionally been timing, selection and leverage. Alternative data can help investors generate alpha by providing leading indicators of future price movements and other security selection factors. Other ways alternative data can help investors is by giving them an information advantage over their peers that do not have access to the data source.

Also, some alternative data can provide trading signals earlier than the traditional data source. One example is evident when the Fed announces its decision on interest rates. Across the industry, many traders sit with bated breath to see which direction rates will move. Some have found

alternative data that may signal the direction of the move as early as a week before the announcement. Perhaps by looking at shipping data or scouring LinkedIn for the number of job openings by industry, traders are able to discern the direction of rate changes with increasingly accurate results. Having a few extra days to unwind positions or take on additional risk can be huge for traders, especially when their peers are a day or two away from having the same information.

Having a few extra days in order to unwind positions or take on additional risk can be huge for traders, especially when their peers are a day or two away from having the same information.

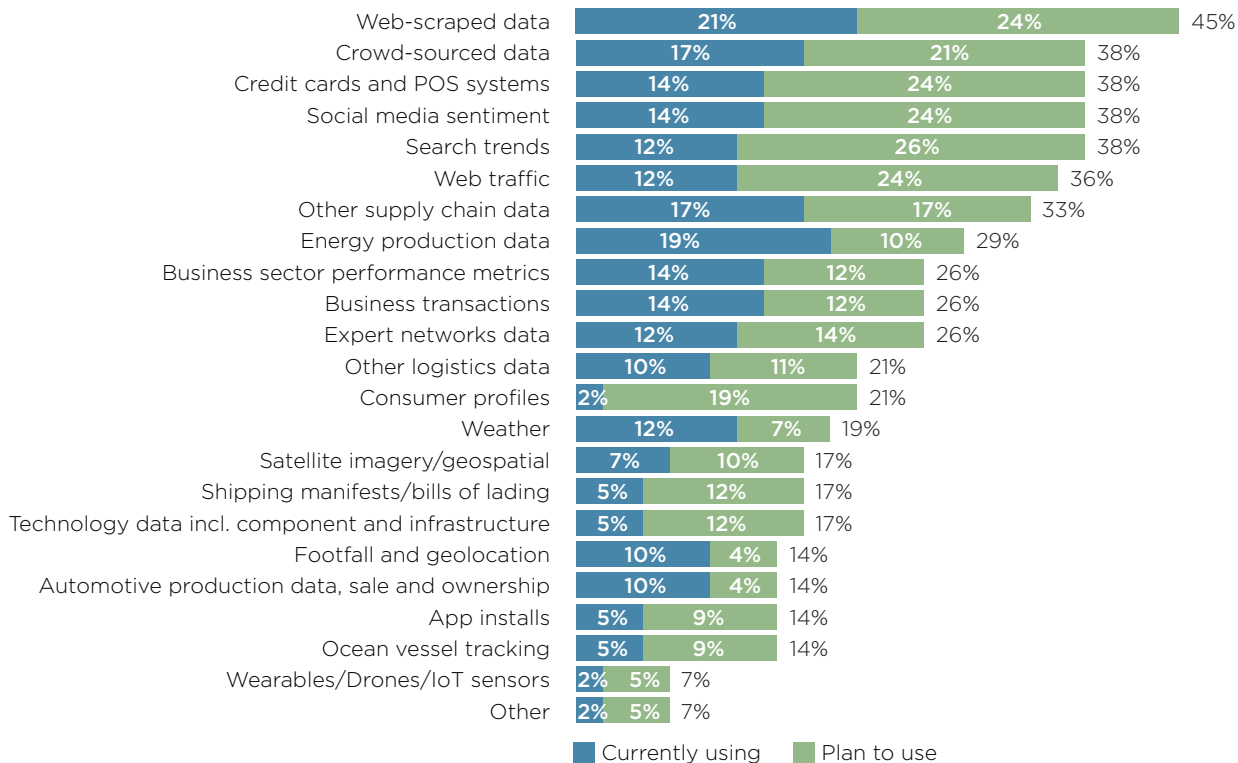
Competitive Landscape of Alternative Data

Driven by innovative data collection techniques and an explosion of data being created by an increasingly interconnected world, there is now an array of alternative data that can provide insight into the potential performance of a stock, sector or investment strategy.

Some of the most popular types of alternative data include:

- **Web-scraped data:** Many websites contain valuable information about corporate activity. For example, by tracking prices and inventory on public retail websites, it is possible to ascertain the performance of brands and companies.
- **Sentiment:** Social media sentiment is one of the most well-known types of alternative data and is still widely used. More people saying positive rather than negative things about a stock on Twitter can indicate that the stock price will go up. Although this type of alternative data has been widely adopted, it continues to provide value. Other types of sentiment include linguistic analysis of earnings transcripts and news or non-social, web-based content.
- **Credit cards and point-of-sale systems:** These data sets collect consumer spending data straight from the source. Some companies form a panel of representative consumers who agree to share their credit card statements. Other firms work directly with the technology providers that handle retail payments to access data on consumer purchases. This data can then be aggregated and extrapolated to generate insights.
- **Search trends:** This is probably the most easily accessible type of alternative data, as anyone can use Google Trends reports to see if a new product is catching on. Tracking search traffic for specific retailers is one common use case.
- **Crowd-sourced data:** The “wisdom of crowds” theory tells us that the average opinion of a group of individuals is generally more accurate than the opinion of any one individual. Within investing, there are many communities, such as StockTwits and Estimize, that share their insights and investing ideas. This aggregated, crowd-sourced data can provide valuable insight and alpha for an investment strategy.

USAGE OF ALTERNATIVE DATA SETS



Note: Based on 42 respondents.
Source: Greenwich Associates 2019 Alternative Data Study

Example of Alternative Data

On December 26, 2017, Amazon (AMZN) [announced that they had had a record holiday season²](#), including:

- “Echo Dot was the #1 top-selling product across all categories on Amazon”
- “Echo Dot and Fire TV Stick...were not only the top-selling Amazon devices this holiday season, but they were also the best-selling products...across all of Amazon”
- “Millions of Prime members voice shopped with Alexa for gifts, Amazon devices and everyday household essentials”

Amazon’s success over the holiday season clearly wasn’t yet factored into the stock price, which soared by 23% in the weeks following the announcement, while the S&P 500 remained roughly flat. For users of alternative data, however, the strong performance of Amazon products wouldn’t necessarily have been a surprise. Data provided by Thinknum, sourced through Best Buy’s website, shows the increasing sales strength

² <https://press.aboutamazon.com/news-releases/news-release-details/amazon-celebrates-biggest-holiday-more-four-million-people-0>

of Amazon products through the holiday period starting from Black Friday, with the number of Amazon products in the top 1,000 products sold through Best Buy increasing over 200%. In addition, looking at data for “Amazon Alexa” job postings on Amazon’s corporate website shows that the number of open positions related to Alexa increased by 53% throughout 2017, increasing to over 750 positions.

Of course, alternative web-scraped data doesn’t have all the answers. While it may indicate which products are selling well, it doesn’t quantify the impact that may have on a large, diversified company like Amazon. And although an increase in job listings is an indicator of growth, it could also mean an increase in costs that could impact profitability. However, it is clear that alternative data such as web-scraped data can provide important new information about a company’s business and outlook. Sometimes this data has value on its own, but more often, true value is derived when combined with other data sources, both traditional and alternative, and qualitative analysis.

Alternative data such as web-scraped data can provide important new information about a company’s business and outlook.

Sourcing Alternative Data

Investors now have several channels through which they can find and gain access to alternative data. They can source alternative data directly from organizations that create it. For example, a satellite company tracking freighter shipments or crop yields may sell that data directly to investors. However, many consumers prefer to source their alternative data from specialist third-party vendors who are able to offer a wide range of different datasets. In addition, many of these companies clean, vet and prepare the data for use by investors and are able to provide consistent service and support across all the datasets they sell.

Fundamental investors typically seek out data to help support and ultimately improve their current investment strategy. A mutual fund focused on energy markets, for example, could seek out newly collected IoT (internet of things) data on consumer electricity consumption as an input to their investment model. For most hedge funds, however, it is not the strategy that leads to the data, but the data that leads to the strategy.

Just as a college professor once determined that the [S&P 500 can be predicted using the price of butter in Bangladesh](https://www.fool.com/investing/general/2007/09/20/butter-in-bangladesh-predicts-the-stock-market.aspx),³ hedge fund managers are hoping to go beyond basic asset price correlations to unearth true causal relationships that can add alpha to their portfolio. The majority of firms only start searching for data to fill a specific need. Recommendations from peers and peer firms also carry tremendous weight. A suggestion from someone facing a similar challenge is more convincing than one from a data business development professional.

³ <https://www.fool.com/investing/general/2007/09/20/butter-in-bangladesh-predicts-the-stock-market.aspx>

Buying Alternative Data

Despite the hedge fund industry's reputation for high returns and deep pockets, convincing management that a dataset will, in fact, generate the returns needed to justify the costs is no small feat. Hedge fund managers tend to have more of their own money invested in the fund, thus, this additional scrutiny of expenses shouldn't come as a surprise.

The annual price of alternative datasets can vary significantly, depending on the costs involved in creating it, the size of the market that it addresses and other factors, including uniqueness and the quality of signal. A simple dataset that covers one or a few securities could cost as little as \$5,000 per year, whereas complex datasets covering a wide universe of securities could easily top \$1,000,000 annually. A firm's budget for alternative data can also vary depending on how the firm employs this data and the returns it can be credited with generating. For some firms, budgets for alternative data are less than \$100,000 and for others they're over \$5,000,000. There is big money to be made by those that provide alternative data and help the buy side use it to find the elusive edge. Determining exactly how much money is spent by asset managers and hedge funds on these datasets is difficult, however, given the definition of alternative data is infinitely fluid.

Evaluating Alternative Data

While the concept behind an alternative dataset may sound intuitively sensible and insightful, the data needs to be properly analyzed and evaluated before an investor can decide whether to incorporate it into their investment process. Of course, the strength of the signal, or alpha, is the key factor in deciding the value of the data. But just as important is how additive (or not) this dataset is to the investor's overall strategy.

A signal derived from alternative data may have good alpha, but if it is similar to the results being generated by the existing model, then it is considered to have less value. Thus, uniqueness of the data is very important. Sometimes a signal on its own may not have much explanatory power, but when it is unique and uncorrelated, it may add meaningful value when used in combination with other factors.

The size of the investable universe is another key factor in evaluating datasets. Generally speaking, the broader the coverage of a dataset the better. For example, a unique dataset may possess high alpha for a single security, but a weaker signal for a wide range of securities may be preferable, as an investor would be able to allocate more capital and better manage risks.

Other factors such as research support from the vendor, exclusive access to the data and delivery format are considered less important. However, in cases where an investor has narrowed down their options to a few suppliers, these support functions could ultimately tip the scales in one direction or the other.

Once an investor has determined she'd like to purchase an alternative dataset, she then must go and justify the ROI to management. The process for evaluating new data sources is notoriously complicated. The expected return on investment (ROI) is therefore a key factor for investors in determining how much they are willing to pay for a new dataset. A large majority of buyers are still unable to quantify the level of ROI they expected from a specific data purchase. When alternative datasets are combined with others or with existing models, it may be difficult to isolate the incremental value provided by a single signal. This can leave firms unable to judge whether a particular dataset will add sufficient value, clearly complicating the buying process.

When management is not convinced of the value, alternative data can remain out of reach. Suppliers of these datasets, therefore, need to demonstrate the potential value/alpha created when the data is applied to given trading strategies. This enables the trading desk to present a clear path to recoup the time and costs associated with onboarding new data, giving management less reason to prevent the transaction. Management is also concerned that the datasets available today, while valuable, are not complete.

Perception in this case is reality, and a belief that some of the pieces are missing will leave portfolio managers skeptical about making decisions based on data perceived to be incomplete. This means that alternative datasets that are, in fact, complete are particularly valuable to portfolio managers. As such, suppliers that can demonstrate their data quality are well-positioned for growth, given asset manager demand. Those that provide metrics to potential and existing users demonstrating the quality and completeness of the data set can expect to see quick adoption, given the natural demand from, and the value seen by, the buy side.

Suppliers that provide metrics to potential and existing users demonstrating the quality and completeness of the data set can expect to see quick adoption, given the natural demand from, and the value seen by, the buy side.

Integrating Alternative Data

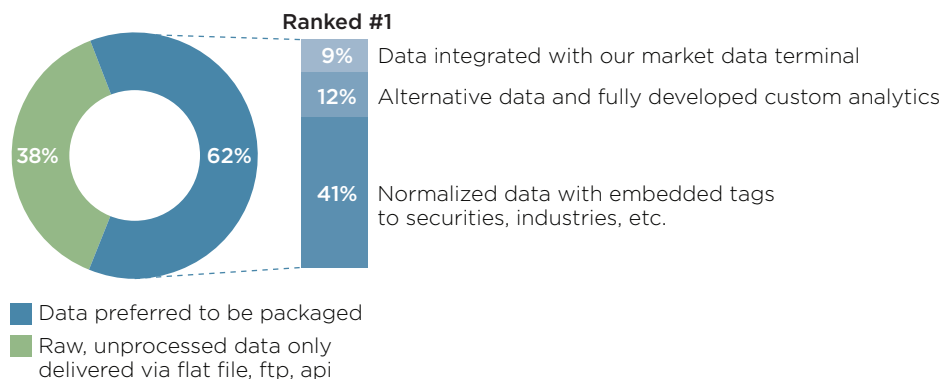
While finding and gaining access to a new and interesting data set is challenging, implementing an investment strategy based on what is often terabytes of data is even harder. The ability to quickly integrate the purchased data into the trading and analytics technology already on the desk is also essential. Market data desktops, such as those provided by Bloomberg, Thomson Reuters and FactSet, are the most commonly

used applications to access alternative data. Analytics platforms and data aggregators are also frequently offered by firms such as Quandl (Nasdaq), Eagle Alpha and 1010data.

Fascinating, although not at all surprising, is the continued heavy usage of Microsoft Excel by hedge funds. Despite the amazing advancements by data analytics and visualization providers, Excel is so well known and so engrained in the minds of nearly everyone in finance, replacing its complicated yet arguably unsurpassed flexibility is a tall order. However, the difficulty investment firms continue to have monitoring Excel usage, coupled with the innovation from firms focused on putting big data to work, creates a huge opportunity for alternative data suppliers that make the transition to new tools more seamless.

Also, alternative data is often, and will increasingly be, quite unstructured and not suited for the analytics in which Excel excels. Alternative data is only valuable to investors if they can put it to work. There have been frustrations expressed by the buy side around the quality of data received from alternative data vendors—thus many prefer the data delivered in a raw, unprocessed format. Alternative data received this way generally requires scrubbing, reformatting and mapping. Another preferred delivery mechanism is for the data to have been normalized with embedded tags linking securities, industries, timestamps, etc. before delivery.

DATA DELIVERY PREFERENCE



Note: Based on 34 respondents.
Source: Greenwich Associates 2019 Alternative Data Study

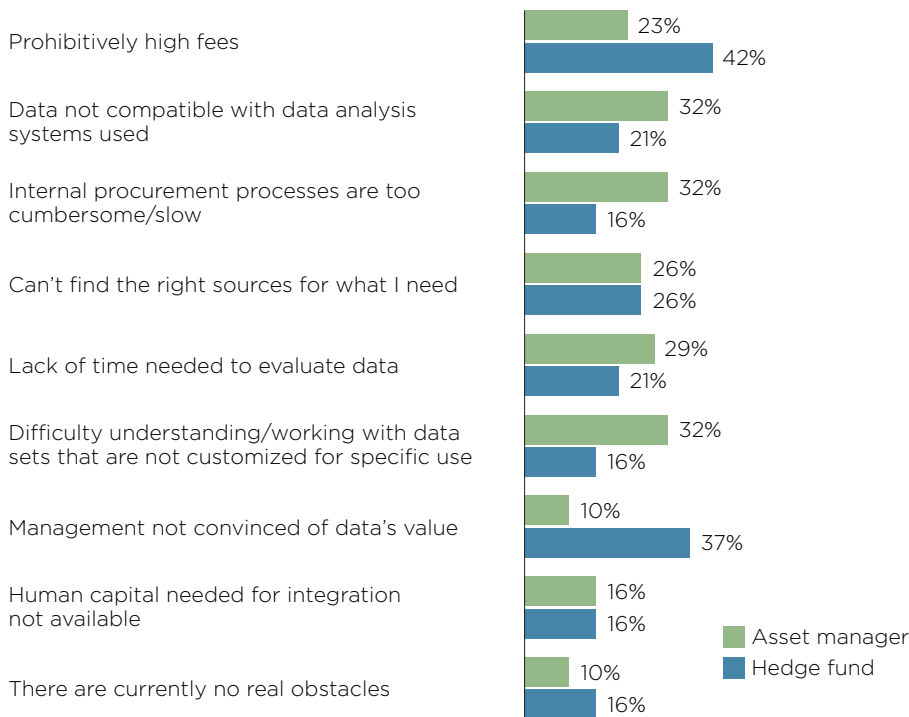
Firms have varying levels of automation set up when it comes to the data ingestion process. Many have automated 100% of the process of bringing in the data, including downloading, cleaning and mapping. This is possible for updates to existing datasets, but new datasets will have different formats and structures and will require a new process to be built.

Obstacles to Alternative Data

As alluded to earlier, analysts and portfolio managers on the buy side cite a number of obstacles inhibiting their usage of alternative data. Prohibitive cost and difficulty in quantifying the value are the top two. In some ways, these are related. Many do not have a formal methodology to estimate ROI. Without a good idea of the value of something, it is harder to justify the cost.

Other obstacles include difficulty in cleaning and integrating the data, and a lack of internal resources. Integrated market data vendors may be better positioned to address many of these obstacles. Economies of scale allow for explicit costs to come down, a more packaged product can alleviate data cleaning, and integration concerns and a robust support model can mean fewer internal resources are required. Therefore, alternative data suppliers should consider the motivations of the end client if selecting a vendor to partner with for distribution and ensure that their selection resolves these pain points for investors.

ROADBLOCKS TO USE OF ALTERNATIVE DATA



Note: Based on 50 responses.
Source: Greenwich Associates 2017 Alternative Data Usage Study

The entire integration process can be quite time-consuming. It takes, on average, 85 person-hours to evaluate a new alternative data source. This is equivalent to two people working full-time on the project for a week. In some cases it could take over 200 person-hours to evaluate a data source—hence, cost is relative. As long as the returns generated from the

dataset outstrip the costs by a wide enough margin, then no cost issue will exist. That said, no fund manager can guarantee returns from a new information source, even if back-testing suggests returns are a sure thing.

Conclusion

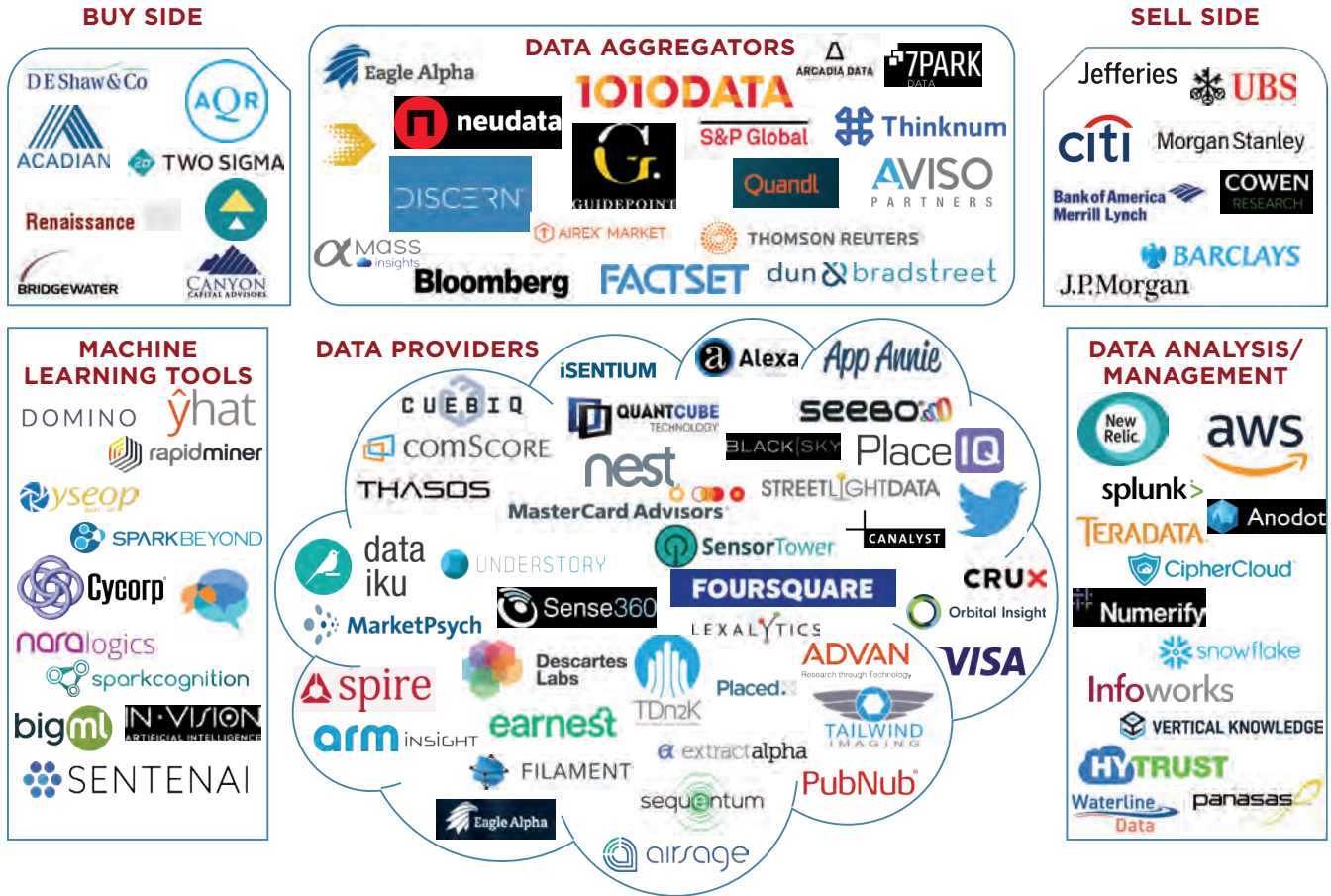
Usage of alternative data is expanding beyond the quantitative asset managers who pioneered its use a decade ago. Data alone is no longer enough. To truly grow this segment, data suppliers will need to provide normalized data with embedded tags, analytics, integration with existing platforms, and a data support model.

The types of alternative data being used are likely to shift also. Currently, usage is concentrating among the top half-dozen or so sources of alternative data. As more investors adopt these sources, aided by vendors providing more productized offerings, it is possible that the alpha from these sources begins to dilute over the next few years, causing these institutional investors to shift their focus to less utilized sources, including those that are not natively digital.

Despite the rapid growth in the market recently, alternative data is still in the early innings when it comes to alternative data adoption. We expect budgets to continue to increase significantly over the coming years, as more firms come into the market and usage among current users increases.

Appendix—Alternative Data Ecosystem

ALTERNATIVE DATA ECOSYSTEM



Source: Greenwich Associates 2020

Appendix—Glossary of Terms

PARTICIPANTS OF FINANCIAL MARKETS

Hedge funds
Pension plans
Insurance companies
Asset managers
Long-only/Mutual funds
Macro funds
Family offices
Sovereign wealth funds
Private equity/Venture capital
Broker-dealers (Sell side)
Prime brokers
Market makers
Banks

TRADING VENUES

Exchanges
Futures/Options exchanges
Alternative trading systems (ATS)

ATSs are trading venues that are not regulated as a public exchange. Examples of ATSs are ECNs, crossing networks and dark pools. ATSs are typically registered as a broker-dealer and focus on finding counterparties for transactions.

Dark pools

A dark pool is a private “exchange” for trading securities, typically equities. Dark pools may be run by banks, exchanges or independently owned. Dark pools allow traders to place orders without publicly revealing their intentions. They are referred to as “dark” because the size of the trade and identity are not revealed until after the trade is executed. Orders are not publicly disseminated and as such do not play a role in price discovery, compared to a “lit” exchange which has orders publicly displayed.

Crossing networks

A crossing network is an ATS that matches buyers and sellers electronically without routing the order to an exchange.

Systematic internalisers (SI)

Systematic internalisers are a counterparty firm that largely operate on their own account (use of proprietary capital) when executing client orders outside of regulated exchanges.

Electronic trading venues

Interdealer brokers (IDB)

A broker that acts as an intermediary between major dealers (banks) and facilitates trades between dealers. IDBs do not take on risk, instead providing pricing and liquidity information while maintaining privacy.

BUSINESS FUNCTIONS AND ROLES

Front office

The front office includes the customer-facing functions such as salespeople and traders.

Back office

Middle office

Middle office manages risk and corporate strategy.

Trader
Sales
Analyst
Fundamental research analyst
Portfolio manager
Quant

Quant traders use mathematical models to identify trading opportunities.

Risk manager
IT manager
Chief compliance officer (CCO)
Chief technology officer (CTO)
Chief data officer (CDO)
Legal
Information security
Sourcing (procurement)
Central data team
Data scientist
Data hunter
Data engineer

STYLES

Quantitative/Systematic
Quantamental

Investment strategy that combines both fundamental and quantitative approaches.

Fundamental/Discretionary

Active

Passive

Momentum

Agency trading

Agency trading is when a brokerage finds the counterparty to a client's trade without taking on risk.

Principal trading

Principal trading is when a brokerage completes a customer's trade using their own inventory of securities or balance sheet.

Event-driven

Arbitrage

Arbitrage takes advantage of price differences or imbalances across two or more markets.

Through arbitrage, prices across markets converge to the true price with the arbitrageur capturing the difference from the market price as profit.

TRADING SPECIFICS

Pre-trade information

Pre-trade information helps traders and portfolio managers in the liquidity discovery process.

Post-trade information

Post-trade information helps traders and portfolio managers determine the quality of execution.

Order book

Interday

Intraday

End of day

Index/Benchmark

ASSET CLASSES

Equities
Fixed income
Money markets
Rates
FX
Commodities
Futures
Credit derivatives
Structured products

TYPICAL TYPES OF ALTERNATIVE DATA

Sentiment data

Social media sentiment is one of the most well-known types of alternative data and is still widely used. More people saying positive rather than negative things about a stock on Twitter can indicate that the stock price will go up. Although this type of alternative data has been widely adopted, it continues to provide value. Other types of sentiment include linguistic analysis of earnings transcripts and news or non-social, web-based content.

Derived data

Derived data takes raw data and applies a mathematical, logical or some other type of transformation such as classification in order to derive new insights.

Raw data

Web-scraped data

Many websites contain valuable information about corporate activity. For example, by tracking prices and inventory on public retail websites, it is possible to ascertain the performance of brands and companies.

Crowd-sourced data

The “wisdom of crowds” theory tells us that the average opinion of a group of individuals is generally more accurate than the opinion of any one individual. Within investing, there are many communities, such as StockTwits and Estimize, that share their insights and investing ideas. This aggregated, crowd-sourced data can provide valuable insight and alpha for an investment strategy.

Credit card/Point-of-sale (POS) data

These data sets collect consumer spending data straight from the source. Some companies form a panel of representative consumers who agree to share their credit card statements. Other firms work directly with the technology providers that handle retail payments to access data on consumer purchases. This data can then be aggregated and extrapolated to generate insights.

Search trends

This is probably the most easily accessible type of alternative data, as anyone can use Google Trends reports to see if a new product is catching on. Tracking search traffic for specific retailers is one common use case.

Web traffic

Supply chain data

Energy production data

Weather forecasts

Satellite imagery/geospatial data

Shipping manifests/bills of lading

Footfall/Geolocation data

Wearables/Drones/IoT sensors data

Country-level forecasts
Sector-level forecasts

TRADING TOOLS/SYSTEMS

Risk assessment and management
Order management system (OMS)

An OMS is an electronic system developed to facilitate and manage the execution of trade orders. An OMS allows a portfolio manager to take a high-level view of their portfolio and track in real time the progress of their orders throughout the system.

Execution management System (EMS)

An EMS is an electronic system developed to provide access to real-time market data and connections to various trading venues to traders. EMSs allow the trader to slice orders into smaller trades and execute across a variety of venues.

Algo trading

Algo trading uses an automated computer program following a defined set of instructions (the algorithm) to generate trade orders.

High-frequency trading (HFT)

API

Terminal

IM/Chat

Smart order routing (SOR)

Cloud computing

Private cloud is an internal cloud that resides on a company's hosted data center or intranet. Management, maintenance and updating of data centers is the responsibility of the company. On the other hand, a public cloud is hosted, managed and updated by a third-party which stores the company's data.

Public cloud

Private cloud

MISCELLANEOUS

Alpha

A measure of performance. Alpha is often considered the active return and gauges the performance of an investment against a market index or benchmark.

Explanatory value

Investable universe

A set of securities/assets that meet a set of criteria as determined by the investing parameters for a managed fund. For example, some funds may be limited to investment-grade credit bonds and unable to purchase junk bonds.

Predictive analytics

Predictive analytics provide analytics to inform predictions of what is to happen in the future, often forecasting future trends off of historical data.

Prescriptive analytics

Prescriptive analytics provide various possible courses of action and the potential implications.

Hard dollars

Soft dollars

Payment for services through additional business. For example, a trading platform may provide analytics to a trader at no additional cost dependent on the amount of trading done through that platform.

Natural language processing (NLP)

Artificial intelligence (AI)

Chinese wall

Point-in-time

Point-in-time data provides a snapshot of a previous state and is not updated in real time.

Market capitalization

Market making

PII (Personally Identifiable Information)

Any data or information that could be used or is associated with individual persons. This includes all personal information and personally identifiable information.

MNPI (Material Non-Public Information)

These terms refer to information about a public company, political intelligence and other market-impactful information that is not widely known and could affect a reasonable person's decision to trade.

Regulations

- General Data Protection Regulation (GDPR)
- MiFID, MiFID II
- Section 28e of the Securities Exchange Act of 1934 providing “safe harbor”

Consumer

Market data

Reference data

Profit and loss (P&L)

NOTES

Cover Photo: © iStockphoto/metamorworks

The data reported in this document reflect solely the views reported to Greenwich Associates by the research participants. Interviewees may be asked about their use of and demand for financial products and services and about investment practices in relevant financial markets. Greenwich Associates compiles the data received, conducts statistical analysis and reviews for presentation purposes in order to produce the final results. Unless otherwise indicated, any opinions or market observations made are strictly our own.

© 2020 Greenwich Associates, All rights reserved. No portion of these materials may be copied, reproduced, distributed or transmitted, electronically or otherwise, to external parties or publicly without the permission of Greenwich Associates, LLC. Greenwich Associates®, Competitive Challenges®, Greenwich Quality Index®, Greenwich ACCESS™, Greenwich AIM™ and Greenwich Reports® are registered marks of Greenwich Associates, LLC. Greenwich Associates may also have rights in certain other marks used in these materials.

