MANAGING CLIMATE CHANGE RISKS

UC Investments, 2021

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I. Introduction

The Office of the Chief Investment Officer of the Regents of the University of California (UC Investments) manages the pension, endowment, retirement savings, and working capital of the University of California (UC). We think of ourselves as an organization that invests for the next 100 years by seeking the best long-term return on investments for our university and its stakeholders. When we make investment decisions, our centennial orientation and fiduciary duty lead us to actively consider the fundamental challenges and risks facing society, including climate change.[1]

The University of California is a leader in sustainability. UC's ambitious climate change goals include a systemwide commitment to carbon neutrality by 2025; our pioneering faculty and researchers advance knowledge of climate change science and solutions; and our dedicated staff integrate climate change considerations into the operations of our 10 campuses, five medical centers, extensive network of agricultural and natural resource centers and the Lawrence Berkeley National Laboratory. The University of California supports the Paris Agreement.[2]

UC Investments manages a number of distinct portfolios, including the defined benefit UC Retirement Plan (UCRP), the defined contribution UC Retirement Savings Program (UCRSP), the General Endowment Pool (GEP) and working capital. As of June 30, 2021, the total value of assets across these funds stood at approximately $168 billion, with 82% invested in public markets and the remaining 18% in private markets.[3] Of the public markets assets, roughly 78% were managed through passive investments, with the remaining 22% in actively managed accounts.

UC Investments began our climate change journey in 2014, the same year we joined the UN Principles for Responsible Investment (UNPRI). In 2016, as a signatory to the PRI's Montreal Carbon Pledge, we began publicly reporting the carbon footprint of the public equities portion of the pension and endowment. We also signed onto the Financial Stability Board's Task Force on Climate-Related Financial Disclosure (TCFD) because robust and consistent corporate and asset owner disclosure of climate-related financial risks and opportunities could help us make more informed investment decisions.

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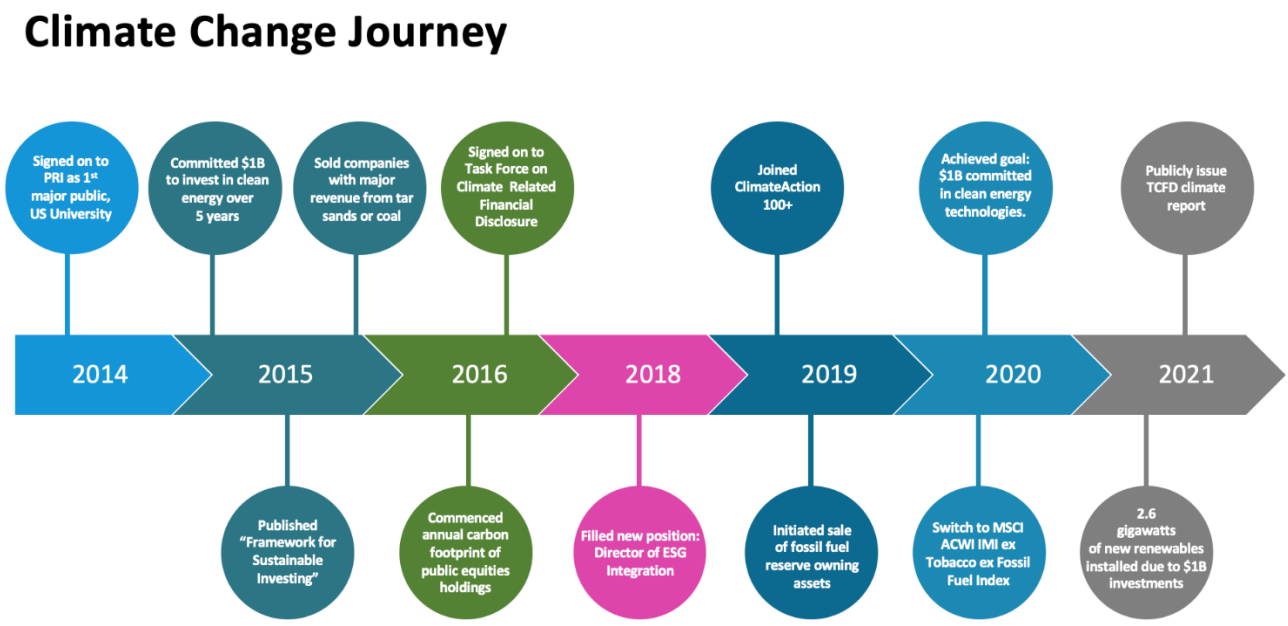
[1] For more information on UC Investments, see: https://www.ucop.edu/investment-office/210924_ucannualreport2021_digital.pdf

[2] See: https://www.universityofcalifornia.edu/press-room/uc-president-drake-lauds-us-return-paris-agreement One of the goals of the Paris Agreement is holding the increase in the global average temperature to well below 2°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.

[3] Unless otherwise noted, all data on UC Investments' holdings are as of June 30, 2021.

This report – which integrates UC Investments' climate related strategies, metrics, and targets - represents another step in our climate change journey. We approach this, our inaugural TCFD-aligned report, in the spirit of learning and with the hope that it helps advance the investment community's efforts to address the risks of climate change.

Chart 1



II. The Task Force on Climate Related Financial Disclosures

Following the 2015 Paris Agreement, the Financial Stability Board, an international body that monitors and makes recommendations about the global financial system, developed a framework of consistent climate-related financial disclosures for corporations and investors. The recommendations report, released in 2017, focused disclosures on four areas:

1. **Governance**: An organization's governance around climate-related risks and opportunities.
2. **Strategy**: The actual and potential impacts of climate-related risks and opportunities on an organization's businesses, strategy, and financial planning.
3. **Risk management**: The processes used to identify, assess, and manage climate-related risks.

4. **Metrics and targets**: The metrics and targets used to assess and manage relevant climate-related risks and opportunities.[4]

In addition to the above recommendations, supplemental guidance requirements apply to asset owners like UC Investments.

III. Governance

The Board of Regents of the University of California oversees UC Investments' strategy on climate change and UC's chief investment officer develops and implements that strategy.

The Board of Regents, pursuant to the California Constitution, has "full powers of organization and governance" subject only to very specific areas of legislative control.[5] The board defines the goals and objectives of UC's investment funds, and is responsible for establishing and approving changes to each fund's investment policy statements. Further, "[t]he Board of Regents may delegate the implementation of this policy to committees, the Chief Investment Officer and investment advisors."[6] The Investments Committee is tasked with "provid[ing] strategic direction and oversight, mak[ing] recommendations to the Board, and tak[ing] action pursuant to delegated authority on matters pertaining to University investment strategy and operations and pertaining to the review and reporting of investment results."[7]

Specifically related to climate and sustainability risks and opportunities, the board charges UC Investments with the following responsibilities:

> The Office of the Chief Investment Officer shall incorporate environmental sustainability, social responsibility, and governance (ESG) into the investment evaluation process as part of its overall risk assessment in its investments decision making. ESG factors are considered with the same weight as other material risk factors influencing investment decision making.

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[4] TCFD, "Recommendations of the Task Force on Climate-related Financial Disclosures" (2017). Available at: https://www.fsb-tcfd.org/publications/.

[5] California Constitution, Article 9. Available at: https://policy.ucop.edu/delegations-of-authority/california-constitution-article-9-education.html.

[6] UC Board of Regents, "University of California Retirement Plan Investment Policy Statement" (2021). Available at: https://regents.universityofcalifornia.edu/policies/6101.pdf.

[7] UC Board of Regents (2019). "Appendix F – Charter of the Investments Committee." Available at: https://regents.universityofcalifornia.edu/governance/committee%20charters/appendix-f.html.

The CIO, who reports to the Board of Regents, is responsible for integrating climate risk into the investment process. To implement this charge, the CIO's team, including the chief operating officer, the director of ESG integration, the chief risk officer, and the investments team, analyze and incorporate climate-related data into investment decisions. Both the CIO and COO have a portion of their compensation linked to the entity's performance on ESG integration.

IV. Strategy

Since 2015, with the publication of our Framework for Sustainable Investing,[8] UC Investments has proactively addressed ESG-related risks, including climate-related risks, within our investment practices. The framework identified eight ESG factors most relevant to UC Investments' work, including climate change, food and water security, and a circular economy.[9]

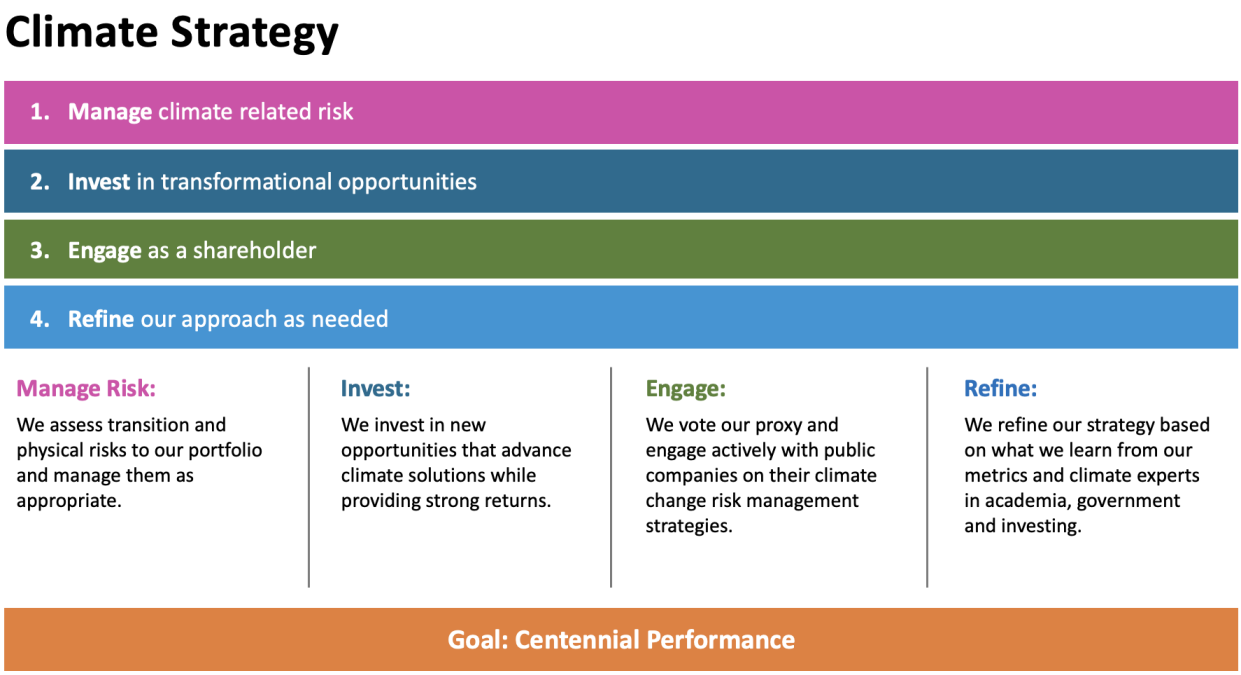
From there, UC Investments developed a climate change strategy in which we manage climate-related risks to our investment portfolio; invest in transformational climate solutions; engage with portfolio companies to address climate-related risks; and refine our strategy based on evolving data. This strategy applies broadly to all our assets under management, with some UCRSP-related exceptions, since, as a defined contribution plan, asset allocation and investment decisions ultimately rest with individual plan participants.[10]

[8] UC Investments, "Framework for Sustainable Investing," (2015). Available at: sustainable-investment-framework.pdf (ucop.edu)

[9] The framework's other ESG factors (inequality, ageing population, diversity and human rights) can all be exacerbated by climate-related challenges in ways that are financially material.

[10] Unlike the pension and endowment, participants are outright owners of the accumulated assets within their individual UCRSP accounts. UC Investments' responsibility is to curate an investment lineup that allows participants to build a cost effective and diversified portfolio.

Chart 2



We discuss managing risk and engaging as a shareholder in section V; we discuss refining our approach in section VI. But first we turn to the element of our strategy that identifies and pursues investment opportunities in climate change solutions.

UC Investments believes that the transition to a low carbon economy creates compelling investment opportunities; in 2015, we set a goal of investing $1 billion in climate change solutions over five years. This commitment is in addition to our investments in climate tech products and services created by publicly owned companies.[11] We believe that private market investments – whether through venture capital, growth equity, infrastructure, or related fund vehicles – have provided more efficient and profitable opportunities to advance sustainable growth than have publicly owned companies. In 2020, we surpassed our $1 billion investment goal through capital commitments that have generated strong returns, contributed to a lower carbon electric grid, and accelerated new technologies.

[11] For every million dollars we invest in public equities, climate tech companies such as those providing alternative energy, energy efficiency and green building products and services, generate $9,304 worth of revenue. To calculate our portfolio's exposure to these companies, MSCI determines the portfolio weighted average of each company's percentage of revenue generated by climate solutions goods and services. This conservative methodology treats companies outside of the coverage universe as having 0% revenue from climate tech. Source: MSCI, 2021.

Cumulatively, UC's private markets capital commitments to clean energy projects have led to the acquisition or development of more than 2.6 gigawatts of wind, solar and battery storage projects in the U.S., Canada, Ireland, India, and Japan. The majority of these clean gigawatts were developed through investments in utility-scale renewables platforms, as well as an aggregator strategy to own and operate commercial and industrial solar opportunities.

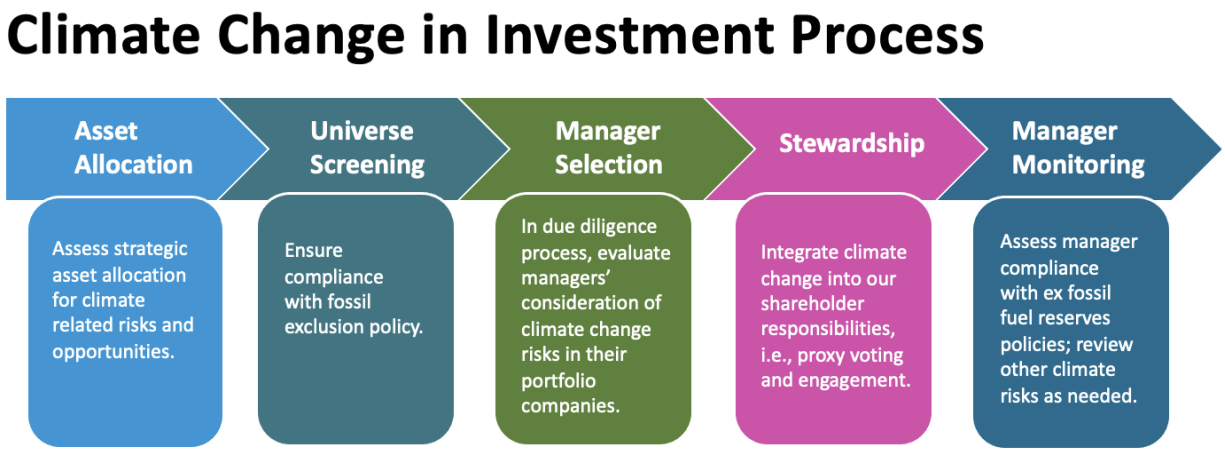
Our investments have also accelerated the scaling of new technologies that can mitigate climate change. For example, UC Investments has committed more than $100 million to two climate tech venture capital teams, Congruent Ventures[12] and the MIT Engine Fund.[13] From electric vehicle fleet charging software, to solar finance tools, to superconducting electric transmission lines, Congruent's portfolio companies are enabling and accelerating the transition to a clean, resilient energy system. The Engine Fund invests "long term capital in startups that show the greatest potential to make an impact,"[14] including companies focused on decarbonizing the manufacturing processes for carbon-intensive industrial materials, such as cement and steel.

V. Risk Management

The TCFD broadly categorizes climate-related financial risks as either transition risks (those stemming from the transition to a lower-carbon economy) or physical risks (those stemming from the physical impacts of climate change).[15] UC Investments manages climate change risks throughout our investment process, as shown in Chart 3 and described more fully below.

[12] See, https://congruentvc.com/
[13] See, https://www.engine.xyz/offerings/the-fund/
[14] Id.
[15] TCFD, "Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures," at 71 (2017). Available at: https://www.fsb-tcfd.org/publications/#implementation-guidance. For specific examples of transition and physical risks, please see Appendix A.

Chart 3



Negative Screening

UC Investments considers stranded asset risk as a key climate change transition risk. To mitigate this risk to our portfolio, UC Investments sold its assets related to coal and oil sands in 2015. In 2019, UC Investments announced it would sell its shares in companies held in our endowment and pension plan that owned any amount of "proved and probable" fossil fuel (defined as thermal coal, oil, and/or gas) reserves. In 2020, we expanded this commitment to cover working capital assets as well.[16]

To achieve our fossil fuel exclusion goal, UC Investments uses negative screening across all asset classes. Our largest asset class, public equities, tracks the MSCI All-Country World Index (ACWI) Investable Market Index (IMI) ex Tobacco ex Fossil Fuel Index, which excludes approximately 300 fossil fuel reserve owning companies.[17] We also exclude these roughly 300 companies from our investments in corporate debt. To the extent that fossil fuel reserve owning companies are held in commingled public equity accounts, UC Investments continues to reduce exposure by, for example, converting such accounts into separately managed accounts that exclude fossil fuel reserve owning companies. For investments in private equity, real assets and real estate (which account for 18% of our AUM), we screen fossil fuel reserve owning assets on

[16] The exit from fossil fuel reserve owning securities does not apply to UC Investments' $34.6 billion defined contribution plan, the UCRSP, at this time. The UCRSP offers participants the UC Global Equity ex Fossil Fuel Fund, an index fund tracking the MSCI ACWI IMI ex Fossil Fuels ex Tobacco Index.

[17] For more information, see: https://www.msci.com/our-solutions/indexes/index-categories/esg-indexes/global-fossil-fuels-exclusion-indexes.

a going forward basis, using a bespoke process that synthesizes relevant data on portfolio companies.

Negative screening of fossil fuel reserves can be effective in managing climate-related transition risks. As discussed in Section VI. below, exclusion of fossil fuel reserve owning assets has reduced the carbon footprint of our portfolio. With a lower carbon footprint, UC Investments' portfolio is better positioned to transition to a global economy that will - eventually - put a price on greenhouse gas emissions.[18]

Manager Selection

In addition to excluding investments in fossil fuel reserve owning assets, we seek to integrate climate change risk – both transition and physical – into our active manager selection and monitoring processes.[19] Depending on a manager's strategy, climate change transition and/or physical risks may be material; during our due diligence process, we evaluate the manager's climate risk and risk mitigation strategy, using quantitative and qualitative measures.[20]

Shareholder Engagement

Given that the majority of our portfolio is invested in public equities and corporate fixed income, investment stewardship – voting our proxies and engaging with publicly listed companies on material ESG topics – is a core element of our climate-related risk management approach. Through proxy voting and shareholder engagement, we encourage the companies we invest in to monitor, assess, disclose, and mitigate their climate risks to help create long-term value.

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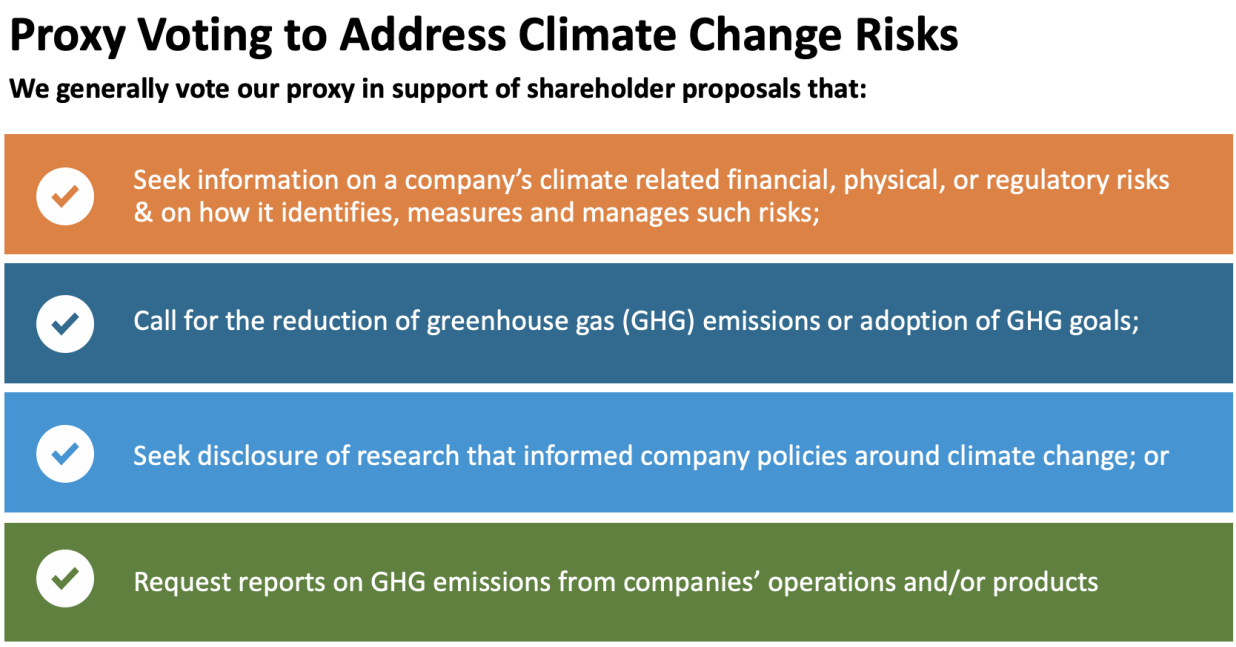
[18] For example, the US government – the world's largest buyer of goods and services – has announced plans to incorporate the social cost of carbon into federal procurement rules. See: https://www.federalregister.gov/documents/2021/10/15/2021-22266/federal-acquisition-regulation-minimizing-the-risk-of-climate-change-in-federal-acquisitions?mkt_tok=MjExLU5KWS0xNjUAAAGAMnhhlYqbo4_7brxfv0uvwUGI8fohk8jtCj57WUhN-kYEELavBVDyev-DeMhNwBiY_t2CmH1FDCZ1qiHj1_PNMqIp5guyhX3iZMj6XX9AfK1EZSk

[19] UC Investments does not manage investments directly; rather, we select external managers to do so.

[20] To inform our integration of climate risk analysis into manager selection processes, UC Investments incorporates data, data analytics, materiality frameworks and other decision support tools from third party providers, including for example, MSCI, the Sustainable Accounting Standards Board (SASB) and the CDP.

UC Investments' proxy voting guidelines pay particular attention to climate change related risks and opportunities, as shown in Chart 4.[21]

Chart 4



In the 2020-2021 proxy season, UC Investments voted on climate-related shareholder proposals as shown in Chart 5.

[21] "UC Investments Proxy Voting Guidelines." Available at: https://www.ucop.edu/investment-office/sustainable-investment/active-ownership/custom-proxy-guidelines.pdf.

Chart 5

Proxy Voting on Climate Matters, 2020-2021

Climate Theme	For	Against
Lobbying	2	0
Disclosure	30	8
Business Activities	4	15
Investor Coalition	1	0
GHG Disclosure	8	0
Plastic Disclosure	1	0
Total climate-related votes	46	23

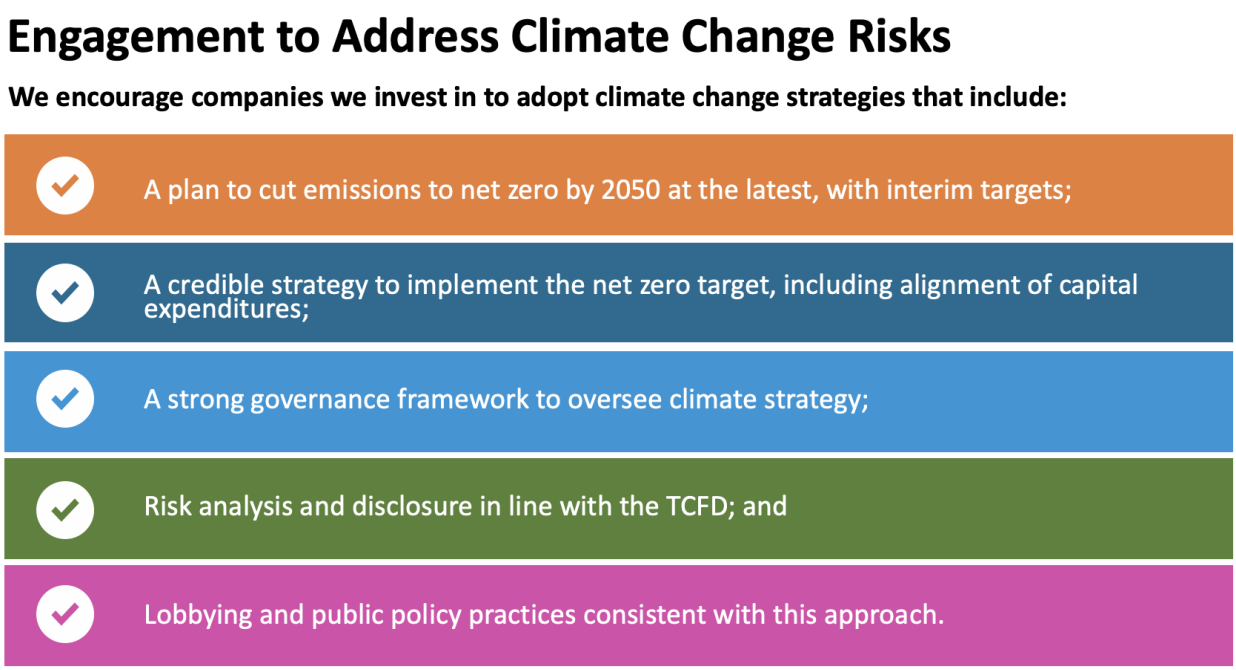
Source: ISS, 2021

In addition to exercising our proxy votes, UC Investments has joined several coalitions focused on climate-related investment risks, such as Climate Action 100+, an investor-led effort that seeks to persuade high emitting companies to transition to net zero emissions.[22] To bolster our influence, we collaborate with other investors through the Bank of Montreal's responsible engagement overlay ("reo") service.[23] We select companies for which climate change poses material risks and engage with them over several years to advance our recommended climate risk management strategies, as summarized in Chart 6.

[22] See, https://www.climateaction100.org/. In addition, UC Investments leverages its work on climate through the FAIRR Initiative, which assesses the physical and transition related climate risks to the food sector (see, https://www.fairr.org/) and the PRI, which provides resources to learn about and act on climate change's impacts to investment portfolios (see, https://www.unpri.org/).

[23] BMO GAM (2021). "Introducing reo" at: https://www.bmogam.com/us-en/institutional/wp-content/uploads/2020/06/us_introducing-reo_responsible-investing.pdf.

Chart 6



Our 2020-2021 climate change related engagements, i.e., meetings regarding climate risk with corporate senior executives, are summarized below in Charts 7 and 8.

Chart 7

Shareholder Engagement on Climate Change, 2020-21

Sector	Number of Companies Engaged	Number of engagements
Health Care	8	19
Industrials	22	32
Financials	55	160
Materials	29	76
Energy	14	50
Consumer Staples	12	37
Communication Services	3	3
Consumer Discretionary	16	39
Utilities	17	31
Real Estate	15	20
Information Technology	7	12
Total	198	479

Source: BMO, 2021

Chart 8

Examples of our Engagement on Climate Change

General Motors: Multi year engagement (in collaboration with other Climate Action 100+ signatories) focused on: environmental strategies, electrification, fuel cells and net zero strategy across GM's value chain. **Result**: early 2021, GM announced goal of carbon neutrality by 2040 across all products and operations.

HSBC: Held multiple meetings, including with the CEO and Chair, seeking development of climate risk strategy. **Result**: In 2020, HSBC committed to align its business strategy with net zero emissions by 2050. In 2021, it committed to a coal financing phase-out policy.

DUKE ENERGY

Duke Energy: In collaboration with other Climate Action 100+ investors, we sought to link climate goals to executive compensation. **Result:** Duke introduced new climate goal, focused on integration of investment plans for clean energy into executives' short-term incentive plan.

Source: BMO Global Asset Management, 2021. For illustrative purposes only.

VI. Refining our Approach

We refine our climate change strategy and risk management actions over time, informed by three main sources of information: UC staff, faculty, and students focused on addressing climate change,[24] our engagement with other investors and stakeholders through peer networks and collaborative initiatives, and our metrics and targets.

Metrics: Carbon Footprints

The carbon emissions footprint of an investment portfolio, broadly speaking, measures the greenhouse gas emissions stemming from the portfolio companies. Carbon footprint metrics are useful indicators of a portfolio's potential transition risks (specifically, policy and technology risk). By themselves, however, they do not provide a complete picture of a portfolio's climate risks for two reasons. First, most carbon footprints are backward-looking, "lagging" indicators; and second, due to the lack of reliable, consistent and robust climate data for private asset classes, accurate carbon footprints for privately valued asset classes are not generally available.[25]

[24] We confer with and learn from the teams advancing important work on climate change, including researchers from Lawrence Berkeley National Laboratory, faculty and staff contributing to UC's Carbon Neutrality Goal, and UC's sustainability teams.

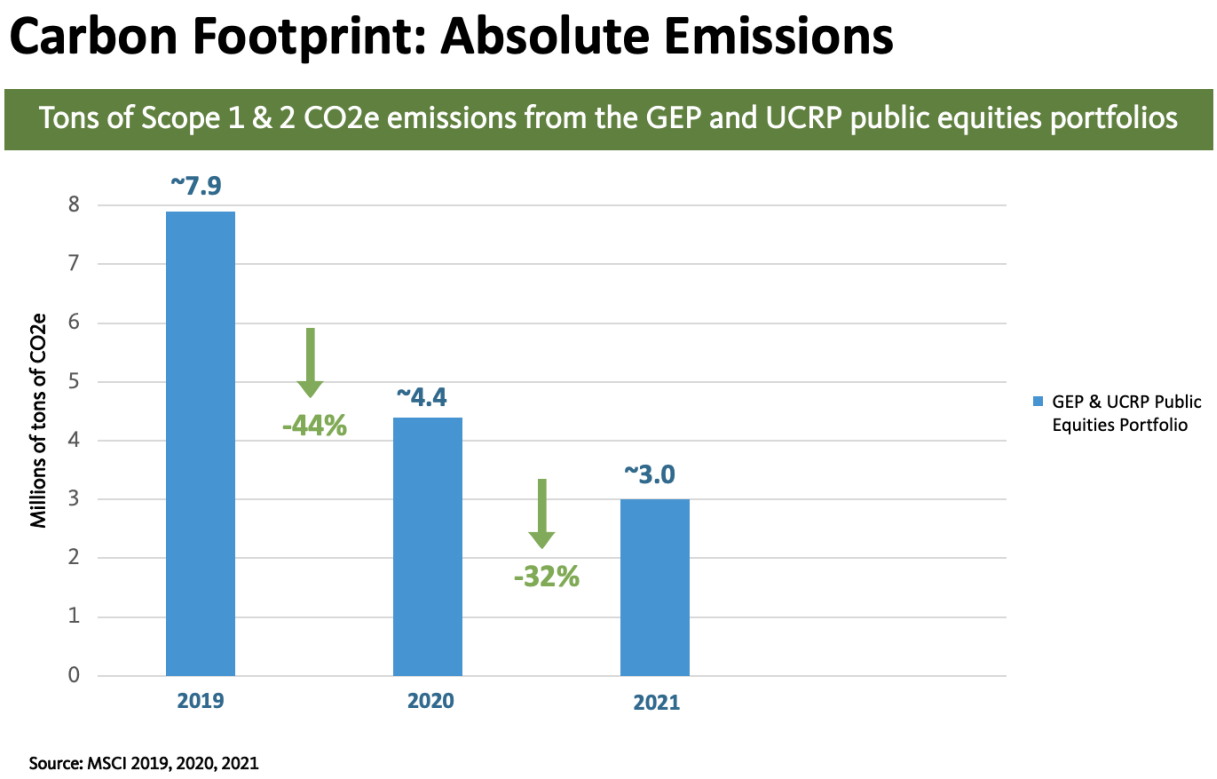
[25] In the coming year, robust and reliable climate data for private markets will likely be available, thus enabling UC Investments (and other asset owners) to expand the coverage of our portfolio's carbon footprint. See, e.g., the recent announcement from MSCI and Burgiss about their launch of carbon footprinting of private equity and debt funds at: https://www.msci.com/documents/10199/dd786a40-dbb6-4218-da01-3d2e3d0a5907

Below are four different carbon footprints of the publicly valued assets in our portfolio. One shows the absolute emissions of carbon dioxide equivalent (CO2e)[26] emissions in tons, another shows emissions of CO2e per million dollars invested, a third shows the weighted average carbon intensity, and the fourth shows the potential future emissions associated with fossil fuel reserve owning assets. Where applicable, a reference point is provided – the MSCI ACWI IMI ex Tobacco Index and/or the MSCI ACWI IMI ex Tobacco ex Fossil Fuel Index - for comparison purposes.[27] Because of unreliable, unverifiable and/or non-standardized data, Scope 3 emissions are not included in these calculations.[28]

As shown in Chart 9 below, UC Investments has decreased the tons of Scope 1 and 2 CO2e emissions from the public equities portfolio in the endowment and pension by 62% (from roughly 7.9 million tons to roughly 3 million tons) since 2019, largely due to the sale of fossil fuel reserve owning assets.[29]

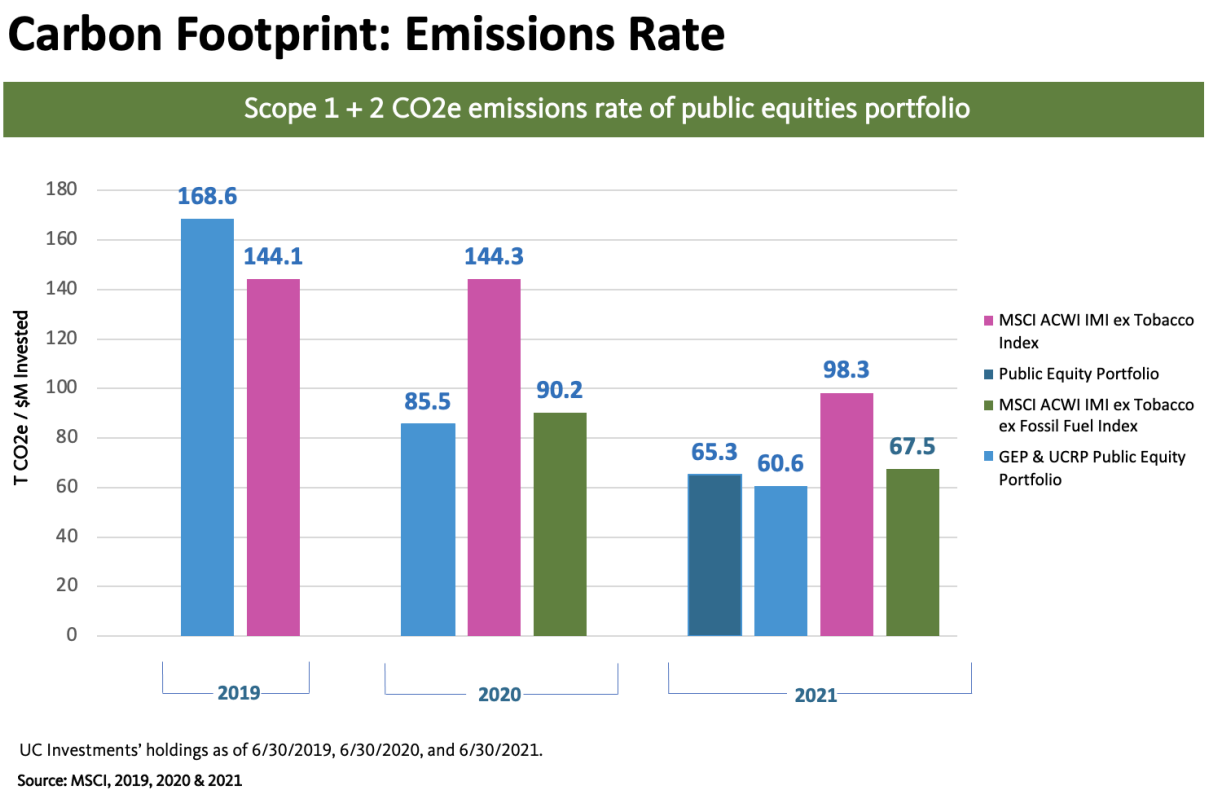
[26] Carbon dioxide equivalent (CO2e) is a catch-all term that includes emissions of all seven greenhouse gases, not just carbon dioxide. Each greenhouse gas has a different global warming potential (GWP); CO2e normalizes the values by converting them all to the GWP of CO2.
[27] These two indices contain the same roughly 9,000 securities, except that the latter excludes fossil fuel reserve owning companies. UC Investments tracked the former Index until July, 2020, when we began tracking the ex-Fossil Fuel Index.
[28] Scope 3 emissions are all indirect emissions of greenhouse gases (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.
[29] Scope 1 emissions are direct emissions of greenhouse gases, such as direct combustion of fuel from owned or controlled sources of a company. Scope 2 emissions are indirect emissions of greenhouse gases from the generation of purchased energy.

Chart 9



To compare the carbon footprints of portfolios of different dollar amounts, asset owners use a standardized metric: tons of CO2e per million dollars invested. UC Investments has reduced its carbon emissions rate by 64% since 2019 due to sales of fossil fuel reserve owning assets, as can be seen in Chart 10 below. Moreover, our portfolio's carbon emissions rate is 10% less than that of our benchmark index (60.5 vs. 67.5) due to our choice of managers in the "actively managed" portion of our public equities portfolio.

Chart 10

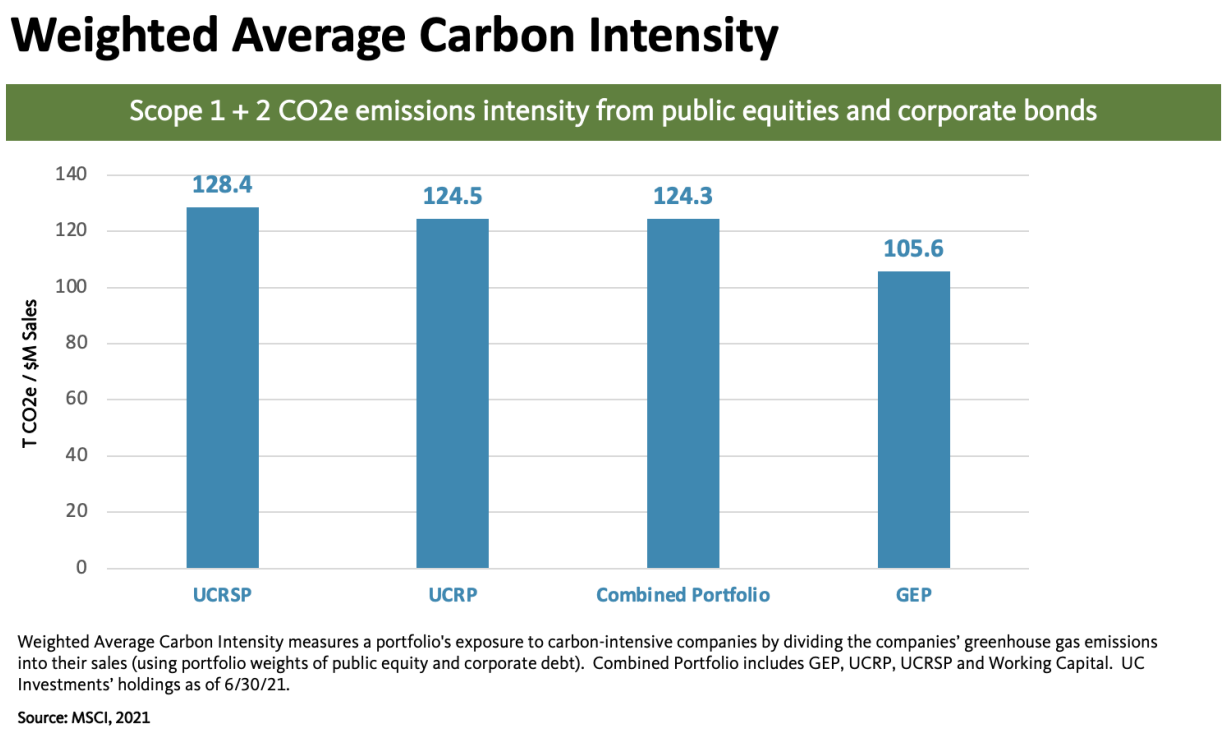


UC Investments' holdings as of 6/30/2019, 6/30/2020, and 6/30/2021.

Source: MSCI, 2019, 2020 & 2021

The weighted average carbon intensity (WACI) measures a portfolio's exposure to carbon-intensive companies as determined by the portfolio companies' carbon intensities (normalized over sales) and portfolio weights. This methodology enables the WACI footprint to include corporate fixed income as well as public equities. Chart 11 below shows the weighted average carbon intensity of our combined public markets portfolios, as well as the major sub-components – the pension, the Retirement Savings Program, working capital and the endowment. We do not have historical data to share as 2021 is the first year we have tracked the WACI of our public equities and corporate bonds.

Chart 11

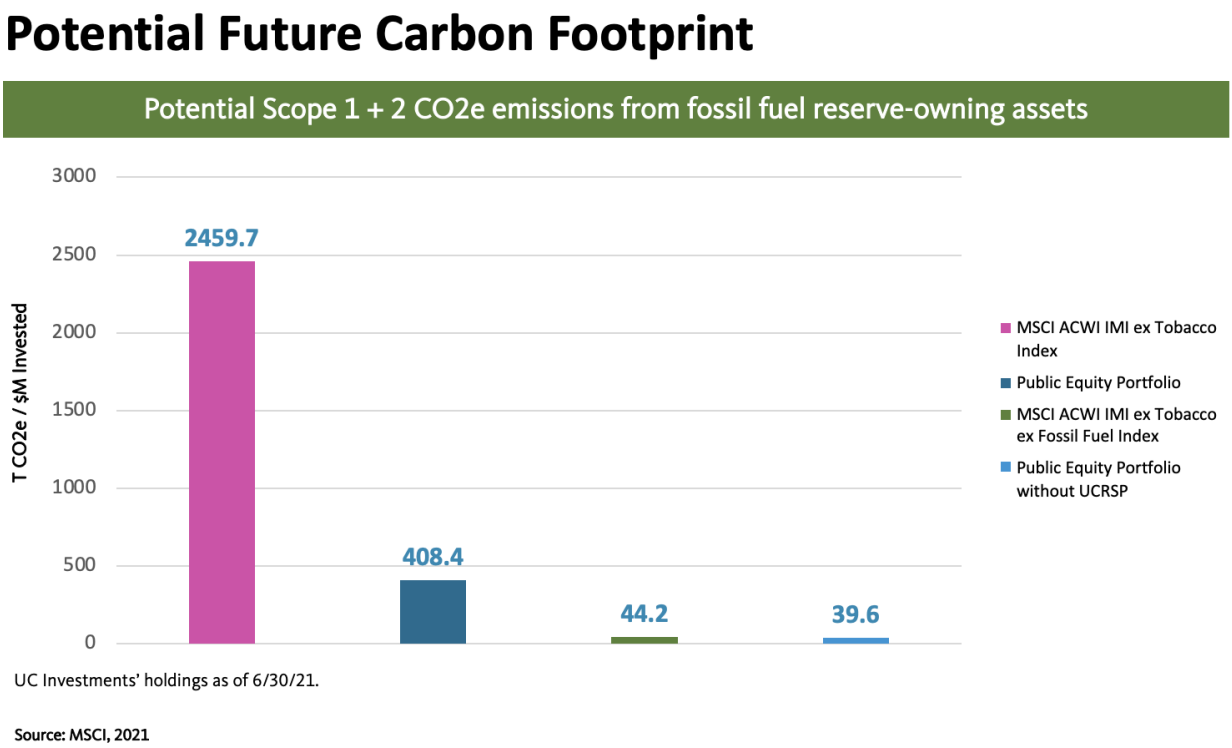


Weighted Average Carbon Intensity measures a portfolio's exposure to carbon-intensive companies by dividing the companies' greenhouse gas emissions into their sales (using portfolio weights of public equity and corporate debt). Combined Portfolio includes GEP, UCRP, UCRSP and Working Capital. UC Investments' holdings as of 6/30/21.

Source: MSCI, 2021

While the carbon footprint and WACI metrics are both backward-looking, we also track a forward-looking footprint metric: the potential future CO2e emissions from fossil fuel reserves in our public equities portfolio, as shown below in Chart 12.

Chart 12



The potential future emissions footprint from fossil fuel reserves of UC Investments' public equities portfolio, without the UCRSP (defined contribution plan), is 98% cleaner than a portfolio that tracks the MSCI ACWI IMI ex Tobacco Index. In addition, UC Investments' public equities portfolio without the UCRSP is 10% cleaner than our benchmark index (39.6 vs. 44.2), due to our choice of external managers – the "actively managed" portion of our public equities portfolio.[30]

Metrics: Dollars Invested in Fossil Fuel Reserve Owning Assets

Through negative screening and sales of assets, the endowment, pension and working capital portfolios contain *de minimis* exposure to fossil fuel reserve owning assets. UC Investments continues to reduce exposure to fossil fuel reserves in both public and private markets

[30] Although the MSCI ACWI IMI ex Tobacco ex Fossil Fuel Index screens out fossil fuel reserve owning assets, there some fossil fuel reserves in the Index, as Chart 12 indicates. MSCI explains this as follows: "[the] ex Fossil Fuel index does not exclude metallurgical coal reserve ownership and companies with fossil fuel reserves used for other applications such as industrial application (e.g., companies classified in the Steel, Diversified Chemicals or Commodity Chemicals sub-industries) are not excluded from the MSCI Global Fossil Fuels." Personal email communication, 10/20/21.

investments by, for example, selling legacy investments and converting commingled public equity accounts into separately managed accounts that track the MSCI ACWI IMI ex Tobacco ex Fossil Fuel Index.

Targets

As discussed above in section IV., UC Investments set a target in 2015 to invest $1 billion in transformational solutions to climate change over the course of five years, a target we met in 2020.

Looking Ahead

UC Investments is actively exploring the use of additional metrics and targets to manage climate risk throughout the investment process. We are considering climate scenario analysis techniques to assess whether and how to incorporate the results of such analyses as formal metrics that would inform both investment decisions and portfolio monitoring. Various tools available on the market enable investors to test their portfolios' exposures against potential future climate scenarios and quantify the present-day costs of both transition and physical risks under those future scenarios.[31] These products have several advantages: for example, they provide leading, rather than lagging, indicators of a portfolio's climate risk and quantify that risk in financial terms.

We are also assessing various climate-related actions by other asset owners, including "net zero" greenhouse gas and commitments aligned with the Paris Agreement. Finally, we are evaluating the possibility of establishing a target for reducing the physical risks of climate change to our real estate investments.

VII. Conclusion

UC Investments is committed to taking a leading approach to addressing climate change in our investment portfolio, and we hope our inaugural TCFD-aligned climate report will serve as the basis for robust dialogue, learning, and continued improvement.

[31] MSCI's Climate Value at Risk tool is one such product. "The premise of Climate VaR is to model costs related to specific climate risks towards the end of the century and with the help of a discounting approach calculate the impact on current asset valuations." MSCI, "Climate Data & Metrics," 2021. Available at: https://www.msci.com/our-solutions/esg-investing/climate-solutions/climate-data-metrics. See also: https://www.msci.com/our-solutions/esg-investing/climate-solutions/scenario-analysis.

APPENDIX A:

CLIMATE CHANGE RELATED INVESTMENT RISKS

Selected Climate Change Related Investment Risks

TRANSITION RISKS:

- **Product & Service** - Companies may face reduced demand for carbon-intensive products and services as a result of the low-carbon transition.
- **Stranded Assets** - Potential to experience the "stranding," or inability to economically utilize, physical/natural assets due to regulatory, market or technological forces arising from low-carbon transition.
- **Regulatory** - The climate change policies and supportive regulations that countries enact in order to decarbonize their economies will generate direct impacts for companies.
- **Litigation** - Companies may face increased legal risk due to various potential organizational failures: to mitigate impacts of climate change, to adapt to climate change, and/or insufficiency of disclosures around material financial risks.

PHYSICAL RISKS:

- **Extreme Heat** - High temperatures can reduce productivity in office settings by significant amounts, and can create hazardous conditions for workers outdoors, leading to lost potential revenues.
- **Sea Level Rise** - Rising seas increase the possibility of flooding and/or storm surge events leading to damages to corporate facilities and potential business interruptions.
- **Flooding** - Increased extreme rainfall events can lead to inland flooding events and potential business interruptions.
- **Drought** - Water is a critical production input for many products, and reduced water availability as a result of chronic or acute drought conditions can therefore lead to business interruptions and lost revenues.

APPENDIX B:

Glossary of Key Terms

Greenhouse gases (GHGs): Greenhouse gas emissions trap heat in the atmosphere and cause the greenhouse effect (climate change). There are seven GHGs: carbon dioxide, methane, sulfur hexafluoride, nitrous oxide, hydrofluorocarbons, perfluorocarbons and nitrogen trifluoride.

CO2e: This acronym stands for carbon dioxide equivalent. It is a catch-all term that includes emissions of all seven greenhouse gases, not just carbon dioxide. Each greenhouse gas has a different global warming potential; CO2e normalizes the global warming potential.

Scope 1 emissions: Direct emissions of greenhouse gases, such as direct combustion of fuel from owned or controlled sources of a company.

Scope 2 emissions: Indirect emissions of greenhouse gases from the generation of purchased energy.

Scope 3 emissions: All indirect emissions of greenhouse gases (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Decarbonization: The process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.

Physical risks: Risks related to the physical or natural environment such as flooding and wildfires that pose a threat to physical assets e.g. buildings, equipment and people.

Transition risks: Risks from policy changes, reputational impacts and shifts in market preferences, norms and technology.

Stranded assets: Assets exposed to devaluations or conversion to “liabilities” because of unanticipated changes in their initially expected revenues due to innovations and/or evolutions of the business context, including changes in public regulations at the domestic and international levels.

Net zero CO2 emissions: Net zero carbon dioxide (CO2) emissions are achieved when anthropogenic CO2 emissions are balanced globally by anthropogenic CO2 removals over a specified period. The term “net zero” is also typically associated with the 2050 date or earlier, as this is aligned with the scientific recommendations to achieve a 1.5°C scenario.

Benchmark index: A market index that may be used as the benchmark against which portfolio performance is evaluated.

MSCI ACWI IMI ex Tobacco Index: This index is based on the MSCI ACWI IMI Index and is designed to represent performance of the full opportunity set of large- and mid-cap stocks across 23 developed and 27 emerging markets, excluding companies that are classified under the tobacco sub-industry based on the Global Industry Classification Standard.

MSCI ACWI IMI ex Tobacco ex Fossil Fuel Index: This index is based on the MSCI ACWI IMI Index and is designed to represent performance of the full opportunity set of large and mid-cap stocks across 23 developed and 27 emerging markets, excluding companies that are classified under the tobacco sub-industry based on the Global Industry Classification Standard or own oil, gas or thermal coal reserves.