**MINIMUM VARIANCE**

# STOXX® GLOBAL 1800 MINIMUM VARIANCE INDEX

## Index description

The STOXX Global 1800 Minimum Variance index weights the components of the underlying STOXX Global 1800 index so that portfolio variance is minimized. STOXX uses Axioma's factor model for the optimization process. The constrained version creates a portfolio similar to the underlying benchmark index, but with a more attractive risk profile. This is achieved by applying a range of factors, country and industry exposure constraints to ensure that components have no high allocation bias.

## Key facts

»Minimized volatility is suitable for risk-averse investors. At the same time, the return of the index is higher than the benchmark.

»Suitable as a liquid underlying for ETFs and structured products. It is easy to replicate as it has fewer components than the underlying Index. It also has predictable rebalancing dates and is optimized to allow tracking (low turnover, transaction costs analysis, etc.).
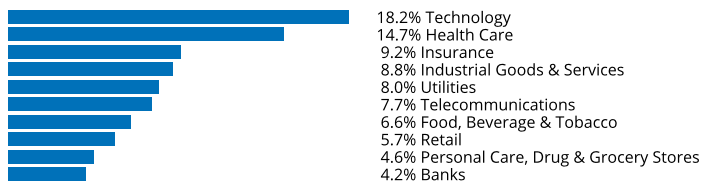
»Capping constraints are applied in accordance with the Undertakings for Collective Investment in Transferable Securities (UCITS) directive to ensure that funds can easily track the index.

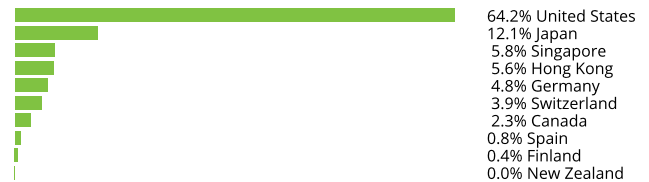»Constraints on diversification and security, country, industry and factor exposure are applied.

## Descriptive statistics

| Index | Market cap (JPY bn.) | | Components (JPY bn.) | | | | Component weight (%) | | Turnover (%) |
|---|---|---|---|---|---|---|---|---|---|
| | Full | Free-float | Mean | Median | Largest | Smallest | Largest | Smallest | Last 12 months |
| STOXX Global 1800 Minimum Variance Index | N/A | 15,656.6 | 119.5 | 67.7 | 984.5 | 4.5 | 6.3 | 0.0 | 30.3 |
| STOXX Global 1800 Index | 9,224,737.5 | 8,364,263.9 | 4646.8 | 1645.7 | 417,724.7 | 199.1 | 5.0 | 0.0 | 2.7 |

## Supersector weighting (top 10)



18.2% Technology
14.7% Health Care
9.2% Insurance
8.8% Industrial Goods & Services
8.0% Utilities
7.7% Telecommunications
6.6% Food, Beverage & Tobacco
5.7% Retail
4.6% Personal Care, Drug & Grocery Stores
4.2% Banks

## Country weighting



64.2% United States
12.1% Japan
5.8% Singapore
5.6% Hong Kong
4.8% Germany
3.9% Switzerland
2.3% Canada
0.8% Spain
0.4% Finland
0.0% New Zealand

## Risk and return figures[1]

| Index returns | Return (%) | | | | | Annualized return (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Last month | YTD | 1Y | 3Y | 5Y | Last month | YTD | 1Y | 3Y | 5Y |
| STOXX Global 1800 Minimum Variance Index | -0.5 | 15.3 | 11.1 | 80.0 | 89.9 | N/A | N/A | 11.2 | 21.9 | 13.9 |
| STOXX Global 1800 Index | 1.5 | 28.0 | 21.2 | 87.1 | 98.8 | N/A | N/A | 21.4 | 23.5 | 14.9 |
| **Index volatility and risk** | **Annualized volatility (%)** | | | | | **Annualized Sharpe ratio[2]** | | | | |
| STOXX Global 1800 Minimum Variance Index | 12.8 | 12.9 | 14.4 | 13.3 | 16.2 | N/A | N/A | 0.6 | 1.5 | 0.8 |
| STOXX Global 1800 Index | 11.5 | 15.9 | 17.7 | 17.6 | 20.5 | N/A | N/A | 1.0 | 1.2 | 0.7 |
| **Index to benchmark** | **Correlation** | | | | | **Tracking error (%)** | | | | |
| STOXX Global 1800 Minimum Variance Index | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 6.4 | 7.0 | 7.8 | 7.9 | 8.0 |
| **Index to benchmark** | **Beta** | | | | | **Annualized information ratio** | | | | |
| STOXX Global 1800 Minimum Variance Index | 1.0 | 0.7 | 0.7 | 0.7 | 0.7 | -3.9 | -2.7 | -1.2 | -0.3 | -0.3 |

[1] For information on data calculation, please refer to STOXX calculation reference guide.
[2] Based on EURIBOR1M

*(JPY, gross return), all data as of Jul. 31, 2023*

**STOXX | QONTIGO**

**STOXX Ltd. is part of Qontigo**

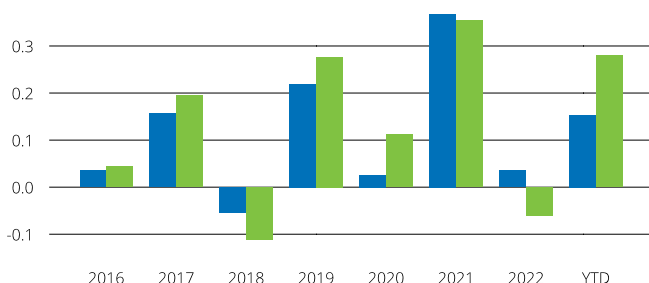# MINIMUM VARIANCE
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## Fundamentals (for last 12 months)

| Index | Price/earnings incl. negative | | Price/earnings excl. negative | | Price/ book | Dividend yield (%) [3] | Price/ sales | Price/ cash flow |
|---|---|---|---|---|---|---|---|---|
| | Trailing | Projected | Trailing | Projected | Trailing | Trailing | Trailing | Trailing |
| STOXX Global 1800 Minimum Variance Index | 21.9 | 18.8 | 21.7 | 18.6 | 2.6 | 2.7 | 1.8 | 14.4 |
| STOXX Global 1800 Index | 22.5 | 18.7 | 20.1 | 18.4 | 0.1 | 2.6 | 2.0 | 9.8 |

## Performance and annual returns[4]
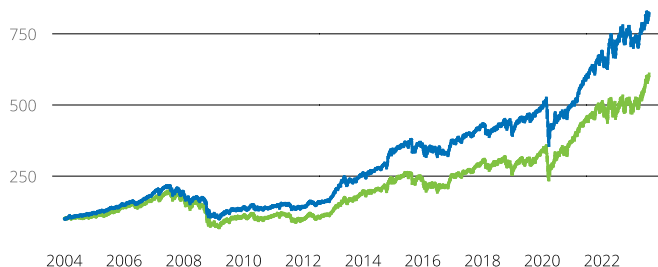


— STOXX® Global 1800 Minimum Variance Index   — STOXX® Global 1800 Index



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## Methodology

On the basis of the underlying index, a covariance matrix is set up by determining the correlation between each component and specific factors. Using Axioma's factor model, the variance-covariance structure of the components is determined, which is then minimized with respect to applicable constraints. The constraints applied cover capping, effective number of assets, rebalancing and turnover, country/industry exposure and other factor exposures, such as growth, value, short-/mid-term momentum, leverage, etc. The full list of factors including the requirements to be met can be accessed in our Index rulebook:
http://www.stoxx.com/indices/rulebooks.html

## Versions and symbols

| Index | | ISIN | Symbol | Bloomberg | Reuters |
|---|---|---|---|---|---|
| Gross Return | EUR | CH0180138346 | SAW1MVGR | SAW1MVGR | .SAW1MVGR |
| Net Return | EUR | CH0180138189 | SAW1MVR | SAW1MVR INDEX | .SAW1MVR |
| Net Return | EUR | CH0180138189 | SAW1MVR | SAW1MVR INDEX | .SAW1MVR |
| Price | EUR | CH0180138023 | SAW1MVP | SAW1MVP INDEX | .SAW1MVP |
| Price | EUR | CH0180138023 | SAW1MVP | SAW1MVP INDEX | .SAW1MVP |
| Gross Return | JPY | CH0225159604 | SAW1MVJG | | .SAW1MVJG |
| Net Return | JPY | CH0225159612 | SAW1MVJN | | .SAW1MVJN |
| Price | JPY | CH0225159620 | SAW1MVJP | | .SAW1MVJP |
| Gross Return | USD | CH0180138825 | SAW1MVGV | SAW1MVGV | .SAW1MVGV |
| Net Return | USD | CH0180138668 | SAW1MVV | SAW1MVV INDEX | .SAW1MVV |

Complete list available here: www.stoxx.com/data/vendor_codes.html

## Quick facts

| | |
|---|---|
| Weighting | Optimization |
| Cap factor | 4.5% / 8% / 35% |
| No. of components | Variable |
| Review frequency | Quarterly (Mar., Jun., Sep., Dec.) |

To learn more about the inception date, the currency, the calculation hours and historical values, please see our data vendor code sheet.

### BACKTESTED PERFORMANCE
This document contains index performance data based on backtesting, i.e. calculations of how the index might have performed prior to launch if it had existed using the same index methodology and based on historical constituents. Backtested performance information is purely hypothetical and is provided in this document solely for information purposes. Backtested performance does not represent actual performance and should not be interpreted as an indication of actual performance.

### CUSTOMIZATION
The index can be used as a basis for the definition of STOXX® Customized Indices, which can be tailored to specific client or mandate needs. STOXX offers a wide range of customization, in terms of component selection, weighting schemes and personalized calculation methodologies.

[3] gr. div. yield is calculated as gr. return index return minus price index return
[4] STOXX data from Jan. 02, 2004 to Jul. 31, 2023

*(JPY, gross return), all data as of Jul. 31, 2023*

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## Top 10 Components[5]

| Company | Supersector | Country | Weight (%) |
|---|---|---|---|
| ARTHUR J GALLAGHER | Insurance | United States | 6.29 |
| Costco Wholesale Corp. | Retail | United States | 4.04 |
| SWISSCOM | Telecommunications | Switzerland | 3.57 |
| HENKEL PREF | Consumer Products & Services | Germany | 3.53 |
| Oracle Corp. | Technology | United States | 3.05 |
| Marsh & McLennan Cos. | Insurance | United States | 2.92 |
| CADENCE DESIGN SYS. | Technology | United States | 2.60 |
| Amgen Inc. | Health Care | United States | 2.29 |
| Canon Inc. | Technology | Japan | 2.25 |
| Japan Tobacco Inc. | Food, Beverage & Tobacco | Japan | 2.20 |

[5] Based on the composition as of Jul. 31, 2023