

Your success. Our priority.

Sustainability in a post-COVID world

For professional investors only 4 May 2021



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Columbia Threadneedle Sustainable themes Our sustainable themes mapped to SDGs

Transition

Regeneration & Infrastructure







E

GOOD HEALTH

Social





















9 INDUSTRY, INNOVATI AND INFRASTRUCTU



Sustainable Resource Management & Transformation

- The 17 UN Sustainable Development Goals (SDGs) represent a catalyst for change, creating new investment opportunities
- Our eight Columbia Threadneedle sustainable themes draw on these SDGs and encompass a range of social and environmental outcomes
- The COVID-19 pandemic has heightened the importance of investing for sustainable outcomes. More than ever we need to direct investment towards those companies providing solutions to some of the world's biggest challenges, many of which have been worsened by the pandemic.
- We believe investment based on these themes can deliver not just impact for investors but solid financial returns

UN logos. Use does not imply UN endorsement of this strategy. Use for promotion of the SDGs. Our thematic framework draws on all SDGs, but the primary SDGs per theme are shown here

Energy and climate transition Decarbonisation: Both challenge and opportunity



The amount of carbon dioxide in the atmosphere $(CO_2, parts per million by volume)$



The challenge:

- Globally the energy system emits ~35 billion tonnes of CO₂ per annum leading to record levels of carbon dioxide in the atmosphere.
- Global warming has seen the world's seven warmest years all occurring since 2014.
- Environmental impacts of climate change include rising sea levels, ocean acidification, desertification, increased frequency and intensity of natural disasters and biodiversity loss.
- Governments and corporates globally have to adopt net zero carbon emission targets to mitigate economic and social devastation from climate change.
- COVID related shutdowns led to 2020 global emissions dropping 4.4% with the associated severe economic hit.
- But we need to cut emissions by 7.6% every single year to align with the Paris climate agreement target of 1.5 degrees Celsius warming.
- To achieve net zero we need a complete re-wiring of our economies.

Source: Charts: IEA, 2020; NOAA (national oceanic & atmospheric administration) www.noa.gov.

Energy and climate transition Decarbonisation: Both challenge and opportunity





Global energy CO₂ emissions reduction drivers in IEA's Sustainable Development Scenario



The opportunity:

- To achieve net zero requires a "green" transition across energy, mobility, housing, agriculture and heavy industries
- The OECD estimates that >US\$6 trillion investments per annum are needed by 2030 to transition to a sustainable, low carbon world
- The energy sector is one of the low hanging fruits to achieve decarbonisation targets contributing ~40% of global emissions
- New technology and innovation are also crucial to achieve net zero targets including advancements in battery, green hydrogen and carbon capture technologies.
- The huge investment over the next decade in the "Green" economy and infrastructure will in turn support job creation and post-COVID recovery.

Energy and climate transition A "green" recovery

Countries commitments towards net zero materially increased in 2020 covering 60% of global GHG

	Countries Climate Targets				
	% global emissions	Net-Zero Target Interim Emissions Reduction Targets			
		Year	Target	Year	Baseline
UK	1%	2050	-78%	2035	1990
EU	8%	2050	-55%	2030	1990
US	15%	2050	-50%	2030	2005
Japan	3%	2050	-46%	2030	2013
Canada	2%	2050	-40%	2030	2005
China	30%	2060	peak emissions	2030	2005
Australia	1.5%	n.a	-26%	2030	2005
India	7%	n.a	-33%	2030	2005

Ordered by level of ambition. In blue countries that announced most recent new targets

US\$921 billionn in green stimulus approved to date By country



Source: BNEF, as at February 2021.

Note: figures only include green stimulus that has been officially approved.





- The COVID pandemic has demonstrated humankind's fragility, accentuating the urgency for climate change action
- 2020 saw an acceleration in the adoption of net zero targets by governments around the world:
 - China announced the goal to become carbon neutral by 2060
 - Post Biden's election, US re-joined the Paris Agreement and announced a new target for 50% carbon emissions reduction by 2030 and net zero by 2050
 - COP26 will be focused on raising global decarbonisation ambition levels
- In the race to net zero, countries have announced green stimulus packages:
 - EU: €1.0 trillion Green Deal
 - UK: £12 billion Green Industrial Revolution Plan
 - US: Biden's \$2.25 trillion infrastructure plan "Build back Better"
- Green investment priorities include renewables, green hydrogen, electric vehicles and buildings renovation

Energy and climate transition Impact through transition

Renewable costs have fallen rapidly and now <

fossil LCOE (\$/MWh, 2019 real) 400 362 350 PV, fixed axis 300 250 Offshore wind 200 150 111 PV, tracking 100 Onshore wind 50 0 문 092010 '11 '12 '13 '14 2015 '16 '17 '18 '19 20







- Transitioning to renewables makes both environmental and economic sense:
 - The cost of renewables is falling rapidly and in most countries is now more economical than coal and nuclear
 - Battery efficiency improvements and cost declines further support the transition to renewable power.
 - Regulation around fossil fuels is growing
- We need large corporates like "Big Oil" to accelerate green investments if decarbonisation targets are to be met:
 - Intentionality is key to capture future sustainable leaders



- Nextera Largest developer and operator of renewables in the US:
 - Generate more wind and solar energy than any company in the world
 - Part of M&A strategy is to shut down inefficient coal power of acquired companies

Source: BofAML Global Research, LCOE is levelized cost of energy; Barclays Research, and IPCC, October 2020. All intellectual property rights in the brands and logos set out in this slide are reserved by respective owners. The mention of any specific shares or bonds should not be taken as a recommendation to deal.

Health and wellbeing Even more relevant post-COVID

Slowdown in physical activity



Source: Tison, et al, Annals of Internal Medicine, 29 June 2020





North America Europe South America Western Pacific South East Asia MENA Africa

Source: Berenberg, as at 2016.

1. See e.g https://runrepeat.com/quarantine-15-weight-gain-study; https://www.mdpi.com/2072-6643/12/7/2016/htm.





- COVID has highlighted the importance of strong healthcare systems
- But it's not just about increasing spend in healthcare – improving the health of populations is key to reducing the burden on global healthcare systems.
- Pressure to continue to grow due to ageing populations and the rise of lifestyle related diseases
 - According to the WHO worldwide obesity is up approximately 3x since 19751
 - Food and exercise habits have shifted, raising the prospect of increases in non-communicable diseases like diabetes and heart disease
- COVID has resulted in government action to support public health
 - UK has introduced an extensive new obesity strategy
 - Mexico has restricted sales of soft drinks and confectionery to youth



Health and wellbeing Healthcare Innovation a key part of the solution





Falling cost of genetic sequencing

"Improve human health by unlocking the power of the genome"

- COVID-19 highlighted the extraordinary innovation in healthcare today
 - Historically took more than 10 years on average to develop a vaccine - Moderna developed one ready for testing in 42 days
 - Diagnostics and testing have played a key role in the pandemic
 - Telemedicine and remote monitoring have enabled safe patient care
- Advances in healthcare innovation helps to improve both outcomes for patients and reduce the cost burden for governments
- Illumina leader in clinical genomics
 - Their next-generation genome sequencing technology results in more effective healthcare e.g. sequencing a tumour can improve efficacy of cancer therapy for patients.
 - Played key role in sequencing COVID virus enabling the development of vaccines and PCR-based tests and identifying new strains and transmission tracking.

Source: Illumina company data and presentation 2019. All intellectual property rights in the brands and logos set out in this slide are reserved by respective owners. The mention of any specific shares or bonds should not be taken as a recommendation to deal.

A more inclusive world Education, work and equality

Share of employees in shut-down sectors by individual earnings in the United States



Gains from increasing the female employment rate across the OECD to match Sweden's at 72% (highest in OECD)







- COVID highlighted and worsened social inequalities globally as people in lower income communities disproportionately affected.
 - A recent survey of 37 countries indicates that 3 in 4 households suffered declining income since the start of the pandemic, with 82% of poorer households affected.
- The rise of "S" in ESG Company treatment of employees, suppliers and customers under increased scrutiny during pandemic
- Addressing social inequality a key part of economic recovery programmes
- More inclusive education and work reduces inequality and supports economic growth:
 - One extra year of education associated with 1.4 percentage point drop in the Gini coefficient
 - Women working to full potential to unlock up to US\$28 trillion in annual global GDP by 2025

Sources: PwC analysis, UNICEF; OECD; McKinsey; World Economic Forum, 2020. All intellectual property rights in the brands and logos set out in this slide are reserved by respective owners. The mention of any specific shares or bonds should not be taken as a recommendation to deal.

A more inclusive world A new way of working and learning

Potential share of time spent working remotely by country %



Note: The theoretical maximum includes all activities not requiring physical presence on-site; the effective potential includes only those activities that can be done remotely without any loss of effectiveness. Model based on more than 2,000 activities across more than 800 occupations. Source: McKneys Global Institute analysis







- Technology platforms played a key role in supporting the economy through the pandemic
- The rise of remote working and learning
 - Cloud adoption soared through the pandemic as companies and learning institutions were forced to move online
 - Microsoft Teams reached 115 million daily active users as of the 28 October 2020 and has been pivotal to schools and businesses alike
- Technology helped to support small businesses which were disproportionately impacted by the pandemic



- Intuit financial management software developer
 - US government used Intuit's platform to help small businesses
 - Intuit launched free tools for small businesses to access financial aid programmes during the COVID crisis.
 - As at 31 July 2020, had helped make just over US\$1.2 billion of approved small business loans available to customers in the U.S. helping 37,000 small businesses

Source: McKinsey Global Institute, as at November 2020. All intellectual property rights in the brands and logos set out in this slide are reserved by respective owners. The mention of any specific shares or bonds should not be taken as a recommendation to deal.

What does this mean for investors?





- The world is changing with COVID accelerating a lot of this change both for society and the environment.
- Companies that contribute to sustainable outcomes by offering solutions to meet these changing demands should enjoy superior growth, returns and wider competitive moats in the long term versus peers who are misaligned.
- We believe that investing for sustainable outcomes can deliver **BOTH** impact and strong financial returns for our investors.



Biography

PAULINE GRANGE Portfolio Manager



Pauline Grange joined the company in 2007 as a portfolio manager within the Global Equities team. She is the lead portfolio manager of Threadneedle World Equity fund and deputy portfolio manager of the Columbia Select Global Equity fund and the Threadneedle (Lux) Global Focus Fund. She also heads the telecommunications and utilities sector research team and is the deputy head of the technology sector research team.

Before joining the company, Pauline was a global equity portfolio manager for Investec Asset Management.

Pauline holds a Bachelor of Business Science (Honours) in Finance from the University of Cape Town and also holds the Chartered Financial Analyst designation.

Company start date:2007Industry start date:2000



Biography

JESSICA WILLIAMS Portfolio Analyst, Responsible Investment | Global Research



Jess Williams is an Analyst in the Responsible Investment research team at Columbia Threadneedle Investments where she covers the energy transition theme as well as supporting a number of specialist responsible investment strategies.

Prior to joining the firm, Jess worked at S&P Global Ratings, where she developed sustainable finance products and published research on ESG-related topics. Prior to this, Jess worked on the Global Innovation Lab for Climate Finance at the Climate Policy Initiative in Venice and completed internships at both Inflection Point Capital Management and the CDP (formerly Carbon Disclosure Project).

Jess has an MSc in Environmental Technology and a BSc in Biology, both from Imperial College, London, and has completed CFA Level 1 and 2.

Company start date:2018Industry start date:2014



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