

# Alpha AI Data Quality (AADQ) Platform

Get high quality investment data more quickly and at scale with AI.

## Data Quality Business Problems and Industry Challenges

Accurate and consistent data is critical to making informed decisions. Organizations manage and validate hundreds of disparate data sources to detect and remediate suspicious data, which is both costly and resource intensive. Data typically contains very few actual errors, but errors that go undetected can create significant problems if consumed by downstream portfolio, risk and reporting systems.

Traditional data validation processes use manually determined rules and thresholds to flag anomalies. Static thresholds can't easily adapt to changes in market volatility and other factors, generating large numbers of false alerts that must be investigated by operations teams. Workloads quickly become unmanageable, risking the release of actual errors.

## Institutional Data Operations Team Business Problems



*"There are hundreds of data report check breaks generated, and I need to review them all manually."*



*"Also, most of the check breaks are false positives and they can't be eliminated or isolated."*



*"One data quality issue may incur several different check breaks. This creates duplicative work as I have to review those breaks with the same issues."*



*"There are overwhelming data quality check rules for us to maintain and set. It is necessary that these rules can be updated automatically, and the data quality check job scheduled in near real time."*

# Introducing Alpha AI Data Quality Platform

## Ensuring high quality data across the investment enterprise

State Street Alpha® AI Data Quality (AADQ) platform fundamentally transforms the art and science of data validation, leveraging AI and ML to train and deploy models that detect anomalous data without manually defined rules and thresholds.

AADQ flags complex anomalies that are difficult or impossible to discover using traditional QA frameworks. Robust model specificity significantly reduces false alerts, boosting efficiency for data operations teams.

Leveraging a continuous learning framework ensures AADQ models constantly adapt and improve as new training data is ingested.

## AADQ Platform Capabilities

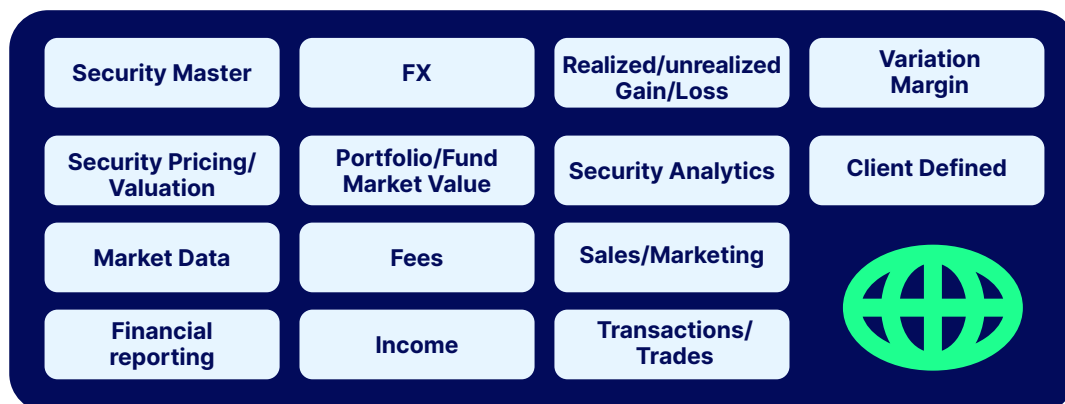
AADQ models can be applied to internally generated and externally acquired data sources and across virtually any investment data domain. Clients can also create their own data domains and validate proprietary data sources if desired, and upload labels to accelerate model training.

Augmented by State Street's deep bench of human domain expertise across the investment data ecosystem, AADQ accelerates model training and streamlines on-boarding of new data domains, delivering consistent and accurate data across the investment enterprise.

Designed as a cloud-native, multi-tenant, model-as-a-service architecture, AADQ offers flexible and cost-effective deployment options that cater to the unique demands of your asset class and product mix.

### Data domains serviced by AADQ

*(Current and under development)*



Internally generated and externally acquired data sources

## AADQ: From prototype to production

In partnership with six State Street clients, we developed a proof-of-concept that delivered a significant improvement over traditional, manual QA frameworks for detecting Top Market Value anomalies. Building on that success, our global team of engineers, data scientists and product managers launched AADQ in 2023 to make consistently high-quality data a reality for investment teams, while radically decreasing workloads for data operations teams.

**6,664**

Portfolios back tested  
across 6 clients

**6 months**

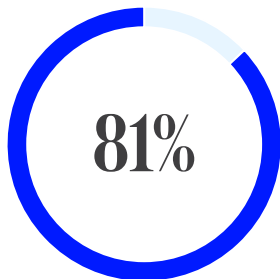
of historical  
portfolio data

**200,000+**

Average Daily Rows of  
Data per Client

**25X**

Efficiency improvement  
flagging true exceptions



**Noise Reduction**  
(Total Exceptions Raised)



**Recall**  
(True Exceptions Found)

Learn how we can partner to  
transform your data QA framework:

[statestreet.com/alpha/data](https://statestreet.com/alpha/data)



## AADQ Product Highlights

- Reduces more than **80% of false alerts**, providing a 25X efficiency increase over manual QA frameworks
- Identifies all **true exceptions missed** by existing rules-based checks for nearly every client tested
- Provides a more stable daily alert rate resulting in **smoother daily business operations**
- Learns **existing data set knowledge structures** without business rules or human intervention
- Domain models can be used independently to analyze a **standalone data domain**, or in concert **to detect anomalous market value** at a fund or portfolio level

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\*Statistics as of Q2 2024. Assets are inclusive of clients using the platform for purposes of secondary compliance.

Learn more at [statestreet.com/alpha/data](http://statestreet.com/alpha/data)

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