



# Five Challenges of Market Data: The Case for the Cloud

As the depth, breadth, and complexity of market data available from markets and vendors increase, so do the challenges of managing the demands of an increasing amount of highly available financial data. Financial institutions lack the necessary methods and resources to address critical usage issues such as control, entitlement, tracking, cost allocation, and compliance.

At the same time, technology infrastructure is becoming less expensive and easier to manage. Leveraging new and existing technologies can help financial institutions at once gain market insight, realize cost savings, and improve market-data management.

The future is in the cloud. Centralized management and distribution of market data provide a streamlined approach to data management and the insight needed to better meet compliance standards. Industry leaders are starting to see the benefits of managed cloud services.

Gartner, Inc., a group that closely watches industry trends, has found that cloud computing is still on the rise. According to Gartner, Inc. research, “The worldwide public cloud services market is projected to grow 18.5 percent in 2017 to total 260.2 billion, up from \$219.6 billion in 2016.”<sup>1</sup>

A recent report by capital-market research and consulting firm Tabb Group notes that the “time is ripe” for market data in the cloud. “We found that the industry is ready for a disruption in the aggregation and delivery of market data. Both the buy side and sell side agree that the industry could and should be on the cusp of a new digital revolution for market data delivery that leverages the public cloud.”<sup>2</sup>

Exchanges themselves are starting to move in this direction. NASDAQ released NASDAQDoD, an Amazon Web Services-powered tick data service back in 2011<sup>3</sup>. CME Group more recently released CME DataMine, a self-service cloud solution used to quickly access CME Group historical data. Several Alternative Trading Systems (ATS) are already operating in the public cloud and it won’t be long before a major exchange matching engine begins fully operating in the public cloud.

Because it promises to provide a centralized and mutualized market data infrastructure efficiently shared by all players in the industry, a cloud-based solution provides the support needed to navigate around the obstacles of market data management.

## 1. The Data Usage Dilemma

Today, market data is dispersed across multiple systems and legacy infrastructures silos. The data is typically decentralized and replicated, meeting a specific need for the source system it is serving. As the use of market data grows and as more systems are built to use these data sources, unmanaged data usage becomes an operational challenge.

Leveraging new and existing technologies can help financial institutions at once gain market insight, realize cost savings, and improve market-data management.

**Table 1. Worldwide Public Cloud Services Revenue Forecast (Billions of U.S. Dollars)**

	2016	2017	2018	2019	2020
Cloud Business Process Services (BPaaS)	39.6	42.2	45.8	49.5	53.6
Cloud Application Infrastructure Services (PaaS)	9.0	11.4	14.2	17.3	20.8
Cloud Application Services (SaaS)	48.2	58.6	71.2	84.8	99.7
Cloud Management and Security Services	7.1	8.7	10.3	12.0	13.9
Cloud System Infrastructure Services (IaaS)	25.4	34.7	45.8	58.4	72.4
Cloud Advertising	90.3	104.5	118.5	133.6	151.1
<b>Total Market</b>	<b>219.6</b>	<b>260.2</b>	<b>305.8</b>	<b>355.6</b>	<b>411.4</b>

Source: Gartner (October 2017)

<sup>1</sup> Gartner, Inc. “Gartner Says Worldwide Public Cloud Services Market to Grow 18 Percent in 2017.” February 22, 2017. <http://www.gartner.com/newsroom/id/3616417>

<sup>2</sup> Tabb Group. “Stairway to the Market Data Cloud: As a Service Model Comes to Market Data.” February 9, 2017. <https://research.tabbgroup.com/report/v15-003-stairway-market-data-cloud-service-model-comes-market-data>

<sup>3</sup> NASDAQTrader. “Mass Download Functionality Now Available for NASDAQ Data-On-Demand Service” April 2011. <https://www.nasdaqtrader.com/TraderNews.aspx?id=dn2011-005>

Replicated data makes it harder for you to track licensed accounts, determine access frequency, and understand general usage. The lack of traceability makes it difficult to dispute vendor claims that they provided the requested files.

When the support infrastructure is not in place for departments to manage their market data effectively, they turn to other institutional technology resources. They may receive the technology support they need, but they can lose the control over their data requests. This makes the process to change the data request cumbersome, requiring the support group to make any changes necessary on their own.

A centralized market data management service helps you overcome data usage challenges by providing the following benefits:

- Ensuring that the market data is consistent, current, and accessible
- Increasing traceability, making it easier to trace the vendor requests back to the source
- Improving transparency, providing insight into what vendor provided the data and what systems are consuming the data
- Providing increased access for departments to control their own data requests while still having a full data management service

With greater visibility into how the data is used and increased request management options, you can adjust processes to optimize usage.

## 2. The Rising Cost of Data

With so many data sources available, it is to your benefit to have access to as much market data as possible. Market data comes at a cost: it is one of the top expenditures for most financial institutions.

In a study conducted by Burton-Taylor International Consulting projected that market data spending would grow 1.36% in 2017 and 1.38% in 2018. “Up 3.45% . . . 2016 marked the first year global spend on market data/analysis topped USD \$27 billion.”<sup>4</sup>

More may be better when it comes to data, but requesting unused or duplicate data is an avoidable cost. Data management is difficult when dealing with such a large quantity of information. Multiple source systems are requesting the same information, each with an associated fee.

With better insight into data sources and centralized data, you can reduce redundancy and unnecessary data delivery requests. Data usage varies with the market. Heavily used data in one market cycle may not be used during another, yet trading desks may still request the data.

What is needed is a quick view of how departments and individuals are using data and to help you determine if and how you can streamline data consumption and reduce costs. When market data is centralized and mutualized in the cloud, you get better oversight at lower cost. It is readily apparent what the vendor is delivering to you and when you are getting it, adding a layer of accountability to the process. This information paired with usage information supports negotiations with the vendor, providing solid information for informed discussions.

“According to our most recent study, market data (including data feeds, market data terminals and co-location fees) account for 44% of the budgets of buy-side trading desks.”

— Dan Connell  
Managing Director  
Greenwich Associates

<sup>4</sup> Burton-Taylor International Consulting. Global Market Data Demand Revenue, Segment & Regional Growth Forecasts, 2017 & 2018. March 28, 2017

### 3. High Compliance Risks and Increased Governance

Poorly managed market data comes with increased compliance risks. As the number of systems accessing the data and the number of individuals and groups consuming the data increases, so does need for increased governance. In a decentralized model, it is difficult to meet the increasing demand of audits. Gathering the necessary records, proof of licensing, and other required documentation is time-consuming, resource-intensive, and often aggravating.

Centralizing the data management provides the visibility needed for compliance reporting. Through a centralized cloud solution, you can access the information needed to support audits:

- Entitlement tracking
- Licensing information
- Usage records

These records provide insight into how the data is being used and record of the flow of information that can be used to ensure that vendor requirements for data usage are being met.

### 4. Data Integrity and Security

When managing market data from different sources with different licensing, ensuring the integrity of the data is crucial. It is important to be able to identify the source of the information and tie licensing information to the vendor data. It is also critical that access to this market information is controlled, to prevent unauthorized access of data.

On the security side, public cloud providers deliver the tightened security that financial institutions require for adopting cloud-based applications. In a managed cloud solution, the data is secured. Public cloud providers can secure information in a virtual public cloud that creates a dedicated deployment with access restricted to a particular financial institution. And within a virtual private cloud, access to market data can be granted on a per user and per source basis down to the individual source vendor field.

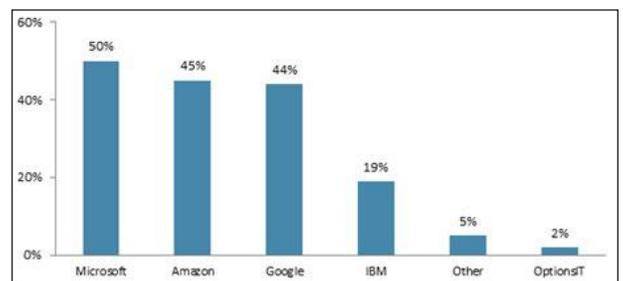
“Public cloud providers have understood the concerns regarding security and are now providing more security and compliance services,” reports Capgemini Consulting in its “Top 10 Trends in Banking—2017” report.<sup>5</sup> “Banks are now increasingly moving toward public cloud-based banking infrastructures, as perceived security and regulatory risks recede.”

Although regulatory challenges persist in the United States, skepticism is receding, especially as regulators themselves adopt cloud technology. The Securities and Exchange Commission (SEC) is migrating some systems to the cloud, and the Financial Industry Regulatory Authority has already moved 75% of its computing and storage infrastructure to Amazon Web Services (AWS).

Market participants should follow these best practices when using cloud services to ensure that policy and compliance obligations are met, according to the Global Investor Group.<sup>6</sup>

“Cloud computing has reached the tipping point as the capabilities, resiliency and security of services provided by cloud vendors now exceed those of many on-premises data centers.”

—DTCC, *Moving Financial Market Infrastructure to the Cloud*



<sup>5</sup> Capgemini Consulting. “Top Trends in Banking – 2017.” Accessed August 8, 2017. [https://www.uk.capgemini-consulting.com/resource-file-access/resource/pdf/banking\\_trends\\_2017\\_web\\_version\\_0.pdf](https://www.uk.capgemini-consulting.com/resource-file-access/resource/pdf/banking_trends_2017_web_version_0.pdf)

<sup>6</sup> Wetjen, Mark. “Cloud computing: a blueprint for market infrastructures.” 31 July 2017 <https://globalinvestorgroup.com/articles/3688124/cloud-computing-a-blueprint-for-market-infrastructures>

- Data confidentiality. Internal security policies must protect data and ensure proper data governance.
- Data integrity. Financial institutions must have tools to control data and verify the validity of outsourced data.
- Continuity of service. Data must be continuously available, and cloud providers must have adequate disaster recovery plans and business continuity procedures.
- Auditing. Cloud providers should have a proven track record of working with regulated institutions to ensure that they understand auditing requirements.

## 5. Complexity of Support Infrastructure

Effectively managing a large amount of market data requires a complex information technology infrastructure. Significant hardware, software, and services are needed to receive, interpret, store, secure, and control access to the information, which if deployed on-premise, takes months to install, has a significant physical footprint, and requires continual maintenance.

A cloud-based data distribution platform is fully managed off-site. The managed service requires only a secure connection to the cloud for access to the wealth of market data. This requires days, not months, to set up. All processing happens in the cloud, making the information quickly accessible.

Even NASDAQ has been taking advantage of cloud services because of the quick time-to-market. In an AWS case study Jeff Kimsey, Associate Vice President of Product Management for NASDAQ OMX Global Data Products explains, “The major advantages of cloud computing are cost and time-to-market. By leveraging the infrastructure created by AWS, we avoided the need to buy expensive hardware and were able to decrease our time to market threefold.”<sup>7</sup>

## Conclusion

Effectively managing the array of market data available requires a powerful Cloud Data Distribution Platform. It requires a comprehensive solution that not only helps you face the challenges of market data management, but also provides an increasing toolset to help you get the most of your market data.

The Xignite Market Data Cloud can optimize your enterprise market-data spend by analyzing usage and consumption patterns, facilitating faster responses to new regulatory demands, eliminating costly duplicate data requests, and empowering users to fulfill their own requests without the risk of vendor non-compliance. As costs and risks increase, it is time to use a managed cloud technology to get control of the market data and meet your challenges head on.

## Benefits



### Reducing Costs

- Eliminate inhouse hardware and software
- Mutualize infrastructure
- Remove vendor lock-in
- Improve controls and reduce spend

### Driving Innovation

- Improve user experience
- Speed development
- Enable focus on business value
- Increase access to information



“A cloud based market data distribution approach such as Xignite offers, relieves user institutions of significant infrastructure investments for storage and streaming of data, as well as driving massive on-demand scalability.”

— Brad Bailey  
Research Director  
Celent

<sup>7</sup> “AWS Case Study: NASDAQ OMX.” Accessed July 20, 2017. <https://aws.amazon.com/solutions/case-studies/nasdaq-omx/>

## Xignite Market Data Cloud—Groundbreaking Solutions for Market Data Challenges

The Xignite Market Data Cloud offers a robust feature set and managed infrastructure needed to securely manage your market data and meet compliance and operational requirements. It can be set up in a matter of days and can scale to meet your growing needs as more market data becomes available.

Xignite enables you to create a single point of access for market data by

- Centralizing and cataloging the first-level real-time and reference data you license from vendors, and
- Enabling you to contribute your own proprietary data to the cloud distribution repository.

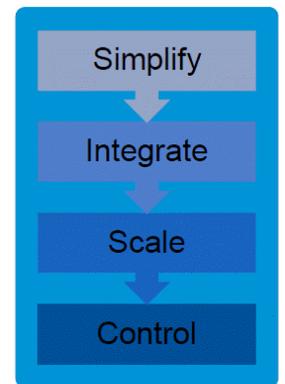
As a result, the Xignite Market Data Cloud increases transparency in data usage, leading to better cost allocation and management. All while eliminating the costly servers and difficult software integration that traditional data vendors require.

Xignite Market Data Cloud reduces the total cost of ownership through better data management and governance. Entitle, track, optimize, and allocate market data usage throughout an organization. Every data request made by any user is logged so that you can more easily understand your costs and allocate them.

This helps optimize data spend by analyzing usage and consumption patterns and eliminating duplicate data requests. By centralizing data that has traditionally been scattered around the organization, the market data cloud facilitates faster responses to new regulatory demands. It also empowers users to fulfill their own requests—without vendor compliance risk.

Hosted inside the Amazon public cloud (AWS), Xignite Market Data Cloud delivers the highest levels of scalability and security at the lowest cost for your most mission-critical applications. In contrast to deploying an Enterprise Data Management system, Xignite Market Data Cloud integrates seamlessly within existing workflows. The cost and risk disrupting existing processes is minimal.

Xignite Market Data Cloud can help you meet the challenges of managing market data to meet compliance requirements, reduce costs, and better manage market data.



Market Data Cloud

### Silicon Valley

1825 South Grant Street, Suite 100  
San Mateo, CA 94402 USA

### Wall Street

26 Broadway, 8th Floor  
New York, NY 10004 USA

+1.866.965.7627 | +1 650.655-3700  
xignite.com | @xignite



### About Xignite

Named one of the ten coolest brands in banking, Xignite, Inc. empowers innovation across financial services. Xignite provides cloud-based real-time and reference market data to financial services and fintech companies for easy integration with websites, apps, and software. The Xignite Market Data Cloud platform, hosted by AWS, allows companies to simplify infrastructure, scale quickly, and innovate faster. Xignite's clients include more than 1,000 financial services, media and software companies including BMO, BlackRock, Charles Schwab, and TIAA, as well as leading fintech disruptors such as Betterment, FutureAdvisor, Motif Investing, Personal Capital, Robinhood, SoFi, StockTwits, Wealthfront and Yodlee. Visit [xignite.com](http://xignite.com) or follow on Twitter @xignite.