BYTEFORGE FINANCE ANALYTICS PLATFORM

Byteforge Finance Analytics Platform is a robust SaaS solution designed to provide comprehensive access to financial and economic data. This web application enables users to explore fundamental, historical and real-time market data, along with macroeconomic data, and offers data exporting and charting capabilities.

This document provides an overview of the platform's features and functionalities. It serves as a comprehensive list of the tools and capabilities available within the Byteforge Finance Analytics Platform.

FUNDAMENTAL DATA

STOCKS / COMPANIES

- General information
- Officers – list of company executives.
- Numbers for Valuation
- Share Statistics
- Technical Indicators
- Splits and Dividends data
- Holders. Institutions and Funds.
- Insider Transactions
- Outstanding Shares:
- Earnings:
- History and Trend.
- Quarterly and Annual.
- Financial Reports. Annual and Quarterly.
- Balance Sheet
- Cash Flow
- Income Statements.

ETF

- General information
- Technicals
  - Beta
  - 52-week high/lows
  - 50/200-day moving average
- Breakdowns
  - Market Capitalization.
  - Asset Allocation.
  - World Regions.
  - Sector Weights.
  - Top 10 Holdings.
  - Performance: Volatility, Expected Returns, Sharp Ratio, Returns YTD/3 years/5 years/10 years.

FUNDS

- General Information.
- Asset Allocation.
- Value Growth Measures.
- Sector Weightings.
- World Regions (for equity and balanced funds).
- Top Countries (for bond-based mutual funds).

INDEX CONSTITUENTS

- Code.
- Exchange.
- Name.
- Sector.
- Industry.
- Components

CRYPTOCURRENCIES

- Market Capitalization
- Market Capitalization Diluted
- Circulating Supply
- Total Supply
- Max Supply
- Market Capitalization Dominance
- Technical Documentation LInk
- Explorer
- Source Code
- Message Board
- Low All Time
- High All Time

TIME SERIES DATA

END OF DAY

Supported ticker types

- Stock
- ETF
- Fund
- Bond
- Forex
- Crypto

Data range

- US stock exchanges: Whole series from the beginning
- Non-US stock exchanges: From 2000

Update frequency

- Stock exchanges update 2-3 hours after the market closes (except for major US exchanges)
- Major US exchanges (NYSE, NASDAQ) are updated in the next 15 minutes after the market closes
- US mutual funds, PINK, OTCBB update next morning, the update starts at 3-4 am EST and ends at 5-6 am EST.

INTRADAY

Supported ticker types

- Stock
- ETF
- Fund
- Forex
- Crypto

Data range

- US Stocks (NYSE, NASDAQ):
    - 1-minute interval data, including pre-market and after-hours, available from 2004.
    - 5-minute and 1-hour intervals available from October 2020.
- FOREX, Cryptocurrencies (CC), and MOEX (MCX):
    - 1-minute interval data available from 2009.
    - 5-minute and 1-hour intervals available from October 2020.
- Other Exchanges:
    - 5-minute and 1-hour intervals available from October 2020.
    - 1-minute interval data from October 2020, but this varies by ticker and exchange.

Update frequency

- Updated 2-3 hours after market closing.

REAL TIME

Supported ticker types
- All US exchange tickers
- Forex
- Crypto

Data range
- Real time with timestamp precision <50ms

NEWS SEARCH

Powerful yet simple tool that continuously analyzes the most crucial financial news portals, providing access to constantly updated news data and generating daily sentiment scores based on positive and negative mentions. It is possible to further filter the news
for ticker by date and news type.

Supported ticker types

- Stock
- ETF
- Fund
- Forex
- Crypto

DATA EXPORT

Platform provides the ability to export fundamental data or historical data for every supported ticker.

Supported ticker types

- Stock
- ETF
- Fund
- Forex
- Crypto

The maximum period per single export:
- *120 days for 1 minute*
- *600 days for 5 minute*
- *7200 days for 1 hour*
- *Unlimited for 1 day*

CHARTING

It is possible to display the time series data for all market tickers and macro indicators in the platform's charting functionality. Chart supports adding different types of lines, measuring, zooming and advanced functionalities like Fibonacci time zones, Pitchfork and others.

MACRO INDICATORS

- ➢ Real interest rate (%).
- ➢ Population, total.
- ➢ Population growth (annual %).
- ➢ Inflation, consumer prices (annual %).
- ➢ Consumer Price Index (2010 = 100).
- ➢ GDP (current US$).
- ➢ GDP per capita (current US$).
- ➢ GDP growth (annual %).
- ➢ Debt in percent of GDP (annual %).
- ➢ Inflation, GDP deflator (annual %).
- ➢ Agriculture, value added (% of GDP).
- ➢ Industry, value added (% of GDP).
- ➢ Services, etc., value added (% of GDP).
- ➢ Exports of goods and services (% of GDP).
- ➢ Imports of goods and services (% of GDP).
- ➢ Gross capital formation (% of GDP).
- ➢ Net migration (absolute value).
- ➢ GNI, Atlas method (current US$).
- ➢ GNI per capita, Atlas method (current US$).
- ➢ GNI, PPP (current international $).
- ➢ GNI per capita, PPP (current international $).
- ➢ Income share held by lowest 20% (in %).
- ➢ Life expectancy at birth, total (years).
- ➢ Fertility rate, total (births per woman).
- ➢ CO_2 emissions (metric tons per capita).
- ➢ Surface area (sq. km).
- ➢ Revenue, excluding grants (% of GDP).
- ➢ Cash surplus/deficit (% of GDP).
- ➢ Mobile cellular subscriptions (per 100 people).
- ➢ Internet users (per 100 people).
- ➢ Merchandise trade (% of GDP).
- ➢ Total debt service (% of GNI).
- ➢ Unemployment total (% of labor force).
- ➢ Net trades in goods and services (current US$).
- ➢ Start-up procedures to register a business (number).
- ➢ High-technology exports (% of manufactured exports).
- ➢ Poverty headcount ratio at national poverty lines (% of population).
- ➢ Prevalence of HIV, total (% of population ages 15-49).
- ➢ Market capitalization of listed domestic companies (% of GDP).

The platform provides direct access to historical data and charting functionality for a number of macro indicators. More directly accessible Macro Indicators can be added by request.

Data range

Most data is provided from December 1960 with annual frequency.

Limitations

Data may not be available for some indicators for all countries and years. Some indicators are only available from the year they were initiated. Some countries do not regularly report data due to conflict, lack of statistical capacity, or other reasons.

DATASETS

Platform provides aggregator over publicly available economic data published by national and international statistical institutions. New datasets are being added on a regular basis.

Currently the platform supports searching of all datasets (~7000) published by World Bank institution and it includes data from the World Bank's microdata, finances and energy data platforms, as well as datasets from the open data catalog.

SUPPORTED EXCHANGES

Major US exchanges (*NYSE, NASDAQ, BATS, OTCBB, PINK, OTCQX, OTCMKTS, NMFQS, NYSE MKT, OTCGREY, BATS, OTC*), London Exchange (*without EOD data*), Toronto Exchange, NEO Exchange, TSX Venture Exchange, Berlin Exchange, Hamburg Exchange, XETRA Stock Exchange, Dusseldorf Exchange, Hanover Exchange, Munich Exchange, Stuttgart Exchange, Frankfurt Exchange, Luxembourg Stock Exchange, Vienna Exchange, Euronext Paris, Euronext Brussels, Madrid Exchange, SIX Swiss Exchange, Euronext Lisbon, Euronext Amsterdam, Iceland Exchange, Irish Exchange, Helsinki Exchange, Oslo Stock Exchange, Copenhagen Exchange, Stockholm Exchange, Victoria Falls Stock Exchange, Zimbabwe Stock Exchange, Lusaka Stock Exchange, Uganda Securities Exchange, Dar es Salaam Stock Exchange, Prague Stock Exchange, Rwanda Stock Exchange, Botswana Stock Exchange, Egyptian Exchange, Namibian Stock Exchange, Ghana Stock Exchange, Malawi Stock Exchange, Regional Securities Exchange, Nairobi Securities Exchange, Casablanca Stock Exchange, Stock Exchange of Mauritius, Tel Aviv Stock Exchange, Korea Stock Exchange, KOSDAQ, Budapest Stock Exchange, Warsaw Stock Exchange, Philippine Stock Exchange, Karachi Stock Exchange, Australian Securities Exchange (*without EOD data*), Johannesburg Stock Exchange (*without EOD data*), Chilean Stock Exchange, Jakarta Exchange, Thailand Exchange, Shenzhen Stock Exchange, Athens Exchange, National Stock Exchange of India, Shanghai Stock Exchange, Colombo Stock Exchange, Vietnam Stocks, Kuala Lumpur Exchange, Bucharest Stock Exchange, Buenos Aires Exchange, MICEX Moscow Exchange