QUANTITATIVE FINANCE LIBRARY FOR PYTHON

QF-Lib is a Python library that provides high quality tools for quantitative finance. Among the features, there are modules for portfolio construction, time series analysis, risk monitoring and a diverse charting package. The library provides extensive functionality for financial data analysis in addition to a wide variety of tools for data processing and presentation of the results.

QF-Lib is a convenient environment for conducting your own analysis. The results are presented in a practical form including a variety of charts and statistical measures.

An extensive part of the libraries is dedicated to backtesting investment strategies. The Backtester uses an event-driven architecture and simulates the events such as daily market opening or closing. Thanks to the architecture based on interfaces, it is easily to customise. Tested strategies may consist of different alpha models, position-sizing techniques, risk management settings and specify commission pricing or slippage models. After testing a strategy on historical data, the user can apply it to a trading environment without any modifications.

APPLICATIONS

Financial data analysis, more specifically:

- Time series Analysis
- Charting
- Portfolio Construction
- Research in Investment Strategies
- Studies, Market Indicators and Analysis

LIMITATIONS

- Frequency of the data. The current version does not support intraday scenarios.

- Supported asset classes. The current version does not support backtesting of investment products based on the term structure like Futures, or Fixed Income.

FEATURES

- Flexible data sourcing. Financial data source can be any commercial data provider or a local database.
- Tools to prevent lookback of 'future data' in the becktesting environment.
- Adapted data containers. Custom time-indexed data structures facilitating the processing of financial data.
- Generation of analyses summaries. Automatic generation of content rich analysis documents.
- Flexible financial 'multi-tool' environment allowing for extension and creation of new functionality
- Permissive Open source licence. QF-Lib is distributed under Apache v2.0 licence

CONTACT PERSON

nick.ziogas@cern.ch
Find out more at: kt.cern