MINIMUM VARIANCE

STOXX® GLOBAL 1800 EX AUSTRALIA MINIMUM VARIANCE UNCONSTRAINED INDEX

Index description

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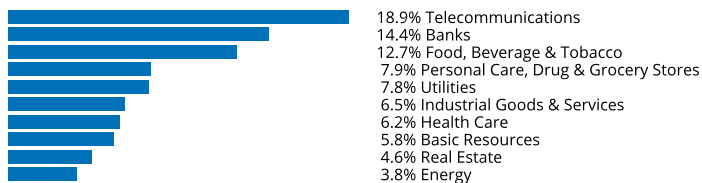
»Two versions - Constrained and Unconstrained - cater to different investor needs.

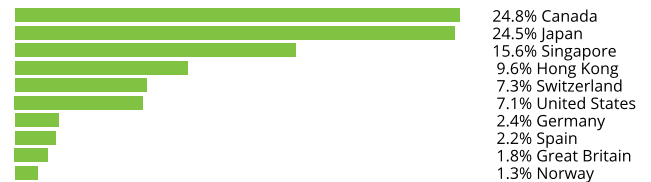»The Unconstrained version offers a first-of-its-kind index for a true minimum variance mandate.

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 ex Australia Minimum Variance Unconstrained Index	N/A	103.6	0.5	0.1	4.4	0.0	4.3	0.0	60.2
STOXX Global 1800 ex Australia Index	58,176.9	52,682.3	31.1	11.0	2,655.1	0.4	5.0	0.0	3.1

Supersector weighting (top 10)

18.9% Telecommunications
14.4% Banks
12.7% Food, Beverage & Tobacco
7.9% Personal Care, Drug & Grocery Stores
7.8% Utilities
6.5% Industrial Goods & Services
6.2% Health Care
5.8% Basic Resources
4.6% Real Estate
3.8% Energy

Country weighting

24.8% Canada
24.5% Japan
15.6% Singapore
9.6% Hong Kong
7.3% Switzerland
7.1% United States
2.4% Germany
2.2% Spain
1.8% Great Britain
1.3% Norway

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 Australia Minimum Variance Unconstrained Index	-5.2	1.0	-3.4	11.6	8.1	N/A	N/A	-3.4	3.8	1.6
STOXX Global 1800 ex Australia Index	-1.1	8.4	2.2	34.7	44.0	N/A	N/A	2.3	10.5	7.6
Index volatility and risk					Annualized volatility (%)				Annualized Sharpe ratio[2]	
STOXX Global 1800 ex Australia Minimum Variance Unconstrained Index	7.8	8.1	11.7	10.9	13.1	N/A	N/A	-0.5	0.3	0.1
STOXX Global 1800 ex Australia Index	10.7	12.5	18.1	16.2	18.3	N/A	N/A	-0.0	0.6	0.4
Index to benchmark					Correlation				Tracking error (%)	
STOXX Global 1800 ex Australia Minimum Variance Unconstrained Index	0.3	0.4	0.7	0.7	0.8	11.1	11.8	13.5	11.6	11.1
Index to benchmark					Beta				Annualized information ratio	
STOXX Global 1800 ex Australia Minimum Variance Unconstrained Index	0.2	0.3	0.4	0.5	0.6	-4.4	-1.6	-0.6	-0.7	-0.6

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

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

STOXX Ltd. is part of Qontigo

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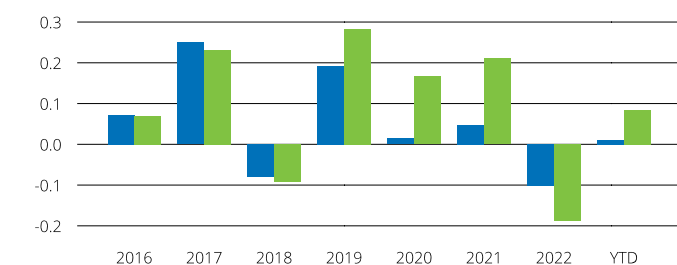# STOXX® GLOBAL 1800 EX AUSTRALIA MINIMUM VARIANCE

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 Australia Minimum Variance Unconstrained Index	15.0	14.3	14.6	14.3	1.5	2.9	1.3	4.7
STOXX Global 1800 ex Australia Index	22.5	17.2	18.7	16.9	0.1	1.6	1.8	5.9

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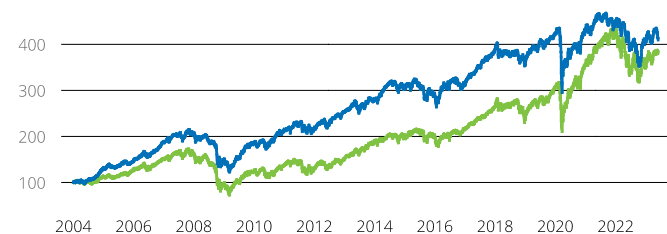
— STOXX® Global 1800 ex Australia Minimum Variance Unconstrained Index

— STOXX® Global 1800 ex Australia Index

■ STOXX® Global 1800 ex Australia Minimum Variance Unconstrained Index

■ STOXX® Global 1800 ex Australia 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	AUD	CH0225161527	SGAAUNG	SGAAUNG INDEX	.SGAAUNG
Gross Return	AUD	CH0225161527	SGAAUNG	SGAAUNG INDEX	.SGAAUNG
Net Return	AUD	CH0225161535	SGAAUNN	SGAAUNN INDEX	.SGAAUNN
Net Return	AUD	CH0225161535	SGAAUNN	SGAAUNN INDEX	.SGAAUNN
Price	AUD	CH0225161543	SGAAUNP		.SGAAUNP
Price	AUD	CH0225161543	SGAAUNP		.SGAAUNP
Gross Return	EUR	CH0225161394	SGAEUNG		.SGAEUNG
Gross Return	EUR	CH0225161394	SGAEUNG		.SGAEUNG
Net Return	EUR	CH0225161444	SGAEUNN		.SGAEUNN
Net Return	EUR	CH0225161444	SGAEUNN		.SGAEUNN

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 a wide range of customization, 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 May 31, 2023

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

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Top 10 Components[5]

Company	Supersector	Country	Weight (%)
SWISSCOM	Telecommunications	Switzerland	4.28
Singapore Telecommunications L	Telecommunications	Singapore	4.08
Fortis Inc.	Utilities	Canada	3.89
Japan Tobacco Inc.	Food, Beverage & Tobacco	Japan	3.84
BCE Inc.	Telecommunications	Canada	3.80
Oversea-Chinese Banking Corp.	Banks	Singapore	3.73
DBS Group Holdings Ltd.	Banks	Singapore	3.17
National Bank of Canada	Banks	Canada	2.85
Uni-Charm Corp.	Personal Care, Drug & Grocery Stores	Japan	2.79
United Overseas Bank Ltd.	Banks	Singapore	2.73

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