

STOXX® GLOBAL 1800 MINIMUM VARIANCE UNCONSTRAINED INDEX

Index description

The STOXX Global 1800 Minimum Variance Unconstrained 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 unconstrained version applies loosely stated constraints to seek an improved risk profile. It targets investors seeking a more optimal portfolio in terms of replicated volatility.

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.

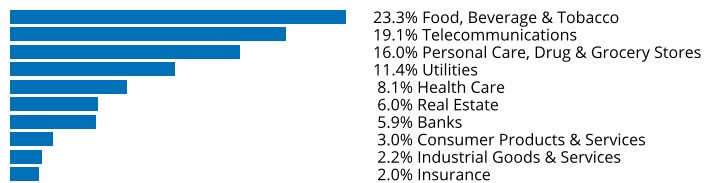
»Two versions - Constrained and Unconstrained - cater to different investor needs.

»The Unconstrained version offers a first-of-its-kind index for a true minimum variance mandate.

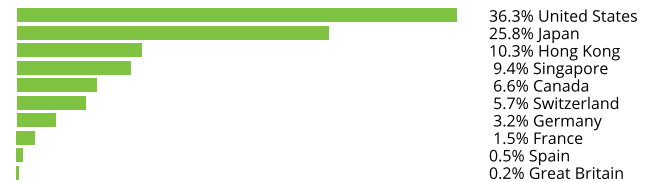
Descriptive statistics

Index	Market cap (USD bn.)		Components (USD bn.)				Component weight (%)		Turnover (%)
	Full	Free-float	Mean	Median	Largest	Smallest	Largest	Smallest	Last 12 months
STOXX Global 1800 Minimum Variance Unconstrained Index	N/A	103.2	0.7	0.2	4.0	0.0	3.8	0.0	57.8
STOXX Global 1800 Index	59,488.6	53,922.1	30.0	10.4	2,655.1	0.4	4.9	0.0	3.1

Supersector weighting (top 10)



Country weighting



Risk and return figures¹

Index returns	Return (%)					Annualized return (%)				
	Last month	YTD	1Y	3Y	5Y	Last month	YTD	1Y	3Y	5Y
STOXX Global 1800 Minimum Variance Unconstrained Index	-5.7	0.0	-3.7	17.6	24.3	N/A	N/A	-3.7	5.6	4.5
STOXX Global 1800 Index	-1.1	8.4	2.5	36.7	47.2	N/A	N/A	2.6	11.1	8.1
Index volatility and risk	Annualized volatility (%)					Annualized Sharpe ratio ²				
STOXX Global 1800 Minimum Variance Unconstrained Index	5.9	7.0	10.1	9.7	12.8	N/A	N/A	-0.6	0.5	0.3
STOXX Global 1800 Index	10.7	12.4	17.9	16.0	18.1	N/A	N/A	0.0	0.6	0.4
Index to benchmark	Correlation					Tracking error (%)				
STOXX Global 1800 Minimum Variance Unconstrained Index	0.1	0.4	0.7	0.7	0.8	11.4	11.3	13.1	11.4	10.8
Index to benchmark	Beta					Annualized information ratio				
STOXX Global 1800 Minimum Variance Unconstrained Index	0.1	0.2	0.4	0.4	0.6	-4.8	-1.8	-0.6	-0.6	-0.4

¹ For information on data calculation, please refer to STOXX calculation reference guide.

² Based on EURIBOR1M

(USD, gross return), all data as of May 31, 2023

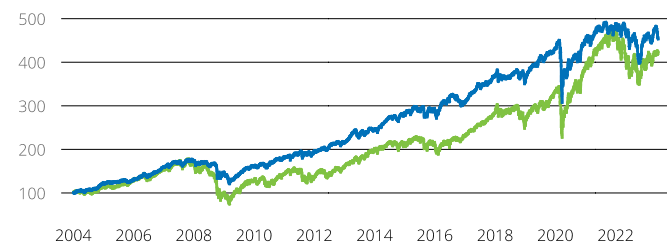
MINIMUM VARIANCE

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Fundamentals (for last 12 months)

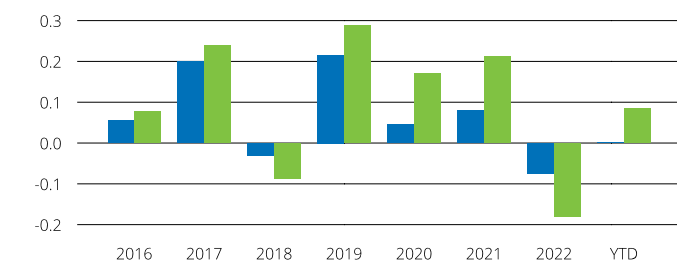
Index	Price/earnings incl. negative		Price/earnings excl. negative		Price/ book	Dividend yield (%) ³	Price/ sales	Price/ cash flow
	Trailing	Projected	Trailing	Projected	Trailing	Trailing	Trailing	Trailing
STOXX Global 1800 Minimum Variance Unconstrained Index	17.6	15.9	17.5	15.8	1.7	3.3	1.6	0.8
STOXX Global 1800 Index	22.3	17.2	18.6	16.9	0.1	2.2	1.8	6.0

Performance and annual returns⁴



— STOXX® Global 1800 Minimum Variance Unconstrained Index

— STOXX® Global 1800 Index



■ STOXX® Global 1800 Minimum Variance Unconstrained Index

■ STOXX® Global 1800 Index

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 individual capping, effective number of assets, rebalancing and turnover. 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	CH0180139336	SAW1UNGR	SAW1UNGR	.SAW1UNGR
Net Return EUR	CH0180139179	SAW1UNR	SAW1UNR INDEX	.SAW1UNR
Net Return EUR	CH0180139179	SAW1UNR	SAW1UNR INDEX	.SAW1UNR
Price EUR	CH0180139013	SAW1UNP	SAW1UNP INDEX	.SAW1UNP
Price EUR	CH0180139013	SAW1UNP	SAW1UNP INDEX	.SAW1UNP
Gross Return JPY	CH0225160636	SAW1UNJG	SAW1UNJG INDEX	.SAW1UNJG
Net Return JPY	CH0225160644	SAW1UNJN		.SAW1UNJN
Price JPY	CH0225160651	SAW1UNJP		.SAW1UNJP
Gross Return USD	CH0180139815	SAW1UNGV	SAW1UNGV	.SAW1UNGV
Net Return USD	CH0180139658	SAW1UNV	SAW1UNV INDEX	.SAW1UNV

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	Monthly

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

CONTACT DETAILS

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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 May 31, 2023

(USD, gross return), all data as of May 31, 2023

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Top 10 Components⁵

Company	Supersector	Country	Weight (%)
Japan Tobacco Inc.	Food, Beverage & Tobacco	Japan	3.85
Church & Dwight Co.	Personal Care, Drug & Grocery Stores	United States	3.72
SWISSCOM	Telecommunications	Switzerland	3.58
Hershey Co.	Food, Beverage & Tobacco	United States	3.57
Uni-Charm Corp.	Personal Care, Drug & Grocery Stores	Japan	3.39
Singapore Telecommunications L	Telecommunications	Singapore	3.26
Oversea-Chinese Banking Corp.	Banks	Singapore	3.18
BCE Inc.	Telecommunications	Canada	3.17
Lamb Weston Holdings Inc.	Food, Beverage & Tobacco	United States	3.12
Sun Hung Kai Properties Ltd.	Real Estate	Hong Kong	3.11

⁵ Based on the composition as of May 31, 2023