

# Climate Pulse

Climate change risks and opportunities

By Mamadou-Abou Sarr



## The heat

## Renewables: are we ready for prime time, at last?

**The war in Ukraine has been disrupting global energy supplies, therefore increasing the focus on energy security. But where does this leave the commitments global leaders made at the Paris Climate Agreement, to limit temperature rises to well below 2°C compared with pre-industrial times?**

There is a concern that, with geopolitical issues dominating the headlines, climate goals could be shunted onto the backburner.

While the overarching goal of hitting net zero carbon emissions by 2050 can give the impression that climate change is a long-term problem, in reality, urgent action is required in the short-term if these targets are to be met.

And, to date, progress in one of the most important aspects of addressing climate change – decarbonising our sources of energy – has been painfully slow.

It seems we have been calling for renewables to replace fossil fuels for decades. Yet the figures point to a lack of meaningful action. In 2019, about 11.2%<sup>1</sup> of the energy consumed globally for heating, power, and

transportation came from modern renewables (i.e., biomass, geothermal, solar, hydro, wind and biofuels). That is up from 8.7% a decade previously.

Fossil fuels' share of the energy mix was roughly flat during the same period. Taking into account growing energy demand, that's an increase in output.

To put it simply, we need renewables to be greater than 11% of the energy mix if we are to combat climate change.

I see three major hurdles for the mass adoption of renewables:

1. Capital costs are still too high for renewables to be seen as a legitimate alternative by many. People will always choose the option that costs less today.
2. There is a lack of infrastructure to facilitate the mass roll-out of renewables. We need energy storage to deal with the intermittent supply associated with technologies such as wind and solar, and a grid capable of transporting this supply.
3. A level global playing field is needed. Renewables investors grapple with a lack of harmonisation in regulation, which hinders progress.

As well as proven technologies like wind and solar, we need other technologies that are still emerging – like carbon sequestration and hydrogen – and others that are not yet discovered. There's a need for capital investment to help achieve breakthrough technologies.

To really help the renewables sector to shift gear, greater public-private partnership is required. Of course, the private sector will be the main source of capital, however better coordination with the public sector is key.

**“Our discussions around renewables also need to be realistic. We need a programmatic transition. That means accepting that different countries will develop at different speeds.”**

The history of the solar sector is littered with failures. The public and private sectors must work in tandem to instill investor confidence.

Our discussions around renewables also need to be realistic. We need a programmatic transition. That means accepting that different countries will develop at different speeds. In certain developing economies, renewables are not yet ready for to replace traditional sources of energy overnight mostly due to competing priorities, lack of infrastructures, land filling and waste management concerns.

Conversely, in other countries such as Norway, Brazil, and New Zealand, hydro power, biofuels and waste, wind and solar represent a substantial percentage of their total supply (respectively 45%, 32.1% and 25%<sup>2</sup>). The increased private investment in renewables plants and the associated infrastructure they require should be maintained, accelerated, and accompanied by the right policies and incentives from the public sector. This is the path to power up the renewables sector.

<sup>1</sup>Source: Center for Climate and Energy Solutions. <https://www.c2es.org>

<sup>2</sup>Source: International Energy Agency



## Solar PV

Photovoltaic (PV) solar cells generate electricity from photons in the sun's rays.

PV panels consist of cells made of a semiconducting material. When photons strike the material, they release electrons, creating an electric current.

This current is captured in the form of direct current (DC) electricity. An inverter converts this DC electricity into alternating current (AC) that can then power appliances or can be fed into the grid.

Contrary to popular belief, modern solar panels do not require direct

sunlight to properly function, although they can produce more electricity on bright, sunny days.

# The pulse

## Equity Indexes

As of 06/30/22	Performance (Net total return)					As of 06/30/22	Risk (Annualized Standard Deviation)			
	Year to date	3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)		3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)
MSCI WORLD	-7.69%	14.44%	12.05%	10.73%	9.56%	MSCI WORLD	17.51%	15.36%	13.29%	13.71%
MSCI WORLD CLIMATE CHANGE	-9.52%	16.09%	13.18%		10.57%	MSCI WORLD CLIMATE CHANGE	17.71%	15.51%		13.81%
MSCI WORLD LOW CARBON LEADERS	-7.88%	14.65%	12.17%	11.04%	9.68%	MSCI WORLD LOW CARBON LEADERS	17.60%	15.44%	13.39%	13.79%
MSCI WORLD CLIMATE PARIS ALIGNED	-9.43%	15.00%	12.77%		10.70%	MSCI WORLD CLIMATE PARIS ALIGNED	17.64%	15.36%		13.70%
MSCI EM (EMERGING MARKETS)	-4.83%	6.04%	6.99%	3.24%	4.07%	MSCI EM (EMERGING MARKETS)	18.21%	16.59%	15.96%	16.33%
MSCI EM (EMERGING MARKETS) CLIMATE CHANGE	-5.67%	6.32%	7.23%		4.62%	MSCI EM (EMERGING MARKETS) CLIMATE CHANGE	18.06%	16.64%		16.28%
MSCI EM LOW CARBON LEADERS	-4.76%	5.17%	6.47%	3.09%	3.68%	MSCI EM LOW CARBON LEADERS	17.73%	16.30%	15.75%	16.11%
MSCI EM CLIMATE PARIS ALIGNED	-5.74%	7.45%	7.58%		4.46%	MSCI EM CLIMATE PARIS ALIGNED	18.46%	16.84%		16.41%
SOLACTIVE GBS DEVELOPED MARKETS LARGE & MID CAP INDEX	-7.72%	14.35%	12.00%	10.68%	9.55%	SOLACTIVE GBS DEVELOPED MARKETS LARGE & MID CAP INDEX	18.76%	15.89%	13.81%	14.27%
SOLACTIVE ISS ESG DEVELOPED MARKETS PARIS-ALIGNED BENCHMARK INDEX	-8.91%	13.86%	11.92%			SOLACTIVE ISS ESG DEVELOPED MARKETS PARIS-ALIGNED BENCHMARK INDEX	17.79%	15.08%		
SOLACTIVE ISS ESG DEVELOPED MARKETS CLIMATE TRANSITION BENCHMARK INDEX	-8.35%	13.68%	11.75%			SOLACTIVE ISS ESG DEVELOPED MARKETS CLIMATE TRANSITION BENCHMARK INDEX	18.08%	15.28%		

## Fixed-Income Indexes

As of 06/30/22	Performance (Net total return)					As of 06/30/22	Risk (Annualized Standard Deviation)			
	Year to date	3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)		3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)
MSCI USD HY CORPORATE BOND	-4.19%	4.84%	4.13%	5.27%	4.00%	MSCI USD HY CORPORATE BOND	9.95%	8.10%	6.86%	8.51%
MSCI USD HY CLIMATE CHANGE CORPORATE BOND	-4.40%	4.37%			4.00%	MSCI USD HY CLIMATE CHANGE CORPORATE BOND	7.74%			6.77%
MSCI USD IG CORPORATE BOND	-5.20%	4.71%	3.77%	3.70%	3.37%	MSCI USD IG CORPORATE BOND	6.81%	5.63%	4.84%	5.91%
MSCI USD IG CLIMATE CHANGE	-5.17%	4.67%	3.77%		3.36%	MSCI USD IG CLIMATE CHANGE	6.35%	5.28%		5.54%

Source: MSCI Inc - <https://www.msci.com/>

ISS ESG - <https://www.issgovernance.com/esg/ratings/>

Solactive AG - <https://www.solactive.com/indices/>

# Climate Pulse

This newsletter should not be copied, distributed, published or reproduced, in whole or in part. The information contained in this newsletter was obtained from publicly available sources, may not be current and has not been independently verified by V-Square Quantitative Management LLC ("V-Square"). V-Square has no obligation to provide any updates or changes. All price references, market forecasts and index performance are correct as of the date specified. Investing involves risks. This newsletter is not a product of V-Square and the information contained in this newsletter is not financial research. The views and opinions expressed in this newsletter are the views of Mamadou-Abou Sarr, V-Square President. V-Square is not providing any financial, economic, legal, accounting, or tax advice or recommendations in this newsletter. The information contained in this newsletter does not constitute investment advice or an offer to buy or sell securities from V-Square should not be relied upon to evaluate any potential transaction. Additionally, the receipt of this newsletter by any reader is not to be taken to constitute such person a client of V-Square. Neither V-Square nor its affiliates make any representation or warranty, express or implied, as to the accuracy or completeness of the statements or any information contained in this newsletter and any liability therefore (including in respect of direct, indirect, or consequential loss or damage) is expressly disclaimed.

Performance data quoted represents past performance and does not guarantee future results. Index performance does not represent V-Square's performance. Widely followed ESG based indexes have been selected along with a broad index for comparison purposes, other indexes are available. It is not possible to invest directly in an index. Actual returns may differ and include the possibility of a loss of principal. Index returns are calculated by their respective index creators. All data as of date indicated and subject to change. V-Square accepts no responsibility or liability for any errors or for any loss from the use of this newsletter page or any of the information or data contained herein. Before investing, carefully consider the investment objectives, risks, charges, and expenses. The information contained herein has been obtained from public sources and is believed to be reliable, but no representation or warranty, express or implied, is made that such information is accurate or complete and it should not be relied upon as such.

© MSCI Inc., 2022. All Rights Reserved. MSCI Inc. and/or its content providers are the proprietors of this information; do not permit its unauthorized copying or distribution; do not warrant it to be accurate, complete, or timely; and are not responsible for damages or losses arising from its use.

© Solactive AG, 2022. All Rights Reserved. Solactive AG and/or its content providers are the proprietors of this information; do not permit its unauthorized copying or distribution; do not warrant it to be accurate, complete, or timely; and are not responsible for damages or losses arising from its use.

© 2022 V-Square Quantitative Management LLC. All rights reserved. All trademarks are those of their respective owners.