

Monthly Index News

November 2024



Newsletter updates

We regularly update this newsletter to include or remove indices, and consider layout modifications. Five single-token indices — tracking Bitcoin, Ethereum, Solana, Cardano and Ripple — have been added to the Digital Asset section.

Table of Contents

Featured index.....3

Benchmark indices4

World Equity indices5

DAX indices.....6

DAX ESG indices7

SRI indices8

ESG-X indices9

ESG and Sustainability indices 11

Climate indices – Paris-Aligned Benchmark indices 14

Climate indices – Climate Transition Benchmark indices 12

Biodiversity indices..... 13

Thematic indices 14

Digital Asset indices 17

Factor indices 18

Industry Neutral Factor indices..... 19

Minimum Variance indices.....20

Dividend indices.....21

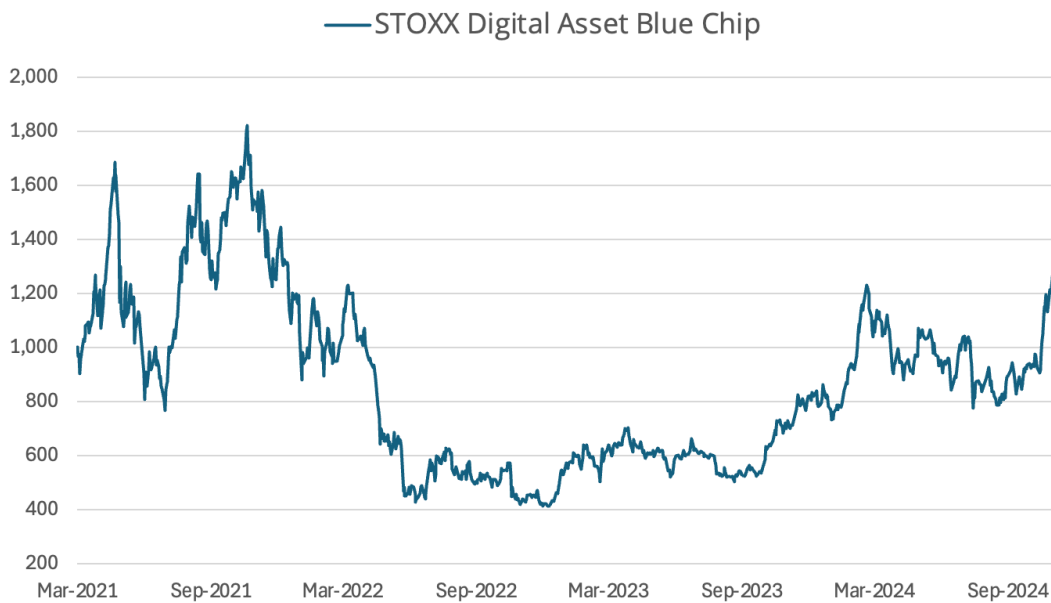
Volatility indices22

Featured index

Investors and traders have snapped up digital assets on expectations that a second Trump presidency heralds an era of lighter regulation in the sector, as well as speculation that the new government may scrap a capital gains tax on cryptocurrencies issued by American companies.¹

The [STOXX® Digital Asset Blue Chip](#) index has gained 45% since November 5,² when Donald Trump clinched a new term as US President. The index advanced 41% over the whole month, its third-best monthly showing since data begins in March 2021. While the recent rally has lifted the index to a near three year-high, it remains 27% below its high in November 2021 (Figure 1).

Figure 1: Performance



Source: STOXX. Price returns in USD from March 22, 2021, to November 29, 2024.

During his campaign, Trump promised to make the US the “crypto capital of the planet” and to have the federal government hold on to its Bitcoin holdings.³ Speaking at an industry event in July, he promised to dismantle the “anti-crypto crusade” of President Joe Biden and Vice President Kamala Harris.⁴

The STOXX Digital Asset Blue Chip index aims to track high-quality assets that represent the crypto universe today. A blue-chip focus means the new index does not just select the largest crypto assets by market capitalization, as is customary with other indices, but instead considers crypto-native metrics including the scope of adoption, the size of the developer community, the fees paid by users and the age of the protocol.

The result is a diversified portfolio, currently consisting of nine assets. While headline-grabbing Bitcoin has advanced 41% to USD 98,175 since November 5, other index constituents have outperformed. Cardano has jumped 223%, Ethereum has risen 48% and Solana has climbed 47%.

¹ TheStreet, “Trump’s Bold Move Could Make Crypto Gains Tax-Free: The 3 U.S. Tokens Set to Skyrocket,” November 18, 2024.

² Data through November 29, 2024.

³ CNBC, “Trump proposes strategic national crypto stockpile: ‘Never sell your bitcoin’,” July 27, 2024.

⁴ CNBC, “Trump proposes strategic national crypto stockpile: ‘Never sell your bitcoin’,” July 27, 2024.

Benchmark indices

Key points

The [STOXX® Global 1800 index](#) posted its best month so far this year in November as investors reacted positively to Donald Trump's decisive victory for a second term as US president.

The global equity benchmark jumped 4.6% last month when measured in US dollars and including dividends, taking its advance in 2024 to 22.1%. The index rose 7.5% in the month when measured in euros, as the common currency fell 2.7%.

The Eurozone's [EURO STOXX 50®](#) decreased 0.3% in euros on a total-return basis, weighed down by continuing economic woes in the region. The pan-European [STOXX® Europe 600](#) rose 1.2%. The [STOXX® North America 600](#) added 6.4% in dollars, while the [STOXX® USA 500](#) gained 6.5%. The [STOXX® Asia/Pacific 600](#) rose 1.2% in dollars.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. EURO STOXX 50	-0.3	9.7	13.3	-3.0	4.9	9.6	16.3	13.8	13.4	20.2	16.0	15.6
2. STOXX Europe 600	1.2	10.0	14.2	-1.6	5.2	10.5	12.6	10.6	10.4	15.8	12.7	12.7
3. STOXX Global 1800	7.5	27.7	32.3	4.6	22.1	28.1	13.7	11.7	11.4	9.2	10.9	10.7
4. STOXX Global 1800 ex USA	2.7	12.3	16.9	-0.1	7.3	13.2	8.5	10.6	10.4	11.5	11.9	11.8
5. STOXX USA 500	9.4	35.0	39.5	6.5	29.1	35.0	17.8	14.2	14.0	12.2	12.7	12.5
6. STOXX USA 900	9.6	34.5	39.5	6.6	28.6	35.0	18.1	14.2	14.0	12.4	12.8	12.6
7. STOXX North America 600	9.4	34.4	39.1	6.4	28.5	34.6	17.6	13.9	13.7	12.0	12.5	12.3
8. STOXX Asia/Pacific 600	4.0	13.5	18.3	1.2	8.5	14.5	13.7	18.9	18.5	14.8	18.8	18.5

Risk and return performance figures for STOXX Benchmark indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

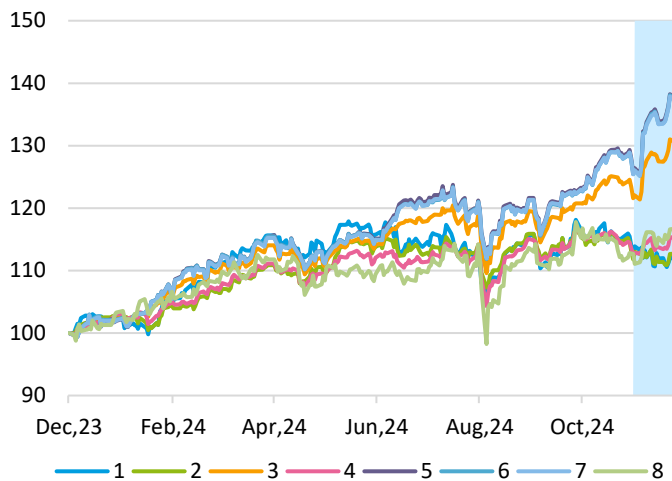


Figure 1: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

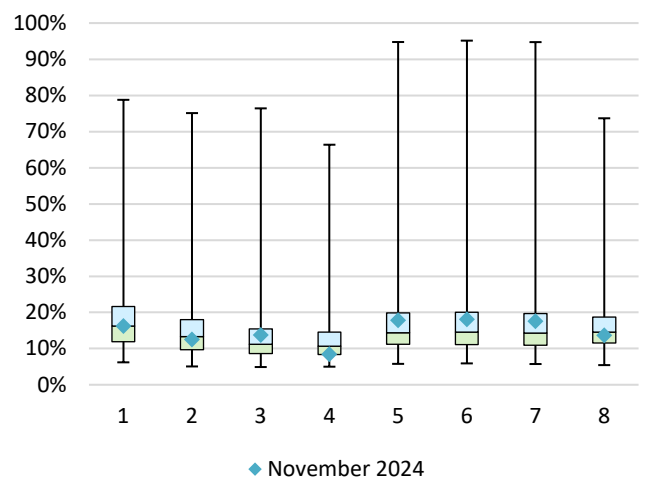


Figure 2: Monthly annualized volatility analysis, EUR gross return. Jan. 2004 – Nov. 2024. Source: STOXX.

World Equity indices

Key points

The [STOXX® World AC](#) rose 3.6% last month, its best month since May.

The [STOXX® World Equity](#) indices are a modular suite that allows investors to flexibly build portfolios covering a broad and liquid universe of markets. Introduced in 2022, the STOXX World Equity indices comprise STOXX's largest pool of markets and stocks to date. With turnover and market-capitalization filters in the stock selection to ensure they are tradable and representative, the indices track the performance of large-, mid- and small-cap stocks from a full range of developed and emerging markets, as well as derived sector strategies.

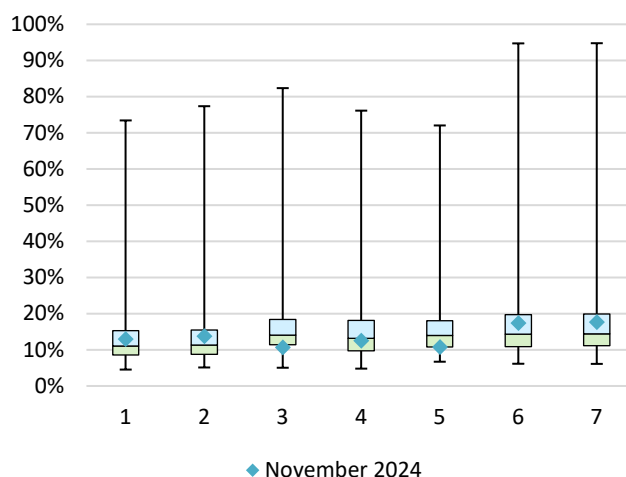
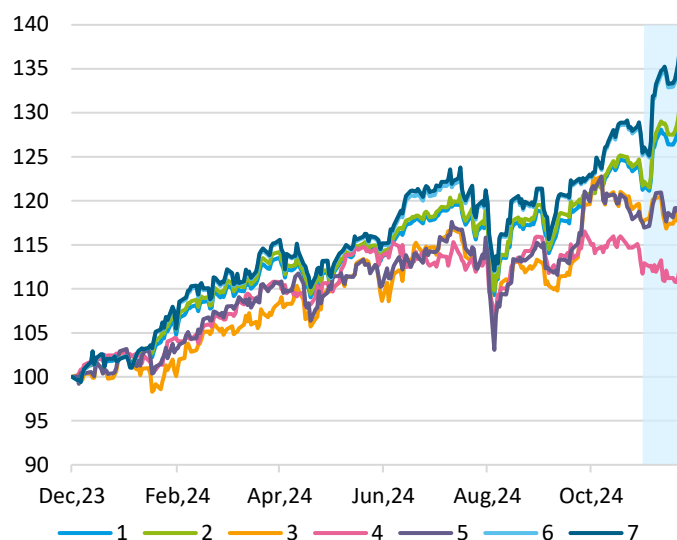
There are two defining features of the STOXX World Equity indices: their exhaustive scope and their modularity. The suite can be used as the basis to create highly targeted solutions in the three focus areas of sustainability, factors and thematic.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. STOXX World AC	6.5	26.1	30.6	3.6	20.6	26.4	13.0	11.3	11.1	8.8	10.4	10.2
2. STOXX Developed World	7.3	27.6	32.3	4.4	22.0	28.1	13.8	11.7	11.5	9.3	10.9	10.6
3. STOXX Emerging Markets	-0.6	13.8	16.9	-3.3	8.8	13.2	10.7	13.9	13.6	11.3	13.4	13.2
4. STOXX Developed Europe	1.2	10.0	14.1	-1.6	5.1	10.5	12.6	10.6	10.3	15.8	12.6	12.5
5. STOXX Asia Pacific AC	1.5	16.0	19.9	-1.2	10.9	16.0	10.7	15.4	15.0	12.0	15.1	14.8
6. STOXX North America	9.0	33.6	38.3	6.1	27.8	33.9	17.4	13.9	13.7	11.9	12.5	12.3
7. STOXX US	9.1	34.1	38.7	6.1	28.2	34.2	17.7	14.2	14.0	12.2	12.7	12.5

Risk and return performance figures for STOXX World Equity indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance



DAX indices

Key points

Germany's DAX family is led by [DAX®](#), the blue-chip benchmark. [MDAX®](#) and [SDAX®](#) gauge, respectively, the performance of the country's mid- and small-caps. [TecDAX®](#) tracks German technology companies. [HDAX®](#) groups all equities that belong to either DAX, MDAX or TecDAX.

All benchmarks had gains in the month that ended.

Risk and return characteristics

	(EUR) Return (%)			(EUR) Annualized volatility (%)		
	1M	YTD	1Y	1M	YTD	1Y
1. DAX	2.9	17.2	21.0	15.3	12.4	12.1
2. MDAX	0.0	-3.0	0.5	14.1	13.7	13.8
3. SDAX	1.5	-2.9	3.6	17.5	15.4	15.6
4. TecDAX	3.9	2.8	7.3	15.2	14.6	14.3
5. HDAX	2.5	14.4	18.1	15.2	12.3	12.0

Risk and return performance figures for DAX indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

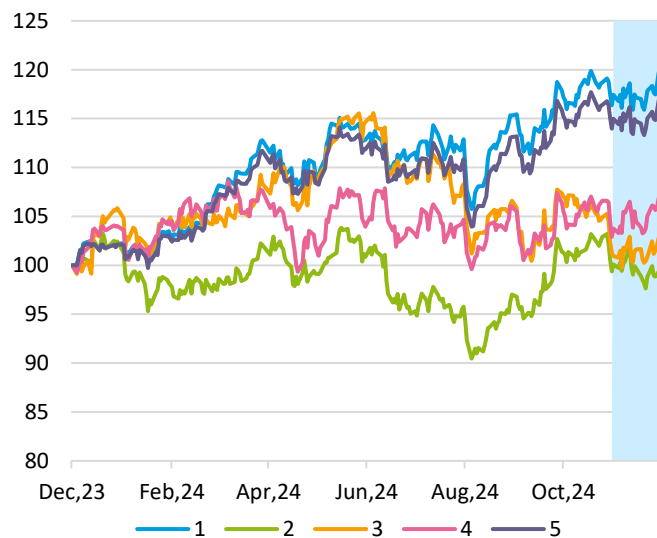


Figure 5: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

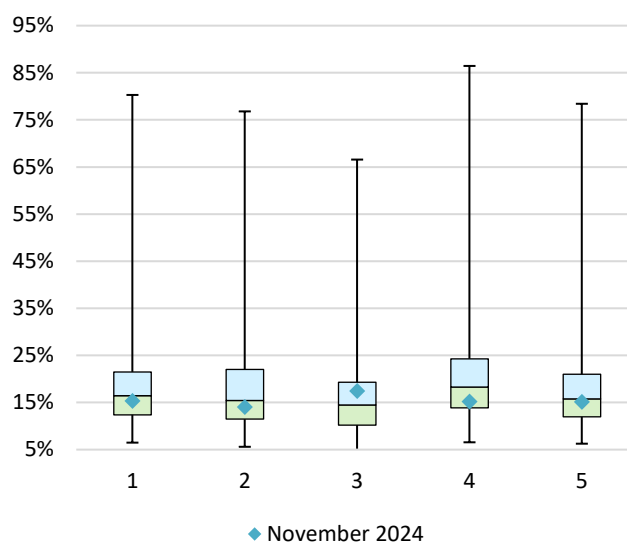


Figure 6: Monthly annualized volatility analysis, EUR gross return. Jan. 2024 – Nov. 2024. Source: STOXX.

DAX ESG indices

Key points

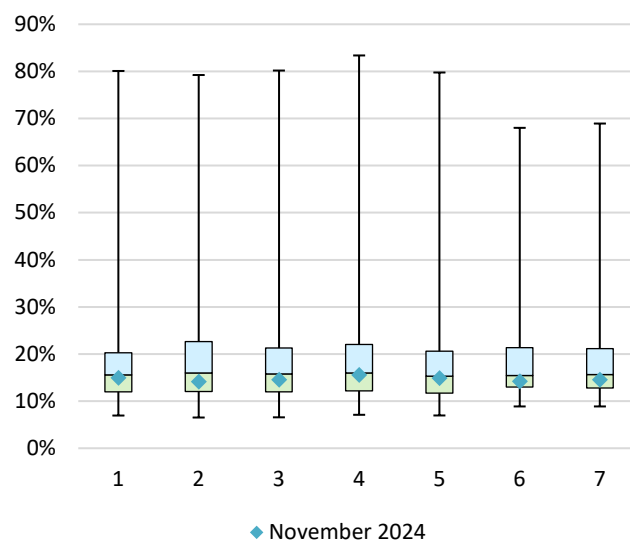
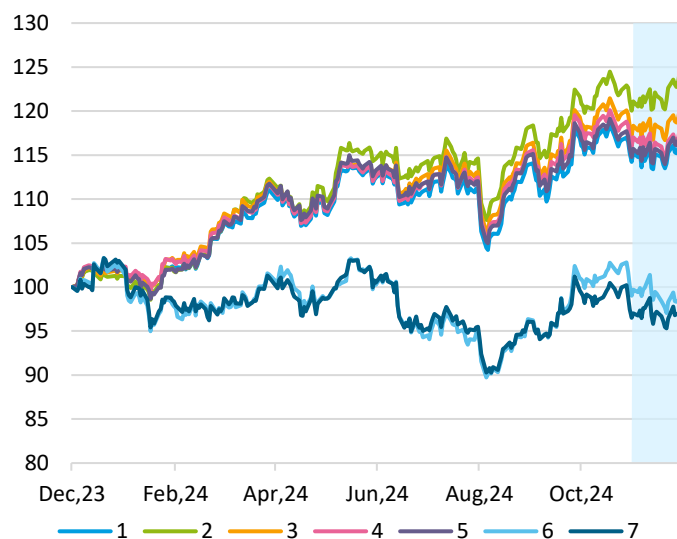
STOXX offers several sustainable options as indices for German equities, including [DAX® 50 ESG](#), [DAX® 30 ESG](#), [DAX® ESG Target](#), [DAX® ESG Screened](#), [DAX® 50 ESG+](#), [MDAX® ESG Screened](#) and [MDAX® ESG+](#).

Risk and return characteristics

	(EUR) Return (%)			(EUR) Annualized volatility (%)		
	1M	YTD	1Y	1M	YTD	1Y
1. DAX 50 ESG	2.2	14.4	18.1	14.9	12.3	12.0
2. DAX 30 ESG	3.9	23.1	26.1	14.1	12.0	11.7
3. DAX ESG Target	2.7	18.2	21.7	14.6	12.0	11.6
4. DAX ESG Screened	1.9	15.5	19.4	15.6	12.4	12.0
5. DAX 50 ESG+	2.6	15.4	19.1	14.9	12.1	11.8
6. MDAX ESG Screened	-0.2	-3.6	-0.1	14.2	13.9	14.0
7. MDAX ESG+	0.7	-5.7	-1.8	14.6	13.5	13.6

Risk and return performance figures for DAX indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance



SRI indices

Key points

The [STOXX® Global 1800 SRI](#) index underperformed the benchmark last month.

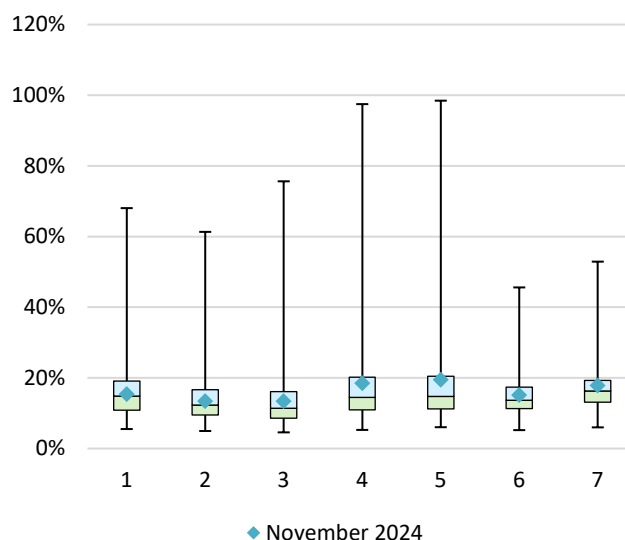
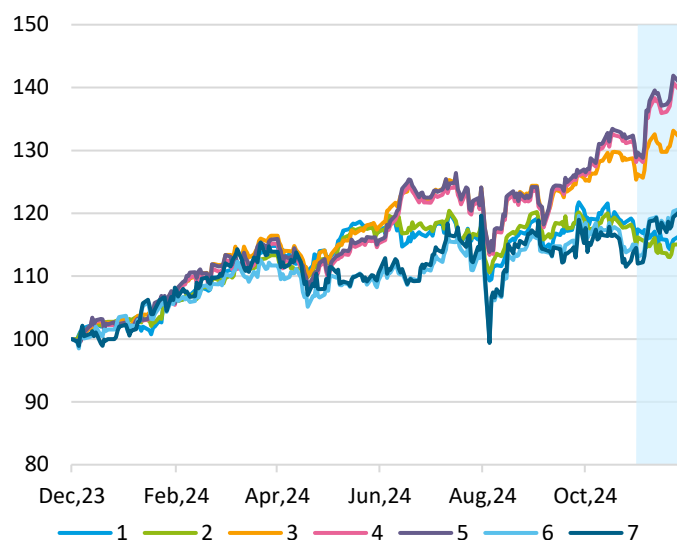
The [STOXX® SRI \(Socially Responsible Investing\) indices](#) apply a set of involvement, carbon emission intensity and compliance screens, and additionally track the best ESG performers in each industry group within a selection of STOXX benchmarks.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. EURO STOXX SRI	0.2	13.7	17.4	-2.6	8.7	13.6	15.4	12.9	12.5	19.5	15.1	14.8
2. STOXX Europe 600 SRI	0.6	12.0	16.5	-2.2	7.1	12.8	13.4	11.3	11.0	16.3	13.2	13.0
3. STOXX Global 1800 SRI	5.5	28.3	33.9	2.7	22.7	29.6	13.4	13.1	12.7	10.5	12.9	12.6
4. STOXX North America 600 SRI	8.7	36.1	41.3	5.8	30.1	36.8	18.5	15.5	15.3	13.1	14.5	14.2
5. STOXX USA 500 SRI	9.0	37.2	42.5	6.0	31.1	37.9	19.4	15.9	15.6	13.8	14.7	14.5
6. STOXX Asia/Pacific 600 SRI	5.5	17.3	22.3	2.7	12.1	18.4	15.1	19.8	19.4	15.7	19.7	19.4
7. STOXX Japan 600 SRI	6.0	19.0	22.5	3.1	13.8	18.6	17.8	23.8	23.3	17.7	23.6	23.0

Risk and return performance figures for STOXX ESG SRI indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance



ESG-X indices

Key points

The [STOXX® Global 1800 ESG-X](#) performed in line with its benchmark.

The [STOXX ESG-X indices](#) are versions of traditional, market capitalization-weighted benchmarks that observe [standard responsible exclusions](#). They incorporate basic norm- and product-based exclusion criteria to comply with ESG principles. Companies are excluded based on Sustainalytics' determination of non-compliance with their Global Standards Screening assessment or if they have a 'severe' ESG risk rating from the data provider. Companies involved in controversial weapons, small arms, military contracting, unconventional oil and gas, tobacco and thermal coal (extraction or use for power generation) are also removed.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. EURO STOXX 50 ESG-X	-0.4	9.9	13.5	-3.1	5.1	9.9	16.2	13.9	13.5	20.2	16.1	15.8
2. STOXX Europe 600 ESG-X	1.0	9.5	13.7	-1.8	4.7	10.1	12.6	10.7	10.4	15.8	12.7	12.7
3. STOXX Global 1800 ESG-X	7.6	27.7	32.6	4.7	22.1	28.3	13.7	12.1	11.8	9.5	11.3	11.1
4. STOXX USA 500 ESG-X	9.6	35.1	39.8	6.6	29.2	35.4	17.8	14.8	14.6	12.5	13.4	13.2
5. STOXX North America 600 ESG-X	9.6	34.6	39.6	6.6	28.7	35.1	17.6	14.5	14.3	12.3	13.2	13.0
6. STOXX Asia/Pacific 600 ESG-X	4.4	13.9	18.7	1.6	8.9	14.9	13.6	18.9	18.5	14.7	18.8	18.5

Risk and return performance figures for STOXX ESG-X indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

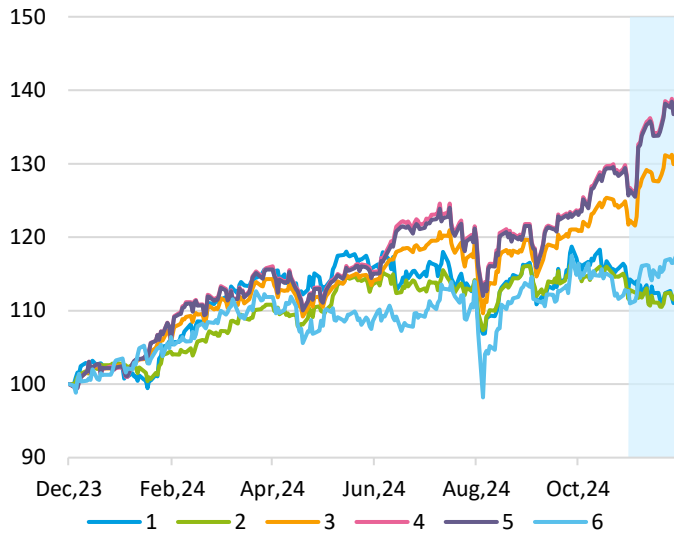


Figure 11: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

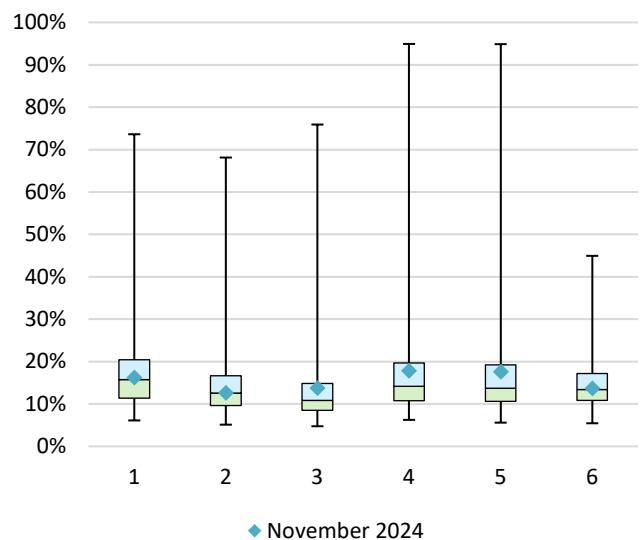


Figure 12: Monthly annualized volatility analysis, EUR gross return. Apr. 2012 – Nov. 2024. Source: STOXX.

ESG and Sustainability indices

Key points

Among the STOXX ESG and Sustainability indices, the [EURO STOXX 50® ESG](#) index outperformed its benchmark by 11 basis points.

The [STOXX® Global ESG Select KPIs index](#), meanwhile, lagged behind the STOXX Global 1800 by 111 basis points. The STOXX ESG Select KPIs indices offer a broad market exposure that is tilted towards companies that score better with respect to a small set of environmental, social, and governance key performance indicators.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. EURO STOXX 50 ESG	-0.2	11.9	15.7	-2.9	6.9	12.0	16.0	13.5	13.0	19.9	15.7	15.3
2. STOXX Europe Industry Neutral ESG	1.0	9.2	13.5	-1.7	4.4	9.9	12.6	10.7	10.4	15.9	12.8	12.7
3. STOXX North America Industry Neutral ESG	9.3	34.0	38.9	6.4	28.2	34.4	17.7	13.8	13.5	11.7	12.4	12.3
4. STOXX Global ESG Select KPIs	6.4	23.0	27.0	3.5	17.6	22.9	12.5	11.3	11.1	9.0	10.5	10.3
5. STOXX USA ESG Select KPIs	9.6	29.5	33.2	6.6	23.8	29.0	17.7	13.4	13.2	11.9	11.8	11.6
6. STOXX Europe ESG Leaders Select 30	0.7	15.1	16.5				11.7	10.7	10.4			

Risk and return performance figures for STOXX ESG and Sustainability indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

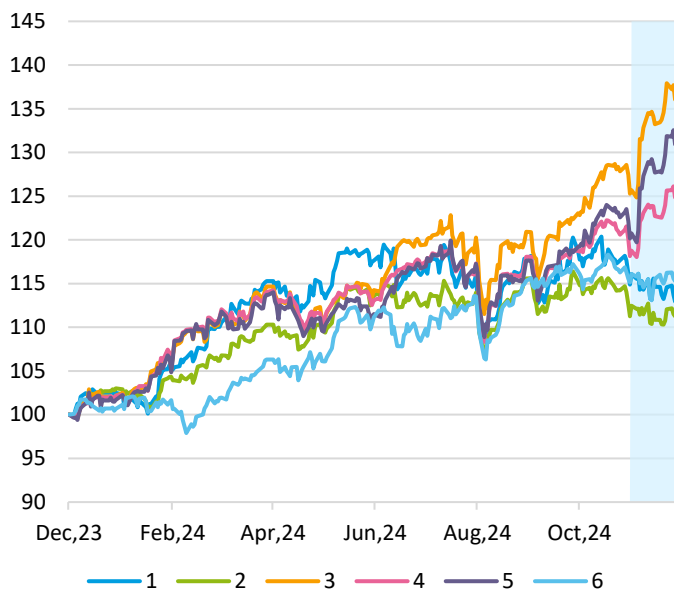


Figure 13: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

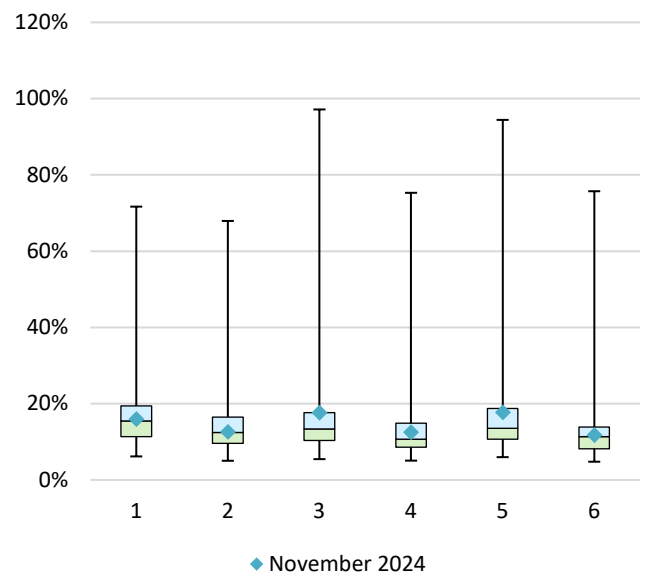


Figure 14: Monthly annualized volatility analysis, EUR gross return. Oct. 2012 – Nov. 2024. Source: STOXX.

Climate Indices – Paris-Aligned Benchmark indices

Key points

The [STOXX® Global 1800 PAB](#) underperformed its benchmark in November.

The [STOXX Paris-Aligned Benchmark indices \(PABs\)](#) are based on liquid securities from a selection of STOXX Benchmark indices and follow the [EU Paris-aligned Benchmark \(EU PAB\) requirements](#) outlined by the European Commission's Regulation (EU) 2020/1818, supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council on climate benchmarks.

Those requirements are designed such that the resulting PAB portfolio's greenhouse gas (GHG) emissions are aligned with the long-term global warming target of the Paris Climate Agreement. The indices incorporate stringent carbon limitations in the selection of holdings, in line with global commitments to work towards keeping global warming between 1.5°C and 2°C above pre-industrial levels.

We have partnered with Sustainalytics for datasets relating to their Global Standards Screening and controversial weapons, and with ISS ESG for climate-related data such as Scope 1 to Scope 3 emissions, science-based climate targets, and others.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. EURO STOXX PAB	-0.7	6.8	10.1	-3.4	2.1	6.6	14.5	11.8	11.5	18.7	14.3	14.1
2. EURO STOXX TMI PAB	-0.7	6.6	10.0	-3.4	1.9	6.5	14.4	11.8	11.5	18.7	14.3	14.1
3. STOXX Europe 600 PAB	0.5	7.6	11.7	-2.2	2.9	8.2	13.6	10.9	10.6	16.7	13.0	12.9
4. STOXX Global 1800 PAB	6.4	21.4	25.4	3.5	16.1	21.4	12.8	11.4	11.2	9.2	10.8	10.6
5. STOXX USA 500 PAB	8.6	29.5	33.7	5.6	23.8	29.5	16.9	14.1	13.9	11.9	12.6	12.4
6. STOXX USA 900 PAB	8.5	28.9	33.3	5.6	23.3	29.0	16.6	13.9	13.7	11.6	12.4	12.3

Risk and return performance figures for STOXX Paris-Aligned Benchmark indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

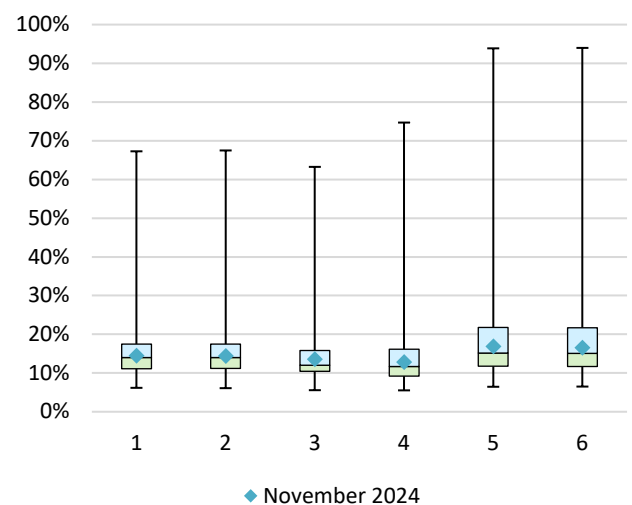
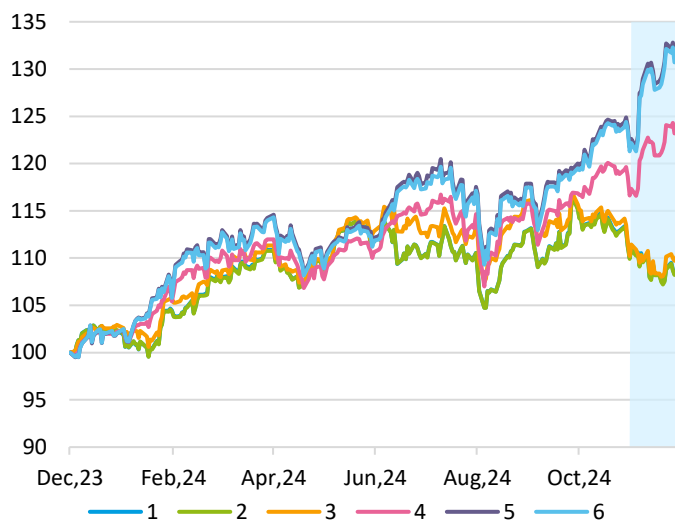


Figure 15: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

Figure 16: Monthly annualized volatility analysis, EUR gross return. Apr. 2018 – Nov. 2024. Source: STOXX.

Climate indices – Climate Transition Benchmark indices

Key points

The [STOXX® Global 1800 CTB](#) also underperformed its benchmark last month.

The [STOXX Climate Transition Benchmark indices \(CTBs\)](#) are based on liquid securities from a selection of STOXX Benchmark Indices and follow the [EU Climate Transition Benchmark \(EU CTB\) requirements](#) outlined by the European Commission's Regulation (EU) 2020/1818, supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council on climate benchmarks. Those requirements are designed such that the resulting CTB portfolio is on a decarbonization trajectory.

As with the Paris-Aligned Benchmarks, we have partnered with Sustainalytics for exclusions datasets, and with ISS ESG for climate-related data, science-based climate targets and others.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. EURO STOXX CTB	-0.6	6.8	10.1	-3.3	2.1	6.5	14.3	11.7	11.4	18.4	14.2	14.0
2. EURO STOXX TMI CTB	-0.7	6.6	10.0	-3.3	2.0	6.5	14.2	11.6	11.3	18.5	14.2	14.0
3. STOXX Europe 600 CTB	0.8	8.2	12.3	-1.9	3.4	8.7	13.5	10.8	10.5	16.6	12.9	12.8
4. STOXX Global 1800 CTB	6.3	21.0	25.1	3.5	15.7	21.1	13.0	11.2	11.0	9.2	10.6	10.4
5. STOXX USA 500 CTB	8.5	28.1	32.4	5.6	22.5	28.2	17.2	13.7	13.6	12.0	12.2	12.0
6. STOXX USA 900 CTB	8.5	27.8	32.2	5.6	22.2	28.0	17.0	13.6	13.5	11.8	12.2	12.0

Risk and return performance figures for STOXX Climate Transition Benchmark indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

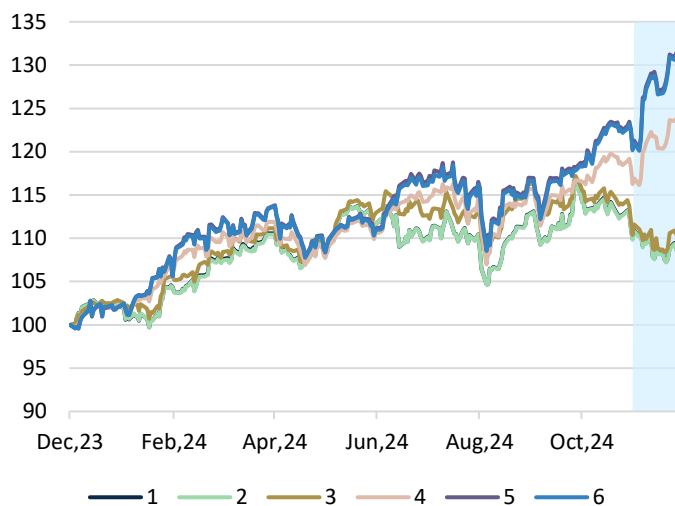


Figure 17: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

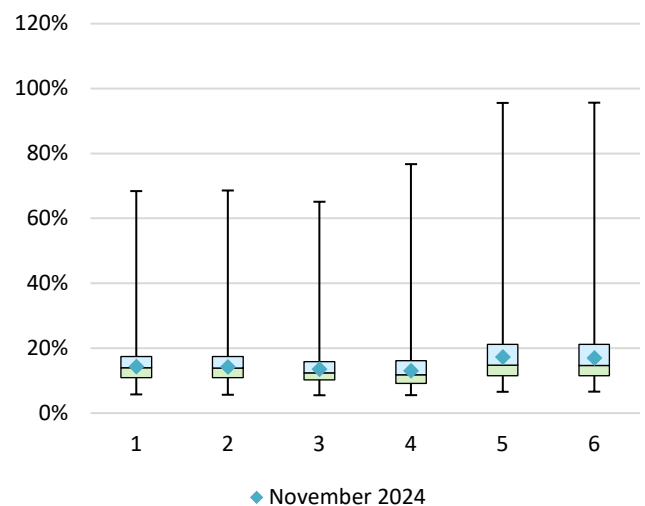


Figure 18: Monthly annualized volatility analysis, EUR gross return. Apr. 2018 – Nov. 2024. Source: STOXX.

Biodiversity indices

Key points

The [ISS STOXX® Biodiversity indices](#) allow investors to take a comprehensive approach to the challenges, risks and opportunities from the degradation of our natural ecosystems and growing efforts to protect them.

The indices exclude companies involved in activities that are controversial or cause harm to biodiversity, select securities with less negative impact on ecosystems and those contributing positively to relevant UN Sustainable Development Goals (SDGs). They also reduce the portfolio's carbon emissions.

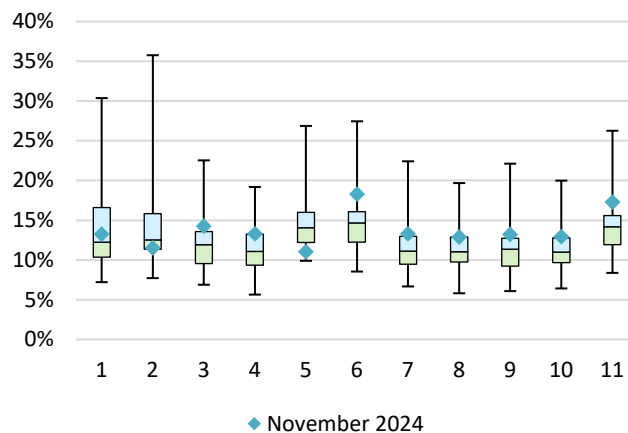
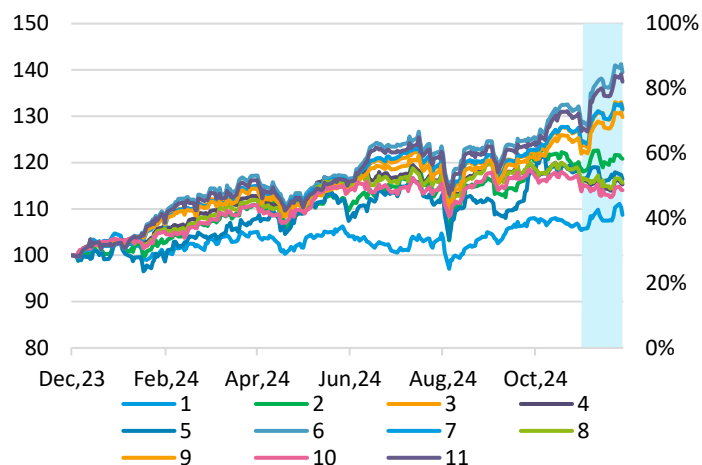
A key component of the ISS STOXX Biodiversity framework is the Potentially Disappeared Fraction of Species (PDF), an output of ISS ESG's [Biodiversity Impact Assessment Tool](#). PDF seeks to measure how corporates affect our natural world by considering a set of environmental pressures on species and habitats across the entire value chain and different geographical locations.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. ISS STOXX World AC Biodiversity Leaders	3.8	4.5	11.1	1.0	-0.1	7.6	13.3	11.3	11.3	11.3	11.7	12.0
2. ISS STOXX Asia/Pacific AC Biodiversity	2.0	17.5	21.3	-0.8	12.3	17.4	11.5	16.7	16.3	12.8	16.4	16.1
3. ISS STOXX Developed World Biodiversity	7.5	29.4	34.5	4.6	23.7	30.2	14.3	12.5	12.3	9.7	11.7	11.5
4. ISS STOXX Developed Europe Biodiversity	1.5	13.2	18.1	-1.3	8.2	14.3	13.3	11.2	10.9	15.7	13.0	12.8
5. ISS STOXX Emerging Markets Biodiversity	-0.3	12.9	15.2	-3.0	7.9	11.6	11.0	15.2	14.9	12.4	14.8	14.7
6. ISS STOXX US Biodiversity	9.5	37.0	42.3	6.5	31.0	37.8	18.3	14.6	14.4	12.6	13.3	13.1
7. ISS STOXX World AC Biodiversity	6.5	28.8	33.6	3.6	23.1	29.3	13.3	12.2	11.9	9.1	11.4	11.1
8. ISS STOXX Europe 600 Biodiversity	1.5	13.7	18.5	-1.2	8.7	14.7	12.9	11.1	10.8	15.4	13.0	12.9
9. ISS STOXX Developed World Biodiversity Focus SRI	7.2	27.1	32.4	4.3	21.5	28.2	13.2	11.9	11.6	8.8	11.1	10.9
10. ISS STOXX Europe 600 Biodiversity Focus SRI	1.5	11.5	16.6	-1.2	6.6	12.9	12.9	10.9	10.7	16.0	13.0	13.0
11. ISS STOXX US Biodiversity Focus SRI	9.1	34.8	40.2	6.1	28.9	35.7	17.3	14.0	13.8	11.6	12.7	12.5

Risk and return performance figures for ISS STOXX Biodiversity indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance



Thematic indices

Key points

The [STOXX Thematic indices](#) seek exposure to the long-term economic upside of disruptive global megatrends.

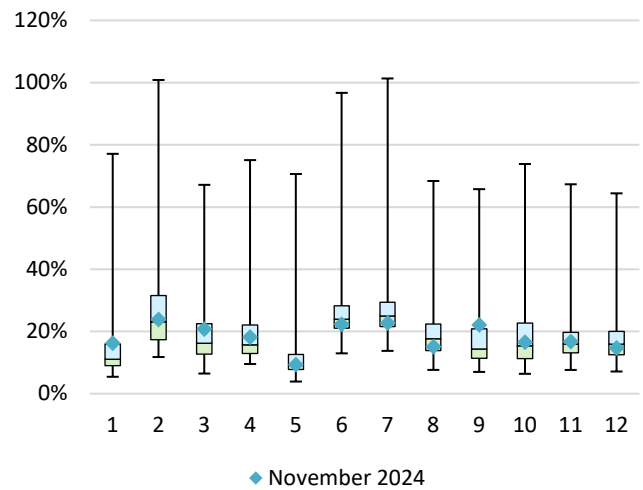
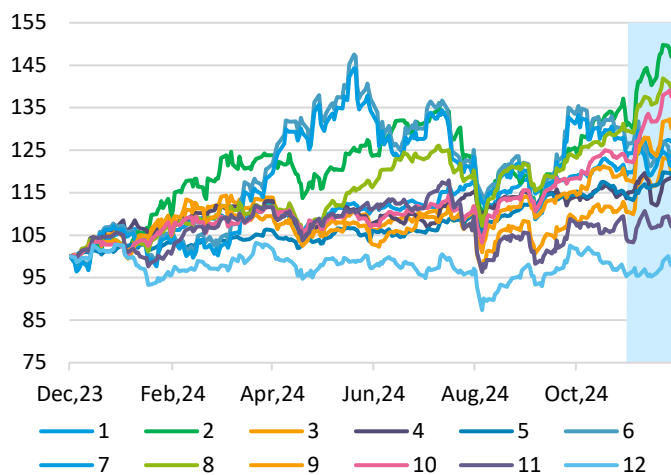
Only 14 of the 36 thematic indices featured in this newsletter outperformed the STOXX Global 1800 last month. The [STOXX® Global Metaverse](#) index showed the biggest gain, while the [STOXX® Global Silver Mining](#) index led losses.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. STOXX Global Ageing Population	7.1	21.3	29.9	4.2	16.0	25.7	16.2	11.7	11.7	12.2	11.4	11.6
2. STOXX Global Artificial Intelligence	13.4	43.0	49.4	10.3	36.7	44.6	23.8	23.3	22.7	20.9	22.5	21.9
3. STOXX Global Automation & Robotics	9.6	14.2	23.5	6.6	9.2	19.5	20.7	17.9	17.5	16.5	17.6	17.3
4. STOXX Global Breakthrough Healthcare	5.0	11.5	21.6	2.1	6.6	17.7	18.1	13.6	13.9	17.8	13.4	14.0
5. STOXX Global Broad Infrastructure	5.0	17.8	21.8	2.1	12.6	17.9	9.3	8.8	8.8	7.0	8.9	8.9
6. STOXX Global Copper and Metals Mining	-0.7	16.6	29.8	-3.3	11.5	25.7	22.3	25.8	25.8	27.2	27.0	27.1
7. STOXX Global Copper Miners	-0.6	15.4	27.6	-3.3	10.3	23.5	22.7	26.0	25.9	27.5	27.1	27.2
8. STOXX Global Digital Entertainment and Education	8.4	35.3	41.3	5.4	29.4	36.8	15.1	16.8	16.3	12.6	16.3	16.0
9. STOXX Global Digital Security	10.8	26.0	33.3	7.8	20.5	29.0	22.1	16.5	16.1	17.0	15.7	15.4
10. STOXX Global Digitalisation	12.9	34.4	40.9	9.9	28.5	36.4	16.5	14.3	14.0	11.0	13.6	13.4
11. STOXX Global Electric Vehicles & Driving Technology	3.9	2.4	9.5	1.0	-2.1	6.0	16.7	18.3	17.8	14.9	18.3	18.1
12. STOXX Global Energy Storage and Materials	2.6	-4.9	-2.0	-0.2	-9.1	-5.1	14.7	16.4	16.0	18.3	17.0	16.8

Risk and return performance figures for STOXX Thematic indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance



Thematic indices (cont.)

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
13. STOXX Global Fintech	12.9	30.4	38.2	9.9	24.6	33.8	19.8	14.2	14.0	13.8	13.4	13.3
14. STOXX Global Health & Weight Loss	5.2	9.5	12.6	2.4	4.7	9.0	12.7	14.0	13.9	14.6	13.9	13.9
15. STOXX Global Housing Construction	4.7	11.9	22.1	1.9	7.0	18.2	19.4	18.7	18.3	17.9	18.7	18.6
16. STOXX Global Industry 4.0	7.9	21.9	29.7	4.9	16.6	25.6	20.0	19.2	18.8	16.3	18.5	18.1
17. STOXX Global Intelligent Computing	6.7	7.6	16.0	3.8	2.9	12.3	18.6	17.8	17.5	16.7	17.5	17.4
18. STOXX Global Lithium and Battery Producers	2.6	-11.9	-7.2	-0.2	-15.7	-10.2	18.9	22.8	22.6	21.6	23.2	23.2
19. STOXX Global Lithium Miners and Producers	-1.3	-32.9	-26.4	-4.0	-35.8	-28.8	28.2	32.7	32.7	30.7	33.0	33.1
20. STOXX Global Metaverse	13.4	34.3	44.4	10.4	28.4	39.8	23.0	19.5	19.0	17.6	18.7	18.3
21. STOXX Global Millennials	9.2	37.4	42.1	6.2	31.4	37.5	12.7	14.8	14.6	10.6	14.0	13.7
22. STOXX Global Next Generation Telecoms	5.6	18.7	24.2	2.7	13.5	20.2	14.3	14.8	14.4	11.6	14.1	13.8
23. STOXX Global Pet Care	4.8	7.2	16.1	2.0	2.5	12.4	10.3	11.1	11.4	10.0	10.8	11.0
24. STOXX Global Sharing Economy	12.0	43.4	49.1	9.0	37.1	44.4	17.8	15.7	15.4	12.3	14.6	14.4

Risk and return performance figures for STOXX Thematic indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

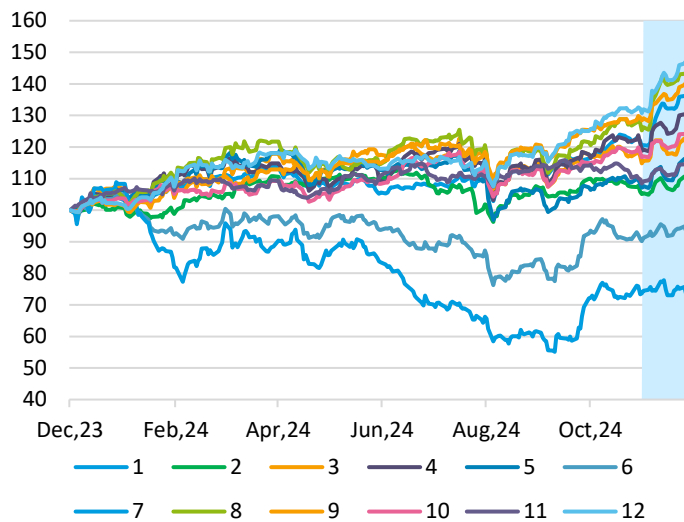


Figure 23: EUR gross return index performance, Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

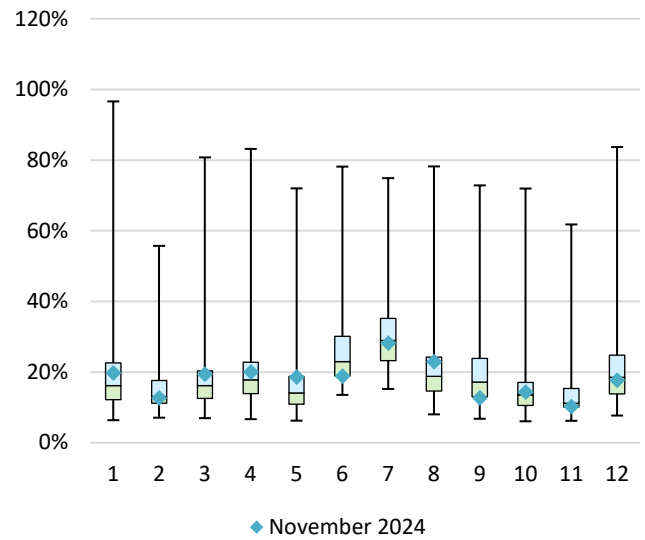


Figure 24: Monthly annualized volatility analysis, EUR gross return. July 2016 – Nov. 2024. Source: STOXX.

Thematic indices (cont.)

Risk and return characteristics

	Return (%)						Annualized volatility (%)						
	EUR			USD			EUR			USD			
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	
25. STOXX Global Silver Economy	5.0	17.9	24.8	2.1	12.7	20.8	16.6	14.3	14.1	13.3	13.3	13.2	
26. STOXX Global Silver Mining	-7.9	34.8	34.9	-10.4	28.9	30.6	24.9	34.8	34.6	28.9	35.9	35.7	
27. STOXX Global Smart Cities	11.5	14.9	26.7	8.5	9.9	22.6	25.4	24.3	23.8	20.9	23.8	23.4	
28. STOXX Global Smart City Infrastructure	6.5	20.2	28.6	3.6	14.9	24.5	16.1	13.3	13.0	13.2	13.4	13.4	
29. STOXX Global Smart Factory	2.3	4.1	14.7	-0.5	-0.5	11.0	25.1	24.1	23.5	22.7	23.6	23.2	
30. STOXX Global Video Gaming & eSports	9.1	29.8	34.4	6.2	24.2	30.1	15.9	17.8	17.4	12.4	17.0	16.7	
31. STOXX World AC NexGen Connectivity	5.8	24.5	30.3	2.9	19.0	26.1	16.2	16.0	15.6	12.3	15.1	14.7	
32. STOXX World AC NexGen Media	8.9	41.5	46.7	5.9	35.3	42.0	18.3	19.2	18.8	15.2	18.4	18.0	
33. STOXX World AC NexGen Software Development	7.4	27.8	35.5	4.5	22.2	31.2	21.0	23.3	22.7	18.4	22.5	22.0	
34. STOXX Europe Luxury 10	-1.6	1.2	3.7	-4.2	-3.2	0.4	24.1	21.2	20.7	27.2	23.0	22.6	
35. STOXX USA ETF Industry				8.2	23.2	33.0					9.5	12.3	12.6
36. iSTOXX Developed Markets B.R.AI.N.	4.0	6.2	12.2	1.2	1.6	8.6	16.1	15.1	15.0	15.1	14.5	14.4	

Risk and return performance figures for STOXX Thematic indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

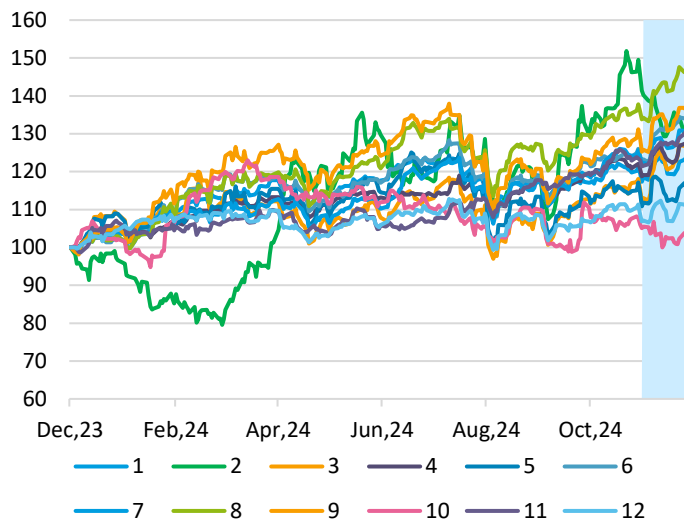


Figure 25: 25-33, 35 show EUR gross return index performance, 34 shows USD performance; Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

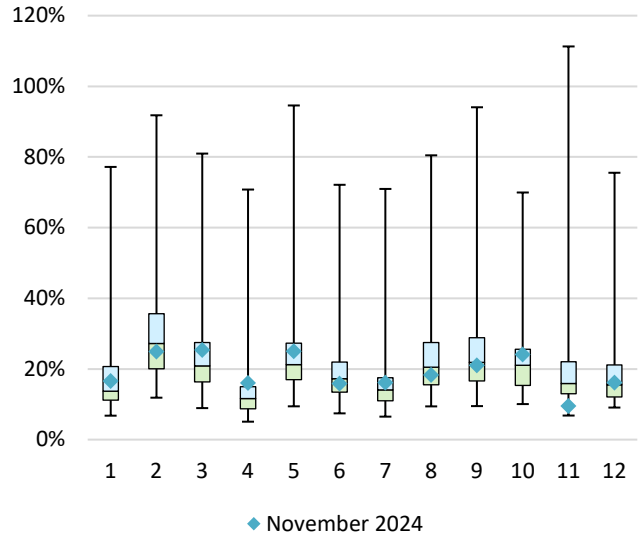


Figure 26: Monthly annualized volatility analysis, EUR gross return. July 2016 – Nov. 2024. Source: STOXX.

Digital Asset indices

Key points

Both the STOXX Digital Asset Blue Chip index and the [STOXX® Digital Asset Blue Chip X](#), which excludes assets not traded on Xetra®, jumped 41% in November.

STOXX also offers digital asset single-token indices, which respectively track Bitcoin, Ethereum, Solana, Cardano and Ripple. The last two soared more than 200% in November.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. STOXX Digital Asset Blue Chip	44.9	53.7	92.9	41.0	62.4	86.7	65.3	54.4	53.4	62.4	53.6	52.6
2. STOXX Digital Asset Blue Chip X	44.9	53.1	92.3	41.0	61.7	86.2	65.3	54.4	53.4	62.4	53.6	52.6
3. STOXX Bitcoin	43.0	142.8	169.6	39.1	132.1	161.0	63.3	51.9	51.1	58.5	51.3	50.6
4. STOXX Ethereum	45.3	62.7	83.9	41.4	55.6	78.0	76.4	62.8	61.5	75.2	62.9	61.7
5. STOXX Solana	47.0	140.8	323.0	43.1	130.2	309.5	97.0	83.7	89.0	94.4	83.4	88.7
6. STOXX Cardano	221.4	86.5	196.8	212.7	78.3	187.3	190.2	91.5	92.8	186.7	90.8	92.2
7. STOXX Ripple	244.7	186.7	193.8	235.4	174.1	184.4	187.4	87.8	84.8	185.7	87.4	84.4

Risk and return performance figures for STOXX Digital assets indices, price return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

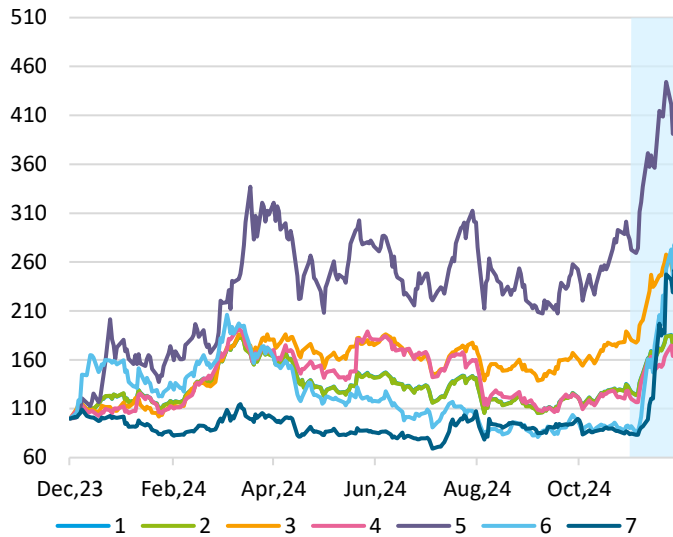


Figure 27: EUR price return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

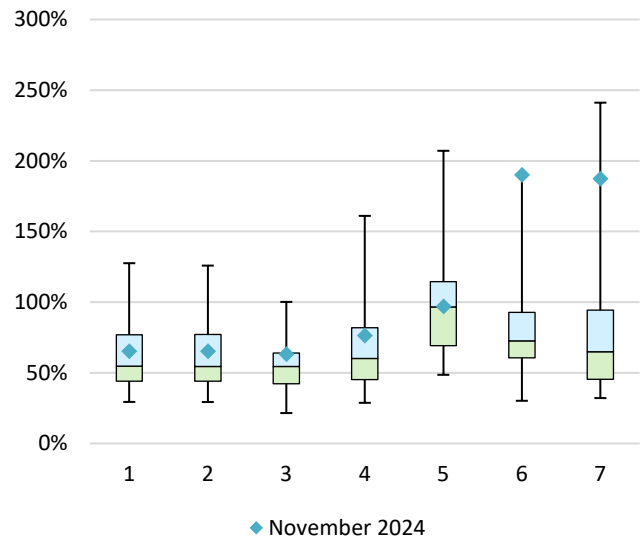


Figure 28: Monthly annualized volatility analysis, EUR gross return. Apr. 2021 – Nov. 2024. Source: STOXX.

Factor indices

Key points

The [STOXX Factor indices](#) offer robust factor definitions and targeted factor exposures, and ensure the tradability of component stocks. They employ the institutionally tested analytics of Axioma Factor Risk Models.

On a global basis, Momentum led gains last month while Low Risk trailed.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. STOXX Global 1800 Ax Low Risk	7.1	25.7	28.3	4.1	20.2	24.1	11.8	8.6	8.7	6.7	7.4	7.3
2. STOXX Global 1800 Ax Momentum	10.5	61.6	66.9	7.5	54.5	61.6	17.4	17.2	16.8	13.6	16.4	16.0
3. STOXX Global 1800 Ax Multi-Factor	7.5	32.1	37.3	4.6	26.3	32.9	12.9	12.1	11.8	9.3	11.5	11.3
4. STOXX Global 1800 Ax Quality	9.5	29.5	35.8	6.5	23.8	31.4	15.3	13.0	12.8	10.8	12.2	11.9
5. STOXX Global 1800 Ax Size	9.6	27.1	34.0	6.6	21.5	29.7	15.1	11.7	11.6	11.2	11.4	11.5
6. STOXX Global 1800 Ax Value	6.6	19.1	25.1	3.7	13.9	21.1	16.6	12.7	12.5	12.2	12.1	12.1
7. STOXX Global 1800 ex USA Ax Low Risk	4.2	16.0	20.1	1.3	11.0	16.3	7.1	7.7	7.6	10.0	9.0	8.9
8. STOXX Global 1800 ex USA Ax Momentum	5.3	27.9	32.3	2.5	22.3	28.0	10.9	14.1	13.7	12.0	14.8	14.4
9. STOXX Global 1800 ex USA Ax Multi-Factor	3.6	12.1	16.6	0.8	7.2	12.8	8.0	11.1	10.8	11.7	12.2	12.0
10. STOXX Global 1800 ex USA Ax Quality	3.6	8.6	14.5	0.8	3.8	10.8	9.4	12.1	11.8	11.4	13.0	13.0
11. STOXX Global 1800 ex USA Ax Size	2.7	8.3	13.4	-0.1	3.5	9.8	9.0	12.4	12.1	12.3	13.6	13.6
12. STOXX Global 1800 ex USA Ax Value	2.2	12.7	16.4	-0.6	7.8	12.6	9.6	12.7	12.5	13.8	14.1	13.9

Risk and return performance figures for STOXX Factor (Global) indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

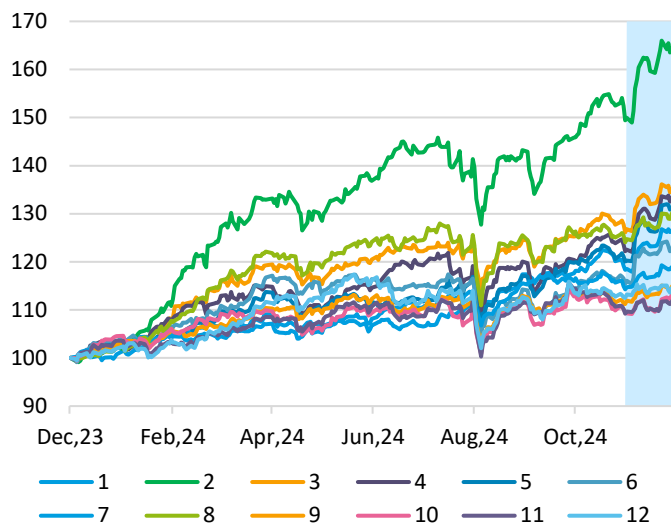


Figure 29: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

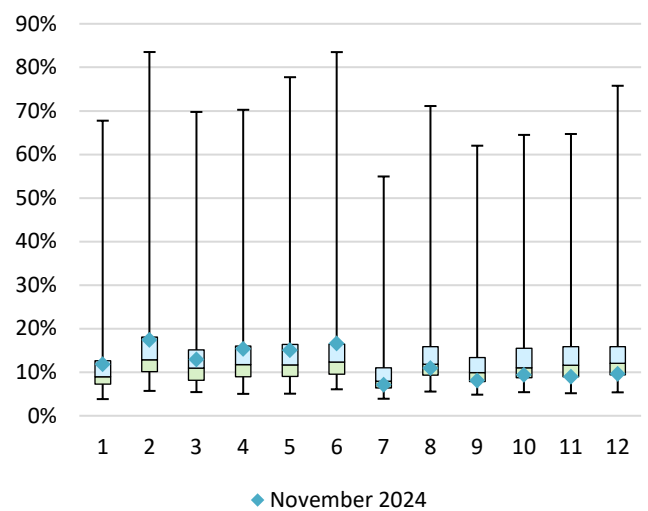


Figure 30: Monthly annualized volatility analysis, EUR gross return. Jan. 2004 – Nov. 2024. Source: STOXX.

Industry Neutral Factor indices

Key points

The STOXX Industry Neutral Single and Multi-Factor indices aim to harvest the risk premia of several academically validated style factors — Value, Momentum, Quality, Size and Low Risk — within each ICB industry.

The indices rely on Axioma's proven factor models and keep the same industry allocation as the respective benchmarks, helping remove unintended industry exposures and enabling access to the pure return of the factor.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. STOXX Europe 600 Industry Neutral Ax Low Risk	2.2	15.4	17.8	-0.5	10.3	14.0	9.7	8.1	8.0	12.2	10.2	10.0
2. STOXX Europe 600 Industry Neutral Ax Momentum	3.4	25.6	28.9	0.6	20.1	24.8	13.6	12.9	12.5	15.8	14.2	14.0
3. STOXX Europe 600 Industry Neutral Ax Multi-Factor	4.2	11.3	14.7	1.4	6.4	11.1	12.8	10.5	10.2	15.1	12.4	12.2
4. STOXX Europe 600 Industry Neutral Ax Quality	2.8	4.9	9.7	0.0	0.3	6.2	13.0	11.7	11.4	15.3	13.4	13.3
5. STOXX Europe 600 Industry Neutral Ax Size	1.3	5.1	11.3	-1.5	0.5	7.7	12.2	11.0	11.0	16.2	13.4	13.7
6. STOXX Europe 600 Industry Neutral Ax Value	2.6	14.7	19.0	-0.1	9.7	15.2	12.7	12.1	11.8	15.6	14.2	14.2
7. STOXX USA 500 Industry Neutral Ax Low Risk	8.7	31.5	34.2	5.8	25.8	29.9	15.5	11.2	11.2	9.6	9.4	9.3
8. STOXX USA 500 Industry Neutral Ax Momentum	12.3	66.4	74.7	9.2	59.1	69.1	21.6	19.0	18.6	16.9	17.8	17.4
9. STOXX USA 500 Industry Neutral Ax Multi-Factor	9.6	36.9	44.0	6.7	30.9	39.4	19.2	15.5	15.3	14.0	14.2	13.9
10. STOXX USA 500 Industry Neutral Ax Quality	13.0	43.6	49.5	10.0	37.3	44.7	20.1	15.0	15.0	15.5	13.5	13.4
11. STOXX USA 500 Industry Neutral Ax Size	10.9	25.9	30.8	7.9	20.4	26.6	19.7	14.3	14.2	14.4	13.0	12.9
12. STOXX USA 500 Industry Neutral Ax Value	9.0	23.6	30.3	6.0	18.1	26.1	22.1	15.1	14.9	16.2	13.7	13.6

Risk and return performance figures for STOXX Industry Neutral Factor indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

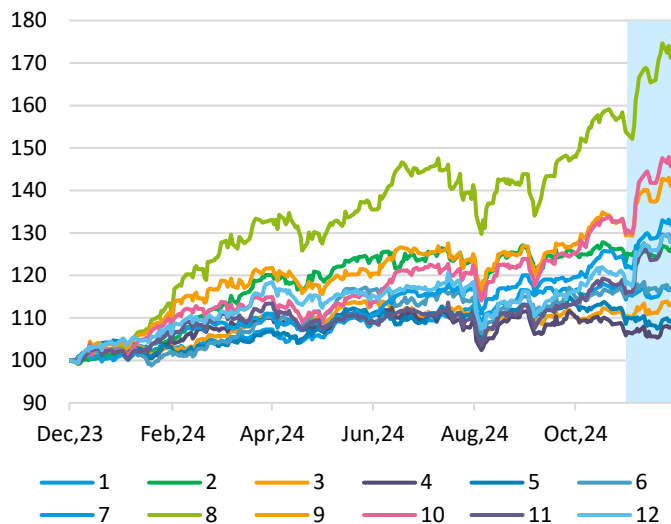


Figure 31: EUR gross return index performance. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

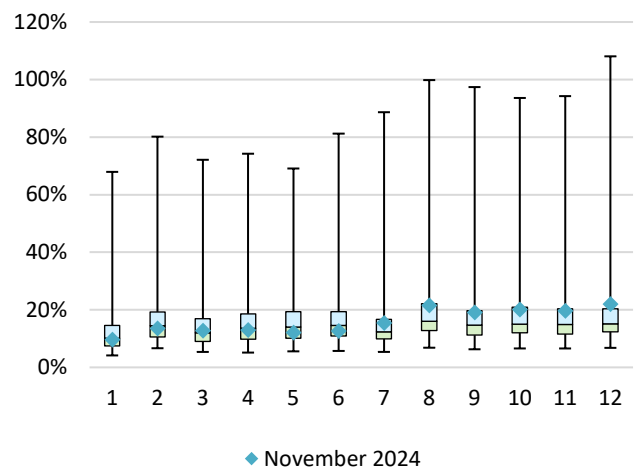


Figure 32: Monthly annualized volatility analysis, EUR gross return. Jan. 2004 – Nov. 2024. Source: STOXX.

Minimum Variance indices

Key points

Minimum variance strategies had a weak month relative to benchmarks in November, as stocks rallied. In Europe, however, they outperformed over the month.

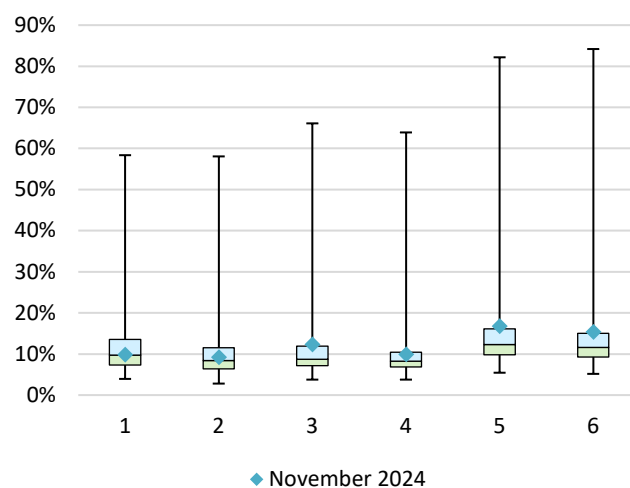
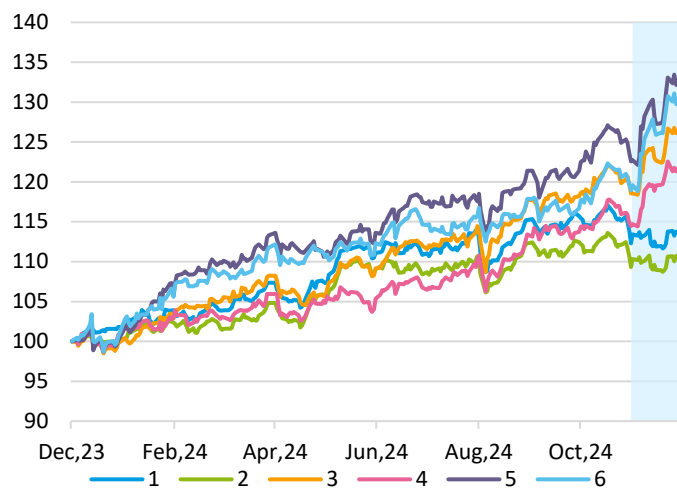
The STOXX Minimum Variance indices come in two versions. A constrained version has similar exposure to its market-capitalization-weighted benchmark but with lower risk. The unconstrained version, on the other hand, has more freedom to fulfill its [minimum variance mandate](#) within the same universe of stocks.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. STOXX Europe 600 MV	1.5	12.0	15.0	-1.2	7.1	11.3	9.8	7.9	7.7	14.0	10.2	10.2
2. STOXX Europe 600 MV Unconstrained	1.5	10.9	11.6	-1.3	6.0	8.1	9.2	7.5	7.2	13.5	9.8	9.7
3. STOXX Global 1800 MV	6.6	26.7	27.8	3.7	21.1	23.7	12.3	9.1	9.4	8.5	8.1	8.1
4. STOXX Global 1800 MV Unconstrained	6.5	20.9	23.1	3.6	15.6	19.1	9.9	8.6	8.7	7.8	7.7	7.7
5. STOXX USA 900 MV	8.1	32.4	34.3	5.2	26.6	30.0	16.7	10.8	11.1	11.6	8.6	8.6
6. STOXX USA 900 MV Unconstrained	9.4	29.4	31.6	6.4	23.7	27.4	15.3	10.1	10.7	9.8	7.8	8.1

Risk and return performance figures for STOXX Minimum Variance indices, gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance



Dividend indices

Key points

[Dividend strategies](#) also underperformed in the month that ended.

The [STOXX® Global Maximum Dividend 40 index](#) selects only the highest-dividend-yielding stocks. The [STOXX® Global Select Dividend 100 index](#), meanwhile, tracks companies with sizeable dividends but also applies a quality filter such as a history of stable payments. The [STOXX® Global ESG-X Select Dividend 100 index](#) targets the highest-yielding stocks within universes screened for responsible investment criteria.

The [STOXX® Global Select 100 EUR index](#) blends increasing dividend yields with low volatility and is calculated in euros.

Risk and return characteristics

	Return (%)						Annualized volatility (%)					
	EUR			USD			EUR			USD		
	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y	1M	YTD	1Y
1. STOXX Global Maximum Dividend 40 ⁵	0.5	6.8	9.0	-2.3	2.1	5.5	8.8	11.2	11.0	14.4	13.6	13.7
2. STOXX Global Select Dividend 100	3.4	16.6	24.0	0.6	11.5	20.1	7.8	9.7	9.6	9.1	10.7	10.9
3. STOXX Global ESG-X Select Dividend 100	3.9	18.2	26.8	1.1	13.0	22.8	7.2	9.6	9.5	8.6	10.7	10.9
4. STOXX Global Select 100 EUR	2.7	14.1	17.6				6.8	7.2	7.1			

Risk and return performance figures for STOXX Dividend indices, gross return except when shown. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

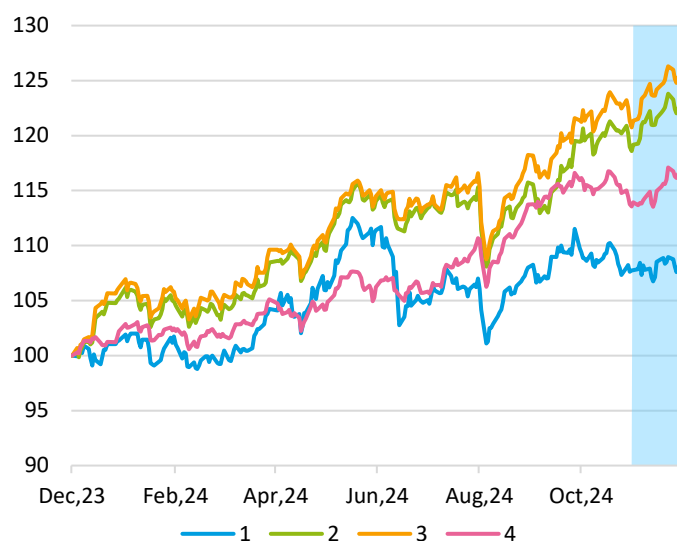


Figure 35: Annual price performance, EUR net return for 1; EUR gross return for 2-4. Dec. 2023 – Nov. 2024. Shaded area: Nov. 2024. Source: STOXX.

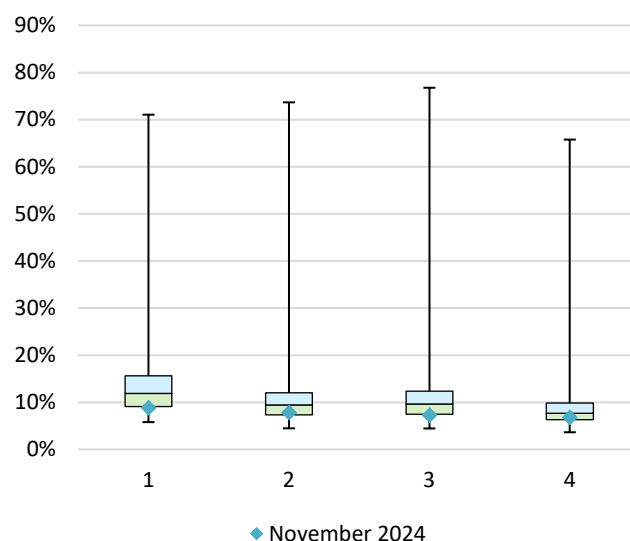


Figure 36: Monthly annualized volatility analysis. EUR net return for 1; EUR gross return for 2-4. Apr. 2012 – Nov. 2024. Source: STOXX.

⁵ EUR net return and USD net return used for STOXX Maximum Dividend 40.

Volatility indices

Key points

European equity volatility fell in November, as measured by the VSTOXX® index and the [VDAX-New®](#) index. The [EURO STOXX 50® Volatility of Volatility \(V-VSTOXX\)](#) index also decreased.

The VSTOXX and VDAX measure the implied volatility of EURO STOXX 50 index and DAX index options traded on Eurex, respectively, across their entire expiration curve. The V-VSTOXX measures the implied volatility of options on VSTOXX futures traded on Eurex, hence reflecting expectations regarding the volatility of volatility. All three are significantly lower than their March 2020 peaks. The VSTOXX, for example, rose to 86 in March 2020.

Risk and return characteristics

	Index Level			Correlation	
	T	T-1M	T-12M	1M	1Y
1. VSTOXX	17.0	21.7	13.8	-0.6	-0.7
2. V-VSTOXX	85.6	107.3	80.6	-0.1	-0.6
3. VDAX	14.6	19.7	13.3	-0.7	-0.7

Index levels for STOXX and DAX Volatility indices. Correlation for VSTOXX and V-VSTOXX compared with EURO STOXX 50 price return, and VDAX relative to DAX gross return. Data as of November 29, 2024. Source: STOXX.

Index and volatility performance

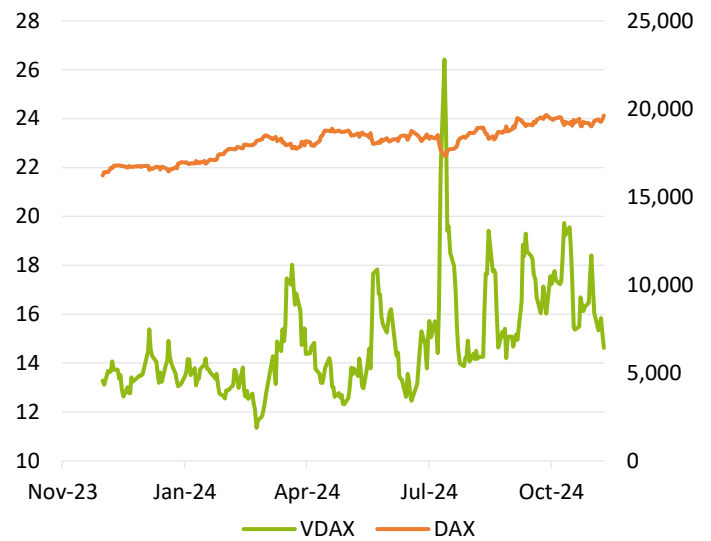
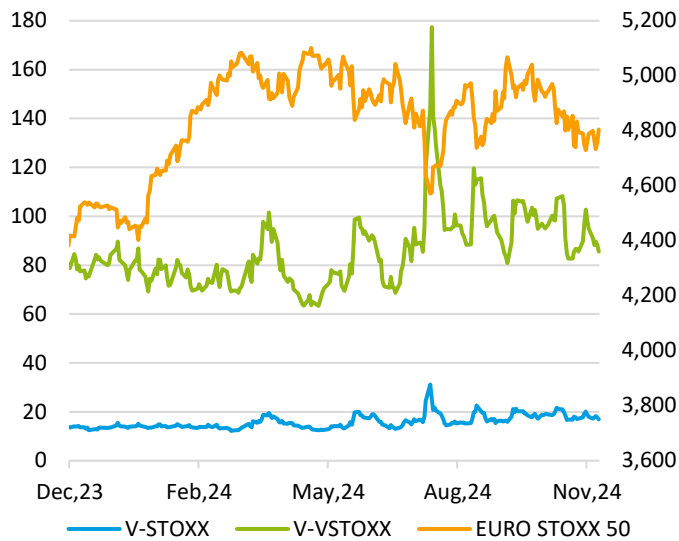


Figure 37: VSTOXX and V-VSTOXX (primary axis). EURO STOXX 50 price return index (secondary axis). Dec. 2023 – Nov. 2024. Source: STOXX.

Figure 38: VDAX (primary axis). DAX gross return index (secondary axis). Dec. 2023 – Nov. 2024. Source: STOXX.

Disclaimer

This document is published for informational purposes only and does not constitute investment advice or an offer to sell or the solicitation of an offer to buy any security of any entity in any jurisdiction.

Although the information herein is believed to be reliable and has been obtained from sources believed to be reliable, we make no representation or warranty, expressed or implied, with respect to the fairness, correctness, accuracy, reasonableness or completeness of such information.

No guarantee is made that the information in this report is accurate or complete, and no warranties are made with regard to the results to be obtained from its use. STOXX Ltd. will not be liable for any loss or damage resulting from information obtained from this report. Furthermore, past performance is not necessarily indicative of future results. Exposure to an asset class, a sector, a geography or a strategy represented by an index can be achieved either through a replication of the list of constituents and their respective weightings or through investable instruments based on that index. STOXX Ltd. does not sponsor, endorse, sell, promote or manage any investment product that seeks to provide an investment return based on the performance of any index. STOXX Ltd. makes no assurance that investment products based on any STOXX index will accurately track the performance of the index itself or return positive performance.

About STOXX

STOXX® and DAX® indices comprise a global and comprehensive family of more than 18,000 strictly rules-based and transparent indices. Best known for the leading European equity indices EURO STOXX 50®, STOXX® Europe 600 and DAX®, the portfolio of index solutions consists of total market, benchmark, blue-chip, sustainability, thematic and factor-based indices covering a complete set of world, regional and country markets.

STOXX and DAX indices are licensed to more than 550 companies around the world for benchmarking purposes and as underlyings for ETFs, futures and options, structured products, and passively managed investment funds.

STOXX Ltd., part of the ISS STOXX group of companies, is the administrator of the STOXX and DAX indices under the European Benchmark Regulation.

The ISS STOXX indices ("Indices") are owned and administered by STOXX Ltd. Environmental, social and governance ratings, scores and other analytical assessments, which may be used as an input to some Indices, are produced by Institutional Shareholder Services Inc. ("ISS"). Both STOXX Ltd. and ISS are wholly-owned subsidiaries of ISS STOXX GmbH. ISS is a Registered Investment Adviser under the Investment Advisers Act of 1940. Except with respect to any applicable products or services from ISS, neither STOXX Ltd. nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and the Indices offered by STOXX Ltd. do not constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such.

This document has not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.