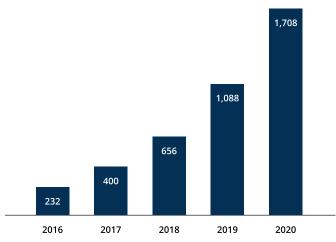
Teza Capital Management is a global quantitative asset management firm. We pride ourselves on attracting and retaining top talent, developing strategies with a data-driven and science-backed methodology, and continuously innovating in pursuit of alpha for our clients. Our Manager Insights pieces delve into our "quant's eye view" on markets, investment strategies, and industry developments.

Over the past decade, the boom in ETFs and other passive investment products has significantly increased herding and overcrowding in financial markets. Many active managers looking to avoid crowded trades and identify new sources of alpha have flocked to alternative data. A combination of demand from the buy side and advances in artificial intelligence grew the number of alternative data providers more than threefold from 2010 to 2018. In turn, money managers looking to maintain an edge over peers have increased their spend on alternative data significantly in recent years (Figure 1).

Figure 1. Total Buy-side Spend on Alternative Data (\$mm), 2016 - 2020



Source: alternativedata.org

Alternative data can provide predictive insights on publicly traded companies that traditional data sources (e.g. earnings statements, press releases, SEC filings) might miss. For instance, analysts often gather information on companies' future plans and financial forecasts from public earnings calls. However, executives can feel pressure from investors and other stakeholders to deliver forecasts in which they may not be fully confident, rendering this information less useful for managers. Advances in artificial intelligence have allowed for the development of "tonal analysis" technology. When applied to earnings calls, tonal analysis can get to the heart of not only what an executive says, but their level

of confidence in these statements. If an executive were to deliver a strong forecast for the upcoming quarter but tonal analysis revealed a level of deception, a manager using only information from the earnings call might receive a strong "buy" signal, whereas a manager who also incorporated tonal analysis data would likely end up with a weaker buy signal or a sell signal.

While the global datasphere is expanding rapidly, presenting meaningful opportunity and a plethora of choices for managers, incorporating alternative data in investment strategies presents certain challenges. First, data surveillance requires significant resources and brainpower. The paradox of choice comes into play, as the more data that is available, the more difficult it becomes to evaluate the landscape and determine which datasets are worth spending on. Second, alternative data is typically sold in an unstructured format, requiring sophisticated data cleaning and analysis to derive predictive insights. Many compelling alternative datasets are underutilized because of their size and complexity. Another challenge lies in the newness of a large percentage of alternative datasets. These datasets exist over relatively short time spans, which makes it difficult to develop signals in a statistically significant way. Lastly, the use of alternative data requires the constant monitoring of alpha decay, i.e. the decrease in efficacy of a dataset over time. As more and more managers develop signals based on any particular alternative dataset, the alpha opportunity diminishes.

Although developing, implementing and monitoring an alternative data strategy can be resource-intensive, the alpha opportunity for managers with robust data and quantitative analysis capabilities outweighs the obstacles. Increased spend on alternative data shows that managers are finding significant value in the space. In a 2019 Greenwich Associates report, 72% of the investment managers surveyed stated that alternative data enhanced their signal quality and helped filter out noise. Over one-fifth of respondents claimed to have generated 20% or more of their alpha from alternative data.²

^{1 &}quot;What is Alternative Data." alternativedata.org. Accessed 19 July 2022.

² "Demystifying Alternative Data." Greenwich Associates / Coalition Greenwich. May 2019

Teza believes that in order to generate persistent alpha, quant managers must identify unique inputs, and many of them. As discussed in our December 2020 Manager Insights piece, the COVID-19 pandemic presented a painful wake-up call for many quant managers who had developed signals based on traditional inputs (especially value-based inputs). Had they leveraged differentiated inputs such as alternative data, they may have been able to better adapt to the unique risks presented by the pandemic. For the well-resourced quant manager with the ability to manage the size, cost and complexity, alternative data presents a compelling long-term alpha opportunity.

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Teza's Edge

Teza has built an institutional-strength organization consisting of a highly talented group of world-class researchers and investment professionals driven by success.

- HERITAGE: Our endeavors in institutional asset management are based on our 10+ year tenure as a proprietary, algorithmic low-latency trading firm, as we strive to leverage the extensive synergies we've identified between the two models.
- TEAM: We have world-class talent with over 60 employees in 4 locations. Our 30+ accomplished researchers and investment professionals hold advanced degrees from renowned universities in science, technology, engineering, and mathematics.
- APPROACH: We follow a rigorous, scientific process and have deployed state-of-the-art portfolio construction and optimization.
- EXECUTION: We have highly developed futures execution capabilities given our quantitative trading roots.
- RISK PHILOSOPHY: We ensure controls and checks and every key step of research and operations.
- INFRASTRUCTURE: As a result of significant investments into our operational infrastructure, we have created a scalable, robust platform.

Founder Biography

Misha Malyshev has led Teza Group as the CEO since the company's founding in 2009. He earned his Ph.D. in Astrophysics from Princeton University in 1998. He also holds an M.S. in Theoretical Physics and a B.S. degree summa cum laude in Physics and Mathematics from Moscow Institute of Physics and Technology. Dr. Malyshev worked for Bell Labs conducting scientific research until 2000. From 2000 through early 2003, he worked as a consultant with McKinsey & Company, where he developed substantial experience working for asset management and investment banking clients. Dr. Malyshev joined Citadel Investment Group, L.L.C. in April 2003 as a member of its strategy group. In 2004, he moved to Citadel's Quantitative Analytics group, where he developed a quantitative trading business. Dr. Malyshev was rapidly promoted to the position of Managing Director and Global Head of High Frequency Trading at Citadel, which he held until he resigned in the winter of 2009. Dr. Malyshev is an avid supporter of education initiatives, and has partnered with organizations that inspire young people, particularly women and minorities, to pursue careers in science, technology, engineering and math. He is currently on the global leadership council of buildOn, an international nonprofit organization that runs youth service after-school programs in United States high schools and builds schools in developing countries. investors should not rely upon this document for tax, accounting or legal advice. Prospective investors should consult their own tax, legal, accounting or other advisors about the issues discussed herein. Investors are also reminded that past performance should not be seen as indication of future performance and that they may lose the entirety of their investment. No recommendation is made positive or otherwise regarding individual securities, futures or other investment products mentioned herein. There can be no assurance that any Product advised by Teza will implement the strategies or trading signals referred to herein, or that if implemented any such strategies or signals achieve their investment objectives.

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