

BYALLACCOUNTS® • SOLUTION BRIEF

Performance Reporting

How Reconciliation-Ready Data Enables More Efficient & Cost-Effective Performance Reporting

Performance reporting — the foundation for well-informed investment decisions — requires wealth management platforms to do the following with precision and ease:

- Access all client data, not just accounts that are managed
- Reconcile positions and daily transaction activity
- Calculate the return on all underlying investments
- Accurately identify held securities to benchmark the portfolio's performance

The financial data that the reports are based on must be timely, consistent, comprehensive, clear, and accurate.

The Challenges of Getting It Right

The value of performance reporting depends on the quality of the data and the thoroughness of the aggregation process. Through aggregation, data is gathered, consolidated, and enriched for targeted platforms and use cases. When the aggregation process fails to focus on the right type of use case-driven enrichment, the data will be incomplete and unreliable, making it inadequate for use. This results in costly and time-consuming intervention by the back offices that consume the data.

Here are some common challenges that can affect data quality and utility:

Accessing the Right Data: The way most financial data is aggregated is not well suited for investment use cases. That's because most financial aggregation vendors are generalists who design their aggregation process to accommodate as many different financial management use cases as possible. Sourcing investment data is specialized and requires deep industry knowledge and expertise.

Activity Gaps: To get a comprehensive view of an investor's portfolio, complete investment-focused data needs to be collected for all accounts in the portfolio, regardless of where they are held or how their information is reported. Data must be up to date (reflecting the prior close), and recovery from inevitable connectivity disruptions must capture anything reported in the interim.

Unreliable Identification & Activity Mapping: Unless positions are consistently and accurately mapped to their underlying security identifiers, as well as their transaction activity, the data becomes too unreliable for any reporting use cases.

Incomplete Transaction Data: Most aggregated data is collected from sources that prepare the data for viewing purposes, not for performing calculations. The raw data does not distinguish between related activities, and as a result, it won't clearly reflect the impact a transaction has on shares, cash flows, and cost basis.

Investment-First Data Aggregator

Investment data is much more sophisticated than banking data. This is because investment accounts hold multiple positions that represent a variety of investment vehicles. There is also a greater degree of complexity for these transactions compared to those made within cash accounts.

For data to be fit for use, it must be:

- **Well Structured & Consistent:** The data is clean and free from any missing, incomplete, redundant, or ambiguous information.

- **Suitable for Investment Reporting:** Positions are mapped to their precise security names, symbols, and share classes. Transactions are mapped to the positions they affect and are classified with a single set of type codes.
- **Reconciliation-Ready:** Data is enriched according to the specific use case to bridge the gap between what the financial institution reports and what the receiving system requires to drive reconciliation operations and its own calculations and reporting.
- **Interoperable:** The data is universal, presents a single source of truth, and is easily used by all stakeholders.

The Morningstar® ByAllAccounts® Difference

ByAllAccounts is a sophisticated financial data aggregator that acquires and enriches data specifically for investment use cases, such as performance reporting. Our solution is powered by artificial intelligence, machine learning, and more than 20 years of institutionalized knowledge.

Using a five-stage enrichment process, ByAllAccounts delivers data from 15,000+ data sources that’s complete, consistent, interoperable, and actionable. What also sets our data apart is our differentiated investment long tail. Our long tail features an industry-leading number of data sources from retirement plan providers and 401(k) recordkeepers, built in response to over 20 years of requests from investment professionals.

01

Acquire: Data is gathered from a variety of financial sources, including the investment long tail of sparsely used smaller institutions, via direct feeds, open banking application programming interfaces (APIs), and other custodial connections

Step 01: Acquire Raw Data

Recordkeeping Fee .50 Classic - Value Adm @ 12.60 Cash - Disbursement 6.30



Proprietary Normalization and Enrichment Process



Step 05: Final Delivery of Data – Normalized and Enriched to Fit End System Requirements

Position Name	Transaction Type	Description	Price	Units	Amount	Ticker	CUSIP
Wells Fargo Classic Value Fund - Class Admin	Sell	Recordkeeping Fee .50 Classic Value-Adm @ 12.60	12.60	-.50	6.30	EIVDX	94975P538
Cash	Fee	Recordkeeping Fee .50 Classic Value-Adm @ 12.60			-6.30	Cash Balance	

02

Parse: The collected data is sorted, organized, and structured into a sophisticated data model for investment use cases.

03

Normalize: Any incomplete or ambiguous data elements are translated into standard data types. The data is made consistent and complete.

04

Enrich: Related positions, transactions, and securities are linked together, and any gaps are filled so the data becomes actionable.

05

Deliver: The data is prepared and delivered in a variety of configurable formats tailored to the unique requirements of the customer's reporting platform.

Key Benefits:

- Map underlying positions to their accurate security IDs, consistently and confidently.
- Standardize your data for faster, more accurate performance reporting.
- Improve back-office efficiencies, saving time and money.

Central to our proprietary enrichment and delivery process are capabilities that include:

Position security and activity matching:

- Positions are consistently mapped to their accurate security identification, down to the share class, and Morningstar Security IDs are used in the mapping process for seamless data integration with Morningstar solutions.
- Transaction activities are mapped correctly and consistently to the underlying positions in the account.

Transaction augmentation for reconciliation and accounting:

- Duplicate transactions are detected and eliminated, and accurate cash flows are computed.
- Missing fixed-income details, such as paydown factors and original or current face, are calculated.

Transaction synthesis and filtering:

- To minimize potential share breaks and cash flow issues, additional transactions are created to represent the different parts of an activity that the financial institution represents as a single transaction.
- Customers may choose to exclude subsets of transactions that are unwanted or unneeded.

Customer-specific modifications:

- Beyond our core enrichment, data is further adapted for our customers' individual systems and use cases.
- Our Data Analyst Team consults to deliver ad hoc modifications and filters to the data to fit each customer's unique needs.

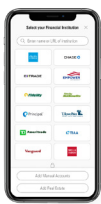
While some aggregators have multiple tiers of data quality, ByAllAccounts offers only superior-quality, fully enriched, reconciliation-ready data that's ideal for performance reporting.

Contact Your Local Sales Representative

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Ready to Make Enriched Data Your Most Valuable Reporting Tool? See for yourself how ByAllAccounts can deliver highly enriched data for more efficient performance reporting and more informed investment decisions.