

USER GUIDE

This user guide describes the calculations of the factor performance data.

TERMS AND CONDITIONS

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DEFINITIONS

Factor refers to the excess return over a benchmark that can be explained statistically by common attributes of stocks, compared to manager alpha which can't be explained systematically. Other names for factor are risk premia or style premia. All factor performance data on our website refers to the performance of a long and short portfolio of stocks.

DATA

Price and fundamental data are updated daily, checked for integrity, and stored in a robust and secure database on a cloud server. Our database includes all listed companies globally and data is available since 1990, although data for most countries only becomes meaningful post 2000 due to small stock universes before then.

BACKTESTING

All factor performance data provided is based on backtesting and not realized performance of an investible product. Past results do not guarantee future performance. Backtesting is subject to a variety of biases, which usually inflate historical returns, and our intention is to minimize these biases. Amongst these are:

- Survivorship bias: Our data includes live and dead companies
- Look-ahead bias: Our backtesting only includes data that was available to investors at that point in time
- Hindsight bias & data mining: Our objective is not to datamine factors, but to focus on the key factors that are supported by academic research or reflected by investor preferences
- Liquidity: We only include stocks with a minimum market capitalization of \$1 billion
- Transaction costs: We incorporate transaction costs of 10 basis points per transaction

In general our objective is to keep calculations as simple and robust as possible.

FACTOR DEFINITIONS

Factors can be defined in many ways and our objective is to stay as close to the academic literature, which tends to maximise the size of the universe, as possible, while at the same time ensuring that the factors are investable.

Factor	Description	Variables
Value	Buy cheap and sell expensive stocks	Combination of price-to-book and price-to-earnings
Size	Buy small and sell large stocks	Market capitalization
Momentum	Buy winners and sell losers	Return over past 12 months, excluding most recent month
Low Volatility	Buy less volatile and sell more volatile stocks	Standard deviation over the past 12 months
Quality	Buy high and sell low quality companies	Combination of return-on-equity and debt-over-equity
Growth	Buy growing and sell declining companies	Combination of sales per share and earnings per share growth rates
Dividend Yield	Buy high yielding and sell low yielding stocks	Current dividend yield

PORTFOLIO CONSTRUCTION

All factor performance data is based on long and short portfolios of stocks with the following characteristics:

- Portfolios: For each factor the entire universe of tradeable stocks per region is sorted by their factor ranking. The bottom and top 10% are used for the portfolio construction in the US, Europe, and Japan compared to 20% in the UK, Australia, Hong Kong and Singapore
- Rebalancing: Monthly
- Market-neutral: All portfolios are constructed beta-neutral
- Currency-neutral: All portfolios are all created within a country or currency region, therefore are currency-neutral

FURTHER DETAILS

Please send us an email at info@factorresearch.com for further details.