DATA SHEET

Highest-Quality Data Enrichment for Exceptional Investment Insights

The Only Financial Data Aggregator That Delivers Investment-First Data

Without enrichment, data is just a commodity—and the quality of enrichment models varies considerably.

Morningstar® ByAllAccounts® is the only financial data aggregator that enriches data specifically for investment use cases. Our proprietary process allows us to prepare the highest-quality data for use by wealthtechs, enterprises, and advisors.

With ByAllAccounts, you get a proven solution for accelerating the digital transformation of the investment industry. Our expertise is backed by more than 20 years of specialization in investment use cases.

Data That's Fully Enriched and Reconciliation-Ready

More data does not necessarily mean more value. That's because aggregated data contains millions of lines of abbreviated and cryptic descriptions, amounts, dates, and other details. Without a process to normalize and enrich this data, key insights remain hidden.

ByAllAccounts uses AI and other proprietary technologies to deliver superior client account data to performance reporting, portfolio analytics, portfolio rebalancing, financial planning, financial wellness, and trade compliance management.

> ByAllAccounts' data enrichment process results in 47% less reconciliation time.

How We Enrich Data

Through a five-step process, we leverage an industry-leading breadth of resources to enrich data for investment use cases. This includes unparalleled support of 401(k) recordkeeper sources, coverage of complex asset types, and an extensive network of direct custodial feeds.

Step 1. Acquire

If you're like most of our customers, you need specific data elements that are mission-critical to your application. That's why ByAllAccounts takes a format-agnostic approach to sourcing and makes data completeness our first priority. Our solution goes deeper into your desired data sources than the competition's. We extract a comprehensive data set, which is then aggregated to capture a 360-degree view of an investor's balance sheet.

Our process enables us to combine data from more than 15,000 unique sources and deliver high-quality, fully intact data, regardless of feed type. The result is an exceptionally wide breadth of data attributes that can support a variety of investment use cases.

Step 2. Parse

Parsing allows us to extract the data from a variety of sources and optimize workflows. The data is instantly analyzed and organized into a structured format.

Step 3. Normalize

The data is then made complete and accurate. We fix any data that is missing, incomplete, redundant, or ambiguous, and normalize it into standard data types, including:

- Activity (transaction) type classifications
- Trade and settlement data basis
- Principal and income breakdown
- Currency identification
- Details from any natural language descriptions, such as memos and comments

Step 4. Enrich

From there, the data is enriched so that it can become usable for advanced investment systems and analysis needs.

Our core enrichment capabilities have been informed by our 20-plus years of experience aggregating investment data, our expert knowledge of the complexities of investment reporting, and our deep understanding of the challenges faced by our customers.

- Security matching technology fueled by the Morningstar Security Master:
  - Consistently maps holdings to their accurate security identification, down to the share class
  - Includes Morningstar Security IDs for seamless data integration with Morningstar solutions
  - Maps 4.6 million publicly traded securities, with the ability to successfully match securities from more than 15,000 different sources
- Transaction synthesis
  - Augments investment-transaction activity to prepare the data for reconciliation and accounting activities, helping to minimize share breaks and cash-flow issues
- Investment activity matching
  - Ensures transactional activity is mapped correctly and consistently to underlying positions in the account
  - Matches tax lots to holdings

In addition to our core enrichment, we also provide customer-specific enrichment capabilities, which gives our customers the flexibility to further refine the data for their unique platform needs.

Step 1: Acquire Raw Data

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Recordkeeping Fee .50 Classic
Value Adm @ 12.60 Cash
Disbursement 6.30
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Proprietary Normalization and Enrichment Process

Step 5: 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	

Step 5. Deliver

The data is then delivered through a process that offers flexibility and customization. You can modify how the data is structured based on your end-system requirements.

- Configure fields and apply your own rules and logic
- Leverage self-serve tooling to avoid expensive custom development
- Use the same data set across use cases—from the basic (financial wellness and portfolio analysis) to the more complex (trade reconciliations and portfolio accounting)
- Filtering of unwanted transactions or positions

A unified experience. Using the same data set across a variety of systems and applications provides a unified product experience. Whether you're an advisor, an investor, or a home-office broker-dealer, you'll never have to worry about finding different values in different places.

Benefits of Data Enrichment

Wealthtechs/Enterprise Home Office

- Streamline back-office efficiencies to reduce operational costs and scale practice
- Manage regulatory requirements with complete and accurate data
- Provide uniform data for advisor and investor experiences
- Support complex use cases such as trade reconciliations and portfolio accounting

Advisors

- Increase efficiency through automated data collection and enrichment
- Determine a client's true asset allocations with complete and accurate data
- Uncover opportunities to grow assets under management

Investors

- View a complete and accurate financial net worth
- Trust that the advisor has the most accurate and complete data
- Enable more effective collaboration with the advisor

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MORNINGSTAR WEALTH

Empowers investor success by delivering world-class investment products and personalized technology solutions to advisors, individuals, and the businesses who serve them.

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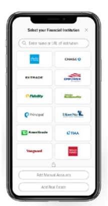

Ready to Make Aggregated Data Your Most Valuable Asset? See for yourself why ByAllAccounts delivers more accurate data for more informed financial investment decisions.