

STOXX ESG Indices / Underlying Eurex Futures

Overview

February 2019



Launch ESG Derivatives

Feedback market participants

General feedback

- Strong demand for ESG versions of STOXX benchmarks
- Focus on liquidity and lower the cost of trading ESG indices
- Keep it simple
- Similar risk-return profile as STOXX benchmarks
- Tier-1 ESG data provider (like Sustainalytics, CDP)
- Aligned with upcoming EU Commission regulation
- Easy to implement

Market participants Europe



Product specific feedback

- Asset managers are looking for “ESG compliant” version of STOXX Europe 600 with “standardized” set of exclusions (UN Global compact, controversial weapons, tobacco, coal)
- Positive feedback on STOXX Europe 600 aligned with “positive carbon impact benchmark” definition EU commission
- Insurance companies showed strong interest in low carbon version of EURO STOXX 50

Based on the strong demand Eurex has announced¹⁾ that the first ESG Derivatives with underlyings linked to ESG versions of STOXX European flagship indices will be launched on **Feb. 18, 2019**.

1) <https://www.eurexchange.com/exchange-en/resources/circulars/Equity-index-derivatives--Introduction-of-futures-on-STOXX--ESG-X--Low-Carbon-and-Climate-Impact-indexes/3569322>

First Eurex ESG Derivatives

Different ESG versions of STOXX European flagship indices

STOXX Europe 600 ESG-X

- Based on exclusion criteria of responsible policy of leading asset owners
- Norm-based screening (Global Compact) including Human and Labour rights, Environment and Business Ethics and Corruption
- Product Involvement screening, including controversial weapons, tobacco and thermal coal
- Aimed to reduce market risk and reputational risks
- Similar risk-return profile as STOXX Europe 600

STOXX Europe Climate Impact

- Next generation of Low Carbon indices
- Evaluates companies progress towards transitioning to low carbon economy
- Integrated CDP climate scoring methodology which includes forward-looking metrics such as carbon pricing and science-based targets
- Addressing climate risks with additional ESG screens: UN Global Compact, Controversial Weapons, Tobacco and Coal

EURO STOXX 50 Low Carbon

- New tool to address climate risks
- Lowering carbon footprint of EURO STOXX 50 with approx. 50%
- Transparent weighting scheme lowering the carbon footprint by applying carbon intensity Z-scores, no exclusions
- Aligned with “Low Carbon Benchmark” definition (article 23a) provided in proposal of EU Commission amending regulation 2016/1011
- Similar risk-return profile as EURO STOXX 50



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STOXX Europe 600 ESG-X

STOXX Europe 600 ESG-X

Norms-based screening and controversial weapons

Norms-based screening

Norms-based screening uses the 10 principles of UN Global Compact for responsible business and covers the following areas:

- **Human rights**
- **Labour rights**
- **Environment**
- **Business ethics and anti-corruption.**

The principles are based on conventions as UN Universal Declaration of Human Rights, International Labour Organization Declaration on Fundamental Principles and Rights at Work, Rio Declaration on Environment and Development, and the UN Convention Against Corruption

Controversial Weapons

International conventions prohibit companies' involvement in the development, production, maintenance, use, distribution, stockpiling, transport or trade of banned weapons or their key components. This includes:

- **Anti-personnel mines and cluster bombs**
- **Nuclear weapons and depleted uranium weapons**
- **Biological and chemical weapons**
- **White Phosphorous**

STOXX Europe 600 ESG-X

Product involvement

Product Involvement

Screening of companies that manufacture and/or sell products or services that risk harming people or the environment. These include the following:

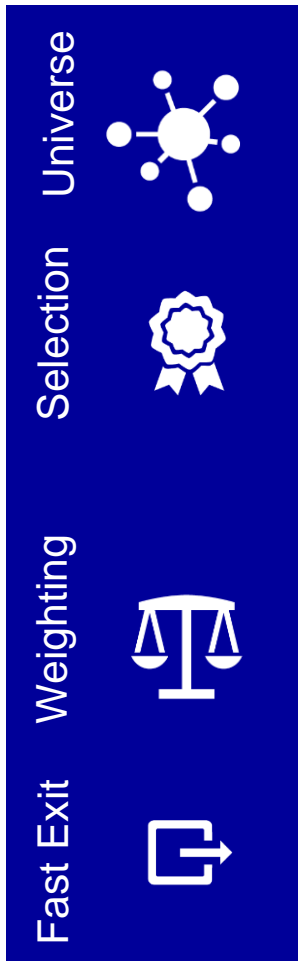
- **Tobacco Production**
- **Thermal Coal**
 - **Mining and exploration**
 - **Power Generating Capacity:**
 - Coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

Leading institutions world-wide started to exclude companies involved in Tobacco and/or Coal, for example:

- Pension funds/Insurances: Norwegian SWF, FRR, PGGM, APG, AP4, AP7, Allianz, MunichRe, AXA, California Public Employees Retirement, NZ Super, Calpers
- Asset Managers: BNPP AM, Robeco, Nordea, SEB, SwedbankRobur
- Retail networks: ABN AMRO

STOXX Europe 600 ESG-X

Norms-based, Controversial Weapons, Tobacco and Thermal Coal Screening



- STOXX® Europe 600
- Exclusion criteria:
 - UN Global Compact Compliance Principles
 - Involvement in Controversial Weapons
 - Anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus
 - Tobacco Producers (0% revenue threshold)
 - Thermal Coal
 - >25% revenue threshold from thermal coal mining and exploration
 - >25% power generating capacity (coal-fired electricity, heat or steam generation capacity / thermal coal electricity production)
- Free Float Market Cap
- In case a company which is an index constituent increases in its ESG-risk level to level 5 (non-compliant with Global Compact), the respective constituent will be deleted from the index.

STOXX Europe 600 ESG-X

Risk and return overview

Risk and return characteristics¹⁾²⁾

	STOXX Europe 600 ESG-X	STOXX EUROPE 600
Return (overall)	7.5%	7.3%
Return 1y	-10.5%	-10.3%
Return 3y	3.8%	4.0%
Return 5y	4.4%	4.4%
Volatility 1y	13.1%	13.0%
Volatility 3y	14.5%	14.4%
Volatility 5y	15.7%	15.7%
Sharpe Ratio (overall) 3)	0,56	0,55
Max. Drawdown (overall)	-25.05%	-24.93%
Tracking error (overall)	0.50%	

Number of Constituents	579	600
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Index performance¹⁾



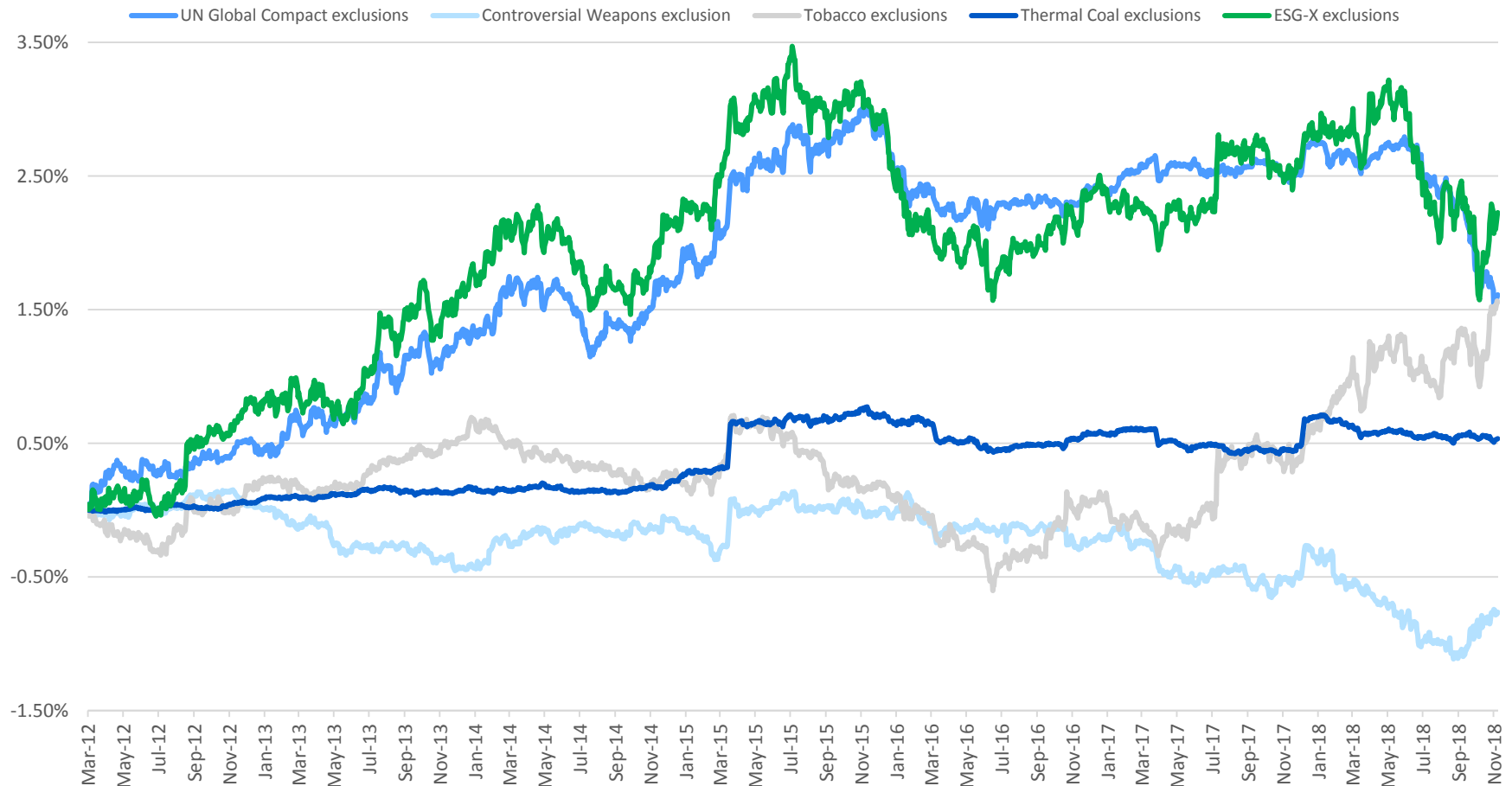
1) Source: STOXX, EUR GR daily data, Mar. 19, 2012 to Jan. 08, 2019.

2) Annualised: returns, volatility, Sharpe ratio and tracking error figures used. Relative figures calculated against STOXX EUROPE 600 Index. Overall: Mar. 19, 2012 to Jan. 08, 2019; 1y: Jan. 08, 2018 to Jan. 08, 2019; 3y: Jan. 08, 2016 to Jan. 08, 2019; 5y: Jan. 08, 2014 to Jan. 08, 2019.

3) EONIA rate used as proxy for riskless returns.

STOXX Europe 600 ESG-X

Cumulative impact of exclusions on total returns



1) Source: STOXX. Data as of data as of Nov. 27, 2018.

2) Please refer to the research paper: [STOXX® Europe 600 ESG-X Index - Analyzing ESG Exclusions](#)

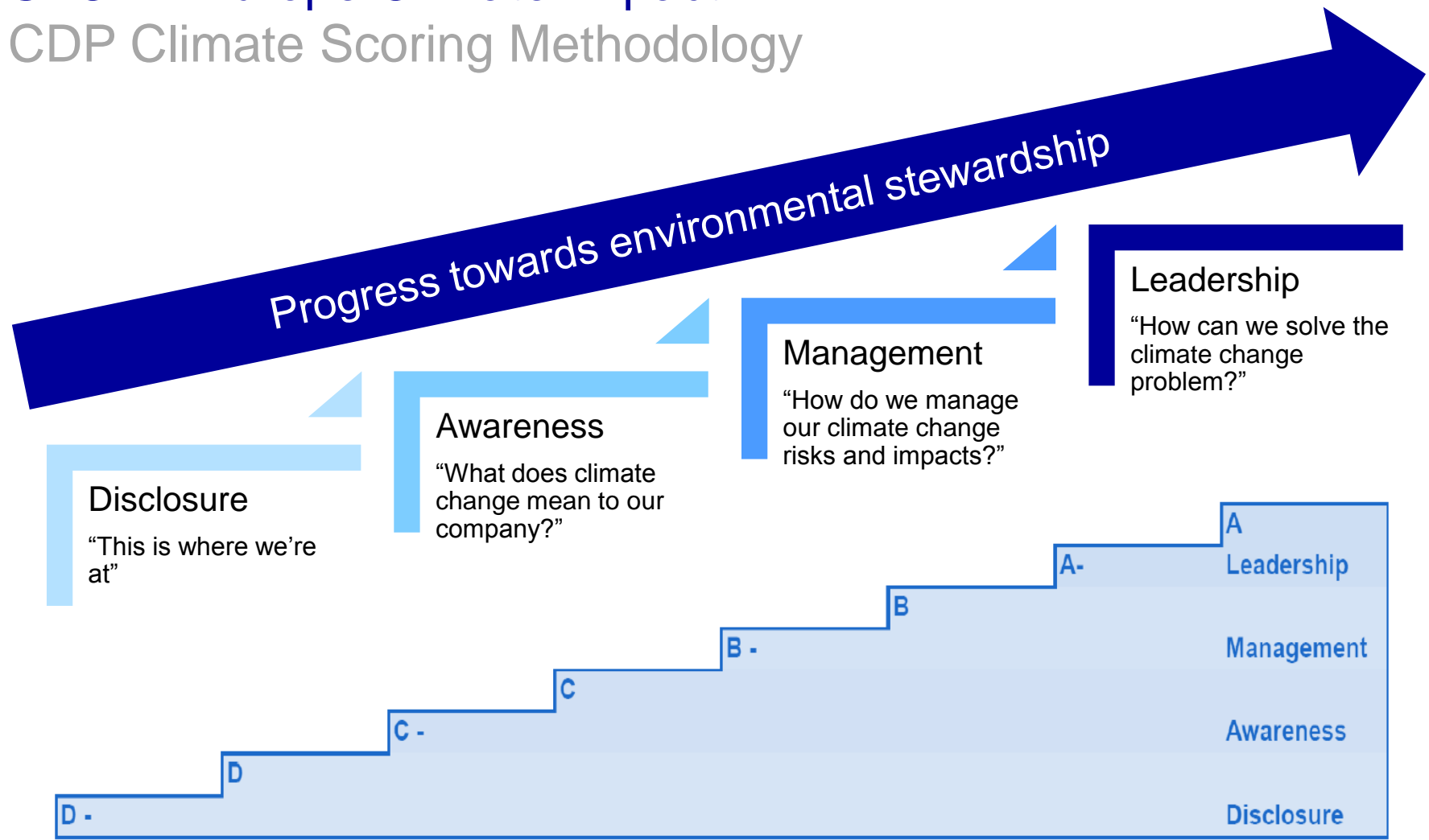


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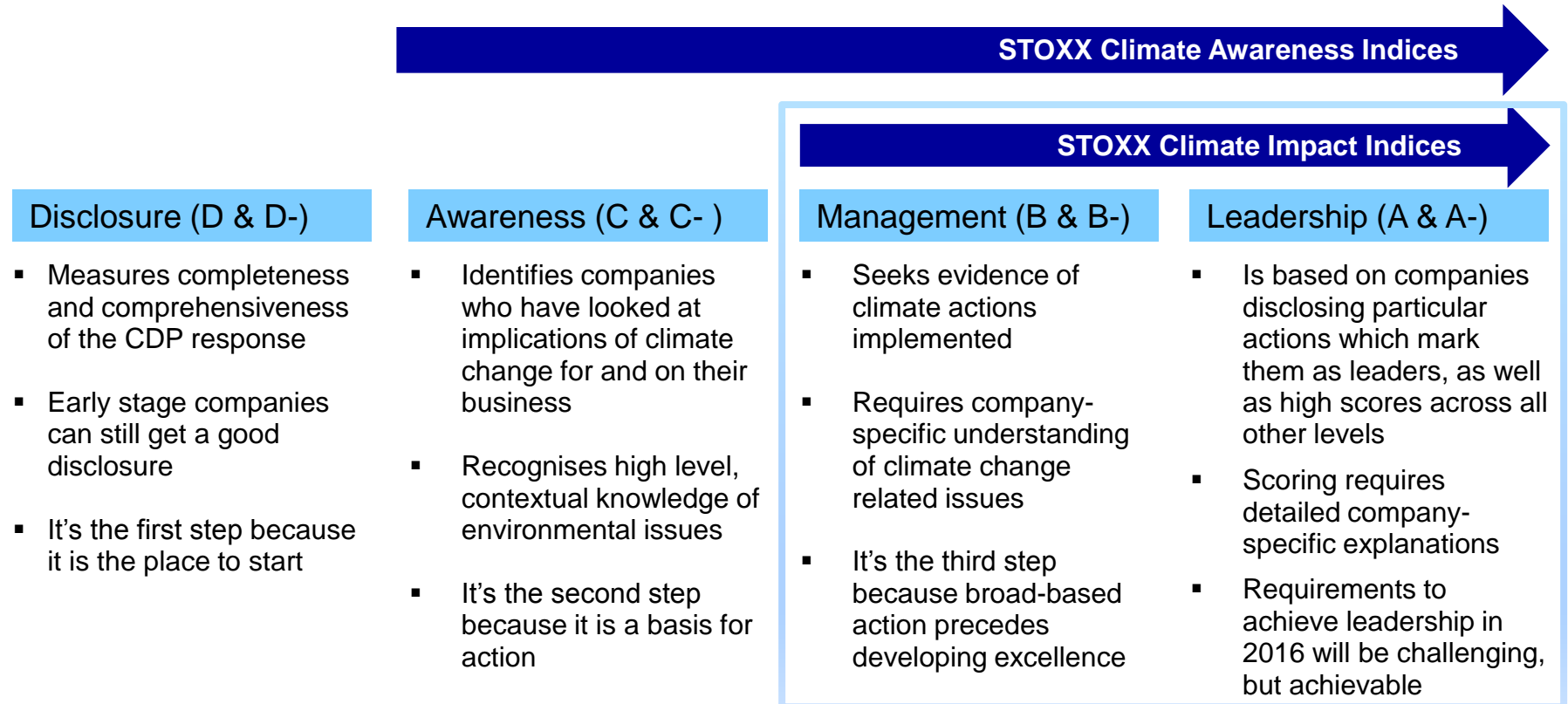
STOXX Europe Climate Impact

STOXX Europe Climate Impact

CDP Climate Scoring Methodology



CDP Scoring Levels



CDP Climate Change scoring measures companies progress towards environmental stewardship. The scoring methodology includes forward-looking metrics such as carbon pricing and science-based targets. STOXX Climate Impact indices select companies with climate change scoring Management and Leadership levels. These companies show understanding of the impact of climate change on their business and all have implemented “actions” to address climate change risk and opportunities in their organisation.

STOXX® Europe Climate Impact Ex Global Compact, Controversial Weapons & Tobacco Index

Description

STOXX Climate Impact Indices

- Unique concept utilizing forward-looking indicators based on CDP research
- Contains companies with a CDP Performance Band Score of between A (Leadership) and B- (Management)
- Constituents focus on solving the climate problem (A to A-: “Leaders”) and managing climate change risks and impact (B to B-: “Management”)
- STOXX® Europe 600
- Exclude:
 - ICB subsector Coal (1771)
 - UN Global Compact Violations
 - Controversial Weapons
 - ICB Sector Tobacco (3785)
- Select all stocks from the Universe with a CDP Climate Scoring of A to B- (Leadership and Management)
- Price weighted:
 - Free-float market cap multiplied by the corresponding Z-score carbon intensity factor of each constituent with constituent capping at 5%
 - Overweight stocks with lower carbon intensities, underweight those with higher emissions

Universe



Selection



Weighting



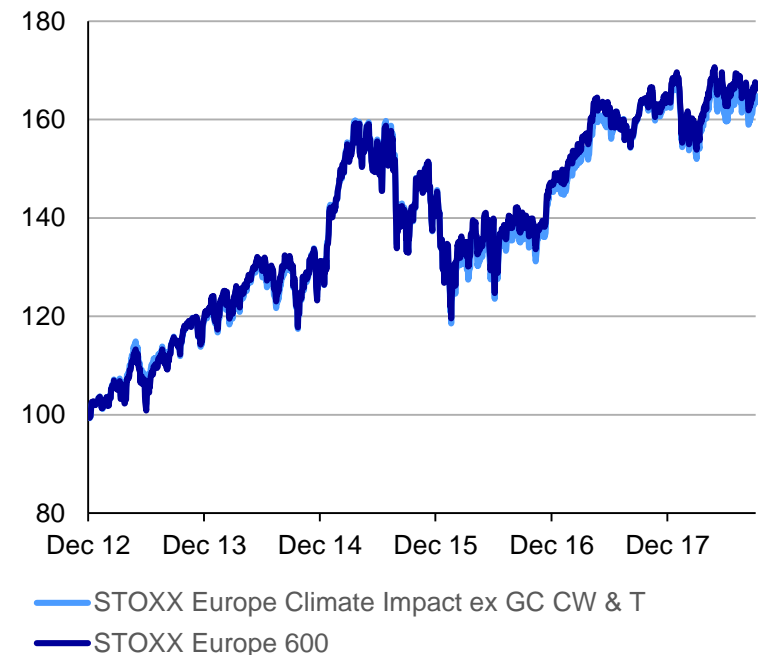
STOXX® Europe Climate Impact Ex Global Compact, Controversial Weapons & Tobacco Index

Risk and return overview

Risk and return characteristics¹⁾²⁾

	STOXX Europe Climate Impact Ex GC, CW & Tob	STOXX Europe 600
Return (overall)	7.1%	7.1%
Return 1y	-9.7%	-10.3%
Return 3y	4.0%	4.0%
Return 5y	4.5%	4.4%
Volatility 1y	12.6%	13.0%
Volatility 3y	14.4%	14.4%
Volatility 5y	15.7%	15.7%
Sharpe Ratio (overall)	0.54	0.54
Max. Drawdown (overall)	-25.8%	-24.9%
Tracking error (overall)	1.6%	
Number of Constituents	262	600

Index performance¹⁾



The STOXX Europe Climate Impact index has a 53.3% lower carbon footprint than the STOXX Europe 600 index

1) Source: STOXX, EUR GR daily data, Dec. 24, 2012 to Jan. 08, 2019.

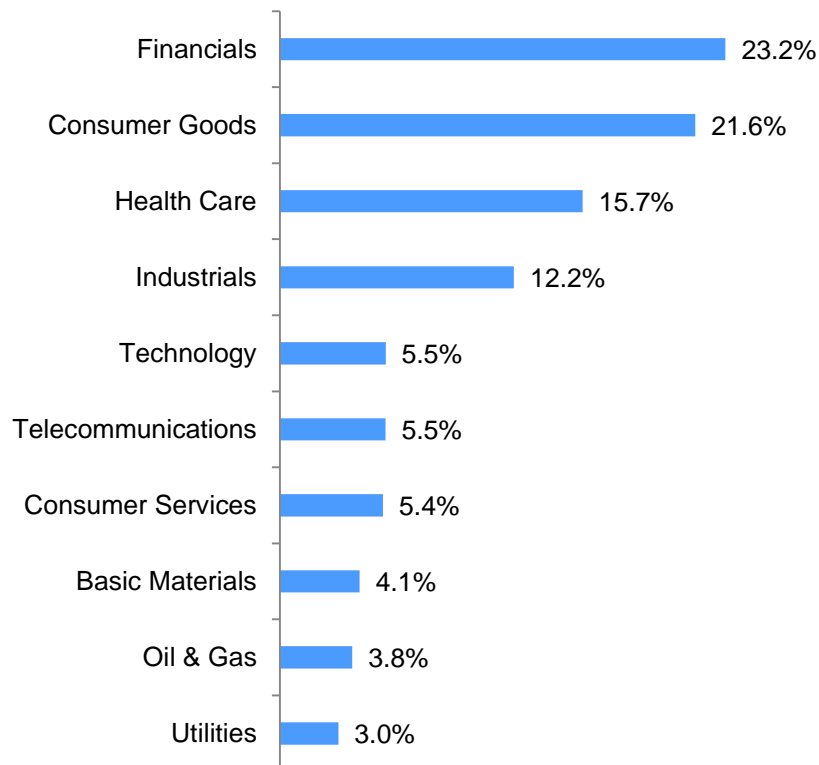
2) Annualised: returns, volatility, Sharpe ratio and tracking error figures used. Relative figures calculated against STOXX Europe 600 Index.
Overall: Dec. 19, 2011 to Jan. 08, 2019; 1y: Jan. 08, 2018 to Jan. 08, 2019; 3y: Jan. 08, 2016 to Jan. 08, 2019; 5y: Jan. 08, 2014 to Jan. 08, 2019.

3) EONIA rate used as proxy for riskless returns.

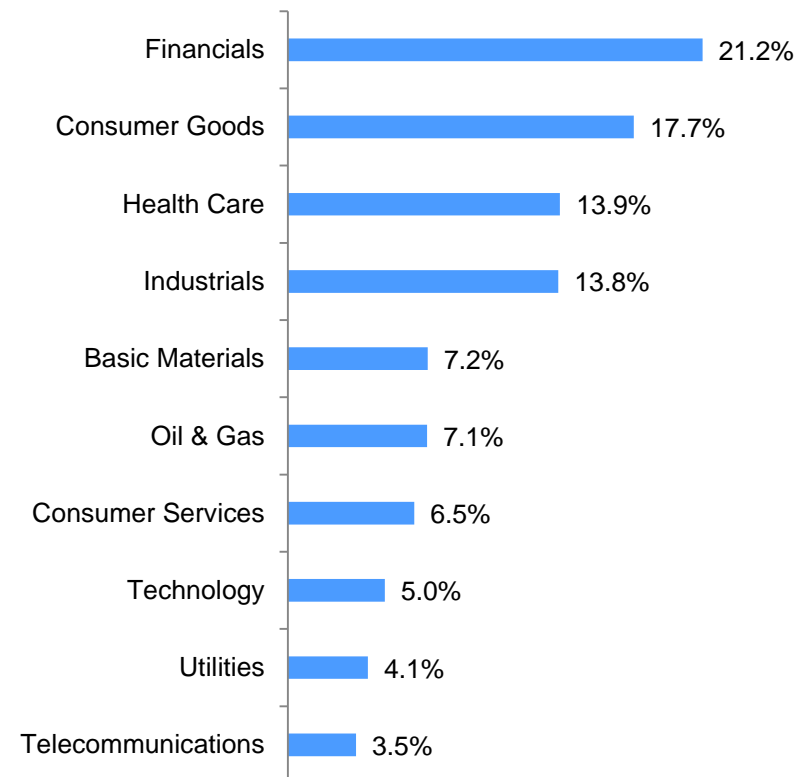
STOXX® Europe Climate Impact Ex Global Compact, Controversial Weapons & Tobacco Index vs STOXX Europe 600

Industry allocation¹⁾

STOXX Europe Climate Impact



STOXX Europe 600



1) Source: STOXX Data as of Jan. 08, 2019.



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EURO STOXX 50
Low Carbon

EURO STOXX 50 Low Carbon

Trusted and reliable data sources

Data partners



- CDP holds the largest collection globally of self reported climate change, water and forest-risk data
- Ranked # 1 by investors in climate change research



Climate Solutions

- ISS Ethix Climate Solutions specializes in carbon emission research and cooperates with CDP to provide robust estimated data

Emission data used for STOXX Low Carbon indices ¹⁾

- Scope 1 Direct GHG emissions are emissions from sources that are owned or controlled by the company
- Scope 2 Indirect GHG emissions from the generation of purchased electricity by the company

Emission data divided into

- Reported data = data voluntarily provided by companies to CDP
- Estimated data = carbon emissions are estimated by ISS Ethix

Recognized and regarded data providers with high quality carbon intensity data

1) Source: <http://www.co2benchmark.com/wri-ghg-protocol-scope-definitions>

EURO STOXX 50 Low Carbon Index

Investment Case

Description

Low Carbon indices

- Same constituents as the benchmarks at the annual review in December
- Carbon-tilt overweights low emitters and underweights high emitters
- Reduces carbon footprint **without** applying exclusions
- No adverse effects from weight optimization
- Low tracking error with similar risk-return profile compared to the benchmark
- Uses both reported and estimated carbon intensity data¹⁾

Universe



- EURO STOXX 50 constituents as of December each year²⁾

Selection



- Select all stocks with Reported and Estimated Carbon Intensity¹⁾ data
- Calculate a Z-Score

Weighting



- Price weighted: free-float market cap multiplied by the corresponding Z-score carbon intensity factor of each constituent. Overweight stocks with lower carbon intensities, underweight those with higher emissions
- Component capping of 5%

1. Carbon Intensity: ((Scope 1 + Scope 2 Greenhouse Gas Emissions (GHG)) / Revenue (\$1 million))

2. Please refer to [STOXX Index Methodology Guide](#) for details on index selection, review, and other details.

EURO STOXX 50 Low Carbon

Risk and return overview

Risk and return characteristics¹⁾²⁾

	EURO STOXX 50 Low Carbon	EURO STOXX 50
Return (overall)	9.6%	8.9%
Return 1y	-13.7%	-12.7%
Return 3y	3.8%	4.0%
Return 5y	3.4%	3.3%
Volatility 1y	14.2%	14.0%
Volatility 3y	16.4%	16.1%
Volatility 5y	18.3%	18.1%
Sharpe Ratio (overall) ³⁾	0.59	0.56
Max. Drawdown (overall)	-27.72%	-27.82%
Tracking error (overall)	0.96%	
Number of Constituents	50	50

Index performance¹⁾



The EURO STOXX 50 Low Carbon index has a 63.8% lower carbon footprint than the EURO STOXX 50 index.

1) Source: STOXX, EUR GR daily data, Dec. 19, 2011 to Jan. 08, 2019.

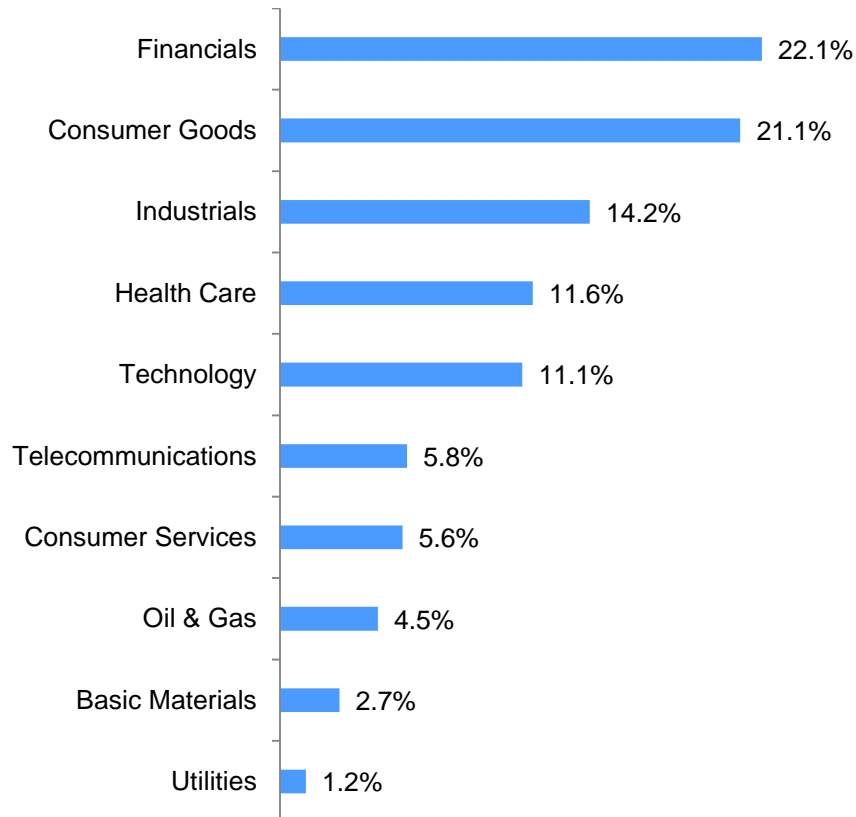
2) Annualised: returns, volatility, Sharpe ratio and tracking error figures used. Relative figures calculated against EURO STOXX 50 Index.
Overall: Dec. 19, 2011 to Jan. 08, 2019; 1y: Jan. 08, 2018 to Jan. 08, 2019; 3y: Jan. 08, 2016 to Jan. 08, 2019; 5y: Jan. 08, 2014 to Jan. 08, 2019.

3) EONIA rate used as proxy for riskless returns.

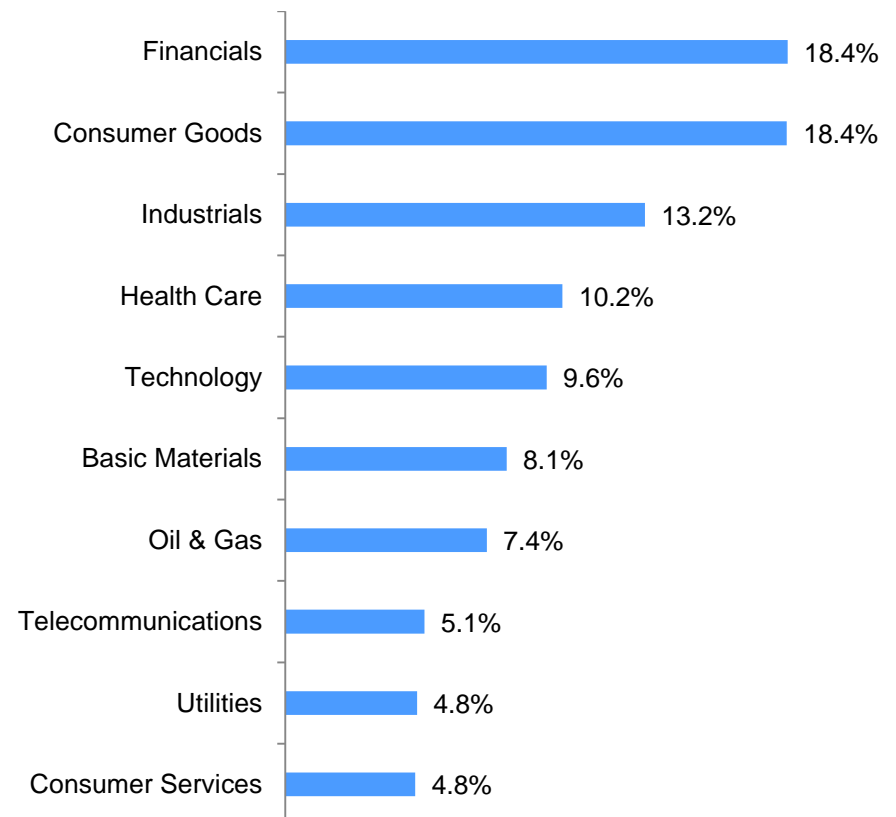
EURO STOXX 50 Low Carbon vs EURO STOXX 50

Industry allocation¹⁾

EURO STOXX 50 Low Carbon



EURO STOXX 50



1) Source: STOXX Data as of Jan. 08, 2019.

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