2019 REPORT ON SUSTAINABLE INVESTING

INVESTING RESPONSIBLY FOR CPP CONTRIBUTORS AND BENEFICIARIES

CPP INVESTMENT BOARD

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photo courtesy of Enbridge, Inc.

CPP Investment Board (CPPIB) is a global investment management organization established to help ensure the Canada Pension Plan (CPP) remains sustainable for generations.

Our teams, with deep expertise and local knowledge, help us compete globally by managing public and private assets to maximize returns and deliver value over the long term.

We ensure the Fund is diversified by asset class and geography. This allows access to the growth opportunities international markets offer, while making the Fund more resilient to volatility in any single market, and safeguarding the best interests of current and future beneficiaries. CPPIB's arm's length governance system – which includes an independent Board of Directors – is globally recognized as a best practice for pension plans.

What Differentiates Us

Sound Governance

Canadians expect the CPP to remain free from political influence. Oversight of CPPIB is provided by a professional Board of Directors that operates independently of federal and provincial governments. Rigorous oversight of the Fund's strategy, composition and performance is a critical element of our Board governance.

Investment-Only Mandate

Our legislated mandate is to maximize returns without undue risk of loss, taking into account the factors that affect the funding of the plan. CPPIB's decisions are not influenced by government direction or any other public policies unrelated to our investment objectives such as regional, social or economic development considerations.

Transparency and Accountability

We operate in a highly transparent way that balances independence and accountability to maintain stakeholder trust. CPPIB publishes quarterly and annual financial statements and holds public meetings for Canadians every second year in each province that participates in the CPP. But we go well beyond what is required of us by legislation to provide timely and continuous disclosure of our investments.

Segregated Assets

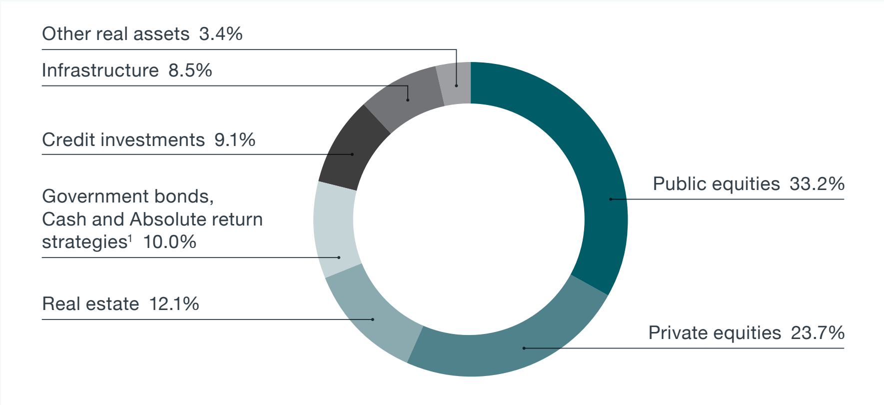
The assets we manage, in the best interests of 20 million CPP Fund contributors and beneficiaries, are owned by CPPIB and are entirely separate from any government's assets.

Professional Management

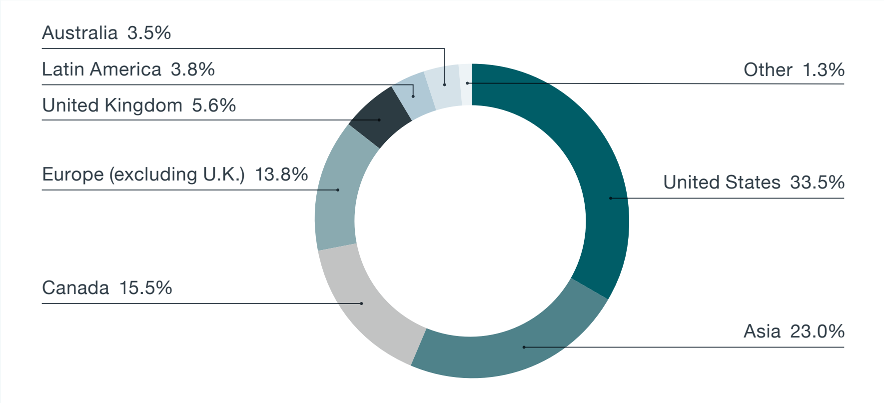
Our entrenched principles of accountability and high performance allow us to attract, motivate and retain top investment talent globally, which drive our brand and reputation as a professional investment management organization.

Operational Highlights

Asset Mix AS AT MARCH 31, 2019



Global Diversification by Region AS AT MARCH 31, 2019



Fiscal 2019 Results AS AT MARCH 31, 2019

8.9%
RATE OF RETURN (NET NOMINAL)

11.1%
10-YEAR ANNUALIZED RATE OF RETURN (NET NOMINAL)

10.7%
FIVE-YEAR ANNUALIZED RATE OF RETURN (NET NOMINAL)

$392.0 BILLION
CPP FUND VALUE

$32 BILLION
NET INCOME AFTER ALL CPPIB COSTS

$247.6 BILLION
CUMULATIVE NET INCOME AFTER ALL CPPIB COSTS SINCE INCEPTION

President's Message

CPPIB received its first dollar to invest two decades ago. Milestones like these provide opportunities to reflect on the factors that help an organization achieve its goals, but also consider disruptive challenges that must be addressed to ensure future progress.

MARK MACHIN
President & Chief Executive Officer

In retrospect, CPPIB's beginnings clearly contained the elements of its future success.

Chief among these is our clear and simple mandate: maximize returns without undue risk of loss, taking into account factors that may affect the funding of the plan.

More than 10 years ago, CPPIB began building what is now our Sustainable Investing (SI) group to engage with companies, coordinate peer collaborations and work with our investment teams to strengthen our understanding of how environmental, social and governance (ESG) factors influence long-term returns.

We learned that embedding these factors more deeply into the investment process, through tools like bespoke databases that track ESG materiality (see page 12), is critical to the pursuit of our investment objectives.

The SI team's work built a solid foundation to help us navigate one of the great disruptive forces of our time: climate change. Our exceptionally long horizon, which requires us to think and invest over multiple decades, has crystalized climate change as an issue we need to understand and address.

All this was top of mind as we prepared this 2019 Report on Sustainable Investing. These pages highlight that team's work, as well as sustainable investing activities across the organization.

Consider our progress in these notable areas.

CLIMATE CHANGE

These past 18 months saw major advances in our ongoing goal to be a leader among asset owners in understanding the risks posed, and opportunities presented, by climate change.

Foremost among these was an acceleration of our Climate Change Program. It elevated the ways our teams incorporate climate change considerations into our investment processes and evolved the organization from theoretical understanding to practical implementation. (See pages 14-16).

Our Climate Change Steering Committee oversees this program. We enhanced this Committee last year, adding more members of our Senior Management Team to facilitate agile, enterprise-level decision-making; so that challenges could be readily addressed.

Among its early achievements was the launch in April of an evaluation framework requiring investment teams to perform bottom-up analyses of climate change risks and opportunities on material investments. The goal is to better understand the risks we are taking on, and to make sure we are getting paid for them.

Such progress is encouraging. Yet we're mindful that fully understanding the implications of climate change – including physical, transition and adaptation risks – will be a continuous process.

For CPPIB, climate change is not merely about addressing risks. Its disruptive impact is also creating opportunities. This includes investments in renewable energy, where our size, expertise and long-term investment horizon make us an ideal partner.

President's Message

We were the first pension fund to issue a green bond in June 2018, and followed in January 2019 with the first euro-denominated green bond issued by a pension fund. Both issues met with robust demand. (See pages 31-33).

While CPPIB's renewable energy investments have been led by our Power & Renewables team (see pages 23-26), our pursuit of opportunities is not confined to a single investment program. Both our Energy & Resources and Thematic Investing teams seek climate change-related opportunities and collaborated on our investment in one of the world's leading electric vehicle charging networks. (Details on pages 21-23).

Finally, some of our broadly based investment programs are exposed to hundreds of companies that are leading the charge to displace traditional energy with more sustainable technologies.

BOARD DIVERSITY

This year we expanded our efforts to improve board diversity among our portfolio companies.

Based on our research, we have long believed companies with diverse boards, including with respect to gender, are more likely to achieve superior financial performance. This is why we increasingly use our voting power to encourage companies to appoint more women to their boards.

We began this practice within Canada in 2017, by voting against the election of nominating committee chairs at companies where boards had no female directors and no extenuating circumstances warranting an exception. If no progress was made by the following year, we voted against all of the company's nominating committee members.

We also engaged directly with company directors prior to casting proxy votes; letting them know our concerns about the lack of female representation on their boards and clarifying our intentions to vote against their nominations.

We witnessed firsthand how this encouraged companies to prioritize the issue and add women to their upcoming nomination slates.

That success led us to take the practice global. As of December 2018, we now vote against the chair of the board committee responsible for director nominations at any investee public company if that board has no women directors and no exception is warranted.

At the end of fiscal 2019, we held shares in more than 3,400 companies outside of Canada. So these efforts mark a significant undertaking to improve board gender diversity across our global public portfolio. We will continue to be active in advancing this important matter.

Board diversity is just one of many issues about which we engage with companies, and success to date reinforces our firm belief in the importance of engagement.

Whether urging managers to more fulsomely consider the impacts of climate change, or to structure their boards for long-term success, engagement creates a path through which asset owners can become powerful, positive influences.

CONCLUSION

Our climate change work, investments in renewable energy and actions to improve board diversity are just some of what we do to help spark positive change and improve long-term investment returns for the Canadian workers and retirees we serve.

This year's report shows the many ways our approach has evolved over 20 years. I hope by its conclusion you will share my optimism about what can be accomplished in the decades to come.

Mark Machin
President & CEO

SUSTAINABLE INVESTING: SELECT MILESTONES

2008

CPPIB releases its first Responsible Investing Report, which highlights our Climate Change, Executive Compensation and Extractive Industries focus areas.

2010

CPPIB adds Water as a focus area and becomes an inaugural member of the Water Disclosure Initiative of the Carbon Disclosure Project (now the CDP).

2012

CPPIB appoints a Head of Responsible Investing, further formalizing our efforts in the space.

2013

CPPIB's 2013 Responsible Investing Report wins Best RI Report by a Large Fund at the 2014 Responsible Investor Reporting Awards.

2014

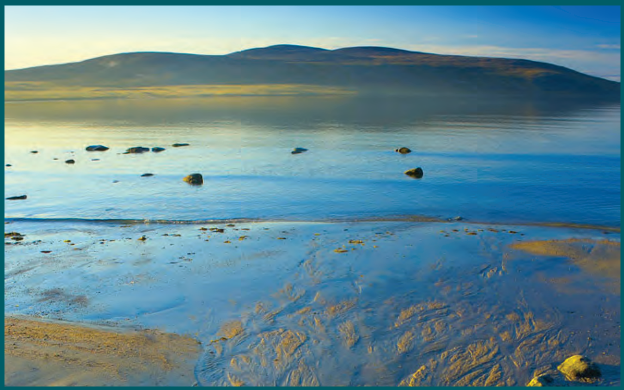
Responsible Investing group is renamed Sustainable Investing, reinforcing our view that ESG factors are fundamental to enhancing long-term returns.

2015

Alongside BlackRock and McKinsey & Co., CPPIB convenes the Long-Term Value Summit in New York. The summit brings together more than 120 investment and corporate leaders from 18 countries to tackle the problem of short-termism and identify ways to focus on long-term value creation.

2016

Human Rights is added as a focus area.



2017

The Financial Stability Board's Task Force on Climate-related Financial Disclosures releases recommendations to improve disclosure of climate-related risks at the G20 summit in Hamburg, Germany. CPPIB is one of only two global pension fund managers to be a member of the Task Force.

2018

CPPIB becomes world's first pension fund to issue green bonds.

Board Effectiveness is added as a focus area.

Organization-wide Climate Change Program is implemented.

2019

CPPIB issues its first euro-denominated green bond.

Direct investments in renewable energy projects exceed $2 billion.

WHY CPPIB WAS CREATED

In the mid-1990s, concerns arose about the CPP's long-term viability. Lower birth rates and longer life spans had reduced the ratio of workers to retirees. In response, Canada's provincial and federal governments came together to create bold reforms to put the CPP back on a sound financial footing for long-term sustainability. They increased contribution rates and created the Canada Pension Plan Investment Board to invest funds not currently needed to pay CPP benefits.

1966
CPP created; there are 6.5 workers for every retiree.

1990
Projections show that, by 2055, there will only be two workers per retiree.

1993
CPP benefits paid out start to be higher than contributions and investment income coming in.

1997
Canadian governments act to address demographic changes, and create CPPIB.

2016
Canadian governments agree to expand CPP with increased contributions and benefits.

2019
CPPIB begins to receive and invest first contributions from expanded CPP.

Our mandate and the consideration of environmental, social and governance factors

CPPIB was created by Canada's provincial and federal governments with a clear legislative mandate: to maximize returns without undue risk of loss, taking into account factors that may affect the financial obligations of the CPP. This mandate supports the important investment challenge we face to achieve sufficient growth to help sustain the Fund for multiple generations.

CPPIB places great importance on environmental, social and governance (ESG) factors. We believe organizations that manage these factors effectively are more likely to create sustainable value over the long term. Some firms take short cuts to produce great annual performance. The cumulative cost of operating this way eventually catches up with them. As such, we look for practices that will outlast immediate results. While the specifics vary by company, industry and geography, we consider relevant ESG matters when evaluating opportunities, making investment decisions, managing our investments and engaging with companies to seek improvements in business practices and disclosure. We believe that properly considering these factors will result in better long-term investment performance across the Fund.

Defining Environmental, Social and Governance (ESG) Factors

Environmental
Climate change and greenhouse gas (GHG) emissions, energy efficiency, air and water pollution, water scarcity and biodiversity

Social
Human rights, local impact and employment, child labour, working conditions, health and safety and anticorruption

Governance
Alignment of interests, executive compensation, board independence, diversity and effectiveness and shareholder rights

CPPIB'S APPROACH TO SUSTAINABLE INVESTING FOR LONG-TERM VALUE

We approach sustainable investing through three key functions: integration (pages 10 to 33), engagement (pages 34 to 53) and collaboration (pages 54 to 73). When approaching an ESG-related issue, we consider using one or more of these to drive positive changes that will create more value in our portfolio companies. This report details our approach and activities from July 1, 2018 to June 30, 2019.

ESG-related risks and opportunities can have significant impact on long-term value creation and this is becoming ever more apparent. Proper assessment of the strategic relevance of ESG matters can help identify emerging trends and investable ideas, as well as help ensure the better management of companies.

ESG factors can have direct impacts on a company's profitability through, for example, greater regulation leading to higher operating costs. They can also influence a company's customer loyalty, brand equity, ability to source financing and talent and its licence to operate. As such, we believe considering ESG factors in our decision-making and asset management activities will lead to better long-term investment performance. This approach is aligned with CPPIB's Integrated Risk Framework and risk appetite.

CPPIB's Sustainable Investing group supports and facilitates integration of ESG considerations in our investment decisions and monitoring processes. The group actively engages with companies in which we are invested and exercises our proxy voting rights. Working closely with our investment departments, the group also conducts in-depth research on companies, industries and assets in which ESG factors are material to the value of our investments.

The group regularly reviews industry standards and best practices and collaborates with other investors and organizations globally. CPPIB has established governing policies, approved by our Board of Directors, to guide our ESG activities. Our *Policy on Responsible Investing* (www.cppib.com/ResponsibleInvestingPolicy) defines how CPPIB approaches these factors within the context of our mandate. Our *Proxy Voting Principles and Guidelines* (www.cppib.com/PVPG) provide guidance on how CPPIB is likely to vote on matters put to shareholders at companies in which we invest and communicate CPPIB's views on governance matters.

CPPIB's investment decision-making process also takes into account issues or events that create the potential for outsized reputation concerns. In assessing risk-adjusted returns, we also evaluate ways unique or cumulative reputation harm may impact CPPIB's brand. The organization's Reputation Management Framework seeks to identify and mitigate the types of risk that have the potential to negatively impact our corporate reputation. To do this, CPPIB has conducted numerous reputation assessments on new investments. ESG considerations have been an integral part of these assessments given their potential to generate reputational harm.

During the reporting period, increased focus was placed on expanding the scope of reputation assessments to cover a broader universe of public equities that could be part of our investment portfolios now or in the future. This ongoing work to extend CPPIB's reputation management programs will help form a more holistic picture of issues that could sway perceptions about the organization and also help ensure that risk-adjusted return calculations more fully incorporate the appropriate reputation and ESG factors.

CPPIB'S INTEGRATED SUSTAINABLE INVESTING FRAMEWORK

BOARD OF DIRECTORS

- Approves overall risk framework, including integration of ESG factors
- Approves Policy on *Responsible Investing* and *Proxy Voting Principles and Guidelines*

CEO

- Sets tone and overall risk culture
- Promotes active ownership approach and our stewardship activities

SUSTAINABLE INVESTING COMMITTEE

- Chair of Committee provides updates to CEO on key issues
- Receives updates and approves sustainable investing policies, guidelines, and strategies

SUSTAINABILITY VIRTUAL TEAM

- Comprised of professionals from all investment teams
- Shares insights on ESG topics, including best practices and lessons learned, so that we can accelerate our firm-wide understanding of key ESG issues

SUSTAINABLE INVESTING GROUP

- Comprised of professionals with diverse backgrounds and expertise in ESG matters
- Supports CPPIB's role as an active and engaged owner
- Champions ESG integration across the organization into investment decision-making

INVESTMENT DEPARTMENTS AND CORPORATE FUNCTIONS

- Integrate relevant ESG considerations into investment decision-making and asset management
- Help inform proxy voting decisions and engagement with companies
- Senior management oversees operational, regulatory and legal, and strategic risks.

LEGEND

- Receives updates and provides approval
- Operation lead & champion
- Operations and working groups

Sustainable Investing Activities

- Receives updates on sustainable investing activities and Climate Change Program
- Approves Integrated Risk Framework, including integration of ESG and reputational factors

Climate Change Program

CLIMATE CHANGE STEERING COMMITTEE

- Includes both the Chief Financial and Risk Officer and the Chief Investment Strategist as well as senior representatives from Public Affairs and Communications, Real Assets, and the Office of the CEO
- Chaired by Global Head of Active Equities, who is Senior Management Team sponsor of the Climate Change Program
- Approves overall program execution strategy and sponsors change management across the organization

CLIMATE CHANGE MANAGEMENT COMMITTEE

- Meets monthly and oversees climate change risk integration across the organization
- Comprised of management from across investment departments and core services

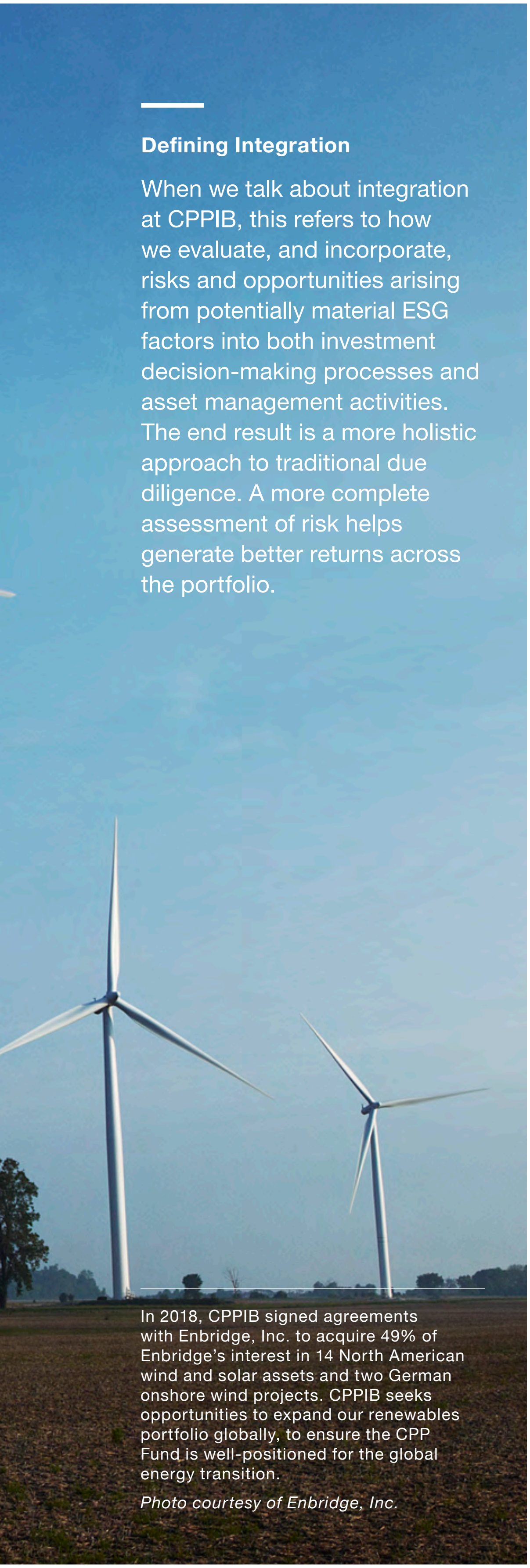
CLIMATE CHANGE PROGRAM MANAGEMENT OFFICE

- Includes representatives from Active Equities and Finance, Analytics and Risk
- Ensures collaboration across the organization
- Leads critical project and process management, implementation and coordination capabilities

WORK STREAMS

- Total fund exposure-appetite and portfolio design
- Total fund exposure-risk measurement & scenario analysis
- Security selection
- Data and information
- Fund-wide learning and knowledge sharing
- External communications


INTEGRATION



Defining Integration

When we talk about integration at CPPIB, this refers to how we evaluate, and incorporate, risks and opportunities arising from potentially material ESG factors into both investment decision-making processes and asset management activities. The end result is a more holistic approach to traditional due diligence. A more complete assessment of risk helps generate better returns across the portfolio.

In 2018, CPPIB signed agreements with Enbridge, Inc. to acquire 49% of Enbridge's interest in 14 North American wind and solar assets and two German onshore wind projects. CPPIB seeks opportunities to expand our renewables portfolio globally, to ensure the CPP Fund is well-positioned for the global energy transition.

Photo courtesy of Enbridge, Inc.

CPPIB integrates environmental, social and governance factors into our investment analysis, both before and after making investments. Our Sustainable Investing group works with investment teams throughout CPPIB.

We believe that deeply embedding ESG considerations into our investment process is critical as CPPIB's assessment of these considerations can be an important factor in determining whether a potential investment is attractive. Where such considerations are material, they can affect our assessment of a company's risk profile and value.

CPPIB's Sustainable Investing group works across the organization to support investment analyses on the impact of ESG factors. It also conducts research on industry standards and best practices, and expands our knowledge and resources by collaborating with external partners and industry associations.

Integration

SUSTAINABLE INVESTING GROUP

Our Sustainable Investing group is comprised of people with diverse professional backgrounds who have expertise in environmental, social and governance matters. It assesses and provides input on evolving trends and industry best practices in these areas, as well as on company-specific, thematic and sector ESG issues.

It also works with investment teams and other departments across the organization to ensure ESG risks and opportunities are incorporated into our investment decision-making and asset management activities. One of the Sustainable Investing group's regular activities is creating ESG reports about publicly traded companies for our investment teams to consider in their active investment decisions, enabling them to identify material risks and opportunities early on.

The Sustainable Investing group recently assumed management of our ESG due diligence process for direct equity investments from the Portfolio Value Creation team (see page 20). This process includes the scoping of ESG-related diligence items related to the environment, health and safety, labour and human rights, community relations, cyber security and data privacy, business integrity and corporate governance.

The Sustainable Investing group also supports our role as an active, engaged owner by carrying out all proxy voting activities and works to enhance the long-term performance of companies in which we invest by engaging, either individually or collaboratively, with other investors. Further, the group undertakes in-house research on topical ESG-related issues. One such study was a recent big data analysis of the relationship between gender diversity on boards and corporate performance (see page 49).

The group constantly explores ways to innovate and be at the forefront of the sustainable investing space. The team recently built a bespoke ESG database that utilizes a proprietary framework of ESG materiality covering multiple industries. The database offers granular insights into which issues have the most significant financial and operational impact.

SUSTAINABLE INVESTING COMMITTEE

Our Sustainable Investing Committee is comprised of senior representatives from teams across the organization and oversees the functions of the Sustainable Investing group with senior management and Board oversight as appropriate. The Committee explores, discusses and approves a wide range of topics, including climate change-related matters, engagement focus areas and CPPIB's *Proxy Voting Principles and Guidelines* (see www.cppib.com/PVPG).

Members of the Sustainable Investing Group: Back row (from left): Redon Gallani, Katie Wu, Fallon Maclean, Caroline Lester, Flora Liu, Danielle Pal, Ingrid Hoffmann, Kristian Branaes. Front row (from left): Tammy Bodnar, Samantha Hill, Ben Lambert, Amy Flikerski, Adriana Morrison.

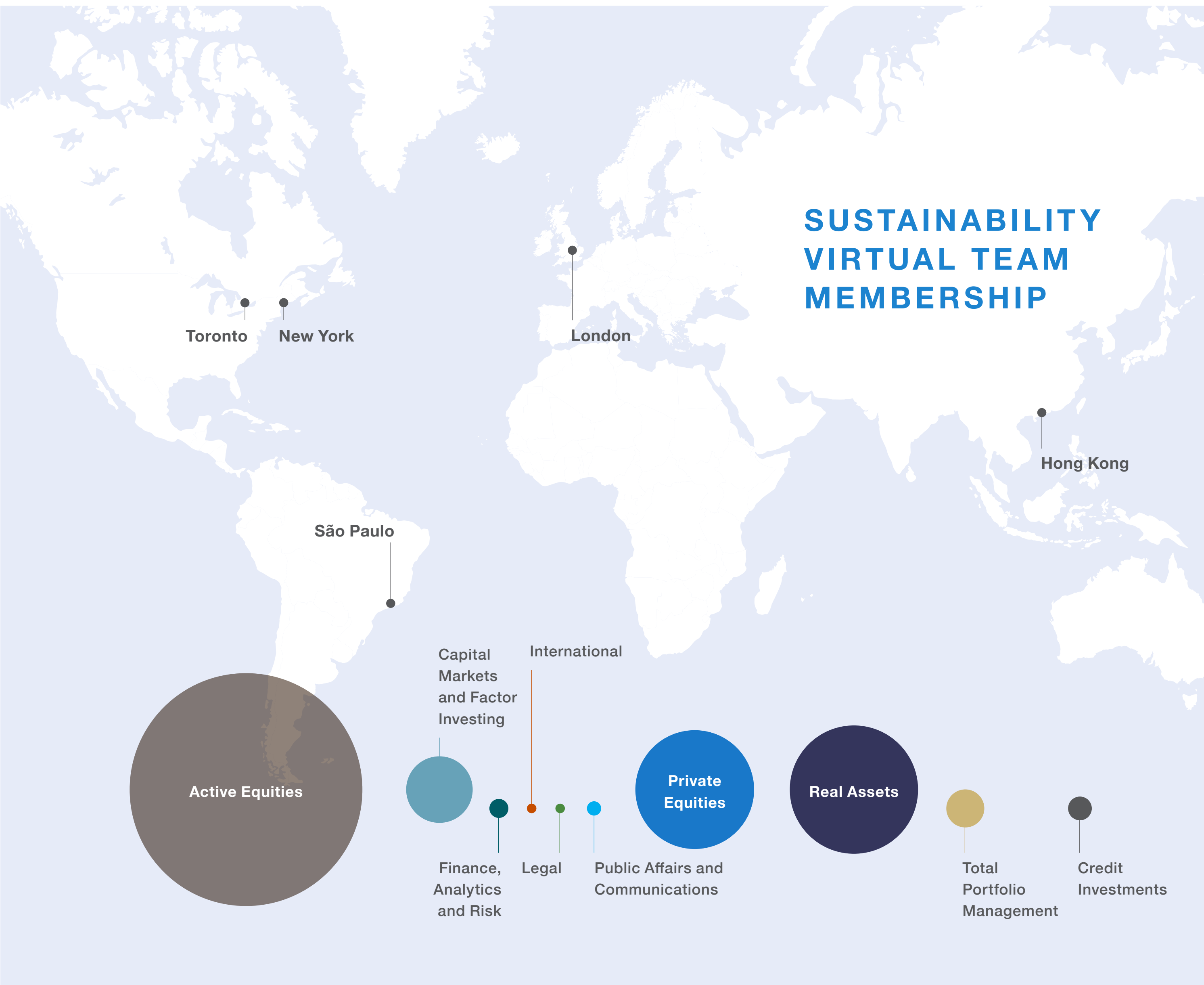
Integration

SUSTAINABILITY VIRTUAL TEAM

This year we launched the Sustainability Virtual Team (SVT), a community of professionals from across CPPIB who share insights on ESG topics, including best practices and lessons learned, to accelerate firm-wide understanding of these issues. The SVT has more than 140 members, including representatives from all investment departments across our global offices.

The SVT hosts quarterly meetings where we invite a globally recognized external leader in sustainable investing to provide us with their insights. The SVT also hosts in-depth topical discussions with relevant internal and external experts on specific ESG issues, allowing us to dive deeply into concentrated topics. The SVT conducts bi-monthly internal calls to facilitate knowledge sharing among members across CPPIB globally.

The SVT is led by members of the Sustainable Investing and Relationship Investments teams and is overseen by the Head of Sustainable Investing.



2019 REPORT ON ACTIVITIES

CLIMATE CHANGE PROGRAM

CPPIB seeks to be a leader among asset owners and managers in understanding the investment risks and opportunities presented by climate change. This aligns with our legislative mandate, recognizing we must act in the best interests of current and future beneficiaries. Investments and assets must be properly priced to reflect risks and offer sufficiently attractive potential returns. This is important for a sophisticated investor with a long investment time horizon.

We apply insight and expertise and monitor developments as we construct our long-term portfolio, rather than setting targets or timelines that could compel us to sell or buy assets at a suboptimal time. This helps protect our holdings against risks, ranging from potential losses to overpaying for investments during the global energy transition.

Launched in 2018, CPPIB's Climate Change Program is a cross-departmental, multi-year initiative designed to help us achieve that objective. The Program has six work streams, described in detail on the following page.

The Program, which incorporates elements of change management, collaboration and knowledge sharing, is designed to provide CPPIB with a differentiated understanding of the impact of climate change on our business. Goals include enhanced capital allocation, deeper investment acumen related to climate change and strengthened external communications and transparency – which is critical to fostering and promoting stakeholder confidence.

The Program builds on CPPIB's years of work on this issue. Climate change has been a focus of our engagement activities with companies for more than a decade.

CPPIB's Climate Change Steering Committee (CCSC) includes both the Chief Financial and Risk Officer and Chief Investment Strategist as well as senior representatives from the following departments: Active Equities, Public Affairs and Communications, Real Assets and the Office of the CEO. This committee, chaired by the Global Head of Active Equities, oversees CPPIB's Climate Change Program Management Office and Climate Change Management Committee, which in turn guide and support the Program's climate-related work streams.

To facilitate this work, CPPIB leverages vendors and external partners with the goal of obtaining best-in-class data and expertise.

Climate Change Steering Committee: From left: Deborah Orida, Neil Beaumont, Geoffrey Rubin, Heather Tobin, Ed Cass, Michel Leduc.

CPPIB CLIMATE CHANGE WORK STREAMS

TOTAL FUND EXPOSURE – APPETITE AND PORTFOLIO DESIGN

Work stream 1 led by: Total Portfolio Management

This work stream takes a top-down approach with the goal of, eventually, directly factoring risks and opportunities into CPPIB's investment strategy and total portfolio design. It works to understand potential climate change and energy transition pathways for various countries, as well as the resulting economic and market impacts. The work stream is also working to develop energy scenarios and reference cases to guide portfolio allocation decisions.

TOTAL FUND EXPOSURE – RISK MEASUREMENT AND SCENARIO ANALYSIS

Work stream 2 led by: Finance, Analytics & Risk

This work stream's main objective is to identify, assess and monitor climate change risks using several approaches, with the goal of ensuring the resilience of the CPP Fund. The work stream is also responsible for compiling CPPIB's carbon footprint metrics and ensuring the process is aligned with emerging best practices (see page 61-62).

SECURITY SELECTION

Work stream 3 led by: Active Equities and Real Assets

The Security Selection work stream takes a bottom-up approach to assessing climate change risks and opportunities. Enhancing the review process for our most material individual investments, the work stream designed a framework that allows investment teams and approval committees to identify and act on key climate change issues for these fundamentally driven decisions across geographies and sectors.

DATA AND INFORMATION

Work stream 4 led by: Technology and Data

This work stream provides enterprise data, technology and information capabilities in support of CPPIB's Climate Change Program.

FUND-WIDE LEARNING AND KNOWLEDGE SHARING

Work stream 5 led by: Human Resources, Public Affairs and Communications

This work stream increases CPPIB's internal awareness and understanding of climate change risks and opportunities through both learning programs and awareness building, often through enterprise-wide communications. This group will help our global investment professionals enhance their understanding of climate change and make better-informed decisions.

EXTERNAL COMMUNICATIONS

Work stream 6 led by: Public Affairs and Communications

This work stream applies a comprehensive communications strategy to strengthen external awareness of CPPIB's climate change work. This includes expanded disclosure through our Sustainable Investing and Annual Reports and ensuring alignment with the Financial Stability Board's Task Force on Climate-related Financial Disclosures.

Climate Change Management Committee: From left: Amy Flikerski, Samantha Hill, Steven Richards, Jacqueline Cosgrove, Caroline Rogers, Diane Oliveira, Jeffrey Hodgson, Maria Montero, Ben Lambert, Rocky Ieraci. Absent: Martin Healey, Kathy Rohacek, Bill Mackenzie, Dureka Carrasquillo.

INTERVIEW WITH DEBORAH ORIDA ON THE CLIMATE CHANGE PROGRAM

Deborah Orida, our Senior Managing Director & Global Head of Active Equities, was named executive sponsor of CPPIB's organization-wide Climate Change Program in April 2019.

What is CPPIB's approach to climate change and why have we chosen this?

CPPIB's approach is to understand both the risks and opportunities from a financial point of view. And the reason we do that is to be consistent with our mandate: to maximize returns without undue risk of loss for the benefit of 20 million Canadians. That means we need to think about these emerging risks and opportunities and ensure that they are fully incorporated into our material investment decisions.

What is CPPIB's Climate Change Program and how is it different than what was done before?

The Climate Change Program is a cross-functional effort that involves people from Total Portfolio Management (TPM), Finance, Analytics & Risk (FAR), our investment departments, Human Resources, Technology & Data, and Public Affairs and Communications. It's a cross-divisional, cross-departmental effort because our strategy on climate change affects all of CPPIB – and we need to work together to make sure we're identifying all the risks and opportunities that could impact investment decisions.

The new Program has three design work streams. The first is a top-down effort led by TPM focusing on portfolio design; and how climate change and energy transition scenarios are going to impact our target exposures in different countries. Second, we have a portfolio risk assessment and scenario analysis work stream led by our folks in FAR.

Finally, a bottom-up security selection work stream led by two investment teams – Active Equities and Real Assets – focuses on incorporating the impacts of climate change in our material investment decisions.

All this work may sound a bit theoretical. You might ask, 'How is it affecting our day-to-day investment decisions?'

One way this work is really starting to come through is in the climate change security selection framework we launched in April. Investment teams must now include descriptions of relevant climate change-related risks and opportunities that impact investment decisions in their screening memos and final investment recommendations.

We know CPPIB aims to allocate more to emerging markets – up to a third of the Fund by 2025. How do climate change considerations fit with that strategy?

The launch of our climate change security selection framework means we now incorporate assessments of climate change-related risk into our material investment decisions. And this applies to our work in emerging markets.

As we think about investment prospects in these markets, the risks and opportunities presented by climate change will be key considerations.

We have already made investments that I believe are excellent examples of the integration of climate change considerations into our emerging markets strategy – including our growing portfolio of renewable energy assets in Brazil and India. And on the public market side we have our investments in the theme of vehicle electrification in China.

Any change will generate a genuine opportunity set, and climate change is just one example of that.

Why is it important for CPPIB to be a leader among asset owners in understanding the risks and opportunities of climate change?

Climate change is a long-term risk and opportunity set that's very consistent with CPPIB's long-term horizon. Being a leader in these areas is key to fulfilling our responsibility to make the best and most well-informed investment decisions possible for 20 million Canadians.

My own assessment is that CPPIB is an industry leader in this regard, particularly because we are so focused on approaching the challenge from a financial perspective. We look at how to incorporate the risks and opportunities in order to make the best investment decisions.

It is a real, disciplined approach and consistent with the fulfillment of our mandate.

CONSULTING WITH INVESTMENT TEAMS ON PROXY VOTING

The Sustainable Investing group votes CPPIB's shares at shareholder meetings for publicly traded companies in which we invest. The group frequently consults with investment teams for their views on voting matters and integrates them into voting decisions. Investment teams across CPPIB's global offices provide input based on their in-depth knowledge of specific companies, industries and geographic markets.

We developed an automated system for notifying investment teams of upcoming shareholder meetings. This helps notify investment teams in real time and facilitates productive and efficient two-way communications between the investment teams and the Sustainable Investing group on voting matters.

This year, our notification system sent more than 1,500 voting notifications to teams across the organization. This process continues to facilitate and enhance discussions between the Sustainable Investing group and investment teams globally. For example, during the proxy voting season, we regularly consulted with CPPIB's Active Fundamental Equities, External Portfolio Management, Fundamental Equities Asia and Relationship Investments teams in Toronto, Hong Kong and London.

Integrating views from investment teams into voting decisions helps ensure we leverage our global expertise and relationships.

ANTI-PERSONNEL LANDMINES AND CLUSTER MUNITIONS

Given our legislated mandate to maximize investment returns without undue risk of loss, we integrate ESG factors into our investment analysis along with other investment considerations, rather than screening investments based on ESG factors alone. However, we do exclude certain companies whose businesses are unlawful in Canada. These include:

Anti-personnel landmines: We will not invest in companies not in compliance with Canada's Anti-Personnel Mines Convention Implementation Act, or that would not comply if they operated in Canada.

Cluster munitions: We will not invest in companies not in compliance with Canada's Prohibiting Cluster Munitions Act, or that would not comply if they operated in Canada.

Our annual disclosure of public equity holdings may show amounts for companies that would be precluded as noted above. Such exposures are indirect, resulting from CPPIB's use of market traded index futures contracts. Composition of these indices is standard and beyond the control of CPPIB. Our exposures do not assist or affect the capital formation of these companies and CPPIB has no direct investments in them.

ESG AND OUR INVESTMENT DEPARTMENTS

Active Equities

ESG factors are considered across the Active Equities department and play a key role in work done by our Active Fundamental Equities, Direct Equity Investments Latin America, Fundamental Equities Asia, Relationship Investments and Thematic Investing groups. The Head of Sustainable Investing is a member of the Active Equities investment committee.

ACTIVE FUNDAMENTAL EQUITIES

The Active Fundamental Equities (AFE) group invests in public equities across North America and Europe. AFE uses independent fundamental research to inform its investment decisions. This research yields a collection of high-conviction, single-company investments.

As part of this process, AFE evaluates risks that could impact a company's profitability, including a detailed assessment of potential ESG risks. The report prepared by CPPIB's Sustainable Investing group is a key input to the evaluation of all potential investments. Key risks surfaced through the ESG report can lead to more focused research on specific factors relevant to the investment under consideration. AFE also works closely with the Sustainable Investing group on matters related to proxy voting, particularly if they are contentious or relate to key considerations for our investments.

DIRECT EQUITY INVESTMENTS LATIN AMERICA

Direct Equity Investments Latin America (DEILA) is a new group formed in April 2019. It is a regional program dedicated to investing through a broad and flexible mandate that incorporates direct and indirect private equity, and public equities investing, and that allows CPPIB to be better aligned with long-term local partners. In public equities, the mandate also includes both a fundamental long/short strategy and significant direct minority ownership investments where DEILA can make a meaningful difference to the success of the company.

Integration

FUNDAMENTAL EQUITIES ASIA

Fundamental Equities Asia (FEA) is a new group formed in fiscal 2019, combining the AFE Asia and Relationship Investments Asia teams. FEA performs fundamental research on public equities, or soon-to-be public equities, and invests in quality companies throughout Asia. The group incorporates both a fundamental long/short strategy and significant direct minority ownership investments where FEA can make a meaningful difference to the success of the company. FEA aims to generate alpha over the long term in Asia with a market-neutral portfolio.

Both the DEILA and FEA teams will engage with the Sustainable Investing group on ESG matters during the due diligence process to identify potential risks. DEILA and FEA might also engage local external advisors in Latin America and Asia respectively to help assess the impacts of these factors, depending on the country or sector related to the potential transaction. DEILA and FEA take a global view of ESG best practices and often engage with management teams where it is a significant investor.

RELATIONSHIP INVESTMENTS

The Relationship Investments (RI) group makes strategic minority investments in public or soon-to-be-public companies. RI focuses on investments where CPPIB can make a meaningful difference to the success of a company and thereby generate long-term outperformance relative to peers. For each investment, we serve as an active, engaged partner to the company's management team and board of directors.

RI seeks to benefit from being a long-term investor in the public markets, where most participants are focused on short-term results. The group views a company's strategy, governance structure and approach to managing environmental and social factors as indicators of its ability to grow sustainably and create long-term value for shareholders. As part of the team's due diligence process, RI assesses a company's ESG practices through discussions with management teams and directors, using both internal resources and third-party experts as necessary.

Once an investment is made, RI can leverage its status as a significant shareholder to engage with company management teams to promote ESG best practices.

THEMATIC INVESTING

The Thematic Investing (TI) group researches and invests in companies exposed to long-horizon structural changes. TI's investment process comprises in-depth research beginning with a global, top-down approach to identify the most compelling long-horizon themes. This top-down research is complemented by bottom-up fundamental research to identify investments in both public and private markets.

TI focuses on companies exposed to structural growth, which occurs over an extended time period, typically exceeding 10 years. Thus, it is important for companies in which TI invests to be sustainable over the long term. TI incorporates ESG assessment into its investment process to ensure investee companies are sustainable and deliver long-term growth. In addition, TI considers how climate change may impact companies and industries.

For example, TI has researched how the transportation industry may transform from one primarily reliant on gasoline and diesel fuel to one primarily dependent on batteries and other forms of energy storage. By analyzing design and manufacturing cost improvements of lithium-ion batteries, TI anticipates electric vehicles are approaching price competitiveness for a rapidly growing set of driving patterns. TI has researched related supply chains globally to identify segments with sustained profitability and product development that contributes to final passenger affordability.

In the face of growing social and commercial recognition of future environmental consequences, TI is preparing to launch a new climate change investment strategy. The portfolio will be fundamentally driven and contain a diverse set of companies with tangible exposures to climate change. TI's climate change strategy will be designed to capture related structural shifts in consumer preferences, industrial practices and physical resources, while mitigating short-term, idiosyncratic risks. Coverage will be global, including both public and private companies, and the portfolio will be scalable to grow with the total fund. We will report on the strategy in the 2020 Report on Sustainable Investing.

SHAREHOLDER ENGAGEMENT IN PRACTICE: RELATIONSHIP INVESTMENTS

CPPIB engages directly with companies to promote ESG best practices. RI is well-suited for this endeavour as the team takes significant minority ownership positions and typically receives governance rights commensurate with its ownership interests. Sustainable Investing works closely with RI to shape the dialogue with companies within RI's investment portfolio, helping them evaluate their ESG approaches and align with best practices. Sustainable Investing has assisted RI portfolio companies on numerous occasions over the past year, as detailed below.

ESG PROGRAM DEVELOPMENT

On several occasions, CPPIB was asked to provide advice to portfolio companies to help build out and enhance ESG practices and performance. We provided guidance on topics such as board best practices (structure, refreshment, diversity and succession planning), HSE (health, safety and environment) and climate change, and assisted a portfolio company in establishing its board diversity policy.

ESG REPORTING

One of our portfolio companies reached out to CPPIB in advance of preparing their annual sustainability report to understand how investors prioritize disclosures regarding compliance with various ESG factors. When aggregated with other investor and staff perspectives, the results helped the company determine which factors were important to manage and report on.

COMPENSATION STRUCTURE

CPPIB joined a discussion with the board of a portfolio company regarding compensation best practices, including the importance of setting incentive plans to link pay and performance.

ESG TOOLKIT DEVELOPMENT

CPPIB has aided portfolio companies developing ESG-related products and services by walking through our diligence process, providing our views on offerings we would find useful and arranging introductions to other CPPIB portfolio companies so they can understand how ESG product needs may vary by industry.

Private Equity and Real Assets

APPROACH TO DIRECT INVESTMENTS IN PRIVATE EQUITY AND REAL ASSETS

Direct equity investments provide CPPIB with significant ownership, interest and influence, including through direct private equity or real assets transactions (such as Infrastructure, Energy & Resources and Power & Renewables). Our intention is to hold direct equity investments for several years – and even decades – in the case of infrastructure or energy investments.

Ongoing management of ESG factors can impact investment performance during the long holding periods. This makes it critical to integrate evaluation of ESG opportunities and risks into our due diligence process for direct investments in private equity and real assets. As our direct equity investment portfolio grows, we must manage ESG factors across a wide range of companies in diverse sectors. And we tailor our approach for each transaction, because circumstances differ by deal structure, company, sector and geography.

Earlier this year, the Sustainable Investing (SI) team took over responsibility for the ESG due diligence process for direct equity investments, which was formerly managed by the Portfolio Value Creation (PVC) team. This was a natural transition, given the SI team's ESG domain expertise, and made possible by close collaboration with the PVC team.

The SI team builds on the detailed process established by the PVC team. The SI team worked with internal groups, such as Business Management and Compliance, investment department heads and select deal team representatives and specialist advisors, to refine its list of due diligence questions and to streamline the process. Our ESG evaluations focus on seven areas: environment, health and safety, labour and human rights, community relations, cybersecurity and data privacy, business integrity and corporate governance.

ESG due diligence will continue to evolve under the SI team's management, with a more forward-looking approach and an orientation toward value creation and protection.

MANAGING ESG FACTORS FOR DIRECT EQUITY INVESTMENTS

1 OPPORTUNITY SCREENING

CPPIB's investment team identifies and highlights key ESG factors as part of the preliminary evaluation of a target company.

2 PRIMARY DUE DILIGENCE

If CPPIB proceeds to due diligence, we conduct a structured and intensive review of a target company's business model and key ESG risk factors by accessing several sources, including senior management and corporate information, in-house specialists and environmental, technical, engineering, legal, security and accounting experts, as necessary. The investment teams also collaborate with Public Affairs and Communications (PAC) on due diligence to assess the implications of CPPIB investing in a company or asset where ESG factors could generate reputational harm.

3 INVESTMENT RECOMMENDATION

The investment approval process includes an assessment of material ESG matters. The deal team assesses the potential financial impact of these risks and opportunities.

4 MONITORING

CPPIB encourages best practices for board governance. As owners, we work to put appropriate controls and processes into each of our portfolio assets.

Once CPPIB makes a direct investment in a private company or real asset, we closely monitor ESG risks and opportunities over the life of the investment, using customized approaches reflecting industry-, geography- and company-specific factors.

Integration

PORTFOLIO VALUE CREATION GROUP: ENHANCING OUTCOMES AS AN ENGAGED OWNER

CPPIB's Portfolio Value Creation (PVC) group is actively involved in the governance and management of direct equity investments across all investment departments. The group works with investment teams, management and partners to drive value within portfolio companies through board oversight, performance monitoring and value creation from operations.

PVC helps CPPIB realize financial benefits of private ownership by monitoring developments and commitments by our portfolio companies and helping resolve governance and operational issues. The group carries out regular semi-annual monitoring processes that include ESG factors for major assets where CPPIB holds significant governance rights or control.

ENERGY & RESOURCES

The Energy & Resources (E&R) group pursues investments in traditional energy production, transport and storage, as well as mining. It prioritizes evaluation and monitoring of ESG factors, working with portfolio companies to ensure implementation of best practices.

This year E&R launched an Innovation, Technology and Services (ITS) strategy, with a mandate to seek early stage investments aligned with our broader sub-sector strategies and energy transition. The E&R group saw the industry is undergoing significant change from new, earlier-stage technology companies that are both creating and improving existing processes and technologies. This creates opportunities for innovative technology companies to become a large and critical segment of the E&R investing landscape.

Over the past six months the team has focused on four key areas experiencing significant change and technological innovation. These are:

- water and waste;
- materials and fuels;
- electricity (transmission, distribution, storage); and
- E&R processes and services (new innovative companies, technologies and services that are improving processes).

In October 2018, CPPIB formed a partnership with the Creative Destruction Lab (CDL) to better connect with emerging technologies in the artificial intelligence and energy sectors. CDL is a seed-stage program, founded by Professor Ajay Agrawal at the University of Toronto's Rotman School of Management. It connects deep-science ventures with serial entrepreneurs, angel investors and venture capitalists to build massively scalable companies. Within CDL's Energy Stream, our ITS team is currently engaged in the inaugural mentoring program run out of the University of Calgary.

ChargePoint

This year, E&R worked with Thematic Investing to complete an investment in ChargePoint Inc, which designs, builds, and supports a comprehensive suite of electric vehicle charger technologies for a range of customer segments including home, commercial and fleet. Headquartered in California, the company is committed to deploying 2.5 million charging spots globally by 2025. Our investment in ChargePoint will provide exposure to an increasingly important transportation technology and help enhance our insights into the latest advances in electric vehicles and energy transition.

Photo courtesy of ChargePoint

AN INTERVIEW WITH ETIENNE MIDDLETON

Capitalizing on Innovation

Etienne is a Senior Principal in the Energy & Resources (E&R) group, leading its Innovation, Technology and Services strategy. He joined CPPIB in 2009 and previously helped the organization develop a world-class infrastructure program.

CPPIB recognizes the need to understand the long-term global shift to lower-carbon energy sources. How does this projected energy transition influence the work of the E&R group?

Everything our team does is underpinned by the approach of what this energy transition means when we look at long-term investments. The global energy value chain is undergoing substantial change and is being impacted by earlier-stage technology companies that are improving existing processes.

That's led to the development of our Innovation, Technology and Services (ITS) strategy, which sees to it that we're not just aware of the changes but actually investing in some of them. Some of these companies have potential to scale and become large investments.

We also see energy demand moving to broader electrification. Looking at Heating Ventilation Air Conditioning (HVAC), and particularly heating, we're seeing more electrification. The other obvious case is the electrification of the automobile. That shift is significant because charging Electric Vehicles (EVs) puts a substantial load on homes, in some cases doubling the load. Existing infrastructure in most cities is not set up to handle that.

What areas show the most potential for future investments under our Innovation, Technology and Services strategy?

The ITS strategy focuses on companies that are improving and disrupting both existing energy and resource sectors. It currently focuses on four key areas: water and waste, materials and fuels (including carbon), electricity (generation, transmission, distribution, efficiencies and storage), and oil and gas processes and services (new innovative companies and technologies that are improving existing processes).

We're looking for opportunities across industries that are starting to bring new technologies to bear.

There's a lot to be done for oil and gas processes, where you can apply technologies to improve productivity and efficiency, and green the footprint. With commodity prices remaining low, you have to look for efficiencies in order to be competitive.

Plus, we're looking at electricity more broadly. There's a new generation of technologies that impact transmission, distribution deficiencies and storage across the chain.

We're also talking to companies that are exploring ways to sequester or use carbon better. For example, early stage technology is creating carbon nanofibers that can be coupled with other technology that is pulling carbon out of the atmosphere. Those fibres can be used for many applications such as aerospace and medical.

What have you found most interesting about the sector since launching this investment strategy?

We're seeing innovation being applied to very large, global challenges. Carbon capture, use and storage has emerged as a very big theme requiring massive investment that can help meet carbon reduction goals.

We've come to appreciate that CPPIB is very well-positioned to deliver these investments, given our scale, our long-term focus and the capabilities we've built across investment teams.

How do our investments in companies like ChargePoint dovetail with this larger strategy?

With the investment in ChargePoint, we were able to leverage expertise from across the firm, making the investment with our teammates in Thematic Investing who are focused on the shifting usage of automobiles. We were also able to tap into our portfolio companies, to understand their perspectives.

Working with teams across CPPIB and our portfolio companies to identify and unlock new, applicable technologies is a core part of our strategy. The global scale of our investments ensures we have relevant touchpoints for new technologies.

More broadly, ChargePoint dovetails with the thesis around energy transition, given the potential magnitude of the shift in fueling automobiles, moving from fossil fuels to electrification. Our broader strategy hangs on this paradigm shift of changing energy supply and energy demand. ChargePoint gives us one early window into how quickly this shift is coming and allows us to apply that knowledge across our investing activities.

POWER & RENEWABLES

The Power & Renewables (P&R) group's mandate is to take advantage of opportunities created by the global energy market's transition, as well as overall global growth in demand for power – particularly for low-carbon energy alternatives. Electricity is now the fastest-growing form of energy consumption worldwide and renewables are becoming a prominent part of the energy mix as deployment costs fall and green technologies increasingly become mainstream.

The group was created to help access attractive investments in the sector, since the industry's dynamics align closely with our competitive advantages – notably our scale, flexibility and long-term horizon. P&R focuses on strategic opportunities and the ability to apply long-term investment horizons, with latitude to explore promising, less mature development and greenfield investments.

Over the past year, P&R focused on establishing and deepening strong relationships with strategic investors in renewables – with the expectation that this will create additional investment opportunities. These include the continued success of its partnership with Brazil's Votorantim Energia, which provides access to a scaled, growing and attractive Brazilian power market.

P&R also made significant progress setting up a European-focused offshore wind joint venture that was a key component of its acquisition of a minority interest in certain Enbridge renewable assets. And, it spent the year strengthening asset management capabilities, specifically through the build-out of Cordelio Power, an entity created upon the acquisition of NextEra Energy Partners' Ontario assets in 2018. This included hiring a full asset management team with the skill to drive best practices across P&R's portfolio. There is a significant benefit to this type of common asset-management platform, both in providing efficiency and driving long-term value within the portfolio.

P&R believes CPPIB's comparative advantages are well-suited to help us build a diversified renewable energy portfolio that can deliver the best risk-adjusted returns available. CPPIB's scale provides access to the largest opportunities. Our long-term horizon makes us an attractive equity partner and preferred source of capital for top-tier management teams. Finally, our total portfolio approach and certainty of assets allow us to access a broad range of investment risk profiles, including meaningful exposure in emerging markets and disruptive technologies. P&R collaborates with colleagues in other investment programs, including Infrastructure, Relationship Investments, Active Fundamental Equities and Energy & Resources.

INTERVIEW WITH MARTIN LAGUERRE AND BILL ROGERS

Investing in Renewables

Bill and Martin are Senior Principals in the Power & Renewables group. Each has more than a decade of experience in the renewable energy sector and serve on the boards of CPPIB portfolio companies. Since joining CPPIB in 2016, Martin has played a leading role in our investment strategy for renewable energy and pursues investments on a global basis. Bill joined CPPIB in 2019 to help grow our global renewable energy portfolio, particularly in Europe.

MARTIN:

Please describe the current state of the renewable energy market. What are the trends?

We are seeing three key trends. One is that renewable energy markets continue to grow globally and have reached a point where they are attracting a different cost of capital. Renewables are being adopted widely, so we're seeing opportunities to invest in both developed and emerging economies.

The second is that the sector continues to be very competitive to buy good projects and quality companies. It attracts capital and really has gone from a market that was heavily subsidized to one that is very much competitive and at parity with conventional energy sources.

Third, pricing is becoming transparent, which means developers will bid on projects at auctions. It's attracting the large utilities, which see attractive risk-adjusted returns.

Where are investment opportunities for CPPIB likely to be found?

Again, there are three primary areas. One is buying businesses rather than just buying assets. We're spending more time forming strategic partnerships so we can scale and grow efficiently.

When you buy a business, management can invest in R&D projects at an earlier stage. These R&D projects can in time result in very high returns. That complements some of the lower-yielding, more stable assets.

The second focuses on emerging markets, where demand is driven mostly by new load growth as opposed to load substitution. Compared with developed markets, where coal is going down and renewables are picking up as replacement, emerging markets are growing 5% to 7% per annum because of demographic changes like the growing middle class.

Thirdly, we'll be going after large, complex transactions where we're one of only a few players that can act, and where we have the flexibility to think differently. A lot of investors will sell after five years. Having a total-return focus differentiates us – it's very flexible capital that allows us to look at special situations.

Integration

CPPIB is known for its very long time horizon. How is the renewable energy space likely to evolve over the coming decade, and what's in store for the Power & Renewables team?

We describe it as having a barbell strategy – we want large-scale exposure in terms of operating assets, and then combine that with development, R&D and greenfield, which is a different type of risk profile. It combines into a portfolio that we feel is very balanced and prudent.

Over time, you're going to see more technology mixing in to power and renewables. And that could be in the home, in the car, in an industrial business or at the utility.

You're going to see artificial intelligence creating the ability to load shift and load balance the grid. The power grid goes all the way to the people consuming electricity, so we'll be looking at how energy efficiency comes into play. Emerging technologies will enable some of the efficiencies utility customers are looking for. So, from our investment perspective, Power & Renewables will have a much broader definition. And, of course, climate change will continue to play a major role in supporting the shift to greater use of renewable energy.

BILL:

How would you characterize the renewable power market in Europe today? What are its major drivers or influencers?

The market today is active and reaching a new level of stability. From a low point of investment in 2017, it is now stabilizing at about US$80 billion to US$100 billion in investments a year.

There are two main drivers. The first is long-term regulatory goals – a European-wide 2030 target for reducing greenhouse gas emissions, and the U.K. recently setting a goal to be carbon neutral by 2050. That creates a long-term framework that supports building of new renewables.

The other driver is the increasing competitiveness of renewable technologies against conventional energy sources such as coal and gas. Solar costs have dropped over 90% since 2010 and, similarly, the cost of wind energy generated has dropped by more than 50% over the same period.

In Southern Europe, you can now make an attractive return from building solar plants without any subsidy, and the same is true for wind in parts of Northern Europe.

How is Europe different from other major renewable energy markets? Which parts of it are likely to offer the best opportunities for CPPIB's Power & Renewables team?

Europe is arguably the most mature renewable energy market in the world, having pioneered many of the technologies and business models that are driving the energy transition. It is home to many of the world's leading suppliers and project developers, who are attractive potential partners for CPPIB.

One area to highlight is offshore wind. The latest turbines can generate energy at an increasingly competitive cost, thereby unlocking a global market worth up to US$500 billion over the next 10 to 15 years.

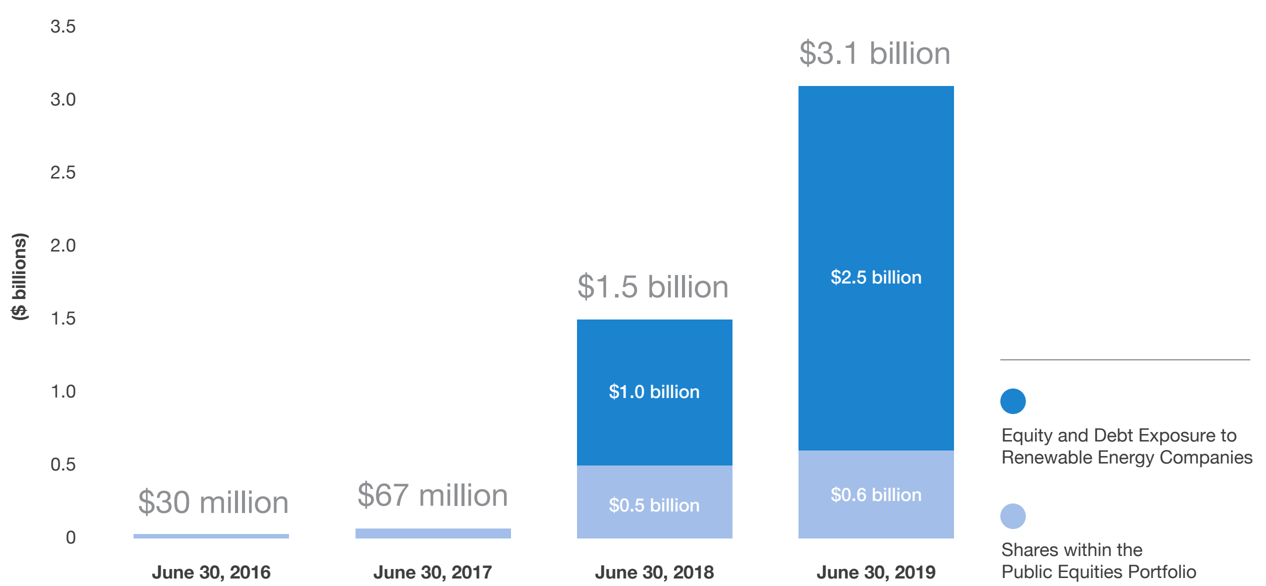
To help us access this market, we recently set up Maple Power, a 50/50 partnership with Enbridge. This will enable us to partner with leading European utilities to develop, construct and own offshore wind farms. Our initial investments are in Germany and France, with plans to expand to other parts of Europe.

CPPIB'S EXPANDING PORTFOLIO OF RENEWABLE ENERGY

CPPIB's investment in renewables is aligned with our mandate, and belief that this sector can provide attractive risk-adjusted returns when transactions are done in a thoughtful, prudent manner. Below are major transactions in this space

- In December 2017, CPPIB signed agreements with Brazil's Votorantim Energia to form a joint venture, acquiring two operational wind parks located in northeastern Brazil through an initial contribution of $272 million in equity.
- In January 2018, CPPIB announced plans to acquire a 6.3% stake in ReNew Power, a leading Indian renewable energy developer and operator with clean energy capacity diversified across wind, utility-scale solar and rooftop solar power-producing assets. CPPIB's initial investment of US$144 million was followed by an additional US$247 million in March 2018. In June 2019, CPPIB participated, alongside other shareholders, in a rights Issue by ReNew Power for an additional US$100 million, bringing our total investment to US$491 million.
- In April 2018, CPPIB signed an agreement to acquire a portfolio of six Canadian operating wind and solar power projects from NextEra Energy Partners for $741 million. The business now operates as Cordelio Power.
- In May 2018, CPPIB signed agreements with Enbridge Inc. to acquire 49% of Enbridge's interests in select North American onshore renewable power assets, as well as 49% of Enbridge's interests in two German offshore wind projects. CPPIB's total commitment was about $2.25 billion. The assets included 14 long-term, fully contracted operating wind and solar assets in four Canadian markets and two operating wind and solar assets in the United States
- In October 2018, CPPIB expanded its existing joint venture with Votorantim Energia through the acquisition of the State of São Paulo's stake in the Brazilian hydro generation company Companhia Energética de São Paulo (CESP) for BRL $1.7 billion ($600 million). This acquisition added more than 1.5 gigawatts of gross capacity to the joint venture, in addition to the prior 564 megawatts of wind capacity.

CPPIB's equity and debt exposure to renewable energy companies



Integration

REAL ESTATE

The Real Estate group seeks to further enhance the value of our real estate holdings through prudent management of ESG factors in partnership with our operating partners. Buildings are among the biggest sources of carbon emissions. While compliance with local environmental regulations is a basic requirement for any CPPIB real estate investment, making a building more environmentally sustainable can increase revenue and occupancy, reduce operating costs, and increase a property's value and return on investment.

The office sector is particularly sensitive to environmental factors and operating efficiencies. Leading tenants frequently seek environmentally advanced buildings for their corporate offices to reflect the company's commitment to ESG standards, address stakeholder expectations and control costs. For new office developments or major renovations, environmental quality is a major element in determining a property's attractiveness to prospective tenants, the rents that can be charged, the economic value of the property and its sustainability.

Opportunity Screening and Due Diligence

When assessing opportunities, our Real Estate team follows a formal ESG due diligence procedure. This process includes reviewing the importance of operating efficiencies, including energy consumption, greenhouse gas emissions, water use and waste generation. While the factors examined are tailored to the specific opportunity, here are the five broad categories:

- **Sustainability Features:** Assess the quality and level of green building design and incorporate these into our assessment of an asset's attractiveness.
- **Partner's Approach:** Determine our prospective partner's approach to sustainable investing principles and ESG practices.
- **Regulatory Compliance:** Ensure environmental regulatory compliance and, where necessary, quantify remediation costs into capital requirements.
- **Operational Efficiencies:** Identify and factor in operational efficiencies, which often have environmental implications, and incorporate them into our valuation where applicable.
- **Social Impacts:** When applicable, assess social impacts and issues to ensure they are part of the decision process.

Monitoring

Working with CPPIB's real estate partners, our Real Estate investment team assesses ESG factors and operating efficiencies on an ongoing basis to maintain and enhance the competitive position, value and marketability of property investments. Once CPPIB acquires a real estate asset, we put annual ESG monitoring tools in place to enhance communications with our investment partners. This involves asking operating partners to disclose significant ESG issues or events, to provide updates on the latest regulatory changes and corporate initiatives with respect to environmental and social matters, and to report on new environmental certification and performance against operating efficiency targets achieved over the past year.

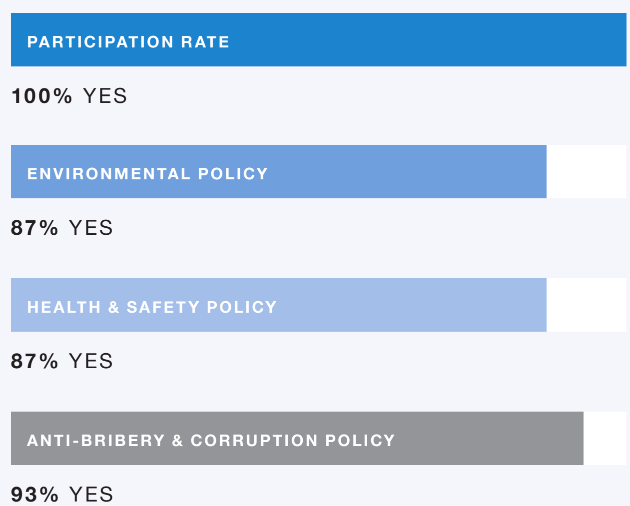
Monitoring Questions

To deepen our understanding of our partners' sustainability operations and near-term objectives, we track our existing partners' participation in the Global Real Estate Sustainability Benchmark (GRESB) and the CDP – formerly known as the Carbon Disclosure Project.

Our total Real Estate Equity portfolio has a GRESB participation rate of 82% by equity carrying value. A majority of survey respondents indicate they have environmental sustainability policies or initiatives in place at their companies. And almost all respondents say they have policies in place for anti-bribery and corruption, and frameworks to monitor worker health and safety requirements.

Annual real estate survey results

Percentage of survey respondents with sustainability-related policies and initiatives



295 Green Building Certifications

25 Countries

CAPITALAND: RAFFLES CITY THE BUND

CapitaLand Limited (CapitaLand) is one of Asia's largest diversified real estate companies. Headquartered and listed in Singapore, it is an owner and manager of a global portfolio worth over S$103 billion ($100 billion) as of March 31, 2019. Sectors it invests in include commercial, retail; business park, industrial and logistics; integrated development, urban development; as well as lodging and residential.

CapitaLand's sustainability efforts have been consistently recognized globally. It was ranked 33rd in the Global 100 Most Sustainable Corporations in the World 2019 list and remains the only Singapore real estate company to receive the Bronze Class distinction in The Sustainability Yearbook 2019 by RobecoSAM. CapitaLand is also listed in the Dow Jones Sustainability World and Asia Pacific Index, Global Real Estate Sustainability Benchmark (5 Star) and the FTSE4Good Index Series.

The company is a signatory to the United Nations Global Compact and a supporter of the Task Force on Climate-related Financial Disclosures, reflecting its commitment to contributing to a sustainable global economy. It is also a participant in the annual CDP Climate Change Program. Its footprint is calculated in accordance with the Greenhouse Gas (GHG) Protocol.

CPPIB and CapitaLand first partnered in 2008 on a development in China. In October 2016, CPPIB allocated a further US$375 million to the Raffles City China Investment Partners III (RCCIP III) that acquired Raffles City Shenzhen, a group of skyscrapers designed with a focus on greenery, with lush landscaping, sky gardens and park views. Upon completion in April 2017, that development achieved a LEED Gold certification by the U.S. Green Building Council.

In January 2019, CPPIB completed acquisition of a 12.5% interest in Raffles City The Bund, Shanghai's tallest twin towers, via RCCIP III. The Bund will consist of two Premium Grade A office towers built directly above a six-storey shopping mall. In line with CapitaLand's commitment to environmental sustainability, the office towers by Pelli Clarke Pelli and Benoy Architects are designed to obtain LEED Gold, BREEAM Outstanding, upon completion. This project will become the eighth Raffles City that CPPIB has invested into and will be the seventh LEED Gold Certified building in our relationship with CapitaLand Group.

Raffles City The Bund has received pre-certification of LEED Gold, BREEAM Outstanding.

GROWING OUR PORTFOLIO OF GREEN BUILDINGS

CPPIB's real estate team is focused on acquiring assets with high sustainability metrics that align with our long-term investment goals. The level of green certification is one of the most important metrics we use to assess asset quality. The Leadership in Energy and Environmental Design (LEED) certification program and Green Building Councils across the globe encourage sustainable building and development practices through standards and performance criteria.

Like CPPIB, our partners in real estate acquisition and management take LEED or equivalent ratings into account when building and operating their property portfolios. CPPIB also looks for opportunities to enhance the performance of existing buildings through upgrades and redevelopment.

Today, our 25-country portfolio has a total of 295 green certified buildings. This includes 101 LEED-certified buildings, with 12 earning the LEED Platinum (highest level) certification, and 47 earning LEED Gold certification.

SELECT LEED PLATINUM BUILDINGS IN THE REAL ESTATE PORTFOLIO

AMLI BUCKHEAD

Partner: AMLI
Location: Atlanta, U.S.
Sector: Multifamily
CPPIB Interest: 45%

GLP MISATO III

Partner: GLP
Location: Misato, Japan
Sector: Industrial
CPPIB Interest: 50%

MNP TOWER

Partner: Oxford Properties
Location: Vancouver, Canada
Sector: Office
CPPIB Interest: 50%

CENTENNIAL PLACE

Partner: Oxford Properties
Location: Calgary, Canada
Sector: Office
CPPIB Interest: 50%

RBC WATERPARK PLACE

Partner: Oxford Properties
Location: Toronto, Canada
Sector: Office
CPPIB Interest: 50%

PRIVATE EQUITY FUNDS

The Private Equity Funds (Funds) team commits capital and invests alongside top-tier private equity fund managers worldwide who share CPPIB's belief that good management of ESG factors enhance long-term value.

Our approach includes a structured ESG questionnaire that is completed by private equity fund managers (General Partners, or GPs) to help evaluate their approaches, including how they integrate ESG into due diligence, monitoring and reporting, and their commitment resourcing these activities.

Opportunity Screening and Due Diligence

GPs must complete an ESG questionnaire as part of CPPIB's due diligence process. The Funds team uses these responses to drive an active dialogue with the GP about its practices; and it incorporates questionnaire findings and due diligence meetings into its investment recommendations. Monitoring questions are sent to all our GPs each year to collect data on any additions or changes to a GP's ESG practices and policies.

Monitoring and Enhancing Outcomes as an Engaged Investor

Many GPs provide updates and reports on their ESG practices to Limited Partner (LP) Advisory Boards on a semi-annual basis. CPPIB partners with GPs that are transparent and responsive to ad hoc investor inquiries into ESG practices. To the extent a material ESG matter impacts our investment thesis in a fund, the Funds team would include this in its quarterly monitoring process or ad hoc discussions. During the year, most GPs have increased their focus on presenting and reporting on ESG policies and practices, both in financial reports and at annual investor meetings. In particular, there is more transparency around key statistics and diversity metrics.

Capital Markets and Factor Investing

EXTERNAL PORTFOLIO MANAGEMENT

The External Portfolio Management (EPM) team creates value through the engagement of external managers whose distinct strategies and expertise in public markets complement our own. EPM team members, who recommend the external managers they invest with, are required to consider ESG matters and stewardship activities during due diligence for all investment opportunities. Prospective external managers are asked, when applicable, how they monitor these risks at their portfolio companies, how they engage with these companies and how they assess and integrate ESG factors into investment decisions, including any relevant processes and policies.

After committing to a manager, EPM continues to monitor its stewardship activities and ESG practices, including regular communications to identify how those practices may be evolving. This information is incorporated into EPM's ongoing monitoring processes.

Poul Winslow, CPPIB's Global Head of Capital Markets and Factor Investing, continues to be on the Board of Trustees of the Standards Board for Alternative Investments (SBAI). The SBAI is a standard-setting body for the alternative investment industry and custodian of the Alternative Investment Standards. The SBAI creates a framework of transparency, integrity and good governance for the industry and facilitates investor due diligence. CPPIB continues to work with the SBAI on improving transparency and governance for the alternative investment industry.

EVALUATING POTENTIAL GENERAL PARTNERS

1 ALIGNED APPROACH

How do the GP's ESG policies, processes and approaches compare to CPPIB's?

2 DUE DILIGENCE INTEGRATION

What ESG due diligence does the GP systematically conduct during the investment review process for potential new investments?

3 RESOURCES

What resources does the GP commit to the oversight and implementation of ESG considerations?

4 SPECIFIC ESG FACTORS

What is the GP's approach to climate change matters and how are diversity factors considered internally and at the portfolio company level?

5 MONITORING AND REPORTING

What asset management activities and reporting of ESG factors and risks does the GP implement throughout its ownership of portfolio companies?

CPPIB MARKS ANOTHER FIRST WITH EURO-DENOMINATED GREEN BOND

In 2018, CPPIB became the first pension fund manager to issue a green bond. It set another landmark in January 2019 with the first sale of a euro-denominated green bond issued by a pension fund manager, a €1 billion 10-year fixed-rate note.

Since their introduction in 2007, green bonds have become a mainstream way for companies, governments and other organizations to raise funds for projects with environmental benefits. Green bonds provide CPPIB with additional funding as we pursue acquisitions of strong, long-term investments eligible under our Green Bond Framework. The Framework has been evaluated by the Center for International Climate Research (CICERO), a leader in providing second opinions on the qualification of debt for Green Bond status.

CPPIB's cross-departmental Green Bond Committee includes representatives from Sustainable Investing, Capital Markets and Factor Investing, Power & Renewables, Legal, and Public Affairs and Communications. The committee met in July of 2018, and January and July of 2019. The committee determines which projects are eligible for green bond proceeds in the following categories.

RENEWABLE ENERGY (WIND AND SOLAR)

- Acquisition, operation, maintenance and upgrades of wind and solar energy projects
- Efficiency improvements of wind and solar energy projects

SUSTAINABLE WATER AND WASTEWATER MANAGEMENT

- Acquisition, operation and upgrades of projects that improve efficiency of water distribution and water recycling services
- Investments in tail water recovery systems, which collect run-off water from fields that is then recycled for agricultural production

GREEN BUILDINGS (LEED PLATINUM CERTIFIED)

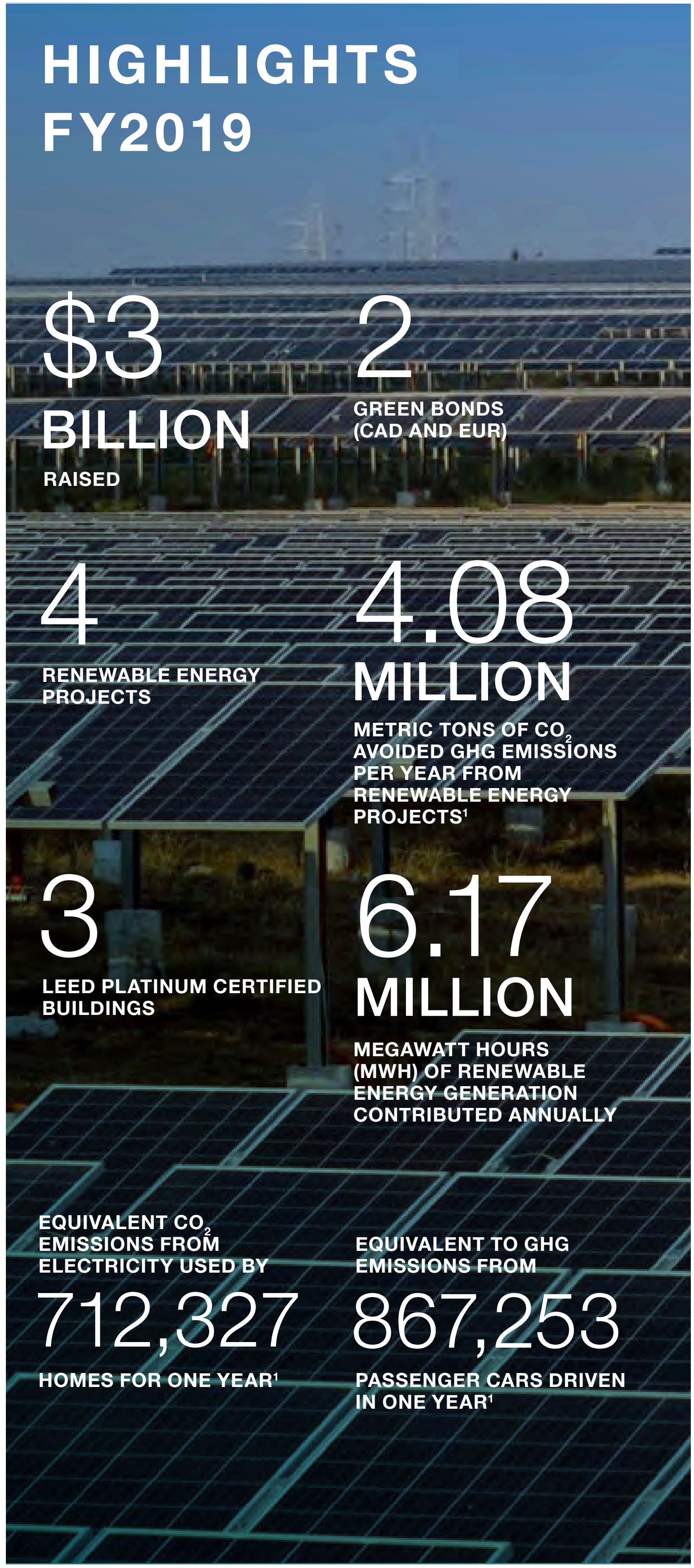
- Direct investments in buildings certified as LEED Platinum over the 24-month lookback period and during the life of the bond

GREEN BOND REGISTER

The Green Bond Committee also oversees the Green Bond Register. It documents the value of green bond issuance and which assets proceeds have been allocated to. Below is the registry as of June 30, 2019. Further details on CPPIB's renewable energy assets can be found on page 26.

NAME RENEWABLE ENERGY	CURRENCY
Cordelio Power	CAD
Votorantim Energia's Piaul I & Ventos III	BRL
Enbridge	CAD
Enbridge	EUR
Enbridge	USD
ReNew Power	USD
GREEN BUILDINGS	
Centennial Place, Alberta	CAD
Eau Claire Tower, Alberta	CAD
Richmond Adelaide Centre- 111 Richmond, Ontario	CAD
TOTAL ASSETS	**3,033,821,458**

CAD	1,500,000,000.00	1,500,000,000
EUR	1,000,000,000.00	1,488,100,000
TOTAL BONDS		**2,988,100,000**



1 Data is derived using the following website: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator based on CPPIB's investment in renewable energy projects only

ESTIMATED IMPACT OF OPERATIONAL RENEWABLE ENERGY PROJECTS

INVESTMENT	LOCATION	DATE OF INITIAL INVESTMENT	DESCRIPTION	TECHNOLOGY	CPPIB OWNERSHIP	GROSS CAPACITY (MW)	PRORATA CAPACITY (MW)
Cordelio Power[1]	Canada	April 2018	Portfolio of six Canadian operating wind and solar power projects	Solar	100%	396	396
				Wind			
Enbridge[1]	Canada/ United States	May 2018	North American onshore renewable power assets	Solar	49%	1,300	637
	Germany		Two German offshore wind projects	Wind		Under Development	Under Development
Votorantim Energia[1]	Brazil	December 2017	Two operational wind parks located in Northeastern Brazil	Wind	50%	565	283
ReNew Power[2]	India	March 2018	Leading Indian renewable energy developer and operator with clean energy capacity diversified across wind, utility-scale solar and rooftop solar	Solar	18%	3,100	558
				Wind		1,600	288
TOTAL						**6,961**	**2,162**

1 Assets operational as of June 2018-May 2019

2 Assets operational as of March 2018-March 2019

ESTIMATED GREEN BUILDING IMPACT

INVESTMENT	LOCATION	DESCRIPTION	CPPIB OWNERSHIP	PRO RATA ENERGY (MJ) SAVINGS	PRO RATA GHG SAVINGS	CERTIFICATION
Centennial Place	Canada	1,470,000 sf Multipurpose Commercial Space	50%	8%	11%	LEED EB PLATINUM
Eau Claire Tower	Canada	829,990 sf Multipurpose Commercial Space	50%	6%	15.5%	LEED CS PLATINUM
Richmond Adelaide Centre – 111 Richmond	Canada	258,129 sf Multipurpose Commercial Space	50%	15%	10%	LEED EB PLATINUM

The Model National Energy Code for Buildings 1997 is the baseline for a typical year upon which actuals were compared to calculate efficiency improvements.

ENGAGEMENT

Our international offices strengthen our active ownership activities at the local level. CPPIB's offices in Asia Pacific, including Sydney, allow us to access investment opportunities and maintain strong relationships with partners in the region. Additionally, we exercise our ownership rights by voting our proxies in a significant number of meetings in the region.

Defining Engagement

When we talk about engagement at CPPIB, this refers to a process of communicating with companies that we invest in, or with other key stakeholders, about enhancing environmental, social or governance disclosure and practices. We use a variety of methods, including proxy voting, in-person meetings and formal correspondence, either independently or in collaboration with other investors.

CPPIB believes our stewardship of the CPP Fund goes beyond simply buying and selling assets. We have a responsibility to conduct ourselves as principled and thoughtful owners with a view to the best interests of our contributors and beneficiaries. As such, we work to enhance long-term performance of the companies we invest in by engaging with them, either individually or collaboratively with other investors. Proactive and constructive dialogue with senior executives, board members, regulators, industry associations and other stakeholders can reduce investment risks and enhance and sustain returns over time.

These activities are directed at companies presenting material ESG risks and opportunities. We tend to favour approaches where we work with them to promote positive changes on issues that we believe are material to investment value. In those situations where progress appears unlikely, our understanding of ESG-related and other risks helps us assess whether it is better for the Fund to redeploy our capital to other companies and assets. Invariably, the key question comes down to compensation for the risks CPPIB must pursue to help sustain the CPP. In some cases, the risk overwhelms the prospect of returns.

Our engagement approach is determined by in-depth research into the company, consideration of the industry and region, and examination of industry standards and global best practices. Engagement can be an ongoing, resource-intensive effort. It often takes several years to yield results. This means we must be strategic and selective in deciding which companies to focus on. Fortunately, our long investment horizon puts us in a better position than many to bring about this positive change.

Collaborative engagement creates opportunities to substantially increase the influence, resources and expertise we can bring as part of a group of investors seeking to positively influence corporate behaviour. Whether we engage with a company on our own or collaboratively, we don't typically disclose the company's name publicly or to third parties, as this has been shown to negatively impact dialogue and ultimate outcomes.

DETERMINING WHEN TO ENGAGE

1 ANALYZE

Analyze ESG risks in our portfolio companies using internal and third-party research.

2 IDENTIFY

Identify engagement objectives considering materiality, time horizon, resource implications and likelihood of success.

3 OPTIMIZE

Select the best method of engagement: direct, collaborative and/or proxy voting.

4 ENGAGE

Engage with companies to seek improved practices and enhanced disclosure.

ENGAGEMENT: FROM INITIATION TO PARTNERSHIP

Contact

Initiate contact with the company, either individually or collaboratively, to discuss its ESG disclosure and practices.

Dialogue

Discuss the relevant issues we have identified with subject-matter experts, senior management and/or the board.

Commitment

Gain corporate commitments to enhanced disclosure and practices, monitor their progress and follow up to encourage continued improvement. If our concerns are not sufficiently addressed, consider escalating the engagement, which may include one or all of the following activities: exercising our proxy voting rights to express dissatisfaction, collaborating with other investors, submitting a shareholder proposal or making our concerns public.

Partner

Act as a long-term constructive partner to help companies continue to meaningfully address ESG factors – ultimately leading to enhanced financial performance over the long term.

Engagement

EXERCISING OUR RIGHTS AS OWNERS IN PUBLIC MARKETS

Voting our proxies at annual and special meetings of shareholders is among the most effective ways for us to convey our views to boards of directors and management and meet our stewardship responsibility to be an active owner. We use our best efforts to exercise ownership rights in all cases.

CPPIB makes proxy voting decisions independently. We engage Institutional Shareholder Services Inc. to make initial, customized recommendations based on our voting guidelines. Our Sustainable Investing group considers these recommendations and conducts additional research, consults with our investment teams and communicates with companies and stakeholders, if necessary, to arrive at CPPIB's own voting decision. When appropriate, we supplement voting activities with high-touch, concentrated interactions with investee companies.

We ensure transparency in our voting activities by providing full prior disclosure of our voting intentions, both to the companies concerned and to other interested parties, and implementing the leading practice of posting individual proxy vote decisions in advance of meetings. Our website provides a searchable database, by company name, of our votes at each shareholder meeting (see www.cppib.com/ProxyVoting).

CPPIB also conducts an annual review of our *Proxy Voting Principles and Guidelines* to ensure they reflect evolving global governance best practices. The process takes input from our Sustainable Investing group, Sustainable Investing Committee and external advisors. Revised Guidelines are reviewed and approved annually by CPPIB's Board. This year, our *Proxy Voting Principles and Guidelines* have been updated to explicitly include our new Global Board Gender Diversity voting practice.

CPPIB'S ENGAGEMENT FOCUS AREAS

Our key engagement focus areas have a meaningful impact on the long-term financial sustainability of our public equity portfolio. Because the topics we engage on are often interconnected, engagements may cover more than one focus area. While we choose to focus our efforts on these five areas, we also discuss other relevant topics.

HERMES EOS

CPPIB is a client of Hermes Equity Ownership Services (Hermes EOS), a global collaborative engagement platform that offers an effective means to expand our engagement activities across many of our international public equity portfolio companies. During the reporting period, Hermes EOS engaged with 275 companies globally on behalf of CPPIB.

What type of proposals do we support in our proxy votes?

CPPIB's published *Proxy Voting Principles and Guidelines* provide insights on how we will likely vote on a range of issues put to shareholders (see www.cppib.com/PVPG). We also normally support resolutions empowering boards of directors to act in the best interests of the corporation, enhance management accountability and support shareholder democracy. We also normally support resolutions that request enhanced practices, policies and/or disclosures related to ESG matters. For example, since 2004, CPPIB has backed more than 50 shareholder proposals at tobacco companies requesting improved disclosure and standards on a range of ESG factors, including health impacts and human rights-related matters.

CLIMATE CHANGE

Why We Engage

Climate change can present material financial risks and opportunities for companies and impact long-term investment values. The global transition to lower-carbon energy sources will have far-reaching implications for investors and companies across sectors and geographies. We believe companies should have a transparent and robust approach to assessing the challenges posed by climate change, so investors can make informed decisions.

What We Seek

> Enhanced practices related to governance, strategy, risk management, performance metrics, and targets and opportunities

> Improved disclosure on potential exposure to near-term and long-term climate change-related risks and subsequent impact on company strategy and profitability

Engagement

For more than a decade, we have worked with our portfolio companies on climate change-related issues, including understanding their levels of greenhouse gas (GHG) emissions, improving their climate change-related disclosure and advancing best practices related to climate change.

Climate change is one of the most significant physical, social, technological and economic challenges of our time. Scientists overwhelmingly believe it is critical to limit global warming to less than two degrees Celsius (2°C) above pre-industrial levels to prevent irreversible damage. Rising temperatures and sea levels create physical and transition risks, such as water scarcity, threats to biodiversity, extreme weather, and policy and market risks.

CPPIB's efforts to understand these implications and take commensurate action have accelerated and will remain a priority in coming years, building on our extensive engagement experience. Our enterprise-wide approach integrates climate change considerations into our risk framework and across relevant investment activities to build and protect long-term investment value (see pages 14-16 for details on our Climate Change Program).

Engagement

We have taken a leading role in encouraging companies to improve climate change disclosure and practices. We have also helped develop global standards for how they do this through our participation on the Financial Stability Board's Task Force on Climate-related Financial Disclosures (see pages 58-60 for more information).

CPPIB's commitment to determining material financial impact means we have a responsibility to press companies to be transparent about challenges posed by climate change. We believe our interactions with portfolio companies, often in collaboration with other investors, will help us better understand climate change-related risks and opportunities, take them into consideration and respond accordingly to build long-term value.

DIRECT ENGAGEMENTS

We continue to lead and participate in collaborative engagements alongside other Canadian and global investors. These collaborative engagements press large GHG emitters in oil and gas, utilities and other sectors to improve disclosure related to GHG emissions, strategies and performance. We find it encouraging that more and more companies are providing enhanced disclosure about climate change-related matters and the potential long-term impacts to their businesses. We will continue pressing for additional enhanced disclosure to better enable investors to assess the risks and opportunities presented by climate change.

HERMES EOS ENGAGEMENTS

In addition to direct engagement by our Sustainable Investing group, CPPIB also works with Hermes EOS. Hermes EOS' work focuses on sectors most exposed to climate change, including oil & gas, mining and materials, industrial and capital goods, utilities, automotive, technology and financial services, as well as supply chain considerations in the retail and consumer goods sectors. It engages with companies and contributes to the work of other global organizations on climate change, including the Task Force on Climate-related Financial Disclosures (see pages 58-60).

What types of climate change-related risks and opportunities should investors consider?

According to the Financial Stability Board's Task Force on Climate-related Financial Disclosures, climate change-related risks can be broadly classified into two categories: transition risks (regulatory, technological, market-based demand and/or reputational risks that could result from the shift towards a lower-carbon economy) and physical risks – those direct event-driven (acute) or longer-term (chronic, potentially resulting in food and water scarcity) risks associated with climate change. Climate change-related opportunities can be classified according to resource efficiency, energy source, products and services, the development of new markets and asset resilience.of ESG factors, including health impacts and human rights-related matters.

Engagement

CDP CLIMATE CHANGE PROGRAM

We support the Climate Change Information Request by the CDP (formerly the Carbon Disclosure Project). Each year, it seeks increased disclosure and management of climate change risks on behalf of investors from over 6,900 global companies. Its most recent Climate Change Report found over half of companies reporting identified climate-related risks as having potentially material financial or strategic impact on their businesses.

In 2018, a member of our Sustainable Investing group attended CDP's energy company and investor roundtable, which included discussions about the CDP Climate Change Information Request and potential ways to improve it. The roundtable also discussed the Financial Stability Board's Task Force on Climate-related Financial Disclosures recommendations (see pages 58-60) and climate-related scenario analysis. Investors also gave companies details about how climate-related information is considered when making investment decisions.

Working with companies to reduce methane emissions

Methane, the main constituent of natural gas, is a colourless, odourless, flammable greenhouse gas (GHG). It enters the atmosphere in many ways, from decomposing biological material to leaks in natural gas pipelines. While in the atmosphere, methane traps much more heat than the equivalent amount of carbon dioxide (CO_2), although it dissipates more quickly. Data from the Intergovernmental Panel on Climate Change (IPCC) shows methane is 84 times more potent than CO_2 over a 20-year time frame and is responsible for a quarter of the global warming we are experiencing today.

Managing methane is particularly important because of the role played by natural gas in the global energy transition. Many power generators are migrating from coal to natural gas as part of their transition to renewable energy sources. Since 2017, CPPIB has been active on the Advisory Committee of the United Nations-supported Principles for Responsible Investment (PRI) collaborative engagement on methane risks in the oil and gas and utilities sectors. The focus of the engagement is to encourage companies to reduce methane emissions, improve management of methane emissions and enhance disclosure.

We have chosen to lead a number of the more than 30 engagements alongside 35 other global investors. Since the launch of this initiative, targeted companies have shown stronger awareness and action on methane management.

Engagement

PROXY VOTING

Over the reporting period, CPPIB supported 19 climate change-related shareholder resolutions. Several of these sought deeper disclosure on five areas related to climate change risk and opportunity management: (i) ongoing operational emissions management, including on methane, (ii) asset portfolio resilience, (iii) low carbon energy research, (iv) public policy intervention and (v) climate change risks in supply chain (see the pie chart below).

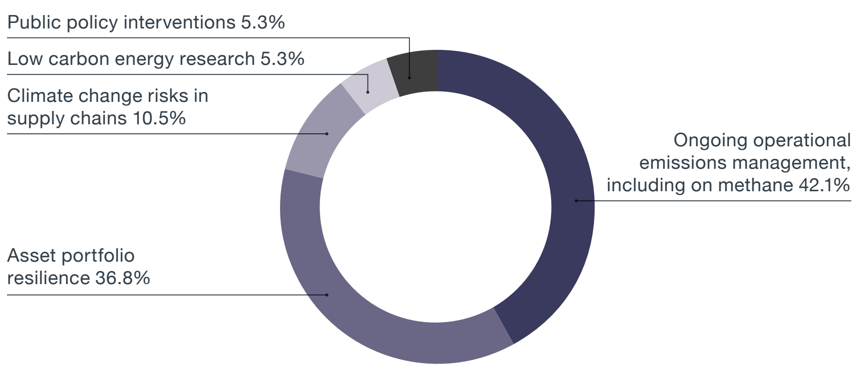
CPPIB has been supporting shareholder proposals that encourage companies to improve disclosure of climate change-related risks and opportunities for over a decade.

CPPIB supports proposals that enable stakeholders to better understand a company's exposure to climate change-related risks and opportunities. Shareholder support for these climate change-related resolutions can be seen in the bar chart to the right for a select number of companies.

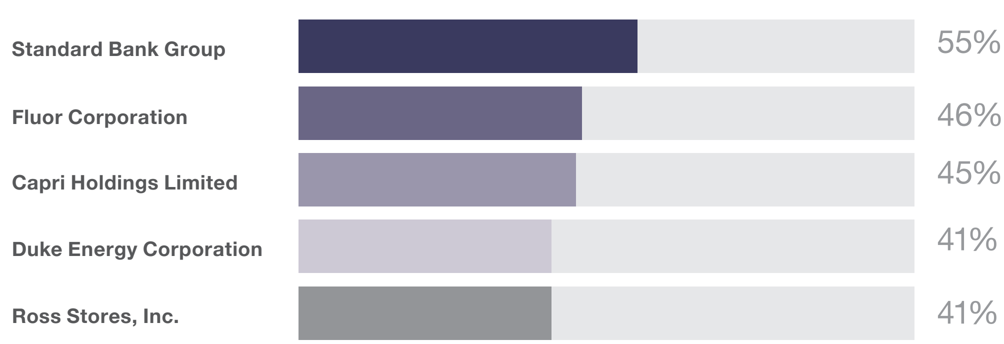
We continue to see strong levels of support for climate change-related shareholder resolutions across different sectors, which is reflective of the wide range of organizations that are exposed to climate-related risks. The support is encouraging, and we hope it will continue motivating companies to improve their disclosures and management of relevant climate change related risks and opportunities.

CLIMATE CHANGE-RELATED SHAREHOLDER PROPOSALS THAT CPPIB SUPPORTED IN 2019

SHAREHOLDER PROPOSALS BY TYPE



SELECT CLIMATE CHANGE-RELATED RESOLUTIONS THAT RECEIVED HIGH LEVELS OF SHAREHOLDER SUPPORT



WATER

Why We Engage

Understanding water-related risks is important for investors both today and over the long term. Effective management of water supply, use and quality is fundamental to the long-term sustainability of many companies. These factors can have direct operational impacts that potentially affect companies' performance.

What We Seek

> Increased reporting on water-related strategies and performance

> Improved and more comparable disclosure of water-related data

> Better management of water risks

Engagement

DIRECT ENGAGEMENT

We continue to work with companies, industry bodies and investors on ways to improve disclosure of water-related risks and build consensus around what metrics and information are most relevant. One such effort is the CDP Water program, of which CPPIB has been an investor signatory since its launch in 2010.

The CDP Water program asks companies to disclose via questionnaire (the CDP Water Information Request) efforts to manage water-related risks. Investor signatories can use data collected by CDP to better engage with portfolio companies, mitigate risk, capitalize on opportunities and inform investment decisions.

WHY WATER MANAGEMENT MATTERS

Water is one of the world's most critical resources – its supply is limited, while demand continues to rise. NASA notes less than 3% of the world's water supply is freshwater that can be used for agriculture, industry and household consumption. Yet, according to the 2019 United Nations Water Development Report, global water demand in 2050 is expected to be 20% to 30% higher than current levels. Effective water management is, therefore, essential to meet long-term global needs.

The most recent CDP Water Information Request was supported by 650 institutional investor signatories representing over US$87 trillion in assets. The CDP 2018 Global Water Report, which analyzed 783 of the world's largest publicly listed companies, noted:

40%

OF RESPONDENTS HAVE INTEGRATED WATER INTO GOVERNANCE AND STRATEGY MECHANISMS

29%

OF RESPONDENTS HAVE SET TARGETS OR GOALS AT MULTIPLE LEVELS OF THEIR BUSINESS

50%

OF RESPONDENTS REGULARLY MONITOR AND MANAGE WATER ASPECTS ACROSS FACILITIES.[1]

1 Includes withdrawals, discharges, quality and consumption.

HERMES EOS ENGAGEMENTS

Water risk has been a long-standing theme for our global collaborative engagement platform Hermes EOS. Its water-related engagements focus on the consumer goods, mining and utilities sectors and include topics such as water stress (shortages of water), water management plans and water risk in supply chains. Companies are also encouraged to respond to the CDP Water Information Request.

PROXY VOTING

This year, we continued to support shareholder proposals requesting improved management and disclosure of water-related risks, including those stemming from water availability and quality. We supported proposals relating to requests for increased disclosure of water risk management practices including those at Pilgrim's Pride Corp. and Chevron Corp.

Engaging on water risks in agricultural supply chains

In early 2018, CPPIB joined the United Nations-supported Principles for Responsible Investment (PRI) collaborative engagement on water risks in agricultural supply chains. Agriculture is a significant user of water and accounts for about 70% of annual water withdrawals globally.

This collaborative engagement targets companies with operations and supply chains that are dependent on agriculture and can be subject to various water-related risks, such as water shortages and flooding. These companies include those across the agricultural products, apparel and luxury goods, food and beverage and retail sectors. CPPIB chooses to play an active role in this effort, alongside over 35 global investors, by leading an engagement with one of the more than 15 targeted companies.

In September 2018, two members of our Sustainable Investing team joined 25 other members of this PRI collaborative effort on a fact-finding trip to California. The state has experienced extended periods of drought for many years and its agricultural sector has had to adapt to changing water availability and develop innovative solutions to address ongoing challenges. Trip participants met with companies, policymakers, environmental groups and farm owners who shared their views on the drivers and strategies for water management in the agricultural supply chain. These conversations helped deepen our understanding of the water risks and opportunities for long-term investors.

HUMAN RIGHTS

Why We Engage

CPPIB believes that no company can endure if it fails to respect human rights. As such, as an investor, we carefully consider a company's track record in dealing with human rights. Those firms that do not respect human rights face above-average operational turmoil, higher legal risk, lack of community support and impaired brand value resulting from reputational damage.

What We Seek

> Enhanced reporting on identifying, managing and mitigating human rights-related risks

> Improved human rights practices, including those specific to supply-chain management

We believe strong human rights practices contribute to sustaining long-term value. Working with companies in our portfolio on this topic is key to our mandate to maximize long-term returns, without undue risk of loss. Companies with strong human rights policies and practices are less likely to face operational disruptions from legal and regulatory risk, protests, workforce action and other activities. They are also less likely to suffer reputational damage due to human rights-related controversies.

We also assess human rights risks within company supply chains, primarily considering poor working conditions and labour issues (such as child labour). We are currently focusing on supply chain management in the information technology sector.

Engagement

COLLABORATIVE ENGAGEMENTS

Since 2016, we have participated with over 20 global investors in a collaborative engagement related to child labour and other human rights concerns in the cobalt mining industry in the Democratic Republic of the Congo. It is the world's largest producer of cobalt, a key ingredient of lithium-ion batteries that power products ranging from smartphones and laptops to electric vehicles.

Child labour and poor safety practices, concerns often associated with cobalt mining, could expose companies and investors to operational, regulatory and reputational risks. This collaborative engagement originally aimed to encourage 13 electronics, automotive and battery manufacturing companies to improve supply chain management systems. Specifically, it sought to get them to identify and mitigate human rights risks in the procurement of cobalt. As of 2019, this effort has expanded to almost 20 companies, involves more than 35 investors, and is now supported by the Principles for Responsible Investment (PRI). The group has had numerous interactions with global industry associations, which have since instituted initiatives related to cobalt. These include:

- the Responsible Business Alliance's Responsible Minerals Initiative,
- the Chinese Chamber of Commerce for Metals, Minerals & Chemicals' Responsible Cobalt Initiative, and
- the World Economic Forum's Global Battery Alliance.

We are encouraged by the increase in disclosure and mitigation practices to date and expect more positive steps related to cobalt sourcing as the topic gains momentum and more relevant resources and tools become available.

WHAT DO WE MEAN BY HUMAN RIGHTS?

We consider human rights broadly and are guided by definitions set out in the United Nations Universal Declaration of Human Rights. For companies, this can take the form of forced, slave or child labour; may involve impacts from bribery and corruption; and can result from poor working conditions (including health and safety practices), poor relations with local populations and indigenous peoples or poor security practices. Any of these can also be relevant matters within company supply chains.

HERMES EOS ENGAGEMENTS

Human rights has long been a priority theme for engagements conducted by Hermes EOS, particularly with respect to supply chain risk management. Hermes EOS engages on topics such as child labour, indigenous rights, protection of basic rights and human rights reporting. Companies are also encouraged to adhere to, or align with, initiatives such as the United Nations Guiding Principles on Business and Human Rights (UNGPs) and the Responsible Business Alliance (formerly the Electronic Industry Citizenship Coalition).

PROXY VOTING

This year, we continued to see a focus on human rights-related proposals on the agendas of portfolio companies. Over the reporting period, CPPIB supported shareholder proposals at Macy's, Inc. and Saputo Inc. requesting more disclosure of human rights risks in direct operations and supply chains.

EXECUTIVE COMPENSATION

Why We Engage

Long-term shareholder value is more likely to be created when management and investor interests are aligned. Clear and appropriate links between executive pay and company performance help align these interests.

What We Seek

> A clear link between executive pay and company performance that appropriately aligns management and investors

> Appropriately structured executive compensation programs emphasizing long-term and sustainable growth of shareholder value

> Full disclosure in corporate reporting of compensation information and clear rationales for compensation decisions

Engagement

Executive compensation is an important factor in a company's creation of sustainable long-term value. Well-designed incentive plans shape management actions and the level of risk they are willing to assume. They also contribute to a company's ability to attract and retain talent. We exercise our ownership rights and advocate for companies to adopt good governance practices with respect to executive compensation. We focus not only on how much executives are paid, but more importantly, on how compensation plans align the interests of management with those of long-term investors.

DIRECT ENGAGEMENT

Executive compensation is a key focus of our governance engagements. We directly engaged with more than 20 companies on executive compensation issues during the reporting period. This allowed companies to explain their rationale for key compensation decisions and let us provide feedback aimed at strengthening the link between pay and performance, encouraging an appropriate level of risk-taking and promoting long-term decision making.

HERMES EOS ENGAGEMENTS

Hermes EOS, our global collaborative engagement platform, engages with company compensation committees and boards, regulatory authorities and industry bodies to promote compensation structures that align executives' interests with those of long-term investors.

PROXY VOTING

Say on Pay gives shareholders the means to provide direct feedback on the board's compensation decisions. Depending on regulatory requirements or internal corporate policies, Say on Pay can be either a binding or non-binding vote. We believe Say on Pay encourages better investor-corporate dialogue on executive compensation, leading to improved disclosure and pay practices. A number of companies that received low support for Say on Pay in 2018 responded to feedback from CPPIB and other investors and implemented positive changes this year.

BOARD EFFECTIVENESS

Why We Engage

Board effectiveness is one of the most important topics in corporate governance. Having the right board in place to guide strategy and oversee risk is critical to long-term value at our investee companies.

What We Seek

> Boards with the independence, skills, expertise, experience and diversity to ensure effective oversight of management and the business

> Robust and transparent processes for evaluating and improving effectiveness of the board, its committees and each director individually

> Transparent and formal director nomination processes that seek a diverse pool of qualified candidates

We believe board effectiveness is essential to long-term value creation. Our *Proxy Voting Principles and Guidelines* (see www.cppib.com/PVPG) provide explicit guidance on our expectations. As a long-term investor, we consider it part of our stewardship responsibilities to take steps that ensure boards of our investee companies have and maintain appropriate independence, skills, expertise, experience and diversity to effectively carry out their duties.

Board diversity is a critical component of board effectiveness. We expect boards to be diverse, including with respect to gender. We believe companies with diverse boards are more likely to achieve superior financial performance. Having directors with a range of experiences, views and backgrounds helps ensure the board has the right mindset to properly evaluate management and company performance.

WHAT DO WE MEAN BY BOARD EFFECTIVENESS?

Board effectiveness refers to a board's overall makeup and functioning. We evaluate effectiveness by looking at whether the board as a whole has the independence, skills, expertise, experience and diversity required for proper oversight of the company's business. These case-by-case judgments are based on several considerations, including the nature of the business, the skills needed to oversee existing and emerging challenges (e.g., climate change and cyber risk) and diversity.

We look at whether a company has robust processes in place to select directors and ensure it maintains an appropriate board composition over time. Specifically, we look at whether there are strong processes for regularly (i) identifying evolving needs and weaknesses of the board through a well-designed board skills matrix; (ii) evaluating individual directors and the board as a whole, and taking steps to address the results of evaluations; (iii) refreshing the board; and (iv) nominating new directors with skills, expertise, experience and attributes relevant to evolving needs.

Engagement

DIRECT ENGAGEMENT

During the reporting period, we directly engaged with approximately 30 companies on board effectiveness issues, such as how they select their directors and gender diversity of the board. These engagements gave CPPIB an opportunity to share views on board effectiveness and focus on ways companies can make improvements. We meet with an increasing number of board chairs or directors, which gives us a better understanding of the rationale for key decisions and an opportunity to provide direct feedback.

HERMES EOS ENGAGEMENTS

CPPIB also works with companies on board effectiveness through our global collaborative engagement platform Hermes EOS. It seeks assurance that companies have an appropriate board structure, and that board members have the right skills, diverse backgrounds and sufficient independence.

PROXY VOTING

CPPIB is committed to advancing gender representation on boards. In 2018, we launched our Global Board Gender Diversity Voting Practice to take a stand for increased representation of women on corporate boards around the world. Our goal is to improve the gender balance and, hence, the overall effectiveness of public company boards worldwide.

Research on Board Gender Diversity

CPPIB believes there is a clear business case for diversity. Our long-standing position is that diversity directly links to positive long-term value creation. Furthermore, we view lack of diversity as a business and financial risk. This year, we began a major research effort to empirically analyze the relationship between gender diversity on boards and value creation. Our Sustainable Investing team conducted a meta-study of existing research on board gender diversity, which they supplemented with proprietary big-data analysis. They found a robust association between gender diversity and financial performance across various countries and sectors.

OUR NEW GLOBAL BOARD GENDER DIVERSITY PRACTICE

Starting in the 2019 proxy season, CPPIB votes against the director who chairs the nominating committee at our investee public companies if the board has no women directors and there are no extenuating circumstances. This international program builds on our Canadian initiative that has shown encouraging results.

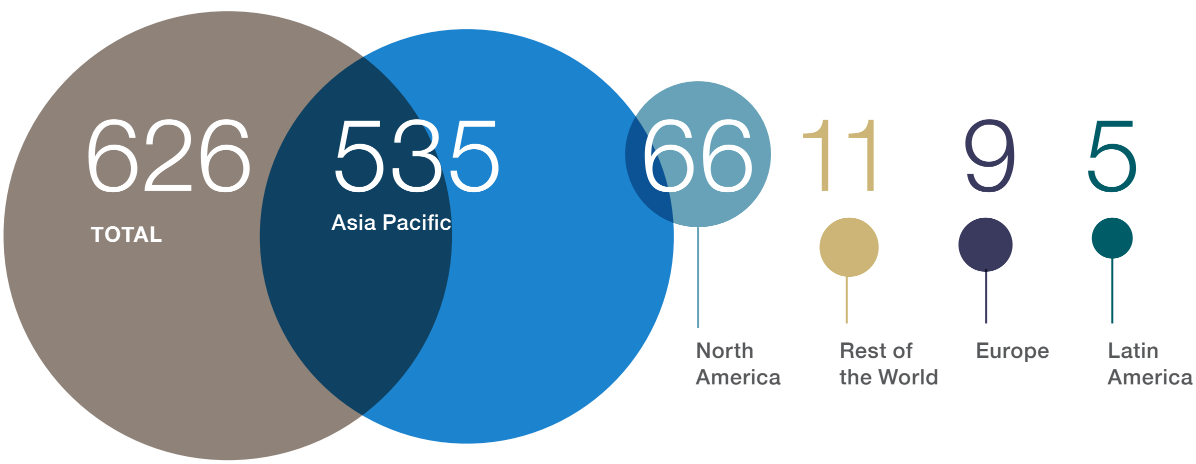
Global Results

Our new Global Board Gender Diversity Voting Practice resulted in CPPIB voting against the election of 626 directors globally during the 2019 proxy season (see chart below). We evaluated whether it was warranted to vote against 687 directors responsible for nominations at companies with no female directors. We found extenuating circumstances in 61 of those cases (9%).

In each case, we reviewed the company's proxy disclosures to understand any efforts by the board to address its lack of gender diversity, including whether a diversity policy or target had been adopted. In some cases, we engaged with the company to determine whether the board was taking any active steps to address the lack of gender diversity.

GLOBAL BOARD GENDER DIVERSITY VOTING PRACTICE, RESULTS FOR 2019 PROXY SEASON

Number of companies, by region, where we voted against directors



ESCALATING OUR CANADIAN EFFORTS

CPPIB's early efforts to improve board diversity began in Canada. Since 2017, for all our Canadian public holdings, we have been voting against the election of the nominating committee chair if the board has no female directors and there were no extenuating circumstances. In 2017, CPPIB cast votes at shareholder meetings of 45 Canadian companies with no women directors and undertook efforts to engage with these companies. A year later, nearly half of those companies had appointed a woman director.

In 2018, we escalated this practice to vote against all nominating committee members at companies where we voted against the committee chair in 2017 if the company had since made no progress at improving its lack of board gender diversity.

In 2019, we further escalated our Canadian approach to vote against nominating committee chairs of S&P/TSX composite boards with only 1 female director. This escalation is to encourage progress on board diversity consistent with our 30% target for women on boards and executive teams of composite companies by 2022 (see pag 66 for more on this initiative).

2019 RESULTS OF OUR VOTING EFFORTS IN CANADA

14

TOTAL NUMBER OF CANADIAN PUBLIC COMPANIES (INCLUDING ONES ON THE S&P/TSX COMPOSITE) WHERE WE VOTED AGAINST DIRECTORS FOR HAVING ZERO WOMEN ON THE BOARD

21

TOTAL NUMBER OF CANADIAN PUBLIC COMPANIES ON THE S&P/TSX COMPOSITE WHERE WE VOTED AGAINST DIRECTORS FOR HAVING ONLY ONE WOMAN ON THE BOARD

Dr. Heather Munroe-Blum, Chairperson

CHAIR OF CPPIB'S BOARD HONOURED AS A FELLOW OF THE INSTITUTE OF CORPORATE DIRECTORS

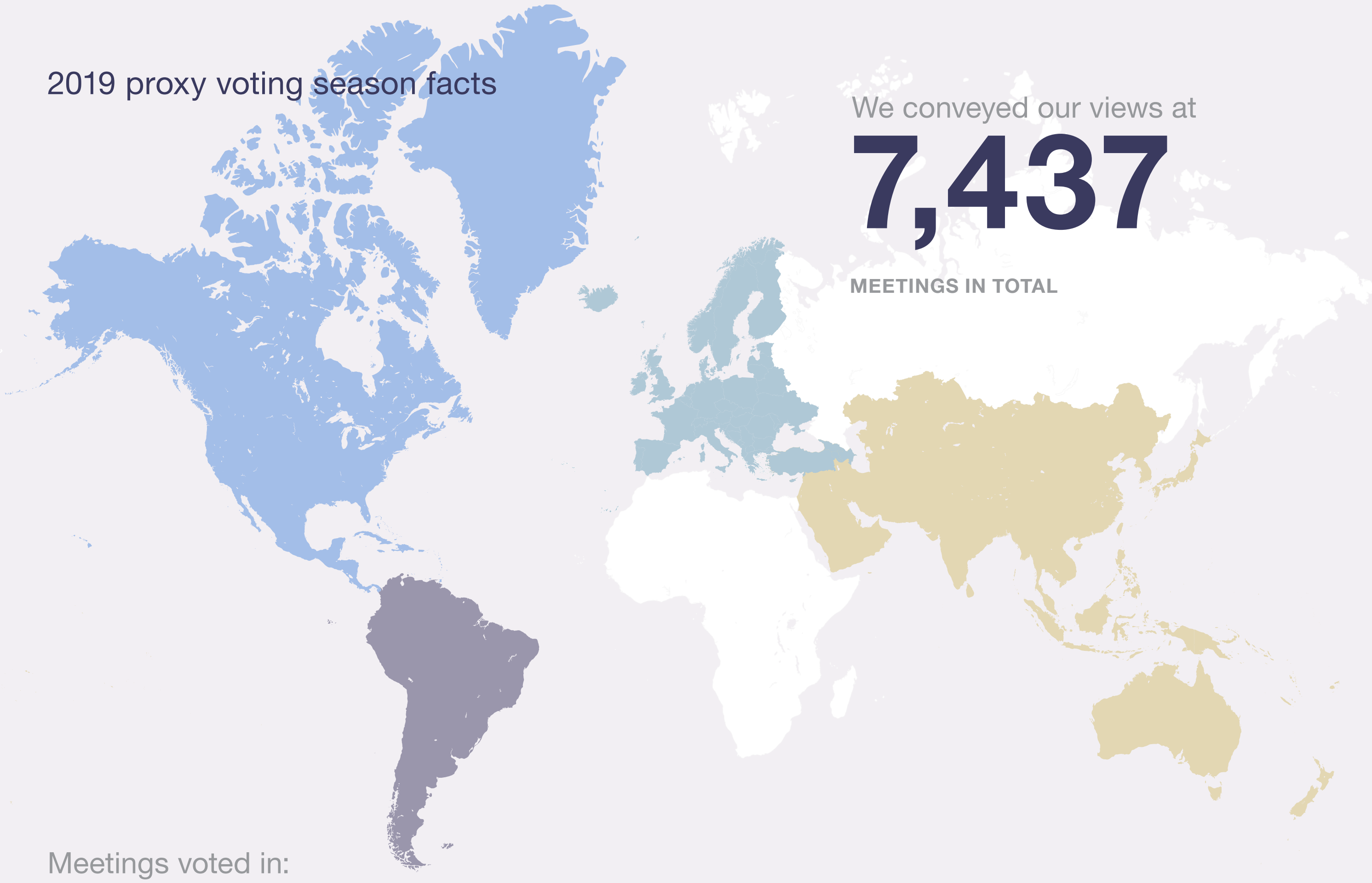
On June 6, 2019, Dr. Heather Munroe-Blum, CPPIB's Chairperson, was honoured as a Fellow of the Institute of Corporate Directors (ICD) at its annual Fellowship Awards Gala. The award was established in 1997 to honour those making outstanding contributions to Canadian enterprises and not-for-profit organizations through their governance leadership in boardrooms. The award is the highest distinction for Canadian corporate directors and, to date, 88 directors across Canada have received this award. These include former CPPIB CEOs David Denison and John MacNaughton, as well as other current and former CPPIB directors, including founding Chair Gail Cook-Bennett.

Heather Munroe-Blum has been a CPPIB director since 2010 and CPPIB's Chairperson since 2014, and also chairs our Board's Investment Committee. She is Emerita Principal and Vice-Chancellor, McGill University (where she served as Principal for over a decade and was the first woman in this role). She has extensive board experience as a director on executive, human resources and compensation, governance, investment, finance and risk committees in the corporate and not-for-profit sectors. Dr. Munroe-Blum currently holds board seats at the Royal Bank of Canada, the Gairdner Foundation (Chair), McGill's Tanenbaum Open Science Institute (TOSI), McGill's Bensadoun School of Retail Management and Stanford University's Center for Advanced Study in the Behavioral Sciences (CASBS). She is also a Member of the Trilateral Commission and the Lui Che Woo Prize Recommendation Committee. A strong advocate for gender diversity in the boardroom, Dr. Munroe-Blum is a founding member of the 30% Club (Canada) (see page 65).

She has received numerous domestic and international honorary degrees and awards of distinction, including Officer of the Order of Canada, Officer of the Order of Quebec, and Specially Elected Fellow of the Royal Society of Canada.

PROXY VOTING OVERVIEW

2019 proxy voting season facts



We conveyed our views at

7,437

MEETINGS IN TOTAL

Meetings voted in:

1,935	570	758	4,431	250
North America	Latin America	Europe	Asia Pacific	Rest of the World

We voted on:

71,198

AGENDA ITEMS

We voted in:

61

COUNTRIES

We voted against management in:

9.81%

OF CASES

Engagement

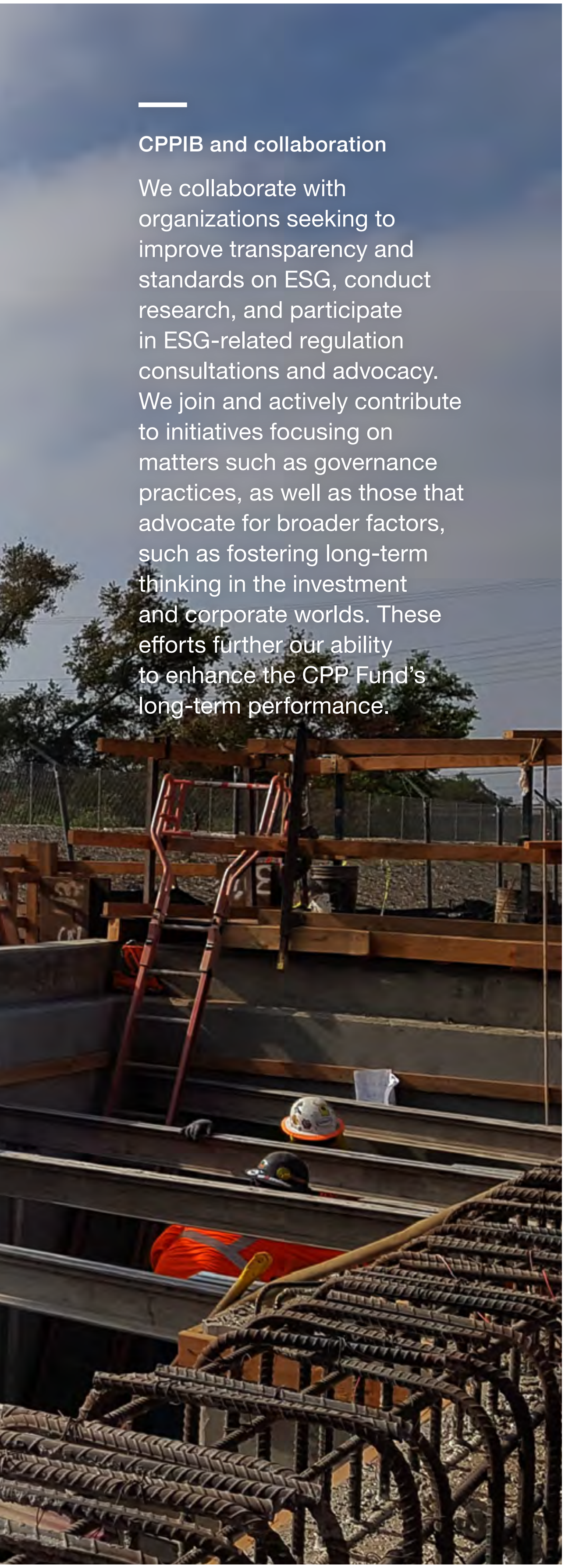
2019 proxy season themes

The following tables present key themes in the 2019 proxy season and our voting decisions. Our *Proxy Voting Principles and Guidelines* can be found at www.cppib.com/PVPG. We do not support shareholder proposals if they are overly prescriptive or duplicative of initiatives already in place or underway or if they are likely to detract from long-term company performance.

PROPOSAL	VOTE	GENERAL RATIONALE FOR VOTE
VOTES ON COMPENSATION		
Approve Executive Compensation	18% AGAINST 1,834 VOTES	Voted against where the company was deficient in linking executive pay with long-term company performance.
Approve Share Plan Grants	54% AGAINST 442 VOTES	Voted against where the plan cost was excessive and did not contain challenging performance criteria.
Say on Pay Frequency	100% FOR 70 VOTES	Annual Say on Pay votes promote effective oversight of executive compensation and allow shareholders to provide timely feedback to the company.
Compensation-related Shareholder Proposals	44% FOR 159 VOTES	Supported shareholder proposals that strengthen pay and performance alignment and help mitigate compensation-related risk.
VOTES TO ENHANCE SHAREHOLDER DEMOCRACY		
Reduce Supermajority Vote Requirements	100% FOR 52 VOTES	Supported shareholder proposals that remove undue barriers on the ability of shareholders to effect change.
Proxy Access	96% FOR 27 VOTES	The ability to nominate board candidates enhances shareholder rights and increases board accountability.
Right to Call Special Meetings	96% FOR 25 VOTES	Granting shareholders the right to call special meetings with a reasonable ownership threshold enhances shareholder democracy.
VOTES TO ENCOURAGE ENHANCED DISCLOSURE AND PRACTICES ON ENVIRONMENTAL AND SOCIAL MATTERS		
Enhance Disclosure on Environmental and Social Risks and Performance	76% FOR 76 VOTES	Improved disclosure allows investors to assess the operational risk profile of companies with respect to financially relevant, long-term environmental and social factors.
Adopt/Disclose Corporate Responsibility Standards	44% FOR 55 VOTES	Companies that adopt and enforce high standards of business conduct are likely to achieve better long-term financial performance.
Report on Political Contributions/Lobbying	98% FOR 64 VOTES	Greater disclosure of political spending helps shareholders assess associated costs, risks and benefits.

COLLABORATION

CPPIB continues to collaborate with organizations such as the United Nations-supported Principles for Responsible Investment (PRI). In September 2018, representatives from the Sustainable Investing group participated in a PRI-led trip exploring water management strategies in California.



CPPIB and collaboration

We collaborate with organizations seeking to improve transparency and standards on ESG, conduct research, and participate in ESG-related regulation consultations and advocacy. We join and actively contribute to initiatives focusing on matters such as governance practices, as well as those that advocate for broader factors, such as fostering long-term thinking in the investment and corporate worlds. These efforts further our ability to enhance the CPP Fund's long-term performance.

CPPIB increases its impact by leveraging partnerships and collaborations. We work with peers to improve environmental, social and governance-related practices, and advocate for long-term focused policies and approaches. Through collaboration, we reduce risks and promote value-building growth for all investors. We frequently join with like-minded organizations on initiatives we believe will create positive long-term outcomes for ESG-related matters and investment performance.

Collaboration

FOUNDING MEMBER

CPPIB's Chairperson is a founding member of the 30% Club (Canada) and our President & CEO joined upon assuming his role in 2016. This group of business leaders is committed to improving gender balance at all levels of organizations through voluntary actions. A member of CPPIB's Sustainable Investing group is a member of the 30% Club's Canadian Investor Group.

MEMBER

The Asian Corporate Governance Association is an independent, non-profit membership organization dedicated to working with investors, companies and regulators in the implementation of effective corporate governance practices throughout Asia.

MEMBER

This organization promotes governance practices in Canadian public companies, the improvement of the regulatory environment to best align shareholder and management interests, and the efficiency and effectiveness of Canadian capital markets.

MEMBER

A global non-profit helping build workplaces that are inclusive and empowering for women. Founded in 1962, the organization drives change with pioneering research, practical tools and proven solutions.

INVESTOR SIGNATORY

Non-profit organization (formerly known as Climate Disclosure Project) acting on behalf of over 800 institutional investors globally, encouraging companies to measure, disclose, manage and share climate change information. CPPIB also supports CDP's Water program.

ASSOCIATE MEMBER

This non-profit association of pension funds, other employee benefit funds, endowments and foundations promotes good corporate governance and shareowner rights. A member of CPPIB's Sustainable Investing group is a member of the Corporate Governance Advisory Council.

CO-FOUNDER

CPPIB's President & CEO is a member of FCLTGlobal's board and chairs its Finance and Audit Committee. FCLTGlobal is a not-for-profit organization dedicated to developing practical tools and approaches to encourage long-term behaviours in business and investment decision-making.

PARTNER

An open and collaborative platform for leading investors interested in addressing sustainability and long-term growth. Launched in 2018, the ILN benefits from participation of various partners, including the Government of Canada and multilateral institutions.

Collaboration

ICGN
International Corporate Governance Network

MEMBER

The International Corporate Governance Network is a global organization aiming to raise standards of corporate governance worldwide. Membership includes investors responsible for assets under management in excess of US$34 trillion from more than 45 countries.

IIGCC
The Institutional Investors Group on Climate Change

SUPPORTING PARTNER

The Institutional Investors Group on Climate Change is a membership body for investor collaboration on climate change. The group works to mobilize capital for the low carbon transition by working with business, policy makers and fellow investors. It has over 170 members across 13 countries representing over €23 trillion in assets under management.

Pension Investment Association of Canada
Association canadienne des gestionnaires de caisses de retraite

MEMBER

PIAC is composed of over 140 of the largest pension plans in the country. The group promotes sound investment practices and good governance for the benefit of pension plan sponsors and beneficiaries.

PRI Principles for Responsible Investment

FOUNDING SIGNATORY

International network of the world's largest institutional investors works to put its six Principles for Responsible Investment into practice. In 2018, an SI team member joined the PRI's Private Equity Advisory Committee for a three-year term.

SASB
Sustainability Accounting Standards Board

INVESTOR ADVISORY MEMBER

The Sustainability Accounting Standards Board connects businesses and investors to identify, manage and report on the financial impacts of sustainability. The head of the Sustainable Investing group represents CPPIB on the Investor Advisory Group.

TCFD
Task Force on Climate-Related Financial Disclosures

MEMBER

The Task Force was established by the Financial Stability Board to develop voluntary, consistent climate-related financial disclosures by companies to provide useful decision-making information to investors, lenders, insurers and other stakeholders.

World Economic Forum

INDUSTRY PARTNER

Independent international organization committed to improving the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas. CPPIB is part of the World Economic Forum's Industry Community for Institutional Investors, Sovereign Funds, an exclusive group focused on renewable infrastructure investment, long-term investment and investing for change as priority issues.

2019 REPORT ON ACTIVITIES

Task Force on Climate-related Financial Disclosures

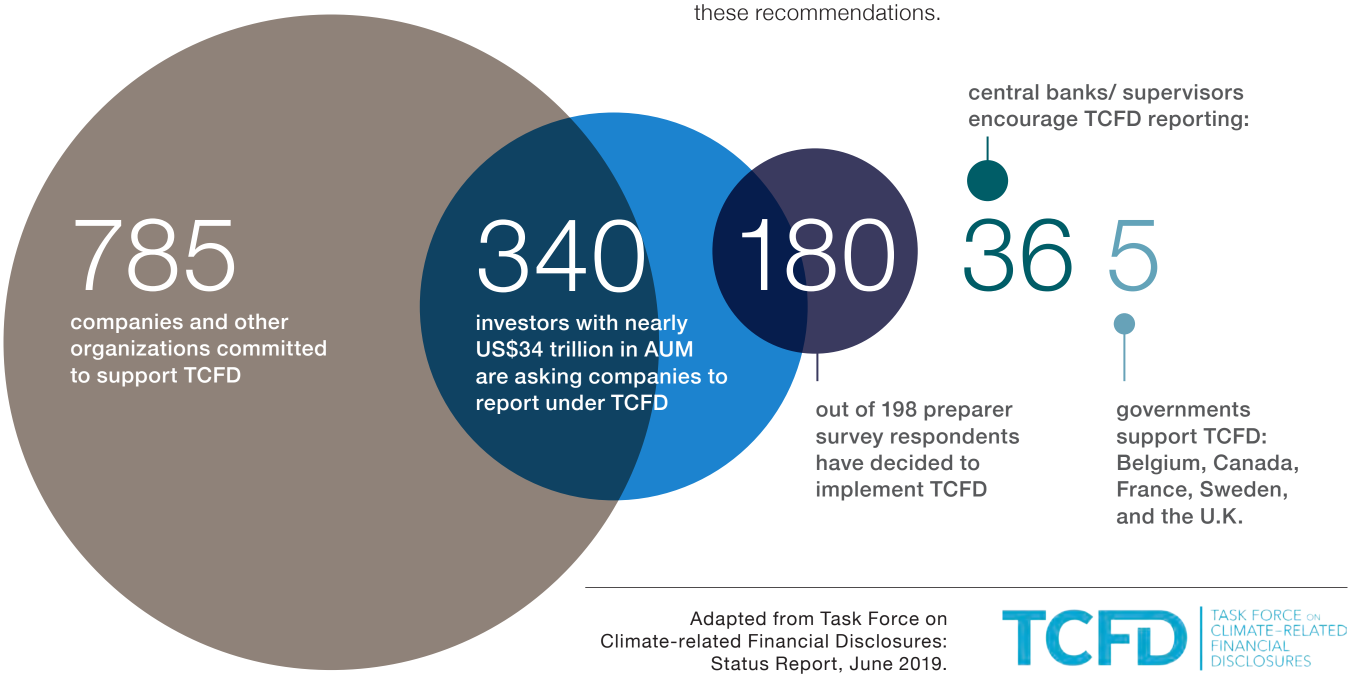
The Financial Stability Board (FSB) is an international body created in the wake of the 2008 financial crisis to monitor financial system stability. The FSB established the Task Force on Climate-related Financial Disclosures (Task Force) in 2015 to develop voluntary recommendations for more efficient and effective climate-related financial disclosures to promote more informed investment, credit and insurance underwriting decisions.

The FSB believes more effective climate change disclosures will help reduce financial stability risks by avoiding an abrupt repricing of asset values as the impacts of climate change become clearer. We agree, and this belief is reflected in our long-standing climate-related engagement work with companies.

The Task Force, chaired by Michael Bloomberg, includes capital providers, insurers, large global companies from a range of financial and non-financial sectors, accounting and consulting firms and credit rating agencies. Stephanie Leaist, former Head of Sustainable Investing and an advisor to CPPIB, is a member of the Task Force and is continuing our efforts to actively contribute by bringing an investor perspective. CPPIB is one of only two global pension fund managers represented on the Task Force.

The Task Force's 2017 recommendations have had a growing impact on the global financial system's approach to and understanding of climate change, acting as a catalyst for transparency and action. As of June 2019, more than 785 companies and other organizations have pledged their support. More than 340 investors with nearly US$34 trillion in assets under management are asking companies to report under the Task Force's recommendations. According to the Task Force's most recent Status Report, disclosure of climate-related financial information has increased since 2016. However, they note it is still insufficient for investors and suggest mainstreaming climate-related issues will require the involvement of multiple functions including sustainability, risk management, finance and executive management.

The Task Force's recommendations are structured around four pillars: governance, strategy, risk management, and metrics and targets. They provide a framework intended to help investors and others in the financial community better understand and assess climate-related risks and opportunities. CPPIB is committed to full adoption of these recommendations by the end of fiscal 2021. In 2019 CPPIB began including climate-related disclosures in our annual report in line with the Task Force recommendations. In the following pages, we provide an overview of steps we are taking to implement these recommendations.



Adapted from Task Force on Climate-related Financial Disclosures: Status Report, June 2019.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

IMPLEMENTATION OF THE TASK FORCE'S RECOMMENDATIONS

GOVERNANCE

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

The Board oversees CPPIB's enterprise-wide efforts to understand and manage climate-related risks and opportunities. It receives an annual update about our Climate Change Program's progress, as well as updates about broad trends and specific investment-related developments via ongoing risk reporting.

Our CEO sets Management's overall tone and approach for governance and integrated risk management. Our Chief Financial and Risk Officer (CFRO) has explicit accountability to recommend to the board the risk appetite and limits of the fund across all dimensions of risk consistent with the Integrated Risk Framework having specific regard CPPIB's unique mandate.

Our CFRO and Chief Investment Strategist, along with senior representatives from Active Equities, Public Affairs and Communications, Real Assets and the Office of the CEO, comprise CPPIB's Climate Change Steering Committee. Our Global Head of Active Equities recently took over from the CFRO as Chair of this committee and sponsors our firm-wide Climate Change Program. That committee oversees the work of CPPIB's Program Management Office and Climate Change Management Committee. Together, the Program Management Office and Climate Change Management Committee guide and support climate-related work streams.

STRATEGY

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

Specifically addressing climate change in our investment activities puts us in a better position to make more informed decisions over the long term. Portions of our portfolio – including airlines; fossil fuel, steel and cement producers; and many other companies – are exposed to climate change-transition risks, including policy, legal, technology and market risk. Some assets may also be vulnerable to physical risks, like natural disasters. Simultaneously, new investment opportunities in sectors such as renewable power and resource efficiency will continue to emerge. To help address risks and opportunities, CPPIB has established a Climate Change Program with six work streams (see pages 14-16).

In late 2017, CPPIB created a stand-alone Power & Renewables group to better position the Fund to invest in climate change-related opportunities. Since then, the P&R group has been making significant investments in renewable energy projects. The combined value of these assets is now more than $2.47 billion. This was done with the goal of helping diversify the portfolio as the world transitions to a lower-carbon energy supply.

In June 2018, CPPIB became the world's first pension fund manager to issue a green bond, and then followed up with the issuance of our first euro-denominated green bond in January 2019 (see pages 31-33 for more details). What's more, CPPIB's Energy & Resources (E&R) group launched an Innovation, Technology and Services strategy to capitalize on opportunities created by the global energy transition, such as networks to charge electric vehicles (see page 21 for details). E&R also carefully considers the transition when investing in traditional energy. Our Thematic Investing team is also preparing to launch a new climate change investment strategy.

The TCFD has said organizations should describe climate-related scenarios used to inform strategy and financial planning. For details on CPPIB's scenario analysis work, see page 63.

RISK MANAGEMENT

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

Climate change is a key risk in CPPIB's Integrated Risk Framework. The Climate Change Steering Committee is guiding CPPIB's multi-year effort to identify, assess and manage climate-related risks and opportunities at both the organizational and investment group levels (see page 14).

One way we do this is by engaging with companies to improve their climate change-related disclosures. Over time, we have pressed large greenhouse gas emitters in oil and gas, utilities and other sectors for improved disclosure on this issue. And, for over a decade, CPPIB has used its voting power to support shareholder proposals that encourage companies to improve disclosure of climate change-related risks (see page 41 for details on CPPIB's support for climate change-related shareholder resolutions during this reporting period).

We believe our support of the recommendations of the Task Force on Climate-related Financial Disclosures will result in better disclosure of climate change risks. This, in turn, should help asset owners, including CPPIB, better assess these risks and make sounder investment decisions. We have a heightened interest in ESG factors broadly and climate change factors specifically. We have this interest because the risks associated with these factors tend to have material impacts on value over longer horizons. As such, we continue to push for enhanced disclosures so that we can make appropriate risk-adjusted investment decisions fully aligned with our mandate.

Additionally, as a sophisticated long-term investor, CPPIB has a structured approach for the due diligence and monitoring of environmental, social and governance (ESG) risks, including climate-related ones, in our direct investments (see page 20 for details).

The significant continuing work CPPIB is undertaking helps address climate change risk at the total portfolio level and advances our understanding of potential implications for our existing and future investments.

CPPIB is continuing efforts to develop and refine methodologies for stress testing and scenario analysis. For example, we are in the process of identifying and monitoring climate-related factors that may have an impact on CPPIB's investment portfolio and implementing controls to reduce the risk. Our assessments consider various time horizons and will allow us to quantify the potential financial impact and assess compliance with CPPIB's Risk Appetite Statements, which are an integral part of our Integrated Risk Framework. For details on CPPIB's scenario analysis work, see page 63.

METRICS AND TARGETS

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

CPPIB published the first carbon footprint of its public equities portfolio last year. This included metrics on total carbon emissions and carbon intensity. This year, we provide a more comprehensive metric that includes both our public and private investments (see pages 61-62). We consider key performance indicators for GHG emissions, water consumption and energy efficiency in our individual investments.

Collaboration

Carbon Footprint & Scenario Analysis

CARBON FOOTPRINT

The recommendations of the Task Force are widely recognized as the global standard for climate change disclosure. Building on our support of and commitment to the Task Force, CPPIB introduced the carbon footprint of our public equities portfolio in the 2018 Report on Sustainable Investing. In this year's Report, we are disclosing the carbon footprint of our broader portfolio, including private holdings.

This disclosure represents part of our work (see pages 59-60) to align with the Task Force recommendations and develop a better understanding of our exposure to climate change-related risks.

CPPIB's Risk Group (Risk) developed an in-house methodology to estimate the metrics below. The numbers reflect our carbon metrics as of June 30, 2019 and show metric tonnes of carbon dioxide equivalent (CO_2 e)[1]. The formulas are consistent with Task Force recommendations.

The Task Force has said there are challenges and limitations with carbon footprinting metrics and noted these should not necessarily be interpreted as risk metrics. At the same time, they have said they expect the release of this data to prompt important advancements. We agree with this position. We continue to research what are the most relevant indicators of climate change risk for the portfolio. Our research to date suggests an understanding of the energy transition is particularly important, recognizing physical impacts will play a key role in certain geographies.

CPPIB PORTFOLIO CARBON FOOTPRINT METRICS

METRIC[2]	LONG-TERM CAPITAL OWNERSHIP	EQUITY OWNERSHIP	DESCRIPTION
Total Carbon Emissions (million tonnes of CO_2e)	25.7	43.1	The absolute GHG emissions associated with a portfolio. This figure would typically rise as assets under management grow.
Carbon Footprint (tonnes of CO_2e/$ million invested)	64	107	Total carbon emissions for a portfolio normalized by the market value of the portfolio.
Carbon Intensity (tonnes of CO_2e/$ million revenue)	226	267	Volume of carbon emissions per million dollars revenue (carbon efficiency of a portfolio).
Weighted Average Carbon Intensity (tonnes of CO_2e/$ million revenue)	195	195	Portfolio's exposure to carbon-intensive companies[3].

1 Based on the most recent annual emission information available at June 30, 2019 and allocated based on CPPIB's June 30, 2019 holdings. Exchange rates applied are those as at the year-ends of the reported emissions and revenue data, and as at June 30, 2019 for market capitalizations and long-term debt of holdings. The following asset classes were excluded from the portfolio carbon footprint assessment: Government Bonds, Cash and Money Market Instruments, Non-Equity Derivatives.

2 Issuers' Scope 1 and 2 GHG emissions are allocated to our portfolio based on both equity ownership approach and long-term capital ownership approach, and the data is normalized based on the total in-scope portfolio value. Under the equity ownership approach, if an investor for example owns 5 percent of a company's total market capitalization, they own the same percentage of the company's emissions. Under the long-term capital ownership approach, if an investor for example owns 5 percent of the sum of a company's total market capitalization and its long-term debt, they own the same percentage of the company's emissions.

3 For this metric, Scope 1 and Scope 2 GHG emissions are allocated based on portfolio weights (the current value of the investment relative to the current portfolio value).

Collaboration

OUR METHODOLOGY

For our carbon disclosure, we use Scope 1 and 2 GHG emissions. Scope 1 refers to direct GHG emissions from an organization's owned and controlled sources. Scope 2 refers to indirect emissions from the generation of purchased energy. We have opted to use these types of emissions because the dataset for Scope 1 and 2 emissions is currently the most complete and robust available.

We have used emissions data provided by S&P Trucost Ltd. (Trucost[1]), a division of S&P Global that provides investment grade carbon and environmental data to investors, companies and governments. While this data is the best we currently have available, it has limitations due to the use of differing GHG calculation methodologies by companies, incomplete reporting by some companies and the resulting use of partial company data to extrapolate or estimate historic emissions based on sector emissions performance.

The carbon footprint metrics estimation follows a waterfall methodology using different estimation sources in order of priority based on data availability. The priority setting is based on the principle of using as much directly disclosed data as possible, prioritizing more sophisticated estimation method and balancing cost vs. benefit:

1. GHG emissions data that is disclosed by the public portfolio company and provided to CPPIB either by a credible source such as Trucost or by the portfolio company;
2. GHG emissions data that is estimated by a credible source such as Trucost or by CPPIB using specific comparable operating facilities similar to those of the issuers;
3. GHG emissions data that is estimated by CPPIB using a public proxy. The public proxy is established based on the average emission of the sector and country.

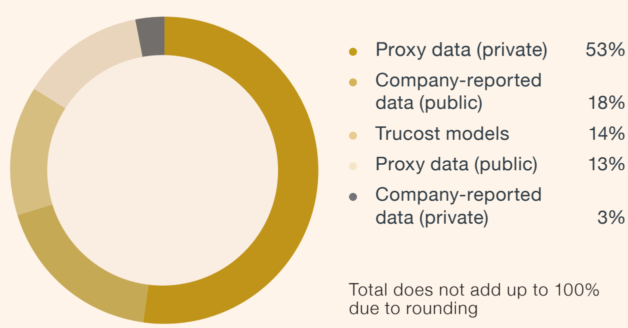
The data we have presented, while the best available, is subject to inherent uncertainties and these uncertainties may be material.

We also recognize the assumptions made in applying the methodologies noted had a material impact on the resulting metrics. These include the use of a point-in-time approach to reporting on our portfolio, which may not fully reflect our holdings throughout the year, and the selection of the exchange rate when making calculations. There is, as yet, no authoritative guidance or emerging standard of disclosure in relation to these assumptions. As a result, the comparability of the data presented here for our portfolio to the carbon data disclosed for other portfolios is significantly reduced.

The chart below shows the different types of data available for our calculations (percentages based on value of holdings).

TYPES OF DATA AVAILABLE TO CALCULATE OUR CARBON DISCLOSURE

(percentages based on value of holdings)



Total does not add up to 100% due to rounding

1 Trucost, its affiliates, and their third-party data providers and licensors (collectively "Trucost Parties") do not guarantee the accuracy or completeness of the Information. Trucost Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Information. The Trucost parties make no warranties or representations, and, to the maximum extent permitted by law, each Trucost party hereby expressly disclaims all implied warranties, including warranties or merchantability and fitness for a particular purpose. Without limiting any of the foregoing and to the maximum extent permitted by law, in no event shall any of the Trucost parties have any liability regarding any of the information for direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited.

Collaboration

SCENARIO ANALYSIS

One of the Task Force's recommended disclosures focuses on the resilience of an organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. The Task Force recommends the disclosure of how the organization's strategies might change to address potential climate-related risks and opportunities. It believes that scenario analysis is important for improving the disclosure of decision-useful, climate-related financial information.

Scenario analysis, which has been a key element of CPPIB's Integrated Risk Framework, is used to make forward-looking assessment of risks and opportunities. Scenarios are descriptions of potential future pathways. They can be either quantitative or qualitative, or a combination of both.

To better understand the risks posed by climate change, CPPIB is developing a climate-related scenario analysis framework both internally through a cross-functional approach involving experts in risk management and investments, as well as externally through investors' collaboration platforms and consultation. (For more on CPPIB's Climate Change work streams, see page 15).

The Total Portfolio Management (TPM) department is working to assess risks and opportunities related to climate change and the energy transition using internally-determined scenarios and signposts, with particular focus on the impact on unconditional long-term returns and asset allocation.

The Risk Group (Risk) is identifying and monitoring causes or factors that affect the likelihood, timing or impact of climate change risk scenarios or events, potential investment and non-investment impacts to CPPIB and controls that can be implemented to monitor and/or reduce the risk to CPPIB's portfolio over various time horizons.

Risk recently commissioned an external service provider to support our assessment of the potential financial impact to our portfolio under different global warming pathways. The external provider used global warming pathways to project how much the world average temperature will increase compared to pre-industrial levels. The global warming pathways assessed include an orderly transition to a 1.5°C warmer world, a disorderly transition to a 1.5°C warmer world, an orderly transition to a 2°C warmer world, a gradual transition to a 4°C warmer world, and a transition into 4°C warmer world with significant extreme weather events.

This work is in the early stages of development and the results cannot be deemed conclusive. However, CPPIB believes it is important to be an early adopter to gain a better understanding of the climate change risks to and opportunities for our portfolio.

SIGNPOSTS

TPM has developed an initial framework for using key indicators, or "signposts", to monitor the energy transition and climate change. These signposts use recent trends in data to help inform our view on the likelihood of potential scenarios for overall energy demand, the shifting mix between traditional and renewable energy sources, and the physical effects of climate change, which we can summarize in terms of an overall warming signal.

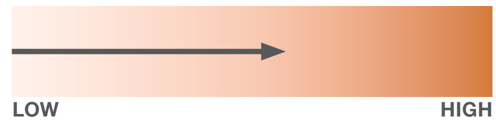
We have split these signposts into a set of categories, with four covering key elements of the energy transition and one monitoring physical indicators. The graphic on page 64 shows some preliminary results as to which level of warming each category is currently pointing. The insights provided will help the organization to better gauge the potential physical and transition risk impacts of climate change on both the global economy and our portfolio. The goal is to ensure CPPIB fulfills its mandate to maximize return without undue risk of loss by fully understanding climate change risks and opportunities.

We continue to evolve our thinking around signposts. Moving forward, we aim to expand the number of variables and make ongoing refinements to our mapping from signpost indicators to potential warming paths and scenarios. For example, we plan to expand our Physical Effects signposts so that we can better use them to warn us if we are under- or over-estimating the physical risk damages associated with climate change, or if we have reached an Earth system tipping point that is amplifying human impacts.

CLIMATE CHANGE SIGNPOSTS

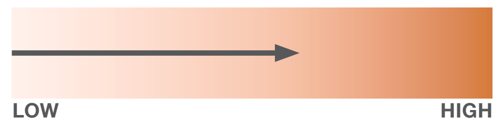
Demand is an important predictor of energy consumption, with demand being driven by growth in both population and income (measured by GDP per capita). Tracking demographic and economic growth, as well as the energy intensity of that growth, provides important information about the current path of aggregate energy use.

DEMAND



Technology is an important determinant of growth in renewable generation and is a key economic driver of the energy transition and the path of emissions. Innovation has driven rapid declines in renewable energy and electric vehicle costs, dramatically improving their competitiveness compared with higher-carbon technologies. Tracking technology costs and penetration rates provides an important insight into the evolution of the energy system and future emissions. Technology is also an important precondition of policy as improvements in the quality and affordability of renewable technology reduce the cost of action for policy makers.

TECHNOLOGY

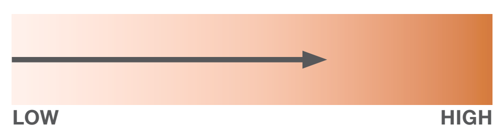


Policy both shapes and is shaped by demand and technology factors, and can help drive the overall path of warming. Carbon pricing is a key element of climate policy, and its adoption around the world helps us track current policy trends. More broadly, the Nationally Determined Contributions (NDCs) are the foundation of the Paris Agreement on Climate Change and embody efforts by each signatory country to reduce national emissions. However, the NDCs are not legally binding and some countries are making better progress than others. Policy impacts both investment in new infrastructure and the rate of retirement of the existing stock of fossil fuel infrastructure.

POLICY

Our **Market** signpost tracks what is happening in real time and gives us a sense of how energy markets are currently evolving. Current trends in energy production help us track where energy and emissions are moving over the near-term, while investment in different energy sources gives a clear line of sight into future generation capacity and the emissions associated with it.

MARKET



The **Physical Effects** signpost is designed to track the ongoing evolution of earth systems due to human activities, which is reflected in part through headline indicators like anthropogenic emissions and overall temperature change. This can help gauge both the trend and potential physical impacts of climate change. The Earth system also contains numerous sub-cycles that can temporarily mute or magnify overall warming trends. These cycles can make tracking these indicators important for the potential evolution of policy, as “pauses” in global warming such as were observed in the early 2000s can reduce public support for policy change (and vice versa).

PHYSICAL EFFECTS

ADVOCATING FOR GENDER DIVERSITY IN CORPORATE LEADERSHIP

The 30% Club is a group of business leaders committed to achieving better gender balance on corporate boards and at the executive management level. It works to bring about change through several targeted initiatives that include encouraging and supporting boards to appoint more women, providing information and help for businesses trying to improve their diversity, and keeping the spotlight on the issue through media channels and educational programs.

The driving premise of the 30% Club is that gender diversity is about business performance, addressing gender diversity from the perspective of building long-term value in companies. The 30% Club aims for meaningful, sustainable change in the representation of women. Launched in the U.K. in 2010, it has since become an international business initiative with chapters in Australia, Canada, Hong Kong, Ireland, South Africa and the United States, among other countries.

CPPIB's Chair, Heather Munroe-Blum, is a founding member of the 30% Club (Canada) and Mark Machin joined upon becoming President & CEO in 2016. In addition, CPPIB is a member of the 30% Club's Canadian Investor Group, which works to coordinate the investment community's approach to gender diversity. We have hosted a number of Investor Group meetings on our offices. This year, in our Toronto offices, we hosted a meeting with the Global Chair of the 30% Club, Brenda Trenowden, at which we discussed developments related to the 30% Club's work globally.

G7 WOMEN IN BUSINESS SUMMIT

In March 2019, our CEO discussed gender balance in business during a fireside chat at the G7 Women in Business Return on Investment Summit. He highlighted CPPIB's work in improving gender balance on boards, including our involvement in the 30% Club Canadian Investor Group and the launch of our Global Board Gender Diversity Voting Practice. He also reinforced the business case for gender diversity and CPPIB's own commitment to a diverse and inclusive workplace.

30% TARGET FOR WOMEN ON BOARDS AND EXECUTIVE TEAMS IN CANADA BY 2022

In September 2017, CPPIB released a public statement alongside peers on the 30% Club's Canadian Investor Group calling on companies listed in the S&P/TSX composite index to take prompt and considered action to achieve a minimum of 30% women on boards and in executive management by 2022 (see 30percentclub.org/assets/uploads/30_percent_Club_Canadian_Investor_Statement_Updated_May_2019.pdf).

We called on companies to (i) adopt a professional and structured approach to director nominations that ensures directors are appointed based on merit, with due regard for the benefits of gender diversity; and (ii) commit to rigorous assessment of director and executive performance, as well as regular board refreshment.

Since then, we have worked with our peer signatories to collaboratively engage companies that have not yet met the 30% by 2022 target. We aim to encourage and assist these companies to intensify their efforts to enhance female representation at both the board- and executive management levels.

While the trend toward more women on boards and executive teams is positive, progress remains slow. To signal our expectation that S&P/TSX composite index companies accelerate progress toward the 30% by 2022 target, the 30% Club's Canadian Investor Group released a follow-up statement in September 2018 reiterating our call to action (see 30percentclub.org/assets/uploads/30_Percent_Club_Investor_Statement_-_One_Year.pdf).

PROMOTING GOVERNANCE BEST PRACTICES IN ASIA

GOVERNANCE ROUNDTABLE IN KOREA

On January 23, 2019, Suyi Kim, CPPIB's Senior Managing Director and Head of Asia Pacific, hosted a roundtable discussion in Seoul, South Korea, on "Corporate Governance in Korea – Overcoming New Challenges." Roundtable participants discussed progress made since the recent corporate governance-related policy developments in South Korea and the challenges that lie ahead. These recent developments include the adoption of a South Korean Stewardship Code and increased awareness of corporate governance in South Korea.

More than 20 senior representatives – from asset managers, corporates, academia and government entities – participated in the roundtable. Key discussion topics included: (i) the role of the board in South Korea; (ii) changes to corporate governance in South Korea following adoption of the Stewardship Code; (iii) investors' perspective on how board effectiveness, including diversity, independence and strategic engagement contribute to long-term value creation in South Korea; and (iv) the impact of regulatory changes and activist investors to board composition and corporate behaviour.

A member of our Sustainable Investing team shared our approach on board effectiveness and active engagement.

This roundtable was organized with support from external partners Kim & Chang, South Korea's largest law firm, and McKinsey Korea.

ASIAN CORPORATE GOVERNANCE ASSOCIATION

Since 2013, CPPIB has been a member of the Asian Corporate Governance Association (ACGA), an independent organization dedicated to implementing effective corporate governance practices throughout Asia. ACGA membership gives us access to expertise on local governance matters, which leads to better-informed proxy voting decisions and an established platform for the region.

CPPIB's Senior Managing Director and Head of Asia Pacific, Suyi Kim, hosted a roundtable discussion on "Corporate Governance in Korea – Overcoming New Challenges" in Seoul, South Korea in January 2019.

CPPIB participates in bi-monthly ACGA Investor Discussion Group calls, which let global investors raise emerging governance matters and solicit support for collaborative initiatives. The calls also create opportunities for members to provide input on ACGA's advocacy work.

Advocacy with financial regulators, stock exchanges and other standard-setting bodies is a key element of the ACGA's scope of work. During the year ended June 30, 2019, the ACGA submitted a number of comment letters on behalf of members, including CPPIB, to promote best practices in corporate governance and shareholder stewardship.

This year, we hosted an ACGA Member Briefing in our Toronto offices on "Awakening Governance: The evolution of Asia's corporate governance ecosystem." The briefing covered current trends and new developments in Asia Pacific's corporate governance and ESG ecosystem.

Commonsense Principles for Corporate Governance

In July 2016, CPPIB joined a coalition of executives from leading public companies and institutional investors to seek common ground on key corporate governance issues in the U.S. The group includes major U.S. asset managers, as well as some of the largest public companies, shareholder activists, public pension funds and mutual fund companies.

This led to the development of the Commonsense Principles of Corporate Governance (Commonsense Principles), which establish a basic framework for long-term oriented governance practices and foster dialogue on the topic. We drew on CPPIB's own comprehensive and robust set of *Proxy Voting Principles and Guidelines* (www.cppib.com/PVPG) to provide input into the framework.

Last year, the group reconvened with a few additional members, to continue discussions on strengthening corporate governance and consider the work of other groups that has emerged since the Commonsense Principles' release (see below list of group members). This resulted in the release of an update, Commonsense Principles 2.0, in October 2018.

The new volume combines insights from the many existing corporate governance principles to create a single, unified set of corporate governance principles to guide the engagement of companies, boards and institutional investors. The Commonsense Principles 2.0 are intended to be a guide and, as such, allow for flexibility in their adoption given the significant variation among public companies.

LIST OF PARTICIPANTS

Tim Armour	Capital Group
Mary Barra	General Motors
Edward Breen	DowDuPont
Warren Buffett	Berkshire Hathaway
Jamie Dimon	JPMorgan Chase
Mary Erdoes	J.P. Morgan Asset Management
Larry Fink	BlackRock
Alex Gorsky	Johnson & Johnson
Marillyn Hewson	Lockheed Martin
Mark Machin	Canada Pension Plan Investment Board
Lowell McAdam	Verizon Communications
Bill McNabb	Vanguard
Brian Moynihan	Bank of America
Ronald O'Hanley	State Street Global Advisors
James Quincey	Coca-Cola
Brian Rogers	T. Rowe Price
Ginni Rometty	IBM
Charlie Scharf	BNY Mellon
Randall Stephenson	AT&T
David Taylor	Procter & Gamble
Jeff Ubben	ValueAct Capital
Dion Weisler	HP
Theresa Whitmarsh	Washington State Investment Board

Canadian Coalition for Good Governance

The Canadian Coalition for Good Governance (CCGG) promotes good governance practices in Canadian public companies, and the improvement of the regulatory environment, to best align the interests of boards and management with those of their shareholders. This promotes the efficiency and effectiveness of Canadian capital markets. CPPIB is a long-standing member of the CCGG and, over the years, has been actively involved in both its board of directors and Public Policy Committee.

ADVOCACY AND POLICY HIGHLIGHTS FOR 2018/2019

- CCGG's efforts over the past decade have contributed to the introduction by the Federal government, in 2019, of Bill C-97, which requires federally incorporated companies to disclose their approach to executive compensation and to hold a non-binding Say on Pay shareholder vote.
- In 2018, CCGG published The Directors' E&S Guidebook, a practical guide to assist public company directors in assessing and overseeing Environmental and Social (E&S) factors and to assist issuers in their disclosure of E&S matters.
- CCGG updated its *Gender Diversity Policy* in 2018 to reflect CCGG and its members' evolving views on best practices for enhancing gender diversity. The updated policy states that companies should adopt a written diversity policy and self-imposed targets for the number of female directors and the number of women in senior management.

ENGAGEMENT HIGHLIGHTS

The CCGG conducted 37 board engagement meetings with Canadian issuers during their review period, representing 17% of the total market capitalization of the S&P/TSX composite index. The scope of engagement dialogue covers governance policies and executive compensation practices, broader discussions of board composition, and the board's approach to providing effective oversight and input in critical areas such as risk management, including environmental and social risks, strategy setting, and board and management succession.

Active involvement in the Principles for Responsible Investment

In 2005, the United Nations Secretary-General invited CPPIB, along with a small group of the world's largest institutional investors, to address the issue of responsible investing from a global and fiduciary perspective. Collaborating with experts from the investment industry, civil society, academia and others, we helped formulate the Principles for Responsible Investment (PRI), which are supported by the United Nations. Today, the PRI has grown to include over 2,350 signatories worldwide, representing more than US$80 trillion in assets under management.

Over the years, CPPIB has contributed to the PRI in several ways:

1. **Active contribution to several PRI-facilitated collaborative engagements.** We have been a member of the Advisory Committee for PRI's collaborative engagement on methane risks in the oil and gas and utilities sectors since February 2017 (see page 40 for further details). We also joined PRI's collaborative engagements on water risks in agricultural supply chains in early 2018 and child labour and human rights concerns related to cobalt mining in early 2019 (see page 45 for further details).
2. **Participation in consultations.** CPPIB has provided responses to various consultations for signatories to help ensure the PRI's objectives are useful and aligned with its signatory base – and the responsible investment market as a whole. The aim of the most recent consultation was to review the PRI's Reporting Framework to assess if it is fit for purpose and remains relevant to evolving responsible investment practices.
3. **Implementation of the six Principles for Responsible Investment.** PRI's asset owner and investment manager signatories are accountable for implementing six Principles (at right) and utilizing its Reporting Framework to describe their activities. In addition to CPPIB's annual Report on Sustainable Investing, we provide information on our sustainable investing activities annually through this framework, which is publicly available on the PRI's website (see www.unpri.org).

PRI's Private Equity Advisory Committee

In January 2018, a member of our Sustainable Investing group joined the PRI's Private Equity Advisory Committee (PEAC) for a three-year term.

PEAC focuses on objectives and projects related to ESG in private equity funds for PRI signatories. These projects primarily focus on aligning reporting practices, leveraging strategic partnerships and promoting integration practices. The Committee fosters dialogue among LPs, GPs and Funds of Funds by having a balanced mix of representatives from each. Recent and current PEAC projects include developing ESG monitoring and reporting guidance, engaging in a strategic partnership on a climate change initiative and providing collective comments on relevant ESG-related position papers, templates and industry guidance.

Being part of the PEAC keeps us abreast of activities and best practices in the private equity space that we can leverage to enhance our internal processes and advocate for industry improvements.

CPPIB IS GUIDED BY THE PRI'S SIX PRINCIPLES FOR RESPONSIBLE INVESTMENT

1 **We incorporate ESG factors into investment analysis and decision-making processes.**

2 **We are active owners and incorporate ESG factors into ownership policies and practices.**

3 **We seek appropriate disclosure on ESG factors by the entities in which we invest.**

4 **We promote acceptance and implementation of the principles within the investment industry.**

5 **We collaborate to enhance our effectiveness in implementing the principles.**

6 **We report on our activities and progress towards implementing the principles.**

Collaboration

Conferences

ANNUAL CONFERENCE

Investor Relations Society

June 2019 | London, U.K.

Annual conference to explore ways in which IR can adapt and overcome political, market and regulatory changes to fully exploit the value of the public markets

> Spoke on a panel on adapting to regulatory changes and addressing the growing interest in sustainability

Photo courtesy of Naomi Gabrielle Photography

SCOTIABANK ESG CONFERENCE

Scotiabank

May 2019 | Toronto, Canada

Conference aimed at fostering ESG dialogue in capital markets and the new opportunities for risk evaluation and business performance

> Spoke on a panel about the theory and practice of ESG and investing for alpha

ADVANCING GENDER EQUITY AND GOVERNANCE IN THE INVESTMENT MANAGEMENT INDUSTRY

C.D. Howe

May 2019 | Toronto, Canada

Roundtable discussion focused on driving meaningful change in gender equity and governance in the investment management industry

> Spoke on a panel exploring the positive impacts of gender equity and diversity in governance, including best practices in promotion within the industry

> Presented CPPIB's proxy voting practices for gender diversity on boards and processes for evaluating overall board effectiveness

GLOBAL CONFERENCE 2019

Milken Institute

April 2019 | Beverly Hills, U.S.

The Milken Institute's 22nd Global Conference brought together leading minds in business, technology, government and academia

> Spoke on the Global Capital Markets panel sharing CPPIB's ambitious targets for investment in emerging markets, our outlooks on Asian markets, how we approach long-term investing in an environment ripe for disruption and CPPIB's proprietary analysis on the robust association of gender diversity and long-term value creation on boards

Photo courtesy of Milken Institute

Collaboration

CLIMATE RISK IMPACTS ON THE ENERGY SYSTEM: EXAMINING THE FINANCIAL, SECURITY AND TECHNOLOGICAL DIMENSIONS

Council on Foreign Relations

March 2019 | New York, U.S.

Workshop addressed the finance-, security- and technology-related risks and opportunities impacting the energy system

> Participated in breakout sessions and panels on the impact on climate change on energy infrastructure and the role of financial markets in evaluating and mitigating risks

FINANCING THE 21ST CENTURY: INVESTMENT, INFRASTRUCTURE AND INNOVATION

GLOBE Capital

February 2019 | Toronto, Canada

Series of events exploring global investment in low-carbon infrastructure and how investors can mobilize capital, enhance returns and assess investment challenges stemming from climate change

> Spoke on a panel about the role of the finance community in the transition towards a low-carbon economy and the risks and implications for investors

CLIMATE-RELATED FINANCIAL RISK AND DISCLOSURES

EY

February 2019 | Toronto, Canada

Event focused on understanding how the market addresses recommendations made by FSB's Task Force on Climate-related Financial Disclosures

> Spoke on a panel on steps companies should consider to incorporate the Task Force's recommendations into their business strategies

9TH ANNUAL RENEWABLE ENERGY INVESTOR FORUM

AltAssets

February 2019 | London, U.K.

Forum for discussion on the future of renewable energy investing with institutional investors, fund managers and project developers and financiers

> Spoke on a panel about Investor Outlook for 2019, renewable energy allocations and ESG implementation

CLIMATE ADAPTATION LEADERS FORUM

Government of Canada

January 2019 | Ottawa, Canada

Leadership forum hosted in partnership with the Insurance Bureau of Canada and the Chartered Professional Accountants of Canada focused on how adapting to the physical risks of climate change can make business more competitive in attracting investment

> Participated in roundtable discussing the role of the private sector in growing a climate-resilient economy and catalyzing action and investments in climate adaptation

FINANCIAL DISCLOSURE AND INVESTMENTS ROUNDTABLE

Public Policy Forum

October 2018 | Toronto, Canada

One of five roundtable events held across Canada as part of the consultation process of the Canadian Expert Panel on Sustainable Finance, with discussion topics including: green and transition bonds, fiduciary duty and financial regulation

> Participated in roundtable discussion on climate-related financial disclosures and asset management

Collaboration

PRACTICAL SOLUTIONS TO OVERCOMING BARRIERS FOR ESG INTEGRATION

CFA Society Toronto

October 2018 | Toronto

Session to review the global survey on ESG integration in the portfolio management process

> Spoke on a panel to discuss main drivers and barriers for integrating ESG into investment analysis based on Canadian survey responses

AIMA CANADIAN INVESTOR FORUM

AIMA

October 2018 | Toronto, Canada

A forum for Canadian institutional investors on investing in an age of disruption, including the impact of integrating ESG factors on returns

> Spoke on a Responsible Investing panel about the importance of good ESG data, due diligence and monitoring of managers, as well as return for ESG performance and climate change strategies

CAPITALIZING ON SUSTAINABLE FINANCE REPORT LAUNCH

Toronto Finance International

October 2018 | Toronto, Canada

Event explored key findings of TFI's report Capitalizing on Sustainable Finance, including ways for Toronto's finance sector to develop talent, expand expertise and leverage economic opportunity in sustainable finance

> Spoke on an executive panel discussion about ways for the Toronto finance sector to capitalize on the sustainable finance opportunity

CLIMATE AND ESG ASSET OWNER SUMMIT

CFA Society New York

September 2018 | New York, U.S.

First annual summit during Climate Week on the status of sustainable investing among asset owners, and ESG trends and developments across the global and regional levels

> Spoke on a panel on sustainable investing asset owner perspectives in the Americas and discussed report findings for ESG trends in the Americas

SUSTAINABLE BUSINESS SUMMIT

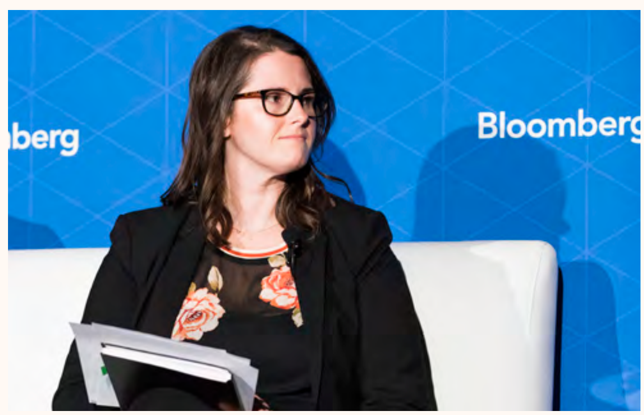
Bloomberg

September 2018 |Toronto, Canada

Third annual Summit brought together executives and thought leaders to discuss how companies use sustainability as a driver of business value

> Spoke on a panel about implementing the TCFD's key recommendations

Photo courtesy of Bloomberg



PRIORITIES FOR THE COMING YEAR

1. Climate Change

The Sustainable Investing team will continue to play a leadership role in developing our firm-wide view of climate change and tools to better identify and assess specific risks posed by climate change to the Fund. Over the past year, the team played a key role in establishing and accelerating our Climate Change Program, which aims to enhance capital allocation, deepen investment acumen and strengthen our external communications and transparency through six distinct work streams (see page 15). In 2020, the SI team will incorporate learnings from the securities selection framework (which is a focus on one of the work streams) to assess climate change risks and their impact on the risk /reward profiles of certain investments.

2. Innovation

In 2020, the Sustainable Investing team will continue to improve on our ESG database and materiality matrix to further demonstrate, through research and back-testing, the scalable alpha opportunity and enterprise-wide knowledge sharing opportunities. In addition, the team will commence the beta-test of an investment portfolio.

3. Thought Leadership

The Sustainable Investing team will expand its thought leadership efforts by producing research papers on material ESG topics, encouraging the knowledge sharing through the Sustainability Virtual team and continuing to speak at high profile external events.

4. Engagement

The Sustainable Investing team will continue to collaborate with deal teams to proactively identify and actively engage with portfolio companies where specific ESG perspectives and expertise are expected to enhance the value creation/protection elements of these investments.

5. Culture

The Sustainable Investing team will continue to actively participate in firm-wide initiatives and events that support an inclusive environment, which is mindful of diversity and allows everyone to feel welcome to express themselves.

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