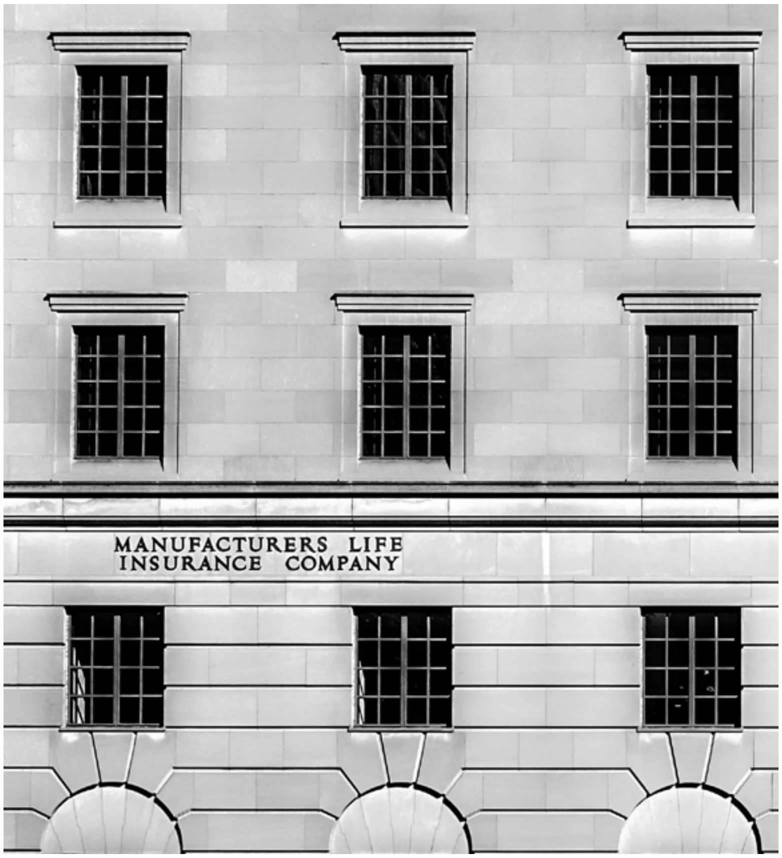

INSURING THE CLIMATE CRISIS

SUN LIFE & MANULIFE'S FINANCED EMISSIONS

SEPTEMBER, 2022

ABOUT INVESTORS 4 PARIS COMPLIANCE (I4PC)

We work with investors to hold Canadian publicly-traded companies accountable to their net-zero promises. We believe that a just transition to the net-zero economy can unlock shareholder value while giving our kids a better future.

We represent investors or take financial positions in select Canadian companies ourselves. We do a deep-dive analysis of their net-zero plans. We engage those companies and other investors to improve accountability, including filing shareholder resolutions where appropriate.

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SUMMARY

The climate crisis is increasing risk and driving negative health outcomes in Canada and around the world. This runs counter to the mission of life and health insurance companies like Sun Life and Manulife.

And yet, in their role as major asset owners and managers—a combined $3 trillion—they are making significant investments in fossil fuels, which makes the climate crisis worse. For example, Sun Life and Manulife are the number one and three Canadian investors in coal.

To their credit, Sun Life has committed to achieving net zero by 2050 in their financed emissions, and Manulife has committed to net zero for the insurance premiums they invest. Both are taking steps towards implementation. How far do they have to travel?

We commissioned Profundo to estimate Sun Life and Manulife's financed emissions based on available data and extrapolations. Because of their large size, the scale of those financed emissions is massive—for each company it's about equivalent to the combined emissions of Ontario and Quebec. For the two companies added together, it's about equivalent to three-quarters of Canada's national emissions.

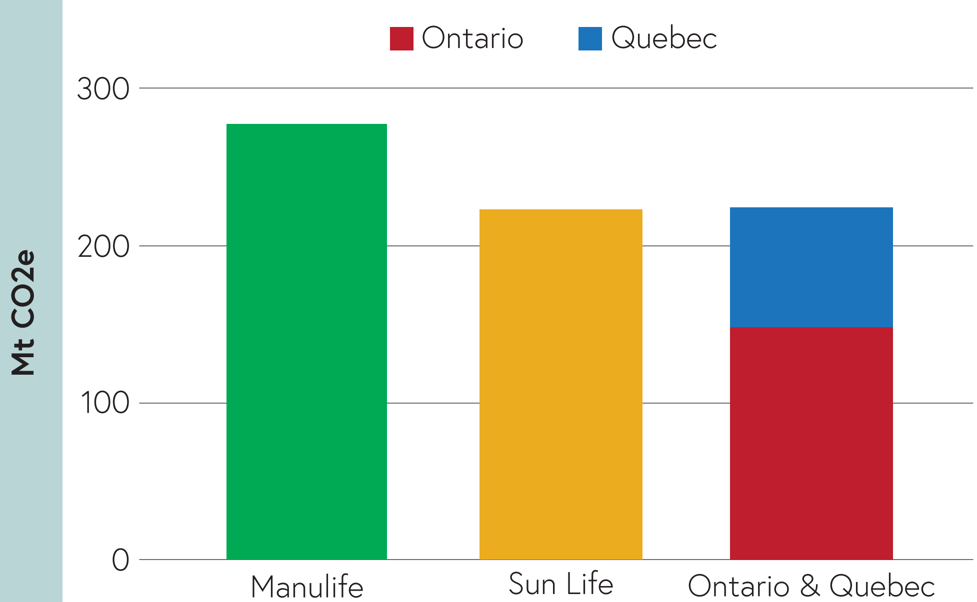

Figure 1. Sun Life and Manulife's 2021 estimated financed emissions and Ontario and Quebec's 2020 emissions.

Source: Sun Life and Manulife emissions per Profundo estimate, see Appendix; Ontario and Quebec data per Environment and Climate Change Canada (2022) National Inventory Report 1990–2020: Greenhouse Gas Sources and Sinks in Canada.

What do Sun Life and Manulife need to do to tackle these financed emissions? We reviewed guidance from a variety of international sources to condense these best practices:

a. Measure and report financed emissions, including scope 3, where material.

b. Set medium-term financed emissions reduction targets in line with climate science.

c. Implement strategies to meet targets, including

   i. Establish fossil fuel phase-out policies.

   ii. Establish escalating engagement strategies.

   iii. Invest in climate solutions.

   iv. Align public policy lobbying with net zero.

Based on Sun Life and Manulife's disclosures to date, we arrived at this summary of where they stand as of the time of this report:

	Financed Emissions Progress as of September 2022	
	Sun Life	Manulife
a) Report absolute financed emissions, including scope 3	No reporting.	Part of General Account only, excluding most scope 3.
b) Set interim financed emissions targets in line with science	Coming in 2022–2023, including subsidiaries.	Coming in 2022 for its General Account. Will seek SBTi certification.
c) Implement strategies to meet targets:		
i. Fossil fuel phase-out policies	No overall policy. One subsidiary excludes fossil fuels. Other subsidiaries express opposition to doing so.	Weak coal exclusions only.
ii. Escalating engagement policy	No overall escalation policy. One subsidiary is developing one. No overall proxy voting policy. Some subsidiaries disclose votes.	No overall escalation policy. Has proxy voting policy and discloses votes of mutual funds.
iii. Climate solutions investment	Target of $20B in new "sustainable investments," but vague and no quantification of impact on financed emissions.	Has vague "sustainable investments," but no targets or quantification of impact on financed emissions.
iv. Align public policy lobbying with net zero	Says supportive of net zero public policy. Limited lobbying disclosure. No public position on key climate issues of the day.	No disclosed policy. Limited lobbying disclosure. No public position on key climate issues of the day.

Sun Life and Manulife have much work to do to decarbonize their portfolios, and there is an urgency to act. This summer has seen heat waves and floods that are killing the vulnerable, causing fires, disrupting major rivers, and leading to crop failure. Without rapid and bold progress, these impacts will get exponentially worse, and the insurance industry is on the front lines of managing those costs.

"We can clearly say that at a scenario between 3 and 4 degrees, it's not insurable anymore."

—Thomas Buberl, former chief executive officer of AXA SA1

"World on Track for 3.2 Degrees Celsius of Warming, Latest IPCC Report Warns."[2]

PART I: LIFE AND HEALTH INSURANCE COMPANIES AND FINANCED EMISSIONS

The insurance industry exists to manage risk. The climate crisis turbocharges risk to existential levels. So why is the insurance industry making the climate crisis worse through its investments?

This report examines the investment practices of Sun Life and Manulife, two of Canada's largest insurance companies, and also two of the country's largest asset owners and managers with a combined three trillion dollars under management.

Sun Life and Manulife have a huge influence over capital flows and shape the emissions profile of the economy in positive or negative ways based on their decisions. In 2021 Sun Life pledged to reach net zero in their financed emissions by 2050, and Manulife pledged to reach net zero for the insurance premiums they invest. Both have yet to tackle their fossil fuel investments by setting any fossil fuel phase out policies. For example, as of 2021 Sun Life and Manulife were the number one and number three Canadian investors in coal, the dirtiest fossil fuel with significant adverse health impacts.[3]

There is a clear tension between the core mission of life and health insurance companies and their fossil fuel investments. Unless this tension is addressed in favour of rapid decarbonization, their core business will face increasing challenges as the climate crisis drives up risk and causes widespread adverse health outcomes.

> **"Climate change is already negatively impacting the health of Canadians."**
>
> **"Health risks will increase as warming continues, and the greater the warming, the greater the threats to health."**
>
> —*Government of Canada*[4]

THE CLIMATE CRISIS AND HEALTH IMPACTS

The 2021 heat dome in British Columbia killed 619 people. This is perhaps the most dramatic recent example of a climate-related disaster with immediate impacts on the health and wellbeing of Canadians, but unfortunately is part of a worsening trend.

In February 2022, the Government of Canada released the landmark report *Health of Canadians in a Changing Climate: Advancing our Knowledge for Action*[5]. This national assessment of climate and health summarized the various serious challenges that climate change is posing to Canadians' health and well-being, including extreme weather, air quality challenges, increased infectious diseases, worsening water quality, growing food security risks, and deteriorating mental health.

Importantly, the national assessment also found that climate health impacts fall disproportionately on those already facing unequal health outcomes due to income, ability, or social position. It found: "People disproportionately affected by climate change include children; pregnant people; First Nations, Inuit, and Métis peoples; people with chronic illnesses; outdoor workers; low-income individuals; and people with disabilities."[6] In the BC heat dome disaster, for example, the BC Coroners Service concluded that more of those who died "lived in socially or materially deprived neighbourhoods than the general population."[7]

The Canadian Institute for Climate Choices quantified Canadian climate health impacts under both a low-emissions and high-emissions scenario.[8] It projects that average summer ozone concentrations could increase by 22 percent by the end of the century, driving healthcare costs of ozone exposure to one-quarter of current healthcare costs linked to cancer. It estimates the resulting costs of death and lost quality of life to be $87 billion per year by mid-century and $246 billion per year by the end of the century.

The Institute projects that even under a low-emissions scenario, heat-related hospitalization rates will increase by 21 percent by mid-century and double by the end of the century. The costs of death and reduced quality of life from heat-related deaths range from $3.0–$3.9 billion annually.

The Institute estimates that mental illness already costs Canada about $34 billion in productivity losses associated with depression and $17 billion for anxiety. Mental health experts have documented increased hospitalizations and suicide associated with extreme heat,[9] which is expected to get worse with the climate crisis.

Below is a table summarizing the Institute's cost estimates. Costs are per year by the end of this century.

	Low-emissions scenario	High-emissions scenario
Lyme disease	$0.1 billion	$0.2 billion
Ground level ozone illness	$0.5 billion	$0.8 billion
Heat related deaths	$5.2 billion	$8.5 billion
Heat-related productivity losses	$6.6 billion	$14.9 billion
Ground-level ozone deaths	$87 billion	$246 billion

The Institute concludes that "Canada has a substantial deficit in health-related adaptation" and that one of the most effective ways to reduce health impacts is to reduce emissions. It goes on to make recommendations that governments implement health adaptation policies to address symptoms and root causes, map key adaptation levers against the top impact areas, incorporate health resilience in cost-benefit decisions, and invest in more research on climate health impacts.

While these climate health impacts are extremely serious, it should be noted that Canada is a rich country with the ability to adapt and build resilience. Canada's life insurance companies are expanding around the world, including in places such as Asia where climate impacts will be even more severe, with less ability of local populations to respond if climate change is not mitigated.

THE RESPONSE OF THE LIFE AND HEALTH INSURANCE INDUSTRY

To its credit, the life and health insurance industry in Canada has at least recognized the threat that climate change poses to its industry. Here is a statement by the Canadian Life and Health Insurance Association (CLHIA):

> Canadian life and health insurers support all governments taking steps to reduce, mitigate and adapt to the risks of climate change. The effects of climate change—more frequent and severe storms, flooding, drought and forest fires—has a more immediate impact on property and casualty insurers. However, life and health insurers are closely watching the impact of climate change on mortality and morbidity, public health, peoples' livelihoods and inequality.[10]

But does this recognition translate into action? At the time of writing, climate mitigation and adaptation are missing in CLHIA's areas of "policy and advocacy" on its website.[11] In its most recent submissions to the federal government and various provincial governments on budget priorities, the association focuses on advocating for its members to be able to invest in transition-related public-private partnerships and says little about mitigation or adaptation policy.[12]

In short, there is a disconnect between the growing climate-related health challenges facing the industry and its collective lobbying.

At the level of individual insurance companies, lobbying disclosure reports show that companies like Sun Life and Manulife are constantly meeting with government officials, but since disclosures are vague we cannot know whether they are asking for things like stronger emissions reductions policies or better climate adaptation, including related to health. They have not taken public positions in support of specific Canadian climate initiatives such as the passage of the *Canadian Net-Zero Emissions Accountability Act* or the proposed emissions cap on the Canadian oil and gas sector.

Given the massive scale of Sun Life and Manulife's investments, it is via their asset ownership and management that they have the largest impact on climate change.
It is to this topic that we now turn.

PART II: FINANCIAL SECTOR NET ZERO BEST PRACTICES

Before we evaluate how Sun Life and Manulife are progressing with their asset management-related net zero commitments, we first outline the elements we evaluate them against, drawn from international guidance. See Appendix A for a list of key guidance documents.

The central role of finance in a liveable, one-point-five degree celsius future is recognized in the Paris Agreement, which commits in Article 2.1(c) to "making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development." The financial sector enables much of the economy's greenhouse gas emissions, as well as climate solutions, through its underwriting, loaning, investment management, and asset ownership activities. Fortunately, the financial sector is starting to at least talk about Paris alignment, as evidenced by the growing adoption of net-zero commitments under the Global Financial Alliance for Net Zero (GFANZ) umbrella. But there remains a significant gap between corporate net-zero pledges and meaningful action.

The financial sector is beginning to accept the shared value in minimizing exposure to increasingly risky financed and facilitated emissions and maximizing exposure to Paris-aligned opportunities. The sector is also beginning to acknowledge the double materiality of climate change. That is, the impacts of climate change are not just a material risk for the financial sector; the financial sector can also aggravate or mitigate climate change via its activities.

What Paris alignment looks like for the financial sector is evolving and varies based on the financial sub-sector in question, e.g., for asset managers, asset owners, banks, or insurers. The following are key elements across multiple net-zero guidance documents:

a. Measure and report financed emissions, including scope 3, where material.

b. Set medium-term financed emissions reduction targets in line with climate science.

c. Implement strategies to meet targets, including

    i. Establish fossil fuel phase-out policies.
    ii. Establish escalating engagement strategies.
    iii. Invest in climate solutions.
    iv. Align public policy lobbying with net zero.

Each is fleshed out below, with references to relevant standards, guidance documents, and examples.

A) MEASURE AND REPORT FINANCED EMISSIONS

The need for comprehensive baseline emissions measurement and reporting is essential for tracking progress toward emissions reduction targets. In the financial sector, measuring financed emissions is a particularly important and unique aspect of greenhouse gas emissions accounting.[13]
It is an accounting principle which requires

- Banks to account for the emissions associated with their loans and underwriting services.
- Insurance companies to account for the emissions associated with their underwriting services and insurance premium investing.
- Asset owners and managers to account for the emissions associated with the companies in which they invest their clients' money.

In addition, financial actors are also responsible for measuring and reporting material scope 3 emissions associated with their financing activities, for example, the end-use emissions associated with oil and gas companies. The Partnership for Carbon Accounting Financials (PCAF), an international financial sector standard-setting body, states where this is required:[14]

- As of 2021, for activity in the oil and gas and mining sectors.
- As of 2024, for transportation, construction, buildings, materials, and industrial activities.
- By 2026, for all sectors.[15]

Scope 3 emissions accounting intentionally involves double counting to reflect shared responsibility and risk. For clarity, PCAF recommends reporting client scope 3 emissions separately.[16] To help identify business risks, PCAF also recommends reporting emissions by sector.[17] Draft Guidance from Canada's Office of the Superintendent of Financial Institutions (OSFI) would require major Canadian banks and insurance companies to disclose scope 3 emissions in accordance with PCAF guidance for fiscal periods ending on or after October 1, 2023.[18]

Data on company-level scope 1 and 2 emissions are readily available. Scope 3 emissions data are developing but often lacking. In the meantime, estimates based on industry averages are acceptable. Though many banks have begun to report on client material scope 3 emissions, the asset management sector is further behind, with most committing to include it as it becomes required or the data becomes more reliable.[19] But PCAF states that data quality should not prevent reporting based on proxy data (e.g., industry averages), because even this can help identify portfolio hotspots.[20] Delays in reporting can lead to delays in taking action.

Emissions accounting should be disclosed to the public in absolute metrics and should cover all asset classes for which accepted accounting methodologies exist.[21] PCAF does not yet provide GHG accounting methodologies for

- Private equity which refers to investment funds.
- Green bonds.
- Sovereign bonds.
- Loans for securitization.
- Exchange-traded funds.
- Derivatives (e.g., futures, options, swaps).
- Initial public offering underwriting.[22]

In order to more comprehensively address their climate transition risk, some leading financial sector actors have preemptively reported on emissions associated with some of these asset types as well as client scope 3 emissions. For example, Toronto Dominion bank has reported on its client scope 3 emissions as well as those emissions associated with underwriting.[23]

Asset managers are mostly reporting on financed emissions for asset classes with accepted accounting methodologies. At the time of writing, these include listed equities, corporate bonds, and real estate. Best practices in this financial sub-sector include reporting on clients' scope 3 emissions. For example, the University Pension Plan of Ontario with over $11 billion in assets under management (AUM) reports its oil and gas as well as mining sector scope 3 emissions.[24] Similarly, Dutch-based Robeco, with €246 billion in AUM, reports its financed scope 3 emissions for its equities and fixed income.[25]

B) SET MEDIUM-TERM FINANCED EMISSIONS REDUCTION TARGETS

To provide a 50 percent chance of a one-point-five degree Celsius future, the International Energy Agency (IEA) states that the world needs to nearly halve global carbon emissions by 2030 based on a 2019 base year.[26] When accounting for all greenhouse gasses, the Net Zero Asset Owner Alliance (NZAOA) finds that 49 to 65 percent or greater reductions are necessary.[27] Without setting more immediate science-based targets, net-zero by 2050 pledges are not credible.

For interim greenhouse gas reduction targets to be Paris-aligned they must ensure absolute emissions reductions. This could involve the application of sector-level physical intensity-based targets, so long as they are combined with annual absolute emissions reporting and contribute to portfolio-level absolute interim targets.[28]

In addition to the accounting methodology limitations outlined in the previous section, practicality and equity argue for prioritizing near-term emissions reductions from more carbon-intensive sources and from more developed regions. As a result, setting interim reduction targets can be a complex process for financial institutions with broad exposure across a variety of industries and regions.

To address this challenge while ensuring timely progress towards net-zero, financial sector net-zero guidance permits an incremental approach to interim target setting. The Net Zero Banking Alliance (NZBA) advises banks to start by setting targets for their most carbon-intensive portfolios, and to cover all of the following sectors in their targets within three years of joining the alliance: agriculture, aluminum, cement, coal, commercial and residential real estate, iron and steel, oil and gas, power generation, and transport.[29] Similarly, the NZAOA advises focusing on the most carbon-intensive sectors first, including energy and power.[30] The Net Zero Asset Managers Initiative (NZAMi) advises asset managers to start by setting an interim target for a portion of their AUM, which is ratcheted up over time.

In practice, some leading asset managers are setting interim targets for all asset classes where PCAF has established accounting methodologies as of 2021, namely public equity, corporate bonds, and real estate.[31] For example, APG Asset Management, based out of the Netherlands, has committed USD $445 billion—its listed equities, corporate bonds, and real estate—to an absolute interim emissions reduction target of 50 percent below 2019 levels by 2030.[32] This target does not yet include scope 3 emissions, but APG has committed to measuring those emissions in line with the PCAF schedule and will consider including these emissions in their interim target.[33]

Where interim targets are not yet comprehensive—e.g., there is no accepted emissions accounting methodology—the financial institution should provide a timeline for full interim targets coverage. Though no guidance dictates timelines, in order to align with science, full portfolios would need to be covered by an interim target as soon as possible.

C) IMPLEMENT STRATEGIES TO MEET TARGETS

Once financial institutions set targets, they need clear strategies for meeting them. There is a range of options, and given the magnitude of the challenge and the urgency to act, all options should be pursued aggressively. The options listed below are not intended to be exhaustive.

I. ESTABLISH FOSSIL FUEL PHASE-OUT POLICIES

To align with a 50 percent chance of ensuring a one-point-five degree Celsius future, the IEA's Net Zero by 2050 Roadmap concludes there is no need for any new development of oil, gas, or coal projects beyond projects already committed as of 2021.[34] In June 2022, the Race to Zero—of which GFANZ is a member—updated its criteria to make explicit the need for corporations and investors to "restrict the development, financing, and facilitation of new fossil fuel assets, which includes no new coal projects."[35]

In addition to setting a clear policy not to finance or facilitate any new fossil fuel exploration and production, the SBTi also recommends adopting a phase-out approach in which all financial support (excluding decarbonization or transition to carbon alternatives) is eliminated to existing coal assets by 2030 and to existing oil and gas assets by 2040.[36]

UK-based Aviva Investors, a multinational insurance company with £357 billion in AUM, has committed by the end of 2022 to divest from companies deriving more than five percent of revenue from coal unless they commit to science-based targets.[37] US-based asset manager Algebris, with USD $12 billion in AUM, does not permit investments in companies operating in the coal, Arctic oil, or oil sands sectors, and has strict limits for investments in companies operating in conventional oil and gas.[38]

II. ESTABLISH ESCALATING ENGAGEMENT STRATEGIES

Financial institutions have significant influence over the companies they finance, whether they extend finance in the first place and on what terms, by way of active ownership and engagement, voting for or against Directors and shareholder resolutions in the case of public equities, or ultimately via divestment. To achieve net zero targets, this influence must be leveraged to drive companies to adopt and work toward science-based emissions reduction targets.

To ensure an effective Paris-aligned escalation plan, GFANZ provides the following guidance:

- Describe the engagement plan—e.g., what qualifies as a sufficient emissions reduction plan and key metrics.
- Specify the escalation process if metrics of the engagement plan are not met.
- Summarize any relevant engagement or collaboration with peers in relation to the engagement plan.[39]

Similarly, the SBTi also recommends engaging with fossil-fuel companies to adopt net-zero targets and action plans, clearly outlining a divestment policy for companies that are unable or unwilling to transition in line with net-zero pathways.[40] The NZAOA and NZAMi also call for engagement escalation with clear objectives, timelines, and escalation tactics—including divestment—and connecting them to their voting practices.[41]

A good example of an escalating engagement policy is that of Aviva Investors, a UK-based multinational insurance and asset management company with over £357 billion in AUM, which has committed to

> Starting in 2021 engage with 30 systemically important carbon emitters, with the potential to divest. We are making specific asks, including delivering net zero Scope 3 emissions and establishing robust transition roadmaps. We are setting out timelines between 12 and 36 months. If we don't see serious company commitment to meet the climate challenge, we will put them on our stoplist and divest any assets we hold. And we will work through the alliances of other asset owners and investors to increase the pressure.[42]

Similarly, AXA, an insurance and asset manager with USD $650 billion committed to net zero by 2050, has committed to engage select companies that do not have a net zero commitment or have set inadequate emissions reduction targets with a "three strikes and you're out" principle. This engagement policy aims at applying sufficient pressure to affect timely change and is applied on behalf of third-party clients.[43]

III. INVEST IN CLIMATE SOLUTIONS

While financial companies need to decarbonize their entire portfolio rapidly, to enable this decarbonization their net-zero strategies can benefit from creating dedicated financing for activities that accelerate the transition, sometimes vaguely called "sustainable finance" but more appropriately referred to as "climate solutions investing."[44]

Certain technologies essential to the economy's net-zero transition require additional financing or new financing vehicles to bring them to scale. Examples include electric arc furnaces for steel smelters and mass deep residential energy efficiency and fuel switching retrofits for homes and buildings. The Institutional Investors Group on Climate Change (IIGCC) 2022 Climate Investment Roadmap provides a comprehensive overview of the climate solutions financing gaps across multiple technologies key to the climate transition, including

- Electricity generation, transmission, and storage.
- Various renewable energy production technologies.
- Zero emissions vehicles.
- Energy efficient building retrofits and fuel switching to heat pumps.
- Carbon capture use and storage.[45]

To help achieve its targets, a financial institution can create funds and products dedicated to accelerating the transition to net zero.[46] Critical, however, is that a financial institution clearly defines and discloses what qualifies as part of the transition, since the sector is awash in vaguely-defined financial products that may in fact achieve the opposite of the stated intention and qualify as "greenwashing."[47] To ensure that this financing positively contributes to net zero, financial institutions should measure and disclose the emissions impacts of climate financing.

The Caisse de dépôt et placement du Québec, provides an example of best practice when in addition to divesting from fossil fuels it has also created a $10 billion transition envelope aimed at decarbonizing the heaviest carbon-emitting sectors.[48] Or, the New York State Common Retirement Fund has committed US $20 billion to its Sustainable Investments and Climate Solutions program.[49]

IV. ALIGN PUBLIC POLICY LOBBYING WITH NET ZERO

Many financial institutions make the case that they need robust public policy to help them meet their own corporate net-zero targets.[50] Yet, most have so far been cautious about actively lobbying for such public policy, and in the case of Canadian bank CEOs, have even pushed in the opposite direction by advocating for fossil fuel expansion.[51]

Financial institutions have influence over government policy via public policy lobbying, either directly or via their professional bodies. Supporting robust government climate action is critical to enabling financial sector net-zero targets. GFANZ has recently clarified the need for financial institutions to align their engagement or lobbying activities with science-based targets.[52]

The broader Race to Zero Campaign added the "Persuade" criteria to its net zero membership requirements in June 2022, which it defines as the need for actors to align their public policy lobbying activities at the national and sub-national levels with their net-zero plans.[53] The importance of transparent, net-zero-aligned public policy lobbying is echoed by the UN-convened Paris-Aligned Investors Initiative, which recommends that companies have a Paris-Agreement-aligned climate lobbying position and demonstrate alignment of their direct and indirect lobbying activities.[54]

Vancity, Canada's largest credit union with $28 billion in AUM, provides a good example of transparent climate lobbying by clearly posting all of its public policy submissions on its Net Zero by 2040 webpage.[55]

PART III: SUN LIFE AND MANULIFE

In 2021, Sun Life and Manulife, two of Canada's largest life and health insurers and asset managers, committed to net zero targets. Sun Life committed all of its assets under management, while Manluife committed about 30 percent. These commitments reflect both companies' acceptance of climate risk to their businesses, particularly for their nearly three trillion dollars in AUM.[56]

Climate risks are well known to both companies. This is partly due to their core business provision of life and health insurance, which means they have access to good information about climate change's physical and associated health risks. It is also partly due to their participation in the 2021 Bank of Canada and OSFI climate scenario analysis pilot project which estimated the risks to the Canadian economy of the economic transition.[57] And yet, both companies have massive financed emissions, including some of the largest investments in coal in Canada (see textbox).

SUN LIFE AND MANULIFE ARE MAJOR COAL INVESTORS

Surprisingly, Sun Life and Manulife are the number one and three biggest Canadian investors in companies on the Global Coal Exit List,[58] the world's most comprehensive database about the coal industry. Coal is not only the worst fossil fuel from a climate perspective, but the burning of coal also causes serious adverse health impacts including asthma, respiratory diseases, and hundreds of thousands of premature deaths worldwide.[59] Other major insurers and asset managers have formal policies to phase out coal investments, but to date, neither Sun Life nor Manulife has followed suit. Sun Life advises that it is taking steps to reduce its coal exposure in its General Account, as exemplified by its 75 percent reduction in coal-powered electricity generators in Malaysia.

Both companies are in the early stages of developing their net-zero strategies, which means this is a critical time to assess their interim net-zero targets and strategies with a view to developing a rigorous approach.

This section of the report will assess each company's activities to date with regard to their financed emissions and highlight gaps. A summary of the results is provided below.

	Financed Emissions Progress as of September 2022	
	Sun Life	Manulife
a) Report absolute financed emissions, including scope 3	No reporting.	Part of General Account only, excluding most scope 3.
b) Set interim financed emissions targets in line with science	Coming in 2022–2023, including subsidiaries.	Coming in 2022 for its General Account. Will seek SBTi certification.
c) Implement strategies to meet targets:		
i. Fossil fuel phase-out policies	No overall policy. One subsidiary excludes fossil fuels. Other subsidiaries express opposition to doing so.	Weak coal exclusions only.
ii. Escalating engagement policy	No overall escalation policy. One subsidiary is developing one. No overall proxy voting policy. Some subsidiaries disclose votes.	No overall escalation policy. Has proxy voting policy and discloses votes of mutual funds.
iii. Climate solutions investment	Target of $20B in new "sustainable investments," but vague and no quantification of impact on financed emissions.	Has vague "sustainable investments," but no targets or quantification of impact on financed emissions.
iv. Align public policy lobbying with net zero	Says supportive of net zero public policy. Limited lobbying disclosure. No public position on key climate issues of the day.	No disclosed policy. Limited lobbying disclosure. No public position on key climate issues of the day.

SUN LIFE

As of December 31, 2021, Sun Life, including its subsidiaries, had about $1.44 trillion in AUM.[60] About 12 percent of Sun Life's AUM are insurance premiums managed on its own behalf, and therefore Sun Life has full discretion over these investments.[61] For the remaining 88 percent of its AUM, Sun Life acts as a fiduciary, managing funds on behalf of third parties, subject to various criteria depending on the fund, product, and/or client.

Sun Life subsidiaries have committed 90 percent of their AUM to net zero by 2050 via membership to one of the GFANZ umbrella groups.[62]

An assessment of Sun Life is complicated by the existence of several subsidiaries that in some cases are charting their own course on net zero. We therefore attempt to summarize the approach of the parent company together with relevant disclosures of a few major subsidiaries such as SLC Management, InfraRed Capital Partners, MFS, Sun Life Global Investments, and BentallGreenOak.

A) MEASURE AND REPORT FINANCED EMISSIONS

Currently, Sun Life only reports its operational emissions for the buildings it uses as well as employee travel.[63] Sun Life does not yet publicly report on its financed emissions, nor do its major subsidiaries.[64]

We commissioned Profundo to conduct an estimate of Sun Life's financed emissions based on available data for its managed corporate bonds and listed equity from all of its subsidiaries, which represent 55 percent of its AUM in the first quarter of 2022 (see Appendix B). The study estimated 121 million tonnes of carbon dioxide equivalent for investments which had data available.

The most carbon-intensive of these were Sun Life's investments in the oil and gas sector at about 2,000 tonnes of carbon dioxide equivalent per million USD invested, followed by materials and utilities, each at about 1,000 tonnes of carbon dioxide equivalent per million USD invested. For scale, consumer discretionary represents about 200 tonnes and real estate just under 100 tonnes of carbon dioxide equivalent per million USD invested.

Profundo then assumed the same average emissions intensity for the remainder of Sun Life's portfolio, and added Sun Life's internal estimates for its real estate investments, to arrive at an overall estimate of 222 million tonnes of carbon dioxide equivalent for all of Sun Life's financed emissions. While this is an imperfect measure, for a sense of scale that is about equivalent to the combined emissions of Ontario and Quebec in 2020—226 million tonnes of carbon dioxide equivalent.

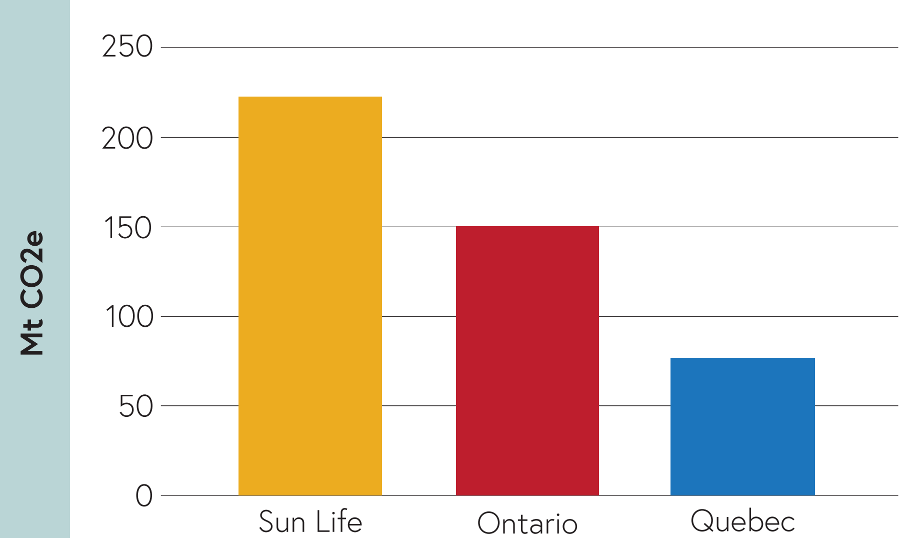

Figure 2. Sun Life's 2021 financed emissions and Ontario and Quebec's 2020 emissions.

Source: Sun Life emissions per Profundo estimate, see Appendix B; Ontario and Quebec data per Environment and Climate Change Canada (2022) National Inventory Report 1990-2020: Greenhouse Gas Sources and Sinks in Canada.

B) SET MEDIUM-TERM FINANCED EMISSIONS REDUCTION TARGETS

Sun Life as a parent company has set an interim target for its own operations—50 percent absolute reduction of emissions by 2030, relative to 2019—and intends to set interim targets for select asset classes in 2022.[65]

Regarding its subsidiaries, SLC Management has committed to set an interim target for its investment grade fixed income assets in 2023.[66] InfraRed and BentallGreenOak state they will release interim targets in 2022.[67]

MFS Asset Management states that it aims to have at least 50 percent of its portfolio in companies that meet one of the following criteria:

- A decline in carbon emissions on a rolling three-year basis.
- A commitment to a recognized high-quality carbon reduction plan or target aligned with national and global carbon emissions reduction goals, such as a science-based target or net zero commitment.
- Operating on a "net zero" basis.
- Corporate debt instruments issued to finance activities that facilitate the transition to a lower-carbon economy.

Note that there is a large degree of interpretation associated with these criteria—for example, many major companies claim to be aligned with net zero despite this not being true.[68] How those issues of interpretation are to be resolved is not discussed.

Sun Life has not yet committed to a timeline for full portfolio coverage.

C) IMPLEMENT STRATEGIES TO MEET TARGETS

Sun Life and its subsidiaries are in the early days of establishing targets and strategies to meet them.

I. ESTABLISH FOSSIL FUEL PHASE-OUT POLICIES

Sun Life as a parent company has not set any fossil fuel policies. Its 2021 Sustainability Report highlights one instance of an investment decision to reduce exposure to fossil fuels: a 75 percent reduction in investments to coal-fired power producers in Malaysia.[69]

Regarding divesting from fossil fuels, Sun Life states:

> We don't believe this is the optimal approach. These companies are critical to the economy and provide livelihoods to millions of people. We support encouraging these companies to transform their business models to transition towards net-zero emissions. Importantly, when an equity stake is sold, it may be purchased by someone who doesn't engage or care about its climate impact. That's why our engagement is so important. We aim to limit exclusions and divest only if engagement is unsuccessful.[70]

This rationale is not consistent with net zero models that show entire asset classes like coal needing to be phased out quickly. Nor does it provide clarity regarding what metrics Sun Life applies to define "unsuccessful" engagements and over what time period, as per credible and effective escalation.

Sun Life subsidiaries have other approaches regarding fossil fuels. InfraRed has an exclusion policy that covers coal, oil, and fossil gas if unaligned with a net zero trajectory, and supporting infrastructure.[71] It states:

> As a signatory of Net Zero Asset Managers initiative, InfraRed has committed to achieving net zero GHG emissions across its portfolio by 2050. Exclusion policies are vital to drive this transition, to favour projects that are net positively contributing to an environmentally and socially sustainable world.

MFS Asset Management takes the opposite approach, declining the possibility of excluding heavy emitters.[72] In its 2021 Sustainability Report, the SLC Management Chief Investment Officer criticizes divestment, saying "it doesn't encourage change or action,"[73] despite evidence to the contrary.[74]

II. ESTABLISH ESCALATING ENGAGEMENT STRATEGIES

As a parent company, Sun Life does not yet disclose an overall policy about how it escalates engagement with investees with clear benchmarks and timelines. Sun Life states in its 2021 Annual Report that it "engages with some of the world's largest corporate GHG emitters with whom they have investments to ensure their climate-related goals and objectives align with those of the Company and our Clients."[75] Sun Life does not provide details about how these engagements escalate over time to achieve results.

For public equity, Sun Life does not appear to have an overall proxy voting policy. But SLC Management and MFS are members of the global shareholder environmental engagement initiative Climate Action 100+ (CA100+), while Sun Life and SLC Management are members of Climate Engagement Canada (CEC). CA100+ assesses the net zero progress of major polluters and participants engage individually or collaboratively with target companies, although it has come under criticism for ineffectiveness.[76] CEC collaborates on investor engagement with a further 40 Canadian large emitters and is yet to establish a track record.

The subsidiary MFS Asset Management states it believes in escalation, but discloses few metrics or details, claiming that each case is unique, thereby creating a lack of transparency. It does commit in its 2022 Sustainability Report, however, to further develop its escalation mechanism related to climate.[77]

For public equities, MFS Asset Management has a proxy voting policy that states it expects companies to develop a climate plan in line with the Paris Agreement and that it supports proposals that are consistent with this.[78] It also provides public access to its proxy voting record via a searchable platform on its website. It reports that it voted for 37 percent of environmental proposals in 2021, lower than its vote on social issues (62 percent) or governance issues (57 percent).[79]

The subsidiary Sun Life Global Investments states that it "requires its investment sub-advisors to have proxy voting policies in place," but does not say what these are.[80] It discloses the proxy votes of various funds on its website by August 31 of each year in a non-searchable format. Below is a table summarizing Sun Life Global Investments' votes on significant Canadian climate-related proposals in 2022. When the vote is "For/Against," this means that different funds voted in different ways.

Canadian Company	2022 Climate-Related Shareholder Proposal	Sun Life Votes
BMO	Ensure the bank's financing does not contribute to new fossil fuel supplies inconsistent with IEA's Net Zero Emissions by 2050 Scenario	Against
BMO	Adopt an annual advisory vote on the bank's environmental and climate change action plan	Against
Brookfield	Have affiliates set emission reductions targets consistent with the Paris Agreement by 2025	For / Against
CIBC	Adopt an annual advisory vote on the bank's environmental and climate change action plan	For / Against
Enbridge	Strengthen the company's net zero commitment to be consistent with a science-based net zero target	For / Against
Imperial Oil	Cease exploration and development of new oil and gas fields consistent with IEA Net Zero scenario	Against
Scotiabank	Adopt an annual advisory vote on the bank's environmental and climate change action plan	Against
TD	Adopt a policy of not financing new fossil fuel supply, including financing of companies exploring or developing undeveloped oil and gas reserves	Against
TD	Adopt an annual advisory vote on the bank's environmental and climate change action plan	Against
RBC	Update the bank's criteria for sustainable finance to preclude fossil fuel activity and projects opposed by Indigenous Peoples	Against
RBC	Avoid bank participation in pollution-intensive asset privatizations	Against
RBC	Adopt an annual advisory vote on the bank's environmental and climate change action plan	Against

III. INVEST IN CLIMATE SOLUTIONS

Sun Life has set a target of $20 billion in new sustainable investments from 2021 to 2025 across its General Account and client investments, which are managed by SLC Management.[81] It also states in its 2021 Sustainability Report that it then had over $65 billion in sustainable investments. Sun Life's definition of "sustainable investments" is a general list, including renewable energy, energy efficiency, sustainable buildings, clean transportation, water management, and social infrastructure projects.[82] There are no details regarding the emissions impacts of these investments and how they relate to Sun Life's net zero commitments.

MFS discusses its participation in various sustainable finance instruments—including greenwashing-prone[83] "sustainability-linked" bonds—but does not set any targets related to investing in climate solutions, nor does it disclose the emissions impacts of these instruments.[84]

IV. ALIGN PUBLIC POLICY LOBBYING WITH NET ZERO

According to Sun Life's website, "The company is committed to advocacy and collaboration with governments, regulators, investors, and industry leaders to develop supportive net-zero programs and policies that pave a path towards decarbonization."[85] But, Sun Life does not disclose the details of its advocacy so we are unable to evaluate its consistency with net zero. Publicly, Sun Life has not weighed in on recent major climate policy debates such as the passage of the *Canadian Net-Zero Emissions Accountability Act* or the proposed emissions cap on the Canadian oil and gas sector.

Sun Life CEO Kevin Strain is registered to lobby the Canadian government and files disclosure forms.[86] Under "subject matters," it does include climate, but there are no further details. The monthly communications reports include several meetings between Sun Life and government officials responsible for various climate files, but do not indicate what Sun Life's positions were during those meetings, or whether it advocated for stronger or weaker government climate action.

Sun Life's 2021 Sustainability Report discloses some of its climate-related lobbying activities, including in response to the Office of the Superintendent of Financial Institution's discussion paper "Navigating Uncertainty in Climate Change," as well as Sun Life Group Retirement Services (GRS) engagement efforts on sustainable investing.[87] But, it is clear from the federal lobbying registry that Sun Life is engaging in a variety of other climate-related issues that aren't clearly disclosed.

Sun Life's major subsidiaries do not discuss public policy advocacy.

Sun Life is a member of the Canadian Life and Health Insurance Association (CLHIA). As discussed above, the CLHIA does not appear to advocate for stronger climate mitigation or adaptation policies.

MANULIFE

In 2021, Manulife committed to achieving net zero by 2050 across its General Account, which represents about 30 percent of their total $1.4 trillion in AUM as of December 31, 2021.[88] Their General Account includes their revenue from insurance premiums, which they manage on their own behalf. The remaining two-thirds of their AUM are managed by Manulife on behalf of third parties.[89] John Hancock, is the US arm of Manulife Financial and represents approximately 50 percent of Manulife's AUM.[90]

A) MEASURE AND REPORT FINANCED EMISSIONS

Manulife started to report some of its financed emissions in 2021 for the public equity and corporate debt associated with its General Account where data was of sufficient quality. It reported on 63 percent of the investments in its General Account.[91] It estimated 38.3 million tonnes of carbon dioxide equivalent in financed emissions for this portion of its portfolio in 2020.[92] This number does not include downstream scope 3 emissions, and as a result, represents an under-reporting.[93] For example, downstream scope 3 emissions typically represent more than 80 percent of oil and gas companies' footprint. Manulife has committed to reporting all required financed emissions by the end of 2022.

We commissioned Profundo to conduct an estimation of Manulife's financed emissions for the corporate bonds and listed equity in its General Account (see Appendix B). The study estimated 115 million tonnes of carbon dioxide equivalent, three times Manulife's own reporting. Of these, about 44 percent result from investments in utilities and 20 percent from investments in oil and gas companies. Profundo also estimated the emissions associated with all of Manulife's corporate bonds and listed equity and assumed the same emissions intensity for the remainder of Manulife's portfolio, arriving at an overall estimate of 277 million tonnes of carbon dioxide equivalent. While this is an imperfect measure, for a sense of scale, it is more than the combined emissions of Ontario and Quebec in 2020, or 226 million tonnes of carbon dioxide equivalent.

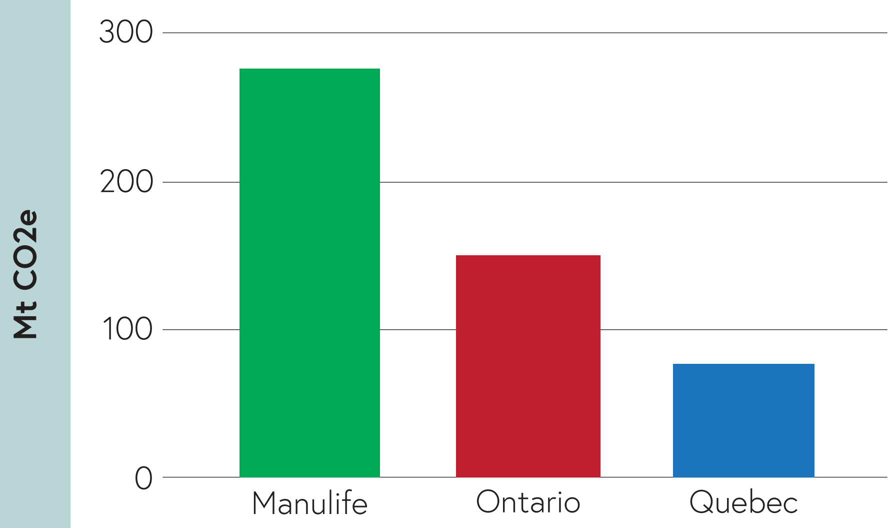

Figure 3. Manulife's 2021 financed emissions and Ontario and Quebec's 2020 emissions.

Source: Manulife emissions per Profundo estimate, see Appendix B; Ontario and Quebec data per Environment and Climate Change Canada (2022) National Inventory Report 1990–2020: Greenhouse Gas Sources and Sinks in Canada.

B) SET MEDIUM-TERM FINANCED EMISSIONS REDUCTIONS TARGETS

To date, Manulife has committed to reducing its own operational scope 1 and 2 emissions by 35 percent by 2035 from a 2019 base year. As for setting interim financed emissions targets, Manulife has committed to do so by the end of 2022 for its most carbon-intensive sector portfolios, across all asset classes for which accepted accounting methodologies exist, including power generation and utilities.[94] Manulife has also committed to certifying its targets with the SBTi, which will add credibility.[95]

C) IMPLEMENT STRATEGIES TO MEET TARGETS

Manulife is in its early days of establishing targets and strategies to meet them.

I. ESTABLISH FOSSIL FUEL PHASE-OUT POLICIES

While this is not the same as a fossil fuel phase-out policy, Manulife states:

> On an ongoing basis, we evaluate our investment approach toward higher-emitting sectors such as oil and gas and power, and, where appropriate, recommend changes to investment limits and/or the investment duration of certain sub-sectors.

Similarly, Manulife is improving its internal risk assessment policies related to carbon-intensive investments.[96] In both cases, it is unclear how these policies will result in the emissions reductions required to achieve science-based interim targets.

With regards to coal, Manulife no longer considers private equity investments in individual coal-fired power plants,[97] although most coal plants are run by bigger utilities that Manulife does invest in.[98] For its General Account, Manulife indicates that it undertakes additional due diligence for companies that generate more than 30 percent of their revenue from thermal coal mining operations,[99] although that does not mean it won't finance them.

Manulife has not taken a position regarding the IEA's finding that a net zero pathway means there is no need for new fossil fuel projects.

MANULIFE BUYS A MAJOR POLLUTER

In May 2021 Manulife announced its commitment to net zero by 2050 for its General Account.[100] Fourteen months later Manulife announced its joint purchase of Midland Cogeneration Venture,[101] a fossil gas facility in Michigan which produced over four and a half million metric tonnes of CO2 equivalent in 2020.[102] A portion of those emissions will now count towards Manulife's financed emissions at a time when it is supposed to be reducing them. While the press release announcing the purchase spoke of the coming transition of the overall electric grid, Midland itself has no current plans to switch to less polluting energy. Observers noted[103] that one of the sellers of Midland, the Ontario Municipal Employees Retirement System, has been divesting its fossil fuel assets and that this sale fits into that pattern.

II. ESTABLISH ESCALATING ENGAGEMENT STRATEGIES

Manulife does not yet disclose an overall policy about how it escalates engagement with investees with clear benchmarks and timelines. It states that it practices "ongoing engagement"[104] with companies it invests in to further climate goals, but does not specify how it evaluates such engagements with a view to escalation and achieving results. Manulife does provide some detail about its engagement with infrastructure owners:

> As part of broader ESG monitoring improvements undertaken across the private equity business, we requested infrastructure assets disclose their Scope 1, 2 and 3 emissions if available. If they had not yet measured their emissions, we asked how they view their climate-related impact (low, average, high), and explain why they believe so. We also looked to assess what our portfolio companies' preparedness was for potential climate-related impacts and explain why they believe so.[105]

Manulife's private equity and credit sustainable investing framework[106] and its infrastructure sustainable investing framework[107] talk about "collaboration and engagement" with investees, but not about accountability.

For public equities, Manulife has a global proxy voting policy that states it expects investees to address material sustainability risks and opportunities.[108] Manulife states that its separate climate change statement will help guide relevant proxy voting decisions, which includes this: "we regularly engage the companies we invest in, to encourage them to mitigate their exposure to climate change risk and align their business models with the lower carbon future envisaged in the Paris Agreement."[109]

Like some Sun Life subsidiaries, Manulife is a participant in CA100+ and CEC, although as stated above, the former has come under criticism for being ineffective, while the latter is yet to establish a track record.

Manulife reports its proxy voting record for its mutual funds in a searchable online format[110] and provides some detail about its votes in its Sustainability Report.[111]

The table below summarizes the votes of Manulife mutual funds on key climate-related shareholder proposals at Canadian companies in 2022. Where it says "For/Against," this means that different funds voted in different ways. Note that Manulife voted against the more substantive proposals.

Canadian Company	2022 Climate-Related Shareholder Proposal	Manulife Votes
BMO	Ensure the bank's financing does not contribute to new fossil fuel supplies inconsistent with IEA's Net Zero Emissions by 2050 Scenario	Against
BMO	Adopt an annual advisory vote on the bank's environmental and climate change action plan	For/Against
Brookfield	Have affiliates set emission reductions targets consistent with the Paris Agreement by 2025	For/Against
CIBC	Adopt an annual advisory vote on the bank's environmental and climate change action plan	For/Against
Enbridge	Strengthen the company's net zero commitment to be consistent with a science-based net zero target	Against
Imperial Oil	Cease exploration and development of new oil and gas fields consistent with IEA Net Zero scenario	Against
Scotiabank	Adopt an annual advisory vote on the bank's environmental and climate change action plan	For/Against
TD	Adopt a policy of not financing new fossil fuel supply, including financing of companies exploring or developing undeveloped oil and gas reserves	Against
TD	Adopt an annual advisory vote on the bank's environmental and climate change action plan	For/Against
RBC	Update the bank's criteria for sustainable finance to preclude fossil fuel activity and projects opposed by Indigenous Peoples	Against
RBC	Avoid bank participation in pollution-intensive asset privatizations	Against
RBC	Adopt an annual advisory vote on the bank's environmental and climate change action plan	For/Against

III. INVEST IN CLIMATE SOLUTIONS

As of 2021, Manulife reports that it had $67.4 billion in "sustainable investments," which it defines as including green buildings, sustainably-managed timberlands, renewable energy, sustainably-managed agriculture, energy efficiency, and more.[112] It is unclear, however, what the emissions implications of this category are and what relationship it has to the company's net zero commitment.

Manulife has issued about $2 billion in green bonds and recently updated its Sustainable Bond Framework to apply to its own issuances after February 2022.[113] Eligible for use of proceeds include renewable energy, green buildings, environmentally sustainable land use, renewable energy, and more. Excluded is petroleum. This list includes but is not limited to climate solution technologies. It is also unclear how these investments relate in a quantitative manner to Manulife's net zero commitment.

It is unclear under what guidelines Manulife invests in bond issuances from other parties, particularly in the greenwashing-prone "sustainability-linked" instruments.

IV. ALIGN PUBLIC POLICY LOBBYING WITH NET ZERO

In the document *Select Manulife policies, standards and guidelines related to sustainability*,[114] Manulife states that it has a "Charitable Contributions Policy" that covers "Trade Associations, business groups, and public policy engagements," but this policy is not publicly available, nor does Manulife disclose a summary of its recent public policy engagements.

Publicly, Manulife has not weighed in on recent major Canadian climate policy debates such as the passage of the *Canadian Net-Zero Emissions Accountability Act* or the proposed emissions cap on the Canadian oil and gas sector.

Manulife CEO Roy Gori is registered to lobby the Canadian government and files disclosure forms.[115] Under "subject matters," it does include climate, but there are no further details. The more recent monthly communications reports related to this registration do not include climate-related matters.

Manulife Investment Management did sign onto the 2022 Investor Agenda statement to governments on the climate crisis which includes calls for carbon pricing and for the phasing out of thermal coal power and fossil fuel subsidies.[116]

Manulife is a member of the Canadian Life and Health Insurance Association (CLHIA). As discussed above, the CLHIA does not appear to advocate for stronger climate mitigation or adaptation policies.

CONCLUSION AND RECOMMENDATIONS

Sun Life and Manulife, in their role as major global asset managers, are financing a massive amount of greenhouse gas emissions. The climate crisis is driving increasing risk and worsening health impacts in Canada and around the world, the opposite of what life and health insurance companies are trying to achieve.

As major owners and managers with almost $3 trillion in AUM, Sun Life and Manulife have a huge influence over capital flows and whether those foster increased emissions or the necessary rapid transition to a clean energy economy.

To their credit, Sun Life and Manulife have made commitments to bring some share of their portfolios in line with net zero by 2050. They are each at the early stages of measuring their financed emissions, setting targets, and implementing strategies to meet those targets. How they tackle those tasks will determine the credibility of their commitments.

We are seeking rapid and robust action from Sun Life and Manulife. As this report goes to print, the world is experiencing heat waves and floods that are killing the vulnerable, causing fires, disrupting major rivers, and leading to crop failure. Without quick and bold progress, these impacts will get worse, and the insurance industry is on the front lines of having to manage those costs.

Here are our recommendations:

a. That Sun Life and Manulife accelerate the measurement disclosure of all their financed emissions, including accounting for scope 3 emissions where material.

b. That Sun Life and Manulife quickly adopt short and medium-term financed emissions reduction targets in line with climate science that are expressed in absolute reduction terms.

c. That Sun Life and Manulife accelerate the adoption and implementation of portfolio decarbonization strategies to meet targets, including fossil fuel phase-out, clear escalating engagements with investees, earmarking climate solutions investing, and aligning public policy lobbying with net zero.

APPENDIX A: KEY FINANCIAL SECTOR NET ZERO SOURCES

The financial sector net zero best practices outlined in this report are sourced from the following:

- The International Panel on Climate Change's (IPCC) Special Report on Global Warming of 1.5°C, which is incorporated by reference into the 2015 Paris Agreement.
- Net zero planning guidance laid out by the UN-backed Race to Zero campaign.
- Financial sector guidance laid out by the UN Glasgow Financial Alliance for Net Zero (GFANZ) and its sub-sector groups:
  - The Net Zero Asset Managers initiative (NZAMi),
  - The Net Zero Asset Owners initiative (NZAOi),
  - The Net Zero Banking Alliance (NZBA), and
  - The Net Zero Insurance Alliance (NZIA).
- Financial sector GHG accounting and reporting principles and standards set out by the Partnership for Carbon Accounting Financials (PCAF), which builds on the broader corporate standards established by the Global GHG Protocol.
- The Science Based Targets initiative (SBTi), which is the foremost global third-party certifier of corporate net zero plans.
- The Investor Agenda, which represents many financial sector organizations working to provide guidance and highlight best practices, including
  - United Nations Environment Program Finance Initiative.
  - Institutional Investors Group on Climate Change.
  - Ceres.

APPENDIX B: FINANCED EMISSIONS OF SUN LIFE AND MANULIFE

August 16, 2022

Author: Ender Kaynar

About this report

This report has been commissioned by Investors for Paris Compliance.

About Profundo

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Authorship

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Methodology

Following the financed emissions accounting standards by Partnership for Carbon Accounting Financials (PCAF), the methodology section will describe the steps taken to collect the necessary data for the financed emissions calculations.

1.1 Managed / owned assets

The investment portfolios of Sun Life and Manulife have been retrieved from Refinitiv Eikon with the aim to obtain the investment amount per financial asset and associate these amounts with the emissions of their issuers. All available investment data (public equities and corporate and sovereign bonds) from all relevant subsidiaries of the two insurers were collected. Accordingly, USD 603 bn worth of share and bond holdings (55% of Q122 AUM) were identified for Sun Life and USD 297 bn (27% of Q122 AUM) for Manulife. These data form the nominator of the emissions attribution factor. Detailed information needed for the real estate and mortgage investments could not be found, yet both insurers internally report emissions for real estate investments, which were added to the data directly.

1.2 Issuer data

From the investment data, specific issuers had to be identified to retrieve 1) the available emissions data and 2) financial data to calculate "Enterprise Value including Cash" (EVIC) to from the denominator of the attribution factor.

1.2.1 Issuer emissions

For the corporate issuers that Refinitiv Eikon has emissions data, the emission values are directly used (where available 2021, otherwise 2020 data). Where data was not available, sectoral averages (TRBC class.) were utilized to estimate the missing data. For sovereign bonds, the PCAF's proposed standard suggests using OECD's Carbon dioxide emissions embodied in international trade data as the basis for the country's emissions.[1] Since the data covers only until 2015, 2020 values are modelled using total emission growth figures from UNFCCC GHG dataset.

1.2.2 Issuer Enterprise Value

The PCAF standard prefers to use EVIC to avoid negative denominator values and better capture all the capital taken in by the corporate issuer. Depending on data availability, the denominator of the attribution factor was calculated with the following preference hierarchy: 1) Enterprise value + Cash, 2) MCAP + Total Debt + Minorities, 3) Equity + Total Debt + Minorities. For sovereigns, the standard suggests using GDP PPP as the denominator.

Please note that while calculating EVIC for the Mexican Petroleum company PEMEX, the significant negative equity value (USD 105 bn) was adjusted to zero as an exception, to avoid abnormally high emission attribution to Sun Life and Manulife.

2

Sun Life Financial

2.1 Sun Life Financial Investments and calculated financed emissions

Calculated with the available data as per latest filings, Sun Life Financial finances at least 121 million tonnes of CO_2 equivalent emissions with its identified investment portfolio (55% of Q122 AUM). The average emission intensity of its total identified portfolio is calculated at 201 tCO_2e/USDmn (209 tCO_2e/USDmn excluding investments with missing emissions data such as derivatives, ETFs etc.), with the fixed income portfolio at 246 tCO_2e/USDmn and equities at 190 tCO_2e/USDmn.

Table 1 Sun Life Financial financed emissions from identified investments (tCO_2e) by scope

Sun Life Financial	Scope 1	Scope 2	Scope 3	Total
Fixed Income	10,398,475	3,521,485	13,678,563	27,598,524
Equities	13,007,128	3,388,811	76,905,042	93,300,981
Real Estate*	17,422	26,072	14,277	57,771
Total	**23,423,025**	**6,936,369**	**90,597,882**	**120,957,276**

Source: Refinitiv Eikon, latest filings as of July 2022, *Sun Life own calculations[2]

Table 2 Sun Life Financial investments and total financed emissions by manager and inv. type

Manager Name	Bondholding	Shareholding	Real Estate	Total
Investment amount (USD mn)				
MFS Investment Management	82,760	451,834	0	534,593
MFS Investment Management Canada Limited	3,481	18,510	0	21,991
Sun Life Institutional Investments (U.S.) LLC	16,101	0	0	16,101
MFS International Singapore Pte. Ltd	0	10,892	0	10,892
Sun Life Global Investments (Canada) Inc.	7,954	3,072	0	11,026
Sun Life Assurance Company of Canada (Toronto)	94	4,819	0	4,913
MFS International (U.K.) Limited	1,619	878	0	2,497
MFS Investment Management K.K.	0	674	0	674
Crescent Capital Group LP	375	0	0	375
Sun Life Assurance Co of Canada	94	0	0	94
Sun Life Financial*	0	0	0	0
Total	**112,383**	**490,680**	**0**	**603,063**
Financed Emissions (tCO2)				
MFS Investment Management	18,327,084	86,025,821	0	104,352,905
MFS Investment Management Canada Limited	2,075,032	3,050,205	0	5,125,237
Sun Life Institutional Investments (U.S.) LLC	3,475,628	0	0	3,475,628
MFS International Singapore Pte. Ltd	0	3,026,712	0	3,026,712
Sun Life Global Investments (Canada) Inc	3,203,582	0	0	3,203,582
Sun Life Assurance Company of Canada (Toronto)	0	173,497	0	173,497
Sun Life Global Investments (Canada) Inc.	0	776,675	0	776,675
MFS International (U.K.) Limited	357,699	152,244	0	509,943
MFS Investment Management K.K.	0	95,826	0	95,826
Crescent Capital Group LP	126,846	0	0	126,846
Sun Life Assurance Co of Canada	32,653	0	0	32,653
Sun Life Financial*	0	0	57,771	57,771

Total	**27,598,524**	**93,300,981**	**57,771**	**120,957,276**
Total average emission intensity (tCO2e/USDmn)	**246**	**190**		**201**

Source: Refinitiv Eikon, latest filings as of July 2022, *Sun Life own calculations

Using the average emissions from identified investments for calculation, Sun Life's General Account (Fund)'s financed emissions as of Q1 2022 is calculated at 31.4 million tonnes CO2 equivalent emissions where the calculation covers debt securities, corporate loans and public equities (72% of total General Account). General Account of Sun Life had average emission intensity of 314.7 tCO2e/USDmn, with fixed income portfolio at 323.4 tCO_2e/USDmn and public equities at 190.1 tCO_2e/USDmn. (See the spreadsheet accompanying this report for the analysis)

Table 3 lists the financed emissions of Sun Life's identified investments broken down by sector.

Table 3 Sun Life Financial financed emissions by sector

Sector name	Investment (USD mn)	Financed emissions (tCO_2e)	Average Emission (tco2/USDmn)
Energy - Fossil Fuels	14,275	27,708,724	1,941.1
Industrial Goods	40,667	20,448,946	502.8
Utilities	20,516	18,024,416	878.6
Government Activity	49,667	12,714,226	256.0
Chemicals	22,079	8,093,262	366.6
Mineral Resources	7,086	7,366,686	1,039.6
Automobiles & Auto Parts	4,424	6,345,128	1,434.2
Food & Beverages	29,122	5,055,846	173.6
Personal & Household Products & Services	13,176	3,300,285	250.5
Consumer Goods Conglomerates	8,039	1,851,298	230.3
Transportation	14,557	1,373,550	94.4
Technology Equipment	30,803	1,339,017	43.5
Applied Resources	2,125	1,095,112	515.3
Retailers	14,501	1,062,995	73.3
Healthcare Services & Equipment	38,848	882,333	22.7

Pharmaceuticals & Medical Research	26,765	771,508	28.8
Cyclical Consumer Services	18,946	766,444	40.5
Cyclical Consumer Products	12,138	758,547	62.5
Software & IT Services	74,897	634,450	8.5
Industrial & Commercial Services	19,173	355,164	18.5
Real Estate	14,351	328,301	22.9
Telecommunications Services	7,825	271,231	34.7
Banking & Investment Services	61,059	162,084	2.7
Food & Drug Retailing	3,507	142,052	40.5
Insurance	23,184	69,229	3.0
Financial Technology (Fintech) & Infrastructure	3,669	16,416	4.5
Investment Holding Companies	423	11,626	27.5
Academic & Educational Services	322	4,419	13.7
Renewable Energy	94	3,578	38.0
Uranium	16	360	23.1
Collective Investments	123	42	0.3
N/A	541	0	0.0
Missing emission data	26,065	0	0.0
Institutions, Associations & Organizations	83	0	0.0
Grand Total	**603,063**	**120,957,276**	**201**
***Excluding investments with missing emissions data**	**576,457**	**120,957,276**	**209.8**

Source: Refinitiv Eikon, latest filings as of July 2022

3

Manulife Financial Corporation

3.1 Manulife Financial Corporation investments and calculated financed emissions

Manulife finances at least 77 million tonnes of CO2 equivalent emissions with an average emission intensity of 260 tCO2e/USDmn. The fixed income portfolio averaged 322 tCO_2e/USDmn vs. the equities at 192 tCO_2e/USDmn.

Table 4 Manulife financed emissions (tCO_2e) by scope

Manulife Financial	Scope 1	Scope 2	Scope 3	Total
Fixed Income	13,860,262	3,417,748	31,687,374	48,965,383
Equities	4,387,160	1,273,935	22,131,953	27,793,048
Real Estate*	35,475	104,778	195,684	335,937
Total	**18,282,897**	**4,796,461**	**54,015,010**	**77,094,368**

Source: Refinitiv Eikon, latest filings as of July 2022, *Manulife own calculations

Table 5 Manulife Financial investments and total financed emissions by manager and inv. type

Manager Name	Bondholding	Shareholding	Real Estate	Total
Investment amount (USD mn)				
Manulife Asset Management (US) LLC	70,538	0	0	70,538
Manulife Investment Management (North America) Limited	0	68,733	0	68,733
Manulife Investment Management (US) LLC	0	66,993	0	66,993
John Hancock Financial Services, Inc	57,514	0	0	57,514
Manulife Asset Management Limited	12,695	0	0	12,695
Manulife Investment Management (Hong Kong) Limited	0	7,233	0	7,233

Manulife Asset Management (Asia)	6,687	0	0	6,687
Manulife Asset Management (North America) Limited	2,029	0	0	2,029
John Hancock Advisers LLC	958	0	0	958
Manulife Asset Management (Japan) Limited	766	0	0	766
Manulife Investment Management (M) Berhad	0	747	0	747
Manulife Investment Management (Europe) Limited	0	622	0	622
Manulife Asset Management (Singapore) Pte Ltd	405	0	0	405
Manulife Investment Management (Ireland) Ltd	0	231	0	231
Manulife Financial	176	0	0	176
Manulife Asset Management (Europe) Limited	144	0	0	144
Manulife Life Insurance Company	86	0	0	86
Total	**151,998**	**144,560**	**0**	**296,558**
Financed Emissions (tCO2)				
Manulife Asset Management (US) LLC	17,146,739	0	0	17,146,739
Manulife Investment Management (North America) Limited	0	13,734,715	0	13,734,715
Manulife Investment Management (US) LLC	0	12,337,674	0	12,337,674
John Hancock Financial Services, Inc	21,833,549	0	0	21,833,549
Manulife Asset Management Limited	6,162,481	0	0	6,162,481
Manulife Investment Management (Hong Kong) Limited	0	1,124,968	0	1,124,968
Manulife Asset Management (Asia)	2,144,577	0	0	2,144,577
Manulife Asset Management (North America) Limited	1,139,409	0	0	1,139,409
John Hancock Advisers LLC	186,314	0	0	186,314
Manulife Asset Management (Japan) Limited	69,844	0	0	69,844
Manulife Investment Management (M) Berhad	0	495,826	0	495,826
Manulife Investment Management (Europe) Limited	0	48,117	0	48,117
Manulife Asset Management (Singapore) Pte Ltd	141,975	0	0	141,975
Manulife Investment Management (Ireland) Ltd	0	51,748	0	51,748

Manulife Financial	76,150	0	335,937	412,087
Manulife Asset Management (Europe) Limited	44,117	0	0	44,117
Manulife Life Insurance Company	20,230	0	0	20,230
Total	48,965,383	27,793,048	335,937	77,094,368
Total average emission intensity (tCO2e/USDmn)	**322**	**192**		**260**

Source: Refinitiv Eikon, latest filings as of July 2022. *Manulife own calculations.

Manulife's General Account (Fund)'s financed emissions as of Q1 2022 is calculated at 115.1 million tonnes CO2 equivalent emissions where the calculation covers debt securities, private placements, and public equities (68% of total General Account). General Account of Manulife had average emission intensity of 526.5 tCO2e/USDmn, with fixed income portfolio at 560.4 tCO_2e/USDmn and public equities at 192.3 tCO_2e/USDmn. (See the spreadsheet accompanying this report for the analysis)

Manulife also discloses its financed (portfolio) emissions using the same PCAF methodology. In its disclosure for 2020, which covers 73% its General Account investments, Manulife reported a total of 38.3 million tCO_2e with 862 tCO_2e/USDmn average emission intensity. Fixed income portfolio had 942 tCO_2e/USDmn and listed equities at 324 tCO_2e/USDmn financed emissions.

Table 6 Manulife financed emissions by sector

Sector name	Investment (USD mn)	Financed emissions (tCO_2e)	Average Emission (tco2/USDmn)
Energy - Fossil Fuels	15,134	26,434,607	1,746.7
Utilities	13,281	15,846,382	1,193.2
Government Activity	36,641	9,337,730	254.8
Automobiles & Auto Parts	3,478	4,876,691	1,402.3
Mineral Resources	3,613	3,847,129	1,064.8
Industrial Goods	6,538	3,518,185	538.1
Chemicals	3,550	2,401,943	676.5
Food & Beverages	5,974	1,683,115	281.7
Technology Equipment	13,499	1,200,769	89.0
Cyclical Consumer Services	8,394	1,038,831	123.8
Consumer Goods Conglomerates	2,116	873,719	412.8
Transportation	6,667	805,469	120.8

Industrial & Commercial Services	8,245	764,647	92.7
Real Estate	9,411	727,905	77.3
Cyclical Consumer Products	4,198	680,512	162.1
Applied Resources	1,358	574,711	423.4
Healthcare Services & Equipment	11,421	551,638	48.3
Retailers	8,238	550,429	66.8
Banking & Investment Services	38,831	304,136	7.8
Personal & Household Products & Services	1,459	251,301	172.3
Telecommunications Services	6,194	238,444	38.5
Food & Drug Retailing	2,157	208,753	96.8
Software & IT Services	22,837	191,366	8.4
Pharmaceuticals & Medical Research	7,581	136,679	18.0
Renewable Energy	250	28,984	115.8
Insurance	5,138	10,905	2.1
Investment Holding Companies	1,011	5,730	5.7
Financial Technology (Fintech) & Infrastructure	585	1,125	1.9
Academic & Educational Services	1,296	1,056	0.8
Uranium	40	973	24.4
Collective Investments	319	507	1.6
N/A	49	0	0.0
Institutions, Associations & Organizations	332	0	0.0
Missing emission data	46,722	0	0.0
Grand Total	**296,558**	**77,094,368**	**260**
***Excluding investments with missing emissions data**	**249,787**	**77,094,368**	**308.6**

Source: Refinitiv Eikon, latest filings as of July 2022.

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