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COLUMBIA THREADNEEDLE INVESTMENTS

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CONTENTS

Stewardship in action

01 Foreword

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As we have moved into 2021 and look towards COP26, the 2021 United Nations Climate Change Conference in Glasgow in November, the degree of focus around climate-related issues and themes has only intensified. This has equally been reflected in aspects of our thematic research and thinking. In this quarterly review you will find insights from this work across a range of topics.

Technologically innovative, sustainable infrastructure can pave the way for an inclusive post-Covid economic recovery. The economic fallout caused by the pandemic is forcing governments around the world to develop policies not just for stimulating the global economy, but also to respond to climate change and to tackle the social inequalities that have once again been highlighted by the spread of the virus. Many of these governments are considering a tried-and-true method to boost economies in the short term and provide wide societal benefits in the long term, through infrastructure investment. However, by some estimates the world is currently on-trend to face a $15 trillion gap between the infrastructure investment needed and the amount provided by 2040.[1] The motivation to tackle this is clear.

As the World Economic Forum has noted[2] on the supply side, when the equivalent of 1% of GDP is invested in infrastructure, economic output increases by about 0.4% in the same

Glasgow will host the UN Climate Change conference in November

Source: iStock.

year and by 1.5% four years later. Set against this context, in this issue of Responsible Investment Quarterly we touch on Europe's green infrastructure plans and the related financing needs to provide an insight into a thematic aspect of our research intensity. We also touch on President Joe Biden's $2.25 trillion "American Jobs Plan" that, in some areas, goes beyond even his election campaign pledges.

We also look at a sector that isn't traditionally associated with environmental responsibility: aviation. It currently consumes around 8% of all oil, but rather than looking at solutions that would require extensive infrastructure reorganisation, perhaps there is something more immediate that can be done. This gives an insight into the breadth of our thinking around ESG investing.

There's an interesting dynamic playing out in Switzerland as well, a country regularly associated with finance, if not sustainable finance. But keen to not get left behind in a rapidly changing sphere, it is quietly working on generating and implementing ways to manage money sustainably. We look at some of the ways it is attempting this.

The world is changing and not just because of climate change. We are living through the Fourth Industrial Revolution as well as dealing with the impacts of the Covid pandemic. How governments and companies respond to the change will have significant implications economically, competitively and for employment as well. The scale of change involved creates uncertainty and concern for many. This was reflected in press headlines during the quarter suggesting millions of jobs will be put at risk from climate transition over the next three decades. We disagree and discuss some of the reasons why later in this report.

As the progress of sustainable finance reforms has continued around delegated regulations and technical standards in Europe, a broader debate about international standards has been playing out. The International Organization of Securities Commissions (IOSCO) has been discussing the development of an international framework for sustainability reporting for public issuers with the International Financial Reporting Standards Foundation (IFRS). In the US the Securities and Exchange Commission (SEC), reflecting both the new political administration and growing investor demand, is both examining the need for better climate and other environmental, social and governance (ESG) information, as well as including a greater focus on these issues in its supervisory 2021 examination priorities.

I hope this quarter's report will help provide insight into the types of issues our thematic research covers.

Source:

1 https://www.smartbrief.com/original/2021/01/are-we-talking-about-infrastructure-right-way

2 https://www.weforum.org/agenda/2020/04/coronavirus-covid-19-sustainable-infrastructure-investments-aid-recovery/

02 Portfolio manager's viewpoint

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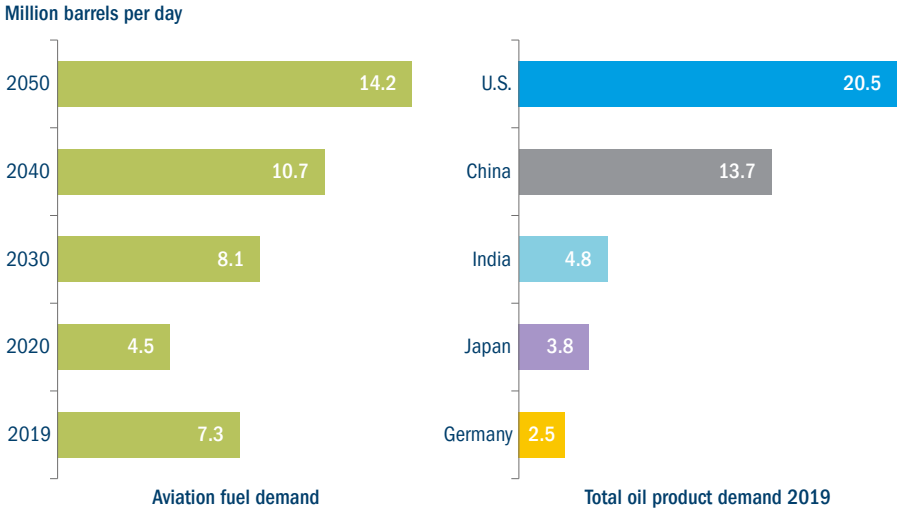
Pan-European Equity strategy

We are now less than a decade out from the self-imposed deadline set by many companies to become carbon neutral by 2030. Similarly, the 2050 deadline set by many countries to achieve this is looming into view. Big strides will need to be made in order to achieve these targets. But how?

One sector that consumes massive amounts of natural resources, but in our opinion boasts the opportunity for realistic change, is aviation. Successfully reducing emissions would be a big win. In 2019 the sector consumed 8% of all oil,[1] the equivalent of almost 7.5 million barrels a day.[2] In 2020, Covid-19 grounded most airlines leading to a 39% drop in fuel consumption,[3] but the long-term appetite for air travel will likely still grow – mobility is important. Without policy intervention, however, planes will continue to use fossil fuels, and it is estimated that by 2050 the sector could consume over 14 million barrels a day, more oil than China consumed in 2019 (Figure 1).

If the demand is to remain, it is surely better to look at changing how planes are powered. This turns the spotlight to alternative fuels such as hydrogen, sustainable aviation fuels (SAF) or electricity. Electric planes may have a future in 25-30 years, but we don't yet have sufficient infrastructure to recharge electric vehicles on roads, or batteries with truly long ranges, so the idea of electric planes remains some way off. Hydrogen is an interesting prospect but, like electricity, requires a completely new infrastructure and technology to make it work, both with the aircraft themselves and at airports. Although there is a drive to invest in solutions such as hydrogen and electricity, for now the focus is on SAF.

Figure 1: Aviation fuel demand and country oil demand



Source: BloombergNEF, 2020.

Straight in the tank

We believe a major differentiation between airlines and cars is the massive amount of capital tied up in existing planes – these are assets that are viable for the next 20-30 years and simply replacing them would be prohibitively expensive. Alongside this, the technology is too far out to make them run on different fuels, so the need is for something that can go in the existing tank. SAF can. SAF is made from waste destined for landfill, such as used cooking oil and discarded animal fat, blended with existing fossil fuel.

Although the SAF market is small and early-phase, we see opportunities for investors with a number of companies getting a foothold, among them Neste,[4] the world's largest producer of renewable diesel and sustainable aviation fuel refined from waste and residues,[5] and renewable solutions firm UPM.

Market size and penetration

In our view, sustainable aviation is the only way the aviation sector's emissions can be brought down in the medium term, providing a bridge to technologies such as hydrogen and electric planes which are decades out. This creates a massive market.

In 2019, aviation fuel was a 300 million tonne global market.[6] The International Air Transport Association's fuel forum projects a 420 million tonne market by 2030,[7] and the World Economic Forum predicts a rise to 510 million tonnes in 2040.[8] The European Union accounts for around 20% of this total, and is targeting 14% of this amount for use with SAF, creating 11 million tonnes of demand by 2030 in Europe alone.[9]

But it is not the size of the market alone that makes SAF an exciting prospect. There is an increasing desire within the aviation industry for reform and regulation. First, firms that have traditionally been devoted to fossil fuels, such as oil refineries, are exploring SAFs – after all, they too have sustainability targets to hit. Second, the pandemic has offered a glimpse of a world with lower carbon emissions, but also made us realise not enough is being done, which has pushed sustainability up airlines' agendas. Numerous airlines now say they are aiming to reduce their emission to zero by 2050, and achieving carbon neutrality by 2035 – as JetBlue's CFO said, they would rather be driving the bus than be hit by it.[10] Neste has signed deals with a number of airlines during the pandemic to increase the use of SAFs, including All Nippon Airlines.[11] But the game changer is regulation.

Mandates

SAFs remain expensive, but mandated blending could force the issue into the mainstream by the mid-2020s. This means governments forcing a certain proportion of SAF fuel use by airlines. Some countries are already moving on this: Sweden is mandating a minimum of 0.5% of SAF in 2021, and France 1% in 2022.[12] Holland is considering regulation which would see a 14% blend by 2030.[13] In the EU, the ReFuelEU initiative is set to be announced in July 2021, and will likely have a target of blending levels of 2% in 2025 and 5% in 2030,[14] while President Biden is being urged to introduce a pan-US 1% mandate.[15] Once mandates are introduced and begin to rise, and regulations improve, scalability will lead to reduced costs and even greater adoption – a virtuous circle.

On top of government support, SAF requires end-consumer pressure to develop. Passengers and corporates, under pressure from increasingly ESG-aware investors, can engage with airline companies to encourage them to reduce their carbon footprint and will accept temporary price hikes owing to the cost. A 2% blend for a three-hour flight is estimated to add US$2 to the price of a ticket.[16]

Investor opportunities

For us investors this is an exciting opportunity. We like to explore themes that play into the UN Sustainable Development Goals (UN SDGs).[17] The SAF market is directly linked to a number of these: the Sustainable Transport element of UN SDG 11, Make cities and human settlements inclusive, safe, resilient and sustainable; the Sustainable Tourism element of UNSDG 12, Ensure sustainable consumption and production patterns; and UN SDG 13, Take urgent action to combat climate change and its impacts.

To use an aviation analogy, SAFs are taxiing on the runway, but with technology, the right political will, shareholder pressure and mandate development, they can take off.

Source:

1 BP, Statistical review of world energy, June 2020.
2 BloombergNEF, 2020.
3 BloombergNEF, 2020.
4 The mention of specific companies should not be taken as an endorsement.
5 https://www.neste.com/about-neste/who-we-are/business#9507dabd
6 IATA, 2021.
7 IATA, 2021.
8 World Economic Forum, 2021.
9 Neste management presentation, February 2021.
10 Exane BNP Paribas, Global Airlines: Sustainable Change, 13 May 2021.
11 https://biofuels-news.com/news/neste-and-all-nippon-airways-collaborate-on-first-supply-of-sustainable-aviation-fuel-in-asia/ 26 October 2020.
12 ISCC Global Sustainability Conference, February 2021.
13 https://www.ainonline.com/aviation-news/business-aviation/2020-03-06/dutch-government-targets-saf-blending-mandate-2023 6 March 2020.
14 Exane BNP Paribas, Global Airlines: Sustainable Change, 13 May 2021.
15 https://www.reuters.com/article/us-usa-energy-aviation-idUSKBN2AJ0LH, 19 February 2021.
16 Columbia Threadneedle analysis, 2021.
17 https://sdgs.un.org/goals

03 Country head focus – Switzerland

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The country's financiers and fintech entrepreneurs are developing fresh ideas that are influencing the global evolution of sustainable finance

Along with the unspoiled Alps, finance is emblematic of Switzerland. The country's banks and asset managers, especially, are known for exporting finance all over the world, counselling the world's wealthy. In the 20th century fierce ingenuity made Switzerland known for its banking secrecy and hedge funds. Yet today its financiers and fintech entrepreneurs are turning their minds to the development of sustainable finance.

This is partly through necessity: there is a rising bar of sustainable finance regulation with which to comply, both in Switzerland and its export markets. But also, many private banking and asset management clients are highly sophisticated investors and philanthropists. For them, sustainable investing in its various forms is a natural extension of existing activities.

With finance representing around 10% of gross domestic product,[1] the Swiss government is encouraging local banks, asset managers and insurers to move quickly on this. It is keen for Swiss finance to remain competitive, and to play a part in helping the country achieve its stated goal of becoming carbon neutral by 2050. For that reason, Switzerland's Federal Council introduced a three-pronged approach to making the country a leading centre for sustainable finance at the end of 2020.[2]

Three steps for sustainability

Firstly, by the autumn of 2021 the State Secretariat for International Finance must propose changes to legislation for preventing "greenwashing". Secondly, the Federal Council recommended that financial market players publish methods and strategies for taking account of climate and environmental risks when managing clients' assets. Finally, recognising the need to transform the entire economy, companies in all sectors must implement the recommendations of the Taskforce on Climate-related Financial Disclosures.

The momentum for sustainability was gathering even before this announcement. According to the 2020 Swiss Sustainable Investment Market Study, the value of sustainable investments rose by almost two thirds – 62% – in 2019 to CHF 1.2 trillion, equivalent to about a third of locally managed assets.[3] While 2020's fund flows have yet to be announced, the growth rate is likely to have accelerated if it has followed international trends,[4] as rising awareness of environmental and social issues is boosting inflows into sustainable investment funds all over the world.

Beyond banking and asset management, Switzerland is an international insurance centre.

Like its peers everywhere, its insurers are under pressure to mitigate environmental, social and governance (ESG) risks, while also engaging with the companies they invest in to improve their actions if needed. The country's best-known insurers, Zurich and Swiss Re, were ranked first and fifth respectively, in the insurance/reinsurance sector of the Dow Jones Sustainability Indices.[5] What's more, almost nine in 10 (86%) of Swiss insurance companies include ESG criteria when making investment decisions, according to the 2019 Sustainability Report of the Swiss Insurance Association.[6]

That said, the country cannot claim to be at the forefront of all areas of sustainable finance. For instance, the SIX Swiss Exchange only lists about 40 sustainable bonds, with just half of them primary listings.[7]

From social finance to fintech

But while the country might not be a juggernaut of sustainable finance, some of its nimbler organisations are proving just as innovative as they were in boosting their competitiveness in previous eras. For instance, UBS took the step in 2020 of declaring that sustainable investments would be the default solution for private clients investing globally, becoming the first major global financial institution to do so.[8]

Further, the bank's UBS Optimus Foundation is innovative in the field of social finance, where philanthropy and sustainable investing converge, pioneering Development Impact Bonds (DIBs) in education and healthcare. Its Quality Education India DIB, launched in 2018, sets out to improve the quality of learning and literacy in India, and in its first year reported achieving a 30% improvement in participating schools in the states of Delhi and Gujarat.[9]

Another field of innovation is Switzerland's green fintech companies, which are growing quickly from small beginnings.[10] They are operating across fields ranging from providing green financial products and analysing ESG data, to providing insurance solutions related to climate change.

One tangible example is Yova,[11] which offers investments through a digital platform that aims to combine sustainability with attractive returns. Its CEO, Tillmann Lang, is quoted on the Finance Swiss website saying: "People buy organic food, eco-friendly clothing, green power, switch from planes to rail… They also want to invest sustainably. There aren't so many good financial solutions out there for those who want their investments to make a clear difference. Yova was set up to provide sustainable investment solutions for normal people."[12]

Quite a few green fintechs collect and analyse ESG data. For instance, RepRisk is a pioneer in the application of machine learning to ESG data. Further evidence of the progress of Switzerland's fintechs in 2020 can be seen in the Swiss Fintech Innovation Lab joining forces with Stanford University to form the Global Centre for Sustainable Digital Finance.

Exporting ideas and influence

As the shift to sustainable finance rapidly accelerates, so Swiss ingenuity is contributing new ideas, some of which may be copied elsewhere. It may not be the best-known country for sustainable finance, but its financial institutions and fintechs are quietly pioneering ways to manage money sustainably. Meanwhile, its insurers also appear to be ahead of their peers.

As has always been the case, the country's financiers are exporting their ideas, exerting influence beyond its mountains that symbolise environmental purity.

Source:

1 https://www.coface.com/Economic-Studies-and-Country-Risks/Switzerland
2 https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-81571.html, 11 December 2020.
3 https://www.sustainablefinance.ch/en/swiss-sustainable-investment-market-study-2020-_content---1--3037--35722.html, 8 June 2020.
4 https://www.reuters.com/business/sustainable-business/sustainable-fund-inflows-hit-record-high-q1-morningstar-2021-04-30/, 30 April 2021.
5 https://finance.swiss/en/sustainable-finance/
6 SIA 2019 Sustainability Report, 5 June 2020.
7 https://www.six-group.com/dam/download/the-swiss-stock-exchange/listing/bonds/sustainable-bonds-SIX.pdf, 2021.
8 https://www.ubs.com/global/en/media/display-page-ndp/en-20200910-gwm-si.html, 10 September 2020.
9 https://www.ubs.com/global/en/media/display-page-ndp/en-20200910-gwm-si.html, 10 September 2020.
10 https://finance.swiss/en/news-and-events/green-fintech-takes-off-as-the-financial-sector-embraces-sustainability/, 7 December 2020.
11 Mention of specific companies should not be taken as a recommendation to buy.
12 https://finance.swiss/en/news-and-events/green-fintech-takes-off-as-the-financial-sector-embraces-sustainability/, 7 December 2020.

04 Funding Europe's green infrastructure finance gap

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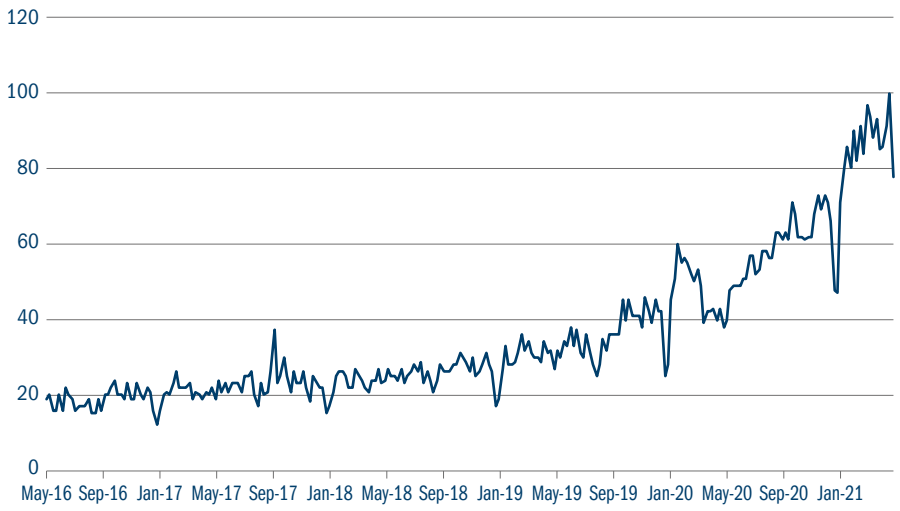
Transformational plans for energy, mobility and buildings require huge amounts of private sector finance, inevitably opening up a new field of attractive investment opportunities.

Responsible Investment has witnessed strong growth over the past five years. However, the past six months have seen it embark on a much steeper trajectory. If we take a Google Analytics view on worldwide searches for "ESG" (environmental, social and governance) phrases, it peaked in March 2021 (Figure 1). This growth is also evident within corporate transcripts with respect to the growing usage of ESG themes (Figure 2).

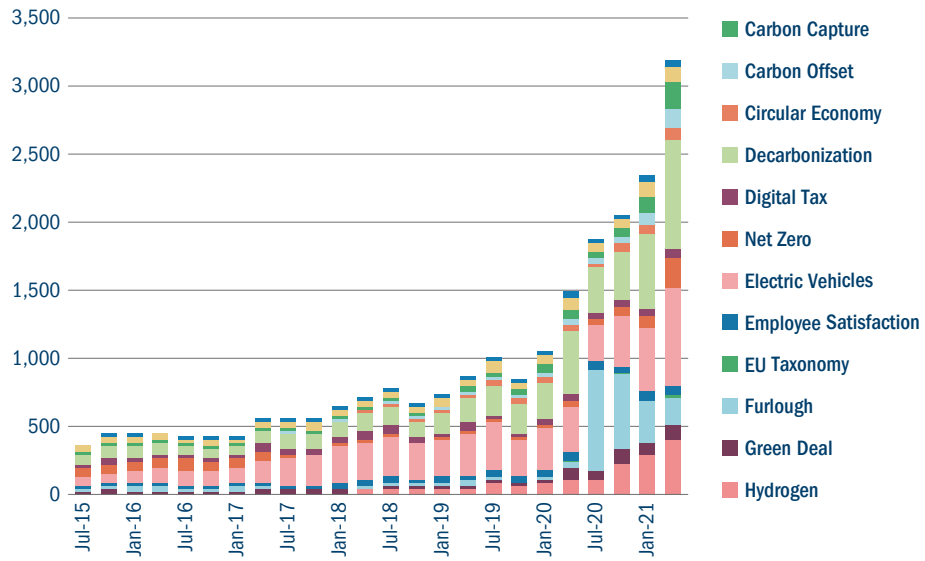
Figure 1: Google Analytics returns for ESG phrases



Source: Google Analytics, May 2021. Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is peak popularity. A value of 50 means the term is half as popular. A zero means there was insufficient data for this item.

Figure 2: key RI themes increasingly mentioned in company transcripts

Decarbonisation and EVs continue to be areas of focus
Mentions of ESG Themes in event transcripts



There has been growing interest in net zero, carbon capture and carbon offsetting versus 4Q20

	YoY change	QoQ Change
Biodiversity	29%	33%
Biofuel	22%	-1%
Carbon Capture	194%	67%
Carbon Offset	134%	72%
Circular Economy	60%	4%
Decarbonisation	81%	49%
Digital Tax	56%	39%
Electric Vehicles	99%	51%
Employee Satisfaction	33%	31%
ESG	34%	25%
EU Taxonomy	525%	39%
Furlough	327%	-29%
Green Deal	46%	19%
Hydrogen	258%	34%
Net Zero	352%	107%
Renewables	16%	7%

Source: Alphasense and Morgan Stanley, as at April 2021.

One of the enablers of this stellar growth has been strong policy support, particularly in Europe. The build out of green infrastructure here is nothing if not ambitious. The European Union was among the first to commit to carbon neutrality – by 2050[1] – and has gone furthest in publishing investment plans to enable a green transition. Some observers estimate that up to €7 trillion in infrastructure spending will be required over the next 30 years to achieve the EU's stated goals, of which around €3 trillion will come from private sources.[2]

But while 2050 may seem a distant prospect, the EU does not plan to start its transformation slowly. The Green Deal, which is the cornerstone of the continent's transition to a low-carbon future, aims to deliver a reduction of 50%-55% in carbon emissions by 2030 compared with 1990 levels.[3]

This will not be achieved through new projects alone, developing existing brownfield projects will be key to supporting sustainable investment.

For investors, Europe's gargantuan appetite for green infrastructure investment will inevitably lead to significant investment opportunities. The Green Deal's targets imply an investment gap of around €470 billion a year through to 2030.[4] This will not be bridged without major injections of private capital alongside state spending and incentives, creating huge, multi-year investment opportunities.

Aside from environmental benefits, green infrastructure investment can also accrue economic advantages through the stimulation of economic activity – a recent IMF[5] paper concluded that every dollar spent on carbon-neutral activities generates more than a dollar of economic activity, with this positive multiplier effect persisting for at least four years and the impact on economic activity being two to seven times larger than those associated with environmentally detrimental measures.

Policies driving transformation

As Europe gears up to stimulate economic recovery from Covid-19, so its plans for green infrastructure investment have increased. Joining forces with the Green Deal, the EU Recovery Plan gives climate transition a central role in the continent's blueprint for economic recovery and growth, aiming to create the jobs of the future as well as positive climate and sustainability impacts, including reduced emissions, greater energy self-sufficiency and lower bills.

To support its Green Deal agenda, the EU originally intended to mobilise at least €1 trillion of public and private investment by 2030, but the stimulus package drawn up to address the economic impact of Covid-19 has boosted this. The EU Recovery Plan's additional stimulus for the period 2021-27 is expected to total around €1.85 trillion, roughly a quarter of which could be allocated to climate transition-related investments.[6] Additionally, a €17.5 billion Just Transition Fund has been agreed as part of the Green Deal to mitigate the economic and employment impacts of Europe's climate transition.[7]

The EU's Green Taxonomy will help to drive private investment into green infrastructure. This is an ambitious attempt to classify economic activities according to their sustainability, and is intended to influence the way private capital is allocated, alongside the less prescriptive framework of the 17 UN Sustainable Development Goals (SDGs). Globally, the effort to achieve the SDGs could create more than $12 trillion in market opportunities[8] across four key areas – health and wellbeing, cities, energy and materials and food and agriculture.

Four major investment themes

Focusing specifically on European infrastructure, the four most notable investment themes are all central elements of the Green Deal agenda.

1. Renewable energy

The plan calls for a doubling of electricity generation from renewable sources by 2030 to help meet its emissions reduction targets. This implies a major increase in European utility companies' current rates of investment in renewable capacity and power grids. According to research carried out by the consultancy AT Kearney, annual renewables investment in Europe will rise from €60 billion in 2020 to €90 billion in 2022. By 2030, investment in European wind and solar capacity will total at least €650 billion and could reach €1 trillion.[9] This is likely to boost utility valuations in Europe significantly, particularly given the big increase in demand that will result from the replacement of fossil fuels with electricity in transportation. It will also flow through to rising profits at equipment makers such as Danish turbine maker Vestas, which reported return on capital employed last year of around 20%.[10]

2. Green mobility

The transition to electric power for transport is a central element of the Green Deal, which stipulates that by 2030 at least 30 million zero-emission cars will be in use on Europe's roads,[11] high-speed rail travel will double across Europe and all scheduled mass transport for journeys of less than 500km should be carbon-neutral.[12] For some companies, these targets present immediate opportunities to generate attractive returns. Rail equipment makers are well positioned to benefit from the Green Deal, although an accelerated transition to electric vehicles will pose major challenges for automakers that need to develop new vehicles and ensure access to sufficient battery capacity.

3. Hydrogen as a future energy source

There is growing interest in hydrogen as a clean energy source, although it remains expensive relative to others. The cost of so-called "green hydrogen" – made using renewable electricity to power electrolysis of water – has fallen thanks to dramatically cheaper renewable energy, but remains seven times higher than fossil fuels. Hydrogen is also difficult

to store and transport.[13] However, it has major potential in areas where electrification is not feasible, such as heavy industry, trucks, shipping and seasonal energy storage, and the EU aims to grow the share of hydrogen in the bloc's energy mix from less than 2% currently to 13%-14% by 2050.[14] To realise this potential, major policy support will be necessary to encourage investment. The European Commission estimates the carbon price under the EU's Emissions Trading Scheme will need to rise from around €30 currently to €55-€90 a tonne.[15] Examples of projects getting underway include Ørsted building a 1GW green hydrogen plant in the Dutch North Sea, which is slated for operations by 2030;[16] and in the UK Cadent's HyNet North West project, which has been awarded £72 million in funding, partly from the UK government, to finance a hydrogen carbon capture and storage (CCS) project. It is hoped the fresh capital will accelerate the project to a final investment decision by 2023 in order for the initial phase to become operational by 2025.[17]

4. Building stock

Around three-quarters of the 220 million buildings in the EU are deemed energy inefficient.[18] The EU's Covid-19 recovery plan will channel major investment into upgrading them, given that buildings account for 36% of the EU's greenhouse gas emissions and 40% of energy consumption. The plan's key targets call for a 60% reduction in greenhouse gas emissions from buildings by 2030 and a cut in energy used for heating and cooling of 18%. To achieve this it aims to double the renovation rate of buildings to 2% over the next decade, which will require investment of €275 billion a year. Energy efficiency standards will also be tightened.[19]

These themes are consistent with the opportunities we are seeing in the infrastructure space, in particular in the past 12 months those themes linked to methods of decarbonisation such as carbon capture, and solutions around decarbonsiation (both brownfield and greenfield), namely hydrogen and carbon offsetting.

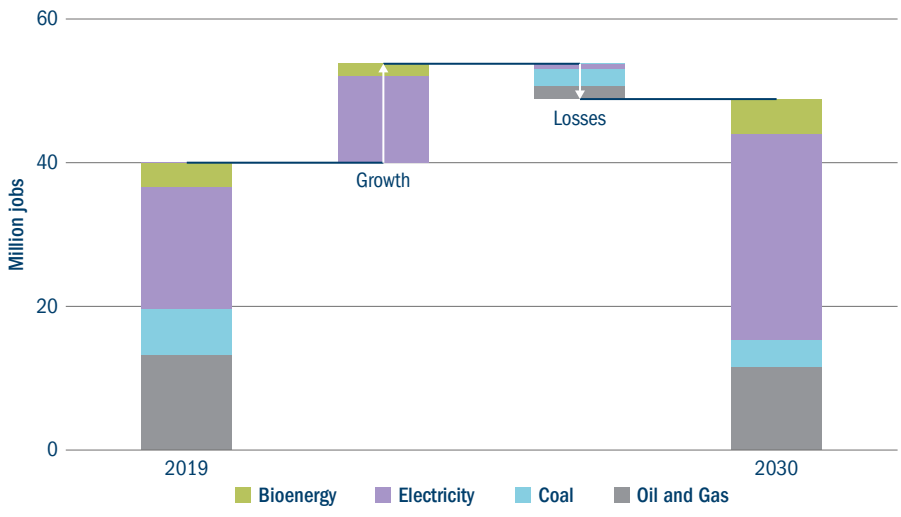
Thus, the supportive policy backdrop is presenting sustainability-focused openings within the small mid-cap nexus.

Don't forget social!

This rapid move towards net zero creates a risk that some people are left behind – perhaps those without the opportunity to reskill into low-carbon industries or unable to access the benefits of the new energy system. The Just Transition acknowledges the social implications of delivering net zero, from jobs and training to working with communities and ensuring no one is left behind (Figure 3). Working with our portfolio companies – and any future ones – to ensure we create a just transition for employees is of the utmost importance, and strategies to ensure positive social outcomes are embedded in our business plans.

Looking forward, Europe's drive to green its economy will lead to a new range of opportunities in infrastructure investment. Indeed, Europe's policymakers are aware that they cannot achieve their zero-carbon goals without attracting private investment. Given the Green Deal's ambitious timeline over the next 10 years, now is the time to be exploring the major investment themes.

Figure 3: Global employment in energy supply in the net-zero pathway, 2019-2030



Source: International Energy Agency, 2019.

Source:
1 https://ec.europa.eu/clima/policies/strategies/2050_en
2 Goldman Sachs Equity Research: The EU Green Deal, July 2020.
3 https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1599
4 https://ec.europa.eu/info/sites/default/files/economy-finance/assessment_of_economic_and_investment_needs.pdf
5 IMF.org, Building Back Better: How Big Are Green Spending Multipliers?, 19 March 2021.
6 https://ec.europa.eu/info/strategy/recovery-plan-europe_en
7 https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2354
8 https://www.un.org/sustainabledevelopment/sg-finance-strategy/
9 https://www.handelsblatt.com/unternehmen/energie/energiewirtschaft-bis-zu-eine-billion-euro-fuer-oekostrom-energiekonzerne-planen-rekordinvestitionen/26727336.html
10 https://www.vestas.com/~/media/vestas/investor/investor%20pdf/financial%20reports/2019/q4/2019_annual_report.pdf
11 Reuters, EU to target 30 million electric cars by 2030, 4 December 2020.
12 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789
13 https://www.energy.gov/eere/fuelcells/hydrogen-storage-challenges
14 https://ec.europa.eu/energy/sites/ener/files/hydrogen_strategy.pdf
15 https://www.icis.com/explore/resources/news/2020/08/03/10537257/eu-hydrogen-strategy-could-cause-power-and-carbon-prices-to-drop
16 https://www.energylivenews.com/2021/04/01/orsted-to-build-one-of-the-worlds-largest-hydrogen-plants-at-north-sea-port/
17 https://www.business-live.co.uk/economic-development/72m-funding-announced-hynet-north-20193274
18 https://ec.europa.eu/energy/sites/ener/files/eu_renovation_wave_strategy.pdf
19 https://ec.europa.eu/energy/sites/ener/files/eu_renovation_wave_strategy.pdf

05 Biden's strong commitment on climate change

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Equity analyst

The US president's "American Jobs Plan" aims to fulfill his campaign pledges on climate change – if he can get it through Congress

President Joe Biden's first months in the White House fully reflect his administration's commitment to pursuing a transition to a low carbon economy. Biden has rejoined the Paris Agreement and recently announced a highly ambitious target to reduce emissions by half by 2030.[1]

In a landmark proposal announced in March, Biden's $2.25 trillion American Jobs Plan,[2] or Infrastructure Plan, broadly addresses his campaign pledges on climate change, even going further than expected in some areas. While there may be compromises around the final numbers to get the plan through Congress, it aims to boost clean energy generation and US-made electric vehicles (EVs), as well as modest support for renovations of buildings. At the heart of this approach is the Infrastructure Bill – a $2 trillion wish-list of measures to get the US on the path to net-zero emissions by 2050. The infrastructure proposal includes support for low carbon technologies and core targets relating to climate change.

Biden unveiled a wide-ranging set of spending and tax incentive proposals, mostly over an eight-year period, focused on infrastructure, climate adaptation and social initiatives. Broadly speaking, the plan sets out

to improve infrastructure, create jobs, foster innovation and accelerate the transition to a zero-carbon economy. It has three priorities for supporting the energy transition: accelerating the shift to a clean power sector; the electrification of transport; and the renovation of energy-inefficient buildings. While there will be compromises ahead in order to get the plan through Congress, if passed it should accelerate the US energy transition, with positive implications for the long-term growth of the sectors that will help to decarbonise the US economy.

Turbocharging clean power

Notably, the plan sets out a goal of generating entirely carbon-free electricity by 2035, which was a Biden campaign pledge. It backs this through surprisingly generous tax incentives for renewables and carbon capture and storage (CCS), as well as $100 billion in investments for upgrading power infrastructure.

A proposed 10-year extension of tax credits for wind, solar and fuel cells goes far beyond the two years of incentives previously introduced in December 2020, in a move that would accelerate the clean energy transition. Under the proposal developers of new renewable energy projects would be able to immediately realise the cash value of tax credits, helping their cash flows. Utility companies may also benefit, albeit less directly, as the tax credits are likely to lower the cost of renewable energy for consumers. Lower consumer bills tend to ease relations between utilities and state regulators, paving the way for higher capital spending by utilities, boosting growth.

Also favourable for utilities is the $100 billion earmarked for upgrading power infrastructure, which again supports capital spending. The Biden proposal specifically references transmission investments, as higher voltage lines are needed to move green electricity from larger wind or solar sites to load centres. What's more, any measures that smooth the siting process for transmission projects will encourage the construction of new projects. This major investment programme looks positive for electrical equipment manufacturers, as well as select engineering and construction companies.

But there are also losers: Biden's plan would eliminate fossil fuel subsidies for oil and gas companies. However, this was not unexpected.

Empowering clean transport

Turning to clean transport, the greatest emphasis in Biden's proposals is on galvanising the US-made EV market. The plan earmarks $174 billion for the sector, notably to be spent on installing

500,000 EV chargers by 2030, which is a modest positive surprise. When combined with a potential $7,500 subsidy for each consumer buying a US-made EV, this could be significant, giving consumers confidence in the charging infrastructure and making the cost of EVs competitive versus internal combustion engines. The combination of these two measures adds 15%-30% to Columbia Threadneedle forecasts for annual lithium demand from 2021-2025 and could support companies positioned to address that increased demand.

The plan's clean transport initiatives also include a proposed $111 billion for water infrastructure, including modernising ageing water systems, as well as investments for modernising public transit and rail systems, and reinforcing the resilience of critical infrastructure to the consequences of climate change. Investments for airports and ports are intended to make the US a global leader in clean freight and aviation, while the investment in water infrastructure may help companies with products that support efficient water transport, filtration and treatment. Meanwhile, $25 billion in airport funding and $17 billion in waterway funding, coupled with other more traditional infrastructure spending, should benefit construction equipment companies. Alongside this, $85 billion in public transit funding and $80 billion in railway funding will help delivery and rail companies shift their fleets toward clean transport.

Making buildings energy efficient

Reflecting Biden's modest campaign pledge to kick-start a gradual renovation of buildings, the plan proposes spending $213 billion on improving energy efficiency. Buildings account for roughly 10% of US emissions and a third of the country's energy consumption, according to the US Energy Information Administration (EIA).[3] The money will be spent on retrofitting 2 million affordable homes, building 500,000 new homes and retrofitting more than a million homes with energy-efficient upgrades.

These goals would be accomplished through the extension and expansion of home and commercial efficiency credits, along with the establishment of a $27 billion "Clean Energy and Sustainability Accelerator" to mobilise private investment. There is also a proposal for energy renovation projects in public buildings.

Major beneficiaries of the drive to make the US building stock greener are heating, ventilation and air conditioning companies. They will play a major part in renovations, significantly reducing electricity consumption and replacing harmful refrigerants.

Waiting on Congress

The Biden plan as it stands is a significant shift from the policies of the previous administration and, if implemented, should accelerate the greening of US power, transport and buildings – despite the absence of some campaign pledges, such as tangible plans about green hydrogen and details of how agriculture will be decarbonised.

But that is a big "if". It now falls to Congress to translate the plan to legislation. It is highly likely that some of the provisions are not passed or will be altered.

Source:

1 The Guardian, Biden vows to slash US emissions by half to meet 'existential crisis of our time', 22 April 2021.
2 https://www.whitehouse.gov/american-jobs-plan/
3 https://www.eia.gov/tools/faqs/faqphp?id=86&t=1


EV
ELECTRIC
VEHICLE
CHARGING
STATION
EV

06 Climate change, net zero and the employment myth

Iain Richards
Head of Global Responsible Investment Policy

The world is changing and not just because of climate change. How companies and governments respond to the change will have significant implications, economically and competitively as well as for employment, which we will focus on in this article.

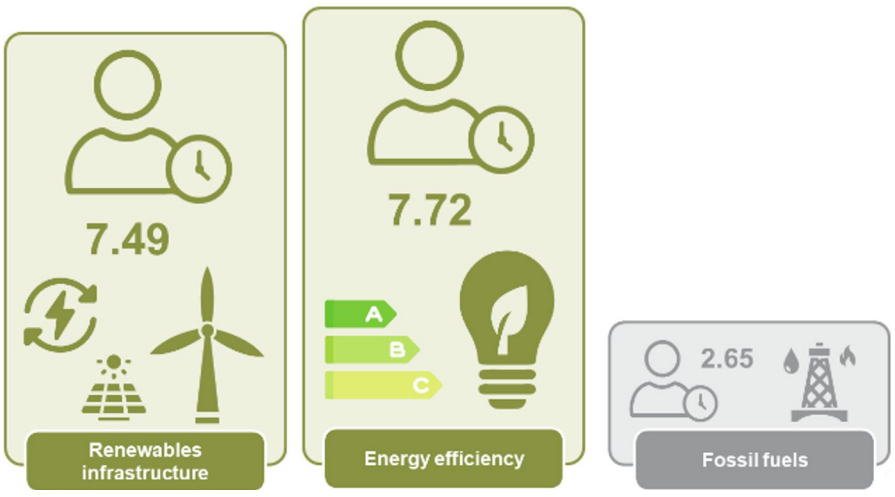
As a research-driven investment house, identifying, analysing and understanding the trends and changes that impact, or will impact, our investments is at the heart of our "thematic" research focus. It was in that context that a recent UK report entitled "Getting to Zero"[1] caught our attention. It has been cited under press headlines suggesting that as many as 10 million UK jobs would be at risk from the UK's transition to net zero over the next three decades. Is that really the potential implication of the UK's decarbonisation plan? We think not.

Will net zero boost employment growth?

A good starting point here is a commentary on the report published by Alex Brown at the London School of Economics' Grantham Institute, which raised important questions about it.[2] The need for caution about the methodology used, as well as the failure to understand wider changes taking place or the job creation potential of policy responses to climate change, is important.

Current longer-term employment issues do need to be considered in the context of an "industrial" revolution that is already playing out and likely to be accelerated by the effects of the coronavirus pandemic. Digitisation and automation are examples of this and more than 80% of CEOs surveyed

Figure 1: Jobs created per $1 million invested



Source: Joseph Stiglitz, et al. 'Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?', May 2020.

by the WEF[3] reported that they are accelerating the automation of their work processes and expanding their use of remote work. That has implications for employment, but not the way some people think. Let's start with some context on climate change:

Framing the scale of the economic challenge[4]

Scientists have estimated that were temperature increases to reach three degrees celsius global GDP would fall 25%. If they reached four degrees the decline would be more than 30% compared to 2010 levels. That is comparable to the Great Depression, but the difference is that the impact would be permanent.

Framing the upside alternative[5]

I'll start here at a more regional level, given differences that are evident. It has been estimated that the EU's GDP would benefit to the tune of 1.1% by 2030 should it successfully implement the Paris Agreement and transition towards a low-carbon economy. That is merely a result of increased investment activity and lower imports of fossil fuels, before we look at any other benefits.

In terms of employment, the associated upside growth in EU employment is, at the more conservative end of the scale, around 0.5%. That is approaching an extra million jobs compared to business as usual. The employment implications do vary by country, as well as by sector:[6]

- Services sectors, for example, benefit from both increased consumer activity but also as part of the supply chain of renewables and energy efficiency equipment and installation processes. This reflects a strong trend we were seeing in the US before the Paris Agreement withdrawal.
- In contrast, the mining sector faces a substantial fall in employment reflecting lower production in the energy extraction sector.
- The implications are, of course, not just for employment but also countries' economic competitiveness.

However, under the same analysis the US's outlook under the Trump administration, having rejected the Paris Agreement, was not looking so rosy. That stood in stark contrast to what we were seeing ahead of the then president's announced withdrawal from Paris. Compared to the EU's 1.1% boost to GDP, the US faced an estimated 3.4% contraction in GDP by 2030 and a 1.6% hit to its job market.[7]

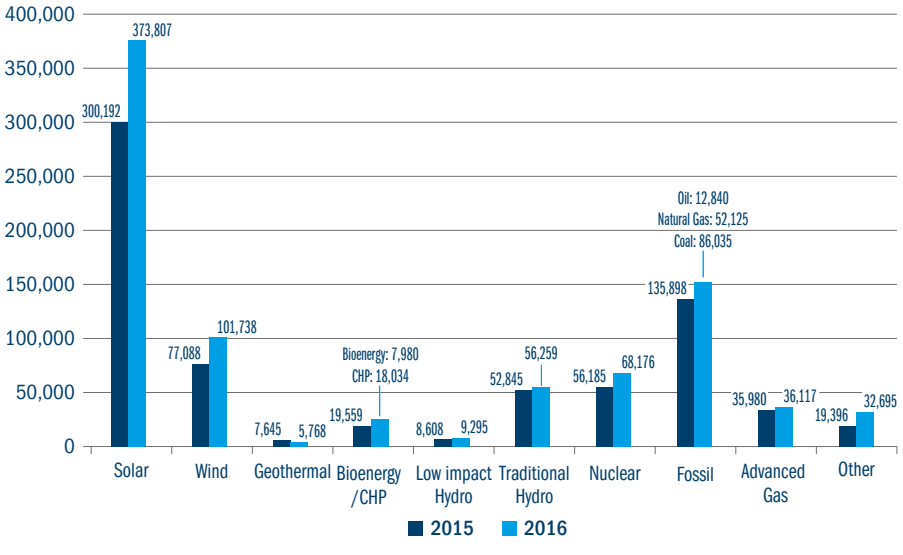
The "pre-Paris withdrawal" boost being seen in US economic activity and related jobs growth linked to US climate leadership was clear. With job creation spanning energy efficiency, transportation, renewable energy, waste reduction, natural resources conservation and education, the effect was significant – even before exploring the innovation and job creation being seen across other sectors. At the time it was estimated that in the US such jobs collectively numbered around 4-4.5 million jobs;[8] and, relative to jobs in coal mining,[9] many of these

Figure 2: EU employment growth projections by sector

	2030 (%)
Agriculture	0.5
Mining	-16.6
Manufacturing	0.7
Utilities	-2.4
Construction	1.1
Distribution, retail and hotels and catering	0.6
Transport and communications	0.5
Business servies	0.7
Non-business services	0.3

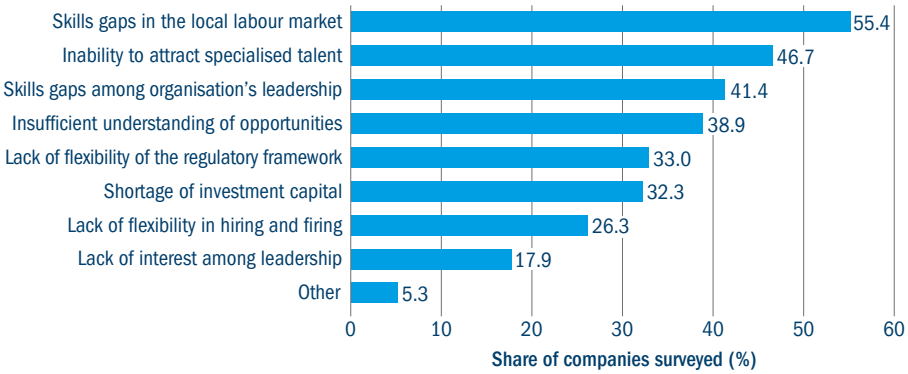
Source: FOME energy scenario projections, 2020.

Figure 3: Electric power generation employment by technology (Q2 2015-Q1 2016)



Source: US Department of Energy, US Energy and Employment Report, January 2017.

Figure 4: Perceived barriers to the adoption of new technologies



Source: WEF, Future of Jobs Report 2020, October 2020.

were inherently local, contributing to growth in their local economies. Comparing what was being seen with jobs directly associated with US electric power generation the significance of energy transition for US employment was clear:[10]

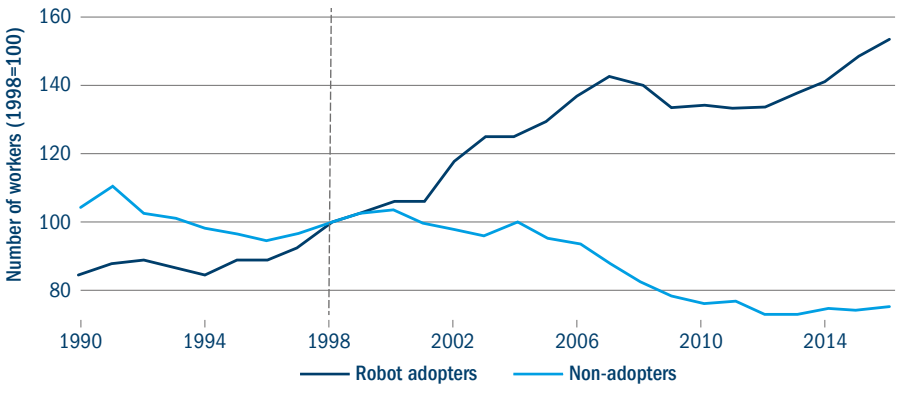
Coming back to the UK's transition to net zero, there are clearly employment implications that were largely in line with the EU average. Rather than there being an impending job disaster, there are in fact very real opportunities on offer for the UK and seizing that in a post-Covid and post-Brexit world will be important.

The UK's adoption of climate-relevant approaches as part of a strategic approach to economic stimulus and recovery[11] will have important and positive implications for both job creation and long-term competitiveness. As part of this, the need for policymakers to embrace "inclusive growth", taking account of the trends playing out, should not be underestimated. The rebalancing we expect to see in the jobs market will make active labour market policies (ALMPs[12]) an important focus for policymakers. The need for, and merit of, initiatives such as the EU's Skills Agenda[13] is clear. In laying the foundations to support future competitiveness and address key challenges, the World Economic Forum's work highlights some of the challenges policymakers need to consider (Figure 4).[14]

The WEF estimates that by 2025 85 million jobs may be displaced, while 97 million new roles may emerge across the 15 industries and 26 economies it examined – a net gain of 12 million jobs. Education, training and the re-skilling of the workforce will be critical issues in this context. Reflecting that, corporate planning on future investment and operations will be influenced by the availability of the right skills and talent. It is not the companies that embrace change that lose out. As recent historical evidence tells us, companies that automate will survive, prosper and hire more workers. Those that don't will end up shedding staff (Figure 5).[15]

The priority for policymakers, then, is how to facilitate the changes needed to support those who will adapt and be tomorrow's winners – this reflects the challenge faced by economies across the OECD and beyond. Although economic outcomes over the past 20 years have varied widely and employment has risen, wages have not only stagnated for many but the costs of housing, healthcare and, notably in this context, education have risen, more than offsetting income gains.[16]

Figure 5: Robots in the workplace



Source: Michael Koch, et al. "Robots and firms", July 2019.

Conclusion

For investors, understanding the issues and challenges companies will face in securing the right skills, expertise and talent needed to respond to these changes will be important. The focus on, and approach to, education and training by policymakers will play an important role in this at a national level.

The right long-term policy approaches, combined with and facilitating forward-looking programs by companies, will help sow the seeds for success. Corporate initiatives such as SSE's Supporting a Just Transition[17] or AT&Ts Future Program[18] already illustrate strategic approaches to business adaptation and investment in the future. That said, for many companies unilateral solutions – absent the right policy environment and support – may not be viable.

With all these factors at play, one thing that is clear is that the Paris Agreement should not be seen as a threat to employment; if anything the opposite is true. It represents an opportunity – both to mitigate the impacts of climate change, help recovery post-Covid and benefit from real upside opportunities. Our world and economies are already changing – economic, technological and societal change are a reality and the effects of Covid will accelerate the changes we are seeing. Companies and governments will either rise to the challenge they face or fail their stakeholders.

For countries such as the UK, recognising these dynamics and taking advantage of them will be critical to pursuing the right policy options and ensuring their future prosperity and competitiveness.

Source:
1 Onward, Getting to zero: A practical policy commission to deliver decarbonisation in the UK, January 2021.
2 Net-zero: bad for UK jobs?, 15 January 2021.
3 WEF, The Future of Jobs Report 2020.
4 Nature, Large Potential Reduction in Economic Damages Under UN Mitigation Targets, 2 November 2020.
5 Eurofound, Energy scenario: Employment implications of the Paris Climate Agreement, 12 February 2019.
6 FOME energy scenario projections, 2020.
7 Eurofound, Energy scenario: Employment implications of the Paris Climate Agreement, 12 February 2019.
8 EDF Climate Corps and Meister Consultants Group, December 2017.
9 The coal industry, which had shed jobs since 2012 given competition from cheap natural gas, employed just over 160,000 workers nationwide, of which about 53,000 were in mining, according to a January 2017 US Energy and Employment Report from the US Department of Energy.
10 US Department of Energy, US Energy and Employment Report, January 2017.
11 Joseph Stiglitz, et al. Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?, May 2020.
12 Luca Sartorio, et al, What works for Active Labor Market Policies?, July 2019.
13 https://ec.europa.eu/social/main.jsp?catId=1223
14 WEF, The Future of Jobs Report 2020, October 2020.
15 Michael Koch, et al, Robots and firms, July 2019.
16 McKinsey Global Institute, The social contract in the 21st century.
17 SSE, https://www.sse.com/media/xtrlsctj/just-transition-strategy-sse-final.pdf, 18 November 2020.
18 https://www.cnbc.com/2018/03/13/atts-1-billion-gambit-retraining-nearly-half-its-workforce.html, 13 March 2018.

STEWARDSHIP IN ACTION

Our stewardship activities are integral to our investment process, allowing us to detect inflection points and long-term trends, and influence companies' standards around ESG risk management and sustainable outcomes. A key focus is to enhance our investment research so that we can make informed capital allocation decisions as active investors.

The ultimate goal of our stewardship approach is to enhance our understanding of our exposure to risks and opportunities that may affect our ability to deliver sustainable long-term value for clients. In approaching these responsibilities we are mindful of market trends; company, local market and industry-specific issues; and relevant best-practice standards – but we will ultimately be guided by what is in the best long-term economic interests of our clients.

The research and analysis emerging from this, and the ongoing engagement with companies, is disseminated globally throughout the firm as part of our culture of research intensity and helps us identify potential issues at an early stage.

In prioritising our engagement work, we focus our efforts on the more financially material or contentious issues and themes, and the issuers in which we have large holdings. There are many companies with which we have ongoing engagements, as well as a number that we speak to on a more ad hoc basis, as concerns or issues arise.

We vote actively at company meetings. We view this as one of the most effective ways to signal approval (or otherwise) of a company's governance, management, board and strategy, or standards of operating practice.

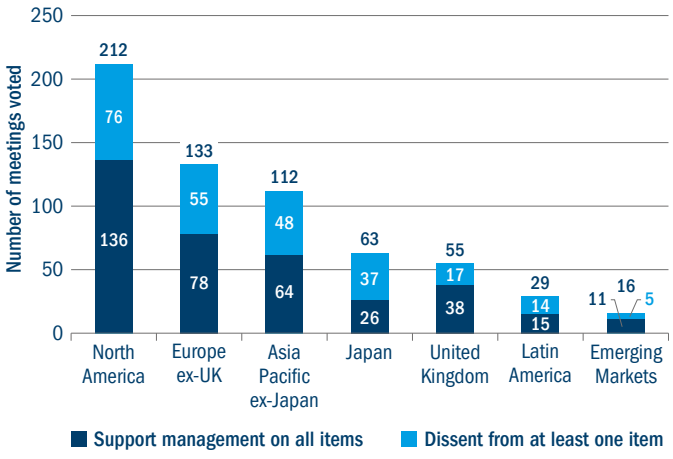
While analysing meeting agendas and making voting decisions, we use a range of research sources and consider various ESG issues, including companies' risk management practices and evidence of any controversies.

Our final voting decisions take account of research issued by proxy advisory organisations such as ISS, IVIS and Glass Lewis, as well as MSCI ESG Research. Although we subscribe to proxy advisors' research, votes are determined under our own custom voting policy. Votes are cast identically across all mandates for which we have voting authority. All our voting decisions are available for inspection on our website seven days after each company meeting in EMEA/APAC, and are updated annually in September in the US.

07 Voting Q1

Between January and March 2021 we voted at 620 meetings across 44 global markets. This compares to 711 meetings voted across 47 global markets in the last quarter of 2020. Of the 620 meetings, 406 were annual general meetings, 191 special, 14 court, four combined annual/special, four written consents and one proxy contest meeting. We cast at least one dissenting vote in 252 meetings (41%).

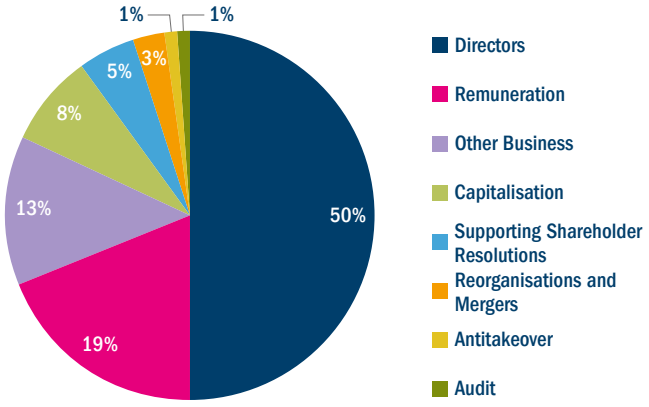
Figure 1: Meetings voted by region



Source: Columbia Threadneedle Investments, ISS ProxyExchange, 31 March 2021.

We voted in 44 separate markets in the first quarter. Most meetings were voted in the US (208), followed by Japan (63) and the United Kingdom (54). The majority of the voting items that we did not support throughout the quarter continue to be related to directors, followed by remuneration and other business-related proposals.

Figure 2: Proportion of dissenting votes per category



Source: Columbia Threadneedle Investments, ISS ProxyExchange, 31 March 2021.

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