


The logo for Newton Investment Management, featuring the word "NEWTON" in a bold, white, sans-serif font on a black rectangular background.

NEWTON

Investment
Management

➤ BNY MELLON | INVESTMENT MANAGEMENT

May 2020

The background of the entire page is a photograph of a forest fire. The sky is a deep orange and red, with smoke rising from the trees. The trees in the foreground are dark silhouettes against the bright, fiery background.

TAKING ACTION ON THE IMPLICATIONS OF CLIMATE CHANGE

Please read the important disclosure at the end of the document.

KEY STAGES ON THE CLIMATE-CHANGE TIMELINE

347 ppm **1986**
Atmospheric CO₂ levels
347.21ppm¹

4.96 billion
World population
4.96 billion²



March 1994

The United Nations Framework Convention on Climate Change (UNFCCC) comes into force with 196 countries (known as parties) on board.

April 1995

First Conference of the Parties (COP1) takes place in Berlin.

363 ppm **1996**
Atmospheric CO₂ levels
363.08ppm

5.82 billion
World population
5.82 billion

December 1997

Kyoto Protocol adopted at COP3, the world's first greenhouse gas-emissions reduction treaty.

January 2005

European Union Emissions Trading Scheme launches, the first international system for trading greenhouse gas-emission allowances.

383 ppm **2006**
Atmospheric CO₂ levels
382.64ppm

6.59 billion
World population
6.59 billion

December 2015

COP21 in Paris. 195 countries agreed to four clear objectives including to stick within two degrees Celsius of warming and to help finance developing countries' adaptation to climate change. 2015 is reported as hottest year on record.³

405 ppm **2016**
Atmospheric CO₂ levels
405.12ppm

7.46 billion
World population
7.46 billion

412 ppm **2019**
Atmospheric CO₂ levels
412.43ppm

7.71 billion
World population
7.71 billion

TAKING ACTION ON THE IMPLICATIONS OF CLIMATE CHANGE

At Newton, responsible investment has been integral to our investment process since our inception in 1978, when we began actively voting our clients' shares. In 1998, we started to run exclusions-based portfolios, and since then our responsible investment approach has grown to include environmental, social and governance (ESG) integration across all our strategies, alongside active engagement with the management of the companies that we invest in. Over the last two years, we have taken our responsible approach further, by launching focused sustainable investment products.

This long heritage, combined with our long-term investment outlook, means that climate change has naturally been an area of focus for some time, as we seek to help curb and mitigate the impact of global warming on the world around us as well as trying to identify the associated opportunities and risks.

This article will address the topic in the following ways:

- Present the stark realities of climate change by examining the scientific evidence that man-made emissions are contributing to the accelerated change in the Earth's temperature.
- Look at the international policies put in place that seek to combat global rising temperatures and avoid irreversible change to the global environment.
- Examine initiatives developed at Newton, both internally and within our wider peer group, that seek to mitigate the impact of climate change.
- Look at how we engage with companies to understand the risks posed by climate change to the successful delivery of their business strategies, and to push for better disclosure on their management of carbon risks and opportunities and the reduction of greenhouse-gas emissions.
- Showcase how our sustainable and thematic investment approaches can be a useful tool for investors seeking to address climate-related investment risks and opportunities.

1 Source: All atmospheric CO₂ levels data is provided by National Oceanic and Atmospheric Administration (NOAA). Data as at December 2019. <https://climate.nasa.gov/vital-signs/carbon-dioxide/>

2 Source: All world population data is provided by United Nations Department of Economic and Social Affairs. Data as at August 2019. <https://population.un.org/wpp/Download/Standard/Population/>

3 Source: World Meteorological Organization, '2015 is hottest year on record', 25 January 2016. <https://www.wmo.int/media/content/2015-hottest-year-record>

Your capital may be at risk. The value of investments and the income from them can fall as well as rise and investors may not get back the original amount invested.

CLIMATE-CHANGE SCIENCE: LOOKING BLEAK

Concerns over climate change are never far from the headlines. From wildfires in Australia and California, to record floods in Venice, to shrinking polar ice caps, the last few years have witnessed a huge increase in awareness of the significant role that fossil-fuel emissions are playing in accelerating global warming.

This increased concern is well justified; it is hard to ignore the fact that 18 of the hottest 19 years since records began in 1884 have occurred since 2001, while the Intergovernmental Panel on Climate Change (IPCC) estimates that global temperatures are currently on track for a potentially catastrophic rise of between 3.1 and 3.5 degrees Celsius (°C) by 2100.

The Paris Agreement (which we will discuss in greater detail shortly) has the long-term aim to limit the increase in global average temperatures to well below 2°C above pre-industrial levels, and to pursue efforts to limit the temperature increase even further to 1.5°C. Why 1.5°C and not 2°C? The difference between 1.5°C and 2°C is significant; a 1.5°C increase is likely to mean an ice-free Arctic once every 100 years, while a 2°C increase would change that to once every decade, which would spell the end for biodiversity in the region. Furthermore, a 2°C rise would see global coral reefs almost completely destroyed, and even more extreme heatwaves and droughts, with hundreds of millions of people exposed to climate-related risks.⁴

Today, the average global temperature rise stands at 1.1°C. Global scientists have agreed that global temperature rises must be held well below 2°C (and preferably at 1.5°C) by the end of this century to avoid runaway climate change. However, based on today's climate science and current projections, achieving this goal looks a very tough challenge.

In 2018, the atmospheric concentrations of carbon dioxide and other greenhouse gases once again reached new highs according to the World Meteorological Organization. Since 1990, there has been a 43% increase in warming from the use of fossil fuels and deforestation, and since pre-industrial times, global emissions have risen 147%.

A glance at exhibit 1, on the next page, shows the top greenhouse-gas emitters on an absolute and a per-capita basis, with China and the US being the greatest of today's biggest culprits. (Historically, Europe and the US were the biggest emitters before China opened up its doors to trade.)

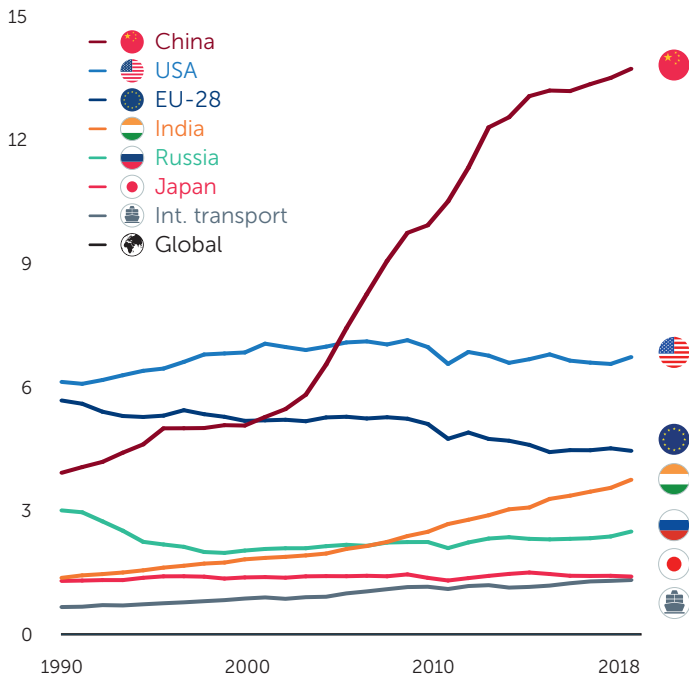
Exhibit 2 shows how levels of greenhouse-gas emissions would change under different pledge scenarios by the end of the century.



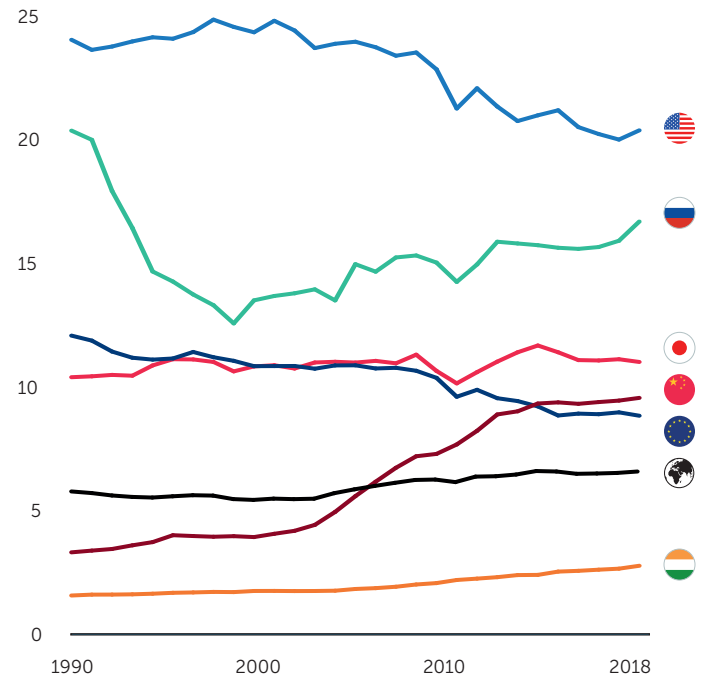
⁴ Source: IPCC, 'Global Warming of 1.5°C', October 2018. <https://www.ipcc.ch/sr15/>

Exhibit 1: Top global greenhouse-gas emitters

Top greenhouse-gas emitters on an absolute basis – GtCO₂e

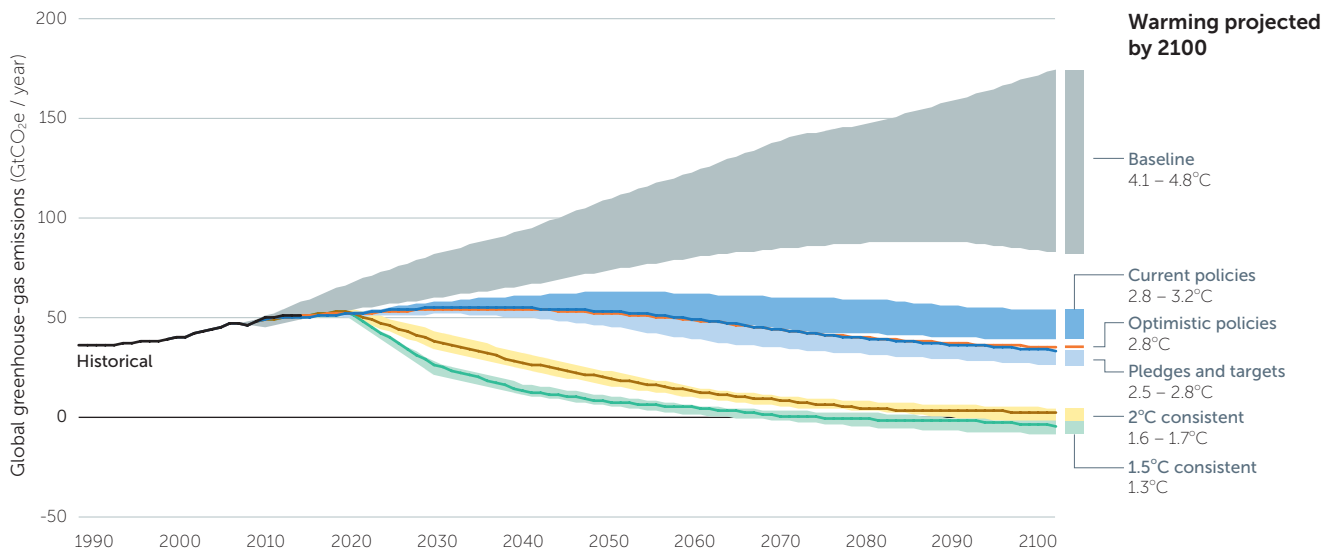


Top greenhouse-gas emitters on a per-capita basis – tCO₂e



Source: UN environment programme, 'Emissions Gap Report 2019', 26 November 2019. <https://www.unenvironment.org/resources/emissions-gap-report-2019>
GtCO₂e = gigatonnes of carbon dioxide equivalent. tCO₂e = tonnes of carbon dioxide equivalent.

Exhibit 2: Global emissions must reach net zero by 2050



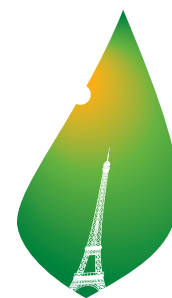
Source: Climate Action Tracker, 'Addressing global warming', 10 December 2019. <https://climateactiontracker.org/global/temperatures/>
GtCO₂e = gigatonnes of carbon dioxide equivalent

What is clear is that, if global greenhouse-gas emissions are to reach net zero by 2050, it will require a huge collective effort from societal, corporate or investment perspectives.⁵ Moreover, it will mean significant change in terms of how natural resources are produced, how they are consumed, how goods are transported, and how fixed assets such as buildings are managed.

By extension, the curbing of greenhouse-gas emissions will also have investment implications, but before we analyse these in greater detail, we will start by looking at the most significant piece of global policy on climate change so far, the 2015 Paris Agreement.

⁵ Source: World Resources Institute, 'What Does 'Net-Zero Emissions' Mean? 6 Common Questions, Answered', 17 September 2019. <https://www.wri.org/blog/2019/09/what-does-net-zero-emissions-mean-6-common-questions-answered>

CLIMATE-CHANGE POLICY: FROM THE PARIS AGREEMENT TO 2030



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21•CMP11

In 2015, the Paris Agreement was signed by 197 countries, with the aim of keeping global temperatures to well below 2°C above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5°C through achieving net-zero global emissions by 2050. Each country submitted a national emission-reduction plan (known as its Intended Nationally Determined Contribution or INDC) outlining its approach to reducing emissions, which would ratchet up every five years. Signatories also agreed to finance developing countries' adaptation to climate change with \$100bn until 2020, with a commitment to further finance in the future. But despite the Paris Agreement's success, today's combined INDC pledges mean that the 2°C limit will be exceeded, with warming likely to reach 2.6-3°C by 2100, and 3.5°C after 2200.⁶

Furthermore, the pledges are not legally binding, and there are no sanctions to punish those who fail to deliver on them. Moreover, while the annual \$100bn of climate financing is a huge step in aiding climate-change adaptation and mitigation, the cost out to 2050 of just one developing country adapting to a 2°C warmer world is estimated to be in the range of \$75bn to \$100bn a year.⁷ This leaves the majority of much-needed policy initiatives in the hands of future governments and negotiators.

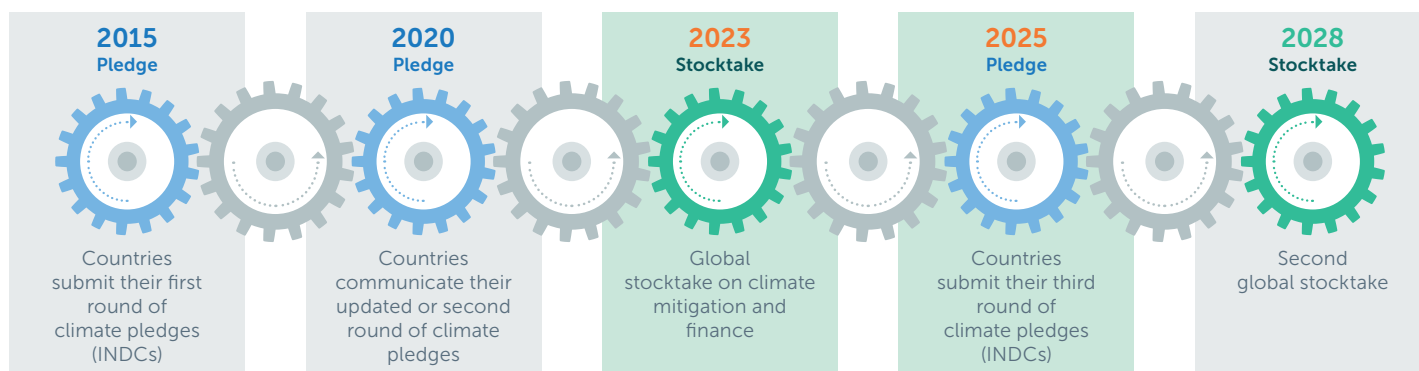
While in the five years since the Paris Agreement widespread policy changes have been slow, there are glimmers of hope. Thanks to subsidies and market forces, the cost of electric vehicles has come down globally, the cost of solar and wind power in many regions now competes with fossil-fuel generation without subsidies, and global public opinion is becoming more and more concerned about the impact of climate change.

Furthermore, as the Paris Agreement's 'ratchet' mechanism continues between 2020-2025, we anticipate that a concerted policy response will be inevitable. (See exhibit 3 below).

There will, of course, be outliers, particularly in countries which are experiencing growing nationalism or where the electoral cycle falls within these years, but, overall, politicians and societies will increasingly prefer renewable energy as a cheaper, cleaner energy source and seek to protect their local biodiversity.

As investors, keeping abreast of policy changes and anticipating them is critical to help us identify winners and losers in the markets; the next five to ten years will be pivotal in identifying what those will be.

Exhibit 3: The Paris Agreement's 'ratchet' mechanism increases the likelihood that governments will strengthen policy by 2025



Policy announcements are expected to accelerate in 2023-2025

Source: Principles for Responsible Investment, 'The Inevitable Policy Response: Policy Forecasts', December 2019.
<https://www.unpri.org/inevitable-policy-response/the-inevitable-policy-response-policy-forecasts/4849.article>

6 Source: International Energy Agency, 'Energy and Climate Change', 2015: <https://www.iea.org/publications/freepublications/publication/WEQ2015SpecialReportonEnergyandClimateChange.pdf>

7 Source: World Bank, 'The Cost to Developing Countries of Adapting to Climate Change', 2011: <http://siteresources.worldbank.org/INTCC/Resources/Executivesummary.pdf>

CLIMATE ACTION: WHAT ACTION IS NEEDED?

Scientists have stated that global emissions must reach net zero by 2050 for there to be a reasonable chance of warming to stay below 1.5°C. By 2030, emissions would need to be around 25% lower than in 2018 to put the world on the lowest-cost pathway to limiting global warming to below 2°C, or 55% lower if limiting warming to 1.5°C.⁸

Climate policies that are consistent with the 1.5°C goal will require upscaling energy system supply-side investments by between \$1.6 trillion and \$3.8 trillion per year globally on average over the 2020-2050 period, depending on how rapidly energy efficiency and conservation efforts can be ramped up.

Furthermore, according to the United Nations Environment Programme's (UNEP) latest Emissions Gap Report, this will involve "expanding renewable energy for electrification, phasing out coal for rapid decarbonisation of the energy

system, decarbonising transport with a focus on electric mobility, decarbonising energy-intensive industry and avoiding future emissions, while improving energy access";⁹ all very challenging actions.

While this may mean that those incumbents in the heavy-emitting sectors may be caught out, it also leaves the door open for many investment opportunities, whether from electric vehicles, from new types of sustainable farming, or even financing green bonds (see page 8).



⁸ Source: New Scientist, 'UN report reveals how hard it will be to meet climate change targets', 26 November 2019.

<https://www.newscientist.com/article/2224539-un-report-reveals-how-hard-it-will-be-to-meet-climate-change-targets/#ixzz66UQE2fTB>

⁹ Source: UN environment programme, 'Emissions Gap Report 2019', 26 November 2019.

<https://www.unenvironment.org/resources/emissions-gap-report-2019>

THE RAPID GROWTH OF GREEN BONDS

Green bonds have been the subject of growing investor interest over the last two or three years. They offer fixed-income investors looking for exposure to sustainable investments the opportunity to invest in the 'E' (environmental) element of their ESG remit. Green bonds allow investors to help aid the transition to a low-carbon world by lending money for use in specific green projects. We anticipate that the green-bond market will continue growing rapidly.

The total amount of green bonds outstanding today sits at \$371 billion and forms the bulk of 'sustainable' debt outstanding, which also includes social, blue and Sustainable Development Goals (SDG)-linked bonds. This figure is meaningful, considering the size of the green-bond market five years ago was \$35 billion. However, this is still only the tip of the iceberg in terms of the size of global bond markets (\$40.1 trillion).¹⁰

Total amount of outstanding green bonds

Year end: 2014



Year end: 2019



\$371 BILLION

Source: ICE BofAML Green Bond Index, January 2020.

Following a year of strong growth in green-bond issuance in 2019, we expect the green-bond market to continue to grow rapidly in 2020, and believe this will be driven by three elements:

- 1 Demand from investors wanting exposure to the environmental element of their ESG remit, and those that want to help aid the transition to a low-carbon world.
- 2 Growth in the number of green projects requiring funding, plus issuers recognising the reputational benefit that can accrue from issuing a green bond.
- 3 From a sovereign perspective, some countries issuing incremental green bonds, along with others entering the market for the first time. The German government, for example, has launched an €86bn 10-year plan to modernise and expand its railway system, including the electrification of more routes. The federal government is planning to finance €62bn of this, with the state-owned rail company providing the remainder. A significant amount of this appears likely to fall under 'green proceeds', which could create the first 'green bunds'. Green sovereign bonds are likely to also encourage more domestic companies to follow suit.

¹⁰ Source: ICE BofAML Green Bond Index, January 2020.

Avoiding the pitfalls

The market does, however, face the risks of both 'greenwashing' and investors paying a 'greenium'. It is therefore critical to assess green-bond issuers from a holistic viewpoint, incorporating broader analysis of how all ESG factors affect credit risk. The European Union's Technical Expert Group is in the process of developing a green-bond standard, which should be applauded for aiming to improve the transparency, consistency and reputation of green bonds.

However, we are watching closely to see whether a standard that is too prescriptive will result in the creation of an effective green list of securities. By this, we mean there is a risk that it may exclude good companies that are moving away from a high level of emissions today. Such a list could attract the bulk of flows, leading to them becoming overvalued, and resulting in investors just trading a methodology.

Mobilising mainstream capital

There is much that is positive about the formation and growth of the green-bond market in terms of it becoming a tool for enabling the transition to a low-carbon world. However, financing the fight against climate change needs not only green financing, but a willingness to fund those issuers and projects that enable the transition away from high emissions. As discussed above, issuers may be making good strides on emission reduction and alternative energy growth without their securities being correctly classified as 'green'.

Mobilising mainstream capital is key to improving the planet's sustainability. Innovative types of financing should be encouraged as long as the market embraces standardisation, robustness and credibility, in order to grow and maintain a long-term source of capital.

NEWTON'S THREE BROAD APPROACHES TO RESPONSIBLE INVESTMENT

With so much irrefutable evidence about the growing threat of climate change all around us, not to mention the need for urgent collective action from countries, politicians, and individuals, how do we feel we can make a difference for concerned investors?

At Newton, we start by aiming to distil the responsible investment strategies available to our clients into three broad buckets. It is an approach that has served us well for a number of years. The chart below sets out the key attributes of the three broad areas that we provide for our clients: integrated ESG, exclusions and screening, and sustainable investing.

It is primarily through our newest approach, our sustainable strategies – which build on our integrated ESG approach – that we seek to mitigate the impact of climate change. We explore this in greater detail in the next chapter, and then more explicitly on page 12.

INTEGRATED ESG

Purposeful ownership



- Analysis of material ESG issues fully integrated into security-selection process
- Engagement used to drive ESG improvement in support of investment performance
- No specific exclusions applied; maximises opportunity set
- May invest in securities with ESG risks if valuation reflects that risk
- Aim to achieve the best risk-adjusted return for investors

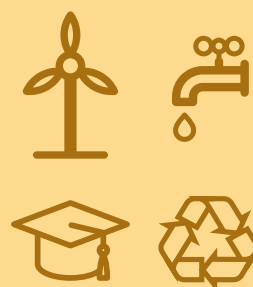
EXCLUSIONS & SCREENING

Traditional SRI



- Sectors excluded on basis of clients' values
- Aligns investors' investments with those values
- Helping clients achieve their objectives
- Reduction of investment opportunity set

SUSTAINABLE



- More emphasis on positive societal outcomes
- Optimal outcome for all stakeholders
- Principles based on red lines ensure minimum standards
- Lens to identify opportunities
- Omits securities with positive short-term prospects but negative ESG profiles

INTEGRATION OF RESPONSIBLE INVESTMENT CONSIDERATIONS

The title above is intended in the economic sense; we think that responsibly managed companies are better-placed to achieve a sustainable competitive advantage and provide strong long-term growth opportunities. In terms of climate change, we believe those companies which are adapting to the changing regulatory, physical, economic and social backdrop offer the most attractive investment prospects.

Whether in equities, fixed-income or alternative assets, responsible investment considerations are an integral part of the investment decision-making process across all of our strategies. We do not select securities simply for their responsible investment or climate-change-related credentials, but instead seek investments which provide the optimum risk/return trade-off, backed by thematic drivers and solid fundamentals at an attractive valuation. Below, we look at our responsible investment process in more detail.

We take three key steps to try to ensure our clients' portfolios are positioned for changes in the investment landscape brought about by climate change:

1. Integrated ESG research

We believe ESG factors can have a material impact on company value, and, as such, all our globally recommended stocks have to be considered from an ESG perspective, the results of which are contained within an ESG quality review produced by our responsible investment and fixed-income teams. These reviews feed into our investment decision-making process and enable our portfolio managers to consider climate-related risks and opportunities highlighted by our global analysts and fellow portfolio managers.

We follow research from independent sources such as CDP (formerly the Carbon Disclosure Project), Transition Pathway Initiative (TPI), Institutional Investors Group on Climate Change (IIGCC), and Carbon Tracker, in conjunction with our own proprietary research and data. Such research covers topics such as policy risk, long-term planning, carbon emissions, use of natural resources and event risk.

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We believe ESG factors can have a material impact on company value, and as such, all our globally recommended stocks have to be considered from an ESG perspective. ”

2. Engagement, collaboration and active proxy voting

Based on the risks and opportunities identified in our ESG reviews, we engage with management teams on their approach to climate change so we can incorporate further details into our investment thesis. We engage with companies on their governance, and seek to understand how their boards are overseeing climate risks. For example, we will consider if directors have the appropriate expertise to understand how the business will be affected by climate change, especially where a company is a heavy emitter. We encourage all companies to set a climate-change strategy, with company-specific greenhouse-gas emissions targets, and to consider a range of carbon prices, to ensure appropriate planning and capital-allocation decisions. We often discuss related issues including water stress, and the impacts of extreme weather on physical assets, to understand how significantly a company may be affected. Positively, we want to understand how companies are considering and looking to build on opportunities around clean technology and renewable energy, and assess whether they may benefit from these technologies.

As we can't do everything by ourselves, we also seek to collaborate with other investors, and sit on bodies and panels that support more rigorous management of climate-related risks and opportunities. Accordingly, we are active members within the Climate Action 100+ programme (CA100+) (climateaction100.org), and are members of the Institutional Investors Group on Climate Change (IIGCC) Corporate Engagement Group (iigcc.org). As a recent example, through being co-lead CA100+ engager with Centrica, we have

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We believe shareholders have the right and responsibility to use their right to vote to encourage companies and whole sectors to take action on key ESG issues.”



engaged regularly with the board and executives, and made statements at the company’s AGMs. We were delighted when the company set Paris Agreement-aligned emission-reduction targets in 2018.

Where we believe they are material and well-founded, we co-file and support shareholder proposals on climate change. We believe shareholders have the right and responsibility to use their right to vote to encourage companies and whole sectors to take action on key ESG issues. Subsequently, following frustration with a lack of action on climate change from the oil and gas industry, during 2018’s voting season, we wanted to deliver a message with a big impact. We worked with our industry colleagues, and rallied other investors to write a public letter to the oil & gas industry which we believe could, and should, do more on climate change. The letter, supported by 60 global asset managers and owners with combined assets of over \$10.4 trillion, gained excellent traction in the global press; it was first published by the Financial Times¹¹ and then by other media outlets including The Wall Street Journal and Bloomberg.

3. Monitoring of policy and regulation

We follow developments in the policy and regulation landscape closely, and attend climate negotiations and conferences. Our team members are members of key bodies, such as the IIGCC Scenario Analysis Working Group and IIGCC Shareholder Resolutions Sub-Group (iigcc.org), the Science Based Targets Initiative Expert Advisory Group (sciencebasedtargets.org) and the Climate Disclosure Standards Board Technical Working Group (cdsb.net).

We think that responsibly managed companies are better placed to achieve sustainable competitive advantage and provide strong long-term growth

COLLABORATIVE ENGAGEMENT: A CASE STUDY

During 2018 and 2019, we actively engaged with companies on topics including climate resilience and stranded assets (see page 15) among heavy greenhouse-gas emitters, reactions to COP 21, and investment in renewables. Of note, in 2019 we co-filed a special climate-change shareholder resolution, alongside colleagues in Climate Action 100+, asking BP to explain its thinking on climate change and how its business is aligned with the Paris Agreement.



This initiative took place after more than six months of engagement, and investors felt that the friendly shareholder resolution would encourage BP to explain how it considers its business strategy to be consistent with the goal of the Paris Agreement to keep global warming to well below 2°C. We also asked the company how it evaluates the consistency of each new material

capital investment with the goals of the Paris Agreement, and which measures and targets it plans to use. In addition we sought information on the anticipated levels of investment in oil and gas and other technologies; targets to promote operational greenhouse-gas reductions; the estimated carbon intensity of energy products; and the linkage of targets with executive remuneration.

The Board positively supported the proposal, and at BP’s AGM¹² the resolution received huge support, gaining 99.14% global investor approval, the highest investor support for an ESG resolution ever. We are very pleased with the result, as it demonstrates what can happen when we engage constructively with companies and work together with other investors on important issues.

¹¹ Source: Financial Times, ‘Oil and gas groups must do more to support climate accord’, 17 May 2018. <https://www.ft.com/content/fda63c26-5906-11e8-b8b2-d6ceb45fa9d0>

¹² Source: Financial Times, ‘BP shareholders vote in favour of greater climate disclosure’, 21 May 2019. <https://www.ft.com/content/fcb14d66-7bcd-11e9-81d2-f785092ab560>

INVESTMENT PRODUCTS: OUR SUSTAINABLE STRATEGIES

In addition to our integrated-ESG strategies, we offer a number of sustainable products, which adopt the fundamental principles captured by our integrated ESG approach, and then amplify the responsible investment requirements. In these strategies, our portfolio managers assess the nature of their investments' contribution to climate change and the carbon footprint of their portfolios.¹³

Newton sustainable strategies – our 'red lines'

Newton's sustainable strategies aim to achieve their objectives through investing for the long term in sustainable sovereign bonds, and securities of companies that demonstrate attractive investment attributes and sustainable business practices, while having no material unresolvable ESG issues:

- Embedding ESG analysis to look beyond the financial statements
- Investing in companies with robust business models which effectively incorporate sustainability into their core business and strategy. We also seek out and support those companies that are making a positive transition to more sustainable activities
- Sustainable 'red lines' ensure that investments do not violate the UN Global Compact's ten principles that promote responsible corporate citizenship, or have characteristics which make them incompatible with the aim of limiting global warming to 2°C¹⁴
- No investment can be made in any company that derives more than 10% of its turnover from the production and sale of tobacco
- Sustainable investment criteria are applied for as long as we hold a security, through continual appraisal of the ESG fundamentals, controversy monitoring, engagement with company management and, importantly, active voting.

Engaging with companies where ESG issues are resolvable and can be improved, and reporting on that activity, is a vital part of the work we do.



¹³ Source: Newton, 2019.

¹⁴ Source: UN Global Compact, 'The Ten Principles of the UN Global Compact', 24 June 2004. <https://www.unglobalcompact.org/what-is-gc/mission/principles>

OUR INVESTMENT THEMES: USING OUR THEMES TO IDENTIFY THE OPPORTUNITIES

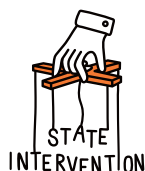
Our investment themes provide us with vital perspective on the investment landscape, allowing us to block out short-term market 'noise' and identify those powerful forces of fundamental change in the world around us, such as climate change. They are built upon fundamental, observable trends, rather than speculative or short-run forecasts. In thinking about climate change thematically, we use themes such as *Earth matters*, *state intervention*, technology-related *net effects*, and *population dynamics* to identify interconnected ways in which global warming can have an impact on our clients' investments:



This theme helps us monitor the effects of greater societal and governmental awareness of climate change.

It highlights the direct physical impact on companies as input costs increase while the world's economic resources become progressively depleted, as well as the indirect costs arising from extreme weather damage to assets.

It also helps identify potential investment opportunities that will benefit from, or contribute to, positive environmental impact and better resource management.



With public awareness of climate change increasing, pressure is growing on policymakers to take action to mitigate the impact. This is likely to lead to increased regulation and policies, resulting in increased compliance costs for carbon-heavy businesses.

Meanwhile, public policy in the form of incentive schemes and tariffs has been vital in supporting renewable technologies, which we believe is creating attractive long-term investment opportunities.

An example of such a policy is the Renewable Obligation Certificate (ROC) scheme in the UK, which provides a floor to the return that is made from investing in new renewable assets.¹⁵



This theme highlights innovation in renewable energy, and the associated opportunities for investors.

The sector offers bond-like investments, many of which benefit from government subsidies, and provide investors with significant diversification, a healthy dividend yield and potential for capital growth.

The key risk to investors is that, where incumbent companies do not make sufficient adjustments to their business models, assets will become 'stranded' (subject to premature devaluation as a result of regulatory or market changes).



Populations are shifting significantly – with unprecedented ageing occurring in mature economies, and income growth driving changes in developing economies.

This creates structural growth opportunities in certain areas together with risks from growing fiscal burdens.

Changing patterns of labour participation such as education later in life and the growing proportion of women in the workplace also contribute. Increasing consolidation of populations around large urban centres is another feature of developed and emerging markets, and will help drive demand for infrastructure and housing.

How our themes help us identify the opportunities and risks of climate change

Identify drivers

Earth matters and state intervention

EU legislation requires reduction in carbon emissions by 2020; UK government has committed to reducing emissions to net zero by 2050 and will need to upgrade energy infrastructure.

Investment implications

Net effects

Winners:
Providers of renewable electricity.

Losers:
'Dirtier' traditional sources of energy (e.g. coal, nuclear).

Investment opportunity evaluation

Renewable electricity company

- 6% dividend yield on offer.
- Growth linked with retail price index.
- Dual income sources: Electricity imported to grid and ROC subsidy.

¹⁵ ROC subsidies are received by energy suppliers for each MWh of electricity they generate. The amount of subsidy they receive is dependent on the technology (wind, solar, etc.) used in energy generation, and when the asset was built.

REPORTING TO CLIENTS: TCFD DISCLOSURE

While shining a light on the performance of the companies in which we invest is something we regularly do, we also realised that it was important to communicate our own activities in relation to climate change.

As a result, our CEO Hanneke Smits commissioned our first *Task Force on Climate-related Financial Disclosures* (TCFD) report in 2018 to provide insight into Newton's governance, strategy, risk management, and metrics and targets related to climate change.

Newton was one of the first asset managers to produce such a report. As part of our continuing work in this area, we have begun undertaking climate-scenario analysis, and continue to explore how climate change will affect Newton and our clients' assets over the short, medium and long term.

Our latest TCFD report, released in April 2020, contains further and more detailed research in these areas, and can be viewed at:

<https://www.newtonim.com/info/tcf-d-report/>

At Newton we have formed a TCFD group, which is an investment-focused team, steered by the responsible investment team. It includes equity and fixed-income portfolio managers, global sector analysts (oil & gas, and renewables), and ESG, quantitative and investment-risk analysts. This group is tasked with undertaking climate-scenario analysis and analysing the policy, physical and technological risks and opportunities posed to Newton's investments. As this work progresses, it will be fed back into the investment and risk teams.

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We have begun undertaking climate-scenario analysis and continue to explore how climate change will affect Newton and our clients' assets over the short, medium and long term. ”

WE ARE ALSO SEEKING A FAIRER TRANSITION...

Our sustainable strategies also seek to ensure that the transition to a lower-carbon world is a fair one, as our work on the cobalt-mining supply chain shows below:

Responsible investment engagement case study

A 'just transition' – child labour and cobalt mining

The regulatory, physical and disruption risks and opportunities of climate change are areas investors should be aware of; however, the need for the energy transition to be fair should also remain in investors' minds.

The concept of a 'just transition', an economic shift that is not only sustainable, but also fair for those who stand to lose out, is nowhere more important than when analysing the potential boom in demand for electric vehicles.

A key mineral in electric-vehicle batteries is cobalt, a mineral predominantly sourced from the Democratic Republic of Congo (DRC). Following a 2016 Amnesty International report which uncovered child labour in the cobalt supply chain, we worked with Samsung SDI, a large Korean battery manufacturer, of which we are one of the largest shareholders, after concerns were raised over the use of child labour in its supply chains.

After visiting China and South Korea to look at the supply chain in person, we realised that an issue with child labour existed – linked to the poor economic situation in the DRC – and that it needed to be raised with management. After a number of emails, calls and meetings with management, we were able to get an internal report published that assessed the company's involvement with child labour in cobalt mining, and raised the profile of the issue internally.

The company also explained that it was working with the Responsible Cobalt Initiative (RCI) as the best way to drive real change. We were also pleased to see that in 2019 it announced a new programme with BMW, BASF and the German Development Department GIZ to establish local community programmes in one of the mining regions in the DRC.

We then went on to engage with other companies on this issue and support the RCI, as it was clear that this was an ESG issue that many companies were involved with. We continue to work with the battery manufacturer to monitor progress on the initiatives created to address the problem, and push for a full supply-chain audit and more projects in local communities.

Overall, we believe the response has been positive and will improve lives in the DRC. In an effort to help coordinate investor action, we co-hosted the first investor roundtable on responsible cobalt, with the Principles for Responsible Investment in November 2019.



NEWTON'S VIEW ON STRANDED ASSETS



What are stranded assets?

Another area that needs serious consideration by investors looking at the implications of climate change is stranded assets. Stranded assets are now generally accepted to be fossil-fuel supply and generation resources which, at some time prior to the end of their economic life, become no longer able to earn an economic return, as a result of changes associated with the transition to a low-carbon economy.

While the concept of stranded assets has recently been linked to action required to tackle climate change, it is an old concept that is fundamentally linked to technology evolution, and part of the creative destruction in any market economy. For instance, whaling ships which hunted for oil became obsolete when electric lights replaced oil lamps. Similarly, climate change is prompting a series of technological innovations that are creating the same potential obsolescence threat to fossil fuels, on account of their emissions.

The transition away from reliance on fossil fuels

There are many projections about the future growth and decline rates of fossil fuels. However, the reality is that the world currently remains deeply reliant upon fossil fuels for reliable energy. We treat these long-term projections with caution though, as supply, demand and pricing are driven by many inter-related variables which become increasingly difficult to predict the longer the time horizon. Additionally, technological disruption can occur quickly.

Renewables are, in some cases, already cheaper than fossil fuels, and this is driving their faster and broader adoption. As asset-replacement cycles occur, replacing old fossil-fuel assets with a combination of renewable technologies is becoming the economically rational choice, which is good news for climate change.

Broadly, we expect global government policy will be supportive of the transition to renewables, but it won't be a smooth journey, with tough choices for politicians seeking to gain electoral support.

Stranded assets are also a useful concept for companies to consider, to help them to ensure that they allocate capital in a sensible manner that takes into account long-term demand predictions. The use of the concept is helping to push fossil-fuel companies to become low-cost producers and find the cheapest method of extracting hydrocarbons. This will help ensure that, as demand falters over the very long term, it will be their supply that is bought, rather than the more expensive, harder-to-access and refined energy sources.

HOW STRANDED ASSETS AFFECT OUR INVESTMENT DECISIONS

We believe that the stranding of assets is a real risk, which, in combination with a range of other investment factors, has resulted in the following broad outcomes:

- We have consistently been underweight in the energy sector over many years, only investing in those companies that, in our view, offer the best risk/reward trade-off in an environment of real concern around the impact of climate change.
- We have a significant number of holdings in renewable energy and the supply chain associated with electric transport, owing to the thematic tailwinds these areas are supported by.
- We have avoided coal-related investments.
- We continue to hold high-quality companies with exposure to oil and gas, but engage with them heavily to understand how their business models will cope and support the energy transition.

OUR ETHICAL INVESTMENT KNOWLEDGE AND EXPERIENCE

Being an active asset manager means listening and responding to our clients' investment preferences, and some choose to leverage our experience in running ethically screened portfolios, which may bypass the oil and gas sector altogether.

We have been offering ethically screened investment products to our clients for many years, and specific products with a fossil-fuel exclusion for around 15 years. The movement towards fossil-fuel divestment – the removal of stocks, bonds and other instruments from portfolios – is a young, rapid and fast-evolving trend. An increasing number of institutions and charities are seeking to align their capital with their mission and objectives, and implement a form of fossil-fuel restriction.

In our view, all investors, whether they implement a screen or not, could benefit from our experience and knowledge in this field.

Knowledge

We pay close attention to the changing ethical investment landscape to ensure we are aware of the latest developments and trends.

For investors who are considering an ethical policy, it is vital they are aware of the potential effect it could have on their portfolio.

Experience

In trying to strike an appropriate balance between delivering attractive investment returns and avoiding key areas of concern, experience is key.

At Newton, we manage £4.8bn in assets covered by ethical criteria (as at 31 December 2019), and we have run ex-fossil-fuel portfolios for almost 15 years.

We have worked with clients to create and implement ethical policies ranging from full sector-wide exclusions of extractives, through to targeted restrictions on companies deriving significant revenues from the most carbon-intensive fossil fuels, such as thermal coal, tar sands and oil shale.

£4.8 BILLION

Assets under management (as at 31 December 2019)
which are covered by ethical criteria

15 YEARS

Number of years during which Newton
has run portfolios with a fossil-fuel exclusion

CONCLUSION

As we have outlined in this paper, climate change is a multi-faceted issue for the investment community, and one that also presents an existential threat to our planet.

However, we believe that through our active, thematic approach, our integration of ESG considerations and our extensive experience of engagement in the field of fossil-fuel divestment, we can offer investors a range of compelling options as we seek to collectively reduce our impact on our planet.

We believe our heritage and focus in these areas stands us in good stead as we manage our clients' portfolios. We will continue to scrutinise developments, and keep abreast of changing policy, as we seek to identify the risks and opportunities that climate change presents to us as active, responsible asset managers.

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