STOXX® GLOBAL 1800 EX USA MINIMUM VARIANCE UNCONSTRAINED INDEX

Index description

The STOXX® Global 1800 ex USA Minimum Variance Unconstrained index weights the components of the underlying STOXX Global 1800 ex USA 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.
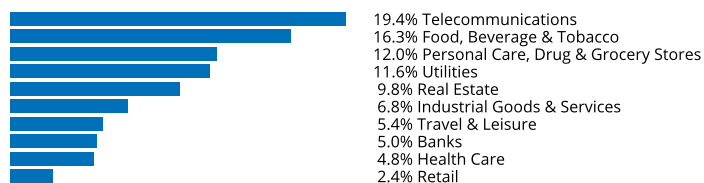
»Two versions - Constrained and Unconstrained - cater to different investor needs.

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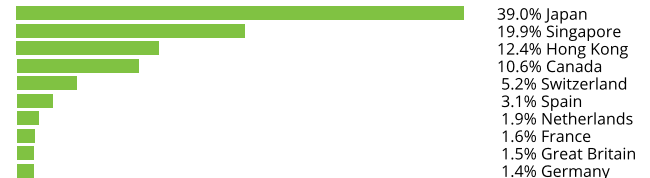
Descriptive statistics

Index	Market cap (EUR bn.)			Components (EUR bn.)			Component weight (%)		Turnover (%)
	Full	Free-float	Mean	Median	Largest	Smallest	Largest	Smallest	Last 12 months
STOXX Global 1800 ex USA Minimum Variance Unconstrained Index	N/A	97.7	0.4	0.2	4.6	0.0	4.7	0.0	60.2
STOXX Global 1800 ex USA Index	21,143.8	17,171.1	13.8	5.1	294.3	1.3	1.7	0.0	3.2

Supersector weighting (top 10)

19.4% Telecommunications
16.3% Food, Beverage & Tobacco
12.0% Personal Care, Drug & Grocery Stores
11.6% Utilities
9.8% Real Estate
6.8% Industrial Goods & Services
5.4% Travel & Leisure
5.0% Banks
4.8% Health Care
2.4% Retail

Country weighting

39.0% Japan
19.9% Singapore
12.4% Hong Kong
10.6% Canada
5.2% Switzerland
3.1% Spain
1.9% Netherlands
1.6% France
1.5% Great Britain
1.4% Germany

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 ex USA Minimum Variance Unconstrained Index	-1.4	-1.6	-4.8	1.8	-1.6	N/A	N/A	-4.9	0.6	-0.3
STOXX Global 1800 ex USA Index	2.1	6.5	8.9	23.8	18.0	N/A	N/A	9.0	7.4	3.4
Index volatility and risk			**Annualized volatility (%)**					**Annualized Sharpe ratio[2]**		
STOXX Global 1800 ex USA Minimum Variance Unconstrained Index	6.4	8.1	8.3	8.3	10.9	N/A	N/A	-0.8	0.1	-0.0
STOXX Global 1800 ex USA Index	9.9	8.8	10.7	11.9	14.1	N/A	N/A	0.5	0.6	0.2
Index to benchmark			**Correlation**					**Tracking error (%)**		
STOXX Global 1800 ex USA Minimum Variance Unconstrained Index	0.8	0.4	0.5	0.7	0.8	6.1	9.4	10.0	9.0	8.3
Index to benchmark			**Beta**					**Annualized information ratio**		
STOXX Global 1800 ex USA Minimum Variance Unconstrained Index	0.5	0.3	0.4	0.5	0.6	-6.8	-1.7	-1.4	-0.8	-0.5

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

(EUR, price), all data as of Jun. 30, 2023

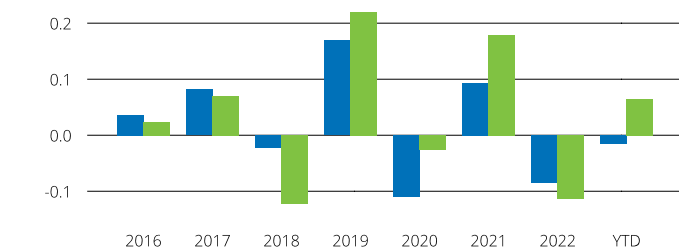# STRATEGY INDICES
STOXX® GLOBAL 1800 EX USA MINIMUM VARIANCE

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 ex USA Minimum Variance Unconstrained Index	11.2	10.4	10.9	10.3	1.0	3.0	0.9	0.2
STOXX Global 1800 ex USA Index	15.7	14.0	14.3	13.8	1.7	2.9	1.3	5.5

Performance and annual returns[4]
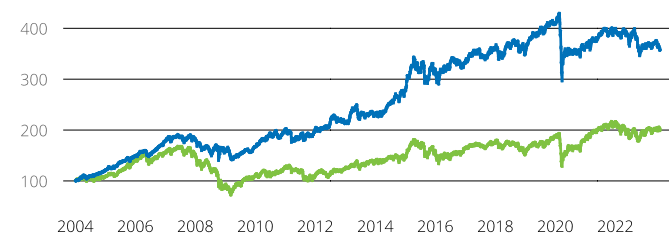
— STOXX® Global 1800 ex USA Minimum Variance Unconstrained Index

— STOXX® Global 1800 ex USA Index

■ STOXX® Global 1800 ex USA Minimum Variance Unconstrained Index

■ STOXX® Global 1800 ex USA 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	CH0283781471	SXGXSUGR		.SXGXSUGR
Net Return	EUR	CH0283781539	SXGXSUR		.SXGXSUR
Net Return	EUR	CH0283781539	SXGXSUR		.SXGXSUR
Price	EUR	CH0283781562	SXGXSUP		.SXGXSUP
Price	EUR	CH0283781562	SXGXSUP		.SXGXSUP
Gross Return	USD	CH0283781570	SXGXSUGV	SXGXSUGV INDEX	.SXGXSUGV
Net Return	USD	CH0283781596	SXGXSUV	SXGXSUV INDEX	.SXGXSUV
Net Return	USD	CH0283781596	SXGXSUV	SXGXSUV INDEX	.SXGXSUV
Price	USD	CH0283781620	SXGXSUL	SXGXSUL INDEX	.SXGXSUL
Price	USD	CH0283781620	SXGXSUL	SXGXSUL INDEX	.SXGXSUL

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.

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 customization in almost unlimited forms for example in terms of component selection, weighting schemes and personalized calculation methodologies.

[3] Net dividend yield is calculated as net return index return minus price index return
[4] STOXX data from Jan. 02, 2004 to Jun. 30, 2023

(EUR, price), all data as of Jun. 30, 2023

STRATEGY INDICES

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Top 10 Components[5]

Company	Supersector	Country	Weight (%)
Singapore Telecommunications L	Telecommunications	Singapore	4.69
Metro Inc. Cl A	Personal Care, Drug & Grocery Stores	Canada	2.49
SWISSCOM	Telecommunications	Switzerland	2.47
Uni-Charm Corp.	Personal Care, Drug & Grocery Stores	Japan	2.20
SembCorp Industries Ltd.	Utilities	Singapore	2.11
Sun Hung Kai Properties Ltd.	Real Estate	Hong Kong	2.07
BCE Inc.	Telecommunications	Canada	1.95
TELUS	Telecommunications	Canada	1.93
Oversea-Chinese Banking Corp.	Banks	Singapore	1.93
Nissin Foods Holdings Co. Ltd.	Food, Beverage & Tobacco	Japan	1.91

[5] Based on the composition as of Jun. 30, 2023