



IHS Markit®

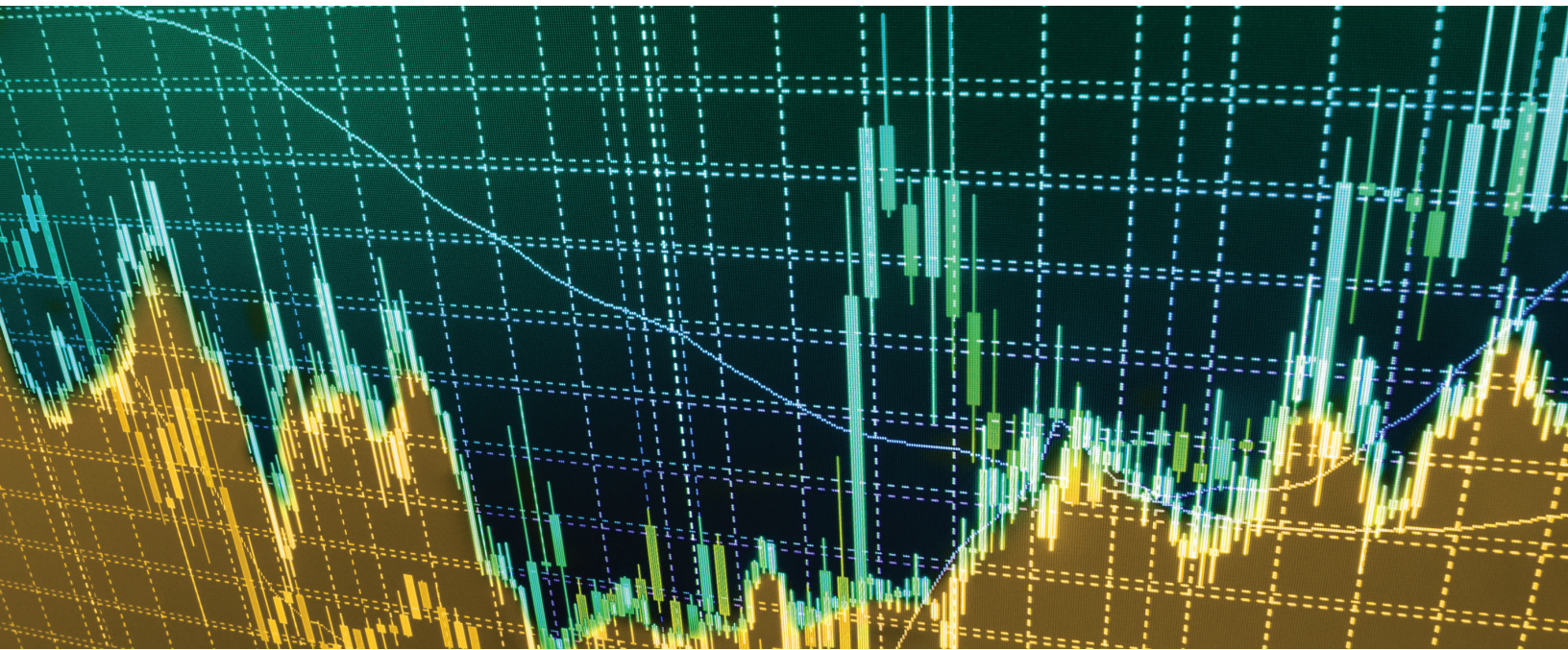
FINANCIAL MARKETS

Exchange Traded Products

Providing a comprehensive view of the global ETP market
to support the needs of all participants



IHS Markit delivers the most advanced and comprehensive view of the global exchange traded product (ETP) market.



IHS Markit has been servicing the ETP marketplace for over 20 years with a comprehensive suite of ETP products and services. We support the complete ETP lifecycle and serve participants across the industry.

Our multi-asset ETP Composition Data service provides daily creation, redemption, and calculation basket information for multi asset class exchange- traded products. The consolidated feed parses, cleanses and normalizes raw data files, reducing cost and minimizing technical overhead for clients.

- ETP Multi-Asset Composition Data
- ETP Encyclopedia
- ETP Analytics
- ETP Dividends
- PCF Services

8,000+

ETPs currently traded

500,000+

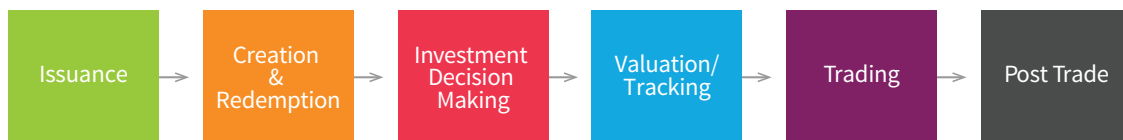
indices tracked

250+

clients

ETP lifecycle

Through our comprehensive suite of ETP products and services, we support the complete ETP lifecycle and serve participants across the ETP industry.



Issuance

Issuers leverage our composition data and analytics for research to support ETP construction, understand fund flows and analyze fundamental data to aid their strategies. All data is processed and validated by a global team of analysts ahead of the exchange open.

Creation and Redemption

Authorized participants (APs) use our composition and reference data to determine their obligations, including delivery of underlying assets and fees, for fulfilling creation and redemption orders.

Valuation/Tracking

Our Calculation basket standardizes the treatment of corporate actions, excluded assets and both constituent and fund level distributions. Estimated cash amounts are normalized across provider methodologies facilitating accurate intraday NAV calculation. Users can consume data in a standardized way across global ETPs, regardless of the provider's underlying structures.

Investment Decision Making

Daily composition data and derived analytics support research and strategy development. Independent dividend forecasting enables options traders to more accurately price ETP options.

Trading

Our composition data supports trading, hedging and investment activities across global funds.

Post Trade

Our composition data enables clients to simplify risk management, and performance attribution.

Tools to transform your ETP business

VIIV Calculation

As a Trusted Agent for the ETF community, IHS Markit provides an independent calculation and validation of the Verified Intraday Value (VIIV), for actively managed non transparent ETFs. VIIV calculation is a requirement for any funds launching under the Precidian ActiveShares model. Our service calculates the most accurate VIIV for Precidian ActiveShares products for ETF Issuers, asset managers and hedge funds.

We ensure the accuracy of our live pricing through a preliminary, full-validation of the open basket, allowing the investment community to effectively trade and arbitrage the ETF.

To verify the basket before live pricing, we validate the following;

- Corporate action corrections
- Estimated cash reconciliation
- Any discrepancies will be raised to the custodian and issuer prior to publishing

ETP Analytics

IHS Markit provides a comprehensive and independent suite of analytics, comprising performance, exposure, liquidity, risk and tracking metrics for the global ETP market.

Analytics are derived from our ETP composition, reference and dividend data. We leverage industry-standard methodologies, enabling customers to select their preferred methodology.

Analytical dataset includes:

- Fund flows and AUM data
- Performance statistics
- Liquidity, such as volumes by venue and bid-ask spread and size
- ETP to benchmark analysis, such as tracking error and correlation
- Regression analysis, such as return series

ETP Multi-Asset Composition Data

IHS Markit works directly with global ETP Issuers to provide a single consolidated source of daily creation, redemption, tracking, excluded and calculation basket information for ETPs across all asset classes.

IHS Markit provides daily NAV, Shares Outstanding, AUM and Creation units as well as complete constituent information. Corporate action, dividend, and management fee impact are normalized within the Estimated Cash across ETP issuers. All data is processed and validated ahead of the listing's local exchange open.

ETP Encyclopedia

A single, centralized source of ETP reference data.

Our ETP Encyclopedia gives industry participants a mechanism for analyzing the topography of the entire ETP landscape, with more than 200 unique data fields managed by our ETP research team.

It provides normalized and detailed information for every fund listed globally across all asset classes. Data is sourced directly from issuer's official marketing documentation (Prospectus, Factsheet or KIID) as well as provider websites. The unique data points can also be used to derive niche classification or organization of ETPs by themes such as underlying investment focus or characteristics of the wrapper itself (leverage, currency hedged, short selling, securities lending etc.)

Data fields encompass the following categories:

- ETP classification system (7 tiers)
- Stated benchmark information
- Listing information and symbology
- Key fund characteristics
- Detailed management fee and expense information
- Creation/redemption data
- Legal structures



ETP Dividends

As ETP option and derivative trading continues to grow, traders and risk managers require an accurate source of forecast dividend data.

IHS Markit delivers complete historical dividend announcements as well as independent forecasts of dividend amounts, payment schedule and announcements, with up to two years of dividend projections.

Our dividend forecasts cover 120 of the most liquid US listed ETPs. Information is collected from various sources including exchange filings, ETP providers and our securities finance dataset.

Forecasts are based on a range of factors, including:

- Accrued dividend per share
- Securities lending revenue
- Fund management fees
- Accounting measures for appropriate payment adjustments
- Consensus forecasts
- Industry trends

Portfolio Composition Files – Production and Distribution Service (PCF Services)

IHS Markit provides ETP issuers with a calculation service and broad distribution channels for daily portfolio composition data. The Portfolio Composition Files (PCFs) are designed to create portfolio and pricing transparency for market participants. Investors and market participants seek funds with high levels of transparency and accuracy in their data prior to market open. With the majority of authorised participants and market makers as existing clients, IHS Markit is an ideal solution to provide PCFs to the requested market participants and traders before the start of trading day.

- Global support with extensive experience in PCF design, production and delivery.
- Flexibility in supporting various methodologies across multiple asset classes.
- Localized knowledge of regional and exchange requirements.
- Distribution to exchanges, authorized participants, market makers and more.
- Delivery channels include consolidated data feeds, APIs, flat files and more.

Support and Delivery

The service is supported 24 hours a day from locations across the globe, with index analysts handling all provider communications, delivery changes and data re-statements. This service allows customers to focus on their core business across front, middle and back office functions, including trading, research, asset allocations, risk, and performance-attribution.

We offer a flexible and scalable delivery which includes an installed database compatible with MySQL, MSSQL, Oracle and Sybase; an API; User Interface and Excel Plug in.



Related products

Index Management Service

Our Index Management service collates and provides official data on indices in a single feed.

Data is sourced directly from providers and is checked and validated ahead of market open.

iBoxx

iBoxx cash bond indices are designed to replicate investible investment grade and high yield fixed income markets.

Reference Data

We support the credit derivative, bond, equity, syndicated loan and legal entity data needs of the financial markets. Our broad range of reference data is specifically designed to facilitate securities trading, settlement, risk management and back-office functions, including accounting and client reporting.

Evaluated Bonds

We provide robust coverage across bonds, CDS and loans pricing, as well as equity volatility data and securities lending data for stocks and bonds.

We offer full transparency into our valuations methodology and inputs and apply rigorous cleaning algorithms to our data to ensure quality.

Factors

We deliver valuable investment insights through a comprehensive library of global stock selection and strategy signals.

Factors cover more than 30,000 securities across 80 countries

Dividend Forecasting

Our dividend forecasting provides announcements and forecasts for dividend amounts and dates for more than 8,000 stocks globally. Forecasts are up to four years in the future, subject to availability.

Customers can also subscribe to our dividend index points service, which allows them to predict the impact future dividends will have on index values.

About IHS Markit

IHS Markit (NYSE: INFO) is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. The company delivers next-generation information, analytics and solutions to customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions. IHS Markit has more than 50,000 key business and government customers, including 80 percent of the Fortune Global 500 and the world's leading financial institutions. Headquartered in London, IHS Markit is committed to sustainable, profitable growth.

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