#### **MINIMUM VARIANCE**

## STOXX® JAPAN 600 MINIMUM VARIANCE **UNCONSTRAINED INDEX**

#### **Index description**

The STOXX Japan 600 Minimum Variance Unconstrained index weights the components of the underlying STOXX Japan 600 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.

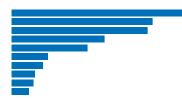
»Two versions - Constrained and Unconstrained - cater to different investor needs.

»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 Japan 600 Minimum Variance Unconstrained Index	N/A	112.0	0.8	0.2	8.5	0.0	7.6	0.0	60.1
STOXX Japan 600 Index	5,489.9	4,663.1	7.8	2.6	207.8	0.7	4.5	0.0	2.6

#### Supersector weighting (top 10)



- 21.8% Food, Beverage & Tobacco 18.0% Travel & Leisure
- 17.4% Real Estate
- 17.4% Real Estate
  17.4% Real Estate
  17.9% Telecommunications
  9.7% Industrial Goods & Services
  4.6% Personal Care, Drug & Grocery Stores
- 4.0% Utilities 2.9% Banks
- 2.8% Retail
- 2.2% Technology

#### **Country weighting**

100.0% Japan

#### Risk and return figures<sup>1</sup>

Index returns				R	eturn (%)			Anı	nualized re	turn (%)
	Last month	YTD	1Y	3Y	5Y	Last month	YTD	1Y	зү	5Y
STOXX Japan 600 Minimum Variance Unconstrained Index	3.3	3.5	3.2	-4.0	-7.2	N/A	N/A	3.2	-1.4	-1.5
STOXX Japan 600 Index	3.2	15.7	14.9	23.3	18.2	N/A	N/A	15.0	7.3	3.4
Index volatility and risk	Annualized volatility (%)  Annualized Sharpe						pe ratio <sup>2</sup>			
STOXX Japan 600 Minimum Variance Unconstrained Index	11.0	12.2	14.6	13.2	14.0	N/A	N/A	0.1	-0.2	-0.1
STOXX Japan 600 Index	12.2	15.2	18.2	17.5	17.8	N/A	N/A	0.7	0.3	0.2
Index to benchmark		Correlation Trackin					Tracking	error (%)		
STOXX Japan 600 Minimum Variance Unconstrained Index	0.7	0.8	0.8	0.8	0.8	9.1	9.2	10.0	10.5	10.7
Index to benchmark					Beta			Annualiz	ed informa	tion ratio
STOXX Japan 600 Minimum Variance Unconstrained Index	0.6	0.6	0.7	0.6	0.6	0.1	-2.2	-1.2	-0.9	-0.6

<sup>&</sup>lt;sup>1</sup> For information on data calculation, please refer to STOXX calculation reference guide

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



<sup>&</sup>lt;sup>2</sup> Based on EURIBOR1M

## STOXX® JAPAN 600 MINIMUM VARIANCE UNCONSTRAINED

#### Fundamentals (for last 12 months)

Index		Price/earnings incl. negative		Price/earnings excl. negative		Dividend yield (%) <sup>3</sup>	Price/ sales	Price/ cash flow	
	Trailing	Projected	Trailing	Projected	Trailing	Trailing	Trailing	Trailing	
STOXX Japan 600 Minimum Variance Unconstrained Index	15.3	17.3	13.3	17.1	1.4	2.8	1.0	12.1	
STOXX Japan 600 Index	15.6	14.9	14.5	14.7	1.4	2.6	1.0	14.2	

#### Performance and annual returns4



STOXX® Japan 600 Minimum Variance Unconstrained Index

STOXX® Japan 600 Index



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STOXX® Japan 600 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	CH0180139393	SA6JUNGR		.XA6JUNGR
Net Return	EUR	CH0180139237	SA6JUNR	SXA6JUNR INDEX	.SXA6JUNR
Net Return	EUR	CH0180139237	SA6JUNR	SXA6JUNR INDEX	.SXA6JUNR
Price	EUR	CH0180139070	SA6JUNP	SXA6JUNP INDEX	.SXA6JUNP
Price	EUR	CH0180139070	SA6JUNP	SXA6JUNP INDEX	.SXA6JUNP
Gross Return	JPY	CH0225791885	SA6JUNGF	SA6JUNGF INDEX	.SA6JUNGF
Net Return	JPY	CH0225791877	SA6JUNF		.SA6JUNF
Net Return	JPY	CH0225791877	SA6JUNF		.SA6JUNF
Price	JPY	CH0225791869	SA6JUNK		.SA6JUNK
Price	JPY	CH0225791869	SA6JUNK		.SA6JUNK

 $Complete\ list\ available\ here: www.stoxx.com/data/vendor\_codes.html$ 

#### **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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#### DISCI AIMER

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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 interrupted 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.

<sup>3</sup> gr. div. yield is calculated as gr. return index return minus price index return

<sup>4</sup> STOXX data from Jun. 28, 2002 to Jul. 31, 2023

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

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### Top 10 Components<sup>5</sup>

Company	Supersector	Country	Weight (%)	
MCDONALD'S HOLDINGS	Travel & Leisure	Japan	7.59	
SOFTBANK	Telecommunications	Japan	7.56	
SKYLARK HOLDINGS	Travel & Leisure	Japan	5.33	
Meiji Holdings Co. Ltd.	Food, Beverage & Tobacco	Japan	3.48	
NH FOODS	Food, Beverage & Tobacco	Japan	3.12	
Toshiba Corp.	Industrial Goods & Services	Japan	2.93	
Nissin Foods Holdings Co. Ltd.	Food, Beverage & Tobacco	Japan	2.88	
NOMURA REIT.MASTER FUND	Real Estate	Japan	2.70	
Japan Tobacco Inc.	Food, Beverage & Tobacco	Japan	2.52	
NICHIREI	Food, Beverage & Tobacco	Japan	2.49	

<sup>5</sup> Based on the composition as of Jul. 31, 2023