

## ETF Data Offering 2018

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ETF Global® is a leading, independent provider of Exchange-Traded-Fund Reference Data and Quantitative Research to the Investment, Academic and Governmental sectors worldwide. ETFG Data is a comprehensive set of reference and analytics data for U.S. Listed Exchange-Traded-Funds and is primarily sourced directly from fund sponsors, custodians, distributors and administrators.

In the following pages are the details of the four primary, ETF data feeds:

### 1. **ETF Profile Data:**

- Product information on Expenses, Index, Assets Under Management, Trading, Bid-Ask Spread, etc.
- Industry-specific information on Service Providers, Lead Market Makers, etc.
- Classification details on Market Exposures, Geographic Exposures, Industry Exposures

### 2. **ETF Daily Fund Flows:**

- Daily Net Fund Flows driven by the ETF creation and redemption process
- Actual capital added or withdrawn from the ETF and includes Shares Outstanding and NAV

### 3. **ETF Global Proprietary Analysis:**

- **ETFG Reward Model:** 22 Factor Scores gauging momentum, sentiment, valuation, and macro views on sectors and countries. Qualitative measures include liquidity, diversification and issuing firm
- **ETFG Risk Model:** 7 factor scores - Measures include volatility, deviation, country, structure, liquidity and efficiency

### 4. **ETF Constituents:**

- Historical and daily holdings (actual) information includes product constituent ID, shares and weight

ETF Global delivers these data feeds daily via FTP & API - historical data is available for testing.

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For more information including pricing and customized feeds, please contact:

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## 1. ETF Profile Data

ETF Profile Data		Type
Ticker	Ticker of the product	Varchar
Issuer	Issuing firm of the product	Varchar
Description	The name of the product	Varchar
Inception Date	Inception date of the product	Date
Related Index	Per the prospectus	Varchar
Tax Classification	RIC/Partnership/UIT - 1099 vs K1	Varchar
ETN	Boolean field to indicate if it is an ETN	Boolean
Fund AUM	Daily total AUM for all products	Float
Management Fee	Management Fee Charged	Float
Other Expense	Other fund expenses	Float
Total Expense	Total Expense	Float
Fee Waiver	Fee Waiver	Float
Net Expense	Net Expense Ratio	Float
Average Daily Trading Volume	3 month average daily trading volume	Int
Asset Class	Which asset class it holds	Varchar
Category	Broad category description	Varchar
Focus	Specific exposure description	Varchar
Development Class	What developmental class	Varchar
Region	Regional focus	Varchar
Levered	Boolean field to indicate if it is levered	Boolean
Leverage Factor	The leverage factor. i.e., -1, 2, 3, -3	Varchar
Active	Boolean field to indicate if it is an "Active" per the SEC	Boolean
Administrator	Administrator	Varchar
Advisor	Advisor	Varchar
Custodian	Custodian	Varchar
Distributor	Distributor	Varchar
Portfolio Manager	Portfolio Manager	Varchar
Subadvisor	Subadvisor	Varchar
Transfer Agent	Transfer Agent	Varchar
Trustee	Trustee	Varchar
Futures Commission Merchant	Futures Commission Merchant	Varchar
Fiscal Year End	Fiscal Year End	Varchar
Distribution Frequency	Distribution Frequency	Varchar
Listing Exchange	Listing Exchange	Varchar
Creation Unit Size	Number of shares needed for a creation unit	Int
Creation Fee	Fee for creating a unit of shares	Int
Geographic Exposure	Geographic breakdown based on country of domicile	Varchar
Currency Exposure	Currency breakdown based on currency of underlying	Varchar
Sector Exposure	Sector breakdown	Varchar
Industry Group Exposure	Industry group breakdown	Varchar
Industry Exposure	Industry breakdown	Varchar
Sub-Industry Exposure	Sub-Industry breakdown	Varchar
Coupon Exposure	Coupon breakdown	Varchar
Maturity Exposure	Maturity breakdown	Varchar
Options available	Are options available on a product	Boolean
Call Options volume	Call volume	Int
Put Options volume	Put volume	Int
Short Interest	Number of shares sold short	Int
Put/Call ratio	Put/Call ratio for products with options	Float
Number of Holdings	Number of Holdings	Int
Discount/Premium	Discount/Premium	Float
Bid/Ask spread	Average intra-day bid/ask spread	Float
Lead Market Maker	The listed LMM for the specific product	Varchar

## 2. ETF Daily Fund Flows

ETF Global Daily Fund Flows		Type
Date	As of Date	Date
Ticker	Product Ticker	Varchar
Fund Shares Outstanding	Number of shares outstanding for all products	Bigint
NAV	Net Asset Value	Float
Net Daily Flow	Daily Net Fund Flow	Float

## 3. ETF Global® Proprietary Analysis

ETF Global® Proprietary Analytics		Type
Date	As of Date	Date
Ticker	Product Ticker	Varchar
Risk Total Score	ETFG Red Diamond Risk Score	Float
Risk Volatility	Component Volatility Score	Float
Risk Deviation	Component Deviation Score	Float
Risk Country	Component Country Score	Float
Risk Structure	Component Structure Score	Float
Risk Liquidity	Component Liquidity Score	Float
Risk Efficiency	Component Efficiency Score	Float
Reward Score	ETFG Green Diamond Reward Score	Float
Quant Total Score	ETFG Total Quant Score	Float
Quant Technical - Short Term	Component Short Term Technical Score	Float
Quant Technical – Intermediate	Component Intermediate Technical Score	Float
Quant Technical – Long	Component Long Term Technical Score	Float
Quant Composite Technical	Component Composite Technical Score	Float
Quant Sentiment - P/C	Component Put/Call Score	Float
Quant Sentiment - Short Interest	Component Short Interest Score	Float
Quant Sentiment - Implied Vol	Component Implied Volatility Score	Float
Quant Composite Sentiment	Component Composite Sentiment Score	Float
Quant Composite Behavioral	Component Composite Behavioral Score	Float
Quant Fundamental - P/E	Component Price/Earnings Score	Float
Quant Fundamental - P/CF	Component Price/Cash Flow Score	Float
Quant Fundamental - P/B	Component Price/Book Value Score	Float
Quant Fundamental – Yield	Component Dividend Yield Score	Float
Quant Composite Fundamental	Component Composite Fundamental Score	Float
Quant Global – Sector	Component Sector Score	Float
Quant Global – Country	Component Country Score	Float
Quant Composite Global	Component Composite Global Theme Score	Float
Quant Quality – Liquidity	Component Liquidity Score	Float
Quant Quality – Diversification	Component Diversification Score	Float
Quant Quality – Firm	Component Issuing Firm Score	Float
Quant Composite – Quality	Component Composite Quality Score	Float

## 4. ETF Constituents

ETF Constituents		Type
Date	As of Date	Date
Fund Ticker	Product Ticker	Varchar
Ticker	Ticker of the underlying constituent	Varchar
Name	Name the underlying constituent	Varchar
Weight	Weight of the underlying constituent	Float
Market Value	Market Value of Underlying Constituents	Float
Unique Identifier	Unique identifier for underlying constituents i.e. FIGI	Varchar
Shares Held	Number of shares of underlying constituent held by the ETP	Float
Exchange	Name of exchange on which constituent trades	Varchar
Country of Exchange	Name of Country in which Exchange is located	Varchar
Broad Asset Class	Equity, Corporate Bond, Municipal Bond, etc.	Varchar
Security Type	ETFG Taxonomy Classification i.e., Common Equity, Domestic, Global etc.	Varchar

### Users of these Datasets include:

- Investment Managers
- Investments Consultants
- Traders
- Hedge Funds
- Pension Managers
- Research Analysts
- Chief Investment Officers
- Data Strategists
- Chief Technology Officers
- Portfolio Managers
- Quantitative Analysts
- Chief Compliance Officers
- Investment Bankers
- Private Equity
- Academic Researchers
- Government Agencies
- Financial Advisors
- Compliance Managers

For more information including pricing, test files and customized feeds, please contact:

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