

# WHY CLOUD OBJECT STORAGE IS THE FOUNDATION FOR INNOVATION IN CAPITAL MARKETS

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F R O S T  S U L L I V A N

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## INTRODUCTION

To succeed in the hypercompetitive capital markets arena, investment firms require three things:

- **Access to data** – Internal and external; proprietary and public; historical and real-time; company performance and competitors’ performance; political, social, environmental, and behavioral data; and more.
- **Data intelligence** – Usable insights and intelligence derived from the data resources, via analytics and cognitive functionality, to identify market opportunities.
- **Speed** – Ability to leverage data insights quickly—before competitors do so, and before conditions change.

In short, an investment firm is only as good as its data and its ability to leverage that data to make smart trades. A firm’s ability to differentiate itself in meeting market needs and bringing new products to market all hinge on its ability to squeeze maximum value out of all available data.

But when it comes to implementing the right technology and processes to support a data-reliant business, those three factors present tremendous challenges.

### I. Accelerating data volumes

Capital markets participants are generating and utilizing **massive and accelerating data volumes**. The US market regulatory organization FINRA (Finance Industry Regulatory Agency) says it monitors up to 75 billion market transactions per day.<sup>1</sup> And financial news and technology provider Bloomberg says more than 60 billion market “ticks” pass through its service daily.<sup>2</sup> Furthermore, the data itself comprises more than traditional structured (numerical) data. In recent years, investment firms have sought a competitive advantage by gleaning market insights from data sources such as social media, political activity, and scientific and medical research.



“Managing data growth” is cited as a major concern by 72% of financial services firms, compared with 65% across all industries.



For financial services firms, storing and managing the accelerating volumes, while complying with complex security and regulatory requirements, presents an urgent and unique challenge. “Managing data growth” is cited as a major concern by 72% of IT decision-makers at financial services firms surveyed by Frost & Sullivan (compared with just 65% of all industries). Seventy-four percent say they are concerned about meeting compliance requirements; and 75% cite concerns about data breaches.<sup>3</sup> Capital markets participants require technology that allows them to store and protect different types of data, while still allowing continual and rapid access to it.

<sup>1</sup> [www.finra.org/about/technology](http://www.finra.org/about/technology)

<sup>2</sup> [About | Tech at Bloomberg](#)

<sup>3</sup> Frost & Sullivan 2015 Cloud User Survey of US-based IT decision-makers.

## 2. Data Intelligence

**Data intelligence** holds the key to providing unique value to clients. Capital markets firms must leverage the massive amounts of data they collect, to shape investment decisions. This requires utilization of intelligence-based analytics platforms that can ingest, analyze, and provide insight based on all the available data: structured and unstructured, on-premises and in the cloud. But adopting new intelligent technology (as well as new processes and skills) can be difficult for many firms in the conservative financial services industry. In fact, 24% of financial services firms surveyed by Frost & Sullivan cited “keeping up with new technology” as their top-ranked IT challenge. According to a 2015 Accenture survey, only 8% of capital markets firms said their “strategic decision-making leverages risk-based analytics tools.”<sup>4</sup> In the future, as data grows and becomes more complex, firms that are unable or unwilling to fully leverage analytics technology will find themselves at a disadvantage.

## 3. Speed to Market

**Speed** in decision-making and execution requires confidence in data intelligence, which requires confidence in the integrity and consistency of the data itself. This can be a challenge for financial firms, due to the large variety and volumes of data resources. For example, some market data (such as stock prices) may call for both real-time and historical views. Other potentially relevant data, such as news events and even social media commentary, require up-to-the-minute analysis of unstructured, unpredictable information. Ensuring that all the relevant data is always available to the users and platforms that need it can be a challenge. Only 9% of capital markets firms say “consistent, updated data is available organization-wide.”<sup>5</sup>

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Furthermore, as pressure increases from individual and institutional investors looking for higher yields, and as government regulators pay closer attention to how trades are executed, trading firms must look for ways to drive out costs, while increasing access to valuable data.

To lay a foundation for market innovation, capital markets firms need technology solutions that allow them to access and leverage a rich variety of data of all types. This is where the right cloud object storage service can provide an advantage.

## INNOVATION IN CAPITAL MARKETS

In the competitive capital markets, market-changing ideas are based on harnessing new types of data and combining it in new ways.

In recent years, capital markets firms have introduced new, innovative asset classes and products designed to attract and retain investors. New products such as “smart beta” electronically traded funds that invest in undervalued companies, and new asset classes such as cloud capacity (traded in spot exchanges) and “sports betting funds” (in which investments are made through Las Vegas sports books) are based on analyzing new data stores.

<sup>4</sup> Accenture, [Risk Management in the Capital Markets Sector](#)

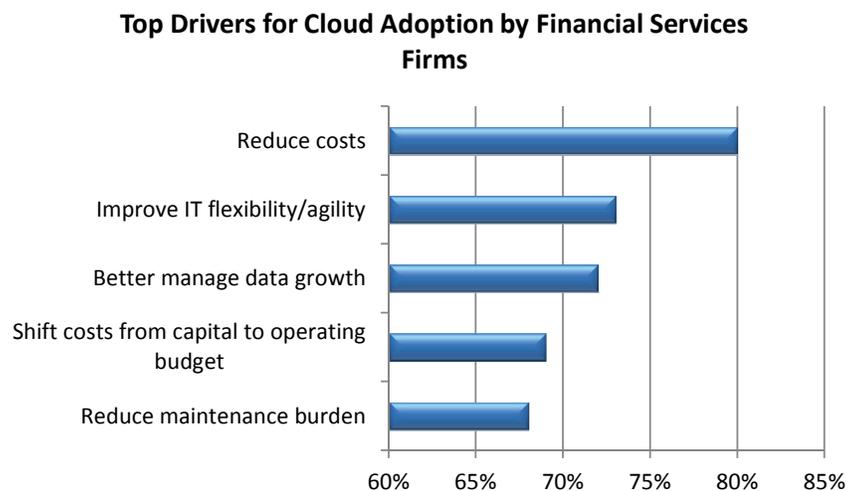
<sup>5</sup> Ibid.

More traditional investment opportunities also benefit from innovative approaches, as investment professionals take a fresh look at up-to-the-minute market data from non-traditional sources. And that requires the right storage platform to ingest, protect, analyze, and store the data.

## HOW CAPITAL MARKETS BENEFIT FROM CLOUD OBJECT STORAGE

As the volume and variety of enterprise data has grown, so has the rise of “object storage.” Object storage is a flexible and scalable storage structure that stores all data as discrete objects in a flat name space. Object storage allows all types of data—structured (e.g., databases), unstructured (e.g., images, video), and semi-structured (e.g., email, social media messages)—to be stored and managed together. Object storage is the basis for most cloud storage services, thanks to its massive scalability and speed of access.

For capital markets firms depending on new and increasing data sources to differentiate themselves, cloud object storage can offer the right technology solution. While late to the cloud market, financial services firms are increasingly recognizing that cloud infrastructure can address their key challenges, at an acceptable level of risk. Cost is a major factor: 80% of IT decision-makers at financial services firms said a key reason for adopting cloud services was a need to reduce costs; and 69% cited shifting expenses from capital to operating budget. Another factor is agility, cited by 73%, as firms seek to improve speed-to-market. A cloud object storage solution enables the firm to more efficiently and cost-effectively handle the influx of data.



*Source: Frost & Sullivan Cloud User Survey*

But not all cloud object storage is alike. To meet their goals of deriving unique value from data, at minimal costs, investment firms should look for a solution that offers the following:

- **Flexible deployment options (on-premises, public cloud, hybrid):** If all usable data were in the cloud, a cloud-only solution might be sufficient. However, most investment firms maintain massive libraries of data in traditional premises-based storage systems: data that may include past market performance, individual company data, economic data, and more. In fact, in the Frost & Sullivan survey, financial services firms cite “on premises physical storage” as their dominant deployment model for primary and archived storage. To ensure that all data sources (premises based and cloud) can be managed together and leveraged by intelligent analytics platforms, investment firms should select a cloud object storage platform that offers an on-premises deployment option.
- **Multi- and single-tenant cloud options:** Investment firms differentiate themselves on the quality of their data, and their proprietary analytics algorithms. It’s not surprising that such firms prefer single-

tenant cloud options to keep the data secure and under control. However, few true single-tenant storage options exist in the market that are available on premises *and* in the cloud. Be sure to probe as you research providers.

- **Data privacy/security:** Investment firms were late to embrace the cloud, primarily because of data security concerns. Today, cloud service providers have taken great steps to improve security—but the onus lies with the firm to protect sensitive data. Ensure that data is encrypted and safe in the cloud. Also understand how the provider assures your data will be protected if a data center is breached, no matter where it is located.
- **Data durability/availability across regions:** Investment firms continually collect data from multiple sources across the US and the world. And for speed-of-execution, they need to ensure the latest data is always available. Choose a cloud object storage service in which data resiliency is architected in. For example, IBM Cloud Object Storage offers a unique architecture that relies on patented data dispersal and erasure coding technologies to ensure data consistency in real time (not eventual consistency).
- **Management simplicity:** If growth in data correlates with growth in storage management effort expended by the firm's IT organization, there's a problem. Look for a solution that allows you to manage all your storage (regardless of location and deployment model) easily. Steer away from solutions that require migrating data through multiple tiers to maintain cost-optimization.
- **Access to a sophisticated intelligence platform:** Assume that any and all data your firm collects will be subject to increasingly sophisticated analytics and artificial intelligence software. The best bet is to ensure that your cloud object storage can easily be integrated with a high-performance platform.
- **Cost efficiency and predictability:** Consider total costs for all your storage, not just the storage cost -per-GB. On-premises solutions require replication for disaster recovery, which can double the cost of your storage. For cloud deployments, consider costs associated with ensuring the level of availability you need. Some cloud providers charge for cross-regional replication of data—and then charge you again to transfer the data between cloud centers. In contrast, the unique architecture of IBM Cloud Object Storage automatically disperses “slices” of data across multiple data centers in multiple regions, minimizing the need to pay for replicated data stores.

## CONCLUSION

In the high-pressure world of financial trading, the winners are those firms that have the most data, and know how to use it.

- They must be able to access and integrate vast quantities of data, of various types, from multiple data sources.
- They must analyze the data for insights that can shape investment decisions.
- And they must be confident the data is always available and up-to-date, enabling them to move quickly to execute their decisions.

Innovative and traditional firms, alike, will continue to analyze data to make smart investment decisions. This means they must invest in storage that protects, maintains, and makes the data available for use. That's why successful investment firms will ensure they have the right foundation in Cloud Object Storage.

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*For information about IBM Cloud Object Storage, click [here](#).*

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