NOVEMBER 2021

CANADIAN PENSIONS DASHBOARD FOR RESPONSIBLE INVESTING

A NAVIGATIONAL TOOL TO INCREASE AMBITION FOR A SUSTAINABLE, INCLUSIVE FUTURE

Smart Prosperity Institute

The Natural Step

In partnership with

Corporate Knights

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The Trottier Family Foundation is a private Montreal-based foundation and one of Canada's leading funders in solutions that mitigate climate change, including initiatives that strengthen the sustainable finance ecosystem.

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Authors: Derek Eaton, Toby Heaps, Anik Islam, Matthew Malinsky

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November 2021

Disclaimer: The authors take all responsibility for the content of the report. Expert Advisory Panel members are acting in a personal capacity to help guide this initiative to achieve positive impact. Their involvement does not necessarily imply their agreement or endorsement of all aspects of the report's content. The views expressed do not necessarily represent the views of The Trottier Family Foundation.

Please send any feedback (including errors and omissions) to Matt Malinsky, Research Analyst, Corporate Knights at: matthew@corporateknights.com

IN SUPPORT OF THIS REPORT

"When it comes to assessing and responding to risks we are accustomed to thinking backwards and in straight lines. Even the steep and exponential risk trajectories we are now challenged by seem linear when we look at a thin slice of them. Fortunately, our major public pension plans have a history, capacity and willingness to think ahead and react thoughtfully. Hopefully the Dashboard will encourage and assist them and other market participants to be proactive in responding to the increasingly existential sustainability challenges we all face together."

Ed Waitzer, Lawyer and former Chair, Ontario Securities Commission

"As stewards of our retirement savings, pension funds have important roles to play in securing the future living standards of Canadians in a just and livable world. To that end, we should all welcome the Sustainable Investment Dashboard for Canadian Pension Funds initiative. The Dashboard will provide important ongoing information on how effectively Canada's pension funds are fulfilling their mission."

Keith Ambachtsheer, Director Emeritus, International Centre for Pension Management, Rotman School of Management, University of Toronto

"This report is an excellent start that will give reference points to what I hope will be a fruitful conversation around the shared value creation pension plans are generating. I hope it will inspire and equip pension plan participants of all sizes to ask questions that matter about the environmental and social impacts their investments have and the type of futures these are enabling".

Rosalie Vendette, Sustainable Finance Expert

"The research team has puzzled together many valuable sustainable investment data points which will make pension plans more attentive to the importance of ESG disclosures and challenge their approaches."

Francisca Quinn, President, Quinn & Partners

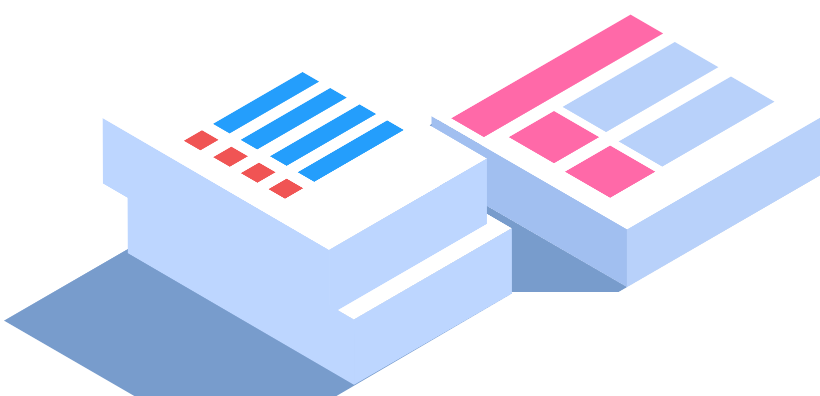
EXPERT ADVISORY PANEL CANADIAN PENSIONS DASHBOARD FOR RESPONSIBLE INVESTING

- **Andrea Moffat**, Vice President, Ivey Foundation
- **Ed Waitzer**, Waitzer Professional Corporation
- **Francisca Quinn**, Founder and President, Quinn & Partners
- **Hugh O'Reilly**, President and CEO, Acuity Global
- **Jessie Sitnick**, Vice President, Corporate and Public Affairs, Argyle
- **Keith Ambachtsheer**, President, KPA Advisory Services
- **Randy Bauslaugh**, Randy Bauslaugh Professional Corporation
- **Rosalie Vendette**, Sustainable Finance Expert, Decode ESG

EXECUTIVE SUMMARY

"Climate change permeates the entire investing landscape. Tackling it requires substantial effort and massive amounts of capital. By significantly growing our portfolio of green investments and working collaboratively with our portfolio companies to transform their businesses, we can make a positive impact by encouraging an inclusive transition that benefits our people, communities, and portfolio companies."

Ziad Hindo, Chief Investment Officer, Ontario Teachers' Pension Plan



Sustainable investing is gaining momentum and has already become central to the management of Canada's largest pension funds. This momentum comes as the world economy undergoes rapid change, with an accelerating transition to net-zero emissions and the pursuit of a range of sustainability and inclusivity objectives, and is essential to Canadian pension funds continuing their tradition of excellence. Collectively, the 12 funds analyzed in this report now have more than $160 billion invested in self-defined environmentally sustainable solutions ranging from renewable energy to green infrastructure and buildings, representing 7% of their total assets.[1]

Many pension funds are also actively engaging on environmental, social, and governance (ESG) issues, with companies in which they invest covering issues ranging from board gender diversity to responsible lobbying and payment of taxes. Similarly, many funds are making efforts to improve their own governance, for example, by increasing diversity of management, aligning their own executive bonus with ESG targets, and increasing environmental and social (E&S) competency in their boards.

The *Canadian Pensions Dashboard for Responsible Investing* intends to highlight these issues and capture progress being made. Pension funds represent a major pool of investment capital[2] and have long-term mandates. Many stakeholders – government, business, civil society, and certainly beneficiaries – are increasingly interested in how pension funds are addressing the challenge of transition to sustainability across a range of environmental and social dimensions. The Dashboard aims to promote open dialogue and engagement to support a collective effort to reorient how capital is deployed.

The *Canadian Pensions Dashboard for Responsible Investing* covers nine key indicators covering sustainable impact, sustainable governance and financial impact. The sustainable governance indicators capture a range of environmental, social and governance considerations. The sustainable impact indicators are dominated by climate issues, reflecting currently available data and the importance of accelerating progress.

As the transition to a climate-friendly economy speeds ahead, global investors are embarking on what is in all likelihood the largest reallocation of capital in our civilization's history – more than US$100 trillion between now and 2050, according to Mark Carney.[3]

To keep up with the pace of change and capture their fair share of commercially attractive clean-growth investment opportunities, Canadian pensions require "a fundamental shift"[4] to boost their investments in low-carbon solutions (making new low-carbon investments in the order of 2% to 5% of net assets or assets under management per year[5]) and fully decarbonize across all asset classes. This scale of investment applied to Canada's $4-trillion pension pools translates into $80 to $200 billion per year of new investments into the low-carbon economy. Given the multi-decade ripple effects of capital allocations made today, this will need to happen well before the 2050 net-zero target for the real economy.

This fall, Canada's second- and third-largest pension fund managers raised the stakes, announcing plans with targets to achieve net-zero emissions linked to executive compensation at the funds.

The Ontario Teachers' Pension Plan (OTPP) has set targets to reduce portfolio carbon-emissions intensity by 45% by 2025 and two-thirds (67%) by 2030, compared to their 2019 baseline. Critically, these targets impact all their real assets, private natural resources, equity, and corporate credit holdings across public and private markets, including external managers. OTPP also communicated it had committed $5 billion to climate and transition solutions so far in 2021, and that it would boost its $30-billion portfolio of green investments.

Caisse de dépôt et placement du Québec's (CDPQ) updated climate plan pledges to boost green assets from $36 billion to $54 billion by 2025, achieve a 60% reduction in the carbon intensity of the total portfolio by 2030, create a $10-billion transition envelope to decarbonize the main industrial carbon-emitting sectors, and complete its exit from oil production (currently just 1% of its portfolio) by the end of 2022.

Other funds have also developed net-zero action plans that are not yet public, so we expect this trend to continue.

While it is encouraging to see the "Maple Revolutionaries" (as *The Economist* dubbed Canada's large pension funds for their strong governance and performance track record[6]) rising to the climate challenge, there is a risk that the lack of clear definitions and expectations could result in unnecessary costs, delays, lost opportunities, and even risks to financial performance.

As the investment wave toward net-zero takes hold globally, now is the time to position Canadian funds (large and small alike) for success.

This requires a clear definition (which may need to evolve over time) of what constitutes a net-zero-aligned portfolio, and making net-zero alignment an expectation or requirement for all pension funds. There are two options for mandating or incentivizing this: through amendments to the Canada Pension Benefits Standards Act, Pension Benefits Standards Regulation, and relevant provincial regulations; or amendments to the Income Tax Act on conditions for tax-exempt status. Action is urgently needed to investigate and implement a solution, particularly given Canada's fragmented regulatory landscape. Funds should be able to report against a common framework rather than costly and numerous reinventions of the wheel by various provinces and agencies. It will also allow for apples-to-apples comparison between funds and for fair assessments to be made.

While there is no single incontrovertible global standard for how to calculate net-zero, there are domestic best practices and credible international standards that exist upon which Canada could issue guidelines, including the Partnership for Carbon Accounting Financials Standard, which was used by both CDPQ and OTPP.[7]

Portfolio analyses done for this report, and by the two large Canadian funds with public net-zero goals, both found that there may even be a financial cost to moving too slowly in this period of unprecedented capital reallocation from high-carbon to low-carbon activities. Now is the time to act on implementing net-zero portfolio strategies.

To be clear, though, net-zero strategies do not mean simple divestment of carbon-intensive assets by pension funds. This has already happened to a large extent via market forces and sell-offs driven by risk-return considerations that have whittled major Canadian portfolio exposures to fossil fuel stocks down to a 10th of what they were 10 years ago.[8] There still exists tremendous potential for pensions to play an active ownership role to help carbon-intensive companies leverage their assets to make the transition from "grey to green," through initiatives like Say on Climate and Climate Engagement Canada[9]. But this engagement must be underpinned by an honest assessment of corporate capital expenditures to "avoid getting caught in the web of greenwashing 2.0."[10]

Pension funds in Canada clearly have an opportunity to aim higher when it comes to responsible investing. The *Canadian Pensions Dashboard for Responsible Investing* is a rigorous navigational tool designed to help Canadian pension funds raise ambition for a sustainable, inclusive future.

10-POINT SUSTAINABLE PENSIONS CHECKLIST

1. **Does the fund have a science-based net-zero commitment backed up by transparently reported interim targets?**

2. **What percentage of the fund's total net assets or assets under management are invested in credible and transparently defined sustainable solutions with exposure breakdown by asset class and entity level provided on an annual basis?** [20%+ of total net assets or assets under management*]

3. **Does the fund disclose the total financed emissions and portfolio carbon intensity with breakdown by asset class while achieving emissions-intensity reduction of at least 7% per annum[11]?**

4. **Does the fund have a publicly disclosed ESG pay link with detail on the target and the percentage of variable compensation linked to the target?**

5. **What is the fund's ratio of highest-paid employee total compensation to median employee total compensation?** [under 8:1*]

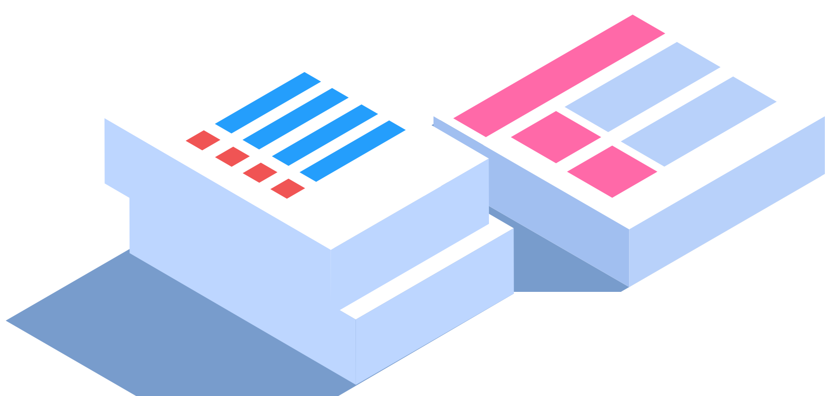
6. **What percentage of the executive team and board of directors self-identify as a visible minority or Indigenous person?** [27%+*]

7. **What percentage of the executive team and board of directors self-identify as non-male?** [50%+*]

8. **What percentage of total E&S resolutions did the fund support in the most recent year?** [75%+*]

9. **What percentage of the board of directors has demonstrated E&S competency either by service for a clean-economy-focused organization or in an E&S-focused role, or notable E&S publications?** [30%+*]

10. **Does the fund have a policy to ensure that both its and its investee political activities are aligned with its ESG priorities?**



*Indicates best practice.

1. OVERVIEW

Canada has a proud tradition of pension fund excellence. Indeed, in 2012 *The Economist* dubbed Canada's large pension funds "Maple Revolutionaries" for their strong governance and performance track record.[12] As funds strive to fulfill their fiduciary function, ESG issues are increasingly relevant to maintaining this excellence.

With this in mind, we have designed a *Canadian Pensions Dashboard for Responsible Investing* that examines how the 12 of the largest entities[13] responsible for managing pension assets in Canada are integrating ESG factors into their governance and impacts. This Canadian-made Dashboard incorporates best practices from similar efforts in other countries. It aims to help fund decision-makers demonstrate credible progress, have more thoughtful and informed conversations with their beneficiaries and other key stakeholders around challenging issues, and help them raise the bar.

The first iteration of this Dashboard (which will be released on an annual basis) has been developed collaboratively from a Corporate Knights template together with The Natural Step Canada and the Smart Prosperity Institute, with input from an expert advisory panel consisting of specialists in sustainable investing and pension funds.

The governance part of the Dashboard includes a review of the pension funds' executive compensation alignment, as well as board diversity from a gender, racial, and E&S competency perspective. The impact part of the Dashboard has a solutions focus, including investment exposures, financial results, and engagement practices. The analysis includes all asset classes insofar as disclosure allows.

1.1 WHY THIS REPORT?

The world economy is undergoing rapid change, with an accelerating transition to net-zero emissions and the pursuit of a range of sustainability and inclusivity objectives. ESG considerations are becoming an integral part of long-term investments due to evolving risk dynamics. As stewards of capital, the main objective of Canadian pension funds is to maximize risk-adjusted financial returns in order to meet the lifetime income of their beneficiaries.[14] ESG risks are already relevant to generating those returns.[15] The World Economic Forum's *Global Risks Report 2021*, which identifies the top threats facing the world by likelihood and extent of impact, shows that seven of the top 10 risks by likelihood and eight of the top 10 risks by impact are related to ESG issues.[16] If these are not accounted for, it would impose material risks on the investment performance of the funds and ultimately put the beneficiaries at risk of not getting their income. At the same time, it should be realized that investment allocations are likely to have a lagged effect on the real economy and, ultimately, risk mitigation. This puts the onus on the pension funds to start acting now.[17]

At the same time, meeting sustainability objectives offers considerable opportunities for investors.[18] Global sustainable investment has been increasing over the last few years, but more can be done.[19] According to Mark Carney, more than US$100 trillion will need to be invested globally over the next three decades to achieve a net-zero economy.[20] The International Energy Agency estimates that annual investments in clean energy alone need to be US$4 to $5 trillion per year by 2030, compared to its current levels of around US$1.2 trillion, to achieve global net-zero emissions.[21] Canada requires around C$70 billion a year to fund green projects and meet its net-zero commitments; however, the country currently invests only around C$10 billion per year.[22] As long-term allocators of capital, Canadian pension funds can help fill these investment gaps and benefit while earning commercial returns.[23] To keep pace with the changing landscape and earn commercially attractive returns from investment opportunities, analysis and best practices reveal that new investment commitments from the largest pension funds in low-carbon solutions need to be in the order of 2% to 5% of their net assets or total assets under management (AUM) per year.[24]

Canadian pension funds need to accept ESG factors as relevant financial considerations and integrate them into their investment allocations and management practices to not only hedge against ESG risks but also take advantage of investment opportunities and increase long-term returns.

Stakeholders are expecting pension funds to give increased consideration to ESG factors, reporting, and disclosures. This pressure is coming from a range of constituencies, including beneficiaries and activists.[25] In Australia, one of the trustees of the Retail Employees Superannuation Trust (REST) filed a case on the grounds of failure to adequately consider climate change risks.[26] It should be noted that this litigation resulted in a settlement and set a new standard vis-a-vis the responsibility of pension funds in Australia, especially as it relates to disclosures and policies to address climate risks.[27] While there may not yet be any court cases against pension funds pertaining to climate risks in Canada, this shows that there might be significant material effects on firms' reputations in failing to account for and make progress on ESG issues.

Moreover, other countries are taking strategic initiatives, which requires a response by Canadian pension funds. The European Union (EU) has developed a sustainable finance strategy and action plan, which includes a disclosure regulation and sustainable investment taxonomy.[28] Other countries have taken steps to integrate sustainable finance practices.[29] For example, Denmark's pensions and insurance lobby has adopted a set of common climate reporting rules for the sector, as part of the ongoing work in the Nordic country to meet its 2030 emissions reduction goal.[30] In Canada, the Expert Panel on Sustainable Finance laid the foundations for developing the sustainable finance landscape, but there is consensus that much more needs to be done by both the public and private sectors.[31] During the interim, in the absence of a Canadian sustainable finance regulatory framework that is likely to be developed by the Sustainable Finance Action Council,[32] pension funds need to be able to adapt to these developments.

Canadian pension funds have natural advantages in driving sustainable investments. The largest Canadian pension funds have been outperforming global institutional investors.[33] They are in a strong position because of their extensive experience investing in infrastructure, independent governance, in-house investment management expertise, and extensive geographic and asset class coverage.[34] These features will help channel patient capital toward sustainable solutions, which might offer considerable rewards over a long-term investment horizon. Indeed, Canadian pension funds have called for improved corporate reporting and disclosures on ESG. In an open letter to the public, the CEOs of the eight largest Canadian pension funds, with a combined $1.6-trillion AUM, stated their ESG integration objectives and asked companies to use the Task Force on Climate-related Financial Disclosures (TCFD) or the Sustainability Accounting Standards Board (SASB) framework to further standardize ESG-related reporting.[35]

At the same time, Canadian pension funds, as an industry, face challenges in integrating sustainability. First, most of the larger pension funds were established under separate legislations, with somewhat differing mandates.[36] This may affect how the wide range of ESG considerations can or should be addressed. Second, while the largest funds have the capacity to incorporate ESG investment and management practices, smaller funds follow a more passive investment approach with external asset managers. This might make it difficult for the smaller funds to integrate good ESG and sustainability practices. Third, through market forces and uncertainties about future returns, many funds have already reduced their portfolio exposures to fossil fuel stocks down to a 10th in value terms of what they were 10 years ago (see Figures 1 and 2 below).[37] However, this might not be the optimal approach for all funds, given the need to transition the sector in line with net-zero pathways. In some cases, contributing members of these funds might also work in fossil fuel companies or related industries. These challenges require strategic engagement and other support to find solutions in line with funds' main objectives.

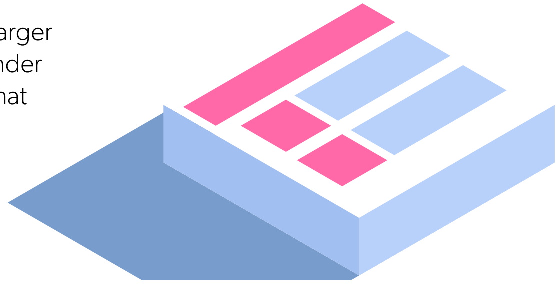


FIGURE 1 – CPPIB'S SECTORAL EQUITY EXPOSURE TO ENERGY COMPANIES

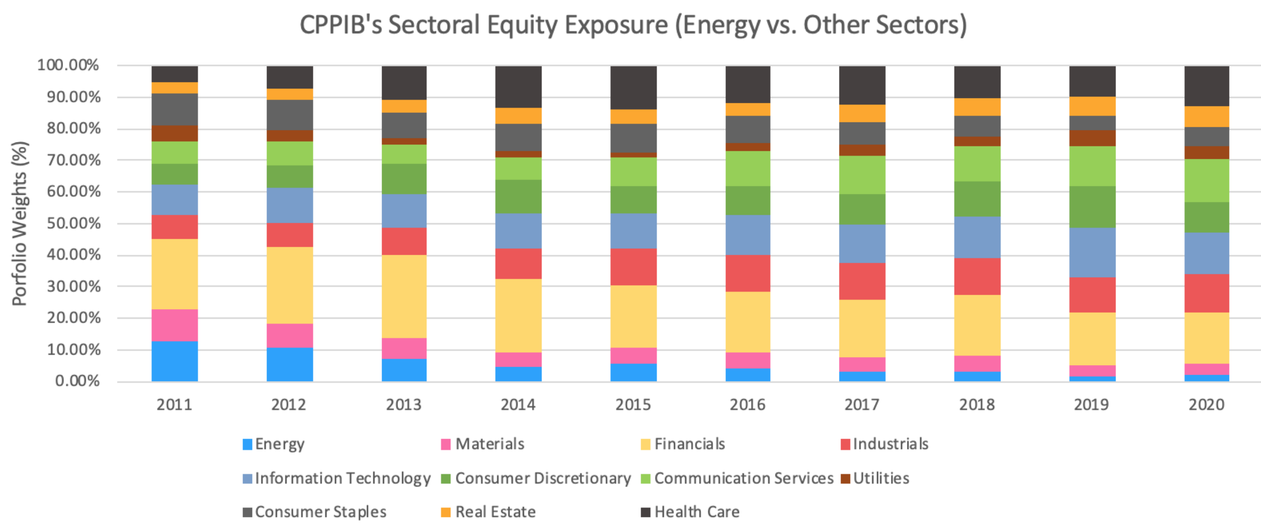
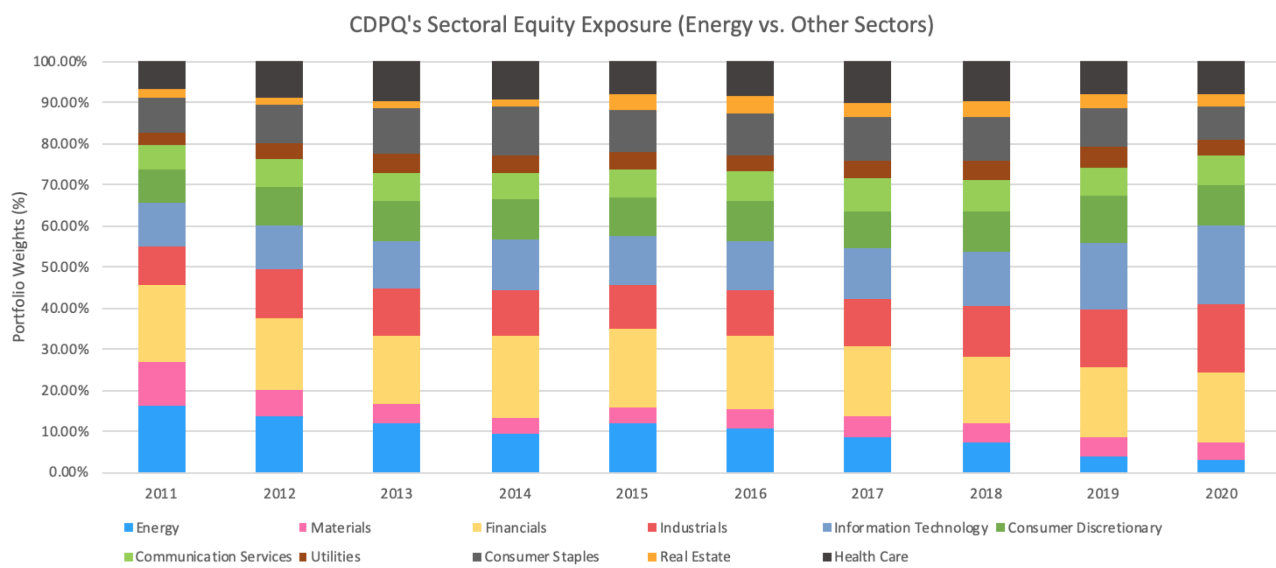


FIGURE 2 – CDPQ'S SECTORAL EQUITY EXPOSURE TO ENERGY COMPANIES



1.2 AIMS & OBJECTIVES

Due to these global developments and pre-existing features of the pension funds, a Canadian Pensions Dashboard for Responsible Investing fits well into the Canadian sustainable investment landscape. The Dashboard would not only help Canadian pension funds measure their progress in ESG integration but also facilitate as a benchmark for global advancement.

The main aims and objectives of the *Canadian Pensions Dashboard for Responsible Investing* are to:

- act as a navigation tool to highlight ESG integration;
- focus on a limited set of indicators to measure progress, which are easily understandable by a broad audience and use mostly publicly available information;
- identify sector-specific challenges and other key issues that are not being addressed in the sustainable finance landscape; and
- highlight best practices by corresponding with key stakeholders in the sustainable finance space, including the pension funds themselves.

The Dashboard builds on successful experiences elsewhere. Different global benchmarks such as the Global Pension Transparency Benchmark,[38] the Asset Owners Disclosure Project,[39] and the Responsible Asset Allocator Initiative[40] assess institutional investors' sustainability and disclosure practices. At the country level, the Dutch Association of Investors for Sustainable Development (VBDO) has a responsible investment benchmark for pension funds.[41] Their aim is to motivate these funds to take sustainability into account in their investment decisions, challenge the pension funds in all aspects of the responsible investment process, and raise awareness to improve performance.

The *Canadian Pensions Dashboard for Responsible Investing* is different from the global counterparts. Most of the global and country-level benchmarks focus on rankings and identifying disclosure practices. The Dashboard adds value to the Canadian economy because it:

- refrains from imposing ranks on different funds. Instead, the Dashboard puts practices of the top pension funds on the same canvas. This helps promote awareness and understanding of different practices by the funds. The aim, with this constructive perspective, is to promote joint learning and raise the bar for all pension funds;
- shows investment allocations for different asset classes (to the extent possible), together with sustainability governance practices and financial performance measures, with an emphasis on allocating funds toward environmentally sustainable solutions;
- puts emphasis on net-zero-emissions commitment at the portfolio level, including investment plans and carbon footprint measurements; and
- provides a medium to foster dialogue among pension funds and other stakeholders, namely government and beneficiaries.

1.3 SUMMARY FINDINGS

TABLE 1 – SUMMARY FINDINGS[42]

Fund	5-Year Annualized Rate of Return[43]	Total AUM (C$ mm)	% Assets in Sustainable Solutions[44]	Annual Carbon Footprint (tCO2e/M$)	Net-Zero Target	ESG Pay Link	CEO–Average Employee Pay	Composite Leadership Diversity[45]	% E&S Resolutions Supported	Board E&S Competency	Signatory to Climate Action 100+
AIMCO	6.10%*	$118,600*	3%*	59*	No	No	12:1*	19%	51%	9%	Yes
BCIMC	9.30%**	$199,600**	1%*	110.7*	No	No	13:1**	21%	60%	14%	Yes
CDPQ	7.80%*	$365,500*	9%*	49*	Yes	Yes	ND	24%	ND	13%	Yes
CPCP	8.80%*	$29,597*	1%*	ND	No	Yes	ND	32%	ND	44%	Yes
CPPIB	11.00%*	$596,353*	11%[46]	115****	No	Yes	8:1**	32%	76%•[47]	17%	No
HOOPP	10.29%*	$104,000*	8%*	ND	No	No	ND	18%	ND	13%	No
OMERS	6.50%*	$105,000*	3%****	58****	No	Yes	ND	24%	ND	13%	No
OPB	7.20%*	$31,000*	ND	ND	No	No	ND	30%	ND	13%	No
OPTRUST	7.10%*	$26,500*	ND	ND	No	No	4:1*	22%	ND	20%	Yes
OTPP	7.00%*	$221,200*	14%***	79*****	Yes	Yes	13:1*	28%	ND	18%	Yes
PSP	9.30%**	$204,500**	6%**	92**	No	No	10:1**	23%	ND	0%	No
VEST	ND	$19,441*	ND	ND	No	No	8:1	23%	ND	10%	No

Basic colour scheme. See Appendix for detailed description of colour coding for each KPI

- Green: Best practice relative to objective standard
- Yellow: Making progress
- Red: Much more progress needed or no information

• This figure is incomplete. It represents only a subset of E&S themes which CPP disclosed on an aggregate basis.

*As of 31/12/2020
**As of 31/03/2021
***As of 30/06/2021
****As of 30/06/2020
*****As of 31/12/2019

1.4 HIGHLIGHTS

Sustainable Impact. Canada's 12 largest pension fund managers now have more than $160 billion invested in self-defined low-carbon solutions, representing more than 7% of total assets ($2 trillion). While this was the first year that portfolio-wide sustainable solutions exposures were disclosed by OTPP and the Canada Pension Plan Investment Board (CPPIB), it is evident that funds are rapidly scaling up their exposures. While it is difficult to peg a precise number for what would be sufficient to align pensions with a net-zero emissions scenario, we estimate net-zero pension fund targets should be in the order of 20% of total AUM or net assets allocated to low-carbon investments, with annual low-carbon investments totalling 2% to 5% of total AUM or net assets. This estimate is based on average Canadian pension fund holding periods,[48] additional global annual capital required for a net-zero emissions trajectory,[49] and the percentage of that which will be privately raised from pension funds[50]. By this measure, none of the Canadian funds currently measures up on overall exposure to low-carbon solutions, although OTPP is closest at 14%[51], including $5 billion in new investments made in "climate and transition solutions" in the first nine months of 2021 (representing 3% of its annual AUM on an annualized basis). The four funds with the largest allocations all provide similar definitions for what qualifies as a low-carbon asset, but they are not clear enough to provide a high level of confidence for making comparisons on an apples-to-apples basis.[52] Additionally, while most funds disclose the majority of their specific investment holdings for the equity asset class, disclosure of holdings in other asset classes is either missing or incomplete, limiting the ability of third parties to conduct benchmarking on an even and comparable basis. In interviews conducted for this report, many fund executives said the lack of common definition and datasets (for portfolio net-zero alignment, portfolio carbon intensity, and low-carbon solutions) is a barrier to better reporting and setting net-zero-aligned targets.

Of the 12 funds, nine report totals invested in sustainable solutions, with an average of 7% of total AUM allocated to solutions in each fund. Seven funds disclose the carbon footprints of their portfolios, with a range of approaches and asset class coverage to measurement of these footprints. The average total fund footprint is 80 tonnes of CO_2 equivalent per million dollars invested (tCO2e/M$). Of the three funds that disclose the percentage of shareholder resolutions supported, there was an average of 62% support for E&S resolutions in 2020, though it is not clear these numbers are wholly comparable as there is no common source for the total basket of E&S resolutions.

Sustainable Governance. CDPQ and OTPP are the only funds that have made public commitments to achieving net-zero portfolio emissions by 2050, though a number of funds indicated in interviews that they would soon also be adopting net-zero-emissions portfolio targets. Five of the 12 funds have a sustainability pay link, tying executive remuneration to performance on sustainability targets. There is an average CEO–employee pay ratio of 10:1 across the six funds that fully disclose this metric, while there is generally a low proportion of E&S-competent board members, with an average of 15% per fund. On the composite leadership diversity metric, which is an assessment of both gender and racial diversity for the executive management team and board of directors of each fund, the average diversity was 24%.

Financial Performance. Across the 12 funds, 11 reported five-year annualized rates of return, with an average return rate of 8.01%, though these figures should be taken in the context that the funds have different liability profiles and investment strategies.

In interviews conducted for this report, many fund executives said the lack of common definitions and datasets for carbon exposure and low-carbon solutions is a barrier to better reporting and setting net-zero-aligned targets.

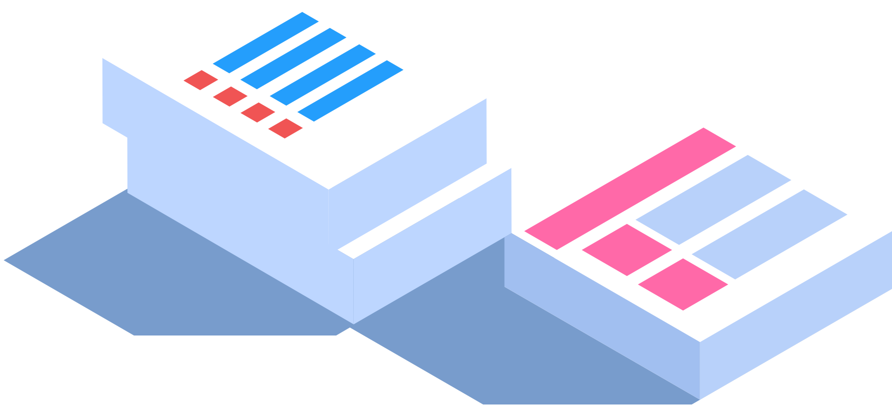
2. METHODOLOGY

The objective of the Dashboard is to showcase best-in-class management of the largest entities that manage pension funds to advance ESG objectives, to motivate and inform practice improvement among pension funds, and to pilot an approach that could in the future be applied to other institutions and ecosystems.

The objective of the Dashboard is to showcase best-in-class management of the largest entities that manage pension funds to advance ESG objectives, to motivate and inform practice improvement among pension funds, and to pilot an approach that could in the future be applied to other institutions and ecosystems. Consultation with members of an expert advisory panel was conducted for the purpose of selecting the performance indicators that would build the most comprehensive Dashboard for measuring sustainable investment performance for pension funds. An assessment of the performance of 12 of the largest entities responsible for managing pension assets in Canada on sustainable impact, sustainable governance, and financial performance indicators was conducted, drawing from publicly available documents.[53] These indicators included annualized rates of return, breakdowns of investments by asset classes, allocations of capital to sustainable solutions, measurements of carbon footprints, active sustainability commitments, and remuneration practices, among other measures.

The preliminary findings were presented to the funds, allowing a period for feedback, and providing the opportunity to address any gaps in the funds' public disclosure documents. Following this feedback period, requests for interviews were sent to each fund, and structured qualitative interviews were conducted with respondents.

A detailed description of the methodology can be found in the Appendix.



3. DASHBOARD RESULTS

3.1 SUSTAINABLE IMPACT

TABLE 2 – SUSTAINABLE SOLUTIONS

Fund	Total AUM (C$ mm)	Total Assets in Sustainable Solutions (C$ mm)[54]	% AUM in Sustainable Solutions	Sustainable Solutions Definition	Asset Class Covered
AIMCO	$118,600	$3,700	3%	Investment value of no/low-carbon assets in Infrastructure & Renewable Resources portfolio. The renewable resources portion of this portfolio comprises investments in timberland and agriculture, contributing to the removal of carbon emissions from the atmosphere.	Infrastructure
BCIMC	$199,600	$3,000	1%	Investments that will benefit from the transition to a low-carbon economy.	ND
CDPQ	$365,500	$36,000	10%	CDPQ uses Climate Bonds Initiative criteria to define low-carbon-solutions investments.	Infrastructure Real Estate
CPCP	$29,597	$221	1%	Investments in renewable energy.	Infrastructure
CPPIB	$596,353	$66,000	11%	Internal assessment.[55]	Infrastructure Real Estate
HOOPP	$104,000	$7,900	8%	Investments in green buildings.[56]	Infrastructure
OMERS	$105,000	$3,300	3%	ND	Infrastructure
OPB	$31,000	ND	ND	ND	ND
OPTRUST	$26,500	ND	ND	ND	ND
OTPP	$221,200	$30,000	14%	The eligibility criteria identify eligible green assets aligned to the OTPP Green Investment Principles and the ICMA Green Bond Principles.[57]	ND
PSP	$204,500	$12,600	6%	Green assets include investments in sustainable infrastructure, renewable energy, green buildings, and certified sustainable forestry.	ND
VEST	$19,441	ND	ND	ND	ND

3.1.1 SUSTAINABLE SOLUTIONS

Current pension fund practice in Canada for defining "sustainable solutions" ranges from referencing an external taxonomy to specific themes such as sustainable infrastructure, renewable energy, green buildings, and certified sustainable forestry. Examples of external taxonomies for "sustainable solutions" include the Climate Bonds Initiative (CBI) Taxonomy[58] and the EU Taxonomy[59] (both focused specifically on sustainable environmental solutions), as well as the Corporate Knights Taxonomy (see Appendix), which integrates the CBI and EU taxonomies alongside sustainable social solutions (such as affordable medicine). While "sustainable solutions" is meant to include environmentally as well as socially sustainable solutions (such as affordable medicine), all the definitions provided by the funds are sorely lacking in detail (for example, what is a green building?) These defintions deal solely in the environmental realm, in many cases with a narrow remit of environmental solutions that does not include most aspects of the bioeconomy, sustainable agriculture, or responsibly mined green metals. One of the reasons for this, as cited by the funds in interviews, is fear of being called out for greenwashing. Common standards and datasets on which to report would help to address this challenge.

Disclosure on investments in solutions varies significantly across the funds, with eight funds providing definitions of what constitutes sustainable (low-carbon) investments within their portfolios. Nine funds in the Dashboard disclosed dollars invested in self-defined sustainable solutions, which constitutes around $163 billion and represents 8% of their total assets. Although not providing definitions for what constitutes sustainable investing, both the Healthcare of Ontario Pension Plan (HOOPP; $231 million[64]) and the Ontario Municipal Employees Retirement System (OMERS; $3.3 billion[65]) disclose the amounts that are invested in renewable energy assets in their 2020 annual reports. If all the funds reported on sustainable solutions, the aggregate amount would have been much higher. This highlights the need for common definitions and transparency on sustainable solutions.

There is an average of 8% of total AUM invested in solutions across the nine funds that report solutions data. OTPP is a leader among the funds, with 14% ($30 billion) of its total portfolio AUM invested in sustainable solutions, while CPPIB has 11% ($65.1 billion) and CDPQ has 10% ($36 billion) of total AUM invested in solutions. The majority of the disclosed sustainable investments are within the funds' infrastructure asset classes, although HOOPP, OTPP, CDPQ and CPPIB's solutions also include investments within their real estate portfolios.

3.1.2 CARBON FOOTPRINT

Approaches to measuring a portfolio's carbon footprint vary significantly across the seven funds that report this information. All funds report in Canadian dollars, but four funds (British Columbia Investment Management Corp./BCIMC, CPPIB, Public Sector Pension/PSP, OTPP) calculate their footprints using the market approach, which takes into account only market capitalization. Conversely, Alberta Investment Management's (AIMCO), OMERS', and CDPQ's footprints are calculated using the portfolios' enterprise values, which, unlike the market approach, factors in the levels of debt.[66] The reported units for portfolio footprints are expressed in tonnes of CO_2 equivalent per million Canadian dollars invested. A number of funds additionally provide footprint calculations using the weighted average carbon intensity (WACI) method, which measures a portfolio's exposure to carbon-intensive companies, expressed in metric tons of CO_2 equivalent per million Canadian dollars of revenue.

Three funds provide detailed breakdowns of the carbon intensity of their portfolios by asset class. BCIMC discloses the footprints of its public equity, fixed income, private market, and real estate asset classes, while CPPIB covers 100% of its investments, including public equities, government-issued securities, and long-term capital ownership assets, and OTPP reports the footprints of its public equity and private market assets. There are many data gaps and there is no common approach to dealing with them, making fund-to-fund comparisons difficult even at the specific asset class level. CPPIB reports the highest coverage of its carbon footprint, accounting for its entire portfolio of investments, while CDPQ has the lowest total portfolio carbon footprint at 49 tCO2e/M$. It is important to note that data availability limits the precision of these footprint calculations, with CPPIB disclosing that 41% of the emissions data used in the calculation of its carbon footprint is proxy data, which is based on average emissions of the sector and country of the investment.[67] OTPP is the only fund that provides the footprint of its entire portfolio in addition to a breakdown by major asset class.

TABLE 3 – CARBON FOOTPRINTS

Fund	Measurement Description	Carbon Footprint (tCO2e/ M$)[60]	% AUM Covered	Asset Classes Covered
AIMCO	Measured using the financed emissions method, which attributes emissions to the investor proportionate to the investor's equity and debt holdings.	59	60%	ND
BCIMC	Different approaches used for different asset classes. Public equity uses the weighted average carbon intensity method.	111[61]	ND	Public equities, fixed income, private markets, real estate
CDPQ	The carbon footprint of an asset corresponds to its direct or indirect greenhouse gas emissions (Scopes 1 and 2) converted into equivalent tonnes of CO2 as defined by GHG Protocol.	49	78%	ND
CPCP	ND	ND	ND	ND
CPPIB	Total carbon emissions for a portfolio normalized by the market value of the portfolio. For our carbon disclosure, we use Scope 1 and 2 GHG emissions for non-government holdings and country-wide emissions for government-issued securities.	115[62]	100%	All CPPIB's holdings.
HOOPP	ND	ND	ND	ND
OMERS	In line with the TCFD recommendations for asset owners and the GHG Protocol. Includes Scope 1 and 2 emissions and uses the "ownership approach," which sets our proportionate ownership of an asset's carbon footprint equal to OMERS' proportionate share of the asset's enterprise value.	58	73%	ND
OPB	ND	ND	ND	ND
OPTRUST	ND	ND	ND	ND
OTPP	Includes Scope 1 and 2 emissions and is proportionate to OTPP's equity share.	79	60%	Public equities, private markets
PSP	Total carbon emissions for PSP portfolio normalized by the market value of PSP portfolio (tonnes CO2e/$ million invested). Weighted average carbon intensity: PSP portfolio exposure to carbon-intensive companies.	92[63]	76%	ND
VEST	ND	ND	ND	ND

TABLE 4 – E&S RESOLUTIONS

Fund	% E&S Resolutions Supported
AIMCO	51%
BCIMC	60%
CDPQ	ND
CPCP	ND
CPPIB	76%[68]
HOOPP	ND
OMERS	ND
OPB	ND
OPTRUST	ND
OTPP	ND
PSP	ND
VEST	ND

3.1.3 E&S SHAREHOLDER RESOLUTIONS

Review of public reports revealed limited disclosure on voting records for environmental and social resolutions. While eight funds reported the total number of shareholder resolutions voted on in their annual/sustainability reporting, only five (AIMCO, BCIMC, CPPIB, OPB, OTPP) disclosed the number of ESG proposals voted on, with three funds providing the percentage of environmental and social resolutions supported. In 2020, AIMCO supported 45% of the environmental and 58% of the social shareholder resolutions voted on,[69] while BCIMC supported 40% of the environmental and 72% of the social resolutions voted on.[70] CPPIB supported the largest proportion of E&S resolutions: 76% of the 96 shareholder resolutions voted on in 2020, though this was just for selected E&S themes disclosed.[71] Additionally, many Canadian pension funds are supporting Say on Climate resolutions and/or Climate Engagement Canada (CEC), an initiative launched in October 2021 by a group of more than two dozen of Canada's largest asset managers, pension plans, insurers, and banks. This initiative is set to pursue a three-year engagement program with 40 high-emitting companies to promote action plans to limit global warming to 1.5°C with meaningful short-, medium-, and long-term targets and to realign their capital expenditures and lobbying activities to support those goals.

3.2 SUSTAINABILITY GOVERNANCE

TABLE 5 – NET-ZERO COMMITMENTS

Fund	Commitment	Targets
CDPQ	One of the founding members of the UN-convened Net-Zero Asset Owner Alliance, a UN initiative that currently brings together 40 large global investors with a shared objective of achieving carbon-neutral portfolios by 2050 while focusing on the impact on the real economy. "We will use our platform for Innovation in Stewardship Investing (ISI) to pursue initiatives such as developing the collaborations necessary for a successful transition to a low-carbon economy."	• Hold $54b in green assets by 2025[72] • Achieve a 60% reduction in carbon intensity of the total portfolio by 2030[73] • Create a $10b transition envelope to decarbonize the main industrial carbon-emitting sectors • Complete exit from oil production by the end of 2022
OTPP	Net-zero emissions by 2050. "As a leading pension plan, we have the scale and influence to help support global efforts to limit global warming to 1.5°C. This is why we are committed to achieving net-zero greenhouse gas emissions by 2050. With a long commitment to ESG, becoming net-zero is a natural next step for us and aligns with our mission to deliver secure pensions and shape a better future. Green investing, direct emissions elimination and avoidance, and reducing portfolio emissions are key aspects of this commitment."	• 45% reduction in carbon footprint of portfolio by 2025* • 67% reduction in carbon footprint of portfolio by 2030*

3.2.1 NET-ZERO COMMITMENTS

Analysis of funds' public commitments, or lack thereof, to achieving net-zero or carbon-neutral portfolios revealed that only CDPQ and OTPP have made concrete commitments to decarbonizing their portfolios. Both have set net-zero targets for 2050 while additionally setting quantifiable short- and medium-term targets that will set them on the path to achieving these long-term goals. **Both Canada's second- and third-largest pension funds have adopted public net-zero emissions targets and interim targets to govern fundamental shifts in their investment strategies. This underscores that it is possible to set net-zero emissions criteria for pension portfolios, even in an environment where standards and data quality are evolving.** Alongside the other founding members of the Net-Zero Asset Owner Alliance, CDPQ made a public commitment in 2019 to a carbon-neutral investment portfolio by 2050.[74] OTPP made its net-zero announcement in January 2021, committing to establishing concrete targets for portfolio emissions and a roadmap for how it would achieve portfolio neutrality, which was published in September 2021. OTPP's plan includes targeted emission reductions of nearly half of its 2019 baseline by 2025 and two-thirds by 2030.[75]

TABLE 6 – ACTIVE COMMITMENTS

Fund	Supports Task Force on Climate-related Financial Disclosures (TCFD)	Investor Signatory to Climate Action 100+	UN PRI Signatory
AIMCO	Yes	Yes	Yes
BCIMC	Yes	Yes	Yes
CDPQ	Yes	Yes	Yes
CPCP	No	Yes	Yes
CPPIB	Yes	No	Yes
HOOPP	Yes	No	Yes
OMERS	Yes	No	No
OPB	No	No	Yes
OPTRUST	Yes	Yes	Yes
OTPP	Yes	Yes	Yes
PSP	Yes	No	Yes
VEST	No	No	No

3.2.2 OTHER COMMITMENTS

Despite only two funds having made commitments to net-zero, many others have publicly disclosed their alignment with several sustainability initiatives. These include the Task Force on Climate-related Financial Disclosures (TCFD), Climate Action 100+, and the United Nations Principles for Responsible Investing (PRI). Three-quarters of the funds support the TCFD, a framework for reporting climate-related financial risks across industries,[76] while six funds are signatories to Climate Action 100+, an investor-led initiative with the goal of ensuring that the world's largest corporate emitters take necessary action on climate change.[77] All but two funds are signatories of the PRI, a UN-led initiative based on six principles that are intended to contribute to a more sustainable global financial system.[78]

It is possible to set net-zero emissions criteria for pension portfolios, even in an environment where standards and data quality are evolving.

Review of public disclosures determined that none of the funds have published formal policies related to ensuring that fund lobbying activities and industry association memberships are aligned with a just transition and the ambition of net-zero emissions. This is also the case for published policies that require investees to ensure that any climate-related policy advocacy undertaken supports a just transition and the path to net-zero. However, two funds (BCIMC and CDPQ) indicated in their responses that they align with both of these measures of sustainable governance based on their industry association memberships.

TABLE 7 – PAY LINK

Fund	Sustainability (ESG) Pay Link Definition
AIMCO	ND
BCIMC	ND
CDPQ	Variable employee compensation linked to the achievement of our climate targets.
CPCP	The Canada Post segment uses senior executive scorecards to monitor performance and progress against strategic priorities; Greening Canada Post and enhancing its accessibility.
CPPIB	ESG considerations are integrated into investment decision-making and incorporated into employee objectives and compensation structures where relevant.
HOOPP	ND
OMERS	Evaluated on the evolution of plan design offering to meet stakeholders'/sustainability needs. Formalizing a sustainable investing policy and advancing integration of ESG into all investment decisions.
OPB	ND
OPTRUST	ND
OTPP	We've had climate considerations on our corporate scorecard for a number of years, which, in turn, impacts compensation. This year, climate change objectives were given added weight on the scorecard, meaning they will have a greater impact on determining employee compensation in 2020.
PSP	ND
VEST	ND

3.2.3 SUSTAINABILITY (ESG) PAY LINK

The sustainability pay link is a mechanism to link the remuneration of any member of a company's top-tier executive team with the achievement of environmental or social sustainability performance targets. Review of annual and sustainability reports revealed pay links among five funds, where ESG performance has an impact on executive pay. While no fund provided details on the percentage or nature of variable compensation linked to ESG targets, in an interview CDPQ disclosed an innovative approach by which portfolio managers get a small upside to their bonus for meeting their climate targets, and a large penalty for missing them, which has proven to be an effective incentive framework without inflating overall compensation levels.

TABLE 8 – CEO–AVERAGE EMPLOYEE PAY RATIO

Fund	CEO–Average Employee Pay Ratio[79]	CEO Salary (C$ mm)	Total Compensation (C$ mm)	# of Employees (FTE equivalent)
AIMCO	12:1	$2.74	$114.70	500
BCIMC	13:1	$3.59	$159.80	590
CDPQ	ND	$3.45	$391.00	ND
CPCP	ND	ND	ND	ND
CPPIB	8:1	$3.99	$938.00	1,936
HOOPP	ND	ND	$280.00	689
OMERS	ND	$2.65	$194.00	ND
OPB	ND	$0.81	ND	ND
OPTRUST	4:1	$1.10	$72.00	250
OTPP	13:1	$5.08	$473.50	1,200
PSP	10:1	$3.69	$322.00	897
VEST	8:1	$1.20	ND	80

3.2.4 CEO–AVERAGE EMPLOYEE PAY

A measure of how much the average employee at a fund makes relative to their CEO, this metric is calculated by dividing the CEO compensation by the average employee compensation. The CEO compensation value is measured as the sum of salaries, benefits, bonuses, value of employer pension contributions, value of stock options, and value of stock unit plans paid to the company's CEO or highest-paid executive. The average employee compensation is measured as the sum of all salaries, benefits, bonuses, value of employer pension contributions, value of stock options, and value of stock unit plans paid to all employees, including senior executives, divided by the total number of full- and part-time employees.[80] Executive management salaries are disclosed by 10 of the funds, with a range of $0.81 million to $5.08 million for total CEO compensation. As a result of limited total compensation and workforce data, ratios were calculated for half the funds. Best practice is seen in OPTRUST, with a ratio of 4:1, while BCIMC and OTPP have the highest pay ratios at 13:1.

TABLE 9 – E&S COMPETENCY

Fund	# of Directors	# E&S Competent Directors	% E&S Competent	Names	Description
AIMCO	11	1	9%	Roger Renaud	Extensive experience in social responsibility.
BCIMC	7	1	14%	Sheila Taylor	Positions with the ministries of health, transportation, environment, and finance.
CDPQ	15	2	13%	Robert Tessier	RT: Chairman of the board of directors of Green Mountain Power; deputy minister of energy and natural resources.
				Jean La Couture	JC: Chairman of the board of Innergex Renewable Energy.
CPCP	9	4	44%	Suromitra Sanatani	SS: Consulting practice included leading First Nations consultations across British Columbia.
				Lloyd Bryant	LB: HP executive sponsor for HP Canada's sustainability efforts.
				Bernd Christmas	BC: Founded the Bernd Christmas Law Group, offering advice and assistance to First Nations as well as industry and government organizations.
				Jim Sinclair	JS: Under Sinclair's' leadership, the B.C. Federation of Labour has established itself as the go-to authority on the exploitation of temporary foreign workers and the undermining of Canadian wages and working conditions that result.
CPPIB	12	2	17%	Sylvia Chrominska	SC: Global responsibility for human resources, corporate communications, government relations, public policy, and corporate social responsibility at the Scotiabank Group.
				Mary Phibbs	MP: Risk expert, ESG, governance, technology application.
HOOPP	16	2	13%	Gerry Rocchi	GR: CEO of Green Power Action.
				Adrian Foster	AF: Co-chair and committee member of the Atlantic Salmon Federation.
OMERS	15	2	13%	Michael Fenn	MF: Fenn's major published research reports include *Bringing Sustainability to Ontario's Water Systems*.
				Yung Wu	YW: Appointed to Canada's Net-Zero Advisory Body.

OPB	8	1	13%	Suzann Pennington	Retired senior finance executive with more than 30 years' experience in strategic planning, complex investments, M&A, risk management, and ESG in public and private companies.
OP-TRUST	10	2	20%	Lindsey Burzese	LB: Currently a surface-water specialist in Hamilton with the Ontario Ministry of the Environment, Conservation and Parks.
				Bob Plamondon	BP: Author of numerous public policy reports, including *Ten Steps to a Governance Checkup for the Boards of Crown Corporations and Government Agencies.*
OTPP	11	2	18%	Monika Federau	MF: Developed deep expertise in strategy, digital transformation, marketing & branding, cultural transformation post-M&A transactions, and sustainability leadership.
				Gene Lewis	GL: Gained extensive experience and expertise in OTPP by serving on committees such as the Ontario Teachers' Sustainability Workgroup and the Partners' Consultative Committee.
PSP	10	0	0%		
VEST	10	1	10%	Michel Doiron	Responsible for Employment and Social Development services in Atlantic Canada.

3.2.5 E&S BOARD COMPETENCY

A board member is determined to be E&S competent if they meet one of the following criteria:

- bio/LinkedIn page explicitly states they have experience in environmental or social sustainability
- have had executive management/board experience at/with clean-economy-focused enterprises/non-profits
- have authored books or highly cited papers/journals relating to the central topics of sustainability

Competency was determined through assessment of board member bios on the current fund website and a review of LinkedIn profiles. Canada Post is a leader among the funds, with four directors determined to possess E&S competency.

TABLE 10 – DIVERSITY

Fund	# Executives	# Non-Male Executives	% Non-Male Executives	# Racially Diverse Executives	% Racially Diverse Executives	# Board Members	# Non-Males on Board	% Non-Males on Board	# Racially Diverse on Board	% Racially Diverse on Board	Composite Leadership Diversity
AIMCO	13	2	15%	3	23%	11	4	36%	0	0%	19%
BCIMC	8	2	25%	0	0%	7	4	57%	0	0%	21%
CDPQ	18	7	39%	2	11%	15	6	40%	1	7%	24%
CPCP	15	6	40%	3	20%	9	4	44%	2	22%	32%
CPPIB	15	5	33%	3	20%	12	7	58%	2	17%	32%
HOOPP	10	4	40%	0	0%	16	5	31%	0	0%	18%
OMERS	16	6	38%	1	6%	15	5	33%	3	20%	24%
OPB	7	3	43%	1	14%	8	5	63%	0	0%	30%
OPTRUST	8	2	25%	1	13%	10	4	40%	1	10%	22%
OTPP	7	3	43%	1	14%	11	6	55%	0	0%	28%
PSP	9	3	33%	0	0%	10	5	50%	1	10%	23%
VEST	6	3	50%	0	0%	10	4	40%	0	0%	23%

3.2.6 DIVERSITY

Table 10 presents the diversity measures for the funds' executive management teams and boards of directors, including a composite diversity metric. Gender diversity is measured as the total number of individuals who identify as non-male, while racial diversity is measured as the number of individuals who are Indigenous or visible minorities according to the definition of the Canadian Employment Equity Act.[81] The diversity figures were determined based on an assessment of bios, names, and photos located on the current fund websites. There is a higher average of non-males on the boards of these funds (45%) than on the executive management teams (34%). The highest proportion of non-males in executive management is seen at Vestcor, at 50%, while OPB is also the leader for non-males on its board of directors, with seven non-males representing 63% of its board. The racial diversity averages are significantly lower than gender diversity, with an average of 10% across the fund executive teams and 7% on the board of directors. Of the 12 fund executive teams, four do not include any racially diverse members, whereas half the funds do not have racially diverse members on their boards. AIMCO is a leader with three members from racially diverse backgrounds on its executive management team (23%), while Canada Post has the highest proportion of racially diverse board members (22%).

The racial diversity averages are significantly lower than gender diversity, with an average of 10% across the fund executive teams and 7% on the board of directors.

3.3 FINANCIAL PERFORMANCE

TABLE 11 – FINANCIAL PERFORMANCE

Fund	Net Return on Total Fund (5-year annualized)	Valuation Date
AIMC	6.10%	12/31/2020
BCIMC	9.30%	3/31/2021
CDPQ	7.80%	12/31/2020
CPCP	8.80%	12/31/2020
CPPIB	11.00%	3/31/2021
HOOPP	10.29%	12/31/2020
OMERS	6.50%	12/31/2020
OPB	7.20%	12/31/2020
OPTRUST	7.10%	12/31/2020
OTPP	7.00%	12/31/2020
PSP	9.30%	3/31/2021
VEST	ND	

Table 11 lists the reported total net returns for the funds on a five-year annualized basis. CPPIB, which has the largest AUM invested in sustainable solutions, is the leader with an 11% annual rate of return.

TABLE 12 – CAPITAL IQ BACKTEST

Fund	10-Year Cumulative Return[82]	10-Year Cumulative Return (Oil & Gas Excluded)
AIMCO	128.46%	184.29%
BCIMC	216.09%	252.71%
CDPQ	141.38%	166.72%
CPPIB	171.88%	188.96%
OMERS	177.28%	233.26%
OPTRUST	181.43%	205.26%
OTPP	63.09%	70.48%
PSP	163.27%	207.88%
Green Flags	315.48%	

A 10-year backtest on funds' public equity holdings was conducted in the S&P Capital IQ database to measure the impact that divestment of all oil and gas[83] stocks would have on the cumulative fund return. There are detailed public equity holdings available for eight of the funds in S&P Capital IQ, which are indicated in Table 12. In every case, divestment of oil and gas stocks led to a greater cumulative return over the 10-year period. The greatest difference in return is seen in AIMCO (55.83%), which is a function of its relatively high exposure to the oil and gas sector, which potentially exposed the fund to double jeopardy given its region's relatively high dependence on that sector.

The green-flag portfolio consists of companies that were listed as green flags (companies that derive at least 20% of revenues from low-carbon solutions that align with the Corporate Knights Clean Economy Taxonomy) in the Corporate Knights database for fiscal year 2019. These 436 "green flag" stocks had a total market capitalization of US$11 trillion and delivered a cumulative return of 315%, illustrating the significant opportunity cost of delaying portfolio shifts from high- to low-carbon assets.

4. CONCLUSIONS AND RECOMMENDATIONS

The results of the Dashboard reveal that there is some progress being made in integrating sustainability and ESG considerations in Canada's pension funds, particularly by some of the larger funds. They also highlight that much remains to be done.

They also highlight that much remains to be done. Here governments and other stakeholders have an important role to play in raising the bar. We have a number of recommendations according to the type of stakeholder.

The Dashboard naturally leads to a 10-point checklist of questions according to individual KPIs (where * refers to best practice):

•

10-POINT SUSTAINABLE PENSIONS CHECKLIST

1. **Does the fund have a science-based net-zero commitment backed up by transparently reported interim targets?**

2. **What percentage of the fund's total AUM or net assets is invested in credible and transparently defined sustainable solutions with exposure breakdown by asset class and entity level provided on an annual basis?** [20%+ of total AUM or net assets*]

3. **Does the fund disclose the total financed emissions and portfolio carbon intensity with breakdown by asset class while achieving emissions-intensity reduction of at least 7% per annum?**

4. **Does the fund have a publicly disclosed ESG pay link with detail on the target and the percentage of variable compensation linked to the target?**

5. **What is the fund's ratio of highest-paid employee total compensation to median employee total compensation?** [under 8:1*]

6. **What percentage of the executive team and board of directors self-identify as a visible minority or Indigenous person?** [27%+*]

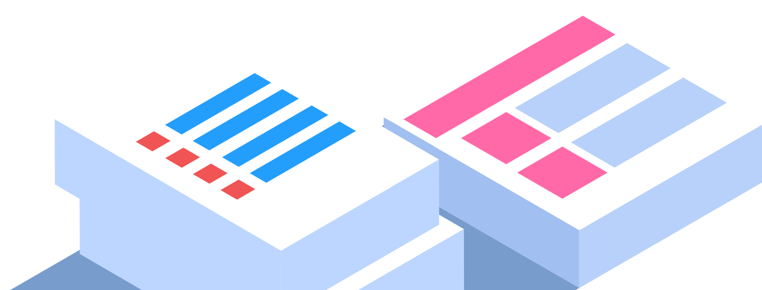
7. **What percentage of the executive team and board of directors self-identify as non-male?** [50%+*]

8. **What percentage of total E&S resolutions did the fund support in the most recent year?** [75%+*]

9. **What percentage of the board of directors has demonstrated E&S competency either by service for a clean-economy-focused organization or in an E&S-focused role, or notable E&S publications?** [30%+*]

10. **Does the fund have a policy to ensure that both its and its investee political activities are aligned with its ESG priorities?**

*Indicates best practice.



4.1 WHAT CAN GOVERNMENTS DO?

Update Canada Pension Benefits Standards Act, Pension Benefits Standards Regulation, and/or the Income Tax Act to require registered pension funds to demonstrate portfolio alignment with a standardized common net-zero criteria and dataset across asset classes.

Challenge: A fundamental shift is required for Canadian pension funds to be on the right side (environmentally and commercially) of the transition to a low-carbon economy. This issue dominates ESG considerations. A growing group of asset owners are adopting net-zero alignment objectives and pursuing implementation. The largest funds, which have the internal capacity to evaluate the risk-return implications related to the low-carbon economic transition, have already reached this conclusion. This can be seen in the Big Three (CDPQ, OTPP, CPP) having increased their allocations to low-carbon solutions from negligible to more than $130 billion today. Many of the funds are making net-zero commitments, but this needs to become a minimum requirement, an example of how fast the financial landscape has moved since the report of the Expert Panel on Sustainable Finance. This will require an acceleration of requirements for transparency and disclosure throughout the economy. The lack of this information does not pose an insurmountable challenge to implementing net-zero investment strategies as evidenced by CDPQ and OTPP commitments, but it makes it difficult for pension funds and other asset owners to move forward on adopting net-zero alignment strategies.

Recommendation: A means should be found to mandate or incentivize pension funds to adopt net-zero alignment strategies, including climate-related disclosure. The U.K., for example, recently passed legislation (Pension Schemes Act, 2021) that requires pension funds to set climate-related targets and report on this to its members and the regulator. For Canada, there are two options:

1. **Regulation:** A regulatory avenue, following the ESG integration approach, would be through amendments to the Canada Business Corporations Act, Canada Pension Benefits Standards Act, and relevant provincial regulations, to create new provisions regarding net-zero alignment and incorporate them in the statement of investment policies and procedures (SIPP) of pension funds, respectively.[84] These provisions would need to be based on clear, standardized criteria, such as the Partnership for Carbon Accounting Financials Standard, which was used by both CDPQ and OTPP. There are also a number of other emerging initiatives.[85] One challenge of the regulatory approach is the complexity of the Canadian pension fund regulatory landscape, which is balkanized along provincial and other lines. For example, the 12 large funds evaluated in this report are overseen by eight separate supervisory structures. Based on this structure, it will be important for the Canadian Association of Pension Supervisory Authorities (CAPSA) to provide guidance on regulatory alignment for all the pension regulators across Canada.

2. **Tax exemption conditions:** An alternative option, also deserving further investigation given the urgency required to find a solution, is an amendment to the Income Tax Act, which provides tax-exempt status to almost all pension funds.[86] Funds would be required to demonstrate net-zero alignment in order to maintain (full) tax exemption status (a Net-Zero Rule). This may offer a more expedient route to incentivizing net-zero alignment. In order for this to work, it would be important either to have the tax law refer to a trusted third-party net-zero standard setter or to ensure Canada Revenue Agency capacity to issue, update, and apply common standardized criteria and data analytics to monitor net-zero compliance (a Net-Zero Implementation Standard). There is precedent for using the Income Tax Act to enforce compliance with portfolio exposures. From 1971 to 2005, the Foreign Property Rule in the Income Tax Act placed a ceiling on the proportion of assets that tax-exempt pensions could invest outside of Canada, which was monitored by the Canada Revenue Agency.[87]

It would also be important to phase in a net-zero requirement through the Income Tax Act to recognize the varying levels of capacity within the Canadian pension sector, starting with large funds (the 63 pension funds with more than $5 billion in assets account for over half all assets among Canada's more than 16,000 pension funds with a total $4 trillion in pension wealth[88]) by 2022, and moving to include all tax-exempt plans excluding RRSPs by 2023. A variation on this recommendation could be to provide a small (10 to 20 basis points), limited-duration (two year) enhanced tax incentive for pension funds that aligned with the net-zero requirement, after which it would become a straight requirement.

Actors: Office of the Superintendent of Financial Institutions, Canada Revenue Agency, Department of Finance, provincial government pension regulators, Canadian Association of Pension Supervisory Authorities.

Fund	Supervisory Body
AIMCO	Office of the Alberta Superintendent of Pensions
BCIMC	British Columbia Financial Institutions Commission
CDPQ	Régie des rentes du Québec
CPCP	Office of the Superintendent of Financial Institutions (OSFI)
CPPIB	Canada Pension Plan Investment Board Act
HOOPP	Financial Services Commission of Ontario
OMERS	Financial Services Commission of Ontario
OPB	Financial Services Commission of Ontario
OPTRUST	Financial Services Commission of Ontario
OTPP	Financial Services Commission of Ontario
PSP	Public Sector Pension Investment Board Act
VEST	New Brunswick Office of the Superintendent of Pensions

Develop regulations for pension funds to integrate ESG[89]

Challenge: Pension funds need to balance ESG responsibilities with their fiduciary duties. Depending on the broad or narrow interpretations of fiduciary duties, it can result in very different implications for pension fund managers' legal responsibilities toward beneficiaries with respect to incorporating ESG factors. Moreover, some of the larger pension funds have committed to ESG integration, including net-zero emission targets for their portfolios, while others refrain possibly due to legal risks associated with such commitments as evident from the Australian REST litigation. Moreover, these commitments might not be straightforward to implement in practice, for both larger and other smaller pension funds, as it might conflict with fiduciary responsibilities.

Recommendation: Amendments in regulations, which ensures ESG integration is considered a part of fiduciary duty, might be the most appropriate approach to align these two perspectives. It would provide not only impetus for pension funds to engage with investee companies, asset managers, and other stakeholders to achieve ESG goals, but also safe harbour for the pension funds themselves in addressing ESG risks. It should be noted that the Expert Panel on Sustainable Finance and other experts recommended clarifying the scope of fiduciary duty for climate change and proposed several regulatory changes in terms of fiduciary obligations and disclosure requirements, respectively. The progress on this recommendation has been deemed "moderate."[90] Therefore, there are likely to be considerable benefits in following through on these recommendations and broadening the scope to include ESG integration and not addressing just climate-change-related risks and disclosures.

Actors: Federal government, provincial governments, Office of the Superintendent of Financial Institutions

Develop a taxonomy for environmentally sustainable economic activities

Challenge: With the ongoing transition to a global low-carbon economy, Canadian pension funds need clear guidance on when an economic activity can be claimed to be "environmentally sustainable."

Recommendation: A taxonomy will not only promote sectors worth investing in for the low-carbon transition but also provide much-needed clarity to industries, policymakers, investors, and beneficiaries. There is already some progress with the Canadian Standards Association's (CSA) Transition Taxonomy Committee, which is a voluntary industry-led initiative to develop a taxonomy for activities necessary during the transition to a low-carbon economy. However, the Transition Taxonomy stemmed from the recommendations of the Expert Panel on Sustainable Finance to enable development of a green fixed-income market and transition-oriented financing. As such, the Transition Taxonomy's main focus is to reduce greenhouse gas emissions. Moreover, the group has no federal mandate to develop a broader green taxonomy. As a result, there is significant scope for the federal government, led by the Sustainable Finance Action Council (SFAC) and the Net-Zero Advisory Body, to build on the Transition Taxonomy and develop a broad green taxonomy for Canada that is similar in structure and depth to the EU Taxonomy and accounts for Canada's natural-resource-based economy and transition requirements. It should be noted that the SFAC has already set up a separate workstream to take the Transition Taxonomy work to date and develop it further. The Corporate Knights Clean Economy Taxonomy (included in the Appendix) is one market-based approach that integrates EU Taxonomy, Transition Taxonomy, and measurable social elements of the UN Sustainable Development Goals.

Actors: Sustainable Finance Action Council, Net-Zero Advisory Body, Innovation, Science and Economic Development Canada, Environment and Climate Change Canada

4.2 WHAT CAN PENSION FUNDS DO?

Broaden common definition of sustainable solutions to take advantage of the investment opportunities

Challenge: Most pension funds think of ESG integration as a systemic risk optimization measure and/or strategic and tactical asset allocation strategy as opposed to the investment opportunity it presents. A significant impediment to the investment opportunity might be the pension fund's narrow disparate definitions of sustainable solutions. For some of the funds, the main definition of sustainable solutions, whether by adopting an external taxonomy or thematic investment strategies, revolves around commercial pure-play low-carbon solutions. Examples of investments include renewable energy (wind, solar, waste-to-energy projects), energy efficiency (green buildings), and others. Notably, this is a small segment of the entire spectrum of sustainable solutions and misses out on others such as bioeconomy, sustainable agriculture, net-zero responsibly mined minerals, et cetera. Moreover, there might be investment in sustainable solutions through different investment funds or asset classes. However, these are not disclosed, which makes it difficult to identify and measure the actual investment in solutions.

Recommendation: Pension funds need to coordinate and align on an inclusive, consistent, and comparable disclosure framework for sustainable solutions. This will enable pension funds to better capitalize on these investment opportunities that might create significant long-term value. There are considerable untapped opportunities for new investment in other areas such as sustainable agriculture, advanced materials, water technologies, and other emerging clean-technology sectors. Research has shown that there are significant investment gaps in sustainable solutions, which have proven to provide better long-term returns. These might correspond to non-liquid assets, which might offer greater liquidity premiums. Until Canada comes up with a transition, and ultimately a green, taxonomy, pension funds need to adapt their own framework. Some funds (e.g. CDPQ) have adopted or aligned with the CBI criteria to define low-carbon investments. Other recommendations might be to adopt a variation of the EU or UK taxonomy to define sustainable solutions. In the case of smaller pension funds, there needs to be a clear agreement on the definition of sustainable solutions with asset managers.

Disclose data on overall investments and investment in sustainable solutions across all asset classes

Challenge: For the purposes of this Dashboard, the percentage of AUM in sustainable solutions was analyzed. This metric is not fully disclosed by all the pension funds analyzed for the Dashboard. Moreover, for the pension funds that disclosed the data, the definitional coverage does not pertain to all asset classes. Most of the disclosures are for the real estate and infrastructure asset classes, which is on average 15% to 20% of a fund's AUM. This risks underestimating aggregate investment in sustainable solutions, which is important for the net-zero alignment and future returns.

Recommendations: While there are no formal regulations on investment disclosures in Canada, all pension funds need to voluntarily disclose investment details in sustainable solutions. This disclosure should be made for all asset classes. This would not only help properly estimate investments in sustainable solutions but also allow pension funds to compare across their peers. While there are crucial challenges around data availability and definitions of solutions, pension funds have taken important steps, such as calls for disclosures from investee companies. The funds need to take similar initiatives in a collective manner (e.g. agreeing on a common reporting framework such as TCFD or SASB) in order to attain full investment disclosures. For smaller pension funds, there needs to be a clear agreement on disclosure practices with asset managers. Notably, these managers might invest in "pools" which might make it difficult to obtain information. Furthermore, asset manager mandates can run for many years and disclosure agreements might not be re-negotiated during the mandate periods. Based on these challenges, it might be necessary for smaller funds to seek government support, possibly through regulation, on the information disclosure investment managers need to make to their customers.

Develop net-zero alignment strategies - urgently

Challenge: The Dashboard revealed that only two of the 12 pension funds (OTPP and CDPQ) have put forward climate plans with net-zero emissions targets and related investment allocations. Consultations with funds that do not have strategies in place revealed that they are taking the necessary steps in conforming to net-zero portfolio emission targets. However, they face challenges, mainly a lack of carbon emissions data, climate-risk-related disclosures by companies, and broader uncertainties in terms of strategic asset allocation, affirmation from pension fund trustees, et cetera. Until these challenges are resolved, pension funds generally remain cautious about releasing net-zero targets and investment allocation plans.

Recommendations: The other pension funds need to adopt net-zero alignment strategies urgently. While there are valid concerns regarding not having one, the changing climate-risk dynamics show that plans need to be developed rapidly. The portfolio backtesting exercise also reveals that funds are missing out on earning significant returns. Moreover, there is no fixed approach in conforming to net-zero and there will likely be few iterations to the approach over the next 30 years. Pension funds need to use the Partnership for Carbon Accounting Financials Standard, PACTA, or other emerging tools such as the Science-Based Targets for Financial Institutions or the Investor Energy-Climate Action Toolkit to assess net-zero portfolio alignment and follow other practices adopted by first movers and adapt them as soon as possible. For smaller pension funds, there needs to be clear agreement on net-zero portfolio allocations with asset managers.

Raise the bar on sustainable governance practices, especially on E&S competency and sustainability pay links

Challenge: There is wide variation in sustainable governance indicators across the funds. However, there is significant scope for improvements on sustainability pay links and E&S competency of board members. The Dashboard results show that only four of the funds have a sustainability pay link, which ties executive remuneration to performance on sustainability targets. On the other hand, the E&S competency of board members is, on average, 15% of total members per fund.

Recommendations: With successive iterations of the Dashboard, pension funds need to raise the bar on sustainable governance, including by ensuring that E&S competency is part of the scorecard matrix for board and executive recruitment. Good governance is crucial for successful implementation of policies and relies on sufficient and diverse knowledge of ESG and net-zero achievement matters. This expertise helps the board and executive team fully comprehend complex concepts/methodologies of, for instance, carbon accounting, science-based targets, equity, and just transitions. Furthermore, it is also important for the executive team to have "skin in the game" through pay links to sustainability targets. Pension funds need to find ways to improve the skill sets of existing board members in a meaningful way and adopt sustainability pay links for executive and upper-management teams.

"The climate situation affects everyone, and we can no longer address it with the same methods used a few years ago. The urgent need to act demands that we do more, faster, and that we innovate. We have to make important decisions on issues such as oil production and decarbonizing sectors that are essential to our economies. With this new strategy, we are demonstrating our leadership as an investor and enter the next stage of climate investing. We believe this is in the interests of our depositors, our portfolio companies, and the communities we invest in."

Charles Emond, President and CEO, CDPQ

Larger funds could syndicate low-carbon infrastructure investments to enable smaller pension funds to participate

Challenge: A handful of Canada's largest pensions have large internal infrastructure teams with global offices capable of identifying and structuring commercially attractive investments in low-carbon infrastructure. However, the smaller and vast majority of Canadian pension funds do not have this capacity. As a result, they might miss out on such investment opportunities.

Recommendation: Large pension funds, including CPPIB, CDPQ, OTPP, and PSP, can create syndication services or co-develop syndication protocols to enable smaller Canadian pension funds to participate in deals to finance low-carbon infrastructure.[91] The syndication will provide natural synergies – by combining the capabilities of funds with in-house infrastructure teams with the appetite of other pension funds interested in more exposure to the infrastructure asset class. It also allows them to compete for larger, riskier deals, which might not make sense to do alone from a risk-adjusted returns perspective. Notably, there is precedence for this approach with the syndication of Highway 407 in Ontario. Therefore, funds can leverage the expertise to invest in other larger commercially attractive low-carbon infrastructure projects. The main impediments to the syndication services or protocols might stem from the regulatory boundaries provided by the Income Tax Act and Pension Benefits Act and today's competitive investment environment. As a result, some form of intermediary or government backstop might be required to develop the syndication structure. Nonetheless, from a risk-return and sustainable investment perspective, it might be in the best interest of all the pension funds.

4.3 WHAT CAN BENEFICIARIES DO?

Use Dashboard as a tool to engage with pension funds

Challenge: Pension funds' beneficiaries might lack information on sustainability impact and governance practices and hence might not be able to collectively engage with the funds themselves on these issues.

Recommendation: The Dashboard provides information on the practices adopted by the largest pension funds on sustainability impacts and governance practices. This provides useful comparisons that can help beneficiaries not only understand the sustainable finance landscape but also ask pension funds specific questions on different sustainability dimensions and gauge the funds' plans to address them.

ENDNOTE CITATIONS

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85 The Paris Agreement Capital Transition Assessment (PACTA) tool (a free, open-source methodology and tool the UN helped to finance), which the Bank of England and KLP (Norway's largest pension fund) use to assess net-zero portfolio alignment. Other notable international initiatives working to set standards include the Partnership for Carbon Accounting Financials, the UN-convened Net-Zero Asset Owner Alliance, the Science-Based Targets for Financial Institutions, and the Investor Energy-Climate Action Toolkit – developing the framework and platform for non-state actors' contribution to the Paris Agreement. For further information, see: https://www.fmo.nl/l/en/library/download/urn:uuid:0728adec-a305-40df-b91b-6724e337b03a/methodology+report+final+version+nov+2019.pdf, https://www.klp.no/en/corporate-responsibility-and-responsible-investments/klps-roadmap-to-net-zero/KLP_Klimam%C3%A5l-rapport_2021__eng.pdf, https://2degrees-investing.org/resource/pacta/, https://carbonaccountingfinancials.com/, https://www.unepfi.org/net-zero-alliance/about/, https://sciencebasedtargets.org/sectors/financial-institutions, https://cordis.europa.eu/project/id/785087

86 According to the *Report on Federal Tax Expenditures* by Finance Canada, in 2019 tax breaks for Canadian pensions' net of taxation on withdrawals amounted to $85 billion, equivalent to 25% of total federal government revenues that year. See: https://www.canada.ca/en/department-finance/services/publications/federal-tax-expenditures/2021.html

87 There were problems with the Foreign Property Rule in principle and practice, including that it deprived Canadian pension funds of the growth opportunities that unconstrained global diversification would provide, and that many of the largest pension funds used swaps and derivatives to get around the limits. In contrast to the Foreign Property Rule, a Net-Zero Rule would provide safe harbour for all pension funds to swiftly make the same fundamental shift the largest funds already have underway, without the burden of duplicating costly evaluations on whether or how to implement net-zero strategies.

88 Statistics Canada Pension Satellite Account ($4.2 trillion in pension wealth). Registered pension plans (RPPs), active members, and market value of assets by size of plan assets (63 plans with more than $5 billion in assets). See: https://www150.statcan.gc.ca/n1/daily-quotidien/201211/dq201211c-eng.htm, https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110012401

89 In light of the urgency of the climate situation, this could be done surgically for net-zero purposes or, as pension expert Keith Ambachtsheer has called for, as part of an expedited, more holistic overhaul to ensure all Canadian tax-deferred asset pools provide integrated annual reports at the total organization level covering their organizational purpose, governance, business model, performance, and strategy, including independent certification that the report deals with reality and not fiction.

90 Cleary, S. & Hakes, A. (2021). *Changing Gears: Sustainable Finance Progress in Canada*. Institute of Sustainable Finance. https://smith.queensu.ca/centres/isf/pdfs/ISF-SustainableFinanceProgress.pdf

91 Dyck, A., & Virani, A. (2012). *Buying into the 407: The Syndication Protocol as a New Model for Infrastructure Investing*. International Centre for Pension Management Case Study, 29. http://kindlecapital.com/ICPM%20Case%20Study.pdf

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Expert Advisory Panel Canadian Pensions Dashboard for Responsible Investing

- Andrea Moffat, Vice President, Ivey Foundation
- Ed Waitzer, Waitzer Professional Corporation
- Francisca Quinn, Founder and President, Quinn & Partners
- Hugh O'Reilly, President and CEO, Acuity Global
- Jessie Sitnick, Vice President, Corporate and Public Affairs, Argyle
- Keith Ambachtsheer, President, KPA Advisory Services
- Randy Bauslaugh, Randy Bauslaugh Professional Corporation
- Rosalie Vendette, Sustainable Finance Expert, Decode ESG