

Climate Paris Aligned Benchmark Select Indexes

This product insight gives an overview of the **MSCI Climate Paris Aligned Benchmark Select Indexes** - designed to support investors seeking to align with a 1.5°C scenario and exceed the minimum standards of the EU Paris Aligned Benchmark label



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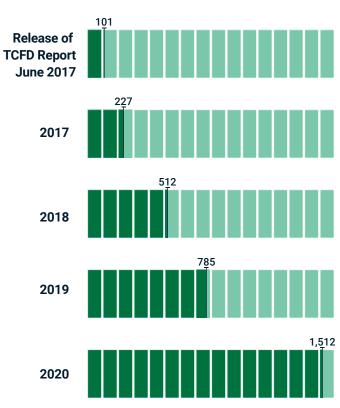
TCFD Reporting Continue to Increase Rapidly



The world's attitude toward climate change is rapidly evolving. What was once perceived as a relatively distant concern has become an imminent and urgent threat. It has begun to reshape both the world we live in and the investment landscape.

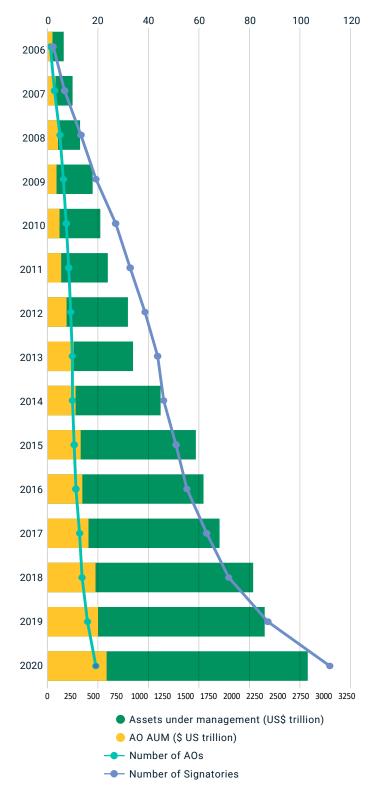
Many investors are increasingly looking to align their portfolios with the objectives of the Paris Agreement.¹ As a result, measuring and managing climate risk has become an ever-more important consideration for the institutional investment process. So has identifying new low-carbon economy investment opportunities to help build more climate-resilient portfolios.

Companies are increasingly aware that ESG factors can affect risk and return. Climate change is the clearest and most pressing illustration of this.²,³ As indication of the growth in measuring and managing climate risk and opportunities, there has been a rapid rise in the number of companies reporting using the Task Force on Climate-related Financial Disclosures (TCFD) guidelines. As of October 2020, over 1,500 organizations had expressed their support for the TCFD recommendations, an increase of over 85% since the 2019 status report. Nearly 60% of the world's 100 largest public companies support the TCFD, report in line with the TCFD recommendations or both.⁴



Another proxy to the growing awareness of ESG and climate is the rise in signatories to the Principles for Responsible Investment (PRI); there are now over 3,000 signatories (asset owners, asset managers and service providers), which manage more than \$100 trillion in assets under management (AUM).⁵ The first principle is a commitment to incorporate ESG issues, including climate, into investment analysis and decisionmaking processes.

There also has been significant growth in the number of and size of ESG and Climate funds. Today, there are nearly 600 ESG and climaterelated ETFs available globally, up from 30 such funds 10 years ago.⁶ As the chart on page 6 shows, as of December 2020, ETF AUM tracking MSCI ESG Indexes had soared by 208% year-on-year.⁷



Accelerating Signatories of the UN PRI

5 Source: https://www.unpri.org/pri/about-the-pri

6 Morningstar global data as of Dec. 31, 2020

7 Source: MSCI and Refinitiv data as of December 2020; only primary listings, and not cross-listings

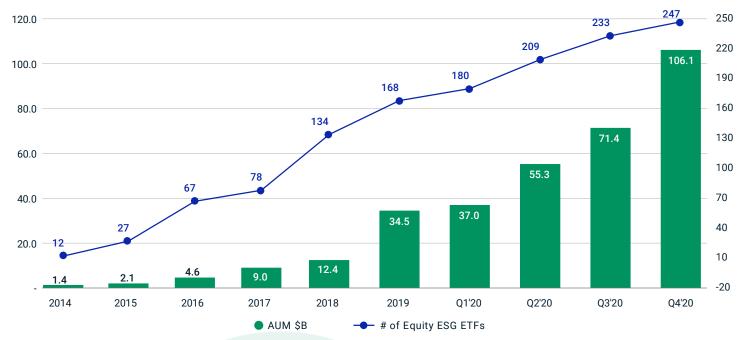
^{1.} https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

https://www.msci.com/our-solutions/esg-investing/principles-of-sustainable-investing
MSCI paper https://www.msci.com/our-solutions/esg-investing/foundations-of-climate-

investing

⁴ Source: Task Force on Climate-related Financial Disclosures (TCFD) status reports https:// www.fsb.org/2020/10/2020-status-report-task-force-on-climate-related-financial-disclosures/

ETFs linked to MSCI ESG Indexes see rapid growth



The Rise of Net-Zero Commitments ____

The Paris Agreement aims to limit global temperature rise to only 1.5°C by 2100 above pre-industrial levels. To achieve this goal, global greenhouse gas (GHG) emissions in the real world must equal net-zero no later than 2050, according to the Intergovernmental Panel on Climate Change (IPCC).⁸ In recognition of that, a growing number of the world's institutional investors, managers and banks have announced net-zero commitments by 2050 or sooner.⁹ Some asset owners (for example, signatories to the Net Zero Asset Owner Alliance¹⁰) are setting targets to reduce emissions and increase allocation to climate solutions, across equity and corporate bond portfolios. Systematic engagement with top emitters is an integral part of these net-zero strategies.

Central banks, through the Network for Greening the Financial System (NGFS),¹¹ are looking to define and require climate stress tests be run under their oversight.



Asset managers, (such as signatories to the Net Zero Asset Managers Initiative¹²) have to set interim targets for 2030, consistent with a fair share of the 50% global reduction in CO2 identified as a requirement in the IPCC special report on global warming of 1.5°C.¹³ They must also take into account portfolio Scope 1 & 2 emissions and, to the extent possible, relevant portfolio Scope 3 emissions.¹⁴ Data and service providers have a role to play too. At MSCI, we believe we have a responsibility to tackle the climate emergency and reduce our impact on the planet. On April 19, 2021 we announced our goal of net-zero emissions before 2040 with the aim of driving a transformation of our company, culture and our actions to the benefit of all our stakeholders.¹⁵ 8 IPCC https://www.ipcc.ch/site/assets/uploads/

- 8 IPCC https://www.ipcc.ch/site/assets/uploads/ sites/2/2019/02/SR15_Chapter2_Low_Res.pdf
- 9 https://unfccc.int/news/commitments-to-net-zero-double-inless-than-a-year
- 10 https://www.unepfi.org/net-zero-alliance/
- 11 https://www.ngfs.net/en
- 12 https://www.netzeroassetmanagers.org/
- 13 https://www.ipcc.ch/sr15/
- 14 https://www.iigcc.org/news/leading-asset-managerscommit-to-net-zero-emissions-goal-with-launch-of-globalinitiative/
- 15 https://www.msci.com/documents/10199/86474318-186a-82dc-7935-04ee0151a889

How Can Indexes Support a Net-Zero Strategy?

MSCI has developed a series of indexes designed to support investors seeking to address climate change in a holistic way by minimizing their exposure to climate risks and maximizing exposure to climate solutions such as renewable energy or clean technology providers. MSCI's Climate indexes leverage state-of-the-art climate analytics and data sets.

The MSCI Climate Paris Aligned Benchmark Select Indexes are designed for investors seeking to reduce their exposure to transition and physical climate risks and who also wish to pursue opportunities arising from the transition to a lower-carbon economy while aligning with the Paris Agreement requirements. The indexes are designed to exceed the minimum standards of the EU Paris Aligned Benchmark designation.



Climate **Paris Aligned** Benchmark Select Indexes

Index Methodology Construction and Review

The MSCI Climate Paris Aligned Benchmark Select Indexes (Indexes) are constructed from underlying MSCI indexes (herein referred to as "Parent Indexes") following a rules-based optimization approach. The applicable universe includes all the existing constituents of the Parent Index. This approach aims to provide an opportunity set with sufficient liquidity and investment capacity. The Eligible Universe is constructed from the Applicable Universe by excluding securities of companies based on specific exclusion criteria listed on page 11 defined in the methodology.¹⁶ At each Semi-Annual Index Review, the indexes are constructed using an optimization process that aims to achieve replicability and investability as well as minimize ex ante tracking error relative to the Parent Index, subject to climate and investability constraints.

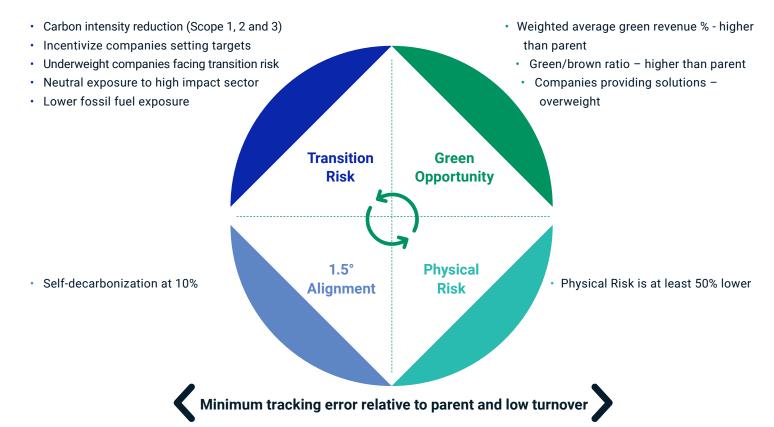
16 https://www.msci.com/egb/methodology/meth_docs/MSCI_Climate_Paris_Aligned_ Benchmark Select Indexes ndf

Key Features:

- >> Designed to exceed the minimum technical requirements laid out in the EU Delegated Act.¹⁷ For example, a higher "selfdecarbonization" rate of 10% year-on-year
- » Targets a reduction in carbon intensity by at least 50% by underweighting high-carbon emitters assessed using Scope 1, 2 and 3 emissions¹⁸
- » Designed to reduce the Index's exposure to physical risk arising from extreme weather events by at least 50%
- » Increases the weight of companies that are exposed to climate transition opportunities and reduces the weight of companies exposed to climate transition risks

Climate Paris Aligned Benchmark Select Indexes

- >>> Increases the weight of companies with credible carbon reduction targets through the weighting scheme
- » Aims to shift index weight from "brown" to "green" using the MSCI Low Carbon Transition score and at least doubling the exposure to green revenue
- » Targets a modest tracking error compared with the Parent Index and low turnover



Index Applications

The MSCI Climate Paris Aligned Select Indexes could be used as:

- >> the basis for index-based strategies, such as indexlinked funds or ETFs
- » benchmarks for climate-aware portfolios to assess the financial, and climate characteristics to active managers' portfolios
- » the underlying index for structured products and derivatives

Parent Indexes: The MSCI World, Europe and EMU indexes can be used as the parent (market-cap) indexes for the MSCI Climate Paris Aligned Select Indexes.

Exclusion Criteria

Controversial Weapons
ESG Controversies
Тоbacco
Environmental Harm
Oil & Gas
Power Generation

Further, companies based on the following exclusion criteria are also excluded from the Applicable Universe. For more information see the methodology book.

Nuclear Weapons
Civilian Firearms
Oil Sands



¹⁷ Commission Delegated Regulation (EU) 2020/1816 of 17 July 2020 https://eur-lex.europa.eu/ legal-content/EN/TXT/PDF/?uri=CELEX:32020R1816&from=EN

¹⁸ The carbon footprint assessment takes into product and supply chain emissions (Scope 3) as well as production and utility emissions (Scopes 1 and 2)

Based on simulated data, the MSCI Climate Paris Aligned Benchmark Select Indexes climate-risk profile compared favorably to the respective market-cap-weighted parent across the following measures:

- » More than 50% carbon-footprint reduction (scopes 1, 2 and 3)
- » Three times more exposure to companies generating 20% or more revenue from clean technologies
- » Three times more exposure to low-carbon transition risk solutions companies
- » Significantly lower (almost 90% lower) exposure to companies with any fossil-fuel reserves and no exposure to thermal coal-mining stocks
- » Fifty percent lower exposure to physical risk

For all three regions (World, Europe and EMU), the Indexes outperformed their respective market-capweighted parent index, based on simulated index performance between November 2013 and March 2021.19 The MSCI Climate Paris Aligned Benchmark Select Indexes displayed lower levels of risk, tracking errors within a range of 1%-2%, and annualized turnover of 11% to 12%.

Simulated Performance- MSCI World Climate Paris Aligned Benchmark Select Index

The table on the left shows back tested performance of the MSCI World Climate Paris Aligned Benchmark Select Index compared with the parent index MSCI World.

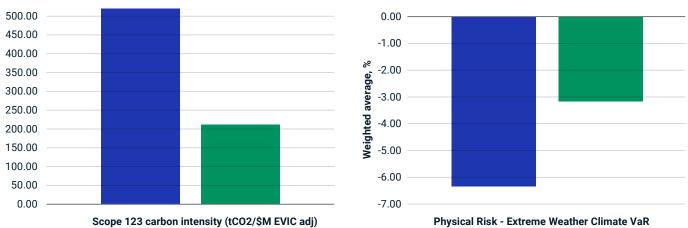
	MSCI World	MSCI World Climate Paris Aligned Benchmark Select
Financial Metrics		
Total Return * (%)	9.8	11.2
Total Risk (%)	13.9	13.7
Return / risk	0.7	0.82
Tracking Error (%)	0	1.1
Turnover ** (%)	1.8	11.9
Number of constituents	1634	1013

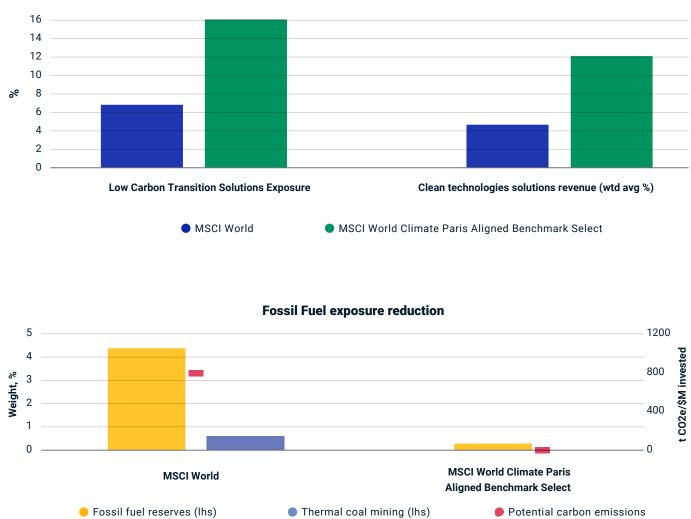
ESG & Climate Metrics

ESG Score	6.1	6.4
Index ESG Rating	А	А
Wtd avg carbon intensity (t CO2e/\$M sales)	141	41
Fossil Fuel Reserves (%)	4.8	0.3
Low Carbon Transition Score	6.1	6.8
Thermal coal mining (%)	1	0
Unconventional oil & gas extraction (%)	2.4	0
Physical Risk (Extreme Weather) as of Dec 2020 (%)	-6.3	-3.2
Red flag controversies (%)	2	0
Environmental pillar score	6	6.6
Ties to controversial weapons (%)	0.6	0
Civilian firearms producers (%)	0.2	0
Tobacco involvement (%)	1	0

Period: Nov 29, 2013 to Mar 31, 2021 except for Physical Risk (Extreme Weather) data which is as of December 2020. * Net returns annualized in USD ** Annualized one-way index turnover over index reviews

Carbon Footprint cut by more than half



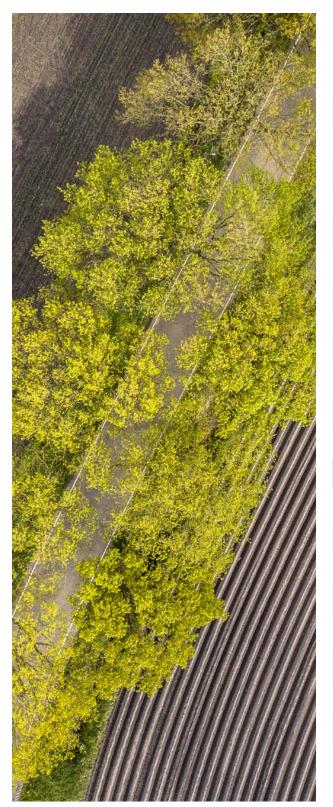


Physical Risk reduced by half

Higher solutions and Green revenues exposure

Simulated Performance - MSCI Europe Climate Paris Aligned Benchmark Select Index

The table below shows back tested performance of the MSCI Europe Climate Paris Aligned Benchmark Select Index compared with the parent index MSCI World.



	MSCI Europe	MSCI Europe ClimateParis Aligned Benc Select Select
Financial Metrics		
Total Return * (%)	6.2	7.9
Total Risk (%)	14	13.7
Return / risk	0.45	0.58
Tracking Error (%)	0	2
Turnover ** (%)	1.8	11.7
Number of constituents	441	324
ESG & Climate Metrics		

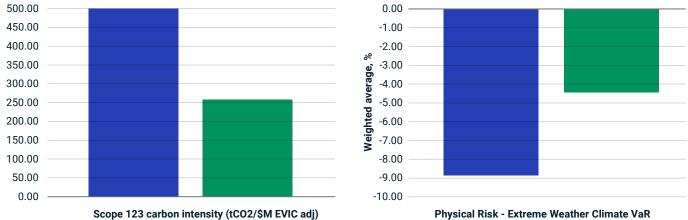
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Index

ESG Score	7.3	7.8
Index ESG Rating	AA	AA
Wtd avg carbon intensity (t CO2e/\$M sales)	143	57
Fossil Fuel Reserves (%)	7.4	0.7
Low Carbon Transition Score	6	6.6
Thermal coal mining (%)	1.5	0
Unconventional oil & gas extraction (%)	3.9	0
Physical Risk (Extreme Weather) as of Dec 2020 (%)	-8.9	-4.4
Red flag controversies (%)	3.5	0
Environmental pillar score	6.3	6.8
Ties to controversial weapons (%)	0	0
Civilian firearms producers (%)	0.5	0
Tobacco involvement (%)	1.4	0

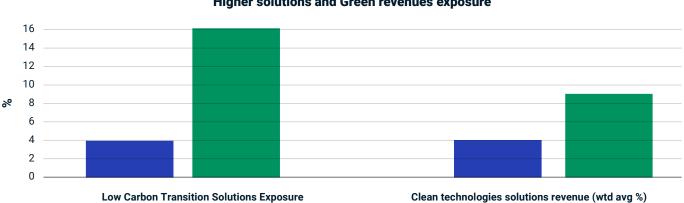
Period: Nov 29, 2013 to Mar 31, 2021 except for Physical Risk (Extreme Weather) data which is as of December 2020. * Net returns annualized in EUR ** Annualized one-way index turnover over index reviews.

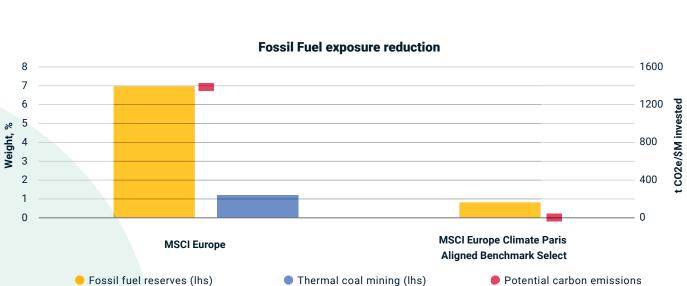
Carbon Footprint cut by more than half



Scope 123 carbon intensity (tCO2/\$M EVIC adj)

MSCI Europe





Fossil fuel reserves (lhs)

Physical Risk reduced by half

Higher solutions and Green revenues exposure

Clean technologies solutions revenue (wtd avg %)

MSCI Europe Climate Paris Aligned Benchmark Select

Simulated Performance - MSCI EMU Climate Paris Aligned Benchmark Select Index

The table below shows back tested performance of the MSCI EMU Climate Paris Aligned Benchmark Select Index compared with the parent index MSCI World.



	MSCI EMU Ind	MSCI EMU Clin Paris Aligned Benchmark Se
Financial Metrics	ļ.	
Total Return * (%)	6.6	8.1
Total Risk (%)	16	15.2
Return / risk	0.41	0.53
Tracking Error (%)	0	1.9
Turnover ** (%)	2.1	11.3
Number of constituents	242	177
ESG & Climata Matrice		

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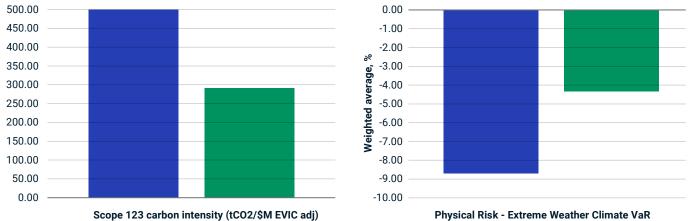
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ESG & Climate Metrics

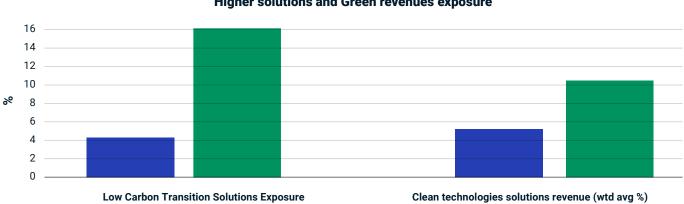
7.2	7.7
А	AA
172	77
6.2	1.3
6	6.6
0	0
2.8	0
-8.7	-4.4
2.8	0
6.6	7
0	0
0	0
0	0
	A 172 6.2 6 0 2.8 -8.7 2.8 6.6 0 0

Period: Nov 29, 2013 to Mar 31, 2021 except for Physical Risk (Extreme Weather) data which is as of December 2020. * Net returns annualized in EUR ** Annualized one-way index turnover over index reviews.

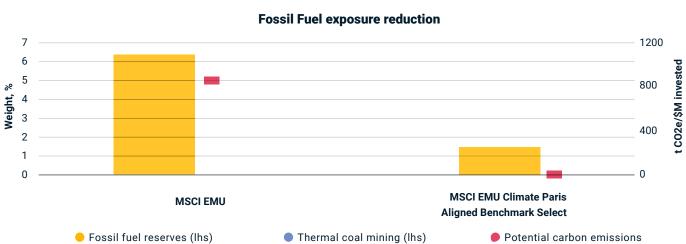
Carbon Footprint cut by more than half



Scope 123 carbon intensity (tCO2/\$M EVIC adj)



MSCI EMU



Physical Risk reduced by half

Higher solutions and Green revenues exposure



Conclusion

As investors adapt their investment strategies to better cope with the physical, social and economic challenges and opportunities of climate change, a holistic approach that embeds forward-looking measures of climate risk and return may help them move along their journey toward decarbonized portfolios. The MSCI Climate Paris Aligned Benchmark Select Indexes can serve as a complementary tool for such institutional investors, as both a benchmark and as the basis of indexed allocations.





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