



2019 RESPONSIBLE INVESTING REPORT

LOOKING TO THE FUTURE



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About OPTrust

With net assets of almost \$22 billion, OPTrust invests and manages one of Canada's largest pension funds and administers the OPSEU Pension Plan (including OPTrust Select), a defined benefit plan with over 96,000 members. OPTrust was established to give plan members and the Government of Ontario an equal voice in the administration of the Plan and the investment of its assets through joint trusteeship. OPTrust is governed by a 10-member Board of Trustees, five of whom are appointed by OPSEU and five by the Government of Ontario.



2019 RESPONSIBLE INVESTING REPORT **LOOKING TO THE FUTURE**

Our 2019 Responsible Investing Report details the Plan's RI results and philosophy directing the integration of environmental, social and governance (ESG) factors into its investment strategy. The report also shares the progress we have made in measuring total fund exposure to climate risk as part of the reporting on our climate action framework – in line with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

2019 HIGHLIGHTS



Completed the **first phase** of a total fund **climate change risk assessment**



Received A+ for our **strategy and governance** approach to responsible investing from the **Principles for Responsible Investment (PRI)**



Supported the **Christchurch Call**, which sets out commitments for governments and technology companies to **eliminate terrorist and violent extremist content online**



Signed the PRI Investor statement on **deforestation and forest fires in the Amazon**



Voted at **2,048** company meetings in **53** countries



Engaged **453** companies on key ESG issues, including **climate change, board effectiveness, gender diversity and data privacy**



Expanded our **Green Bond holdings** with a \$100 million investment in **Ontario government Green Bonds**



Made progress on climate action: **CCAP one-year update** released in May

MESSAGE FROM THE CHAIR AND VICE CHAIR

It is a great privilege to serve on the board of a pension fund focused on investing in a better world for the Plan's members and society. By their very nature, pension funds have a purposeful mandate – creating retirement security over the long term – and OPTrust is no different.

Since the Plan has a long-term investment horizon, OPTrust must work to ensure its activities consider a full range of risks and opportunities while remaining fully funded, which it has achieved for 11 consecutive years.

OPTrust's responsible investing (RI) program is a key component of its Member-Driven Investing strategy that acknowledges the impact of environmental, social and governance (ESG) factors on the Plan. The responsible investing program ensures material ESG considerations are integrated into OPTrust's investment decision-making processes and ownership practices.

OPTrust's reputation as a leader in responsible investing was furthered in 2019 with several notable accomplishments. A Spanish transport infrastructure manager in which OPTrust invests received the top ranking in a global sustainability index. OPTrust partnered with the Investor Leadership Network, and committed to accelerating progress on gender diversity issues in the companies and other partners in which it invests. The organization signed the PRI Investor statement on deforestation and fires in the Amazon, among other significant activities during the year highlighted in this report.

We thank OPTrust's leadership and team members for their commitment to invest sustainably and adapt to the future.



Michael Grimaldi
Chair



Sharon Pel
Vice Chair



MESSAGE FROM THE PRESIDENT AND CEO

The world continues to experience dramatic rapid change and pension funds are increasingly navigating a complex investing environment to keep plans sustainable.

At OPTrust, we invest based on the interests of our 96,000 members. Our investment strategy is designed to preserve the Plan's funded status so that we can provide members with secure retirement income. OPTrust's role is to look far ahead at challenges and opportunities that could affect members' retirement security across multiple generations.

As a long-term investor, our responsible investing program recognizes that environmental, social and governance (ESG) factors have the potential to affect the Plan's funded status and reputation whether we're invested in infrastructure, real estate, private or public markets.

We are an engaged investor, working actively with companies to improve performance on issues that can impact the fund's long-term value from increasing board diversity to divesting from tobacco to assessing climate change exposure.

A few years ago, we embarked on a journey to ensure our portfolio remains resilient to the challenges presented by climate change with the launch of our Climate Change Action Plan. During 2019, we made progress on this front, beginning the first of three phases of a total fund risk assessment and strengthening internal climate risk awareness through education sessions for our investment groups. We have increased our investments in renewable energy, sustainable real estate and green bonds.

We recently announced the creation of the Sustainable Investing and Innovation team that will build on our current approach to responsible investing, while putting capital to work in innovative areas that support OPTrust's long-term sustainability with a focus on climate change.

With an exceptional team behind every investment decision, our members can be confident that their pensions are sustainable for the long term.



A handwritten signature in black ink, which appears to be "Peter Lindley". The signature is fluid and cursive, written over a light gray background.

Peter Lindley
President and CEO

A scenic view of a lake with a forested shoreline and a wooden dock in the foreground. The sky is bright and clear, and the water is calm with gentle ripples. The dock is made of weathered wooden planks and has a railing with a vertical post and two horizontal bars. The forest on the opposite shore is dense and green, with some trees showing signs of autumn. In the distance, a few white sailboats are visible on the water.

RESPONSIBLE INVESTING STRATEGY

OPTrust's responsible investing (RI) strategy supports our mission to pay pensions today, preserve pensions for tomorrow. This conviction appears in our overarching investment policy which states that environmental, social and governance (ESG) factors can affect investment risk and return as well as reputation. OPTrust's RI mandate is implemented through ESG Integration, Active Ownership, Corporate Engagement and Collaboration.

ESG INTEGRATION

ESG factors can affect investment risk, return and reputation. Understanding the significance of these factors is an important part of the investment process. Our investment teams seek to identify, assess and manage ESG risks and opportunities to ensure the Plan remains fully funded and sustainable for the long term. These approaches are increasingly integrated into our investment strategy across the Plan's asset classes.



Screening

The initial exploration and identification of potential ESG risks and opportunities by OPTrust's investment teams.



Due diligence

Whether we are investing directly or with a partner, we assess the impact of ESG factors to ensure alignment with our Member-Driven Investing strategy.



Monitoring and engagement

Investment teams review ESG issues as part of portfolio monitoring to keep abreast of emerging risks or developments and manage them appropriately.

Powering the Energy Sector

OPTrust is a lead investor in Australian renewable energy company Flow Power, holding a 51 per cent stake in the company. Flow Power empowers Australian businesses to unlock value from the wholesale energy market – from retailing electricity, to providing the latest technology and expert advice, the company partners with businesses to reshape how they manage energy.

Flow Power supports organizations looking to reduce their carbon footprint, with their customers including the iconic Sydney Opera House and several municipalities across Australia. The Opera House is the first heritage-listed building to join a growing number of high-profile organizations leading the way towards a low-carbon future through investment in large-scale renewable projects in the country.

OPTrust identified Flow Power as an integral player in the Australian energy market. Recognizing its unique business model, innovative thinking and technology, OPTrust believes that Flow Power holds real promise for the future of Australian businesses and the electricity sector at large.

“We certainly see Flow Power as being an enabler for us to do more in the renewable energy space, while keeping our portfolio aligned with members’ interests.”

Stan Kolenc
Managing Director
Private Markets Group, Sydney



ACTIVE OWNERSHIP

As a responsible steward of our member's capital, OPTrust is committed to fulfilling our fiduciary responsibilities. OPTrust's RI beliefs articulate our commitment to be active owners to enhance long-term sustainable value creation, both in our private and public markets portfolios.

In our private equity and infrastructure portfolios, we hold board or observer seats on 86 per cent of our direct investee companies. Where we do not have direct board participation, we have strong relationships with our financial partners who keep us apprised of material developments at the companies, supplemented by customary company-level information rights.



In addition, we hold limited partner advisory committee seats on over 85 per cent of our fund commitments across our private markets portfolio. We exercise our governance rights and engage on topics key to enhancing value and sustainability, including, among other things, ensuring appropriate board-level attention to long-term strategy, capital allocation, talent development, risk management and ESG-related topics.

“Active and engaged ownership is central to how we invest in our private equity and infrastructure portfolios. We engage actively with our partners and investee companies to ensure a focus on long-term value creation.”

Sandra Bosela

Co-Head, Managing Director and Global Head of Private Equity
Private Markets Group

In our public equity portfolios, where our ownership is less concentrated, we fulfill our active ownership commitments through corporate engagement, proxy voting and collaborative advocacy, detailed in the following sections.

Investing in Sustainable Real Estate

Sustainability has long been a core pillar of our active ownership approach within the real estate portfolio. OPTrust's Real Estate Group has achieved environmental certification (LEED or BOMA) on 58 per cent of our eligible Canadian direct real estate holdings and has implemented comprehensive data collection programs that monitor energy efficiency, water usage and waste management to identify potential areas of improvement and benchmark performance against industry standards.



As sophisticated tenants increasingly seek spaces designed to meet environmental standards, these efforts enhance our assets' competitive positioning and contribute to the portfolio's sustainability, while improved resource efficiency also yields savings in operating costs.

CORPORATE ENGAGEMENT

We partner with external service providers to monitor public companies in our portfolio, actively vote at all company meetings, and engage with investee companies on key issues to improve long-term investment performance. In 2019, we engaged 453 companies on ESG issues through this partnership. The examples below highlight the actions some of our investee companies took to better manage ESG issues around the globe.

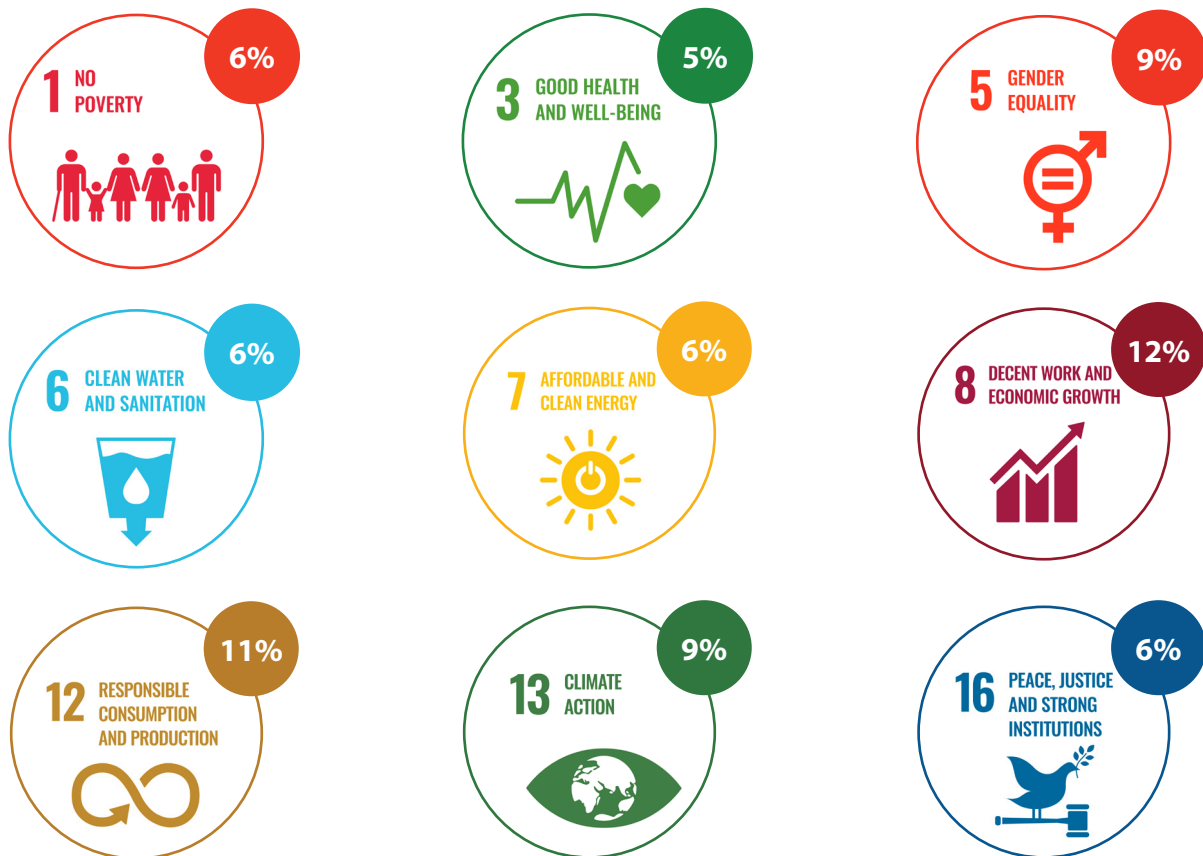
- **Climate change**
ArcelorMittal published its first Climate Report to shareholders, in direct response to shareholder engagement.
- **Environmental standards**
General Mills established targets to make all packaging recyclable by 2030. The company also committed to sustainably source 100% of their fiber packaging by 2020 and achieve zero waste to landfill.
- **Corporate governance**
Tencent appointed a new independent director, the first woman to join the board in its history. With most non-executive directors having served for over 15 years, we have encouraged the company to pursue active board refreshment to enhance board effectiveness by mitigating risks arising from directors becoming overly close to management.
- **Human rights**
Amazon published its Global Human Rights Principles, in which it committed to embedding respect for human rights within its business, particularly workplace safety, diversity and inclusion, equal opportunity, elimination of forced labour and freedom of association. Over the last few years, we encouraged the company to publish a human capital management strategy, with a focus on its workplace practices.
- **Business conduct**
Rio Tinto published the contracts and licensing agreements that govern its biggest mining projects worldwide. We expect this to contribute to the responsible management of natural resources and help prevent corruption. We encouraged the company to build stronger systems to help alleviate the risks of bribery and corruption, especially in developing countries.

Alignment of our 2019 corporate engagements with the SDGs

OPTrust continues to identify where our corporate engagement efforts directly align with the United Nations Sustainable Development Goals (SDGs) to address broad challenges, including climate action, decent work and gender equality.

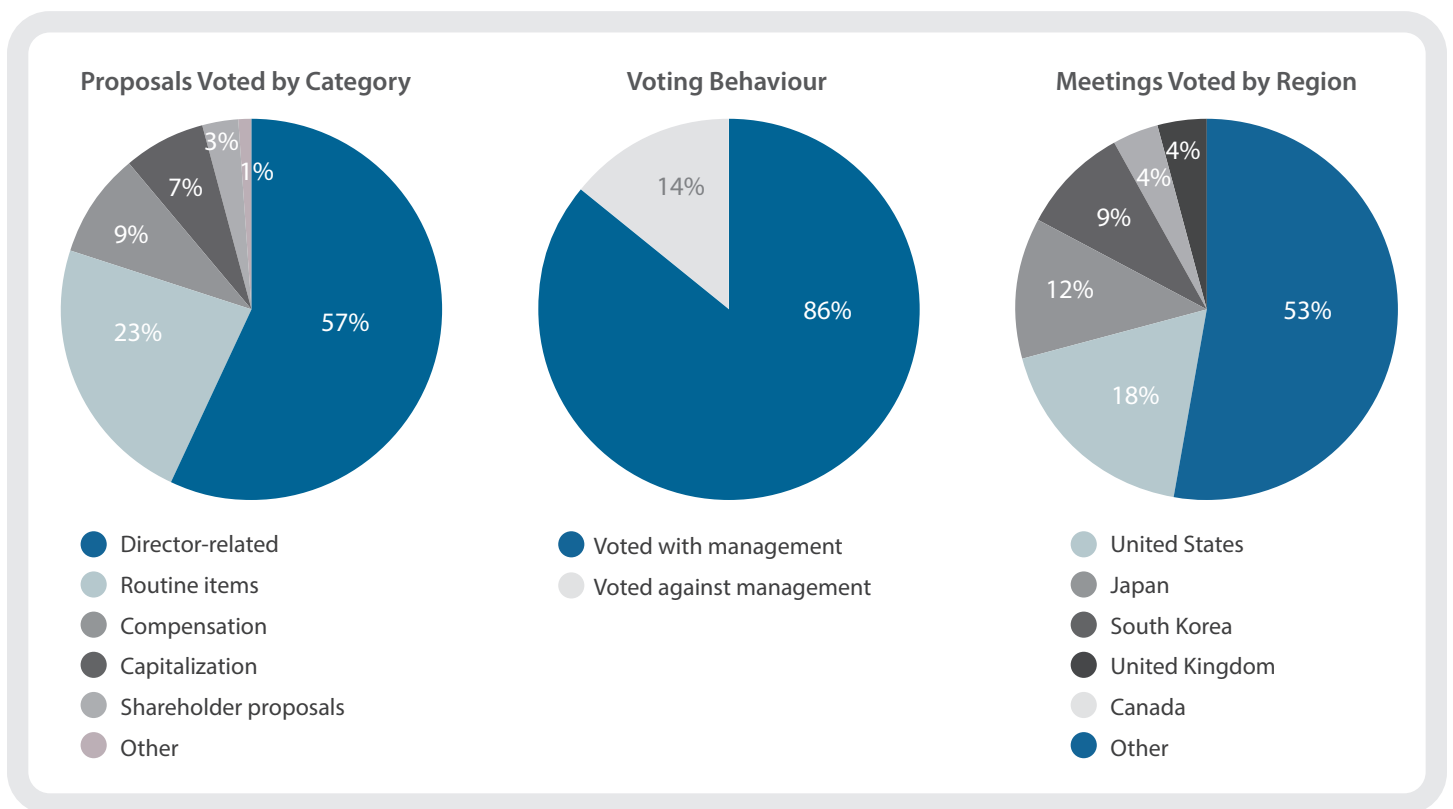
The SDGs are a collection of 17 ambitious goals set by the United Nations General Assembly in 2015 and adopted by Canada and 192 other UN-member states to define a shared blueprint for peace and prosperity for people and the planet, now and into the future.

This illustration shows a breakdown of how our 2019 corporate engagements with more than 450 companies align with the SDGs.



Proxy Voting

As a long-term investor, we believe good governance practices support stronger, long-term performance and enhance shareholder value. We actively exercise our voting rights for public securities held within our portfolio, where possible, according to OPTrust's [Proxy Voting Guidelines](#).



COLLABORATION

OPTrust is involved in a wide variety of collaborative initiatives with industry associations, peer plans and other organizations that bring scale and additional expertise to our efforts. We encourage improved sustainability and transparency in financial markets in Canada and around the world, and we work with our partners to advocate for meaningful change.

 <p>Member</p>	 <p>Member</p>	 <p>Member</p>
 <p>Signatory</p>	 <p>Member</p>	 <p>Signatory</p>
 <p>Research Partner</p>	 <p>Member</p>	 <p>Member</p>
 <p>Signatory</p>	 <p>Member</p>	 <p>Affiliate</p>

Spotlight: Investor Leadership Network (ILN)



OPTrust is a member of a group of leading global investors collaborating to promote gender diversity in investing, develop sustainable infrastructure investment in emerging economies and advocate for improved climate change disclosures. Through 2019, OPTrust actively participated in ILN's gender diversity and climate change disclosure work streams.



Gender diversity

- OPTrust committed to accelerate progress on gender diversity issues in capital markets by increasing the presence of women in key areas of our organizations and advocating for greater diversity and inclusion with portfolio companies, external managers and in the broader industry.
- The ILN's CEO Council on Diversity actions are complemented by the work of its CIO Roundtable, which is working together to define a common baseline for gender diversity in investment activities and agree on tangible commitments.



Climate change disclosure

- Published [TCFD Implementation: Practical Insights and Perspectives from Behind the Scenes for Institutional Investors](#), a report sharing lessons learned from ILN members' Task Force on Climate-related Financial Disclosures (TCFD) implementation experiences to assist asset owners and fund managers in developing their own climate change strategies and disclosures.

Spotlight: Ceres - Leveraging partners' expertise



Building a climate-conscious culture is part of our climate change strategy and we accomplish this in part through internal education for the OPTrust team and Board of Trustees.

In September, we held a climate change education session with our strategic partner Ceres – open to the broader organization – to understand and manage the growing risks and opportunities posed by climate change that will challenge businesses and affect investment returns in the years and decades to come. Building climate awareness is a key education priority for our organization.

OPTrust continues to conduct data analysis and risk exposure in our total portfolio and measure the fund's full carbon footprint, and report on these actions to the broader organization.

COMMITMENT TO CLIMATE DISCLOSURE



We expect transparency and disclosure from the companies we invest in and are committed to leading by example, including through this report, so our stakeholders are kept informed of our activities and progress. In particular, we continue to promote reporting through the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), whose framework has guided OPTrust's climate change reporting since 2017.

OPTrust has publicly endorsed the recommendations of the TCFD as the global standard to provide investors with the information required to assess the financial impacts of climate change. The following reporting, which adheres to the TCFD four-part framework and recommendations, reflects our commitment to transparency, to the implementation of TCFD's recommendations and to continued improvement in our management of climate-related risks and opportunities.



GOVERNANCE



STRATEGY



**RISK
MANAGEMENT**



**METRICS &
TARGETS**



GOVERNANCE

1. Describe the board's oversight of climate-related risks and opportunities

- OPTrust's Board of Trustees oversees the Plan's responsible investing (RI) program. The Board approves the Statement of Responsible Investing Principles (SRIP) and Proxy Voting Guidelines annually and receives regular reporting on RI and climate-related issues and activities. The Board Investment Committee (IC) is responsible for monitoring the implementation of the RI program and our climate initiatives.

2. Describe management's role in assessing and managing climate-related risks and opportunities

- The Board has delegated responsibility for operationalizing the SRIP to the President and CEO, who in turn delegates to the CIO responsibility for overseeing the RI program, inclusive of the fund's climate change strategy. OPTrust's executive leadership has identified climate change as a significant systemic risk to our mandate, requiring innovative strategy and action.
- Climate-related responsibilities are part of the ESG oversight responsibilities of the RI Committee which is chaired by the CIO and includes representatives from across the organization. Further, the Investment Division is responsible for adhering to the SRIP and investment teams are accountable for any ESG-related risks in the investment process.



STRATEGY

1. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term

- Climate risks can be categorized as physical or transition risks. Physical risks may be chronic (related to longer-term climate shifts, e.g. elevated sea levels) or acute (related to increased frequency and severity of extreme weather events, e.g. wildfires). Transition risks include social risk (e.g. changes in consumer behaviour due to awareness of climate change), technology risk (e.g. the development of disruptive technologies to mitigate the advance and effects of climate change) and regulatory risk (e.g. developments in policy intended to manage climate change).

In short, the risks and opportunities arising from climate change are numerous and wide-ranging, with the potential to impact every aspect of our business.

- Given the broadly diversified nature of OPTrust's portfolio, understanding asset-class-specific climate-related risks and opportunities is key to our climate strategy. For instance, a top priority for our Real Estate Group is the assessment of flooding and other physical risks to the property portfolio, while renewable energy has long been identified as an attractive area of growth for the fund's infrastructure portfolio.
- A 2018 pilot project with Ortec Finance identified several key risks and opportunities to the fund at a macroeconomic level over various time frames:
 - Canada is particularly vulnerable to the energy transition under a steep transition scenario due to its export dependence on fossil fuels. Conversely, Canada is relatively well-positioned to withstand the physical impacts of climate change; a rise in temperature might boost agricultural production, although the potential increase in the severity of extreme weather events could prove immensely disruptive.
 - Although the negative impacts of a 1.5°C pathway on OPTrust's portfolio are dominant in the short and medium term, the consequences of a higher warming pathway become most severe in the long term.
 - Climate-related financial risks are dynamic in nature. Near term, transition-related risks are key, as a significant transition must occur to achieve Paris Agreement ambitions. If these targets are not met, the portfolio will be increasingly exposed to profound physical climate risks. Continued monitoring of developments in climate science and policy is essential to remain agile in this dynamic landscape.

2. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning and how these considerations are factored into investment strategies

- In 2018, OPTrust launched our [Climate Change Action Plan \(CCAP\)](#), a five-year plan which defined eight broad actions to guide the fund's management of climate change risks and opportunities. Now partway through the CCAP's term, OPTrust's senior leadership has reaffirmed the organizational focus on climate change and prioritized renewal to ensure continued alignment with current best practice. Meanwhile, all investment teams are engaged in the integration of climate risks and opportunities within their respective investment strategies.
- 2019 marked the introduction of the Sustainable Investing and Innovation (SII) team, establishing a mandate of building on the fund's strong RI foundation and allocating capital towards managing long-term sustainability issues. With an initial focus on innovations arising from climate change, the SII team will enable OPTrust to more proactively identify and act on emerging climate risks and opportunities.

3. Describe the resilience of the organization's strategy, taking into consideration different future climate scenarios, including a 2°C or lower scenario

- Our 2018 study with Ortec Finance, mentioned earlier, integrated physical and transition risks associated with climate change into forward-looking financial scenario sets to quantify climate change risk in our portfolio's strategic asset allocation. The project involved over 1,000 simulations across three climate change scenarios – 1.5°C, 3°C and 4+°C pathways – to examine the impact of climate change on several macroeconomic variables, GDP, interest rates and inflation. The research delivered several conclusions relating to the sustainability of OPTrust's strategic asset allocation, described above. Work to integrate these insights into portfolio construction and enhance the fund's resilience is ongoing.
- Precise scenario analysis remains an area of development, as it is an immensely complex undertaking that is particularly challenging across a diversified portfolio. We continue to collaborate with peers and support work in this area. We are committed to continually innovating our strategy to remain agile and resilient in the face of evolving climate risks and opportunities.



RISK MANAGEMENT

1. Describe the organization's processes for identifying and assessing climate-related risks

- The foundation of OPTrust's Member-Driven Investing strategy is robust risk management and a risk-conscious culture. With climate change identified as a major systemic threat to our mandate, further developing our thinking on the identification and assessment of associated risks is an organizational priority. As with all material ESG risks, OPTrust's investment teams are responsible for identifying climate-related risks throughout their investment processes. This analysis is informed by the consideration of climate risks intrinsic to the asset class as well as risks arising from other investment characteristics, such as geography and sector exposure.
- In 2019, we began work with a service provider on a total fund climate risk assessment. The project analyzes climate risks across several dimensions, including carbon intensity, exposure to stranded assets and carbon pricing risk. This achieves progress towards the CCAP objective of establishing a comprehensive, bottom-up baseline of climate risk over the entire portfolio.
- To facilitate the identification of material climate risks in the broader financial markets, OPTrust is involved in engagements with investee companies to encourage better disclosure and practices related to climate risks. We are members of several collaborative initiatives, such as Climate Action 100+, that engage significant greenhouse gas (GHG) emitters and advocate for enhanced disclosure and action on climate issues. This commitment is affirmed by our Proxy Voting Guidelines, which direct support towards resolutions encouraging companies to have climate-competent boards overseeing climate risk and resolutions asking companies to adopt the TCFD reporting framework. Further, climate change as a thematic area is a top priority for our engagement partner in dialogue with portfolio companies on our behalf. Focus areas include climate risk in the financial sector and coal phase-out in mining and utilities.

2. Describe the organization's processes for managing climate-related risks

- Our investment teams have developed and implemented procedures tailored to managing climate-related risks within their respective asset classes. For instance, the Real Estate Group has engaged a strategic partner to evaluate select properties' climate risk and develop climate adaptation plans to bolster their resilience.

3. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management

- Investment teams are accountable for identifying, assessing and managing ESG risks – including climate-related ones – in their risk management procedures. This encompasses all stages of the investment life cycle, from the identification and analysis of material climate risks during screening and due diligence to the continued monitoring and management of these risks as an engaged owner.



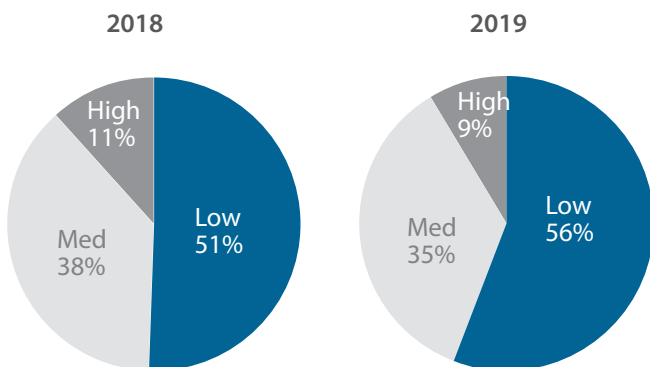
METRICS & TARGETS

1. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process

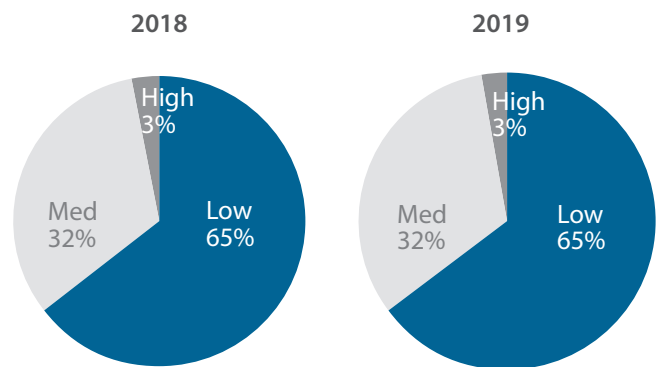
- Since exposure to climate risk is highly dependent on portfolio construction decisions (i.e. high-level sector and geographic allocations), OPTrust conducted an initial total fund climate risk assessment in 2018 using the MSCI ESG Industry Risk Intensity scores and HSBC Climate Vulnerability by Country scores. The results of the assessment were valuable in providing a basic measure for our total fund climate risk exposure. The majority of OPTrust's holdings were shown to correspond to industries and countries with low exposure to climate-related risks.

This exercise was repeated in 2019. While the level of climate risk attributed to geographic exposure was effectively unchanged, there was a significant year-over-year increase in exposure to low-risk industries. This shift does not reflect an intentional allocation to low-risk industries and should not be interpreted as a direct outcome of the fund's climate strategy. Nonetheless, the analysis offers a clear and accessible measure of total fund vulnerability to climate risks from a top-down perspective that is helpful to reassess on a regular basis.

Climate Vulnerability by Industry (MSCI GICS)



Climate Vulnerability by Country (HSBC)



- Further, as introduced in the earlier Risk Management section, OPTrust engaged a service provider in 2019 to conduct our first bottom-up climate risk assessment on a near-total fund basis. In its entirety, this project will evaluate transition and physical climate-related risks and opportunities across all asset classes. The first phase of the project, completed in late 2019, examined carbon intensity, exposure to stranded assets, contribution to energy transition, 2°C alignment and carbon pricing risk in our public markets portfolio.

2. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks

- OPTrust began to measure our portfolio emissions for the first time in 2019. This analysis was conducted as part of the wider total fund climate risk assessment discussed above. A carbon footprint quantifies GHG emissions exposure within the portfolio, presented as tonnes of carbon dioxide equivalents (tCO₂e).
- This carbon footprint analysis was completed on a portion of our externally managed public equities portfolio and calculated carbon exposure using the Weighted Average Carbon Intensity (WACI) methodology, in accordance with TCFD recommendations. A portfolio's WACI can be interpreted as a measure of carbon efficiency, quantifying the emissions associated in deriving a unit of revenue.
- In sharing these figures, we acknowledge the inherent challenges and limitations to calculating and interpreting carbon footprint metrics:
 - Measurement and disclosure of emissions is not standardized, resulting in limited data availability and potential discrepancies across sources.
 - A carbon footprint is a backward-looking statistic that does not account for an organization's strategy or evolution, and is therefore an incomplete gauge of risk.
- Nonetheless, measuring a portfolio's carbon footprint offers a starting point for understanding its embedded emissions and potential associated risks, while disclosure is aligned with the industry best practice that we encourage.
- In 2019, the portion of the public equities portfolio assessed had a carbon footprint of 270 tonnes of tCO₂e equivalent per million dollars of revenue.¹

	Market Value (\$ millions)	WACI Carbon Footprint (tCO ₂ e/\$ millions)
Public Equities	1,618	270

3. Describe the targets used to manage climate-related risks and opportunities and performance against targets

- OPTrust has not established targets relating to carbon-related risks and opportunities, focusing instead on the integration and management of climate-related factors within our investing strategies and targeting continual improvement in this area. This strategy has naturally established a risk-conscious approach to managing the impacts of climate change and prompted investment in areas of opportunity arising from the low-carbon transition, such as renewable energy and sustainable real estate.

Further, as mentioned in the Strategy section, comprehensive and reliable data related to climate risks and opportunities remains an area of development. While existing data and metrics may be useful in providing a baseline understanding of climate risk to the fund, we feel it is premature to use them to inform targets for our organization, especially when their potential impact on preserving our ability to pay pensions – our overarching goal – is not fully understood.

¹ Please refer to the Appendix on p. 24 for further details on our carbon footprint measurement.

LOOKING TO THE FUTURE

SUSTAINABLE INVESTING AND INNOVATION

As previously noted, we recently announced the creation of a Sustainable Investing and Innovation team that will build on our current approach to responsible investing (RI), while also identifying new opportunities to invest in sustainability. This reflects our commitment to overcome the unique challenges we face as long-term investors for the financial benefit of our members and society.

With increased global attention on climate change and stakeholder capitalism, OPTrust continues to build on our RI foundation so we continually focus on creating long-term value by incorporating emerging best-in-class RI integration across our investment portfolio. This includes completing an initial measure of carbon exposure and prioritizing climate change adaptation, diversity and human capital development in our engagement activities.

We recognize that there are opportunities in these areas, and our new team is mandated to develop and deliver against an investment strategy that puts capital to work in innovative areas that support the long-term sustainability of OPTrust's overall portfolio, starting with capturing opportunities stemming from climate change. The focus will be on complementing existing investments where we can tap into the expertise of our investment professionals while pursuing opportunities that are currently underrepresented in our portfolio.

Through this work, we remain committed to building our leadership in responsible investing in a meaningful way.

Launched in late 2019, OPTrust's new Sustainable Investing and Innovation team is uniquely positioned to look beyond responsible investing to identify and capitalize on investment opportunities across asset classes in support of sustainability.



James Davis
Chief Investment Officer



APPENDIX:

NOTES ON METHODOLOGY

Climate Vulnerability Scoring

HSBC ranked 67 developed, emerging and frontier market countries for their vulnerability to climate change risks in the HSBC Global Research report [Fragile Planet: Scoring climate risks around the world](#). The key factors of the analysis are: physical impacts, sensitivity to extreme weather events, energy transition risks and a country's potential to respond to climate change, including financial resources and national governance indicators. We used this ranking to classify countries as high, medium and low to assess the exposure to climate risk.

MSCI ESG Industry Risk Intensity Scores aim to measure the relative magnitude of the ESG risks faced by different industries, stemming from the interplay of environmental, social and governance factors with the core activities of each industry. Some of the themes assessed are: climate change, human capital and corporate governance. From a climate change perspective, MSCI assesses the exposure to costs linked to carbon pricing, carbon regulation, "stranded assets" or reserves, volatile energy costs, indirect exposure to these risks through financing or supply chains and exposure to physical climate risks (e.g. weather patterns).

Source: MSCI ESG Research LLC, (2017) ESG Industry Risk Intensity Scores, MSCI

Carbon Footprint

Source

- Emissions data are provided by S&P Trucost²

Scope

- Included assets and strategies: listed equity held in long-only and multi-asset mandates
- Excluded assets and strategies: listed equity exposure from absolute return strategies and derivatives
- Included emissions: Scope 1 (CO₂e emissions based on GHG directly generated by company operations), Scope 2 (CO₂e emissions generated by purchased electricity, heat or steam)

Data considerations

- Trucost sources emissions figures from company disclosures and, where data availability is incomplete, employs a proprietary model to estimate emissions based on sector and company-specific factors
- Calculations of GHG emissions are standardized as carbon dioxide equivalents (tCO₂e) based on each GHG's ability to absorb heat in the atmosphere

Methodology

- Portfolio Weighted Average Carbon Intensity =

$$\frac{\sum_i^n \text{Value of Equity}_i \text{ in Portfolio} \times \text{Carbon Intensity of Equity}_i}{\text{Value of Portfolio}}$$

$$\text{where Carbon Intensity of Equity}_i = \frac{\text{Total Emissions of Company}_i}{\text{Total Revenues of Company}_i}$$

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