Platform Strategy To Manage Market Data

Idea In Short

A platform-centric data strategy is essential for financial institutions to control costs, ensure quality, and meet rigorous compliance requirements. By centralizing acquisition, automating data quality checks, and focusing on integration with metadata-driven governance, firms turn market data into a strategic asset. Cloud and hybrid models offer scalability and operational flexibility, while AI and machine learning enhance insight and efficiency throughout the data lifecycle.

Market data represents a major expenditure for financial firms. For any Chief Data Officer or Head of Trading Technology, this line item is a strategic concern, not a technical one. The task is no longer just to pipe data feeds into applications. It is a strategic requirement to control rising costs, integrate a wide mix of data sources and meet strict regulatory demands for data governance.

As traditional, separate approaches to data management prove increasingly inadequate, a unified, platform-centric approach to data curation becomes necessary for firms to succeed. This shift is not about simply acquiring more data, but rather about mastering its entire lifecycle - from acquisition and integration to governance and cost optimization. The goal is to turn data from a burden into a strategic asset.

Core challenges of Data Acquisition

Acquiring the right data at the right time presents four ongoing challenges.

- Quality: Flawed or incomplete data leads to flawed analysis, poor trading decisions and significant compliance risks. The main weakness of many data strategies is the lack of robust, automated checks when data comes in
- Coverage: The demand for new data alongside traditional feeds means firms must constantly expand their reach. Sourcing, vetting and onboarding new vendors is a

complex and labor intensive task
- Timeliness: For trading strategies that are sensitive to latency, every microsecond matters. Ensuring data delivery on time requires advanced systems. Even for slower use cases, delayed data can make an analysis obsolete
- Cost: Market data is one of the largest single expenses for financial firms. Without central oversight, costs can increase due to redundant subscriptions, poor license management and paying for data that is never used

Best practice demands a fundamental change toward a centralized ingestion model built on three key principles:

1. Central control: consolidate all vendor management to a single point of entry
2. Proactive quality assurance: apply automated checks the moment data arrives
3. Transparency: deliver a consolidated, real time view of every data stream

Following these principles, a firm can create the foundation needed to find coverage gaps and enforce critical service level agreements.

Integrating a fragmented Data Fabric

After acquisition, market data typically needs to be cleaned, standardized and distributed to various internal systems, such as Order Management Systems [OMS], Execution Management Systems [EMS], analytics engines, risk platforms and client facing applications. Each source often has its own schema, delivery format and update schedule, which creates significant integration problems.

This fragmentation leads to inconsistent symbols, ambiguous metadata and duplicated work across business lines. It also promotes the growth of point to point connections and separate databases, which increases fragility and slows innovation.

Modern platform strategies solve this with centralized data fabrics. These are often built with event driven architectures and microservices. These frameworks allow firms to consume data once, transform it centrally and make it available across the company via standardized application programming interfaces [APIs] or publish subscribe (pub/sub) mechanisms. They also decouple upstream sources from downstream consumers, which reduces interdependencies and makes onboarding new feeds faster and less risky.

Governance as a foundational element

According to the Basel Committee on Banking Supervision [BCBS] 239 principles, data governance is not just a suggestion but a core requirement for banks. The framework explicitly mandates a strong, comprehensive data governance framework with clear roles, responsibilities and accountability to ensure the accuracy, integrity and reliability of risk data. Consequently, effective data governance is required in financial markets. Therefore, platforms should embed governance into their core architecture instead of treating it as an added solution. Central to this is comprehensive metadata management, which provides visibility into data lineage, usage rights and transformation logic. This is essential for both, compliance and internal clarity.

Top platforms now include data catalogs, entitlement frameworks and policy based controls. These features allow firms to define who can access what and under what conditions. These controls increasingly operate in real time and across systems. This is especially true as firms move toward federated architectures where multiple business units consume shared data assets.

Metadata driven orchestration also provides an effective way to automate operational tasks like feed switching, format upgrades and service failovers. This reduces human error and makes the system more resilient.

Deployment models

The cloud offers advantages for data curation. This includes elastic compute for normalization, global distribution via Content Delivery Network [CDN] like architectures and simpler collaboration with third party vendors.

For buy-side firms, cloud native data platforms are becoming the default choice. Sell side firms that operate latency sensitive trading systems or face strict regulatory controls often must maintain on premise or co located deployments for front office work. This has resulted in a growing preference for hybrid deployment models. In these models, core data curation happens in the cloud, while ultra low latency use cases remain local.

Choosing a platform that supports cloud agnostic orchestration is key to success. This includes containerization, edge processing and fine grained control over data locality.

Without this flexibility, firms risk vendor lock-in or degraded performance in critical workflows.

Reducing the Total Cost of Ownership [TCO]

Controlling the total cost of ownership [TCO] of market data has become a strategic requirement. Beyond renegotiating licensing agreements, firms are using platform led strategies to reduce waste and improve efficiency.

One common approach is to consolidate redundant data feeds and eliminate duplicate entitlements across departments. Another is to implement intelligent usage tracking. This ensures that teams only consume the data they truly need. It also flags unused assets for decommissioning.

On the infrastructure side, firms are using platform as a service models and data consumption marketplaces to avoid large upfront capital costs. Modular architectures with pluggable components like normalizers, converters and adapters also help firms scale incrementally and avoid expensive re platforming.

Platforms that provide transparent cost attribution by user, asset class and business function offer the greatest control.

Building "Intelligence" into the platform

Artificial Intelligence [AI] and Machine Learning [ML] offer new ways to improve data curation and generate insights. This is crucial for solving the old problem of data integrity.

This gap between displayed and tradable data is where AI and ML models make an immediate impact. For example, some firms use them to identify anomalies in tick data. They automatically tag outliers and flag old or suspicious updates. Other firms use natural language processing to extract structured signals from unstructured data sources like news feeds, social media or earnings transcripts. They then combine these with traditional pricing data.

The next frontier is using agentic Artificial Intelligence to automate data operations. This includes self-healing pipelines, smart agents that can adapt to schema changes and

predictive analytics that guide data procurement decisions based on usage patterns.

To support this, platforms must expose data in formats that machines can use. They also must support real time inferencing pipelines and include governance frameworks. These frameworks ensure explainability, auditability and compliance in AI driven processes.

Platforms as strategic enablers

Market participants face rising data volumes, evolving compliance needs and intense cost pressure. The case for modernizing market data infrastructure is undeniable. As a global market data leader stated, "Building a curated market data platform is about aligning data strategy with business outcomes. To truly optimize cost and coverage, firms must rethink vendor relationships, streamline entitlements and embed governance from the ground up. The future lies in platforms that are not only interoperable but intelligent leveraging AI to surface insights and automate quality checks in real time."

The firms that succeed will follow this advice. They will treat data curation not as a cost center, but as a strategic capability. By implementing flexible, scalable and intelligent platforms that address the full data lifecycle from acquisition to analysis, they can transform data from a bottleneck into a true source of competitive advantage.

Summary

Modern financial firms must embrace unified market data platforms that support central control, proactive quality assurance, and transparent governance. Cloud-native solutions and metadata management enable scalable integration, cost optimization, and compliance—while modular architectures and automation open the door to more efficient operations and real-time analytics for competitive advantage.