Decarbonisation: seeking stratospheric performance



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Decarbonisation was one of the biggest themes of 2019 and 2020. Rightly so, we would argue. With the 2021 United Nations Climate Change Conference (COP26) taking place in November, this could be another important year for decarbonisation.

Global temperatures are currently on a trajectory to increase by nearly 4°C above pre-industrial levels, which would be truly catastrophic, unless action is taken.¹ As this is a systemic global threat, both the public and the private sectors must contribute to the solution today; neither can defer responsibility to others or wait to act



Yet the action required to decarbonise the global economy is not just a social imperative; we believe it can also be an opportunity to align portfolios with climate objectives and invest in a long-term growth market focused on effecting positive change. Indeed, an estimated \$130 trillion of investment is needed to achieve global net-zero emissions (including \$20 trillion by 2025)² – an essential investment in our future world, but also an investment opportunity itself.

So how can we invest in this theme in practice? The broad trend towards decarbonisation obviously spans many sectors, so we break it down into several categories:

Decarbonisation themes

Clean energy Commodities Storage batteries Renovation Picks and shovels Solar, wind, hydrogen, Materials, manufacturing Residential, commercial Cables Copper, hydrogen, generation, components lithium etc. e.g. Orsted - Danish e.g. Livent - focused e.g. Turquoise Hill e.g. TopBuild - a leading e.g. Prysmian Group installer and distributer on lithium for the next - world leading cable renewable energy Resources - copper generation of batteries of insulation and manufacturer company mining building material products

Source: LGIM, June 2021. Reference to a particular security is for illustrative purposes only, on a historical basis, and does not mean that the security is currently held or will be held within an LGIM portfolio. The above information does not constitute a recommendation to buy or sell any security.

- 1. Legal & General, 2021 (https://www.legalandgeneralgroup.com/media/18377/fy2020-lg-tcfd-report.pdf)
- 2. Legal & General, 2021 (https://www.legalandgeneralgroup.com/media/18405/lg-ar-2020_web-final.pdf)



The value of an investment and any income taken from it is not guaranteed and can go down as well as up, you may not get back the amount you originally invested.

Each of these categories will be subject to its own economic dynamics and idiosyncratic factors, but in combination we believe they represent the industries and technologies critical to meeting the world's net-zero ambitions.

With that in mind, we have built a basket of approximately 25-30 stocks that are both relatively pure plays in each area and – for portfolio and risk-management purposes – have a decent market cap and liquidity, are more or less evenly weighted across the sub-sectors, and offer regional diversification.

C change

Underpinned by the unavoidable environmental considerations, the longer-term growth prospects for the decarbonisation theme look strong, in our view. The technological advances and scale effects making cleaner energy more cost-competitive with fossil fuels should lend additional support. The potential for further investor flow into these assets is another likely tailwind: the EU introduced the Sustainable Finance Disclosure Regulation (SFDR) in March this year, and the UK is moving towards mandatory climate-related disclosures. Such developments should focus attention on responsible investment strategies and, in turn, this theme.

However, we must acknowledge that following the remarkable outperformance of the theme in 2020, decarbonisation stocks were among the casualties of the rotation in equity markets earlier this year away from recent growth winners in favour of value and cyclical names.

While we have no strong view on the short-term dynamics, we believe this presented an opportunity to gain exposure to this secular growth theme for the medium term. Decarbonisation stocks' retreat has not, in our view, changed the fundamental growth drivers outlined above: the environmental necessity (reflected more and more in public policy), the increasingly attractive economics of the technologies and the prospective investor demand.

Legal & General's commitment to decarbonisation

In line with our longstanding commitment to sustainability and inclusive capitalism, in 2020 Legal & General formally added addressing climate change as one of our six strategic priorities. It is now embedded in how we run our business, from how we invest our proprietary assets to how we exert our influence as one of Europe's largest asset managers. The breadth of our businesses, from insurance to investment management to housebuilding, gives us multiple levers to improve environmental outcomes. Our scale enables us to deliver meaningful change.

Carbon sink?

Despite the bullish outlook, we must remain aware of the risks to this theme. From our macro perspective, there are two key assumptions we make and against which we will measure future news flow.

First, we expect regulatory actions to continue to become generally 'greener'. This may not apply to every decision in every country, but the shifts in regulatory attitudes have been one of the driving forces of this theme. Without this, the speed of change is likely to slow.

Second, we expect flows into environmental, social, and governance (ESG) strategies to increase over the next few years. The increase in demand for decarbonisation assets has been a factor in the theme's outperformance and a reversal would challenge the re-rating.

A final issue is that, despite the weakness earlier this year, there is no denying the bullish sentiment around decarbonisation. It remains a strong outperformer over the past two years and valuations across much of the theme have increased relative to the broader market.

However, we believe the longer-term growth prospects do justify paying more for these assets compared with the theme's longer history. We have also screened out some of the more extreme valuation cases in the group and have set out signposts, as we discussed in a recent blog post, designed to keep us disciplined on increasing or decreasing exposure.

Specifically, with these three considerations in mind, we will continue to monitor:



The global regulatory direction



ESG flows



Valuations in our exposure



The performance of stocks in our decarbonisation basket



Market reaction to both macro and companyspecific news around the theme Overall, our conviction in decarbonisation as a theme for the medium to long term is based on the potential benefits it can offer to a portfolio:

Exposure to a long-term secular theme

- Renewables are set to account for 95% of the net increase in global power capacity through 2025. Total installed wind and solar PV capacity is on course to surpass natural gas in 2023 and coal in 2024. Renewables will overtake coal to become the largest source of electricity generation worldwide in 2025. By that time, they are expected to supply one-third of the world's electricity.³
- Demand is estimated to increase by factors of 18-20 for lithium, 17-19 for cobalt, 28-31 for nickel three of the primary elements for battery technology and 15-20 for most other battery materials from 2020 to 2050, requiring a drastic expansion of lithium, cobalt, and nickel supply chains and likely additional resource discovery.⁴
- The hydrogen economy is expected to be worth \$2.5 trillion of revenues and \$11 trillion in infrastructure potential by 2050, equivalent to a seven-fold expansion.⁵

LGIM and net zero

In December 2020, LGIM was a founding signatory to the Net Zero Asset Managers Initiative, which is committed to supporting the goal of net-zero greenhouse-gas emissions by 2050 or sooner and to supporting investing aligned with net-zero emissions by 2050 or sooner.

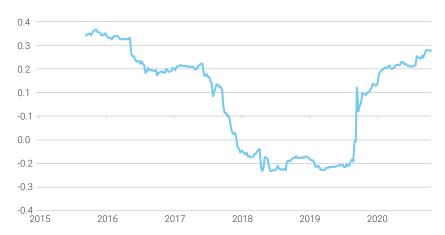
"By signing up to the Net Zero Asset Managers Initiative, LGIM is committing – in partnership with and on behalf of our clients – to invest in alignment with the net-zero emissions framework by 2050 or sooner," explained Michelle Scrimgeour, LGIM's chief executive officer and a member of UK Government's COP26 Business Leaders Group. "Delivering on this ambition requires substantial change across the global economy and LGIM will be at the heart of these efforts."

Diversification potential

In aggregate, our basket of decarbonisation stocks has exhibited fairly idiosyncratic behaviour so far, although we expect its correlation with the wider market to be a touch higher going forward.

That said, we would still expect some diversification benefits from this theme. First, the underlying stocks in the basket are generally smaller than the largest names in indices weighted by market capitalisation. Second, over the longer term, the theme should be driven the secular growth dynamics we have set out; this should make it more resilient than more cyclical areas of the market.

120-day correlation between decarbonisation stocks and S&P 500



Source: Bloomberg & LGIM, data from 11/03/2016 to 16/04/2021. Past performance is not a guide to the future.

Tangible ESG impact and alignment to SDGs

We believe each of the categories within our decarbonisation theme is integral to meeting net-zero targets: clean energy by replacing fossil fuels, storage batteries by overcoming the intermittency of renewable power and facilitating the transition away from internal combustion engines, commodities by being essential inputs for clean energy and batteries, renovation by making the built environment compatible with a net-zero future, and the 'picks and shovels' businesses by enabling electrification.

As such, we believe this theme is aligned with climate objectives and with the UN's Sustainable Development Goals (SDGs).











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^{3.} Source: IEA, 2020

^{4.} Source: Xu, C., Dai, Q., Gaines, L. et al. Future material demand for automotive lithium-based batteries. Commun Mater 1, 99 (2020). https://doi.org/10.1038/s43246-020-00095-x

^{5.} Bank of America Research, December 2020; Goldman Sachs Research, June 2021

A proven record of climate stewardship and engagement

In 2020, LGIM was ranked highest among asset managers for our approach to climate change in a review by NGO ShareAction, with the UN-backed Principles for Responsible Investment (PRI) also selecting us as part of its 'leaders group' on climate change. In early 2021, Corporate Adviser found LGIM the highest-ranking asset manager in a meta-study of industry metrics of actions taken by institutional investors on ESG and climate change.

Source: Asset Managers and Climate Change 2021, InfluenceMap, January 2021

	Engagement scores	
	2020	2019
LGIM	A +	A +
Manager 1	B+/A-	B+/NA
Manager 2	A-	B+
Manager 3	В	C+
Manager 4	B-	B-
Manager 5	С	C-
Manager 6	С	С
Manager 7	С	С
Manager 8	C-	D
Manager 9	D	D-

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Important information

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