

STOXX® GLOBAL 1800 EX JAPAN MINIMUM VARIANCE INDEX

Index description

The STOXX Global 1800 ex Japan Minimum Variance index weights the components of the underlying STOXX Global 1800 ex Japan 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.).

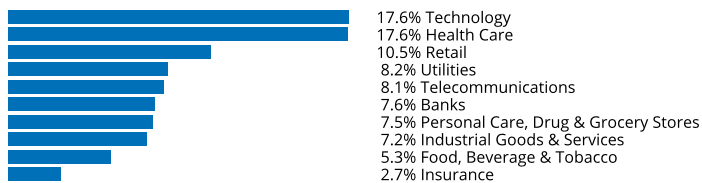
»Capping constraints are applied in accordance with the Undertakings for Collective Investment in Transferable Securities (UCITS) directive to ensure that funds can easily track the index.

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

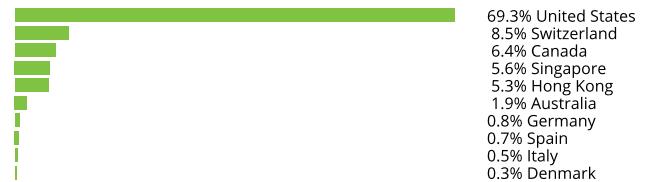
Descriptive statistics

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 ex Japan Minimum Variance Index	N/A	14,721.5	125.8	62.3	889.3	5.0	6.0	0.0	30.1
STOXX Global 1800 ex Japan Index	7,637,470.4	6,959,346.9	4978.1	1820.5	370,958.9	52.3	5.3	0.0	3.2

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 ex Japan Minimum Variance Index	-1.0	6.5	7.1	63.1	86.8	N/A	N/A	7.1	17.9	13.5
STOXX Global 1800 ex Japan Index	1.3	14.8	11.2	80.5	95.2	N/A	N/A	11.3	21.9	14.5
Index volatility and risk	Annualized volatility (%)					Annualized Sharpe ratio ²				
STOXX Global 1800 ex Japan Minimum Variance Index	14.0	14.7	16.5	14.6	17.5	N/A	N/A	0.3	1.1	0.7
STOXX Global 1800 ex Japan Index	18.9	18.6	21.1	19.3	22.0	N/A	N/A	0.4	1.0	0.6
Index to benchmark	Correlation					Tracking error (%)				
STOXX Global 1800 ex Japan Minimum Variance Index	1.0	0.9	0.9	0.9	0.9	7.1	8.1	9.1	8.5	8.6
Index to benchmark	Beta					Annualized information ratio				
STOXX Global 1800 ex Japan Minimum Variance Index	0.7	0.7	0.7	0.7	0.7	-3.9	-2.4	-0.6	-0.5	-0.2

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

² Based on EURIBOR1M

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

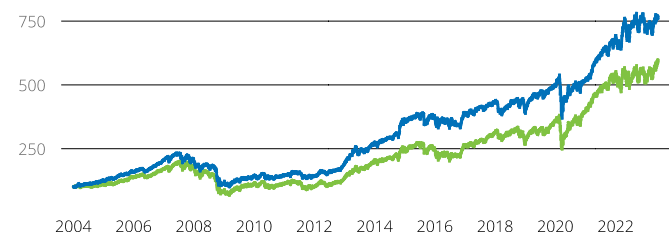
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Fundamentals (for last 12 months)

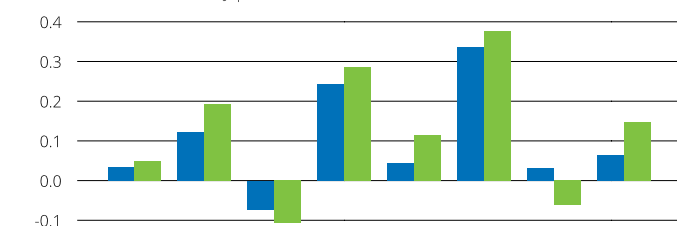
Index	Price/earnings incl. negative		Price/earnings excl. negative		Price/ book	Dividend yield (%) ³	Price/ sales	Price/ cash flow
	Trailing	Projected	Trailing	Projected	Trailing	Trailing	Trailing	Trailing
STOXX Global 1800 ex Japan Minimum Variance Index	22.0	17.1	22.0	17.1	3.1	2.8	2.2	21.2
STOXX Global 1800 ex Japan Index	23.3	17.5	19.1	17.2	0.1	2.4	2.0	5.7

Performance and annual returns⁴



— STOXX® Global 1800 ex Japan Minimum Variance Index

— STOXX® Global 1800 ex Japan Index



2016 2017 2018 2019 2020 2021 2022 YTD

■ STOXX® Global 1800 ex Japan Minimum Variance Index

■ STOXX® Global 1800 ex Japan 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 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	CH0224473345	SGXEMVG		.SGXEMVG
Gross Return EUR	CH0224473345	SGXEMVG		.SGXEMVG
Net Return EUR	CH0224473378	SGXEMVN		.SGXEMVN
Net Return EUR	CH0224473378	SGXEMVN		.SGXEMVN
Price EUR	CH0224474129	SGXEMVP		.SGXEMVP
Price EUR	CH0224474129	SGXEMVP		.SGXEMVP
Gross Return JPY	CH0224474210	SGXYMVG		.SGXYMVG
Gross Return JPY	CH0224474210	SGXYMVG		.SGXYMVG
Net Return JPY	CH0224474442	SGXYMVN		.SGXYMVN
Net Return JPY	CH0224474442	SGXYMVN		.SGXYMVN

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.

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

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

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Top 10 Components⁵

Company	Supersector	Country	Weight (%)
Costco Wholesale Corp.	Retail	United States	6.04
Johnson & Johnson	Health Care	United States	5.53
Oracle Corp.	Technology	United States	4.54
SWISSCOM	Telecommunications	Switzerland	4.07
National Bank of Canada	Banks	Canada	3.52
Oversea-Chinese Banking Corp.	Banks	Singapore	2.85
Amgen Inc.	Health Care	United States	2.63
Procter & Gamble Co.	Personal Care, Drug & Grocery Stores	United States	2.58
SS&C TECHNOLOGIES HOLDING	Technology	United States	2.58
Laboratory Corp. of America Ho	Health Care	United States	2.51

⁵ Based on the composition as of May 31, 2023