2022 TCFD Report

PSP Investments' Climate-Related Financial Disclosures

Reporting in Accordance with the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD)

PSP

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Governance

Disclose the organization's governance around climate-related risks and opportunities

At PSP Investments, we believe, based on IPCC's scientific evidence, that climate change is a long-term systemic risk that will likely have a material impact on investment risks and returns, across different sectors, geographies and asset classes. Given the broad implications of climate change across our investments, operations, risk management, audit and reporting, the level of Board of Directors and executive committee oversight of our efforts to better understand and manage climate-related risks and opportunities has significantly increased over the years.

Consistent with our mandate and our long-term investment objectives, accountability for our climate change approach is assigned across all asset classes, corporate functions, the Executive Committee, and the Board of Directors. The Responsible Investment (RI) group, which is housed in the Chief Investment Office (CIO), is responsible for the development, thought leadership, and implementation of our climate strategy in collaboration with our asset classes and corporate functions. The RI group reports at least twice a year on ESG matters, including climate change, to the Executive Committee and the Board's Governance Committee. PSP Investments' governance on ESG topics, including climate change, is outlined in further detail in the *Responsible investment governance* section of the FY22 Responsible Investment Report.

Our Board of Directors has been engaged in reviewing and supporting the Updated Corporative View on Climate Change, as well as developing PSP Investments' inaugural Climate Strategy Roadmap, including setting relevant climate-related targets and managing and measuring climate-related risks and opportunities. Our new climate strategy is dynamic, designed to be continuously evolving, and progress is monitored and disclosed regularly to our Executive Committee and Board of Directors, and both aim to monitor it on an ongoing basis. New objectives and priorities have already been established for fiscal year 2023, including developing an escalation policy as part of our climate-related engagement activities. Additional targets and plans will be developed periodically to adapt to the rapidly evolving climate environment, and to provide better insight through improved data quality, coverage, and climate analytics.

Beyond the Board of Directors and Executive Committee, climate-related presentations are regularly delivered to all asset classes, key corporate functions and PSP Investments' employees more broadly to keep them informed and engaged on key climate change insights. We conducted several workshops with asset classes and key corporate functions on our new Green Asset Taxonomy, our inaugural climate strategy, and made evolving tools and program applications available to our employees to monitor climate change risks and opportunities. Climate change has also been one of the key topics presented to employees as part of knowledge-sharing sessions led by PSP Investments' leaders organized during the 2022 Employee Town Hall.

PSP Forward: Our Global Fund First and Sustainable Investing Shift

The Global Fund First is a highly ambitious pillar of our strategic plan, *PSP Forward*. It creates the foundation for PSP Investments to enhance how we manage the total fund, develop global fund investment strategies, and integrate ESG considerations into our investments. The Sustainable Investing Shift (SIS) was launched under the Global Fund First in early fiscal year 2022, and its main objective is to elevate ESG factors, including climate change, to key value drivers in our portfolio construction and investment decisions.

This SIS aims at strengthening our responsible investing foundation by further enhancing our ESG governance, approach to climate change and ESG data integration. The Sustainable Investing Steering Committee is composed of senior members of PSP Investments and led by the Chief Investment Officer. The Sustainable Investing Steering Committee oversees the activities of the Climate Investing Workgroup (CIW), the Data and Insights initiative and the Green Bonds Working Group.

Climate Investing Workgroup (CIW)

In the last year, PSP Investments established a new, cross-asset class forum for discussion of climate-related investment opportunities, execution of the climate investing strategy aspects of the Climate Strategy Roadmap, and knowledge sharing across the organization. The CIW is comprised of senior members from all asset classes, and the RI and Corporate Strategy groups.

The CIW has been established to oversee the monitoring of climate-related opportunities, while most climate-aligned investments will continue to be led by and take place within the asset class portfolios, or in the Complementary Portfolio as part of the CIO. The CIW meets monthly, and members are invited to share knowledge and insights related to their specific area of expertise. This helps build up the required cross-organizational expertise to execute successfully on climate-related investing opportunities as well as periodically adjust the climate investing strategy if required.

Data and Insights Initiative

We also launched the Data and Insight initiative to build the foundational data and technology capabilities required to enhance the integration of ESG metrics in decision-making through investment processes, tools and data analytics. This includes deploying applications and data infrastructure to provide the insights on PSP Investments' new climate strategy and monitor progress towards our climate-related targets. Our Data and Insights Initiative is also focused on generating insights related to the relationship between asset-level emissions and financial performance.

Green Bond Working Group

As part of our new green bond program launched in FY22, a Green Bond Working Group (GBW) has been established. The GBW played a central role in the development of our Green Bond Framework, is responsible for evaluating and selecting Green Bond eligible assets, manages the green bond register and issuance process, and monitors relevant environmental performance indicators for the purpose of impact reporting. The GBW is comprised of representatives from the Treasury, RI and Legal Affairs groups as well as various asset classes including Real Estate, Infrastructure, and Natural Resources.

PSP Investments issued an inaugural $1.0 billion, 10-year green bond in February 2022, under the Green Bond Framework released earlier that month.

Both our Green Bond Framework and our inaugural issuance will enable us to contribute to a low-carbon economy and meet growing investor demand for sustainable products. Green bond proceeds will be used to fund projects with high environmental impact or those where environmental performance will improve over time.

Our Green Bond Framework was awarded an environmental rating of "Medium Green" and the highest possible governance score of "Excellent" by CICERO Shades of Green, an internationally recognized provider of independent reviews of green bond frameworks.

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material

The ways in which pension investment managers like PSP Investments could be affected by climate change are diverse and interconnected with many economic, social and sustainability issues. The large-scale and complex nature of unabated climate change make it a unique societal challenge, particularly in the context of investment decision-making and portfolio construction.

As a result of this complexity, as described in further detail in our Climate Strategy Roadmap, we deploy a whole-of-firm approach to minimizing climate-related risks and maximizing our exposure to climate change opportunities aligned with the Paris Agreement. We conduct an annual climate scenario analysis and stress-testing of our policy portfolio; factor material climate risks into investment decisions; consider investment opportunities that contribute to the transition to a low-carbon economy; and encourage enhanced emissions disclosure on climate change risks by companies in which we invest through active ownership. For more information, please see our section below entitled "Risk Management" and our FY22 RI Report.

We understand that we have an important role to play, where appropriate, in actively engaging with and influencing the companies in which we invest to adopt ambitious climate change approaches and to provide rigorous climate-related financial disclosures. This, in turn, allows us to strengthen our own climate-related disclosure and integration practices, and improve our capital allocation to investments best placed to deliver long-term sustainable returns.

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

In their Special Report on 1.5°C, the Intergovernmental Panel on Climate Change (IPCC) – the world's pre-eminent scientific body on the science of climate change – concluded that global net human-caused emissions would need to fall by about 45 percent from 2010 levels by 2030 and would need to reach "net zero" around 2050, in order to avoid the most catastrophic impacts of climate change. The world is not presently on track to achieve the deep emissions cuts required to secure this temperature objective. Scientists presently estimate that at least 1.1°C of warming can be observed.[1] Unfortunately, the short-term effects of systemic climate change are already being felt around the globe and are manifesting as extreme weather events. Moreover, the IPCC 2022 Report: Impacts, Adaptation and Vulnerability concluded that the negative impacts of climate change are more widespread and severe than expected.

We know that climate change can affect our investments directly and indirectly, and both types of impacts must be robustly considered in the execution of our strategies. Impacts can manifest in two key manners:

- Directly, through extreme weather events impacting asset productivity, and/or through climate policies directly impacting the economy, such as economy-wide carbon pricing. These direct impacts are known as physical and transition risks;
- Indirectly through the 'pricing-in' of climate risks and opportunities, where financial markets anticipate future direct impacts in advance of their potential or actual occurrence.

This year, PSP Investments partnered with Ortec Finance to consider three plausible climate pathways and their potential impacts to the PSP Investments portfolio. Ortec has captured both direct and indirect impacts in the scenarios employed, and PSP Investments Chief Investment Office has analyzed these results. Key findings are discussed in more detail throughout this section.

[1] Tollefson, Jeff. "IPCC climate report: Earth is warmer than it's been in 125,000 years." Nature (2021).

Short-term (pre-2030):

- From an investment risk perspective, depending on the severity and frequency of impacts, increased physical risks could result in both market risks and credit risks to the financial system. Market risks generally manifest themselves through reductions in the value of financial assets while credit risks come from the reduction in value of assets used as collateral. Underlying factors could include reduced revenues of investee companies caused by temporary store closures, supply chain disruptions, damaged infrastructure, asset write-downs, rise in insurance costs and increased capital expenditures due to reconstruction.
- Beyond short-term physical risks, short-term transition risks are also increasingly present. In the last year, many governments around the world have introduced significant new legislative and regulatory requirements to curb GHG emissions from incumbent economic activities. While these policy efforts are laudable and increase the probability that the long-term reduction objectives stipulated by the IPCC will be met, they do introduce transition risks of financial loss to existing investments that are not adequately positioned for the low-carbon transition. In our view, companies taking near-term action to establish carbon emission reduction goals and measure their progress against credible third-party standards such as the Science-based Target Initiatives (SBTi) are likely to reduce their transition risks.
- Given these physical risk and transition risk dynamics, it is possible that investors have underestimated the short-term impacts of climate change in their financial modelling and projections. We believe that ensuring climate change considerations are well integrated into the investment decision-making process can reduce these risks considerably.
- Moreover, for institutional investors managing large-scale diversified portfolios of investments across asset classes, sectors and geographies, assessing portfolio-level alignment to a global net zero scenario, and against a 1.5°C degree pathway, represents a significant conceptual and analytical challenge. Currently, there is a lack of data disclosure and no optimal or globally accepted framework for investors to quantitatively assess the climate resiliency of their investment portfolio, nor there is a globally accepted framework to measure their transition readiness. Without a robust and holistic portfolio-level framework at their disposal, investors may fail to correctly position their portfolio on a net-zero pathway, which can potentially lead to misallocation of capital and poor investment performance.
- In response to this challenge, PSP Investments has developed a bespoke Green Asset Taxonomy – as described further in its inaugural Climate Strategy Roadmap, Green Asset Taxonomy whitepaper, and FY22 Responsible Investment Report. Based on the results of this inaugural baseline study, we have established short-term investment and engagement targets to positively position our portfolio in the face of climate change risks and opportunities.

Medium-term (2030-2040):

- In the medium-term, climate change physical and transition risks are likely to intensify. In the absence of significant progress to reduce emissions, temperature will approach the 2°C threshold, resulting in more natural hazards effects. This may impact human health, fresh water, and food systems particularly severely.
- In the medium-term, we expect regulators take additional policy action. As a result, carbon intensive investments may face increasingly strict regulatory requirements, eroding their capacity to generate future returns, hence the risk of lower valuations. Moreover, we expect physical risks will intensify, resulting in more frequent and impactful extreme weather events.
- From an opportunity perspective, we expect that low-carbon products, technologies and services will mature over this timeframe and the supply and demand for decarbonization solutions will increase, presenting new opportunities for business model transformations.

Long-term (2040-beyond):

- In the long-term, climate change risks may present along different pathways: Paris Agreement success or a failed transition. With respect to a successful Paris Agreement pathway, the net-zero transition can manifest in an orderly or disorderly fashion.

As outlined by Ortec Finance, each of these pathways have unique features:

Orderly NetZero by 2050	Disorderly NetZero by 2050	Failed Transition Pathway
• **Early and smooth** transition • **Market pricing-in** dynamics occur smoothed out in the first 4 years • **Locked-in** physical impacts	• Sudden divestments in 2025 to align portfolios to the Paris Agreement goals have **disruptive effects on financial markets** with sudden repricing followed by stranded assets and a sentiment shock • **Locked-in** physical impacts	• The world **fails to meet the Paris Agreement goals** and global warming reaches 4.3°C above pre-industrial levels by 2100 • **Severe** gradual physical & extreme weather impacts • **Markets price in physical risks** of the coming 40 years over 2026-2030, and risks of 40-80 years over 2036-2040
Average temperature increase of 1.5°C	Average temperature increase of 1.5°C	Average temperature increase by 2100 of 4.3°C

- A failed transition scenario generates lower returns relative to an orderly net-zero transition scenario, with the most material impact stemming from increased physical risks. Moreover, climate change is expected to generate higher inflation, particularly for emerging market countries, but the impact on Canadian inflation is expected to be limited relative to other countries.
- Generally, we expect supply chain risks to increase due to higher climate change physical risks. This could negatively impact investee companies' capacity to source raw materials as part of their production cycle. The transportation of goods could also become more challenging if physical infrastructure assets are affected, like roads and bridges. This may imply higher inflation and reduced operating margins for investee companies operating in specific sectors and regions.
- Moreover, the connectivity of climate change to other sustainability issues, for example biodiversity, constitutes an additional significant risk for long-term investors and asset owners. Biodiversity contributes to and enhances climate mitigation and adaptation while climate change can lead to degradation and loss of land and marine biodiversity. Going forward, continued transformation of terrestrial and ocean/coastal ecosystems and loss of biodiversity, exacerbated by pollution and land-use changes, could potentially threaten livelihoods, and food security, which in turn could significantly impact global financial markets.
- Overall, while long-term climate risks are not fully known or understood, if emissions continue to rise there is increased likelihood that climate change impacts will intersect with food security, energy, water and geopolitical tension – resulting in potentially significant and disruptive impacts to investee companies and therefore could result in a challenging environment for PSP Investments to achieve long-term positive returns. That said, based on climate scenario analysis performed (as further described below), our policy portfolio would still achieve better relative performance compared to its reference portfolio.
- From an opportunity perspective, there is also significant potential for low-carbon solutions providers to innovate and deploy technology at scale to mitigate and respond to these impacts. These opportunities may translate into new growth opportunities for investee companies well aligned to the low carbon transition, and/or who provide products, technologies and services that support climate change adaptation.

b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

For long-term institutional investors such as PSP Investments, climate change risks and opportunities, such as those identified in a) above, present new opportunities and challenges. In the past year, we have significantly accelerated our efforts to better assess and address the risks and opportunities posed by climate change on our investment strategy.

As mentioned in the above section, given the lack of portfolio-level climate transition alignment framework available in the market today, we have developed our own Green Asset Taxonomy and carried out our inaugural baseline exercise to better understand our exposure to climate risks and opportunities across our investment portfolio, and to identify potential ways to steer our engagements with portfolio companies, where appropriate, toward relevant decarbonization opportunities. This framework also allows us to assess our exposure to different types of green, transition and carbon-intensive investments. Please see our Green Asset Taxonomy whitepaper for further technical information.

As a result of the development of this Green Asset Taxonomy and the conclusions of our inaugural baseline exercise, we launched our inaugural Climate Strategy Roadmap with enhanced ambition to guide emissions reduction across our investment portfolio. As the need for urgent climate action continues to rise, PSP Investments established tangible short-term climate-related targets, aimed at supporting global net-zero emissions by 2050. Progress will be monitored and disclosed annually, and additional targets and plans will be developed and updated regularly. These targets are further outlined in the *Spotlight on our climate strategy* section of our FY22 RI Report.

Beyond these short-term portfolio investment and engagement targets, we have also set ourselves the goal of measuring and managing our operational carbon footprint. We have done initial calculations and analysis and see this as an opportunity to align our corporate activities and priorities with our climate change investments approach.

In February 2022, we also launched our new green bond program with an initial issue of C$1.0 billion 10-year Green Bond, and the publication of our Green Bond Framework based on best market practices of the International Capital Market Association (ICMA). Net proceeds from the green bond issuances will be allocated to assets that demonstrate strong ESG performance and support the transition to a low-carbon economy. All Eligible Green Assets will contribute to one or more of PSP Investments' Green Bond Framework pillars. Our Green Bond Framework has been awarded an environmental rating of "Medium Green" and the highest possible governance score of "Excellent" by CICERO Shades of Green, a leading global provider of second opinions on green bonds.

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

From a strategic asset allocation perspective, our multi-year climate change approach includes climate scenario analysis and stress-testing, which help us understand how climate change can influence investment performance in both the short and long term and what steps could be taken to protect and better position our portfolio of assets. Conducted annually since 2019, this exercise improves our understanding of the impacts of climate change physical and transition risks on our long-term asset allocation. This year, additional analysis has been undertaken to assess the resilience of the policy portfolio relative to the reference portfolio in a 1.5°C scenario. This constitutes an additional step in PSP Investments' scenario analysis approach, which has historically assessed 2°C, 3°C, and 4°C scenarios, providing a reasonable diversity of potential future climate states.

Active management, dynamic portfolio construction and climate aware investment choices lead to better positioning of the policy portfolio compared to the reference portfolio. Hence, the actual investment portfolio is better positioned from a risk and return perspective in the context of climate change.

Also, due to our broad diversification across asset classes and geographies, PSP Investments' policy portfolio is better positioned from a risk and return perspective relative to the reference portfolio under all climate scenarios considered. This conclusion is due to our active management, dynamic portfolio construction and historical climate aware investment choices across asset classes and geographies.

We are pleased that this independent, external scenario analysis has confirmed the resilience of PSP Investments' Total Fund Strategy under many different future climate scenarios, including an orderly or disorderly, and failed net-zero scenario by 2050.

Risk Management

Disclose how the organization identifies, assesses and manages climate-related risks

Climate change risks can manifest in various ways across investment portfolios. As current natural hazards events have demonstrated, the physical risks from extreme weather events and long-term shifts in climate patterns can disrupt business and negatively impact local and regional economies and, hence, real assets. Transition risks, on the other hand, are those induced by societal responses to avert the worst impacts of climate change, including shifts in policy, legislation, technology and markets resulting in mitigation and adaptation measures. PSP Investments is undertaking activities to minimize and manage both aspects of climate risk.

a) Describe the organization's processes for identifying and assessing climate-related risks

Our process for identifying and assessing climate-related risks is performed both at the total fund level, and at the individual investment level.

Top-down climate change scenario analysis:

First, at the total portfolio level, we perform annual climate change scenario analysis and stress-testing as part of our annual portfolio construction review process to assess the resilience of our long-term strategic asset allocation. This assessment informs us which asset classes or sectors may present higher exposure to climate change transition and physical risks. From this analysis, PSP Investments has re-confirmed its view that the negative impacts of climate change are likely to materialize sooner than originally expected, and possibly with more severity, due to delayed global action to reduce GHG emissions as agreed in the Paris Agreement.

In general, for all climate scenarios considered, investors should expect lower returns as compared to a world in which systemic climate change does not exist given that both physical and transition risk are likely not fully "priced-in" by financial market participants. However, a net zero transition scenario – even a disorderly one – enables global economies to stabilize once the transition has been completed. This demonstrates the need for investors to actively engage with companies and sovereigns to develop credible transition plans. For this reason, PSP Investments' climate change strategy considers both current GHG emissions and long-term climate change commitments, underpinned by tangible evidence. Risks identified in this analysis are presented to the Chief Executive Officer and the Executive Committee on an as-needed basis.

Bottom-up climate change investment analysis

At the investment level, the amount of due diligence that we perform is based on the sensitivity of a given asset or company to climate risks. For internally managed investments, we consider whether climate change physical or transition risk could have a material impact on the company's enterprise value, based on the sector and geography in which it operates. Relevant physical and transition risks, as well as opportunities, are then assessed during the due diligence process, including credible transition plans and emissions disclosure. For more information on our ESG integration framework for our internally managed investments, please refer to the *Internally managed investments* section in our FY22 RI Report.

For example, our private market real assets (infrastructure, real estate and natural resources) are generally more sensitive to physical risks of climate change relative to public equities or fixed income. In this case, we would perform an initial physical risk sensitivity assessment using our physical risk analytics platform. The initial assessment models the impact of natural hazards including extreme temperature, drought, wildfire, coastal flooding, fluvial flooding, water stress, tropical cyclones and others, on each type of assets considered based on their specific vulnerability and geographic location. The platform provides a metric, known as the Modeled Average Annual Loss – which estimates the financial impacts (or losses) a given asset may experience due to physical hazards in different climate scenarios and over different time periods. This metric allows for benchmarking across geographies and investment opportunities, and results can be aggregated at the portfolio level. If a particular investment is considered significantly more at risk, we would generally conduct deeper-dive climate risk analysis from external industry experts and specialized consultants. The main results of this analysis would then be communicated to the risk and investment management committee for final decision-making.

We identify and assess transition risks of climate change by performing an initial sensitivity analysis using company self-reported GHG data. This analysis called the *marginal carbon footprint contribution* provides us with insights on the impact of adding a given investment to PSP Investments' overall portfolio carbon footprint, but also the contribution relative to other existing investments in the portfolio or outside (peer comparison). We also assess the investee company's transition strategy, including its short-term and longer-term carbon emissions reduction objectives. From a climate risk exposure perspective, we also provide information regarding the positioning of an asset on our two-dimensional green asset taxonomy, including defining if a particular asset is considered green, transition, or carbon-intensive. An investment's relative positioning on our Green Asset Taxonomy acts as a proxy for the asset's fundamental exposure to climate change transition risk, since it is hinged to both its greenhouse gas performance and its forward-looking corporate strategy on climate change.

For externally managed investments, with respect to onboarding new General Partners and External Managers, we survey partners to understand how they consider climate change risks and opportunities when investing on our behalf. This year, we updated our assessment framework for General Partners and External Managers to include climate change considerations, including other ESG risk identification. For further information, please see our *Externally managed investments* section in our FY22 RI Report.

Lastly, as part of our commitment to align with industry best practices in assessing climate change risks and opportunities at the investment level, we often leverage our relationships with external consultants and industry experts. We strive to continuously improve our understanding of the potential downside risks associated with climate change, as well as potential benefits and opportunities across key industries. Beyond risks, we also seek the latest market information on how the transition to a low-carbon economy is driving innovation and growth in many sectors, creating attractive opportunities for long-term investors like PSP Investments.

b) Describe the organization's processes for managing climate-related risks

Consistent with our mandate, we manage risks and opportunities related to climate change through: (i) the integration of material climate change considerations at each stage of our investment process and within our portfolio construction activities; (ii) seeking to pursue investment opportunities relating to the transition to a low-carbon economy and working to reduce carbon emissions across our portfolio; (iii) engaging with our investee companies, where appropriate, to encourage their governance and management of climate change risks, including credible transition commitments, and to support enhanced disclosure against the TCFD framework, where appropriate; and (iv) scaling our collaborative efforts with leading organizations to further drive our collective understanding of climate change and its potential impact going forward.

One of our roles as an investor is being an active steward of the assets we own. We regularly engage with companies and partners, where appropriate, to advocate for and improve relevant ESG practices, including climate-related practices.[2] We believe that through this ongoing dialogue, we can encourage sustainable corporate conduct and enhance long-term overall corporate performance.

In the past year, we have increased our engagement activities with companies and partners on decarbonization planning and asset management practices aligned with science-based targets, to ensure business plans are resilient in the face of a changing climate.

With respect to ensuring investments support the long-term goals of the Paris Agreement, we increasingly seek to ensure that our investments demonstrate alignment with sector-specific emissions reductions trajectories as outlined in the International Energy Agency's (IEA) Net-Zero Scenario, guidance from the Scienced-Based Targets Initiative (SBTi), the Investor Leadership Network (ILN) sector decarbonization pathways, or other credible modeling sources in alignment with a 1.5-degree climate scenario.

While divesting from carbon-intensive assets may have an impact on our portfolio's carbon footprint metrics, it may not result in real-world GHG emissions reductions. In that spirit, PSP Investments' approach is generally one of engagement (where appropriate), not divestment. However, by effectively incorporating ESG risks and opportunities into our investment decision-making and asset management, we may exclude or divest from investments where long-term financial risks do not align with our investment beliefs and the meeting of our mandate.

[2] For more information on our engagement approach, see page 27 of the FY22 RI Report.

Our approach and expectations

We expect and encourage boards of directors and company executives at investee companies to ensure climate-related risks and opportunities are integrated into their strategy and operations, and to provide, where material, disclosures that allow shareholders to take informed decisions on that basis. Where boards fail to demonstrate adequate consideration of physical and transition-related impacts from climate change, we will consider, in light of value and portfolio risk considerations, voting against directors to hold them accountable. We also generally support shareholder proposals seeking enhanced climate-related disclosures.

In public markets, Say-on-Climate proposals have emerged and opened a new avenue for shareholders to provide feedback on company transition plans. We believe investors have a role to play in shaping best practices surrounding this new engagement tool. By clearly expressing our expectations to companies on transition plans, including a sound governance structure, company's accountability for overseeing its climate strategy and alignment with climate science, we encourage companies to increase the credibility of their transition efforts while protecting shareholders' interests.

On a case-by-case basis, and depending on PSP Investments' ownership position, we will prioritize pragmatic engagements to articulate our views on the energy transition and determine if management has the capacity and willingness to improve their climate-related disclosure practices.

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

Through our analysis of climate change risks and opportunities, we seek to understand the consequences of climate change on our ability to generate long-term positive returns, hence, to achieve our mandate. Our climate integration approach is highly collaborative, with investment teams and the Responsible Investment group working together to assess a company's risks and opportunities associated with its practices. We believe that ensuring a strong integration across the total fund allows us to protect and enhance long-term financial value for our beneficiaries.

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities, where such information is material

Portfolio Carbon Footprint Metrics

PSP Investments started measuring the carbon footprint and carbon intensity of its assets under management in fiscal year 2017 and began publicly disclosing those numbers in 2019. Since our first disclosure, we have been committed to continuously improving our methodologies, to enhancing the quality of underlying data by adding more self-reported GHG emissions data instead of using estimates or proxies, and to rapidly evolving our analytical tools and system to monitor climate risks and opportunities.

This year, to steadily improve our disclosure in line with best market practices, and based on recommendations from the TCFD, we are disclosing three different portfolio carbon footprint metrics:

1. **Weighted Average Carbon Intensity** (WACI);
2. **Financed Emissions** (PCAF-informed approach)[3];
3. **Carbon Footprint** (Equity-only approach);

The WACI metric is PSP Investments' preferred carbon accounting methodology. It is a TCFD-recommended metric and it is used in our Climate Strategy Roadmap and Green Asset Taxonomy. The financed emissions metric is the newest addition to our climate disclosures and provides useful information to understand emissions resulting from activities that are financed through both lending and investment portfolios. Finally, we continued to report our portfolio carbon footprint metric this year for comparison purposes, but we expect to gradually phase out this metric over time.

The table provides details on these three metrics:

Metric	**Weighted Average Carbon Intensity** (tonnes CO_2e/$ million revenue)	**Financed Emissions – PCAF informed** (tonnes CO_2e/$M invested on an EVIC basis)	**Portfolio Carbon Footprint – Equity-only** (tonnes CO_2e/$M invested on an equity basis)
Description	Provides portfolio-level exposure to carbon-intensive companies, by measuring carbon emissions normalized by revenues	Total carbon emissions for a portfolio normalized by the market value of the portfolio, as determined by the enterprise value of underlying investments	Carbon emissions for a portfolio normalized by the market value of the portfolio, on an equity-only basis. This methodology does not allow for the inclusion of debt investments.
Carbon accounting equation	$\sum_{i}^{n} \frac{\text{Holding NAV}_i}{\text{PSP portfolio NAV}} * \frac{\text{Issuer'}_i\text{ GHG emissions}}{\text{Issuer'}_i\text{ revenues}}$	$\text{Financed emissions} = \sum_{c} \frac{\text{Outstanding amount}_c}{\text{Total equity + debt}_c} \times \text{Company emissions}_c$	$\sum_{i}^{n} \frac{\text{Holding NAV}_i}{\text{Issuer'}_i\text{s Mkt Cap}} * \text{Issuer'}_i\text{ GHG emissions}$
Methodology in brief	1. Normalize company Scope 1 and Scope 2 emissions by company revenues 2. Multiply by weight in PSP portfolio 3. Sum across portfolios and the total fund	1. Calculate PSP attribution factor, based on equity and debt exposure over the company's enterprise value 2. Multiply attribution factor by company Scope 1 and Scope 2 emissions 3. Sum across portfolios and the total fund	1. Calculate PSP attribution factor, based on equity exposure over the company's market value 2. Multiply attribution factor by company Scope 1 and Scope 2 emissions 3. Sum across portfolios and the total fund

[3] PCAF stands for Partnership for Carbon Accounting Financials and provides a new Global Accounting and Reporting Standard for the Financial Industry.

Metric	**Weighted Average Carbon Intensity** (tonnes CO2e/$ million revenue)	**Financed Emissions – PCAF informed** (tonnes CO2e/$M invested on an EVIC basis)	**Portfolio Carbon Footprint – Equity-only** (tonnes CO2e/$M invested on an equity basis)
In-scope of Total AUM	87% (+11% relative to last year)	87% (new metric this year)	77% (below other two metrics since credit investments are excluded)
In-scope Asset Types	**Private Markets:** Direct and indirect investments in private equity, infrastructure, real estate, natural resources, credit investment and the complementary portfolio. **Public Markets:** Shares in long-only public equity strategies (active and passive), externally managed investments, exposure to the underlying stocks through Total Return Swaps.	**Private Markets:** Direct and indirect investments in private equity, infrastructure, real estate, natural resources, credit investment and the complementary portfolio. **Public Markets:** Shares in long-only public equity strategies (active and passive), externally managed investments, exposure to the underlying stocks through Total Return Swaps.	**Private Markets:** Direct and indirect investments in private equity, infrastructure, real estate, natural resources, and the complementary portfolio. **Public Markets:** Shares in long-only public equity strategies (active and passive), externally managed investments, exposure to the underlying stocks through Total Return Swaps.
Out-of-scope Asset Types	**Private Markets:** Any balances associated with working capital, cash or debt instruments, fund of funds. **Public Markets:** Shares in long-short public equity strategies, corporate and government bonds, cash and money market instruments, derivatives, securities held through exchange traded funds (ETFs).	**Private Markets:** Any balances associated with working capital, cash or debt instruments, fund of funds. **Public Markets:** Shares in long-short public equity strategies, corporate and government bonds, cash and money market instruments, derivatives, securities held through exchange traded funds (ETFs).	**Private Markets:** Credit investment, corporate and government bonds, any balances associated with working capital, cash or debt instruments, fund of funds. **Public Markets:** Shares in long-short public equity strategies, corporate and government bonds, cash and money market instruments, derivatives, securities held through exchange traded funds (ETFs).

Weighted Average Carbon Intensity (WACI)

Our WACI metric is used to calculate the portfolio's exposure to carbon-intensive companies. This TCFD-recommended metric is PSP Investments' preferred carbon accounting approach and is used in the implementation of the Climate Strategy Roadmap and Green Asset Taxonomy.

Weighted Average Carbon Intensity (WACI)[4] (tonnes CO2e/$ million revenue)		
	2022	**2021**
Public Markets	156	149
Private Markets	170	99
Total Results *(tonnes CO2e/$ million revenue)*	**166**	**116**

PSP Investments' WACI has increased by approximately 43% this year. While this increase is significant, multiple factors can explain this result:

1. Since the calculation of the WACI requires normalizing investee company GHG emissions by revenues over the same reporting period, the metric is highly impacted by large macro-economic events that reduce revenues.
2. We have improved our methodology pertaining to GHG data and estimates. We have increased the percentage of investee company reported data, and we have improved our methodology for GHG proxies to obtain more granular sub-industry estimates. In some cases, this has resulted in higher estimates than those previously applied.
3. We have executed several large transactions in sectors which we believe have substantial potential to transition towards lower GHG performance over time. These positions increase our WACI in the short term.

[4] Please note that the scope has changed since last reporting. The inclusion of credit investments and the complementary portfolio doesn't allow for a like-for-like comparison.

Financed Emissions: PCAF informed approach

For the first time, PSP Investments is disclosing a financed emissions metric informed by the guidance produced by the Partnership For Carbon Accounting Financials (PCAF).

This methodology allows for the inclusion of debt investments and provides alignment for market participants around an enterprise value reporting approach. Going forward, we aim to assess our portfolio using a methodology informed by this metric on an annual basis.

Financed Emissions – PCAF Informed
(tonnes CO2e/$M invested on an EVIC basis)

	2022	2021
Absolute Emissions (ktCO2e)		
Public Markets	2,871	N/A
Private Markets	7,575	
Assets under management in-scope ($M invested)		
Public Markets	53,953	N/A
Private Markets	131,270	
Financed Emissions – PCAF Informed		
Total Results *(tonnes CO2e/$M invested on an EVIC basis)*	**56**	**N/A**

There are some areas in which our application of the PCAF methodology has diverged from current guidance. This divergence is in the spirit of increasing total coverage of the metric and ensuring its suitability for an institutional investor like PSP Investments.

1. **Exclusion of funds:** The Standard does not provide explicit guidance on methods to calculate financed emissions for unlisted equity investment funds[5]. Since PSP Investments has material exposure through fund investments, we believe that excluding these investments would negatively impact the scope and validity of this calculation. We have therefore decided to include those investments with the goal of providing the most representative view of PSP Investments' total financed emissions in this inaugural calculation for FY22.
2. **Availability of data:** Information for underlying investments in funds can be challenging to obtain. In situations where we could not retrieve underlying debt information on investments, we have used an equity-only approach. This has the effect of overestimating PSP Investments' attribution factor. More specifically, 72% of our PCAF informed metric was calculated using a Total Enterprise Value approach. The remaining was calculated based on an equity-only basis. This approach was taken in the spirit of increasing coverage of the financed emissions metric.
3. **Exclusion of derivatives:** The Standard does not provide explicit guidance on methods to calculate financed emissions from derivatives. At PSP Investments, our Capital Market portfolio has exposure to Total Return Swaps for which we have GHG information at the underlying investment level. We have therefore included these investments in the spirit of increasing coverage and providing a more representative picture of PSP Investments' total fund financed emissions.

We expect that the PCAF methodology will improve over time.

[5] PCAF (2020). The Global GHG Accounting and Reporting Standard for the Financial Industry. First edition. Page 44.

Portfolio Carbon Footprint: Equity-only approach

To allow for like-for-like comparison to our fiscal year 2021 carbon emissions metrics, we continued to calculate using the Equity-only approach for fiscal year 2022. This approach is calculated using GHG data of a company and multiplying it by the percentage ownership of PSP Investments' equity holding in that company. The attributed emissions are then normalized by PSP Investments' portfolio NAV.

Portfolio Carbon Footprint – Equity only
(tonnes CO2e/$M invested on an equity-only basis)

	2022	2021
Absolute Emissions (ktCO2e)		
Public Markets	4,893	5,830
Private Markets	9,065	10,198
Assets under management in-scope ($M invested)		
Public Markets	53,953	56,304
Private Markets	113,496	102,839
Portfolio Carbon footprint – Equity only		
Total Results *(tonnes CO2e/$M invested on an equity-only basis)*	**83**	**101**

In fiscal year 2022, our portfolio carbon footprint trended downward, from 101 to 83 tonnes of CO2e per million dollars invested. Two main reasons for this 17% decline are:

1. In the last fiscal year, our absolute attributed emissions have reduced by 13% on a like-for-like basis. This decline is in part due to the reduction of carbon emissions by portfolio companies and lower economic activities resulting from COVID-19[6].
2. Assets under management increased by 5.2% over this period.

Methodology: In Depth

The methodology used by PSP Investments to calculate portfolio carbon footprint and financed emissions is based on the GHG Protocol and informed by the requirements set forth in the PCAF Corporate Value Chain (Scope 3) Accounting and Reporting Standard for category 15 investment activities.

We include investee companies' Scope 1 and Scope 2 emissions in our portfolio carbon footprint metrics. Scope 1 emissions are direct emissions from owned or controlled sources at our portfolio companies. Scope 2 emissions are those associated with purchased energy.

Investee companies' Scope 3 emissions cover other indirect sources such as the extraction and production of purchased materials and fuels, outsourced activities, business travel and waste disposal. At this stage, investee companies' Scope 3 emissions are excluded from the calculation because the comparability, coverage, transparency and reliability of Scope 3 data is generally insufficient in the marketplace. We intend to include greater amounts of Scope 3 data as it becomes more widely available and reliable.

We use emissions data either directly obtained from investee companies or from proprietary data sources. This Scope 1 and Scope 2 GHG data is used consistently across all three carbon accounting metrics.

[6] As of March 31, 2022, most investee company GHG information available in the market was from 2020 during which impacts of COVID-19 were significant for the overall economy.

We acknowledge that companies use different methodologies to calculate and report their GHG emissions. For those companies that do not report their GHG emissions, we use a waterfall approach, as explained below:[7]

1. **Company-reported emissions (42% of NAV)**
   a) This represents an increase of 14% relative to FY2021. In the last year, PSP Investments undertook a significant data collection exercise across its private markets investments, for both direct and indirect positions. This year-long data collection initiative was a central action within PSP Investments' data-driven ESG priority.

2. **Estimate based on company-specific factors (9% of NAV)**
   a) For Natural Resources, an estimation method was employed for sub-industries of particular importance, including livestock and dairy production. In these cases, emissions were estimated based on investee company's historical production data, scientific literature and life-cycle analysis, and public markets benchmarks.

   For Real Estate, in cases where partial building energy data is available, a third-party consultant estimated the remaining based on partial data and/or industry-specific benchmarks.

3. **Proxy based on sub-industry average emissions (49% of NAV)**
   a) This number has declined by 18% since last year – which has significantly improved the quality and robustness of PSP Investments disclosures.
   b) This year, in alignment with broader portfolio management priorities, we moved our sub-industry GHG emissions estimation approach from the Global Industry Classification System (GICS) to the Bloomberg Industry Classification System (BICS). These new sub-industry benchmarks allow for a more granular estimation of GHG emissions at the company level, which again significantly improves the accuracy of our TCFD reporting.

As we use our capital and influence to support the global transition to net-zero emissions by 2050, we remain committed to advancing market-leading carbon accounting and methodology practices and to upholding a high degree of public transparency regarding the methodologies that underpin our climate-related financial disclosures.

Given the dynamic nature of GHG data and reporting, and the evolution of leading practices in the field, PSP Investments uses guidance and methodologies provided by the TCFD and the Partnership for Carbon Accounting Financials (PCAF). Emissions disclosure by portfolio companies is voluntary, not always consistent or timely, and the coverage is limited. The scope of assets under management as part of our climate strategy is growing and the data quality and coverage is improving over time.

In this report, PSP uses three methodologies to calculate its GHG footprint. All three metrics used by PSP Investments are impacted by macroeconomic factors that may impact investee company absolute carbon emissions. While the carbon footprint and the new, still under development, PCAF financed emissions metrics are useful measures to understand portfolio-level emissions, they may vary over the short-term due to changes in in recommended methodology, and PSP's portfolio's net asset value in scope. On the other hand, the Weighted Average Carbon Intensity (WACI) metric is normalized by company revenues and is therefore impacted by factors that may drive sudden changes in investee company revenues, such as, for example, COVID-19. Moreover, because the WACI metric does not use an investor's proportional share of total equity, this metric is not sensitive to share price movements or market fluctuations. As a result, these metrics don't always change similarly in direction or magnitude.

By executing on our climate strategy, we anticipate reducing our portfolio GHG emissions intensity by 20-25% by 2026 relative to a 2021 baseline. However, PSP Investments does not manage to a particular carbon footprint or financed emissions value for a given year. Due to our commitment to increase our exposure to transition assets, it is likely that we will observe short-term increases to our carbon footprint due to the introduction of higher carbon positions in our portfolio. The effect of these investments are expected to reduce over time as asset-level decarbonization strategies are successfully executed by portfolio companies.

[7] Please note that this section describes the coverage for our PCAF informed metric.

Green Asset Taxonomy: Metrics and Targets

To continue to evolve PSP Investments' climate measurement and management approach, we developed an in-house classification system called the Green Asset Taxonomy. The Green Asset Taxonomy was used to conduct an inaugural baseline assessment of PSP Investments' exposure to green, transition and carbon-intensive assets. The results of this assessment have been published as part of the launch of the inaugural climate strategy and were the foundation for the establishment of PSP Investments' first climate-related targets. Please see our Green Asset Taxonomy whitepaper for further technical information.

Using our Green Asset Taxonomy baseline as a starting point, PSP Investments announced short-term investment and engagement targets to be met by 2026. These are commitments that aim to:

- Increase investments in Green Assets to C$70.0 billion
- Increase investments in Transition Assets to C$7.5 billion
- Reduce holdings of Carbon Intensive Assets that lack transition plans by 50%
- Ensure that assets representing 50% of PSP Investments' carbon footprint have commitments to implement mature transition plans
- Steer at least 10% of PSP Investments' long-term debt financing toward sustainable bonds
- Undertake efforts to obtain GHG data for 80% of the in-scope portfolio of PSP Investments' carbon footprint

Since our first assessment as at September 30, 2021, we have continued to focus our efforts to improve our Green Assets Taxonomy approach and implementation. This includes the continuous evolution of our methodology and data collection approach. We have provided an update on these metrics with fiscal 2022 data in the FY22 Responsible Investment report.

We are pleased to disclose significant improvements in the scope of application of the taxonomy as we have included two new asset classes that were not previously covered: Credit Investments and Complementary Portfolio. Their inclusion increased the scope of these metrics from 77% to 88%.

However, the two recently included asset classes have low GHG data coverage. Going forward, they will be included in PSP Investments' annual ESG data collection process. At this time, their inclusion in the Taxonomy has the effect of reducing our total GHG data coverage from 56% to 47%. Our target to achieve an 80% data coverage by fiscal year 2026 remains and we will continue our data collection efforts to increase the mapping of our portfolio with reported data.

For more information on our climate change roadmap and progress to date, please see the *Spotlight on our climate strategy* section of our FY22 Responsible Investment Report.

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