2019 ANNUAL REPORT

INVESTING FOR GENERATIONS

CPP INVESTMENT BOARD

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WHO WE ARE

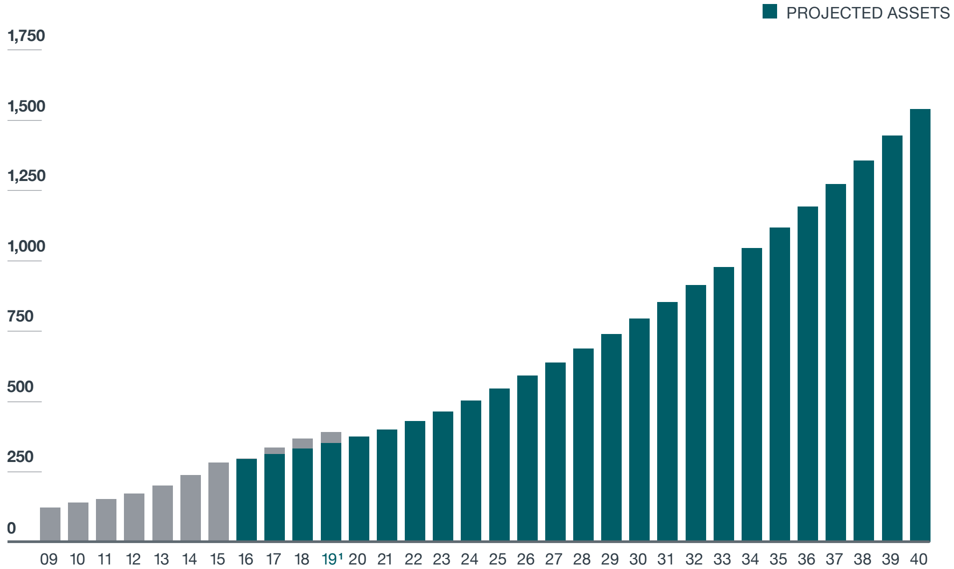
We are CPPIB. Investing for generations.

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

We compete around the world to secure and manage public and private assets. Our teams bring deep expertise and local knowledge. We take a disciplined, long-term approach to managing the CPP Fund.

CPPIB ensures the Fund is diversified by asset class and geography so that it is more resilient, and to safeguard the best interests of current and future beneficiaries against other factors affecting the funding of the CPP.

Sustainability of the CPP AS AT DECEMBER 31 ($ BILLIONS)



75+
YEARS OF CPP SUSTAINABILITY

20+ MILLION
CONTRIBUTORS AND BENEFICIARIES

The most recent triennial report by the Chief Actuary of Canada indicated that the CPP is sustainable over a 75-year projection period.

Projections of the CPP Fund, being the combined assets of the base and additional CPP accounts, are based on the nominal projections from the 29th Actuarial Report supplementing the 27th and 28th Actuarial Reports on the Canada Pension Plan as at December 31, 2015.

1 Represents actual total Fund assets as at March 31, 2019.

20 YEARS OF CPPIB

YESTERDAY

CPPIB began investing 20 years ago.

For Canada, it was a critical time. Canadian governments took action to address demographic changes and an impending pension shortfall. They also increased CPP contribution rates.

These bold reforms were a foundation to help ensure the CPP was placed back on sound financial footing for long-term sustainability and to support generations to come. In 1999, CPPIB received its first transfer of funds to invest.

We steadily evolved from there. From local to global. From passive to active investment management. All to build value and grow the Fund for contributors and beneficiaries.

In the past 10 years:

$239 BILLION
NET INCOME AFTER ALL CPPIB COSTS

11.1%
RATE OF RETURN (NET NOMINAL)

TODAY

Sustainable. Scalable. Diversified.
This is CPPIB at its 20-year milestone.

Taken together, our clarity of mission, professional governance, scale, certainty of assets and investment strategy set us apart from other funds.

Our long-term performance helps provide a foundation on which Canadians can build financial security in retirement.

20 Years of CPPIB

1999
Received first transfer of funds from CPP to begin investing in publicly traded stocks

2001
CPPIB's first public meetings held in nine Canadian cities

First private equity fund investments

2003
First direct real estate transaction: Five Canadian shopping centres

In-house management of our passive public equity portfolio begins

2004
Legislated restrictions on investments in foreign holdings lifted

2006
CPP Fund surpasses $100 billion in assets

CPPIB made the decision to adopt an active management strategy

2008
Opened our first international offices in Hong Kong and London

$392 BILLION

CPP FUND VALUE AT MARCH 31, 2019

$32 BILLION

FISCAL 2019 NET INCOME AFTER ALL CPPIB COSTS

8.9%

FISCAL 2019 RATE OF RETURN (NET NOMINAL)

TOMORROW

We will continue to take ambitious steps forward.

On the path to 2025 we have set out a plan to position CPPIB for growth.

> We will build an increasingly diverse and global team and champion an inclusive culture

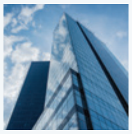
> Up to one-third of the Fund is set to be invested in emerging markets

> Technology and data will help us improve efficiency and investment decision-making

2009
Participated in three of the five largest private investment transactions in the world

2011
More than half the portfolio invested outside of Canada

2014
Increased our global footprint by opening offices in New York City and São Paulo, Brazil



2015
Opened offices in Mumbai, India and Luxembourg

2016
Marked 10 years of active management with the CPP Fund totalling almost $280 billion

2017
Opened our office in Sydney, Australia

2018
Issued our inaugural Green Bond, the first such market offering from a pension fund

2019
Began managing additional CPP contribution amounts

CHAIRPERSON'S REPORT

DEAR FELLOW CONTRIBUTORS AND BENEFICIARIES OF THE CANADA PENSION PLAN,

As Chairperson of CPPIB, it is my honour to report to you on the activities of the Canada Pension Plan Investment Board in this, our 20th year since receiving the first funds to invest on behalf of the Canada Pension Plan. Before I deliver the report on this year's activities, I will take a moment to reflect on the 20 years since CPPIB's inception.

CPPIB was formed by an Act of Parliament in 1997, with a singular mandate "to maximize returns without undue risk of loss, taking into account factors that may affect the funding of the Canada Pension Plan." Just over a year later, in March 1999, CPPIB received an initial transfer of about $12 million.

Over the ensuing 20 years, numerous developments took place, including our first private-market investment in 2001, our first commercial real estate investment in 2003, and our strategic decision in 2006 to move to an active management strategy.

Our enabling legislation, the *CPPIB Act*, provided three far-sighted, critical ingredients for the organization's successes to date: gold-standard governance, arm's-length operation from government and unambiguous investment objectives. The Board, Management and our stewards all agree that these will only become more important in the years ahead.

And, while this milestone 20th anniversary naturally has us looking back at what has brought us to this chapter in the life of the organization, CPPIB is a forward-looking organization by nature. Making decisions today with a view to the best interests of multiple generations is key to our mindset, and this draws our focus continually toward long-term performance.

In January 2019, CPPIB received its first transfer of funds from the additional CPP. The Board's oversight duties in preparation for this transfer included ensuring that the Board, Management and the organization as a whole are well-equipped to deal with the challenges of managing two accounts with different risk profiles; and to ensuring there would be no potential negative impact to the base CPP or additional CPP. To accomplish this, the Board worked both on its own and with Management to assess how CPPIB could best take on this new stream of funds, always considering how we can most effectively serve contributors and beneficiaries.

Details of how CPPIB is managing the additional CPP and the base CPP are found on page 20 of this year's annual report.

Since inception, CPPIB has repeatedly demonstrated that it can accomplish what it sets out to do. Our results this past fiscal year, where the total CPP Fund stood at $392 billion, are a prime example of the work the organization does to contribute to the sustainability of the CPP Fund.

DR. HEATHER MUNROE-BLUM
Chairperson

THROUGHOUT ITS 20-YEAR HISTORY, CPPIB HAS REPEATEDLY DEMONSTRATED THAT IT CAN ACCOMPLISH WHAT IT SETS OUT TO DO.

Stewardship of CPPIB's long-term investment strategy

In my report on CPPIB's activities last year, I wrote about the work Management had initiated with respect to developing the strategic direction for CPPIB in 2025. This year, Management received Board approval for the CPPIB 2025 strategy, which focuses on four key elements:

- Adopting a global investment approach;
- Placing a focus on using technology and data to empower all employees and drive better investment decisions;
- Building an operationally excellent core services team; and
- Furthering our talent and an optimal CPPIB culture.

It has been a big 12 months since my last report. I commend Management on setting a clear and ambitious strategy that positions CPPIB to compete across global capital markets, and to leverage its comparative advantages to benefit the CPP Fund.

In the spirit of proactively equipping ourselves to manage evolving risks, the Board continuously assesses CPPIB's risk oversight as well as the appropriate evolution of our risk management framework. In fiscal 2018, we appointed a Chief Financial and Risk Officer and established an ad hoc risk committee of the Board of Directors. That committee oversaw a comprehensive review of CPPIB's risk management practices. In February 2019, we formally constituted a standing risk committee of the Board to position our governance and the organization for the next phase of growth. (See page 103 for a description of Board membership and roles.) I look forward to reporting to you on the work of this committee in next year's report.

Optimizing CPPIB's culture is a key emphasis of the 2025 strategy, and part of the Board's commitment to best-in-class governance is expressed through ensuring CPPIB's culture, conduct and values represent a high standard and are enduring and owned across the organization. The Board struck an ad hoc conduct and culture committee in early 2018 with a mandate to review CPPIB's organizational culture and to consider opportunities to enhance oversight of our culture consistent with our goal to meet rigorous standards of business conduct.

The committee focused on a review and affirmation of CPPIB's core values, which underpin our culture and are articulated in our guiding principles and considered our Code of Conduct and related polices. A refreshed CPPIB Code of Conduct was approved by the Board and published on April 1, 2019 to ensure that our values of respect, integrity, partnership, inclusion and high performance are manifest and transparently embedded in our Code and across the organization.

The ad hoc committee on conduct and culture concluded its work in December 2018, with the Governance Committee of the Board taking on the supervision of Management's ongoing activities under the refreshed Code.

As an organization nearly 85% invested outside of Canada, we also pay close attention to the geopolitical environment. In fiscal 2019, this theme loomed especially large, with the growth of protectionism, trade uncertainty and growing trade tensions – particularly between the United States and China. Our Board oversight role requires us to understand the potential impact of geopolitical risks to CPPIB and to investigate Management's approach to anticipating and mitigating related risk impacts. The Board participated in numerous education sessions with Management and external experts to engage deeply with the potential risks related to these developments.

We also continue to be very much engaged in the oversight of CPPIB's efforts to understand and manage climate-related risks.

This past fiscal year, the Board provided guidance to Management on ways to enhance active assessment of Environmental, Social and Governance (ESG) and reputation-based considerations of CPPIB's portfolio, independent of the level of any one investment. Focus was placed on expanding the scope of assessments on potential investments, such that the Total Fund benefits from comprehensive risk-adjusted return calculations, including consideration of reputation and ESG factors.

Engagement with CPPIB's business activities

The Board's oversight of CPPIB's investment strategy requires us to have a deep understanding of the markets in which we operate. As we've done since 2014, the Board holds a meeting in one of our regional markets every other year, allowing us to learn more about the geopolitical context, immersing ourselves in the local operation, and meeting with our employees, investment partners and others of influence and interest in that region.

In fiscal 2019, the Board held a meeting in Latin America, where we met with employees, investment partners, peers and government contacts in São Paulo, Brazil and Santiago, Chile. Given CPPIB's focus on emerging markets as an element of its 2025 strategy, gaining deeper knowledge of Brazil, as the financial capital of Latin America, is critical. Through these face-to-face meetings with stakeholders, the Board gathered valuable insights into investment opportunities, as well as the challenges and geopolitical risks that global investment organizations like ours will face.

While it's important for the Board to hear from our global and domestic stakeholders, we and Management are always aware that the work we do serves the retirement benefit of 20 million CPP contributors and beneficiaries. In carrying out this critical, singular public purpose, public accountability is vital. CPPIB demonstrates this accountability through a multitude of activities, including robust disclosure of our investment activities, the tabling of this annual report in Parliament by the federal Finance Minister, public presentations at home and abroad, and during this past year through our Canadian public awareness initiative. In addition, every second year, we hold public meetings in every province that participates in the CPP. These meetings offer Canadians and stakeholder groups across the country the opportunity to meet with us, ask questions and learn more about CPPIB.

CHAIRPERSON'S REPORT

I co-hosted one of these public meetings in Halifax last year, where it struck me again how integral the success of this organization is to the Canadian fabric. Attendees ranging from post-secondary students to current beneficiaries asked us thoughtful and important questions on topics ranging from climate change, to costs, to the sustainability of the CPP. It is a privilege to hear directly from you and I thank each of the CPP contributors and beneficiaries who took the time to come out and speak with us. Our next public meetings will be held in 2020.

The Board's oversight activities also include an annual review of CPPIB's operating budget. In fiscal 2019, the operating expense ratio remained relatively steady over a five-year period at 32.8 basis points, as we added employees to manage the growing and increasingly diversified Fund, and invested in initiatives such as enhanced technology and data systems.

The Board also approves the appointments to CPPIB's Senior Management Team (SMT), and this past fiscal year we welcomed one individual in a new role, and four as successors. With these appointments, the SMT now has a strong combination of fresh perspectives and deep organizational knowledge, which is a substantial asset for an organization like ours that plans for 2025 and beyond. On behalf of my fellow Directors, I take this opportunity to welcome the new SMT members and to thank all of the SMT, including those who have departed, for their many significant contributions.

Continued renewal of the Board of Directors

This year, we completed the proactive work that began in 2015 to contribute to an effectively staggered renewal of the Board. I thank all of our Directors, past and present, who contributed to the development of this Board renewal process, targeted to deliver a dedicated, skilled and collegial Board, ongoing.

This fiscal year, the federal Minister of Finance announced the appointments of Sylvia Chrominska and Chuck Magro to the Board, reappointed Tahira Hassan, and myself as Chair. Sylvia and Chuck replace Ian Bourne and Bob Brooks, who both graciously extended their tenure to ensure a measured, smooth and orderly transition. Our first international Director, Jackson Tai, completed his term and his replacement will be announced in due course.

It is with both sadness and appreciation that I recognize Doug Mahaffy, who passed away in January, just following his retirement from the Board. Doug also served with dedication and great distinction during his nine years on the Board. The appointment of William "Mark" Evans, as Doug's replacement, was announced after our fiscal year end.

On behalf of my fellow Directors, I offer a warm welcome to Sylvia, Chuck and Mark, and extend profound gratitude to each of Ian, Bob and Jack for their dedication and superb record of outstanding contributions. Each provided sound guidance and wise, thoughtful governance oversight during a period of substantial change for CPPIB.

Complete biographies of our Board of Directors can be found on page 112 of this report.

In closing

I've had the consistent privilege of working with a superbly qualified and committed group of Directors and a stellar Management team. I thank our Directors for their thoughtful, sustained engagement in delivering a globally recognized standard of governance oversight of CPPIB. I also celebrate our CPPIB employees for their exemplary work, and ongoing commitment to providing a stable and secure base from which Canadians can plan their retirements led by our dedicated CEO, Mark Machin, and his senior team. Our employees working around the world have consistently placed equal emphasis on the results they achieve, and on how those results are delivered for Canadians.

I close expressing my appreciation to our Board, executive and all employees – and all those who have come before us – for the outstanding progress and contribution CPPIB has made over the past 20 years. As we enter the third decade of CPPIB, we all look forward to continuing to serve our common purpose: the retirement benefits of the contributors and beneficiaries of the CPP.

Sincerely,

Heather Munroe-Blum OC, OQ, PhD, FRSC

Chairperson

TO OUR FELLOW CANADA PENSION PLAN CONTRIBUTORS AND BENEFICIARIES,

MARK MACHIN
President & Chief Executive Officer

Canada Pension Plan Investment Board (CPPIB) has been through a remarkable evolution since it first began to invest your contributions 20 years ago.

We have steadily expanded internationally, broadened our investment and risk management capabilities and worked hard towards being the best fund of our type in the world – all to serve the 20 million people who have entrusted us with the foundation of their retirement savings.

At this 20-year milestone moment, CPPIB is taking stock of the past, but focused firmly on our future and the opportunities and challenges we see coming over the next 20 years. We understand the importance of data and technology, the shift in economic power toward emerging markets, and how we can use our comparative advantages and the reputation we've built to access the best investment opportunities and to attract the best people.

It is critical to me, as CEO, that Canadians have conviction that we will safeguard and grow the money that they, and their employers, contribute each month. This was top of mind for CPPIB in January, as we began to receive and invest additional CPP contribution amounts.

Much like 20 years ago, the first additional CPP transfer of funds was small – less than $15 million. Over time, that will increase to support the enhanced benefits that contributors will receive from CPP in their retirement years. The maximum benefit level will begin to climb from one-quarter to up to one-third of their average work earnings covered by the CPP. For CPPIB, this means more capital to invest over the coming decades, since additional CPP assets are expected to match base CPP assets by 2055.

Today, both the base CPP and additional CPP have the full advantage of CPPIB's global network, expertise, investment systems and risk management. (You can learn more about our strategy for investing these funds on page 20.)

While we look forward to this new phase of growth, it is also important to stay true to the mandate that has been our compass since the beginning: to achieve a maximum rate of return, without undue risk of loss, having regard to the factors that may affect the funding of the CPP. Each and every one of us at CPPIB is seized with the responsibility to invest on behalf of our contributors and beneficiaries, recognizing – as we did in 1999 – that a CPP pension is the source of basic retirement income for many people in this country. And, taken with Old Age Security, it is often the only money that provides precious peace of mind when it comes to the overwhelming challenges posed by life expectancy and market risks.

Another constant is our dedication to earn the trust of Canadians and ensure they are informed about CPPIB and our approach to managing their money. The compulsory nature of our asset management role – that Canadians don't get to choose CPPIB – imposes an even greater responsibility to demonstrate that they can count on us. We will continue to inform Canadians more directly by expanding our digital communication channels and seeking new ways to supply them with facts about the Fund that are efficient and low cost.

About 15 years from now, we project that CPPIB will cross $1 trillion in net assets, and we have conviction that the highly scalable investment programs we are building today can comfortably handle the increased size of the CPP Fund to serve Canadians now and in the future. Moreover, greater heft will strengthen CPPIB's competitiveness against investment behemoths that are already measured in trillions of dollars today.

PRESIDENT'S MESSAGE

Over the past 20 years, CPPIB has earned its standing as an influential and resourceful investor with a wide range of global capabilities that can keep pace with its asset growth. In fact, this year *The Economist* called us "an investment force to be reckoned with" and a model for many other countries. We view this accolade with humility, knowing that the world is changing rapidly and we can never be complacent. Our next 20 years will require us to expand our skills and embrace new technologies. We will also need an innovative spirit that will continue pushing us towards fresh ideas.

As I think about CPPIB's next phase of growth, it's clear that the principles that have defined our culture since day one – partnership, integrity, high performance and a strong sense of purpose – will guide us forward.

Investment climate

The past year confirmed our view that CPPIB will need bold and transformative thinking to anticipate the trends that will drive growth in the coming years, as well as navigate the vagaries of unexpected and unpredictable markets.

To begin with, geopolitical risks are more acute, with unpredictable potential outcomes witnessed around the world. Equity markets took a tumble as the last pages of the calendar were turned in 2018, but we then saw an early 2019 rebound in financial conditions, with generally supportive central banks – at least at the time of my writing, that is.

Aside from a confluence of temporary shocks, there are country-specific questions hanging over the global economy. In the United States, issues such as a government shutdown and a fading impulse from tax reform slowed the economy for the moment. Meanwhile, China's policymakers looked to targeted fiscal and monetary stimulus as they responded to trade pressures and witnessed a slowing in industrial activity that contributed to reduced GDP forecasts. What's more, Europe also felt the impact of an economic slowdown, with a decrease in exports that is reverberating through its economies and giving way to constrained fiscal and monetary policy.

These are tensions that we can't control. What we can do is continue to diversify the Fund and remain ready to take advantage of market dislocations and the opportunities that these uncertainties create. We must keep our eyes on our extended horizon and withstand the heavy pressures of dealing with current events.

Against a difficult backdrop, our investment departments worked creatively and collaboratively to find, assess and execute on new investment opportunities. This includes the partnership between Energy & Resources and Thematic Investing to explore the long-horizon potential to invest in the still-nascent electric car charging space, as well as the Infrastructure team working closely with both Power & Renewables as well as Relationship Investments to bring to bear new opportunities in hydroelectric power and water and wastewater management, respectively.

Extending our network of partners and deepening our global connections has also become increasingly important to our strategy as more and more large sources of capital compete for the best assets. CPPIB is grateful to its partners for another year of collaboration and idea sharing that helped build businesses and generate growth in the past year.

Another factor that is reshaping the global investment environment is climate change. As a long-term investor, understanding environmental impacts on our investments is a key consideration and we continue to chart both the risks and opportunities stemming from climate change. This year, we launched our inaugural Green Bond, becoming the first pension fund to do so. We followed that with a euro-denominated offering. These issuances provide additional funding for CPPIB as it increases its holdings in renewables and energy-efficient buildings as world demand gradually transitions in favour of such investible assets.

We expect that the next several years will look very different from today as demographic trends, new digitally driven business models and evolving consumer demand change the investment landscape. Our ability to navigate the increasingly complex and unpredictable future requires agility in our thinking and in our investment approach. To win we must continue to build our investing programs, strengthen our commitment to pushing deep into emerging markets and mine insights from our data systems.

Our performance

CPPIB's efforts to create a resilient Fund and build value is on track, as we report a 10-year rate of return of 11.1% this year, net of all costs.

To translate some of that success into dollar terms (because that's what pays pensions, after all), CPPIB's investment operations have contributed $152 billion in net investment income, after all costs, over the last five years alone. While we launched our active management strategy more than a decade ago, it takes time for programs to solidify and their assets to mature, so we are pleased to see this momentum.

Of course, as our 20-year journey shows, incremental gains along the way can add up too. In fiscal 2019, the Fund grew to $392.0 billion, comprising $32.0 billion in net income and received $3.9 billion in net contributions. We achieved a solid net return of 8.9% this year.

While these are strong annual results, our focus is on making a contribution to the long-term sustainability of the Fund. And we know that at our chosen risk level, which we believe maximizes returns in the long term while also not taking undue risk as detailed on page 30, we expect to incur annual losses of 17% or more once in any 20-year period. We also measure our success against our Reference Portfolios, a representation of the passive public investment alternative each account might otherwise hold. When public markets soar, we expect our Reference Portfolios to perform exceptionally well, often better than our total Fund.

However, during a downturn, our diversified Fund demonstrates its resilience, as it did this year where we had some bearish turns and bumps, particularly in December 2018 when a broad equity market sell-off saw the S&P 500 drop by roughly 14% during the fourth quarter of the calendar year.

Our dollar value-added (DVA) compared to our Reference Portfolios for the fiscal year was $6.4 billion. While it's important to report on our annual progress, we know that DVA is a volatile measure, and this is why we look at our success over the long term, and as of the end of the fiscal year, we have delivered $29.2 billion in compounded DVA since inception of our active management strategy.

As the Fund grows, and our investment decisions become increasingly global, we're also developing new risk management capabilities. This past year, the Risk group worked with senior management, and in partnership with the Board of Directors, to develop a new framework that supports and enables the risk-taking required to fulfil our mandate and to pursue returns, without taking excessive risk. Our new Integrated Risk Framework leverages our strong existing risk management practices while ensuring we have the necessary agility for seizing investment opportunities.

Our 2025 strategy

With two decades under our belt, CPPIB has hit its stride and truly knows its potential as a global active manager of capital. Last year, I wrote about the Board-approved strategic direction for CPPIB in 2025. Over this past year, we've continued to refine this 2025 strategy, and chart the course for the coming years.

Pillars of our 2025 plan include investing up to one-third of the Fund in emerging markets such as China, India and Latin America, increasing our opportunity set and pursuing the most attractive risk-adjusted returns. We have reoriented our investment departments to deliver on this growth plan, to manage a larger Fund and to achieve our desired geographic and asset diversification.

We will continue to develop an enterprise-wide technology and data capability and to improve our analytics and automation processes, while also better capitalizing on our collective knowledge. This year we were pleased to welcome Kelly Shen as Senior Managing Director & Chief Technology and Data Officer, a newly created role on the senior leadership team, to lead our advancements in this area.

Our corporate functions, including the human resources, tax, legal and other professionals are critical to ensuring it is possible for our operations to perform seamlessly.

We do all this while we further strengthen our focus on how we govern the organization, how we operate each day, and how we find, hire and retain talented professionals. Through it all, our employees, our stewards and our stakeholders can expect us to be transparent in our financial and investment disclosure. As mentioned earlier, public trust in our work is the lifeblood of CPPIB's mandate, and we must work hard to earn it every day and connect directly with contributors and beneficiaries.

CPPIB aspires to be a world-class, global investment organization in terms of strong governance, talent and delivering superior financial returns through our strong performance over the long term.

Looking ahead

At CPPIB's 20-year milestone moment, we reflect on what has helped us overcome many hurdles as well as what has fuelled this organization's growth.

Through this time, the one constant has been the quality of our people, who are all driven to succeed by the knowledge that they are helping to lay the groundwork for Canadians' retirement security. No matter which CPPIB office I visit internationally, I see that our employees are motivated to deliver their best for you each day.

I am enormously grateful for the opportunity to lead CPPIB as we meet these challenges and opportunities, and I am proud to lead an organization that has come so far since its founding. Thank you to our Board of Directors and all my colleagues at CPPIB for their hard work this past year, and for their relentless commitment and support of our organization and our mandate in the next phase of our journey. And thanks to you for trusting us with investing today for your tomorrow.

Sincerely,

Mark Machin
President & CEO

OPERATIONAL HIGHLIGHTS

Preparing to accept, invest and report on the additional Canada Pension Plan

- Completed the final stages of preparation for the arrival of additional CPP funds in January 2019. Changes to all policies, standards and procedures were completed and approved.
- Currently operating under the two-account, two-pool investment structure.

Improving our understanding of opportunities and risks related to climate change

- Accelerated our work on this issue with the creation of the Climate Change Program to oversee, guide and support our organizational efforts.
- Delivered a framework that allows investment teams to efficiently and effectively identify, assess and price key climate change risks and opportunities that are likely to have an economic impact on their investments.
- Produced and published the first ever carbon footprint of the public equities portfolio, with specific metrics including total carbon emissions and carbon intensity.

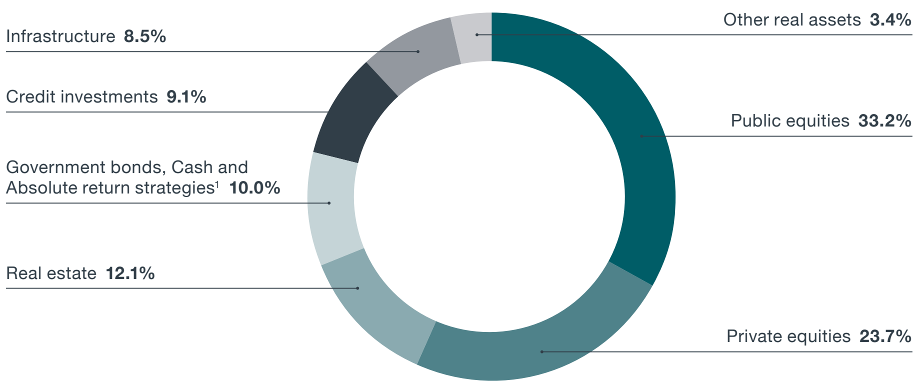
Driving better investment decisions with technology and data

- Created a focused Technology & Data department headed by a new Senior Managing Director & Chief Technology and Data Officer.
- Launched a Knowledge Management team to improve knowledge sharing and collaboration across the organization.

Scaling our investment activities and growing our emerging market investments

- Capital Markets and Factor Investing scaled to $66.5 billion in assets under management, including establishing new investment programs.
- Active Equities grew to $63.2 billion of assets under management, including increasing the Fund's emerging markets exposure by adding new investments, primarily in Asia and Latin America.
- Credit Investments was launched and assets increased to $36.6 billion through scaling our investment activities along the entire credit spectrum.
- Private Equity assets increased to $87.7 billion at the end of fiscal 2019 as we continue to actively manage relationships to generate deals.
- The Real Assets portfolio increased to $94.1 billion through a continued focus on growth, including in emerging markets.
- Grew our investments in emerging markets from $56.1 billion to $77.9 billion this year, representing 19.9% of our net investments; this includes $50.2 billion in Greater China.

Asset Mix AS AT MARCH 31, 2019



1 Net of external debt issuances

Investing Today for Your Tomorrow

Starting January 2019, CPPIB began to receive and invest additional CPP contribution amounts resulting from the recent enhancements to the CPP. These added amounts will be phased in for contributors over seven years starting in 2019, with full implementation in 2025. Both the base CPP and additional CPP will have the full advantage of CPPIB's global network, expertise, investment strategies and risk governance framework while being invested at their distinct investment risk profiles.

Here's an overview of how the enhancements to CPP will work, and the expected growth of the Fund.

Each scenario is based on $50,000/yr in wage-adjusted constant earnings.

STARTED WORKING IN 1990

Retires in 2030

Up to **$500/yr** in extra retirement benefits

5 years of full additional CPP contributions

STARTED WORKING IN 2010

Retires in 2050

Up to **$2,500/yr** in extra retirement benefits

25 years of full additional CPP contributions

STARTS WORKING IN 2025

Retires in 2065

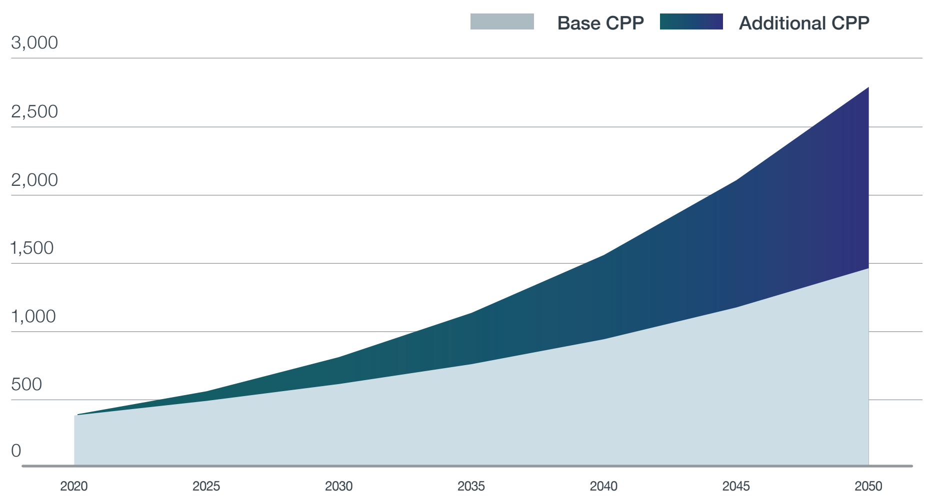
Up to **$4,000/yr** in extra retirement benefits

40 years of full additional CPP contributions

Fully enhanced benefits will be available after approximately 40 years of making additional CPP contributions, while partial benefits will be available sooner based on years of additional CPP contributions. Benefits are presented in wage-adjusted 2016 dollars.

Disclaimer: The information in this infographic is not intended to provide investment or financial advice to any individual or organization and should not be relied upon for that purpose. Source of data for additional CPP benefits: Department of Finance Canada, "Archived – Backgrounder: Canada Pension Plan (CPP) Enhancement", September 2016.

Growth of CPP Fund ($ BILLIONS AS PROJECTED IN THE 29TH ACTUARIAL REPORT)



Employee & Employer CPP Contributions

\+ **Fund Investment Returns**

– CPP Benefits

= **CPP Fund** {Base CPP & Additional CPP}

GLOBAL INVESTMENTS

CPPIB benefits from the CPP Fund's exceptionally long investment horizon, a certainty of assets and the scale of our operations. We have developed a global team of professionals with deep expertise and local knowledge. Located in eight international offices, our teams pursue attractive investment opportunities around the world.

52
COUNTRIES IN WHICH WE HOLD INVESTMENTS

274
GLOBAL INVESTMENT PARTNERS

425
GLOBAL TRANSACTIONS IN FISCAL 2019

Our Comparative Advantages

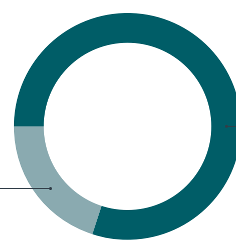
> Long-Term View

> Certainty of Assets

> Size and Scale

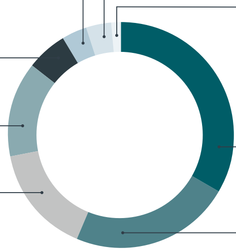
Total Fund Market Classification

AS AT MARCH 31, 2019



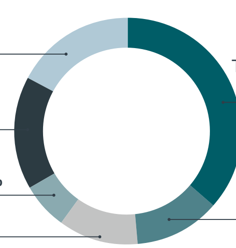
Global Diversification by Region

AS AT MARCH 31, 2019



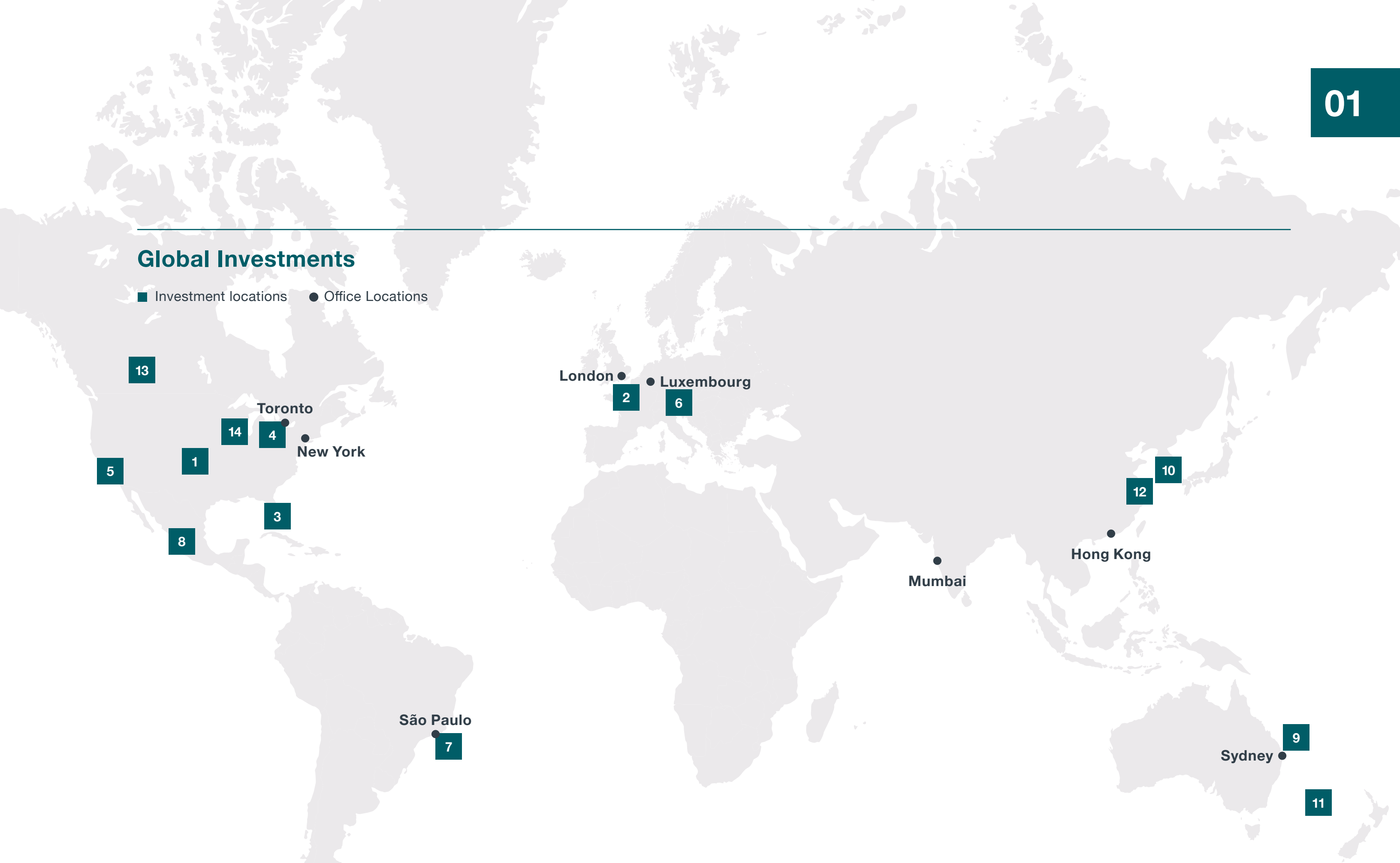
Assets Under Management by Investment Department

AS AT MARCH 31, 2019



1 For Capital Markets and Factor Investing and Active Equities, Assets Under Management (AUM) represent the sum of long investments in each of these programs. AUM differs from Net Investments, which factors in offsetting systematic exposures through short investments.

Global Investments



1 Midstream joint venture
United States
US$1.34 billion
Formed a joint venture with Williams to establish midstream exposure in the U.S., with initial ownership stakes in two of Williams' midstream systems.

2 Grand Paris development
Paris, France
Formed a joint venture with CMNE, La Française's majority shareholder, to develop real estate projects linked to the Grand Paris project, a significant infrastructure initiative in Paris.

3 Ultimate Software
United States
Total value:
US$11 billion
Acquired a leading global provider of cloud-based human capital management solutions, alongside consortium partners Hellman & Friedman, Blackstone and GIC.

4 CPPIB Green Bond Issuance
Canada and Europe
C$1.5 billion/€$1.0 billion
First pension fund to issue green bonds in 10-year fixed-rate notes. Our inaugural Green Bond was a Canadian dollar-denominated bond, followed by a euro-denominated bond.

5 ChargePoint
United States
Total value:
US$240 million
Invested as part of a funding round in preferred shares of ChargePoint, the world's leading electric vehicle charging network.

6 European logistics facilities
Europe
€450 million
Formed a partnership with GLP and Quadreal to develop modern logistics facilities in Germany, France, Italy, Spain, the Netherlands and Belgium.

7 Companhia Energética de São Paulo (CESP)
São Paulo, Brazil
R$1.9 billion
Together with Votorantim Energia, acquired a controlling stake in CESP, a Brazilian hydro-generation company.

8 Pacifico Sur
Mexico
C$314 million (initial)
Signed an agreement alongside Ontario Teachers' Pension Plan to acquire a 49% stake in a 309-kilometre toll road in Mexico from IDEAL.

9 WestConnex
Sydney, Australia
Total value:
A$9.26 billion
Invested in WestConnex, a 33-kilometre toll road project in Sydney, alongside consortium partners Transurban, AustralianSuper and ADIA.

10 Logistics facilities
Korea
Up to US$500 million
Partnered with ESR to invest in modern logistics facilities in Korea.

11 Challenger fund
Australia and New Zealand
A$500 million
Partnered with Challenger Investment Partners to invest in middle-market real estate loans in Australia and New Zealand.

12 Ant Financial
China
US$600 million
Invested in Ant Financial, a company with an integrated technology platform and an ecosystem of partners to bring more secure and transparent financial services to individuals and small businesses.

13 Renewable power assets
Canada, U.S., Germany
C$2.25 billion
Acquired 49% of Enbridge's interests in a portfolio of North American onshore wind and solar assets and two German offshore wind projects, and agreed to form a joint venture to pursue future European offshore wind investment opportunities.

14 Berlin Packaging
United States
US$500 million
Invested US$500 million in the recapitalization of Berlin Packaging L.L.C. alongside Oak Hill Capital Partners. Berlin Packaging is a leading supplier of packaging products and services to companies in multiple industries.

OUR PEOPLE

Our people are our most valuable resources

1

Green Bonds

We issued two Green Bonds this year, which enabled us to invest further in eligible assets such as renewable energy projects, sustainable water and wastewater management systems and green real estate projects. Our Green Bond team collaborated on our inaugural issuance in June 2018, the first such market offering from any pension fund. Investors bought $1.5 billion of the Canadian dollar-denominated 10-year bond. Our euro-denominated Green Bond of €1 billion was issued in January 2019.

Team (l-r): Redon Gallani, Natalie Steshenko, Jeffrey Hodgson, Samantha Hill, James Logush, Sandy McRae, Brian Savage, Mike Conrad

2

Ant Financial

Collaboration among Fundamental Equities Asia, Active Fundamental Equities and Thematic Investing teams led to an investment of US$600 million in Ant Financial, China's leading financial services technology platform. Through this investment, we increased our exposure to the Asia region and will contribute to Ant Financial's efforts to provide more secure, transparent, cost-effective and inclusive financial services to businesses and individual consumers both globally and in China.

Team (l-r): Roman Leifer, Kyu Ho, Jing Xu, Agus Tandiono, Helen Wu, Michael Tao, Mike Rodgers

3

Companhia Energética de São Paulo (CESP)

We extended our partnership with Votorantim Energia through a joint-venture opportunity to acquire the State of São Paulo's controlling stake in Brazilian hydro generation company Companhia Energética de São Paulo (CESP) for R$1.9 billion. Through this Power & Renewables investment, CPPIB increased its existing portfolio of renewable energy in Brazil and contributed to the growth of its valued partnership with Votorantim Energia, a leading player in the Brazilian power sector, after forming a partnership in December 2017.

Team (l-r): Martin Laguerre, Sebastian Berardi, Jose Entrecanales, Bruce Hogg, Ricardo Szlejf, Karen Boutros, Joao Possamai

4

Grand Paris

The Real Estate team in Europe forged a new partnership in France with a leading real estate manager and investor La Française, and its parent company CMNE, to launch a real estate investment and development vehicle: Société Foncière et Immobilière du Grand Paris. Through this partnership, the team is positioned to access opportunities related to regeneration and infrastructure-led investments in the Greater Paris market, as the city's transit upgrade plans reshape the region.

Team (l-r): Rod Carnan, Lillia Benzine, Marcus Peel, Andrea Orlandi, Tim Barlow

We have grown and excelled as a result of the commitment of our people and their devotion to our purpose. Their investment knowledge, international experience and dedication to high performance drives us forward. They enable us to successfully pursue attractive investments across geographies and asset classes.

5

Additional CPP

For more than a year before we began to receive additional Canada Pension Plan contribution amounts, teams across our organization worked to ensure that these incoming amounts would be invested at their distinct investment risk profile while still having the full advantage of CPPIB's global network, expertise, investment strategies, operational capability and risk governance framework. The new two-account structure is now serving all CPP beneficiaries and contributors.

Team (l-r): Stephen McGurk, Tara Perkins, Julie Levesque, Brad Sinclair, Susan Han, Steven James, Wei Wang, Stephanie Lau, Dario Kosarac, Asheeyah Shameer, Marinde Kwok, Logan Willis, Scott Bull

SENIOR MANAGEMENT TEAM

CPPIB's Senior Management Team brings a broad range of experience to lead the organization.

LEFT TO RIGHT

Suyi Kim
Senior Managing Director & Head of Asia Pacific

Edwin Cass
Senior Managing Director & Global Head of Real Assets

Mary Sullivan
Senior Managing Director & Chief Talent Officer

Shane Feeney
Senior Managing Director & Global Head of Private Equity

Geoffrey Rubin
Senior Managing Director & Chief Investment Strategist

Patrice Walch-Watson
Senior Managing Director, General Counsel & Corporate Secretary

Kelly Shen
Senior Managing Director & Chief Technology and Data Officer

Mark Machin
President & Chief Executive Officer

Alain Carrier
Senior Managing Director & Head of International, Head of Europe

John Graham
Senior Managing Director & Global Head of Credit Investments

Michel Leduc
Senior Managing Director & Global Head of Public Affairs and Communications

Neil Beaumont
Senior Managing Director & Chief Financial and Risk Officer

Deborah Orida
Senior Managing Director & Global Head of Active Equities

Poul Winslow
Senior Managing Director & Global Head of Capital Markets and Factor Investing

OUR MISSION AND INVESTMENT STRATEGY

This section provides an overview of how CPPIB manages the Fund.

How we manage the CPP Fund

Our investment objectives

The *Canada Pension Plan Investment Board Act* directs Canada Pension Plan Investment Board (CPPIB) to manage the assets of the CPP Fund in the best interests of contributors and beneficiaries of the Canada Pension Plan (CPP). CPPIB's primary objective is to "invest its assets with a view to achieving a maximum rate of return, without undue risk of loss, having regard to the factors that may affect the funding of the Canada Pension Plan."

Aligned with our independence from any government, the Act sets no expectations or directions on economic development, social objectives or politically based directives. As a result, we are able to invest with an unambiguous focus solely on the interests of CPP contributors and beneficiaries.

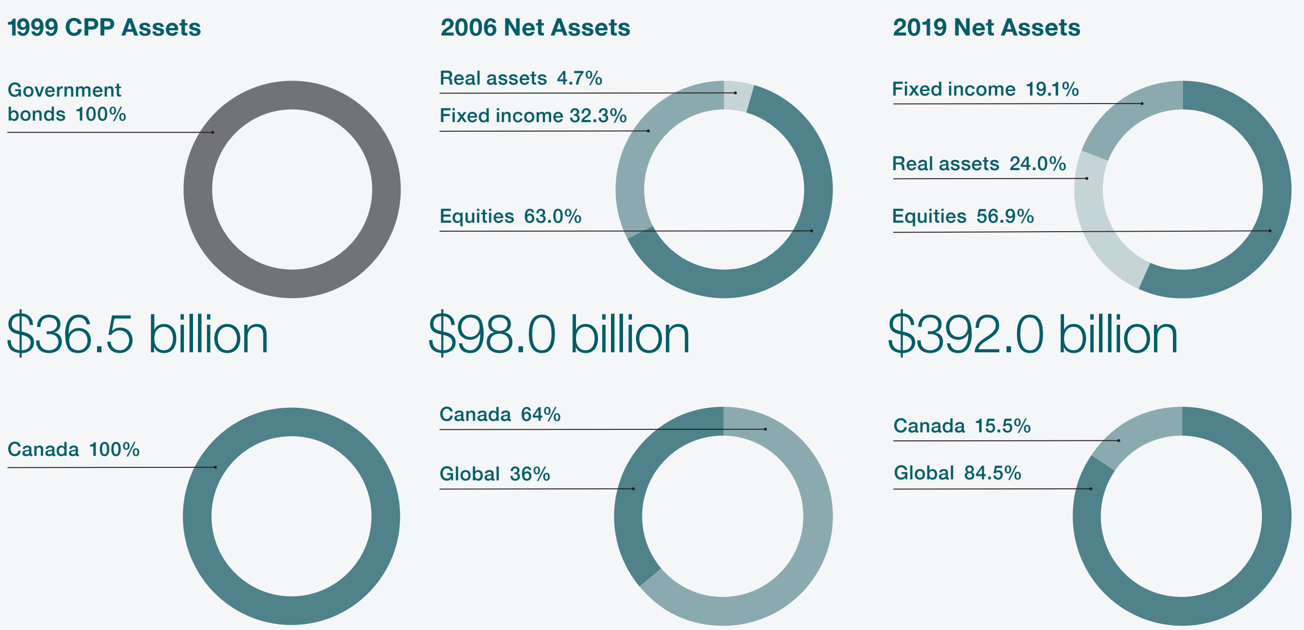
Our purpose

CPPIB's purpose is to help sustain the CPP as a foundation on which Canadians can build financial security in retirement by appropriately investing the assets of the CPP Fund. When the CPP began in 1966, the contribution rate was set low but with the clear expectation that it would rise over the years. By 1997, despite several increases in contribution rates, there was serious concern about the viability of the CPP. In response, the federal and provincial governments worked together to place the CPP on more secure financial footing. They made two major changes. First, they introduced a system to set contribution rates at a long-term, stable level. Second, they directed the CPP Fund to invest broadly in the capital markets to seek higher long-term returns that will help better sustain the plan. They also established CPPIB as an independent Crown corporation to manage investment of the CPP Fund, at appropriate levels of risk, to maximize long-term returns.

Until March 1999, the CPP Fund was invested only in non-marketable Canadian, federal, provincial and territorial bonds (known as CPP Bonds). It is at that time that CPPIB became responsible for investing all CPP contributions not needed for CPP payments and administration expenses and for reinvesting all net income it generates. Together with net transfers from the CPP, which include the CPP Bonds and net cash flows, the Fund has grown to its current value of $392.0 billion. In January 2019, CPPIB also took on responsibility for managing the assets of the additional Canada Pension Plan (additional CPP). See page 20 for more details on additional CPP. The assets held through the additional CPP reached $423 million at March 31, 2019, and will grow rapidly with the anticipated substantial additional net cash inflows.

Historical Comparison of the Portfolio for the CPP

As at March 31



It is critical that CPPIB manages the Fund so as to offset the risks and non-investment factors that the CPP itself faces. These include an aging population in Canada, future levels of employment and immigration, and the real rate of growth in earnings on which CPP contributions are based. To offset exposures exclusively related to future Canadian economic and demographic conditions, our investments are prudently diversified. Combined with the relatively small size of domestic capital markets, this is the key reason why a large proportion of Fund assets, currently 84.5%, is invested outside Canada.

Managing a public fund responsibly and successfully is not only about investment skill – it is also about the organization's culture. CPPIB's strong and unifying culture is founded on our Guiding Principles – Integrity, Partnership and High Performance. As a first order of business, we seek to attract talented individuals who are truly motivated to work for an international, professional organization that serves a meaningful national purpose. All new employees receive in-depth orientation on the role and impact of these three core principles that guide everything we do. All staff members also attend an intensive workshop every year devoted to reviewing the Guiding Principles, actively discussing how they apply through case studies and reinforcing their use in everyday duties.

Our annual employee performance review process includes an assessment of how each employee has demonstrated these principles in their work. We evaluate an employee's performance not only on their results but also on how they have achieved them.

Independence with accountability

All the assets in the CPP Fund are owned by CPPIB and are entirely separate from any government's assets. CPP contributions by plan members and employers are savings invested in the Fund to generate retirement income benefits. Unlike Old Age Security, CPP benefits do not come from general tax revenues. The money required to pay CPP benefits comes from only two sources:

- Contributions from plan members and their employers based on employment earnings up to the maximum amount covered by the CPP, and
- Investment returns earned on the Fund.

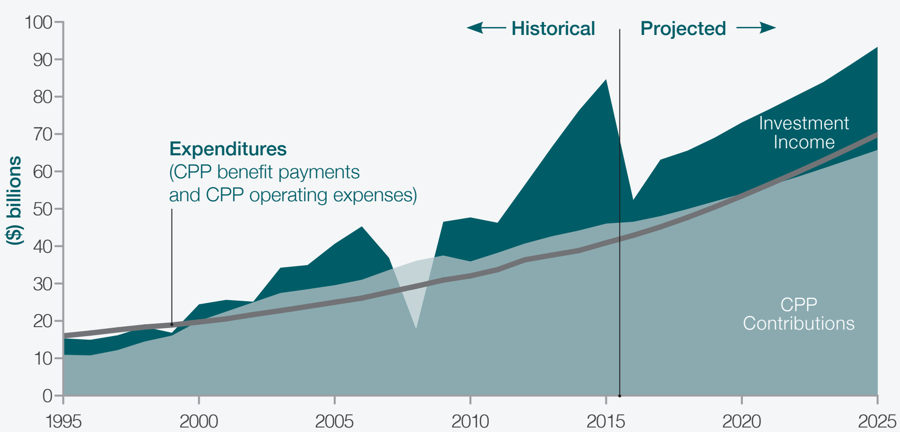
Most importantly, unlike taxes collected into the consolidated revenue fund, CPP contributions may only be applied to serve the CPP.

Canadians expect the CPP to remain free from political influence. Under the 1997 CPP reforms, the federal and provincial finance ministers enshrined CPPIB's independence with carefully written legislation, ensuring that we can, and do, operate at arm's length from any government. To maintain the public's trust through a careful balance between independence and accountability, we operate in a highly transparent way. This includes:

- Explaining through multiple public outreach channels who we are, what we do and how we invest;
- Broadly disclosing our investment activities and major transactions in a timely manner;
- Issuing regular reports about our assets, portfolio holdings and performance results;
- Holding public meetings every two years in each participating province;
- Preparation of an external Special Examination every six years; and
- Actively engaging with news organizations, stakeholders and other interested parties.

CPP Revenues and Expenditures

As at December 31 ($ billions)



From the 27th Actuarial Report:

> The assets grow continuously over the projection period. During the period 2000 to 2020, contributions are more than sufficient to cover expenditures.

> From 2021 onward, a portion of investment income is required to fund CPP expenditures.

> Investment income, which represents 24% of revenues in 2017, will represent 30% in 2030. This clearly illustrates the importance of investment income as a source of future revenues for the CPP.

> Based on Table 10 – Historical Results and Table 11 – Financial Projections for the base CPP.

Similarly, our Board of Directors is accountable to the stewards of the CPP, the federal and provincial finance ministers. Our diverse Board is appointed by the Governor in Council on the recommendation of the federal Minister of Finance, following consultation with the provinces.

CPP contributors and beneficiaries can take comfort in these strong checks and balances to protect their best interests and the independence of the Fund. Amendments to the legislation that governs CPPIB, and certain amendments to the legislation that governs CPP, require agreement by the federal government plus two-thirds of the provinces representing two-thirds of the population. This is a higher requirement than for changes to the Canadian Constitution.

Finally, the overall framework has been upheld by various organizations as a leading example for other countries to emulate in the management of public funds.

Current and future status of the CPP Fund

Every three years, the Office of the Chief Actuary of Canada conducts an independent review of the sustainability of the CPP over the next 75 years. In addition to future return expectations, this review takes many factors into account, including:

- The growing base of contributors and employment earnings;
- The rising ratio of those receiving pension benefits relative to contributors; and
- Expected increases in life expectancy.

The most recent actuarial review of the base Canada Pension Plan (base CPP) – that is, as it existed before January 2019 – was conducted as of December 31, 2015. The results were released in the 27th Actuarial Report in September 2016. The Report concluded that the CPP is sustainable for the next 75 years. It showed that investment income over the three years since the previous review was 248% higher than expected, contributing $67.5 billion to the $70 billion by which Fund assets were higher than anticipated by the end of the period. While results as favourable as these are not expected to be repeated, the additional investment income helped offset the additional costs associated with increased benefits. It also helped offset non-investment factors, such as a greater increase in life expectancy than anticipated in the previous review.

A key assumption in the 27th Actuarial Report is that, over the 75 years from 2015, the base CPP investments will earn an average annual rate of return of 3.9% above the rate of Canadian consumer price inflation, after all investment costs and CPPIB operating expenses. In the 28th Actuarial Report, covering only additional CPP, the corresponding assumption is that the additional CPP investments will earn an average annual net real rate of return of 3.55%. The next actuarial review will cover the status of both base and additional CPP as at December 31, 2018, and will be performed in calendar 2019.

Additional Canada Pension Plan (additional CPP)

In December 2016, following federal and provincial agreement, Royal Assent was given to Bill C-26, *An Act to Amend the Canada Pension Plan*, the *Canada Pension Plan Investment Board Act* and the *Income Tax Act*. This Act increased the amount of retirement pensions and other benefits that will be paid on contributions made after 2018. It also increased both the rate of contributions required on earnings covered by the CPP and the upper limit on covered earnings. The contribution and earnings limit increases began in January 2019 and will be phased in over seven years.

With this Amendment, the Canada Pension Plan now defines the enhanced CPP in two parts. The "base" Canada Pension Plan (base CPP), refers to the benefits and contributions at the rates used before January 2019. The "additional" CPP refers to the additional benefits and the additional contributions that started in January 2019. The contributions, benefits and resulting assets for the additional CPP must be accounted for separately from those for the base CPP.

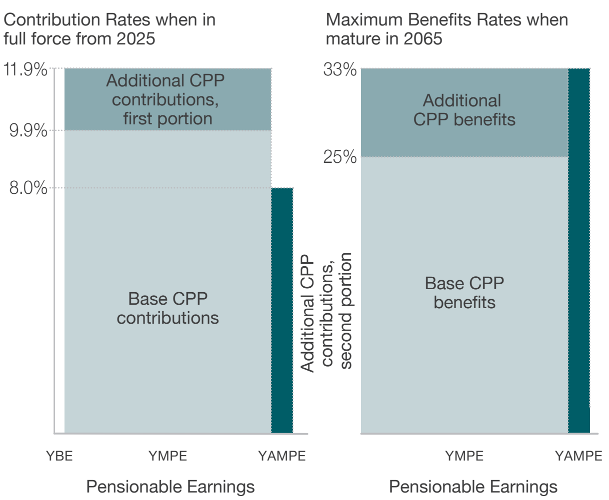
The additional contributions are set at levels such that, together with investment income, they are expected to be sufficient to fully pay the additional benefits (see the call-out box on page 22). Contributors will gradually earn additional benefits as they make additional contributions. Full additional benefits will be paid out only after 40 years of contributions. The diagrams illustrate the increases in:

> Contribution rates after 2025, following the phase-in period;

> Covered earnings from Year's Maximum Pensionable Earnings (YMPE) to Year's Additional Maximum Pensionable Earnings (YAMPE) in 2025; and

> Maximum benefits rising from 25% to 33% of pensionable earnings following 40 years of contributions.

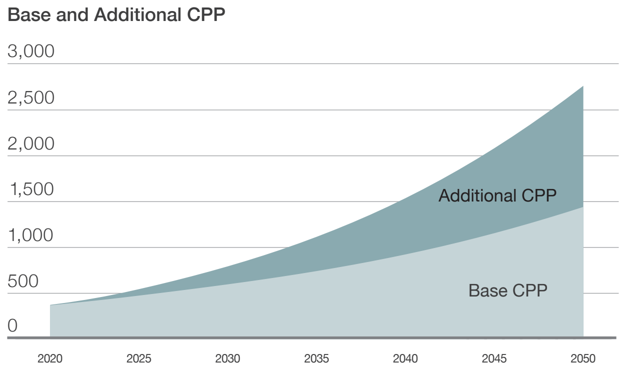
Increase in Maximum Benefits, Covered Earnings and Contribution Rates



YBE – Year's Basic Exemption
YMPE – Year's Maximum Pensionable Earnings
YAMPE – Year's Additional Maximum Pensionable Earnings

Growth of CPP Fund

($ billions)



Office of the Chief Actuary Projections – 29th Actuarial Report

Financial projections

The charts on page 21 show expected growth in contributions and expenditures (CPP benefits plus CPP operating expenses) for the base CPP and the additional CPP until 2050. These figures are based on projections in the 29th Actuarial Report, released in 2018.

Both the base CPP and additional CPP accounts have two sources of growth: cash inflows received from the CPP when contributions exceed benefits, and net investment income. For the base CPP, annual benefits will likely begin to exceed contributions in 2021.

Contributions to the additional CPP are projected to far exceed benefits payments until at least 2057. As a result, the assets in the additional CPP account will grow at a much faster rate than those in the base CPP account. By 2055, the two accounts are expected to have comparable assets of about $1.8 trillion each. Thereafter, assets in the additional CPP account are expected to remain greater than in the base CPP account.

Since the additional CPP is fully funded, whereas the base CPP is only partially funded, the two parts of the CPP differ significantly in terms of their future proportions of contributions and investment income as a percentage of total revenues. For the base CPP, the percentage of total revenues represented by investment income is expected to grow slowly from 26% in 2020 to 34% in 2070. However, for the additional CPP, investment income will grow steadily as a percentage of total revenues, stabilizing at about 70% of its total revenues by 2070.

Risk target

As previously noted, investment income will perform a much larger role in sustaining the additional CPP than it does for the base CPP.

CPPIB expresses the absolute risk target for each Investment Portfolio (that is, the Investment Portfolio for each of the additional CPP and base CPP) as being equivalent to that of its Reference Portfolio. The higher the risk target, the higher the long-term expected returns but also the greater the shorter-term volatility and potential for losses. (The role of the Reference Portfolios is explained in further detail on page 30.) For the base CPP, CPPIB has adopted a Reference Portfolio of 85% global equity/15% Canadian governments nominal bonds. By contrast, the additional CPP will be fully-funded, and as a result, has a lower risk target. This is appropriate even in the early years when invested assets are relatively small. Our analysis shows that adopting a higher risk is not warranted, given our longer-term investment perspective. For the additional CPP account, CPPIB has adopted a Reference Portfolio of 50% global equity/50% Canadian governments nominal bonds.

CPPIB will review the Reference Portfolios for both of the base CPP and the additional CPP at least every three years, following the publication of each applicable Actuarial Report.

Two-pool investment structure

We have considered investment structures that would enable us to maintain different levels of total risk in each of the two parts of the CPP while also ensuring that the additional CPP account can benefit from all of CPPIB's comparative advantages, operational capabilities and the investment programs we have developed.

The economic benefits of CPPIB's investments (whether public securities or private assets) must be equitably allocated between the base CPP and additional CPP. To do so, we must:

- Account for the base CPP and the additional CPP separately, including their respective cash flows, assets and economic interests in shared investments;
- Invest (or generate when needed) new weekly CPP net cash flows for both the base CPP and the additional CPP in an equitable manner and at the same time; and
- Manage each account cost-efficiently.

To meet these objectives, CPPIB established two investment pools, each divided into units that are valued daily. Each of the base CPP and additional CPP accounts will invest their long-term Investment Portfolios through holdings of these units.

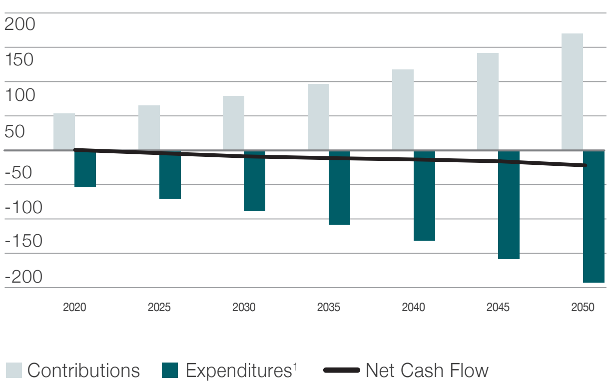
The "Core Pool" initially consisted of CPPIB's existing long-term portfolio. Future net cash flows to or from the base CPP will be allocated to/from the Core Pool, and it will be managed to the risk level appropriate for the base CPP Investment Portfolio. Also, a substantial proportion of additional CPP cash inflows – 55% to 60% – will be allocated to the Core Pool. This unitized-pool structure will allow the base and additional CPP Investment Portfolios to share proportionately in all the investment programs in the Core Pool.

To maintain the lower-risk target of the additional CPP, the remaining assets of the additional CPP Investment Portfolio are invested in a lower-risk "Supplementary Pool." This pool is composed of fixed-income securities. When the Supplementary Pool is combined in the right proportion with the additional CPP's investments in the Core Pool, the resulting overall risk and the underlying market and currency exposures are appropriate for the additional CPP's Investment Portfolio.

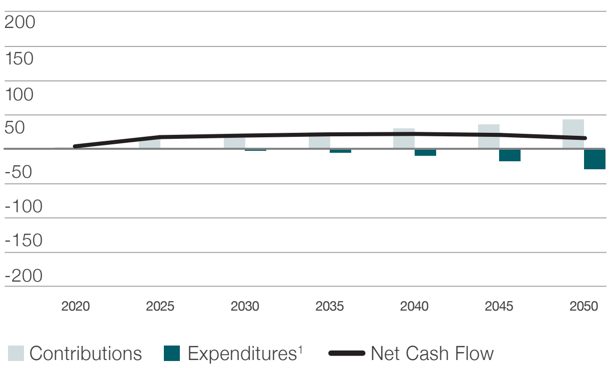
Projected Growth of Base and Additional CPP

($ billions)

Base CPP Contributions, Expenditures[1] and Net Cash Flow



Additional CPP Contributions, Expenditures[1] and Net Cash Flow



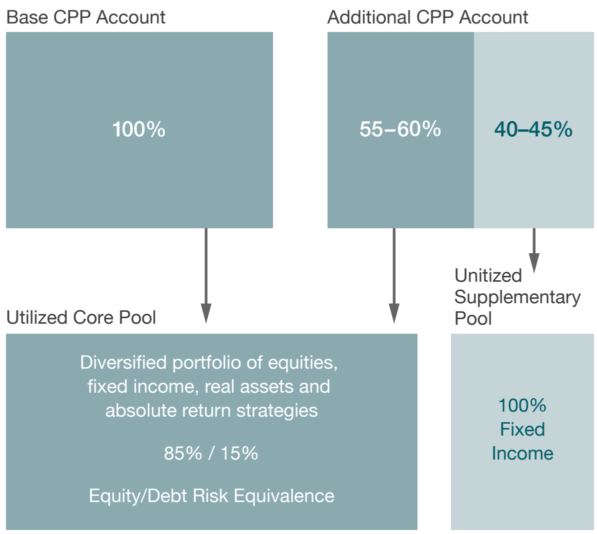
1 CPP benefits plus CPP operating expenses.

Because returns in the Core and Supplementary Pools will differ, the proportions of the two pools held by the additional CPP account will drift over time. CPPIB will rebalance the proportions primarily by adjusting how much of the weekly incoming cash flow from the additional CPP goes into each pool.

The two-pool structure allows CPPIB to apportion all opportunities, individual investments and investment programs fairly, continuously and efficiently between the base CPP account and additional CPP account. The structure respects the distinct risk targets of the base CPP and additional CPP Investment Portfolios while avoiding the significant costs and complexity that would be associated with entirely separate management of each account.

Both the base CPP and the additional CPP accounts include their own Investment Portfolio and Cash For Benefits Portfolio. CPPIB manages cash on a short-term basis in the Cash for Benefits portfolios to support monthly benefit payments made by the CPP. The Cash for Benefits portfolios are segregated from the long-term Investment Portfolios and invested only in liquid money market instruments. The primary objective is to ensure the CPP can meet benefit payment obligations on any business day.

Two-Pool Investment Structure



Financing Social Insurance Programs

The financing of a social insurance program may be characterized by the importance of investment income in the program's total revenues over the projection period.

For a fully funded program, such as the additional CPP, investment income is expected to represent about 70% of total revenues (investment income plus contributions). As a result, a fully funded plan is directly sensitive to:

> Any changes in the assumed rate of return on investments; and

> Any difference in the returns subsequently achieved, compared to those expected.

At the other end of the funding spectrum, a completely unfunded plan (or "pay-as-you-go" plan) holds very little assets. It must balance total contributions paid in and total benefits paid out each year. It is most sensitive to demographics – life expectancy, birth rate, immigration rates – and economic changes, including the level of employment and rate of real wage growth.

The base Canada Pension Plan (base CPP) is a partially funded plan. The Chief Actuary estimates that the investment income will represent about 30% to 35% of total revenues. A partially funded plan is sensitive to all risks discussed above in differing amounts, depending on the relative size of investment income and contributions. Most important, it is less sensitive to investment returns than a fully funded plan. However, the base CPP's current investments plus future contributions are nevertheless expected to fully pay for all accrued and future benefits, assuming a stable contribution rate for current and future contributors.

Governance

The new two-account structure prompted a review of all our governance policies and procedures. An internal committee was charged with ensuring that the two-account, two-pool investment structure continues to serve CPPIB's statutory objectives and maintains fairness between the base and additional CPP accounts. Specific accountabilities include overseeing an annual review of the investment structure and reporting these findings to the Board.

We have enhanced certain aspects of our risk governance framework (described on page 47) to reflect the additional CPP. Certain governance protocols have been expanded to include the additional CPP as well as the base CPP. In particular, each account will have its own risk limits within the Risk Policy.

OUR INVESTMENT STRATEGY

In this section, we explain CPPIB's investment approach to meet the Fund's objectives.

Our investment strategy has a dual focus. It is designed to:

- Achieve long-term total returns that will best sustain the CPP and pay pensions, and
- Use our comparative advantages to earn long-term dollar value-added returns materially above what could be achieved through a low-cost, passive investment strategy.

What differentiates CPPIB's investment approach

To succeed in highly competitive global financial markets over the long term, an investor must have – and make use of – significant comparative advantages. The durable nature of the CPP Fund, our governance, our culture and the strategic choices we make help differentiate CPPIB from other investors.

A number of comparative advantages drive CPPIB's global competitiveness and determine our strategies to maximize long-term CPP Fund returns.

Our inherent advantages

The nature of the CPP Fund itself carries three distinct investing advantages:

Long horizon – The CPP must serve Canadians for many generations to come. As a result, the CPP Fund has a much longer investment horizon than most investors. We can assess the prospects of our strategies and opportunities over decades, as well as over quarters or years. And we can withstand short-term downturns to pursue higher returns and create enduring value over the long run. Most investors take a shorter-term approach, whether by choice or because business pressures or regulation forces them to do so. As such, they are limited in their ability to access or retain certain investments. We can actively but patiently pursue these opportunities to the long-term benefit of the CPP Fund.

Certainty of assets to invest – The CPP Fund's future asset base is largely predictable, and its pattern of cash flows into the future is generally stable. Expected combined contributions from both parts of the CPP are expected to exceed combined benefits paid for many years to come. As a result, we are not forced to sell assets to pay benefits and can design and build programs in reliable anticipation of future investment needs. This certainty of assets and cash flows underpins our ability to act as a long-term financial partner in major transactions.

Scale – As the CPP is one of the largest retirement funds in the world, we can access opportunities globally for which few others can compete. We are able to make major investments in private markets and to engage in public market strategies that are not readily accessible to many investors. In addition, our size enables us to maintain highly skilled in-house teams and to access major external partners. Scale also allows us to develop the investment technology and operational capabilities needed to support those teams as they execute our wide range of strategies. By handling many investment and operational activities ourselves, we achieve a cost-effective global investing platform.

Our developed advantages

The choices we make as an organization afford us three key strategic advantages:

Internal expertise and brand – Our expertise, local knowledge and reputation allow us to source and develop the best opportunities across the globe, in both private and public markets. Headquartered in Canada, we employ professionals working from eight international financial centres. The global team creates enduring value by combining best practices, depth, skill, experience and expertise to manage assets both internally and with external partners. Our brand and reputation allow us to attract, motivate and retain high-calibre executives, investment professionals and operational specialists from around the world.

Expert partners – Through our scale and other advantages, we are able to engage the specialized resources and expertise of many top-tier external partners around the world. Our internal expertise allows us to work as equals with these long-term partners to maximize benefit for the Fund. Through these partnerships, we gain additional access to major investment opportunities, especially in emerging markets. We enter co-investments and other joint efforts with them, in ways beyond the reach of many investors. Our external partners provide further rigorous research, in-depth, on-the-ground analysis and local knowledge, as well as supplying ongoing asset management services.

Total Portfolio Approach – We believe that broad asset class labels such as "real estate" or "equities" do not sufficiently capture the more complex variety of factors that influence the risks and returns of investments. As a result, we consider the fundamental and more independent return-risk factors that underlie each asset class, strategy and type of investment. This allows us to better understand and quantify the distinct return-risk characteristics of each investment and program. Armed with this understanding, we can more effectively combine them into a truly diversified total portfolio that more accurately achieves our targeted overall risk and preferred mix of global exposures designed to maximize returns overall.

How we create value for the CPP Fund through active management

In 2006, CPPIB made the strategic decision to actively manage the Fund to a much greater degree, with the Reference Portfolio(s) as the performance benchmark(s). The combined value of the total Fund now stands at $392.0 billion. That is more than $29.2 billion higher than would have been the case had the assets at April 1, 2006 (plus all subsequent cash flows) earned the Reference Portfolios' rates of return.

Pursuing an active, global strategy was a fundamental strategic decision. We review this decision on an ongoing basis. We recognize that many investors seek above-market, risk-adjusted returns; few consistently achieve them. Active management is not a low-cost approach. It increases complexity and resource requirements as we deal with additional sources of risk and return. But we believe that applying our comparative advantages in actively managing the Fund to achieve above-average returns is prudent, responsible and consistent with our statutory objectives. We remain confident that our active management approach will generate sustained value over the long term.

Success in active management requires not only deep investment insights but also well-structured processes to capitalize on them. It means having the right resources to access and negotiate large, often complex, deals in private markets, and to manage and grow these assets over time. And, it requires expertise to identify and execute the best strategies in public markets. The leading long-term investors in the world's marketplaces will be those with the most talented and disciplined investment teams. As we coordinate our value-creating investment programs, we allocate our resources and skills where they will have the greatest impact in diversifying risks and maximizing long-term returns after all costs.

CPPIB's stature as a global investor also enables us to engage constructively with governments, corporations and like-minded investors to improve public policy and promote best practices with a view to better long-term returns for all stakeholders. This includes engaging as an active owner or lender in the companies in which we invest. We believe that responsible conduct not only increases corporate profits, but also improves the functioning of capital markets for all participants.

In 2016, CPPIB, along with McKinsey & Company, BlackRock, Dow Chemical and Tata Sons founded FCLTGlobal as a non-profit organization dedicated to developing practical tools and approaches that encourage long-term behaviours in business and investment decision-making. Today, the organization comprises more than 40 leading asset managers, asset owners, corporations and professional services firms. For more information, see fcltglobal.org.

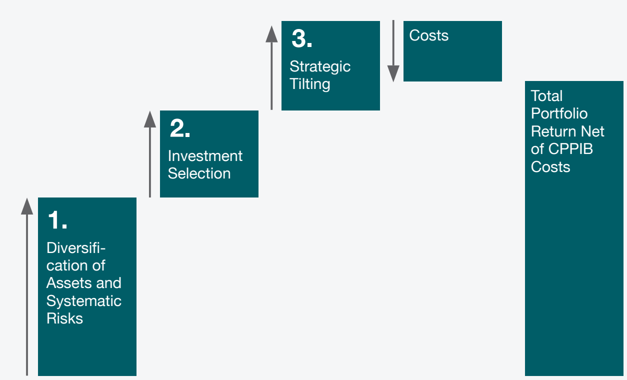
The three sources of total portfolio return

Through active investment decision-making, we pursue absolute returns and value-added greater than the benchmark Reference Portfolios. We do this through three basic sources:

1. Diversification

Diversification is the most powerful way to enhance investment returns at a targeted level of total risk. The key to optimal diversification is to understand both the short-term volatilities and the long-term risk-return factors underlying each broad investment area and each investment program. It is also important to understand how investment areas relate to each other, rather than simply looking at each in isolation.

The Three Sources of Total Portfolio Return



Systematic and non-systematic risks

Investment returns cannot be earned without accepting some form of risk. Investors face two general types of risk: systematic and non-systematic.

> Systematic risks stem from common factors that affect all investments of a particular type. These risks can be diminished through diversification, but not eliminated. We believe that, over sufficiently long periods, in aggregate, market asset prices and income will adjust to deliver the returns required by investors to justify exposure to systematic risks. The market returns earned over time from systematic risk factors are often called "beta."

> Non-systematic or "idiosyncratic" risks are those that are unique to a particular selected asset, investment or strategy. The gains or losses, beyond beta, that arise from intentional exposure to non-systematic risks are often called "alpha." Non-systematic risk can be substantially reduced through diversification within specific investment types, but this also reduces potential alpha.

As research into markets continues, the line between market-based beta and skill-based alpha is increasingly blurred. Regardless of the label, CPPIB balances risk exposures to focus on maximizing total net return, at the targeted total risk level, from all sources.

To do this, we use the Total Portfolio Approach, one of our developed advantages (see page 23). Our operating principle is that only those investment areas and programs that have fundamentally different sources of value creation offer true diversification. The risk and expected return of the total portfolio depend primarily on how we combine systematic and non-systematic risk exposures to meet our investment goals (see the call-out box on page 25).

The passive Reference Portfolios contain only global public equities and nominal bonds issued by Canadian governments. These are weighted by market capitalization. Our decision to diversify very broadly beyond the Reference Portfolios, without increasing total risk, provides the most reliable source of additional long-term returns. We maintain significant investments in almost all primary asset classes, both public and private, and in both developed and emerging markets around the world. These investments are of three broad types:

a) Public market securities – The Fund profits from global economic growth through equity ownership and credit investments in public companies around the world. To help diversify exposures and sustain necessary liquidity, the Fund also maintains meaningful holdings of government bonds.

b) Private company investments – We invest in the equity and debt of privately held companies, both directly and through funds and partnerships. These investments generate returns from underlying corporate earnings in the same way as comparable public companies. As a group, they generate additional returns to compensate for complexity and illiquidity. We expect well-selected private company investments to deliver higher average returns for "alpha" (see call-out box at left for more about "alpha"), that more than cover the much higher costs and any additional risks associated with these investments. Further, we believe these assets provide additional diversification that benefits the total Fund.

c) Real assets – These investments generate returns from tangible assets through very different fundamental sources, including property income, facility-user fees, oil and gas revenues, etc. They include investments in real estate, infrastructure, renewable energy and natural resources. We access and hold real assets primarily through private corporations, partnerships or other entities, in the form of both equity and debt interests.

The chart below shows the growth of our public market investments and the growth of our private investing programs.

Growth of Investment Programs

($ billions)	**2019**	2018	2016	2011	2006
Balancing Programs	**172.6**	176.6	131.7	97.5	88.9
Active Public Programs[1]	**4.9**	1.6	14.5	2.6	0.2
Private Credit Investments	**32.7**	25.1	21.1	5.1	–
Private Equity	**87.7**	69.3	51.5	22.4	4.4
Real Estate Investments	**47.5**	46.1	36.7	10.9	4.2
Energy and Resources	**8.2**	6.1	1.4	0.3	–
Infrastructure	**33.3**	28.6	21.3	9.5	0.3
Power and Renewables	**5.1**	2.9	0.9	–	–
Total Net Investments	**392.0**	356.3	279.1	148.3	98.0

1 Absolute Return Strategies within Active Public Programs hold offsetting systematic exposures through long and short investments. As a result, their net asset values greatly understate their size and impact on the portfolio.

To capitalize on our comparative advantages, we have successfully committed a major portion of the Fund – approximately 55% – to very broadly diversified investments in private markets. CPPIB's reputation gives us access to private market opportunities around the world, especially in places where public markets are less well developed. With their potential for large transactions, private markets leverage our advantages of scale and certainty. As previously noted, private investments generally offer a higher return to compensate for their illiquidity, which the Fund can absorb due to its long investment horizon and certainty of assets. Most important, the special expertise that we and our partners bring greatly increases the likelihood of success in these markets. The chart on page 25 shows the growth in our private market investments of all types.

2. Investment selection

Investment selection means how we select, buy, weight and sell specific securities, investments and sectors. This activity offers the widest set of opportunities to the skilled internal or external manager, in both private and select public markets.

The potential amount of dollar value-added from investment selection (in a reasonably diversified portfolio) is comparable to that from diversification. However, due to the highly competitive nature of investment selection, the long-term reliability of this dollar value-added is less than that from diversification. Seeking to outperform a market index through active management requires both covering its costs and achieving better returns than the average. And finally, markets become more "efficient" and harder to outperform as they mature. Clearly, however, over any given period within a particular market there will be both winning and losing active managers, with wide variation between their returns. That is why successful investment selection requires employing the most skillful professionals, both internally and externally.

We believe that many of CPPIB's comparative advantages increase the long-term likelihood of investment selection success. First, our scale and asset certainty enable us to identify and access appropriate talent. Second, our long horizon provides an advantage in selecting investments. Because of the shorter-term investing pressures and practices found in many markets, individual asset prices and current valuations are often different from the long-term intrinsic value and earnings potential. This difference creates opportunities over longer time horizons. We believe that investment selection focused on the long term can succeed in most asset classes, particularly so in less-developed markets. Further, skilled management using long/short strategies in public markets can add value whether markets are rising or falling. Such pure alpha return is extremely valuable. When properly controlled, it adds relatively little to total risk in the portfolio while contributing significantly to total return.

Outperforming competitive markets is a challenging task, and doing so sustainably is even more so. We diversify investment selection across multiple active programs, drawing upon distinct investment perspectives to increase portfolio breadth and risk-adjusted returns. Several programs involve more than one strategy, and some employ many. These include:

a) Large, complex transactions – Taking advantage of opportunities available only to large investors. Alone or with partners, we can access, structure and carry out major, complex transactions globally in private and public equity, principal lending, infrastructure, real estate, natural resources and renewables.

b) Private markets deals – Skillfully selecting, negotiating, financing and managing individual private equity and debt investments. As owners with large stakes – and in some cases board representation – we can make meaningful contributions to improving the operation of businesses and properties. Not being forced to sell, we can exit or realize investments at a time of our choosing.

c) Long-term value investing – Buying and selling individual public securities or sectors that we believe are mispriced relative to their long-term intrinsic value. With our long investment horizon, we can be patient and profit from longer-term indicators more than most other managers.

d) Thematic investing – Investing through "themes" by anticipating long-term structural changes and broad trends such as demographic shifts or alternative energy transitions. These are developments, which emerge over the longer term, that we expect will influence the growth, earnings and stock prices of a particular segment of companies, whether directly or indirectly.

We regularly review the premises underlying all investment selection programs, as well as the demonstrated skill of their execution. This lets us assess whether the programs remain likely to deliver meaningful and sustained value for the costs and risks involved. If our conclusion changes, we adjust or curtail the strategies.

Long and short investing

A "long" investment generates a positive return when the underlying asset increases in value. An example is a price increase following a traditional stock purchase. A "short" investment is a means to generate a positive return when the underlying asset decreases in value. In short selling, the investor sells a stock that he/she has borrowed and buys it back later to pay off the stock loan. If the stock's price then is lower, the investor makes a profit. Taking both kinds of positions simultaneously can be structured to greatly reduce the impact of overall market movements. The results of the long/short strategy then depend almost entirely on the selection of individual long and short positions.

3. Strategic tilting

Strategic tilting is a deliberate, meaningful but temporary shift of asset allocations and factor exposures away from the total portfolio's established targets. We can achieve appropriate strategic positions by exploiting gaps between current market prices and long-term fundamental values.

For example, we may increase our exposure to public equities in a geographic region where the market is falling and prices have become unduly depressed. Or, we may sell in over-valued markets when we project nearer-term future returns will be below long-term expectations. Tilting is thus a value-oriented contrarian strategy, which may go against prevailing market trends.

Two key beliefs underlie our use of strategic tilts to help generate additional returns for the Fund:

1. We observe that asset prices have shorter-term momentum but tend to revert to their fundamental value over time. We believe that in the medium term, the general directions of asset class or factor returns are somewhat predictable, although timing and their path are much less so.
2. The strategy aligns with our long investment horizon and the ability to withstand short-term adverse movements. This allows us to be more concerned with the potential size and likelihood of the opportunity or risk, and less concerned with precisely when the assets will return to their fundamental values.

We continue to develop our Strategic Tilting program internally, subject to Board-approved risk limits. While strategic tilting is not typically as powerful in the long run as the other two sources of returns, it can at times add materially to total returns, or protect Fund asset values, or both.

Our view on currency

Currency exposure is a substantial driver of short-term investment performance. Some investors manage this risk with currency hedging, which reduces the shorter-term impact of foreign exchange rate changes on their returns. Hedging has a cost, however, and requires setting aside cash or generating it quickly to meet hedging contract obligations. Also, some currencies are expensive to hedge.

We believe extensive hedging of foreign investments is not appropriate for the CPP Fund for the following reasons:

1. For a Canadian investor, hedging foreign equity returns tends to increase, rather than reduce, inherent risk. The Canadian dollar tends to strengthen when global equity markets are rising and weaken when they are falling. This is partly due to the Canadian dollar's status as a commodity currency. We believe that the Canadian dollar will continue to behave in this way.
2. When the Canadian dollar strengthens against other currencies as a result of higher commodity prices, especially oil, the Canadian economy is also likely to be stronger. This in turn should mean increased earnings for CPP contributors as a result of higher real wages. As earnings rise, so will contributions into the Fund, which will help offset reported losses in the same period due to currency. Accordingly, this represents a natural hedge for the CPP and reduces the need for explicit currency hedging of the CPP Fund's foreign investments.
3. The cost of hedging currencies of many developing countries is high. And if these countries continue to experience higher productivity and economic growth as their economies mature, their currencies should tend to strengthen over time. That would make a hedging program a long-term drag on returns.
4. We substantially mitigate the volatility of individual exchange rates by holding a broadly diversified set of currency exposures across the world, as shown on page 54.

Accordingly, for the most part, we do not hedge foreign currency exposures to the Canadian dollar.

In the short term, the decision not to hedge currency can impact our returns in either direction. In years of major strengthening or weakening of the Canadian dollar, total performance of the CPP Fund will differ from funds with a standing policy of greater hedging. For example, when the Canadian dollar strengthened along with global equities and commodity prices in fiscal 2010, the Fund generated $16 billion in overall investment returns. This occurred despite a $10 billion loss in the Canadian dollar value of our foreign holdings. On the other hand, in fiscal 2014 we realized a currency gain of $9.7 billion as foreign currencies strengthened against the commodities-driven Canadian dollar.

Climate change

At CPPIB, we seek 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.

As part of our climate change work, CPPIB has been a strong supporter of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). CPPIB is aiming for full adoption of these recommendations by the end of fiscal 2021. The recommendations have four pillars. CPPIB's approach to each is detailed below.

1. Governance

The Board of Directors oversees CPPIB's efforts to understand and manage climate-related risks and opportunities. They receive updates about broad trends and specific investment-related developments through ongoing risk reporting.

Our CEO sets Management's overall tone and approach for governance and risk management. CPPIB's Chief Financial and Risk Officer (CFRO) has explicit accountability to oversee and enhance the risk management framework and to ensure that it is appropriate given CPPIB's unique mandate and risk profile. The CFRO is working closely with the Risk Committee of the Board to advise Management and the Board on the evolution of our risk management practices.

The CFRO was the Senior Management Team (SMT) sponsor of CPPIB's climate change initiative. He also chaired the Climate Change Steering Committee, which included SMT representatives from Active Equities, Total Portfolio Management, Public Affairs and Communications and Real Assets. This committee oversaw the work of CPPIB's Program Management Office and Climate Change Management Committee.

The Program Management Office and Climate Change Management Committee together guide and support climate-related work streams.

2. Strategy

By taking climate change specifically into account in our investment activities, we are better positioning ourselves to make appropriate investments 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. These include policy, legal, technology and market risk. Some assets are also potentially vulnerable to physical risks like natural disasters. At the same time, 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.

CPPIB's "Total Fund Exposure – Appetite and Portfolio Design" climate change work stream takes a top-down approach to, eventually, directly factor risks and opportunities into investment strategy and total portfolio design. It works to understand potential climate change and energy transition paths for various countries and the resulting economic and market impacts. This work stream is also developing energy scenarios and reference cases to guide investment reviews and portfolio allocation decisions.

CPPIB's "Security Selection" initiative takes a bottom-up approach and enhances our current review process for individual investments. The initiative has produced a framework that allows investment teams and approval committees to identify and act on key climate change risks and opportunities that are likely to have an economic impact on investments. Our investment process has been modified to require use of this framework for our more material investments.

The "Total Fund Exposure – Risk Measurement and Scenario Analysis" initiative will identify, assess and monitor key risk events across different time periods and measure CPPIB's carbon footprint. This will help ensure the resilience of CPPIB's strategy.

The remaining three work streams, which help support and facilitate the first three, are "Data and Information," "Fund-wide Learning and Knowledge Sharing" and "External Communications."

CPPIB created a stand-alone Power & Renewables group in late 2017. This better positions the Fund to invest in climate change-related opportunities. Since then, CPPIB has invested more than $2.1 billion in renewable energy projects. This helps diversify the portfolio as the world transitions to a lower-carbon energy supply, production and use. In fiscal 2019, CPPIB became the first pension fund manager in the world to issue a green bond, which was then followed by the issuance of our first euro-denominated green bond. These transactions will further enhance our ability to make investments in this area. (See page 69 for more details.)

In addition, CPPIB's Energy & Resources group launched an Innovation, Technology and Services strategy. It capitalizes on opportunities created by the global energy transition, such as networks to charge electric vehicles.

3. Risk Management

Climate change is an integral part of CPPIB's Board-approved Integrated Risk Framework. The Climate Change Steering Committee is guiding a multi-year effort to identify, assess and manage climate-related risks at both the Fund and investment group levels.

One element of risk management is engaging with companies to improve their climate change-related disclosures. As part of our ongoing engagement process, we have pressed large greenhouse gas emitters in oil and gas, utilities and other sectors for improved disclosure on this issue. For over a decade, CPPIB has also used its voting power to support shareholder proposals that encourage companies to improve disclosure of climate change-related risks. See page 73 for more details.

CPPIB's support for the recommendations of the Task Force on Climate-related Financial Disclosures should result in better disclosure of climate change risks. This, in turn, should help asset owners better assess these risks and make sounder investment decisions.

Additionally, 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 equity investments.

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

CPPIB continues its 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 assessment considers 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.

4. Metrics and Targets

CPPIB published the first carbon footprint of its public equities portfolio in its *2018 Report on Sustainable Investing*. Metrics including total carbon emissions and carbon intensity can be found in the Report. The organization is now working to include our private investments, providing a more comprehensive metric.

We consider key performance indicators for greenhouse gas (GHG) emissions, water consumption and energy efficiency in our individual investments.

Balancing internal and external expertise

Because of our size and professional environment, we can maintain expert internal teams to manage large parts of the CPP Fund. Internal management avoids external fees and lowers other management costs. We often have the skills to carry out investing activities similar to those of external management firms with comparable expertise but at a materially lower cost. For example:

- Our Active Fundamental Equities group has the management experience to make a major contribution to the corporate growth and operational strategies of selected public companies in which we take a substantial stake.
- Our Quantitative Strategies & Risk Premia and Macro Strategies groups can bring to bear the advantage of using longer horizon indicators combined with analytical and modelling capabilities.
- Our Capital Markets and Factor Investing department can draw on specialized strategies, trading and structuring capabilities. These are designed specifically for best execution of our internal active and balancing programs and their execution.
- Our Real Assets, Private Equity, Credit Investments and Active Equities departments have the ability to invest directly in many areas, and also to co-invest with well-aligned external partners. These partners provide access and specialist capabilities in a wide range of private investments around the world.
- Our international offices are a critical component in maintaining valuable relationships and partnerships in all international markets.

Equally, however, we also recognize the enormous breadth of external expertise that can benefit the Fund. We will consider engaging an external manager in any strategy that we cannot execute as effectively on our own. These strategies must be relevant, distinct and meaningful, and we must be able to scale them up as the Fund grows. Expert external managers not only provide specialist strategies, they often also share valuable knowledge with us as long-term partners.

The Board of Directors approves all external manager appointments above certain limits. The manager must demonstrate expertise and, equally important, must be judged capable of providing risk-adjusted value that will more than offset the cost of external fees. We are mindful of principal/agent conflicts. As such, we structure external contracts and mandates with great care to align our partners with the interests of the Fund. We strongly favour the use of performance-based fee structures that have three key features:

- Sharing gains only beyond threshold performance levels;
- Increasing performance fees only with progressively demonstrated skill levels; and
- Partially deferring conditional payouts.

Our teams from the Private Equity Funds, Private Equity Asia, Secondaries and External Portfolio Management groups have the internal depth and knowledge to successfully evaluate strategies and managers in both public and private markets around the world. Selecting, mandating, monitoring, managing and replacing external organizations demands skills that are quite different from those required to select individual investments. The experience and insights of our teams enable us to distinguish solid, sustainable opportunities from those that are fleeting, weakly founded or poorly executed.

A strategic direction for CPPIB in 2025

Over the past two years, the Board and Management have worked to develop a strategy, CPPIB 2025, which positions CPPIB as a world-class investment organization – the standard by which the industry compares itself for governance, performance, talent, partnership and delivering superior financial returns. Approved in April 2018, CPPIB 2025 positions CPPIB to scale into 2025 and beyond, including being resilient to the possibility of increased market volatility and uncertainty in the years ahead, and potential impacts from forces such as disruptive technology, climate change and geopolitical shifts.

In October 2018, the Board approved an implementation plan and roadmap to CPPIB 2025.

CPPIB 2025's four areas of focus are:

> Our Investing Strategy – scaling our private and public investment programs, creating investment agility and investing up to a third of the Fund in emerging markets;

> Putting technology and data at the core of everything we do;

> Developing core services that are increasingly efficient, agile and scalable, adding value to our investment process and international competitiveness; and

> Evolving our culture to be more innovative, ambitious and agile, as well as more diverse and inclusive.

Our Total Portfolio Investment Framework

To successfully maximize returns from all three sources – diversification, investment selection and strategic tilting – while controlling the variety of risks, our Total Portfolio Investment Framework has four principal components:

1. Risk Appetite – expressed primarily by the Reference Portfolios for the base and additional CPP;
2. Diversification – guided by the Strategic Portfolios for the base and additional CPP;
3. Portfolio Management – executed through the Target Portfolios for the base and additional CPP, and the Active and Balancing Portfolios used to manage the Core Pool (see page 21); and
4. Risk Monitoring and Management – maintained by holding the absolute risk of the Investment Portfolios within a narrow range around the risk of their respective Reference Portfolios.

1. Risk appetite – the Reference Portfolios

The foundation of the investment strategy for any portfolio is to determine a prudent and appropriate risk appetite. At a minimum, we must accept a level of risk for the Fund that would be expected to generate the net real return required to sustain the CPP (all other assumptions being met). Depending on long-term return assumptions, we believe that the base CPP cannot ultimately be sustained at a risk/return level below that of a portfolio with approximately 50% global public equities and 50% Canadian governments nominal bonds. For the additional CPP, the corresponding minimum level is that of a portfolio comprising 40% global public equities and 60% Canadian governments nominal bonds. However, there are significant potential benefits to achieving better long-term returns, and better sustaining the CPP, by undertaking a higher – but still prudent – overall risk level.

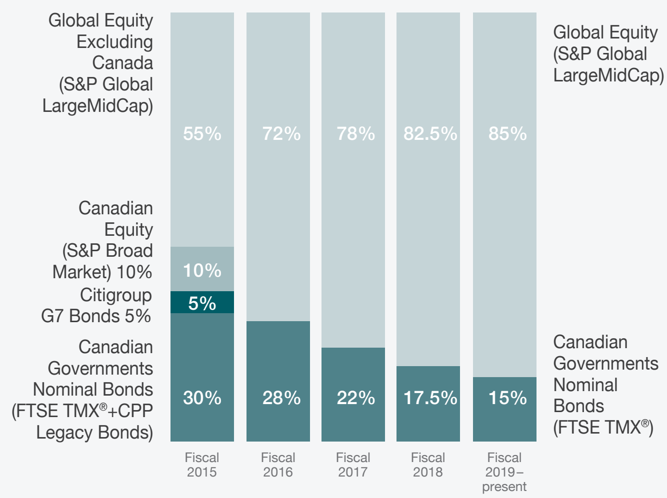
Based on very long-term projections, the Chief Actuary estimates that contributions for the base CPP will finance 70% of future base CPP benefits. Investment returns will finance 30%–35%. In other words, contributions will be about twice as important as investment returns in sustaining future base CPP benefits. For the base CPP, short-term volatility in returns has much less impact on assessed sustainability than it has for fully funded plans. Accordingly, positioning the base CPP account at a higher equity/debt risk equivalence significantly reduces the medium- and longer-term risks of adverse adjustments to the base CPP.

We currently express the appropriate risk targets for the base CPP and additional CPP by means of their Reference Portfolios. Both of these portfolios comprise only public market global equities and fixed-payment bonds issued by Canadian governments. Each class is represented by broad market indexes that could be passively invested in at minimal expense. The chart at right shows the progression of the Reference Portfolio for the base CPP since fiscal 2015, after the Board and Management decided to progressively take on a higher level of risk.

CPPIB Management and the Board of Directors review the Reference Portfolios at least once every three years. They take into account the increasing maturity of the CPP, the evolving funded status of each part of the Plan, and CPPIB's best estimates for long-term economic and capital markets factors. Our methodology uses a model that simulates both the likelihood and potential size of the impact of investment returns and risks over 75 years. It does this for a variety of portfolio asset allocations. It looks at a potential range of positive and negative impacts on future contributions and benefits, calculated over successive future actuarial review periods and multiple economic/investment scenarios. When evaluating prospective portfolio designs, we give more weight to adverse impacts than we do to favourable impacts. We also discount more distant events relative to nearer-term ones.

After analyzing these simulations for each account, we have concluded that the following Reference Portfolios' asset class weights are currently appropriate:

Reference Portfolio – A Shift Along the Return-Risk Spectrum (base CPP)



"Global equities" includes both developed and emerging markets; it takes into account their evolving market capitalization. Because we do not make a separate allocation to Canadian equities, the composition of the S&P Global LargeMidCap equity index effectively determines the weighting of Canadian equities in the Reference Portfolios. As of March 31, 2019, this weighting was approximately 2.7%. However, the actual Investment Portfolios will likely continue to contain a higher percentage of effective exposure to Canadian equities as we take advantage of our home-country knowledge and access.

Breakdown of Asset Class Weights for Additional CPP and Base CPP Reference Portfolios

Account	Effective	Global Public LargeMidCap Equities	Canadian Governments Nominal Bonds
base CPP	April 1, 2018	85%	15%
additional CPP	January 1, 2019	50%	50%

To achieve these distinct risk targets:

- 100% of the Investment Portfolio for the base CPP is invested in units of the Core Pool, which is maintained close to 85%/15% equity/debt risk equivalence.
- Approximately 57% of the Investment Portfolio for the additional CPP is invested in units of the Core Pool. The remainder is invested in units of the low-risk Supplementary Pool, which is composed entirely of Canadian federal and provincial governments nominal bonds. See a diagram of the two-account, two-pool structure on page 22.

Investment Portfolio return benchmark

In addition to serving as the expression of long-term average appetite for absolute risk, the passive Reference Portfolio performs a second function as the benchmark for the total net return of the applicable Investment Portfolio. While the applicable Investment Portfolios generally have a risk level similar to their all-public Reference Portfolios, there are wide differences of composition between the two portfolios:

- The Investment Portfolio has a much broader range of asset classes and is actively managed; and
- The long-term active strategies of the Investment Portfolio take time to show results relative to the Reference Portfolio benchmark. As a result, we focus ongoing performance assessments on the outcomes over five- and 10-year periods. See page 55 for more details.

Characteristics of Investment Portfolio with Enhanced Return-Risk Profile

Simple Portfolio in Two Asset Classes

85/15	Equity/Debt Risk Equivalence	85/15
None	Active Programs Contribution	High
High	Public Equity Allocation	Moderate
Low	Diversification	High
Low	Comparative Advantage Alignment	High
High	Major Loss Potential in Market Extremes	Moderate
No	Best Return-Risk Profile	85/15

Illustrative Portfolio in Multiple Asset Classes

2. Diversifying sources of return and risk – the Strategic Portfolios

As noted, we manage each of the Investment Portfolios to closely match its total absolute risk with that of the associated Reference Portfolio. But that does not mean that we simply hold 85% of the base CPP account in equities, or even in equity-like exposures. We believe this would be imprudent as the portfolio's downside risk would be almost completely dominated by a single risk factor – that of the global public equity markets.

We can, however, build a portfolio with a higher expected return profile for a similar amount of risk by blending a variety of investments and strategies that fit CPPIB's comparative advantages. Each of these strategies offers an attractive return-risk tradeoff of its own, and their addition clearly reduces the dependence on public equity markets.

First, we can invest in a higher proportion of bonds and add two major asset classes with stable and growing income: core real estate and infrastructure. By themselves, these lower the risk of the overall portfolio. This risk saving then allows us to add a wide variety of higher return-risk strategies, such as:

> Replacing publicly traded companies with privately held ones;

> Substituting some government bonds with higher-yielding credits in public and private debt;

> Using leverage in our real estate and infrastructure investments, along with increased investment in development projects;

> Increasing participation in selected emerging markets; and

> Making use of pure alpha investment strategies, which rely on the skills and experience of our internal and external managers.

However, even with these additions, the resulting diversified portfolio would have a lower risk level than targeted. To raise the risk level back to the targeted level and increase expected returns, we introduce a carefully calibrated degree of leverage through the issuance of CPPIB short- and medium-term debt and the use of derivatives. Leverage enables us to:

- Increase our gross holdings of all asset classes, but particularly of lower-risk asset classes that generate attractive risk-adjusted returns;
- Increase overall diversification;
- Maximize return potential at the targeted overall risk; and
- Maintain sufficient liquidity at all times.

Using these tools, we build the Strategic Portfolios in three steps:

1. We first design the optimal strategic mix of key return-risk factor exposures (the "Strategic Exposures") best suited to meet each Investment Portfolio's objectives. This exercise recognizes the practical market limitations facing a fund of our size and the feasibility of CPPIB investing within five years. The mix of factor exposures and leverage is designed to maximize expected long-term returns while maintaining the same total absolute risk as the associated Reference Portfolio.
2. We review our current and anticipated active investment programs to determine the appropriate portion that each should have in the Core Pool. The goal is to ensure that the active investment programs contribute sufficiently to the desired exposures and to returns generated by the managers' skill. We also review the resulting balancing programs and borrowing that are necessary to achieve overall targets.

3. We then translate these planned program allocations into the resulting long-term weightings of six distinct public and private asset classes, as shown at right. This Strategic Portfolio also expresses our long-term plan for allocating assets to three geographic regions – Canada, developed markets excluding Canada and emerging markets. the result is a very broadly diversified aspirational portfolio of investment programs at the intended total risk level. It has significantly higher expected return than the Reference Portfolio and greater resilience to extreme downturns.

The strategic factor allocations we choose provide a clear guide for our selection of investment programs and strategies as the Fund continues to grow. They provide clear guidance for investment departments to ensure each investment program executes its specific mandate and that they collectively deliver the targeted factor exposures over time. For each investment group, our guidance sets out:

- The nature, areas and types of investments;
- Intended contributions to total portfolio return-risk profile;
- Targeted size of assets and/or risk allocation in five years' time;
- Long-term expected risk and returns characteristics; and
- Geographic, sector and other guidelines.

We review both Strategic Portfolios at least every three years, when we review the Reference Portfolios.

Strategic Portfolio Asset Class and Geographic Classifications and Percentage Weights

Asset Class	base CPP % Weight	additional CPP % Weight
Public Equity	26%	14%
Private Equity	20%	11%
Public Fixed Income (high-quality government issues)	27%	60%
Credit Investments (private debt and public fixed income excluding high-quality governments)	13%	7%
Real Assets (public and private, including real estate, infrastructure, resources, agricultural land)	34%	19%
Cash and Absolute Return Strategies[1]	-20%	-11%
	100%	**100%**

Geographic Region	% Weight	% Weight
Canada	11%	51%
Developed Markets ex-Canada	56%	31%
Emerging Markets	33%	18%
	100%	**100%**

1 Sustained explicit and implicit financing of the investment holdings of the Investment Portfolio, partially offset by net assets in Absolute Return Strategies and short-term holdings. The controlled use of such financing enables the optimal diversification of the portfolio at the targeted risk level and helps maintain necessary liquidity.

3. Portfolio Management – the Target, Active and Balancing Portfolios

The Strategic Exposures and corresponding Investment Department guidance represent a long-term plan to deliver on the objectives for both the base and additional CPP. However, the actual Investment Portfolios must also take into account the practical business and investment plans of each investment department and group. In addition, the values of portfolio investments change daily as investments are bought, sold and re-priced. That means there is inevitable movement in the weights of portfolio holdings and risk-return factor exposures.

We address these naturally changing weights with our current-year Target Portfolio allocation bands and our Balancing Process. The Target Portfolio bands use the same asset classes and geographic regions as the Strategic Portfolio, setting out their permitted ranges in terms of percentage weights for each. We may also add more specific limits, such as investments allowed in a single country and the minimum overall Canadian currency exposure.

As always, our individual investment groups will only make an investment when there is sufficient prospect of an appropriate risk-adjusted return. We never make an active investment simply because it fills a gap in a particular asset class or geographic region. However, the Target Portfolio bands ensure that we achieve the desired growth, balance and control of total portfolio asset allocations. They enable us to direct available resources to the best areas of long-term opportunity.

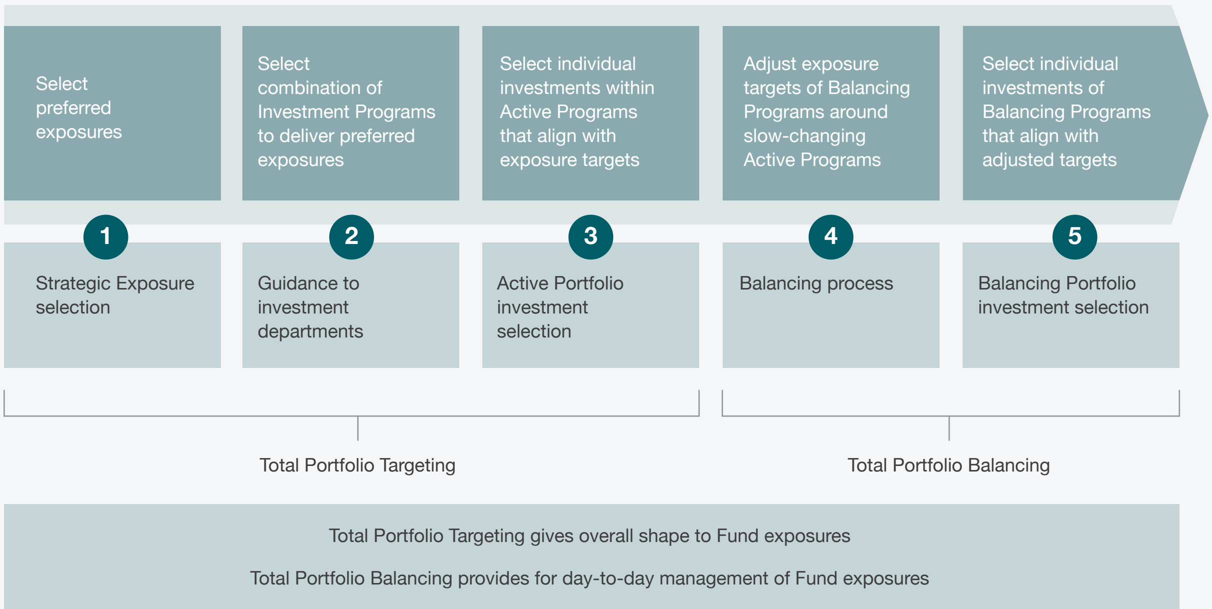
The Core Pool contains many active investment programs, each with its own varying exposures. To achieve the overall targeted exposure weights, the Core Pool has two components – the Active Portfolio and the Balancing Portfolio:

- The Active Portfolio is the collective holdings that directly result from the specific investment selections of the investment departments, guided by their programs' guidance.
- The Balancing Portfolio comprises the remainder of total assets, held entirely in readily tradable public market securities. By knowing the return-risk factor exposures delivered by the Active Portfolio at any time, we can adjust the Balancing Portfolio to maintain the currently targeted mix of exposures for the total portfolio, subject always to the Target Portfolio bands, absolute risk limits and sufficient liquidity.

The Balancing Process aggregates the risk and factor exposures of the Active and Balancing Portfolios daily. When these aggregate exposures vary too far from the intended Core Pool allocations, or total risk varies excessively from its target, we make trades within the Balancing Portfolio to bring the Core Pool back into line.

The Balancing Process is completed by periodically rebalancing the additional CPP Investment Portfolio's mix of unit holdings in the Core and Supplementary Pools by appropriately allocating incoming additional CPP cash flows.

Total Portfolio Investment Framework



Factor investing – Implementing the Total Portfolio Approach

By themselves, asset class labels do not fully convey the highly diverse nature of the investments within each class. For example, real assets such as property and infrastructure investments clearly have attributes of both equities and fixed income in addition to their own specific attributes. Private and public investments may appear fundamentally similar, but their liquidity is very different, as their internal financial leverage or debt level often is. Debt securities carry a wide range of durations and credit risk. Equities vary in their country, sector and financial leverage exposures.

Because of all these variables, we need a unified measure of total exposures to each of the key return-risk factors that can be used throughout the Total Portfolio Investment Framework. We achieve this by modelling and mapping each investment or program based on the extent to which each risk factor affects it. The key factors identified in our risk model include the returns, risks and correlations in:

- Developed and emerging market economic growth;
- Real and nominal government bond yields;
- Credit spreads (over government bond yields);
- Firm size (excess of small cap versus large/mid-cap equity returns); and
- Cash/short-term interest rates.

When we construct portfolios, we take into account desired exposure to each factor, as well as to different geographic areas, sectors, currencies and private versus public assets. We also look at the additional risk/net return of active programs. We use these factors to analyze how potential major new investments or divestments will affect the exposures of the total portfolio. As markets, security prices and investment values change, the Total Portfolio Approach drives how we rebalance our portfolios and avoid unintended risk exposures. For example, it has enabled us to prevent equity-like risk from accumulating in the Core Pool through alternative asset classes.

4. Risk Monitoring and Management

In fiscal 2018, CPPIB completed development of its Long-Term Risk (LTR) model. We use this model to measure and compare potential investment losses over longer horizons. It also compares the risk of the Investment Portfolios with the Reference Portfolios for overall governance and control purposes. The LTR model encompasses five key principles:

1. Historical data is a reasonable starting point. The model is informed by a long time period (since 1971) with a sufficiently wide range of economic and market conditions.
2. Risk is forward looking. The model incorporates forward-looking views on key factors driving potential returns, positive and negative, over longer time horizons.

3. Primary quantification of potential reported loss is expressed over a five-year horizon. It uses a form of risk measurement known as Conditional Value-at-Risk. This incorporates both the size and likelihood of potential reported losses beyond a specified threshold.
4. All major contributors to returns and risks including systematic risks. These risks are particular to an asset and active portfolio management decisions.
5. The absolute value of the LTR risk metric into its equivalent equity/debt allocation percentages, represented by the same market indexes as in the Reference Portfolio.

Using the LTR model, the Balancing Portfolio is managed so as to maintain the equity/debt equivalent risk of the Investment Portfolios at all times within Board-approved limits around the Reference Portfolios.

Financial status and potential impact of extreme market conditions

Under normal volatility in global capital markets, the financing of the CPP and the risk positioning of the CPP Fund are designed to provide a measure of resilience for sustaining existing CPP contributions and benefits. Nevertheless, CPPIB also considers the potential impact of more extreme market "stress" scenarios.

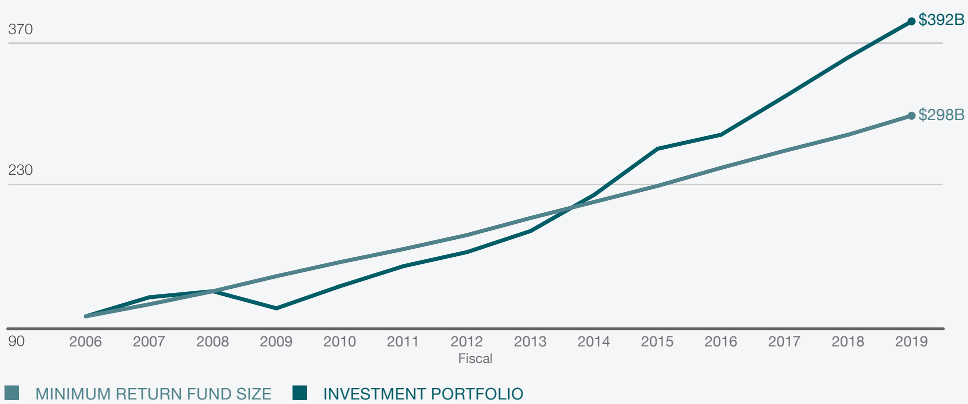
1 Estimates derived by CPPIB from Actuarial Reports

The Excess Return chart shows (1) how the Fund has grown under CPPIB's active management strategy since April 1, 2006, against (2) the lower cumulative Fund growth had returns simply matched the long-term minimum net real returns required for CPP sustainability[1]. The chart also compares the $94 billion in excess return achieved by CPPIB's investment strategy against potential losses that might be expected if (1) market declines similar to those during the 2008-9 Global Financial Crisis (GFC) were to repeat, or (2) the more adverse scenario outlined in the Federal Reserve's 2019 Comprehensive Capital Analysis and Review (CCAR) framework were to eventuate. Currently, the accumulated excess returns of $94 billion would approximately suffice to offset a repeat of the GFC experience; however future stresses of the magnitude forecast under the CCAR severely adverse scenario would not be fully covered by past excess returns. While the above describes notional cumulative effects, in practice all investment gains and losses are immediately recognized in the Actuarial Reports as they occur; gains are not held in reserve as a buffer.

This excess return is only one factor related to the likelihood of an adjustment to contributions and benefits. This likelihood is also dependent on many other factors, such as changes in future return expectations, real earnings growth, mortality rates, and population growth. As such, even in periods where the Fund outperforms the long-term minimum net real returns required for CPP sustainability, adjustments may be needed to either contributions or benefits due to sufficiently large impacts of these other factors.

Excess Return since Inception of Active Management ($B)

Versus long-term minimum return required for Plan sustainability*



* Based on CPPIB's estimate of the minimum required rate of return, plus annual CPI, necessary to ensure long-term CPP sustainability.

Stress Scenarios

Estimated losses based on the following stress scenarios:

1 Market declines similar to those during the 2008-9 Global Financial Crisis (GFC): -$60 billion

2 Federal Reserve's 2019 Comprehensive Capital Analysis and Review (CCAR): -$103 billion

Aligning the Investment Framework Throughout the Organization

How the Board governs investment strategy

Board governance of the investment strategy has four basic approval elements:

1. Risk Appetites and Risk Policy – The Board approves these internal documents annually. The Risk Policy formalizes risk-related constraints on the Investment Portfolios and sets out the measures the Board and Management will use to monitor and control risks. It also spells out limits on non-market risks, such as liquidity, credit risk and the exposures to counterparties. The Board also approves the Absolute Risk Operating Range (AROR) for the upcoming fiscal year. Expressed in equity/debt equivalent terms, the AROR limits how far the total risk of the Investment Portfolios can stray from that of the Reference Portfolios without specific Board approval.
2. Reference Portfolio – This expresses the risk target for each Investment Portfolio as being on a long-term average basis equivalent to that of its simple, low-cost, readily investable Reference Portfolio. It is set to operate within the Board-approved risk appetite and limits. It is also the benchmark for total net return performance of the Investment Portfolio.
3. Business Plan – This annually sets out the current and longer-term investment and operating plans for each department, including operating and capital budget. The plan includes confirmation or adjustment of the Strategic Portfolios' and the Target Portfolios' allocation bands.
4. Investment Statement – The Board approves this external document annually. Required by the Regulations to the *CPPIB Act* and published on our website, it sets out the investment objectives, policies, long-term return expectations and risk management for the Investment Portfolios and the Cash for Benefits Portfolios.

As required under the *CPPIB Act*, the Board also approves:

> Investments above authorized size thresholds, and
> The appointments of external managers, delegating to the CEO those appointments where assets under management will be below a defined level.

Oversight of the Fund's development, composition and performance is a critical element of Board governance. The Board receives comprehensive quarterly reports on the Fund in order to monitor:

> The growth and composition of the Investment Portfolios and Accounts;
> Management's progress against the year's investment plans;
> Total portfolio risk and other risk measures;
> Total returns and individual program contributions; and
> Dollar value-added, net of all costs, versus the Reference Portfolios and other benchmarks.

How we maintain Management accountability for risk-taking and performance

Successful investing requires clear decision-making, accountability and informed risk-taking. It also requires competitive compensation and carefully aligned performance-based incentives. The diagram on page 34 shows how we align all our activities throughout the organization.

Investment Planning Committee

The Investment Planning Committee (IPC) is the primary Management committee with investment responsibilities. It has overall accountability for the long-term Investment Portfolios. The IPC proposes the Risk Policy and other governance elements to the Board. It is then responsible for ensuring control of overall portfolio return-risk exposures within the Board governance framework. Each year, the IPC also approves the investment plans and Investment Department guidance (as described on page 38) for all investment departments, and recommends them for CEO approval.

Taking into account recommendations by departments and IPC subcommittees, the IPC approves the framework for governing, targeting, measuring and managing investment risk and the Total Portfolio Investment Framework described on page 29. The IPC specifically approves:

> Long-term strategy to balance and optimize the three sources of returns (see page 24);
> Definition and appetite for distinct return-risk factors in the Investment Portfolio;
> Approach for managing other broad factors, such as emerging markets exposure, climate change and sustainable investing practices;
> Appropriate use and limitation of leverage in various forms including recommending to the CEO and Board the level and form of full recourse borrowing by CPPIB;
> New investment programs and their mandates, as well as recommendations to curtail programs; and
> Principles and frameworks for key models and methodologies.

The IPC is also responsible for monitoring performance and risk exposures of the Investment Portfolios and Accounts, and evaluating the success of programs. The IPC delegates specific authorities and responsibilities to investment and operational departments for certain recommendations, next-level-down decisions, implementation and program monitoring.

The IPC may undertake strategic investments that will fall under its accountability while delegating their day-to-day management to a particular investment group.

The IPC has designated two subcommittees, one dealing with strategic tilts and the other with liquidity. The former oversees the activities of the Strategic Tilting team, as described on page 39. The latter oversees the overall liquidity position of the Fund. CPPIB has the ability to raise funds through the issuance of commercial paper and medium-term notes, as well as other methods. These provide flexibility in managing Fund liquidity. During the fiscal year, CPPIB expanded both our commercial paper and medium-term note programs as described on page 49. This included a new program of Green Bonds dedicated to the finance of new environmentally sustainable investments. All these borrowings continue to carry the highest AAA credit ratings from Standard & Poor's, Moody's and DBRS.

Measures of success for the IPC are:

- Absolute returns on each Investment Portfolio;
- Net dollar value-added relative to each Reference Portfolio; and
- The delivery of portfolios at the targeted risk level, which are soundly diversified across return-risk factors and progressing efficiently as planned towards their Strategic Portfolio.

Risk management

The Risk group within the Finance, Analytics and Risk department independently provides standard risk metrics and supplementary risk assessments to the Board, the Senior Management Team and the IPC on a regular basis. These assessments include sensitivity tests and various stress scenarios to estimate the potential impacts of major events. For example, we model the potential impact of historical incidents similar to the global financial crisis of 2008–09 and other predictive stresses based on realization of material geopolitical events.

We use multiple statistical techniques including Value-at-Risk to measure the aggregated level of potential losses, which includes equity, currency, interest rate, credit and other risks within our portfolios over a specific timeframe (see page 34). Potential losses are measured over a variety of time horizons and include losses if borrowers default on loans from CPPIB, or if counterparties in financial contracts fail to meet their financial obligations to CPPIB.

CPPIB's risk management framework is further described on page 49.

Transaction approvals

Investment Management Authorities established by the CEO set out the authorities of investment departments to make specific investment transactions for the Fund. The Authorities include the requirement that the Investment Department Decision Committee (IDDC) approve transactions above certain sizes under its terms of reference. Approval by the Investment Committee of the Board is also required for transactions above certain amounts.

Alternative Sources of Liquidity

CPPIB has the ability to raise funds through several channels and instruments. By leveraging our teams' capabilities, our relationships with financial market participants, our scale, and our AAA credit rating, we are able to optimize our funding mix on attractive terms to both maintain our liquidity targets and enable our investment strategies. Our primary means of generating cash funding include:

> We issue debt securities to investors through our Commercial Paper (short-term) and Term Debt (medium- and long-term) programs.

> We obtain desired investment exposures using derivatives in place of physical holdings in certain instances; and

> We borrow and lend securities through our i) prime broker accounts, ii) direct bilateral arrangements with leading financial institutions and iii) repurchase agreements.

Risk/Return Accountability Framework

Accountability	Risk/Return
Board of Directors[1]	> Reference Portfolios > Strategic Portfolios
Human Resources and Compensation Committee[1]	> Compensation and incentive frameworks
Investment Planning Committee	> Ranges of Target Portfolios > Departmental asset and risk targets > Program approvals and investment department guidance > Total portfolio risk management > Returns and DVA of Investment Portfolios
Investment Departments	> Active programs to generate exposures, returns and value-added
Total Portfolio Management	> Balancing programs to deliver intended total return-risk factor exposures

1 Approval of Management recommendations.

Investment departments and groups
Each investment department or group therein is accountable for:

- Decisions to propose or reject new strategies, and to resize or reposition existing strategies, within the overall IPC and Investment Department guidance for total portfolio exposures;
- Identification, access, selection, sizing and exit from investment opportunities and partners;
- Individual investment transactions to build and manage portfolios as guided by the applicable Investment Department guidance; and
- Cost-effective execution of active portfolio management programs within their mandates.

Measures of investment success for each department or group include both absolute returns and the value-added, after all costs, compared to appropriate risk-adjusted performance benchmarks. Equally important is their contribution towards delivering the targeted return-risk factor exposures and total return of the Investment Portfolios.

How we measure and compensate performance

Each year, the Human Resources and Compensation Committee (HRCC) of the Board of Directors approves the compensation structure for all levels of employees. The structure ties incentive compensation to the following elements:

1. Total Fund investment results, with equal weighting given to total return and dollar value-added relative to the Reference Portfolios. Both are calculated over rolling five-year periods, aligning with our long-term perspective;
2. Department and group performance, measured against a variety of objectives set in the annual business plan; and
3. Individual performance.

Full details of our compensation system are provided in the Compensation Discussion and Analysis section, beginning on page 87.

All returns used for incentive compensation purposes are calculated after deducting all investment costs, external manager and other fees, as well as internal operating expenses.

How we set performance benchmarks and value-added targets

At the total portfolio level, returns on the Reference Portfolios form the benchmarks. At the investment group level, the Finance, Analytics and Risk department recommends and measures specific benchmarks and long-term competitive value-added targets for each program. These targets represent the broad investment characteristics of each program, its risk exposures and its inherent opportunities. The targets are then used as part of the annual assessment of each investment group's success.

Our external auditors examine the methods and results for determination of actual and benchmark returns at the total Fund level.

Specific benchmarks are used for individual investment programs, to which a value-added target spread is added for each program:

- Public Markets absolute return strategies: Most public market active programs aim to generate returns that are largely independent of market movements. At the start of each year, we establish risk allocations and target Information Ratios for all programs. An Information Ratio is a risk-adjusted measure of performance, calculated as the net value-added divided by its annualized volatility. The combination of risk allocation and Information Ratio gives us return targets for the respective programs. For any program incorporating deliberate systematic risk, a representative public index (or blend of indexes) is used as the benchmark
- Private Equity: Large/mid-cap public equity index for developed or global markets depending on the program
- Natural Resources: Developed Energy large/mid-cap public equity index
- Infrastructure: Weighted blend of indexes of global large/mid-cap public equities and G7 government bonds
- Private Credit Investments: Weighted blend of three indexes – U.S. leveraged loans, U.S. high-yield corporate bonds, and emerging market bonds
- Private Real Estate Equity: Global Property Fund Index
- Private Real Estate Debt: Weighted blend of indexes of investment-grade Real Estate Investment Trust (REIT) bonds and leveraged loans

INVESTMENT DEPARTMENTS OVERVIEW

This section provides an overview of the responsibilities of our investment departments:

> Total Portfolio Management (TPM)
> Capital Markets and Factor Investing (CMF)
> Active Equities (AE)
> Credit Investments (CI)
> Private Equity (PE)
> Real Assets (RA)

Details about the fiscal 2019 and longer-term performance for each investment department begin on page 63.

Total Portfolio Management

The primary focus of the Total Portfolio Management (TPM) department is long- and medium-term design of the Investment Portfolios, and ongoing implementation of the Total Portfolio Investment Framework (see page 29). TPM's mission is to coordinate and guide the organization's investing activities for both the base CPP and additional CPP accounts to collectively manage a total portfolio that maximizes long-term returns without undue risk. To achieve this mission, TPM has the following broad responsibilities:

- Develop the recommended Reference Portfolios, and the long-term return-risk factor allocations leading to the Strategic Exposures, for each of the Investment Portfolios.
- Develop the ranges for the current-year Target Portfolios, and the shorter-term path for the composition of the Investment Portfolios within those ranges.
- Develop the medium-term construction of the Core Pool in which both Investment Portfolios invest.
- Align the investment activities of other departments and investing groups to help ensure that each contributes effectively to the Investment Portfolios in a coherent way.
- Manage the Core Pool Balancing Portfolio components such that they achieve and maintain intended total portfolio exposures on a day-to-day basis. TPM works closely with the Financing, Collateral and Trading (FCT) group to optimize the efficient construction of the Balancing Portfolio components through public securities selection.
- Guide the Investment Portfolios' overall foreign currency exposures (excluding active tactical currency allocation). Our currency hedging approach is described on page 27. Centralized currency management is more cost-effective and provides better control of overall exposures than managing currencies within each investment department.

TPM is organized into four investing groups:

Portfolio Design

The Portfolio Design group identifies and analyzes the return-risk factors it believes sufficiently characterize the behaviours of the global markets in which CPPIB invests. The group determines the long-term aspirational allocation of the Investment Portfolio for each of the two CPP accounts within the specific risk appetites set by the Board and Management. Based on these decisions, the group annually constructs targeted ranges of asset and risk allocations to each of the investment programs in the Active Portfolio in a systematic and well-diversified manner, subject to liquidity and other constraints. The group is also responsible for the asset/liability modelling of the CPP for portfolio design purposes, including the periodic review of the Reference Portfolios.

Active Portfolio Management

The Active Portfolio Management group is responsible for aligning active program activities with CPPIB's desired long-term portfolio and for optimizing CPPIB's intellectual capital. Applying its ongoing research on investment strategies, the group annually provides the coordinated strategic factor allocations and other characteristics, described more fully on page 32, that guide each of the managed programs in the Active Portfolio on the types and amounts of investments they should target in their specific portfolios. The Investment Department guidance ensures the optimal diversification benefits of factor exposures and active management strategies across investment programs.

Balancing Portfolio Management

The Balancing Portfolio Management group is responsible for the day-to-day management of the Balancing Portfolio. The objective of managing this portfolio is to ensure the Core Pool has each of the desired exposures, once the active and balancing portfolios are combined. Monitoring the exposures of each Investment Portfolio, the group determines when, to what extent and by what means rebalancing is required to adjust exposures. This group also works with the Financing, Collateral and Trading (FCT) group to design and execute appropriate and cost-efficient re-balancing trades.

Portfolio Engineering

The Portfolio Engineering group designs and builds fully systematized investment processes that affect the design of CPPIB's investment strategy and the management of the Investment Portfolios. Its ongoing research also provides value-added analytics and insights to support total portfolio management decision-making.

TPM's annual portfolio design process is integral to the ongoing development of the total Fund. TPM and the other investment departments first scope out the full range of potentially attractive investment areas in each active program over five- and one-year periods. Considering the Fund as a whole and taking into consideration both accounts, TPM works with each of the other investment departments to narrow down these areas to the preferred five-year deployment range for each program. This enables the Fund to achieve the aspirational return-risk factor allocations in a feasible and practical manner, through the long-term portfolio construction and Investment Department guidance annually approved by the Investment Planning Committee.

Capital Markets and Factor Investing

In fiscal 2019, the Capital Markets and Factor Investing (CMF) department was created. Its primary goal is to ensure that CPPIB will have the flexibility to efficiently gain access to a broad array of sources of return in public equities, fixed income securities, currency, commodities and derivatives on a global basis. It also engages investment managers and makes co-investments in public market securities. CMF adds value primarily through diversification and strategic tilting. These exposures complement and extend the returns that CMF can achieve through other investment programs, which are primarily based on security selection.

CMF's activities can broadly be broken down into the following categories:

1. Using CPPIB's comparative advantages to generate alpha in a variety of systematic and discretionary investment programs, including our external investment management partners.
2. Generating sustainable and scalable investment income from risk premia programs, which earn returns from a diversified portfolio of systematic risk factors. CMF is responsible for managing the Fund's overall public markets exposures in close co-operation with Total Portfolio Management (TPM), and under the supervision of the Investment Planning Committee (IPC).
3. Managing collateral, financing and trading needs, which includes the total Fund liquidity and CPPIB's secured and unsecured debt programs.

To carry out these activities, CMF is organized into five groups:

Quantitative Strategies & Risk Premia
The Quantitative Strategies & Risk Premia (QSRP) group delivers returns by building and maintaining a portfolio spanning both systematic alpha and risk premia factors across global asset classes. The group's approach is to invest in well-defined systematic factors providing compensated sources of risk that drive asset returns. The group manages mathematical and statistical modelling (quantitative strategies) to combine sources of return from alpha and risk premia into a portfolio with an attractive risk-return profile. The portfolio also has a lower correlation to broad market indexes and other standard sources of return.

External Portfolio Management
External Portfolio Management (EPM) oversees a portfolio of externally managed funds and separate accounts that complement CPPIB's internal investment programs. The group has relationships with 58 asset managers globally across mandates covering public market equities, credit, interest rates, currencies and commodities. EPM forms long-term partnerships, irrespective of whether the underlying fund strategy is short- or long-term in nature. The group also makes co-investments alongside our fund partners. EPM collaborates with all CMF groups to share ideas and best practices.

Macro Strategies
Macro Strategies (MS) manages five discretionary investment programs for CMF, including strategic tilting (see page 27). The group invests across multiple asset classes in all major developed and emerging markets, utilizing CPPIB's structural advantages of scale, long time horizon and learned expertise to generate returns in excess of market benchmarks.

Financing, Collateral and Trading
The Financing, Collateral and Trading (FCT) group is responsible for CPPIB's financing activities. This includes managing collateral and sourcing liquidity by issuing secured and unsecured debt. It also sources liquidity using synthetic financing. The group is also responsible for the asset/liability management of the firm's portfolio. Finally, FCT oversees CPPIB's centralized trading in major markets across all public asset classes (excluding credit) on behalf of CPPIB's investment teams and the balancing portfolio.

Research & Innovation Group
The Research & Innovation Group (RIG) focuses on defining and leading the global research process in CMF, developing the research agenda in partnership with the department's groups. Additionally, this group has a strong focus on innovation. It actively pursues unique approaches to the development and application of novel forecasting, analysis and portfolio construction techniques. As data is a critical input for both research and portfolio management, RIG is focused on data sourcing and data engineering. RIG also works on data discovery as part of its research, to identify valuable new sources of information and incorporate them into research and investment programs.

Active Equities

Active Equities (AE) invests globally in public (or soon-to-be-public) companies via common shares or equity-linked securities, across all sectors in the Americas, Europe and Asia. It also invests in long-term themes through public equities and the engagement of investment managers, as well as in select earlier-stage private companies. The Sustainable Investing group looks at environmental, social and governance (ESG) factors to assist investment teams.

AE is organized into the following investment groups:

Active Fundamental Equities

Active Fundamental Equities (AFE) invests in public equities across global markets using long-term fundamental analysis to inform our security selection. This results in a collection of single-company investments that can be left largely unmonitored and unchanged for periods of time. AFE assembles these investments into a long/short, market-neutral portfolio using an optimization process that aims to minimize or remove unintended factor exposures. The result is a portfolio with maximum exposure to fundamental research insights and little else.

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 for transformative growth. FEA aims to generate alpha over the long term in Asia with a market-neutral portfolio.

Relationship Investments

Relationship Investments (RI) makes significant, direct minority ownership investments in public or soon-to-be-public companies. It chooses situations in which capital from CPPIB can make a meaningful difference to the success of the company and therefore help it outperform relative to peers in the long term. RI has expanded its geographic reach to include companies in Canada, the United States, South America and Europe. In particular, the group focuses on transformative growth opportunities and transactions involving large ownership blocks.

In most cases, RI obtains governance rights commensurate with the importance of its stake. In turn, the company benefits from having a supportive cornerstone investor with a longer time horizon. Furthermore, through its Direct Equity Investments (DEI) arm in São Paulo, RI invests in equities in Latin America, with the ability to purchase both private and public equities as well as equity-linked instruments. This flexibility allows DEI to maximize its revenue-generating opportunities in those markets. It also enables the program to invest in listed entities and in private companies, either before or during initial public offerings. This helps align CPPIB's long-term interests with those of other investors.

Thematic Investing

Thematic Investing (TI) conducts research and makes investments to gain exposure to long-horizon investment themes across the globe. Since these themes evolve over many years (in some cases decades), they align well with CPPIB's long-term investment strategy. Capital may be deployed using public or private asset classes as well as fund investments.

Sustainable Investing

The Sustainable Investing (SI) group brings expertise in environmental, social and governance (ESG) matters to its work with investment professionals across all of CPPIB's investment departments. We believe that considering ESG factors in investment decisions and asset management activities will lead to better long-term investment performance across the Fund. A company's approach to ESG often serves as a good indicator of the quality of the business and its management and board oversight. It is also an indicator of corporate performance over the long term.

SI works with the investment teams to ensure that ESG risks and opportunities are incorporated into investment decision-making and asset management activities. The group also supports CPPIB's role as an active, engaged owner. It works to enhance the long-term performance of companies in which CPPIB invests by engaging, either individually or collaboratively, with other investors. Engagement activity is directed at companies that present material ESG risks and opportunities. This is determined by research into the company, industry and region, along with an examination of industry standards and global best practices related to ESG. Rather than excluding companies from CPPIB's Investment Portfolios based on ESG factors, SI works with them to promote positive changes on ESG issues that we believe are material to investment value. Sustainable Investing has five engagement focus areas: climate change, water, human rights, executive compensation and board effectiveness.

SI's climate change work supports CPPIB's broader efforts on this issue, as outlined on page 28.

In addition to engagement work done by the SI group directly, CPPIB also has a global collaborative engagement with Hermes Equity Ownership Services (Hermes EOS). Hermes EOS's work on behalf of SI focuses on sectors most exposed to climate change, including oil and gas, mining, metals, materials, utilities, automotive and financial services, as well as supply chain considerations in the retail and consumer goods sectors.

We continue to support the annual Climate Change Information Request by the CDP (formerly the Carbon Disclosure Project). It seeks increased disclosure and management of climate change risks from more than 6,900 companies globally on behalf of investors.

The SI group has taken over responsibility for the ESG integration and due diligence for direct private equity investments. This complements and builds on its ESG skill and expertise in public equities. As an extension of this, SI is now responsible for a newly defined framework aimed at considering climate change risks in material security selection decisions.

The approach and activities of the Sustainable Investing and investment teams are described in detail in the *Report on Sustainable Investing*. This report is published annually and is available on the CPPIB website.

Credit Investments

Credit Investments (CI) is responsible for all of CPPIB's public and private credit investments globally. CI invests in all credit and credit-like products across the capital structure, in all sectors and at all levels of risk, with the exception of local-currency sovereign bonds. The department focuses on liquid/syndicated and direct investing in both investment and sub-investment grade corporate and consumer debt or credit. CI invests in both the physical and synthetic markets.

Direct investing made by CI may include corporate debt, consumer credit, structured credit, real asset-backed financing and royalty-related income streams. These are sourced through participation in custom event-driven opportunities such as acquisitions, refinancings, restructurings and recapitalizations. In select cases, CI also commits to debt funds to access manager expertise or existing strategic benefits, such as origination or due diligence capabilities. To achieve scale, CI invests in platforms and deployment vehicles and may achieve this exposure through an equity investment.

The CI department is organized into six investment groups:

Americas Leveraged Finance
Americas Leveraged Finance (ALF) invests in sub-investment grade credit or credit-like opportunities in both the primary and secondary markets across the Americas. Typical investments include leveraged loans, high-yield bonds, unitranche loans, bridge financings, convertible bonds, mezzanine debt and preferred equity. ALF's portfolio also includes Antares Capital, a leading provider of financing solutions to middle-market private equity sponsors in North America.

Americas Structured Credit and Financials
Americas Structured Credit and Financials (ASCF) invests in sub-investment grade structured credit and debt capital solutions for financial institutions. It also invests in intellectual property in markets across the Americas. Typical investments include purchasing or financing whole loan portfolios, residential mortgages, consumer credit, other smaller-scale credit and collateralized loan obligations (CLO) equity. The group also invests in royalty-related income streams backed by tangible and intangible assets globally.

APAC Credit
APAC Credit (APAC) focuses on sub-investment grade corporate and structured credit in the Asia-Pacific region, with the ability to provide both U.S. dollar and local currency solutions. Typical investments include leveraged loans, high-yield bonds, convertible bonds, mezzanine loans and structured credit products. The group invests in both primary and secondary credit markets.

European Credit
European Credit (EC) focuses on all types of sub-investment grade corporate and structured credit in Europe, including leveraged loans, high-yield bonds, convertible bonds and structured products. The group has a mandate to invest across Europe in any sector, with the flexibility to fund in multiple European currencies. EC invests in both liquid and illiquid credit instruments in both primary and secondary markets, including performing and non-performing loan portfolios.

Public Credit
Public Credit (PC) invests in investment and sub-investment grade, public, single-name credits and credit indexes globally. Instruments used by PC include corporate bonds, hard currency sovereign debt, credit exchange-traded funds, credit derivatives, asset-backed securities, residential mortgage-backed securities and collateralized loan obligations. PC also manages the balancing credit portfolio to balance the credit exposure for the Fund (see page 32 for more details about the Fund's Balancing Portfolio). The group also executes trades for all strategies in CI.

Real Assets Credit
Real Assets Credit (RAC) invests in public and private markets in the following asset classes: real estate (first mortgages, B-notes, mezzanine debt, preferred equity and single-asset commercial mortgage-backed securities); energy and resources (senior debt, subordinated debt, preferred equity and mineral royalties), infrastructure and renewables (project finance, loan finance and bond finance).

Private Equity

The Private Equity (PE) department makes private equity investments globally. These investments are well suited for large, patient and knowledgeable investors. PE focuses on high alignment of interests between shareholders and management and emphasizes long-term value creation to deliver attractive risk-adjusted returns. PE maintains relationships with over 140 private equity fund managers and other specialized partners. It seeks to generate additional investment opportunities to both scale assets under management and add incremental returns in the most efficient manner.

The PE department is organized into four investment groups:

Private Equity Funds
With a diverse and well-established portfolio of private equity managers, Private Equity Funds pursues investments that are expected to outperform public benchmarks and create CPPIB-wide partnering opportunities. The group makes multi-year commitments to established large- and middle-market buyout and growth equity funds in the Americas and Europe. It selectively backs emerging managers with limited track records or institutional history. The group also makes minority, passive direct investments alongside our private equity fund partners.

Direct Private Equity
Direct Private Equity (DPE) focuses on making direct investments in private companies across North America and Europe. DPE considers the full spectrum of ownership structures from passive, minority positions to 100% control. The group invests in all sectors except real assets, with a focus on sizeable investments alongside aligned partners. These partners include family offices, like-minded long-term investors, corporations, entrepreneurs and management teams.

Private Equity Asia
Private Equity Asia focuses on private equity investments in the Asia-Pacific region through commitments to private equity funds, participation in the secondary market and direct investments in private companies alongside our private equity fund partners (GPs) and other like-minded partners.

Secondaries
Secondaries participates in the private equity secondary market in North America, Europe and Latin America. The group has three core strategies:

> The acquisition of limited partnership interests (LP Secondaries);
> GP-led transactions that provide partial or whole-fund liquidity solutions (GP-led Secondaries); and
> Structured investments in a portfolio of private equity assets to provide capital to private equity funds and to GPs (Structured Secondaries).

Real Assets

Real Assets (RA) is focused on building a globally diversified portfolio that delivers stable and growing income to the Fund. The RA portfolio consists of investments in the real estate, infrastructure, power and renewables, agriculture and energy and resources sectors. Investments in these sectors are typically long-term, capital-intensive businesses that generate relatively predictable cash flows that rise with inflation over time. Exposure to real assets, which is generally under-represented in the public markets, also provides significant diversification benefits to the Fund. The Real Assets department comprises four investment groups: Real Estate, Infrastructure, Energy & Resources and Power & Renewables. It also includes the Portfolio Value Creation group.

Real Estate
The Real Estate (RE) group invests in high-quality commercial properties globally through both the private and public markets. The group takes a targeted approach by focusing on investing with experienced partners, allowing for sufficient scale to investment activities.

The group's portfolio consists primarily of investments in top-tier, income-producing properties that generate a stable income stream and are suitable for long-term ownership. RE also pursues development-oriented strategies where attractive risk-adjusted returns are supported by favourable supply and demand dynamics. This "build to core" strategy is designed to develop high-quality assets that will be suitable for long-term investment once completed. As the portfolio has matured, select value-added investments have been included with the goal of enhancing the portfolio's core return profile. Such programs are typically asset rehabilitation or repositioning strategies that require active asset management.

RE remains focused on core geographic markets and sectors:

- The key developed markets of Canada, the U.S., the U.K. and Australia, as well as the key emerging markets of Brazil, Greater China and India; and
- The four main commercial property sectors: office, retail, industrial and housing.

These markets and sectors are among the largest and most liquid in the real estate investable universe and continue to form the majority of our portfolio.

In addition, the group recently established the Listed Real Estate (LRE) program to further enhance the risk-return characteristics of the portfolio by investing in public real estate. The mandate of this program is to gain exposure to countries and sectors that are absent or under-represented in the private real estate portfolio, and to invest in situations where real estate exposure is fundamentally cheaper in the public market than in the private market.

Infrastructure
The Infrastructure group invests globally in large-scale infrastructure companies that provide essential services within the utilities, transport, telecommunications and energy sectors. The group focuses on investing in lower-risk, asset-intensive businesses with stable and predictable long-term returns. These businesses typically operate within strong regulatory or contracted frameworks and afford us significant shareholding stakes and meaningful governance rights.

The Infrastructure group targets private and public-to-private equity investment opportunities in both developed and emerging markets and often invests with other like-minded partners. The group can also deploy additional capital to support growth opportunities in its existing portfolio companies and work alongside management teams to drive operational and financial improvements through proactive asset management initiatives.

Energy & Resources
The Energy & Resources (E&R) group, formerly called Natural Resources (NR), has a diversified investment mandate across oil and gas, energy midstream, merchant power and liquefied natural gas, mining and energy-related technology. Specifically, the E&R group focuses on key investment themes around energy transition, global gas, electrification and energy infrastructure. This has led to partnerships in upstream, midstream, merchant power and technology.

E&R pursues investments in wholly owned platforms to focus on building companies with strong management and long-term value creation. The group is also involved in direct resource investments, where it provides financial solutions in special situations such as joint ventures, add-on financings and royalty-related income streams. In addition, E&R provides private equity capital, which is generally for shorter-duration investments, including the backing of management teams.

To further broaden its range of opportunities, the group launched its Innovation, Technology and Services strategy this year, with a mandate to seek early-stage investments in technologies that are aligned with the group's broader sub-sector strategies and energy transition. E&R has noted that the industry is undergoing significant change from new, earlier-stage technology companies that are both creating and improving existing processes and technologies. This increased industry focus on energy transition is resulting in many new innovative technologies and numerous investment opportunities.

Power & Renewables

The mandate of the Power & Renewables (P&R) group is to invest globally in the power and renewable energy sector. P&R invests in companies, joint ventures or platforms that own, operate and manage portfolios of conventional power, wind, solar, hydro and other assets. The group is building a balanced portfolio composed of projects that are under development, under construction or already operating. It has a mix of lower-risk, longer-term contracts and power market exposure.

The group seeks to deliver attractive risk-adjusted returns for CPPIB by leveraging CPPIB's comparative advantages. It is investing in a large, dynamic and capital-intensive industry created by the transition from carbon-intensive economies to greener, electric energy-intensive markets. The decreasing cost of renewable energy and global and regional climate change policies are creating new investment opportunities. Increased electrification and energy intensity in emerging markets, increasingly delivered through renewable energy, enables P&R to deliver meaningful emerging market exposure to CPPIB.

P&R will look for opportunities of significant influence or control and larger investments, which typically present diversified regional or global portfolios. The P&R team also manages CPPIB's agriculture investments.

Portfolio Value Creation

Portfolio Value Creation (PVC) is responsible for value creation initiatives across CPPIB's global portfolio of material direct equity investments. PVC works closely with deal teams, portfolio company management and deal partners to create value within portfolio companies. The group works across all sectors and geographies and in every phase of the deal life cycle. PVC assists in due diligence, enhances governance, actively monitors portfolio companies and drives operational change. It also ensures the transfer of best practices across all CPPIB's asset management and value creation activities.

OUR PEOPLE AND CULTURE

As CPPIB continues to grow and evolve, our purpose-driven culture drives our global reputation and success. Our unique culture is strong and anchored by our Guiding Principles and Code of Conduct. It remains dynamic and adaptable – as it must. Our CPPIB 2025 strategy calls for evolving *how* CPPIB employees work, encouraging them to strive for agility, ambition, innovation and inclusion. It also focuses on becoming a truly global enterprise in which employees across our locations feel fully included, collaborate with peers and have a consistent workplace experience.

In support of these objectives, we are making efforts to drive a more integrated, holistic approach to culture, engagement and employee experience – an effort led by our Chief Talent Officer. CPPIB also continues to innovate our employee communication activities through enhanced internal channels and compelling content, including expanded use of a leader blog platform.

Global workforce

CPPIB's workforce continues to grow across our global locations to support our mandate. Our offices in priority emerging markets, where we experienced 15% employee growth since the end of fiscal 2018, are a particular strength. We also continue to encourage transfers and secondments across locations. These internal opportunities help us meet our business needs and bring important benefits in professional development. They also foster inter-office alignment and collaboration. This fiscal year the volume of our international assignments and transfers increased by 58%, compared to the prior year. At the end of fiscal 2019, we had 1,661 full-time employees. The totals in each location were: Toronto – 1,310, London – 156, Hong Kong – 105, New York – 42, São Paulo – 21, Mumbai – 13, Sydney – 10, and Luxembourg – 4.

Talent development

CPPIB continues to make important progress on our comprehensive talent management strategy, which we introduced in 2018. Our goal has not changed: we aspire to hire, develop and retain high-performing individuals in an environment of apprenticeship, opportunity and recognition. We continue to make important enhancements to our workplace programs informed by employee preferences and feedback. Notable highlights this year include the introduction of "gigs" (short-term assignments that provide development opportunities outside formal job descriptions), a toolkit and resources to support apprenticeships and an Integrated Career Framework. The framework is designed to ensure that conversations and assessments about performance are consistent and transparent across levels, groups and locations. We have also made efforts to become more aligned, proactive and forward-looking in our talent acquisition strategy.

Throughout these efforts, we continue to strive for transparency in our workplace communications. For example, we are sharing more information around our annual senior leadership promotions and compensation rewards. We are also providing more context on the rationale for program changes.

The data below highlight key progress areas:

- Participation in organization-wide development programs increased by 14% (381 employees).
- About 39% of our top performers took on new career opportunities (e.g., “gigs,” promotions, transfers, secondments, special projects and international assignments), an increase of 8% over fiscal 2018.
- Overall, almost 28% of our global workforce enjoyed new career opportunities.

Culture

At CPPIB, we care deeply about our distinctive culture and workplace experience. As such, we put heavy emphasis on programs and activities that reinforce our core values and foster the engagement of our employees.

Our annual Living our Guiding Principles day takes place across our global locations. It features group discussions exploring select scenarios related to the concrete application of integrity, partnership and performance. Employees value the Guiding Principles day highly, and it serves as an important reinforcement of our public accountability, ethical priorities and professional collegiality. Our annual employee engagement survey, meanwhile, points to areas of progress as well as opportunities for improvement. Overall the results remain largely positive. Almost 80% of employees completed the survey. Similar to last year, responses relating to teamwork and collaboration scored the highest, while questions related to inclusion and diversity saw the largest improvement – including one question about bringing one’s true self to work gaining 5%. A third party conducted a complementary targeted survey with a smaller sample of employees. It found that CPPIB’s purpose is prominent across the organization and employees have strong alignment with our mandate and strategic direction.

Our global team continues to put a premium on community engagement and corporate citizenship. Our Get Involved program, for example, provides the structure and guidance for a range of charitable and volunteer activities, including annual participation in the United Way Toronto campaign – which generated almost $550,000 from employee donations.

Inclusion and diversity

We believe our inclusive culture and diverse perspectives lead to exceptional outcomes for the Fund. In support of that, we must continue to attract and retain the brightest people in our field and ensure that we provide an inclusive environment where everyone can feel able to perform at the absolute best of their abilities. Our inclusion efforts, in turn, support our business priorities of driving innovation and agility, among others. We have made notable progress in fiscal 2019 in our inclusion and diversity efforts, including:

- Establishing a new Inclusion & Diversity Steering Committee of senior executives, chaired by CEO Mark Machin;
- Appointing a new full-time leader as Director, Inclusion & Diversity (I&D), who will drive our efforts to embed inclusion and diversity across CPPIB;
- Creating the cross-functional I&D Council, to sponsor the execution of our inclusion and diversity activities;
- Delivering Respect in the Workplace training to 100% of the workforce; and
- Engaging with our Employee Resource Groups to generate continued guidance and insight: Women’s Initiative Network (WIN), Out@CPPIB for LGBT members and allies, and Mosaic, supporting awareness of cultural differences.

Our grassroots groups continue to coordinate internal activities and participation in key industry events, providing an organic way for employees to gain awareness, show support and get involved.

Our internal research – including a fact-finding tour – confirms our progress in our inclusion and diversity efforts. The research also shows there is room for improvement, both in representation and true inclusion and acceptance. Perhaps the most compelling finding is the strong sense of shared cultural experience, anchored by our Guiding Principles, across our teams and locations. This provides a positive and promising foundation for continued improvement.

We have also updated our representation goals based on our 2025 strategy, which calls for an agile, innovative culture that embraces diversity and higher percentages of female investment professionals and visible minorities in senior roles. In support of these efforts, we are introducing a self-disclosure global survey to better understand our current workforce and remove barriers inhibiting engagement, development and advancement.

Even as we evolve our focus on diversity beyond gender, we are pleased to make continued progress in the advancement of women in CPPIB. This year, we achieved our goal of a gender hire ratio of 50%/50%. Today, about 45% of our employees are female – including 36% of our Senior Management Team (SMT).

Addition to the senior leadership team

There was one notable addition to the SMT since the leadership changes mentioned in last year’s report. Kelly Shen joined CPPIB in November 2018 as Senior Managing Director & Chief Technology and Data Officer, responsible for accelerating CPPIB’s technology and data infrastructure. Kelly joins her colleagues on the SMT with a shared mandate to advance the next stage of CPPIB’s evolution and execute CPPIB 2025.

FURTHERING OPERATIONAL CAPABILITIES

Our operational capabilities aim to support the growth and globalization of CPPIB's investment programs. During fiscal 2019, we continued to advance our processes and controls to protect our assets and increase the efficiency of our operations. In particular, we realigned certain internal functions to better position these groups to be able to deliver operational excellence and a scalable support model for the projected growth across all global investment activities.

We continued to mature our risk management practices by establishing a new Risk Committee of the Board. We also finalized a new Integrated Risk Framework and a multi-year plan for implementation. The Framework describes the scope of our risk management activities and ensures that risk principles and practices are applied systematically across the organization. Working with the Board, we refreshed our risk appetite statements, which are critical to risk governance. We also continued to build our risk functions, establishing distinct independent Liquidity Risk and Valuations groups.

During the year, we created a focused Technology & Data department headed by a new Senior Managing Director & Chief Technology and Data Officer. We also launched a Knowledge Management team and new tools to improve knowledge sharing and collaboration across the Fund. We continued to develop core investment research capabilities and build, test and scale up an inventory of data and analytics tools.

We established a permanent Project Management Office (PMO) that will oversee many of our large-scale programs. These include supporting our efforts on climate change, Knowledge Advantage, and, more broadly, the implementation of our 2025 strategy.

We also made numerous updates to our compliance and legal processes, including the design of our transaction support model and piloting enhancements, updates to our business records governance and the launch of a new legal e-billing and matter management system.

We completed the final stage of preparation for the arrival of funds for the additional CPP in January 2019. All systems and business process changes were implemented in October 2018 as planned. We are now operating under the two-account, two-pool investment structure. On the governance front, changes to all polices, standards and procedures were completed and approved.

In addition, in fiscal 2019, we updated our balancing process to use an expanded multi-factor approach with improvements on the existing process. This resulted in a more efficient portfolio based on improved diversification of the underlying drivers of risk and return. It also created a more systematic process that allows for clearer attribution and transparency and more checks and balances to limit operational risk.

ACCOUNTABILITY

CPPIB is accountable to Parliament and to the federal and provincial finance ministers who serve as the joint stewards of the CPP. We report to Parliament through the federal Finance Minister, who tables our annual report in Parliament. We share quarterly financial statements with the federal and provincial finance ministers, publish them on our website in both official languages and disseminate related news releases publicly. We also engage with news organizations, reaching millions of stakeholders, and we are committed to timely and continuous disclosure of significant investments and corporate developments.

In addition, we hold public meetings every two years in the provinces that participate in the CPP. These meetings offer Canadians and stakeholder groups the opportunity to ask questions and learn more about CPPIB. This fiscal year, public meetings were held between October and November 2018 across nine provinces.

CPPIB has committed to appearing annually before the House of Commons Standing Committee on Finance to deliver an update and respond to questions by Members of Parliament.

As required for Crown corporations, every six years we undergo an external Special Examination of our records, systems and practices. The most recent Special Examination was completed in early 2016 and validated our approach to governance and compliance; strategy and planning; investments, risk management and operations; talent and IT infrastructure. A copy of the report is available on our website. The next Special Examination will be in 2022.

All public financial reports issued by CPPIB are subject to review by the Audit Committee of our Board of Directors, which then recommends their approval to the full Board. This includes the Financial Statements and the financial information within the annual report.

We seek to meet or exceed both legislated requirements and industry norms in maintaining high standards of conduct and business practice, including our commitment to ethical conduct and disclosure practices. Our comprehensive governance and accountability framework includes measures designed to preserve public trust.

One of these measures is our Code of Conduct for Directors and employees. This Code, which is available on our website, requires everyone at CPPIB to act as whistleblowers if they become aware of a suspected breach. They can report confidentially to an external conduct review advisor who is not part of Management or the Board of Directors. The advisor submits a report and meets in person with the Board at least once a year to discuss the advisor's activities. Sheila Block, an internationally recognized litigation and dispute resolution lawyer, has served as CPPIB's Conduct Review Advisor since January 2018.

In addition to the Conduct Review Advisor, our Whistleblower Hotline allows employees to report wrongdoing or unethical behaviour related to CPPIB anonymously and securely.

We also have internal standards and policies to ensure that we act responsibly at all times as a major capital markets participant.

Disclosure

We believe in transparency as the foundation of public trust.

Our disclosure policy reflects the level of information that will help inform CPP contributors and beneficiaries about how we are making investments on their behalf. This policy is designed to foster a better understanding of what drives performance, stability and sustainability of the Fund over time.

We are committed to timely and continuous disclosure of significant new investments and asset dispositions. We disseminate performance results quarterly and publish an annual report, which contains extensive information about our strategy, Fund performance, investment activities governance, costs and compensation.

We strive for consistent disclosure at the organizational level and within investment programs, recognizing that each program has unique legal, competitive and practical requirements.

Our website contains information about how we operate. This includes details of our investments and partners. It also provides access to CPPIB's governing legislation and regulations, bylaws, governance manual and policies. These policies include the investment statements that guide us in managing the long-term CPP Fund Investment Portfolios. We also maintain digital channels to widely communicate new developments.

We exceed our statutory disclosure requirements. We are committed to reviewing our disclosure policies and practices on an ongoing basis to ensure that they keep pace with the evolution of the organization and the needs of Canadians.

Beyond statutory disclosure, CPPIB undertook programs in 2018 to directly reach CPP contributors and beneficiaries and help them better understand how management of the Fund is intended to work for them. We also addressed topics affecting public trust. Public opinion research conducted by CPPIB found consistently low public confidence in the sustainability of the Fund and in understanding how the Fund is managed. Informing Canadians is important because CPPIB's investment strategy exposes the Fund, by design, to a number of risks. Moreover, trust is the lifeblood of any significant financial system, and the national retirement program is no exception.

We want Canadians to be informed about our investment strategy and what this means for how we manage their money. Our efforts in fiscal 2019 furthered this goal by enhancing our digital presence so that we share information about CPPIB to a broader group of Canadians; engaging with media across Canada to help articulate our investment approach; and implementing a public awareness initiative to inform Canadians that the CPP will be there for them and for generations to come.

RISK MANAGEMENT

CPPIB's activities expose us to a broad range of risks. Our Integrated Risk Framework considers all key risks, including both investment and non-investment risks. It helps ensure that the risks we take are prudent and commensurate with the long-term benefits we expect to receive.

We define a key risk as one that could have a significant impact on our ability to execute our mandate. In our assessment of key risks, we consider how different risks are interconnected and/or correlated.

Risk environment

The environment in which CPPIB operates is dynamic, and the pace of change is high. These changes may impact our risk profile, the development of our risk-management practices and our ability to achieve our investment objectives. This past year, we closely monitored the following developments to assess their potential impact on our investments and operations over time:

> Global uncertainty remained a top risk throughout fiscal 2019. Political events in the U.S. continued to dominate the headlines, which increased uncertainty. Concerns also persist around the changing political landscape in Europe and the Brexit negotiations. We expect the geopolitical environment to remain uncertain in fiscal 2020 as Democrats in the U.S. look to oppose Republican policies, and U.S.-China negotiations continue.

> Increasing capital inflows into alternative assets have resulted in high valuations in private markets. This has made it increasingly difficult to source opportunities with attractive risk-adjusted returns. It also elevates the risk of a fall in prices across public and private markets, given extended stock market gains in the past several years.

> The strong U.S. dollar and labour markets have made it more challenging to attract and retain a diverse talent base of specialized investment professionals with global expertise.

> Growing competitive pressures from new technologies and business models. Our investments and operations could feel the impact if we fail to anticipate the degree of these pressures. This is particularly true in the medium to long term.

> Cyber security breaches in both the public and private sectors have illustrated the difficulties organizations are facing trying to keep pace with the rapidly evolving cyber threat environment. We continually enhance our practices to ensure our information is protected.

> Climate change presents a complex array of physical and non-physical risks and opportunities across our investment activities. This is discussed more thoroughly in the Climate Change section on page 28.

Risk Management Objectives

CPPIB's risk management objectives are to ensure that we:

1. Understand and clearly articulate the organization's appetite for risk, including defining "undue risk of loss" in the context of our mandate, considering both the short and long term;
2. Are appropriately rewarded for risks we take on in pursuing both our overall investment strategy and specific investment opportunities;
3. Operate within our stated risk appetite by monitoring our risk exposure and by evaluating the design and operating effectiveness of our controls; and
4. Clearly define who is accountable for various risks and the related controls.

Enhancing our risk management practices

Effective risk management, along with our comparative advantages, allows us to capitalize on opportunities when others cannot. As part of our efforts to continuously improve our risk management practices, we made several enhancements this year. We:

- Worked with the ad hoc risk committee of the Board to evolve our risk management practices. The Board formally constituted a standing Risk Committee in late fiscal 2019 that will be chaired by Jo Mark Zurel. Its purpose is to oversee risk governance and management practices and make recommendations to the Board.
- Enhanced our Integrated Risk Framework. This is based on:
  - > A strong governance structure that includes a risk-aware culture, risk policies, defined risk appetite and risk limits;
  - > Processes for identifying, assessing, controlling, monitoring and reporting all key existing and emerging risks; and
  - > Clear separation between front-line management, risk oversight functions and independent assurance (the "Three Lines of Defence").

Risk culture

We believe that formally documented controls can only be effective with a sound organizational risk culture. This is characterized by open dialogue, a willingness to raise concerns and clear accountabilities.

Our Guiding Principles and Code of Conduct provide a strong foundation for our culture, which is reinforced by a strong tone from the top.

- Amended our risk appetite statements, which are a critical component of CPPIB's overall governance and risk oversight framework. While we have changed the way we articulate our risk appetite, which sets the upper and lower limits for risk taking, we did not materially change the level of risk the Fund is targeting. We continue to believe the current level of investment risk is appropriate.

The above changes will also position us for the future when the Fund will be much larger.

Risk governance

The Board, Management and their respective committees are responsible for risk governance at CPPIB. The Board of Directors oversees our efforts to act in accordance with CPPIB's mandate. This requires us to seek a "maximum rate of return, without undue risk of loss, having regard to the factors that may affect the funding of the CPP."

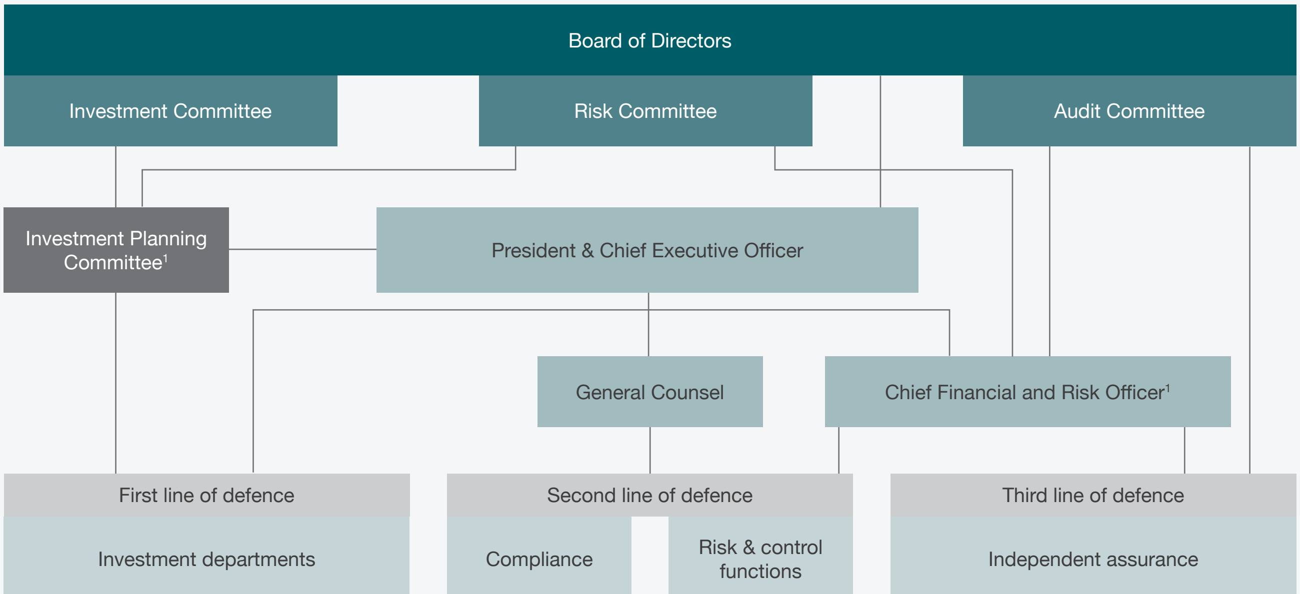
To this end, the Board is responsible for the oversight of risk. It ensures that Management has identified key risks and established a separate risk appetite for each key risk and appropriate strategies to manage them. Board committees have the following risk-related responsibilities:

- > The mandate of the Risk Committee is to oversee risk governance and management practices.
- > The Investment Committee recommends CPPIB's investment policies to the Board and approves and monitors investment activities and risk levels.
- > The Audit Committee oversees financial reporting, tax, external and internal audit and internal control policies and practices.
- > The Human Resources and Compensation Committee (HRCC) is responsible for overseeing risks related to our employees and employment practices. The HRCC reviews and recommends the compensation framework, reviews organizational structure, and ensures that a succession planning program is in place.
- > The Governance Committee ensures that CPPIB follows appropriate governance best practices and monitors application of the Code of Conduct and conflict of interest guidelines.

For a more detailed description of these responsibilities, see page 103.

The diagram below shows CPPIB's risk management structure.

Risk Management Structure



1 The Chief Financial and Risk Officer is a member of the Investment Planning Committee.

The President & CEO, by way of delegation from the Board of Directors, is accountable for all risks beyond those matters specifically reserved for the Board or Board committees. The responsibility for risk management is further distributed throughout the organization, starting with the Chief Financial & Risk Officer (CFRO) and Senior Management Team (SMT).

The CFRO ensures that risk management is integrated with strategic and business planning. Through the business planning process, the CFRO ensures that plans align with our overall strategy and risk appetite and that adequate resources and processes are in place to identify and effectively manage key risks.

As shown above, we have three lines of defence that help ensure clear separation between front-line management, risk oversight functions and independent assurance:

First line of defence: The leaders of each department are responsible for appropriately managing the risks assumed within their areas of responsibility.

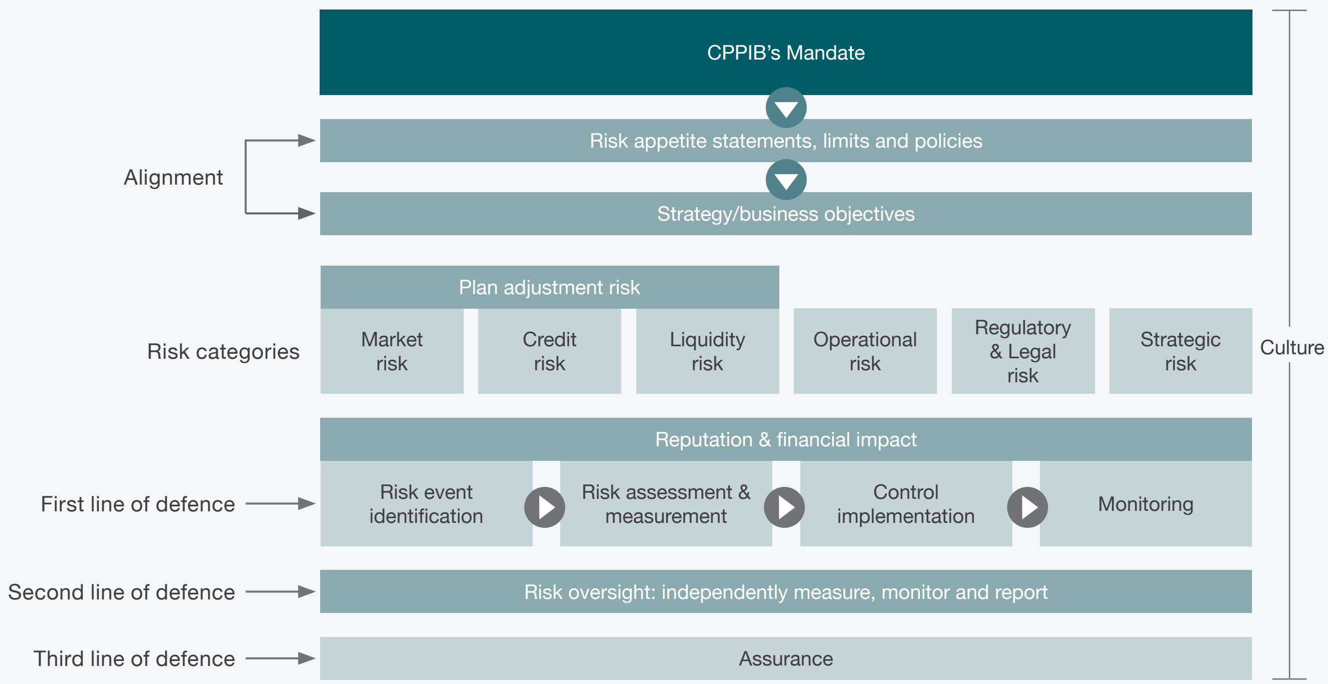
Second line of defence: The CFRO is responsible for risk oversight at CPPIB. The Risk group is responsible for independently challenging the front-line's identification, assessment and management of risks; develops, measures and monitors compliance with all approved risk appetites; and assesses emerging risks for the organization.

Third line of defence: The Assurance & Advisory group (AA) provides independent assurance over risk governance and internal controls.

Our approach to investment risk governance is described further on page 35.

The diagram below shows CPPIB's Integrated Risk Framework.

Integrated Risk Framework



Risk categories and risk management strategies

Plan adjustment risk: This is the risk of increases in the Minimum Contribution Rates due solely to adverse investment experiences. It is an overarching risk to Market Risk, Credit Risk and Liquidity Risk. Calculated by the Chief Actuary, the Minimum Contribution Rates are considered the rates required to sustain the base CPP and the additional CPP, as applicable.

Market risk: This is the risk that the value of an investment will fluctuate because of changes in market prices and rates. Market risk includes changes in value due to underlying shocks in equity markets, interest rates, currency exchange rates and credit spreads.

CPPIB manages market risk through the Risk/Return Accountability Framework, as described on page 36. It includes investing across a wide spectrum of asset classes and investment strategies to earn a diversified set of risk premia over the long term at the total Fund level. The management of market risk is supported by a comprehensive set of risk limits and controls established at various levels within the organization.

In fiscal 2019, CPPIB implemented additional predictive scenarios and quantified the potential impact to the total portfolio if these scenarios were to unfold. In addition to these bespoke scenarios, we also applied the severe scenario outlined in the Comprehensive Capital Analysis and Review framework developed by the Federal Reserve Board to our portfolio to further supplement the range of potential impacts we monitor as part of our stress-testing program.

Credit risk: This is the risk of financial loss due to a counterparty failing to meet its contractual obligations. This risk also includes potential reductions in the value of the assets due to a decline in the credit quality of the underlying entity.

We mitigate credit risk exposure on certain financial assets and financial liabilities through conditional offset rights in the event of default, insolvency or bankruptcy. In the case of reverse repurchase agreements, we mitigate risk exposure through collateral from counterparties.

Liquidity risk: This is the risk of failing to obtain the funds needed to meet our payment obligations as they become due, or to fund investment programs or to optimize/rebalance our portfolio in periods of stress, all without realizing unacceptable losses.

CPPIB supplements its management of liquidity risk through its ability to raise funds by issuing commercial paper and term debt and by transacting in securities sold under repurchase agreements. CPPIB also maintains unsecured credit facilities to meet potential liquidity requirements. In addition, CPPIB maintains sufficient liquid assets, which can be easily converted to meet liquidity requirements.

Liquidity risk is managed and monitored according to the Liquidity Management Standards. Market and credit risk are managed and monitored in accordance with the Risk Policy approved annually by the Board of Directors.

In fiscal 2019, CPPIB conducted a financial crisis management simulation to better understand how we can ensure that we have sufficient liquidity to meet our obligations during a market downturn.

Risk Oversight

We have committees to oversee our various investment risk (plan adjustment risk) exposures. The Investment Committee of the Board has traditionally received regular reporting on our assets, investment income, investment returns, risk measures and stress-testing results. Going forward, the Risk Committee will assume certain of these responsibilities consistent with its mandate to provide a focus on risk governance and management. Management's Investment Planning Committee (IPC) receives risk-related information weekly. It reviews the risks in the Investment Portfolio at least monthly through commentaries prepared by TPM and the Risk group. See page 35 for more details about the IPC.

Additional information related to our investment risk exposures and risk measurement and management processes is included in the section called *How We Maintain Management Accountability for Risk-taking and Performance* on page 35. There is also further information in note seven to our Financial Statements on page 142.

Operational risk: This is the risk of loss due to actions of people or inadequate or failed internal processes or systems. It can be the result of either internal or external factors. Operational risk encompasses a broad range of risks, including those associated with:

- Model risk;
- Human capital management;
- Information integrity and cybersecurity;
- Business interruptions;
- Process management and execution; and
- Integrity of financial reporting.

Risk can take the form of:

- Direct financial losses;
- Indirect financial losses appearing as operating inefficiencies;
- Regulatory sanctions or penalties; and
- Damage to our reputation.

Operational risk can also directly impact our ability to manage other key risks.

Each member of the Senior Management Team bears primary accountability for managing operational risks within their department. CPPIB manages operational risk through internal controls that are subject to internal audit reviews. We also conduct an annual review as part of the CEO/CFRO certification of internal control over financial reporting.

The Finance, Analytics and Risk department, and the Technology and Data department, maintain formal protocols for:

- Implementing new investment products and technologies;
- Managing data, models and user-developed applications;
- Ensuring information security; and
- Establishing continuity plans for potential business interruptions.

In addition, we purchase property and casualty insurance and director and officer liability coverage.

In fiscal 2019, CPPIB continued to increase the effectiveness of cyber-security controls through the implementation of advanced technologies. We also built awareness of cyber risks during our firm-wide cyber-security awareness month.

Regulatory and legal risk: This is the risk of loss due to changes to or non-compliance with applicable laws, regulations, rules, contractual obligations, CPPIB's Code of Conduct or other internal policies. This includes those defined in the *CPPIB Act*. Failure to comply could result in fines, regulatory sanctions and/or harm to our reputation.

Our compliance program is designed to promote adherence to regulatory obligations worldwide. It helps ensure awareness of the laws and regulations that affect CPPIB and the risks associated with failing to comply. We monitor emerging legal and regulatory issues as well as proposed regulatory changes. We also take a constructive role in these developments when appropriate. CPPIB regularly seeks input from external legal counsel to keep us informed on emerging issues.

Compliance with tax laws is a particular type of risk under this category. As with any other risk, our aim is to mitigate tax risk while taking into account our investment mandate. CPPIB does this by adhering to the controls and procedures embedded in our internal policies. Tax risks can be technical, operational or regulatory in nature and can have financial or reputation implications.

To help ensure that CPP's contributors and beneficiaries do not pay tax twice on income earned by the Fund, we employ judicious and prudent investment structures designed to maximize after-tax investment returns. Our Tax group plays a key role in evolving CPPIB's tax strategy. It supports decision-making, oversees tax-risk management and evaluates overall tax practices. We review key tax risk both as part of due diligence for individual transactions and at the total Fund level. For more information about CPPIB's tax strategy, please visit our website at www.cppib.com.

The Board, through its various committees and processes, reviews internal controls and systems designed to address key risks for the Fund. This includes tax risk. At the Management level, CPPIB's CFRO is responsible for CPPIB's tax strategy. Day-to-day management of tax risk sits with the Head of Tax, who periodically reports to the Audit Committee.

Strategic risk: This is the risk that CPPIB will make inappropriate strategic choices, will be unable to implement strategies or will fail to be agile enough to respond to changes in the external environment over the long term. Managing strategic risk effectively is critical to achieving our mandate.

A number of important processes control and mitigate strategic risks:

- The Board discusses and reviews our business plan at least annually.
- Each department carries out detailed business planning that takes into account our strategy and longer-term objectives. The President & CEO reviews these plans, leading to an annual business plan approved by Management and the Board.
- We prepare specific guidance for each investment program to ensure alignment with CPPIB's overall strategy and comparative advantages.
- We complete quarterly reviews of the portfolio and associated investment risks in the context of capital market and emerging economic conditions.
- Both Management and the Board conduct quarterly reporting and discussion of our progress, challenges and risks related to achieving the approved business plan.

Impact Assessments of Risks to CPPIB

The above investment and non-investment risks can have both financial and reputational impacts on CPPIB.

Financial: Financial impacts can take many forms including investment losses, unplanned operational expenses and regulatory fines. The higher the risk target, the higher the long-term expected returns but also the greater shorter-term volatility and potential for reported losses. For a description of how we achieve long-term total returns that will help sustain the CPP and pay pensions while ensuring that we manage CPPIB's investments responsibly for current and future generations, please refer to page 29 for Our Total Portfolio Investment Framework.

Reputation: In managing our reputation we seek to avoid the loss of credibility due to internal or external factors. Many types of risk have the potential to negatively impact our corporate reputation. Internal business practices, or those of our business partners or the companies in which we invest, may generate reputation harm. Consequences include diminished brand efficacy in commercial markets, impeding our ability to execute our strategy and our status as investor, partner and employer of choice.

The responsibility to protect our reputation extends to every employee, Management and Board Directors. We continue to proactively build our reputation and brand with key stakeholders globally to support our business objectives and mitigate risk. The Senior Managing Director & Global Head of Public Affairs and Communications oversees CPPIB's corporate reputation and brand management activities, including our issues management framework. Our Issues Management Executive Committee addresses significant issues as they arise. We also require reputation assessments as part of the investment decision-making process through the Reputation Management Framework protocol.

This year, we expanded our efforts to monitor and manage areas of concern across more of our investment portfolio beyond new investments, including a universe of public equities that could potentially become part of our portfolio in the future. This ongoing work to extend existing reputation management programs will help form a more holistic picture of issues that could sway perceptions about the organization. This also helps ensure consistency across the various dimensions of risk.

FINANCIAL REVIEW

This annual report contains forward-looking statements reflecting Management's objectives, outlook and expectations as at May 8, 2019.

These statements involve risks and uncertainties. Therefore, our future investment activities may vary from those outlined herein.

03

Performance and Governance

The following information provides analysis of the operations and financial position of the Canada Pension Plan Investment Board and should be read in conjunction with the Financial Statements and accompanying notes for the year ending March 31, 2019. The Financial Statements have been prepared in accordance with International Financial Reporting Standards.

FINANCIAL PERFORMANCE

Fiscal 2019 produced positive returns across all major asset classes despite an equity market downturn in the third quarter of our fiscal year. The fiscal year began on a positive note with global equity markets broadly rising as key economic indicators outlined continued momentum in the economic cycle, particularly in North America. Central banks in both the U.S. and Canada recognized those economic conditions by slowly raising interest rates toward more neutral levels. However, sentiment changed direction in the third quarter as growing concern surrounding the U.S.-China trade conflict, as well as the global economy's vulnerability to higher interest rates in the U.S., and rich valuations led to a stock market sell-off. Third-quarter losses in global equity markets reversed the gains from the previous two quarters and put major indexes in negative territory. Government bonds benefited from a flight to safety, while the outlook for interest rates reversed, as the market consensus shifted from expecting further interest rate hikes from central banks, to anticipating near-term interest rate cuts, which resulted in yield curve inversions in both the U.S. and Canada. In the fourth quarter, global equity markets rebounded, bringing broad indexes back into positive territory, while government bonds extended their gains from December. The Canadian dollar's performance was mixed this year, having little overall impact on Fund results, weakening slightly against the U.S. dollar, while strengthening against the euro and British pound.

The total CPP Fund earned a net return of 8.9% for the year, delivering net income of $32.0 billion after all CPPIB costs. Starting in January 2019, CPPIB received and invested its first contributions to the additional Canada Pension Plan (additional CPP) account. The base Canada Pension Plan (base CPP) account, which at $391.6 billion represented 99.9% of the net investments at the end of the fiscal year, earned a return of 8.9%, or $32.0 billion, net of all costs. The additional CPP account, which at $0.4 billion comprised 0.1% of the net investments, earned a net return of 5.0% since January 2019, or $11.0 million (exclusive of start-up expenses of $9 million). The chart below provides the weightings of the CPP Fund by asset category, as described on page 32.

Asset Mix

	As at March 31, 2019		As at March 31, 2018[1]	
Asset Class	($ billions)	(%)	($ billions)	(%)
Public Equities				
Canadian	7.9	2.0%	8.7	2.4%
Foreign	82.7	21.1%	103.3	29.0%
Emerging	39.4	10.1%	26.4	7.4%
	130.0	33.2%	138.4	38.8%
Private Equities				
Canadian	1.0	0.2%	1.0	0.3%
Foreign	80.0	20.4%	61.8	17.3%
Emerging	12.1	3.1%	9.6	2.7%
	93.1	23.7%	72.4	20.3%
Government Bonds				
Non-marketable	22.2	5.7%	23.6	6.6%
Marketable	63.9	16.3%	53.2	15.0%
	86.1	22.0%	76.8	21.6%
Credit Investments	35.8	9.1%	22.6	6.3%
Real Assets				
Real estate	47.5	12.1%	46.1	12.9%
Infrastructure	33.3	8.5%	28.6	8.0%
Energy and Resources	8.2	2.1%	6.1	1.7%
Power and Renewables	5.1	1.3%	3.0	0.9%
	94.1	24.0%	83.8	23.5%
External Debt Issuance	(30.9)	(7.9%)	(24.1)	(6.7%)
Cash and Absolute Return Strategies[2]	(16.2)	(4.1%)	(13.6)	(3.8%)
Net Investments[3]	392.0	100.0%	356.3	100.0%

1 Certain comparative figures and percentages have been updated to be consistent with the current year's presentation.

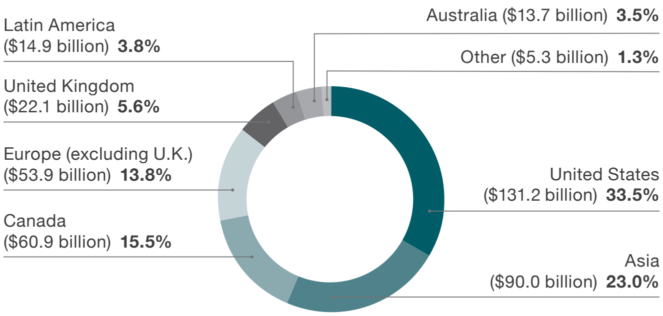
2 The negative balance of $16.2 billion in Cash & Absolute Return Strategies represents the net amount of financing through derivatives and repurchase agreements, and the current net position from Absolute Return Strategies.

3 Includes $391.6 billion of base CPP and $0.4 billion of additional CPP.

The charts below illustrate the global diversification of our portfolio, by region or country and by currency exposure. Canadian assets represented 15.5% of the Fund at the end of fiscal 2019, and totalled $60.9 billion. Foreign assets represented 84.5% and totalled $331.1 billion. Foreign currency exposures represented 84.7% of the Fund. Currency diversification represents the underlying currency exposure of our investments whereas global diversification represents the geographic markets exposure. Private assets made up 54.7% of the portfolio.

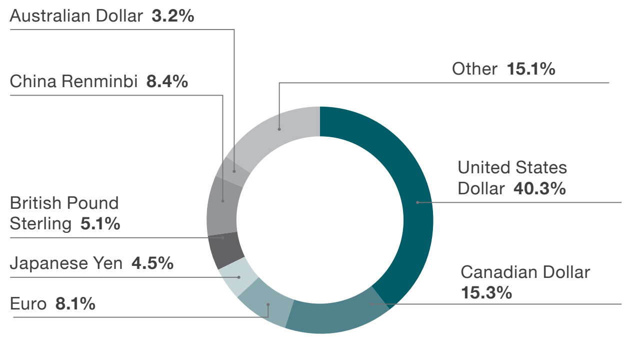
Global Diversification

As at March 31, 2019



Currency Diversification

As at March 31, 2019



Total Fund performance

The CPP Fund ended its fiscal year on March 31, 2019, with net assets of $392.0 billion, an increase of $35.9 billion from the prior year. This increase consisted of $32.0 billion in net income after all CPPIB costs and $3.9 billion in net CPP contributions.

The base CPP net return of 8.9% was driven by strong results from our active programs, as well as a moderate contribution from the Balancing Portfolio, which saw gains across equities, fixed income and credit investments. While global equity markets sold off sharply in Q3, a strong rebound in Q4 put most major indexes firmly in positive territory for the year. The S&P Global LargeMidCap Index gained 6.1% in local currency terms, with most of those gains driven by developed markets, which outperformed emerging markets this year. Among developed markets, the United States and Canada earned 9.5% and 8.1%, respectively, in local currency terms. China's CSI 300 Index was relatively unchanged, with a gain of 1.6% in local terms, and largely contributed to a decline in broader emerging markets measures. China's underperformance reflected ongoing U.S.-China trade tensions, as well as a slowdown in economic growth and domestic deleveraging. India and Brazil earned local gains of 13.2% and 13.3%, respectively.

Fixed income investments performed well this year, reflecting the flight to safety and a reversal in the interest rate outlook in North America. The Canadian and U.S. government bond markets returned 5.4% and 4.2%, respectively, in local currency terms. The U.S. Federal Reserve raised its benchmark interest rate three times for a cumulative increase of 75 basis points to 2.50%, while the Bank of Canada raised its benchmark rate twice for a cumulative increase of 50 basis points to 1.75%. Despite higher rates at the short end of the term structure, medium and long-term rates moved significantly lower in the latter portion of the year, driving positive bond returns and leading to the inversion of yield curves in both the U.S. and Canada.

The impact from foreign currency was small this year, contributing a $0.7 billion gain to the CPP Fund, as the Canadian dollar was slightly weaker against the U.S. dollar in fiscal 2019. Gains from exposure to the U.S. dollar were reduced by losses in the euro and British pound, which weakened against the Canadian dollar. The CPP Investment Portfolio is a global portfolio that holds assets denominated in many foreign currencies. We generally do not hedge these widely diversified currency exposures back to the Canadian dollar – our view on currency hedging is explained on page 27.

The very first contributions related to additional CPP started at the beginning of January 2019. As such, all sums associated with the additional CPP account are very small in absolute terms, and especially in relation to the base CPP account managed by CPPIB, which has benefited from 20 years of cumulative net inflow contributions, not immediately needed to meet current pension obligations, cumulative investment income, and the legacy bond portfolio in place before inception of CPPIB. The amounts of contributions related to additional CPP are also scheduled to be phased in gradually over seven years.

For the first three months of calendar 2019 the additional CPP account delivered an investment return of $11.0 million or 5.0% after all costs, excluding start-up expenses of $9 million. The additional CPP delivered lower net returns compared to the base CPP, mainly due to additional CPP's higher fixed income composition of 53.7% consistent with its structural design to meet its lower risk target.

As a long-term investor, five- and 10-year periods provide a more meaningful assessment to evaluate the performance of CPPIB's investment strategy. For the five-year period ending March 31, 2019, the CPP Fund generated total net income of $152.0 billion or an annualized nominal return of 10.7% after deducting all CPPIB costs. For the 10-year period, the CPP Fund generated $239.0 billion or an annualized nominal return of 11.1% after all CPPIB costs. In the 27th Actuarial Report on the CPP, it was assumed that the base CPP Fund's long-term prospective net real rate of return will average 3.9% over the 75-year projection period of the Report, after all CPPIB costs and adjusting for inflation. The CPP Fund generated annualized net real returns of 8.9% and 9.2% for the most recent five- and 10-year periods. The next Actuarial Report by the Chief Actuary, expected before the end of the calendar 2019 year, will reflect projections including the additional CPP.

Total Fund Returns[1]

Asset Class	Fiscal 2019	Fiscal 2018
Public Equities		
Canadian	**7.9%**	2.2%
Foreign	**7.5%**	11.0%
Emerging	**(1.7%)**	18.6%
Private Equities		
Canadian	**5.7%**	1.8%
Foreign	**18.0%**	16.0%
Emerging	**11.8%**	19.5%
Government Bonds		
Marketable	**5.3%**	1.6%
Non-marketable	**4.8%**	2.7%
Credit Investments	**8.7%**	6.9%
Real Assets		
Real estate	**6.4%**	9.4%
Infrastructure	**14.0%**	15.2%
Other[2]	**0.0%**	(9.8%)
Total Fund[3]	**9.3%**	11.9%

1 Total Fund returns by asset class are inclusive of both the base and additional CPP accounts, before CPPIB operating expenses.

2 Other real assets consist of Energy & Resources and Power & Renewables investments, including Agriculture.

3 The total Fund return in fiscal 2019 includes performance of $(1.2) billion from currency management activities ($1.5 billion in fiscal 2018), $(0.7) billion from cash and liquidity management activities ($(0.6) billion in fiscal 2018), and $0.6 billion from absolute return strategies ($2.9 billion in fiscal 2018). They are not attributed to an asset class return reported in this table.

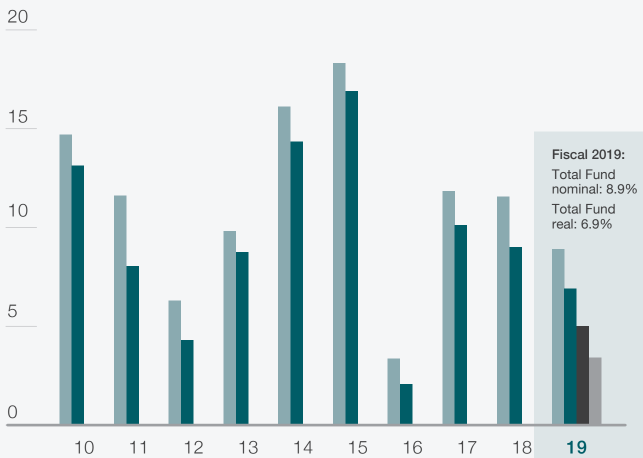
Net Returns

	Fiscal 2019		Fiscal 2018	
	% (annualized)	$ billions (cumulative)	% (annualized)	$ billions (cumulative)
base CPP				
1-year return	**8.9%**	**32.0**	11.5 %	36.7
5-year return	**10.7%**	**152.0**	12.1%	150.1
10-year return	**11.1%**	**239.0**	7.9%	183.3
additional CPP				
1-year return[1]	**5.0%**	**0.0**		

1 Return is not annualized given additional CPP inception in January 2019. Additional CPP net return excludes $9 million in start-up expenses.

Rate of Return (Net)

For the years ended March 31 (%)



Reference Portfolios returns

The CPP Reference Portfolios are two-asset passive portfolios comprising public market global equities and nominal bonds issued by Canadian governments, each represented by broad market indexes. As such, they provide a clear benchmark for long-term total returns on the additional CPP and base CPP Investment Portfolios at their respective targeted level of risk. The Reference Portfolios differ between the additional and base CPP accounts to reflect the different risk levels prudently targeted for each of their long-term investment portfolios. See page 22 for more information.

On a longer-term basis, Reference Portfolios rates of return have been as follows:

% (annualized)	Fiscal 2019	Fiscal 2018
base CPP Reference Portfolio Returns		
1-year	**6.6%**	9.8%
5-year	**9.3%**	11.2%
10-year	**10.7%**	7.7%
additional CPP Reference Portfolio Returns		
1-year[1]	**7.0%**	

1 Return is not annualized given additional CPP inception in January 2019.

Performance against Reference Portfolios

The CPP Fund earned a net return of 8.9% and net income of $32.0 billion in fiscal 2019 after deducting all costs. This result is above the aggregated Reference Portfolios' returns of both base and additional CPP accounts leading to a net dollar value add of $6.4 billion. The gain of the aggregated Reference Portfolios reflected the moderate return from global equities for the year and the relatively strong performance of Canadian government bonds.

To quantify the value generated by CPPIB's active management, each year we measure the difference between the annual performance of each account and that of its Reference Portfolio in dollar terms, or dollar value-added (DVA), after deducting all costs. For the year ending March 31, 2019, the base CPP Reference Portfolio return of 6.6% resulted in a net DVA of $6.4 billion. The additional CPP account had a very minor effect on this year's DVA result given its recent inception date and relative small asset size. See page 24 for more details on active management and the sources of return.

In single years, differences between the actual net returns and Reference Portfolios' returns are often substantially affected by three factors:

1. Diversification – By design, the Investment Portfolios are more broadly diversified than the Reference Portfolios. The base CPP Investment Portfolio includes major commitments to private asset classes such as private equity, real assets, compared to only two asset classes in the Reference Portfolio with a heavy weight in public equities (85% for fiscal 2019). The additional CPP Investment Portfolio also participates in the same broad range of asset classes and strategies, tempered by its higher weight in government bonds.

Asset Class	Benchmark	2019 Return (%)	2018 Return (%)
Equity	S&P Global LargeMidCap Index[1]	**6.7%**	11.6%
Fixed Income	FTSE TMX Canada All Governments Nominal Bond Index	**5.4%**	1.2%
Total base CPP Reference Portfolio[2]		**6.6%**	9.8%
Total additional CPP Reference Portfolio[2]		**7.0%**	

1 Net of CPPIB withholding tax, unhedged.

2 Component returns for base CPP and additional CPP Reference Portfolios are the same, but the aggregated returns differ due to different component weighting between the two benchmarks (Equity/Fixed Income weights of 50/50 and 85/15 for additional CPP and base CPP, respectively). In addition, additional CPP Reference Portfolio has partial year results given additional CPP inception in January 2019.

The diversified allocation of CPP Fund assets to major asset classes on average in fiscal 2019 is shown below:

	Fiscal 2019	
Average Asset Class Weights	base CPP	additional CPP[1]
Public Equities	36%	19%
Private Equities	22%	13%
Government Bonds	22%	53%
Credit Investments	8%	5%
Real Assets[2]	24%	14%
Cash and Absolute Return Strategies[3]	(12%)	(4%)
Total	100%	100%

1 Three months average.
2 Includes 13% for real estate, 8% for infrastructure, 2% for energy and resources, and 1% for power and renewables for base CPP, and 7% for real estate, 5% for infrastructure, 1% for energy and resources, and 1% for power and renewables for additional CPP.
3 Net of external debt issuances.

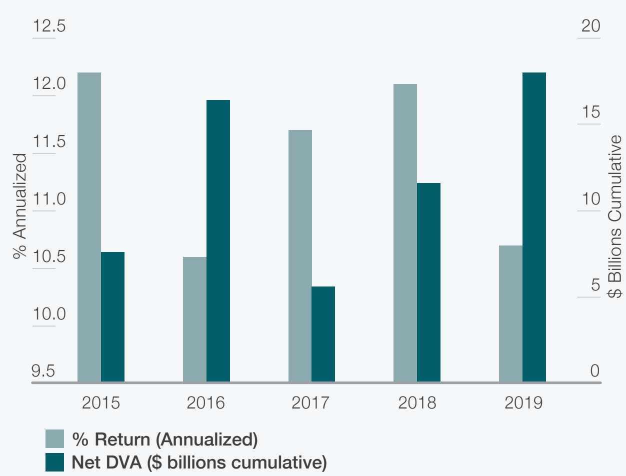
When global public equity markets have a strong year, the public equities-dominated Reference Portfolios' returns will naturally tend to be higher than the more diversified Investment Portfolios. In years when asset class returns are more mixed across the spectrum, and especially when public equity markets are falling, the Investment Portfolios will tend to outperform. Combining a limited degree of leverage in the Fund with much more widely diversified asset class allocations leads to overall positive dollar value-added expected from diversification over the long term.

2. **Investment selection** – Investment selection refers to how we select, buy, sell and weight individual assets in line with their program's mandates and intended factor-exposure appetite, through internal or external management. Generating value-added in the wide set of opportunities in both private and selected public markets requires manager skills. Outperforming markets sustainably is a very challenging task. Nevertheless, we believe that the variety and breadth of our investment programs help stabilize our overall performance.

3. **Valuations** – The values placed on private investments are determined by processes that include independent valuation procedures and the use of external appraisers and valuators. See page 86 for more details about the valuation process. In the short term, private assets tend to exhibit reported investment values that are less volatile than the daily-moving prices of comparable public market equivalents. In periods when public equities rise rapidly, we expect little or even negative reported dollar value-added in private investments, which now comprise 54.7% of the portfolio. Conversely, in periods of sharp public market losses, we expect reported private investments values to be relatively resilient, and thus generate positive reported value-added versus public market equivalents.

We do not place undue emphasis on results in any single year, whether positive or negative. Our investment strategy and decisions intentionally look through horizons spanning multiple years and decades. We focus on tracking absolute and dollar value-added performance over rolling five-year periods. This measurement period aligns with our long-term investment mandate and our compensation framework, as described on page 87. While it does not necessarily represent a full-market cycle, based on historical patterns the five-year period provides a reasonable basis for assessing longer-term performance over multiple such periods.

5-Year Rolling Net Return and DVA



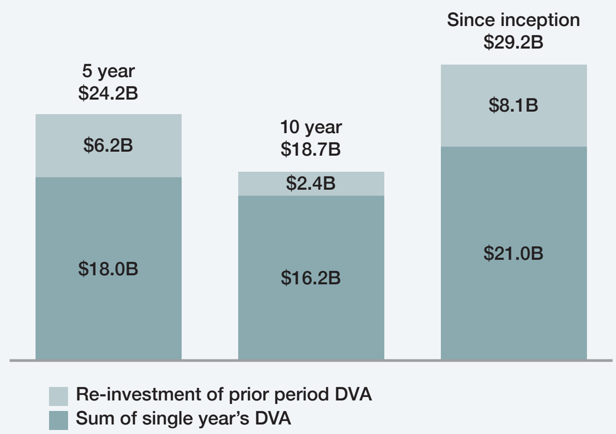
At March 31, 2019, CPPIB has generated $29.2 billion of compounded DVA since inception of active management at April 1, 2006.

The chart at right shows the compounded DVA for the full period since inception, and for the past 10 and five years.

Compounded Dollar Value-Added

Over multiple years, the dollar value-added is not only the sum of every single year's value-added but also the compounding effect of continuous reinvestment of gains (or losses). We therefore calculate compounded dollar value-added as the total net dollar value that CPPIB has added to the Fund over the long term through all sources of active management, above the value that the Fund would have generated had it earned Reference Portfolio returns alone.

Compounded Dollar Value-Added from Active Management



Figures do not add up due to rounding.

Managing total costs

Building CPPIB today and for the future

CPPIB seeks to maximize investment returns without undue risk of loss having regard to the factors that may affect the funding of the CPP. This objective guides all decisions, whether it is creating a new investment program, investing in technology systems, or opening a new office. As a result, we only incur internal or external costs when we are sufficiently confident of enhanced long-term returns for the Fund net of all costs. Further, a decision to either carry out activities with internal resources, or to do so through external partners, is purely an economic calculation in the best interest of the Fund. If we can achieve higher returns using internal resources, we will do so. If the particular program requires more unique capabilities not cost-effectively available internally, we will seek partners. We remain vigilant as we continue to build an organization designed to realize our public purpose.

In 2006, CPPIB made the decision to adopt an active management strategy to build value and generate investment returns that will exceed passive management in the long run after all costs. Our decision to manage the Fund actively was not made lightly. This approach presents significant complexity and comes with costs as it requires resources to build an enduring, skills-based organization with diverse, internationally competitive investment programs each designed to maximize long-term, risk-adjusted returns after all costs.

To evaluate active management, we continually measure results relative to risk against available alternatives. This positions us to deliver superior returns over numerous economic cycles and multiple generations. Ultimately, the benefits of our active management can be distilled down to one word: sustainability. Generating above-market returns over time can help cushion the impact of other factors affecting the sustainability of the CPP in the long term. These include wage growth, demographics, fertility rates, immigration and longevity, all of which are outside the control of CPPIB.

Consistent with the growth in the CPP Fund and the development of our active management strategy, CPPIB's costs have also grown correspondingly over the years. We are continuously building the in-house capabilities required to operate as a global investment organization focused on the future. These capabilities include investment skills, expertise in critical corporate functions, new systems, and the establishment of a local presence in key regions to access investment opportunities and closely manage our investments over the ownership period. It is in the CPP Fund's best interest, from both cost and competitive perspectives, to continue building internal investment expertise and capabilities where CPPIB has comparative advantages. Infrastructure investing is a case in point. We estimate that the costs for an externally managed $21.6 billion pool of committed capital would range on average from $900 million to $1 billion per year. By contrast, the fully costed internal management of our infrastructure portfolio is approximately $88 million.

To obtain the diversification and skills we require, it is not practical to build all capabilities in-house. As a result, we use external managers to complement our internal programs. To ensure we derive the appropriate value from managers, we only partner with top-tier managers and fee arrangements are structured to ensure our interests are aligned. See page 61 for more details.

Our global scale allows us to attract and retain expert professionals from across the world, compete realistically for the world's most attractive investments and win against formidable competitors. It has allowed us to establish and effectively manage 25 distinct investment programs, meeting the goal of diversification and to leverage insights from one program to enhance others.

Scale allows CPPIB to realize the financial benefits of spreading costs over an increasing amount of assets under management. One trend that demonstrates economies of scale is the decreasing ratio of core service professionals to investment professionals. Core services represent business areas such as information technology, legal, operations and finance that partner with and support the investment teams. While the assets we manage and oversee have grown significantly over the years, the ratio of core services to investment professionals has declined. In fiscal 2006, the ratio was 1.18 and has decreased to 0.94 in fiscal 2019.

We regularly assess our cost-effectiveness through participation in external benchmarking studies. Results from the 2018 benchmarking study completed by CEM Benchmarking[1] indicates that CPPIB staffing levels for investment departments are aligned with the benchmark. Meanwhile, the number of full-time equivalent[2] staff in CPPIB's core services remains about 8% lower than the peer comparator benchmark developed by CEM. We continue to monitor these relationships closely and we are comfortable that this level of core services staffing provides us with the resourcing necessary to support investment activities and properly govern and administer the assets we manage. This is especially the case considering the overall profile of the Fund, which gives management considerably more certainty about the amount of capital to be deployed in future decades relative to more significant short-term liabilities associated with most peers. While we benchmark our costs to ensure they are reasonable, CPPIB also participates in benchmarking of our net returns through CEM. For the five-year period ended March 31, 2018 (the most recent data available), our net annualized return of 12.1%, after all costs, was 1.9% higher than the median of our global peer groups and 3.3% higher than the Canadian median.

Growth of CPPIB

The CPP Fund assets are expected to grow to approximately $800 billion by 2030. Given this expected growth, we need the capacity to deploy capital prudently to maximize returns, which requires CPPIB to build capabilities today for the growth of tomorrow.

	Fiscal 2019	Fiscal 2006[1]
Net Assets[2]	**$392.0 billion**	$98.0 billion
% foreign investments	**84.5%**	35.7%
Total employees (full-time)	**1,661**	164
Number of offices	**Eight**	One
Number of investment programs	**25**	Six
Number of external partners	**274**	62

1 Current year results are compared to fiscal 2006 prior to implementing our active management programs.
2 Includes net assets of $391.6 billion for base CPP and $0.4 billion for additional CPP in fiscal 2019.

Cost governance framework

We apply the resources required with the objective to deliver above-market returns. At the same time, we are diligent in exercising control and ensuring value for money spent is delivered to the Fund. Our cost governance framework includes expense-management policies and authorities as well as expense reporting to the Senior Management Team and the Board of Directors. This ensures that we pursue growth in a responsible and cost-effective manner consistent with the Board-approved business plan and operating budget.

In addition, enforcement of our employee travel and expense policy ensures that the expenses incurred are appropriate to the needs of our business. Oversight includes regular reviews by the Assurance & Advisory group. To ensure objectivity, Assurance & Advisory is an independent corporate function that reports functionally to the Chair of the Audit Committee and administratively to the Chief Financial and Risk Officer.

Fiscal 2019 costs

To manage the $392.0 billion portfolio (as at March 31, 2019) and to generate the $32.0 billion of net income after all costs, CPPIB incurred costs of $3,266 million for fiscal 2019.

The costs summarized in the diagram on page 60 reflect the internal and external resources required to invest, manage and govern the CPP Fund assets across 25 distinct investment programs, in 52 countries around the world.

1 CEM Benchmarking Inc. is an independent provider of objective and actionable benchmarking information for large pools of capital including pension funds, endowments/foundations and sovereign wealth funds.
2 Full-time equivalent staffing includes full-time CPPIB employees, contractors and interns.

CPPIB Costs to Invest the CPP Fund

INVESTMENT MANAGEMENT FEES

PAID ON COMMITMENTS AND ASSETS INVESTED	PAID WHEN RETURNS REALIZED		
Management fees	Performance fees	Transaction costs	Operating expenses
$1,138 million	**$448 million**	**$477 million**	**$1,203 million**
What do they pay for? Payments to external fund managers to pay for the operating costs they incur in managing the fund.	**What do they pay for?** High performance and alignment of interests between CPPIB and the external fund managers.	**What do they pay for?** Legal, financial and tax advisors, consultants and trading commissions.	**What do they pay for?** Personnel, global offices, technology, data and other operating costs.
Why do we incur the costs? External managers help produce exceptional performance, net of all costs, and diversify the Fund through different strategies and regions.	**Why do we incur the costs?** A form of profit sharing when returns exceed a predefined percentage hurdle.	**Why do we incur the costs?** Pursuing complex, large investment opportunities in public and private markets requires us to conduct greater due diligence including complying with international regulatory and tax regimes.	**Why do we incur the costs?** To prudently manage the CPP Fund, we employ top-tier talent and have offices in key markets to access and monitor the best investment opportunities.

Management fees, performance fees and transaction costs are incurred by CPPIB or one of its wholly owned investment holding companies.

The table below illustrates the investment income generated and the associated costs incurred by each investment department to support their activities. Further details are available starting on page 63.

Net Income by Investment Department

	Fiscal 2019							Fiscal 2018[1]	5-year[1]
($ millions)	Total Portfolio Management	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total	Total	Total
Investment Income	10,379	143	1,323	3,161	12,853	7,417	35,276	39,931	166,222
Investment Management Fees	–	730	12	24	562	258	1,586	1,738	7,372
Transaction Costs	44	68	76	48	82	159	477	401	2,035
Net Investment Income	10,335	(655)	1,235	3,089	12,209	7,000	33,213	37,792	156,815
Operating Expenses	253	182	173	113	205	277	1,203	1,053	4,858
Net Income	10,082	(837)	1,062	2,976	12,004	6,723	32,010	36,739	151,957

1 Certain comparatives have been updated to conform with the current year's presentation.

Investment management fees

In order to obtain broad diversification, we seek exposure to a wide range of asset classes, geographic markets and active strategies. In some cases, it would not be practical or cost efficient to build a dedicated in-house team. As a result, we seek well-aligned external managers who have demonstrated the highest capabilities and strong prospective returns, net of all costs incurred. In addition to delivering attractive returns through our fund investments, many of our external manager partners generate attractive investment opportunities for our direct investment platforms.

Investment management fees include payments to private equity fund and hedge fund managers who invest and manage capital committed by CPPIB. They also include performance fees paid when CPPIB earns a return above pre-determined hurdle rates.

The $1,586 million in fiscal 2019 reflects $1,138 million in management fees paid primarily to private equity funds and hedge funds, and $448 million related to investment performance. Investment management fees decreased by $152 million in the fiscal year, driven by lower performance fees paid to external fund managers as a result of underperformance in public market strategies in our second and third fiscal quarters.

Net Income by Account

	Fiscal 2019			Fiscal 2018
($ millions)	base CPP	additional CPP	Total	Total
Investment Income	35,265	11	35,276	39,931
Investment Management Fees	1,586	–	1,586	1,738
Transaction Costs	477	–	477	401
Net Investment Income	33,202	11	33,213	37,792
Operating Expenses	1,194	9	1,203	1,053
Net Income	32,008	2[1]	32,010	36,739

1 Additional CPP net income of $2 million includes $9 million of start-up costs in fiscal 2019.

Use of external fund managers

Over the most recent five-year period, external fund managers for both Capital Markets and Factor Investing (CMF) and Private Equity (PE) funds and secondaries programs have delivered $31.8 billion of net investment income relative to the $4.2 billion in management fees as well as $2.3 billion in performance rewards once certain return hurdles were achieved. Our private equity fund partners have also generated a large number of attractive direct investment opportunities for PE, resulting in $32.2 billion of invested capital since inception and $16.7 billion of net investment income over the last five years with no associated fees.

CMF's External Portfolio Management (EPM) group invests in managers that are expected to generate attractive, sustainable results on a risk-adjusted basis, net of all costs. PE invests in funds managed by private equity partners that we expect will outperform public alternatives on a risk-adjusted basis. When negotiating fees and other terms, our primary focus is achieving alignment between the manager's incentives and our investment goals. Some examples of our approach to improve alignment, reduce costs and increase net returns are noted here.

EPM achieves this by:

- Trading lower management fees for higher performance fees;
- Considering longer commitment periods in exchange for lower fee structures;
- Structuring some management fees as an advance on performance fees;
- Making co-investments to increase net returns to the Fund;
- Instituting performance hurdles; and
- Investing in emerging managers, where we can usually achieve lower fees and secure scarce investment capacity.

Fee arrangements are reviewed regularly, and we negotiated improved fees with several of our managers in fiscal 2019.

PE achieves this by:

- Securing direct investment opportunities while paying no fees by being a large investor in the funds that we select;
- Using our scale to secure larger allocations at reduced fees; and
- Making commitments early in the fundraising process when this allows us to obtain lower fee structures.

We can be limited in our ability to negotiate lower fees when managers are unable to accept significant new commitments, but we have declined allocations to potential target managers when we were unable to negotiate acceptable terms.

Transaction costs

Transaction costs for fiscal 2019 totalled $477 million compared to $401 million in the prior year, an increase of $76 million. This year, we completed 69 transactions valued at more than $300 million, each involving complex due diligence and negotiations.

Transaction costs include a variety of non-recurring expenses, including due diligence consulting services. They also include legal and tax advisory fees required to support the acquisition and disposition of private market assets, or, in the case of public markets, commissions paid when trading securities.

Given the nature of these costs, they will vary from year to year according to the number, size and complexity of our investing activities in any given period. These costs are expected to increase over time as we continue to increase our private asset holdings and dispositions, as well as our public markets trading activities in both developed and emerging markets given the expected growth in the Fund.

Further details on transaction costs are included in the investment department performance sections starting on page 63.

Note 5.1 to the Financial Statements provides additional transaction cost information on page 139.

Operating expenses

Total operating expenses were $1,203 million this year representing 32.8 cents for every $100 of invested assets compared to $1,053 million in fiscal 2018 or 31.5 cents.

Total operating expenses increased $150 million year-over-year due to higher personnel costs and general operating expenses as described below.

Total personnel expenses were $802 million in fiscal 2019, an increase of $90 million versus the prior year. The higher personnel costs reflect the increase in staffing levels from 1,498 to 1,661 regular full-time employees in fiscal 2019 required to manage the growing size of the Fund, and for the incentive compensation which reflects the Fund's strong results. The increase also includes the cost of the re-organization of the investment departments to align with CPPIB 2025 strategy.

To support a growing CPP Fund as well as continued diversification of assets across sectors and geographies, CPPIB has expanded its international operations in key markets over the past five years, particularly in the emerging markets of China, India and Latin America. In fiscal 2014, there were fewer than 50 employees in the Hong Kong, Mumbai and São Paulo offices combined. Today, there are almost 140 employees supporting those offices which will continue to grow in the future as CPPIB looks to manage a higher percentage of assets in fast-growth emerging markets.

General operating expenses of $401 million were $60 million higher on a year-over-year basis. This was largely due to increased strategy development work and business initiatives across the organization, and higher investments in technology and data.

Allocation of costs between the base CPP and the additional CPP

In preparation for the investment, reporting and governance responsibilities associated with additional CPP contribution amounts, CPPIB incurred $23 million of start-up costs. These costs were funded by the base CPP during the start-up period in fiscal 2019. To ensure that these costs and the related accrued interest are ultimately borne by additional CPP rather than base CPP, CPPIB has reimbursed the base CPP account, with interest, using funds transferred to CPPIB on account of the additional CPP before March 31, 2019.

In fiscal 2019, $9 million of the start-up costs were expensed. This amount is excluded from the additional CPP's calculation of net investment returns, since it represents one-time, non-recurring costs that will not be part of normal course additional CPP's operations. However, the $9 million start-up costs are included in the calculation of the total Fund net return.

The remaining $14 million of the start-up costs were incurred in connection with system changes required to establish and manage the new unitized pool structure. These costs are capitalized and included in CPPIB's assets as they reflect an enduring benefit.

CPPIB's total costs consist of investment-related expenses and operating expenses (including the amortization of capital expenditures). CPPIB attributes investment-related expenses to the investment programs that directly incur those expenses and attributes operating expenses arising from investment activities to programs based on underlying cost drivers. Operating expenses arising from governance activities are allocated to programs based on assets under management.

This cost allocation process results in allocations to each of the investment pools based on the investment programs within that pool, and therefore to the base CPP and the additional CPP based on their proportionate holdings of the two pools. As a result, regardless of either account's portfolio composition or the weighting of its investments between the two pools, each account is allocated its proportionate share of costs on a fair and consistent basis.

PERFORMANCE OF THE INVESTMENT DEPARTMENTS

The following section provides details about the assets, activities and performance of each investment department for fiscal 2019. A description of each department's responsibilities is found on page 38. We conduct all of our investment activity in accordance with the Statement of Investment Objectives, Policies, Return Expectations and Risk Management, and the Policy on Sustainable Investing discussed on page 40. These and other Board-approved policies are available on our website, www.cppib.com.

The table below shows the year-end composition of total Fund net investments:

Year-End Composition of Net Investments by Department and Asset Class

($ millions)	Total Portfolio Management	Capital Markets & Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total
Public Equities	128,645	–	–	–	1,390	–	130,035
Private Equities	–	–	–	6,769	86,314	–	93,083
Government Bonds	85,883	–	–	227	–	–	86,110
Credit Investments	6,155	–	–	29,586	–	–	35,741
Real Assets	–	–	–	–	–	94,125	94,125
External Debt Issuance	(30,861)	–	–	–	–	–	(30,861)
Cash and Absolute Return Strategies[1]	(17,209)	(31)	1,047	(3)	(8)	(35)	(16,239)
Net Investments	172,613	(31)	1,047	36,579	87,696	94,090	391,994
Absolute Return Strategies – Assets[2]		*66,528*	*63,206*				
Absolute Return Strategies – Liabilities[3]		*(66,559)*	*(62,159)*				

1 Absolute Return Strategies hold offsetting systematic exposures through long and short investments. As a result, their net asset values greatly understate their size and impact on the portfolio.

2 To calculate the size of Absolute Return Strategies on a comparable basis with long-only programs, we calculate Assets (or Assets Under Management) as the sum of the long investments in each of the programs.

3 Includes short positions and hedges of systematic risks arising in Absolute Return Strategies.

This year, we continued to implement a wide range of investment programs, expanded our internal capabilities internationally and further broadened our global reach in pursuit of our long-term objectives. We believe that a local presence in key markets contributes to broader access to investment opportunities around the world. This ensures diligent asset management, while maintaining professionals with expertise specific to each market.

The table below shows the contributions of each investment department to net income, after all CPPIB costs, for the current fiscal year. It also shows the historical five-year period.

Net Income by Investment Department

($ millions)	1-Year	5-Year
Total Portfolio Management	10,082	58,918
Capital Markets and Factor Investing	(837)	5,861
Active Equities	1,062	2,693
Credit Investments	2,976	10,671
Private Equity	12,004	44,284
Real Assets	6,723	29,530
Total[1]	32,010	151,957

1 After all CPPIB costs.

The dollar value-added (DVA) contributions of the investment departments shown in the chart below are measured relative to the respective portfolio's return comparators. The definition of those comparators take into consideration the underlying return-risk factors that represent the specific programs in each department. In the case of the Total Portfolio Management department, it also includes a variety of other impacts contributing to total net dollar value-added, such as foreign currencies, which is excluded from the value-added shown for the other investment departments.

Net Dollar Value-Added Contributions by Investment Department[1]

($ billions)	1-Year	5-Year
Total Portfolio Management	(0.7)	(5.3)
Capital Markets and Factor Investing	(0.8)	3.2
Active Equities	1.1	2.7
Credit Investments	1.3	3.4
Private Equity	3.4	5.4
Real Assets	2.1	8.6
Total	6.4	18.0

1 Foreign currency fluctuations have no impact on value-added of investment departments other than Total Portfolio Management. The currency impact is reported under Total Portfolio Management. See page 66 for more details.

TOTAL PORTFOLIO MANAGEMENT

Fiscal 2019 Net Return ($ billion/%)

$10.1 billion / 6.3%

Net Investments

$172.6 billion

Key Focus this Year

> Launching portfolio design and management of the additional CPP
> Enhancing the Total Portfolio Investment Process and evolving the Exposures Balancing Process
> Developing investment strategy to address climate change risk
> Advancement of Knowledge Sharing and Collaboration framework and tools

SUMMARY

Total Portfolio Management

(%)	Fiscal 2019	Fiscal 2018
Returns		
1-year	6.4%	10.0%
1-year net	6.3%	9.8%
1-year return comparator[1]	6.7%	9.2%

($ billions)	Fiscal 2019	Fiscal 2018
Contribution to Dollar Value-Added[1]		
1-year	(0.7)	(0.5)
5-year	(5.3)	(4.8)

1 Includes net dollar value-added from Balancing Portfolio and diversification.

Total Portfolio Management (TPM) contributes to total Fund investment performance in two major ways, by (1) managing the Balancing Portfolio to achieve the desired set of investment exposures in the Core Pool (see page 21) utilized by the Investment Portfolios of both the base CPP and additional CPP; and (2) designing and directing the construction of the long-term Investment Portfolios given CPPIB's mandate. Global public equity markets have experienced strong performance over the past five years. As a result, the largest element of the contribution to dollar value-added was the broader diversification of the Investment Portfolios beyond the public equity-dominated Reference Portfolios.

Balancing Portfolio Fiscal 2019 Performance

The Balancing Portfolio, which includes leverage and foreign exchange positions, does not itself have targeted asset class or factor weights. Rather, it acts as a completion portfolio of public securities that continuously brings the actual exposures of the Core Pool into alignment with its targeted exposures, once the contributions of the investment programs have been taken into account.

During the fiscal year, the Balancing Portfolio experienced a net return of 6.3% and net income of $10.1 billion, primarily driven by positive returns from Balancing Equity and Balancing Fixed Income programs. Balancing Credit program also added to the net return. The returns are net of TPM's $297 million of costs and comprises transaction costs and operating expenses. Transaction costs of $44 million represent primarily public market commissions and trade settlement costs. Operating expenses were $253 million for the year and include $9 million of additional CPP start-up costs. Operating expenses represent allocations from other departments such as trading execution teams, investment service functions and core services groups as well as TPM's direct expenses. Operating expenses are lower than last year as a result of lower allocated investment service costs.

Balancing Portfolio Composition and Trading Activity:

We have increased the Balancing Portfolio holdings of public equity, fixed income and leverage over the past five years, with more recent increases in emerging market and credit holdings. These changes progressively aligned the total Investment Portfolio more closely with our desired long-term exposures.

Over fiscal 2019, TPM sold public developed market equities mainly to offset the equity exposure of a strong pipeline of private deals. We also reduced Canadian equity holdings slightly to make room for additional emerging market equities.

In addition, we deployed capital into China A shares during the fiscal year using our QFII (Qualified Foreign Institutional Investor) quota and the Hong Kong-Shanghai/Shenzhen Stock Connect mechanism.

We traded Balancing Fixed Income portfolio to maintain total portfolio exposures. The Balancing Credit program grew from $3.4 billion to $5.4 billion over the fiscal year.

Net Income for Total Portfolio Management

($ millions)	Fiscal 2019	Fiscal 2018	5-Year
Investment Income	**10,379**	16,730	60,223
Investment Management Fees	**–**	–	–
Transaction Costs	**44**	40	203
Net Investment Income	**10,335**	16,690	60,020
Operating Expenses	**253**	270	1,102
Net Income	**10,082**	16,420	58,918

Major impacts on Investment Portfolio five-year performance (Fiscal 2015–2019):

Two key decisions that have a significant impact on total Fund performance, and for which TPM develops Investment Planning Committee and Board recommendations for each Investment Portfolio, are the overall targeted risk level and the approach to foreign currency exposures. Both of these are longer-term decisions, so they are addressed with a five-year perspective.

Overall, Investment Portfolio[3] returns include the effects not only of these two basic decisions, but also diversification decisions (for example across programs and strategies) and investment selection decisions within active programs.

Risk Level

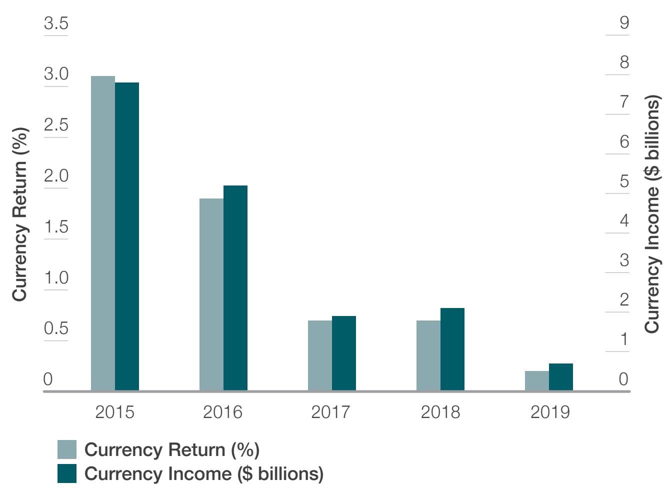
To gauge the impact of the overall risk targets, we compare realized returns under alternative Reference Portfolio specifications (see page 30). For fiscal years 2007 through 2015, CPPIB's Reference Portfolio was composed of 65% public equity and 35% sovereign debt. The simulated returns associated with this 65/35 equity/debt Reference Portfolio over the past five fiscal years are a proxy for performance had we not committed to progressively increasing the risk level of the Investment Portfolio over the fiscal years 2016 through 2018. This can be compared with the returns on the actual transition path of the Reference Portfolio from 65/35 at April 1, 2014 to 85/15 with effect from April 1, 2018.

Over the past five years, given the strong equity market returns observed over much of the period, the risk-increasing actual Reference Portfolio outperformed the former 65/35 Reference Portfolio by approximately 84 basis points (annualized) or an increase in CPP Fund value of $12,892 million cumulatively over the five years.

Foreign Currencies Exposure

As noted on page 27, CPPIB has generally elected not to hedge foreign currency exposures back to Canadian dollars. The table below shows the overall foreign currency gain or loss in each of the past five fiscal years, in billion dollar terms and as a percentage of the Investment Portfolio.

Currency Return



The additive impact of foreign currency gains and losses over the past five fiscal years has been a gain of $17.7 billion.

3 The Investment Portfolio analyzed is only that of the base CPP, as additional CPP cash flows were not received until January 2019.

Fiscal 2019 activities

At the end of fiscal 2019, TPM's team comprised 106 professionals. During the year, the team made major strides in furthering its mission to effect optimal management of the total portfolio of assets entrusted to CPPIB as an integrated, risk-appropriate and return-maximizing whole rather than simply as an aggregate of individual investments. Key aspects of TPM's activities are described below.

Launching additional CPP Portfolio Management: TPM provided key inputs in the design and implementation of the investment management required for the assets now being received for the additional CPP account. The new pooled investment structure (see page 20) enables CPPIB to most effectively manage both the base and additional accounts with minimal organizational changes, while fulfilling the expanded mandate. The implementation leverages CPPIB's structural and developed advantages by allowing both accounts to fully participate in all our active and private programs, while efficiently and appropriately allocating risk given the different funding profiles of the two accounts.

Enhancing the TPM Investment Process: To better execute its role, TPM re-stated its management standards and formalized its Investment Committee in Q1 fiscal 2019. The Committee now provides the forum in TPM with clear responsibility for TPM investment decisions and recommendations (including all those going to the Investment Planning Committee or the Board, as explained on page 35). The standards require rigorous rationale and documentation, and the process provides increased transparency across CPPIB.

Evolving the Balancing Process: Since the adoption of the Total Portfolio Investment Framework (see page 29), TPM has been working to design and implement a more precise Balancing Process for managing factors and other exposures of the Core Pool through the Balancing Portfolio, which currently represents approximately 44% of the pool's assets. Following extensive testing, TPM has achieved a well-defined and fully functional Balancing Process for implementation at the start of fiscal 2020, which will result in:

- A more efficient portfolio based on optimal overall diversification of the underlying drivers of risk and return, while limiting transaction costs;
- A fully systematic methodology allowing for clearer attribution and transparency; and
- Improved checks and balances in the process to limit operational risk.

Developing Investment Strategy for Climate Change Risk: In fiscal 2019, TPM continued the build-out of the Emerging Factors team responsible for assessing the impacts of climate change on economic activity and on risks for the total portfolio. The team designed a Climate Change Risk Index a high-level assessment of country-specific climate change risks based on perceived physical and transition impacts. In addition, the team created climate change warming impact scenarios for CPPIB's focus geographies. Further work this year will be conducted to develop a framework for assessing the potential impact of climate change on financial markets and investment exposures.

Advancement of Knowledge Sharing & Collaboration: Knowledge Sharing & Collaboration (KSC) is a key piece of the Knowledge Advantage initiative (see page 45) designed to help us harness the collective wisdom across CPPIB. Led by TPM, KSC addresses the organization's belief that there are major benefits to systematizing and sharing organized knowledge across departments, groups and teams. In fiscal 2019, in addition to bringing in an experienced leader, the KSC team has launched the "Collaboration Portal" to connect employees based on investment experience and expertise, established a monthly call for global Principles and Portfolio Managers, which provides a cross-department forum to discuss current and potential investment themes, and launched the Top Holdings & Expertise Directory.

LOOKING AHEAD

The primary objectives for TPM in fiscal 2020 include:

> Continue to build and enhance frameworks that guide active programs on how to align their investment activities with the Investment Department guidance that define their intended contribution to the total portfolio;

> Implement the new Balancing Portfolio Management Process and continue to enhance the ongoing management of the Balancing Portfolio for optimal efficiency;

> Continuous improvement of portfolio design methods and techniques including: developing world-class portfolio design methodologies; enhancing factor research, including the evaluation of using macroeconomic factors to underpin the construction of the long-term factor exposures; and

> Advance attribution capabilities by evolving the performance measurement framework and methodologies by which CPPIB's investment performance is evaluated through key performance indicators, and by developing programs' portfolio analytics to better inform and enhance future investment management decisions.

CAPITAL MARKETS AND FACTOR INVESTING

AT A GLANCE

Fiscal 2019 Net Return ($ billion/%)

Absolute Return Strategies[1]
-$0.8 billion / n/a

Net Investments

-$31 million in Net Investments

$66.5 billion in Assets Under Management

Key Focus this Year

> Launching the Capital Markets and Factor Investing (CMF) Department and establishing new investment programs

> Facilitating a greater focus on total return and delivering increased emerging markets exposure

> Assisting in the launch of the Supplementary Pool investment process and investing additional CPP funds according to the additional CPP risk target (see page 21 for more details)

> Launching knowledge-sharing and cross-collaboration initiatives

SUMMARY

At the end of fiscal 2019, Capital Markets and Factor Investing (CMF) managed total net investments of -$31 million for CMF's Absolute Return Strategies. Total assets under management under Absolute Return Strategies were $66.5 billion, generally computed as the sum of the values of the long investments in these strategies. The distribution and development of CMF's assets under management for Absolute Return Strategies is shown below at the current and prior year ends. It reflects an increase of $12.5 billion in the current year. The growth of the portfolio was driven mainly by new investment activity.

The following chart shows the contribution to dollar value-added by CMF's Absolute Return Strategies in fiscal 2019. The returns are reported only in dollar amounts because activities are conducted on a market-neutral or long/short basis. In such cases, there is no generally accepted and appropriate underlying asset base for measuring returns in percentage terms.

Capital Markets and Factor Investing

($ billions)	March 31, 2019	March 31, 2018
Absolute Return Strategies (ARS) – Assets		
External Portfolio Management	**39.5**	37.0
Quantitative Strategies and Risk Premia	**16.2**	14.1
Macro Strategies	**8.1**	0.3
Others	**2.7**	2.6
ARS Assets Under Management (AUM)[1]	**66.5**	54.0
ARS Liabilities[2]	**(66.5)**	(53.6)
Net Investments	**–**	0.4

($ billions)	Fiscal 2019	Fiscal 2018
Contribution to Dollar Value-Added		
1-year	**(0.8)**	0.9
5-year	**3.2**	5.0

1 Absolute Return Strategies (ARS) hold offsetting systematic exposures through long and short investments. (See page 26 for more on long and short investing.) As a result, their net asset values greatly understate their size and impact on the portfolio. To calculate the size of Absolute Return Strategies on a comparable basis with long-only programs, we calculate Assets Under Management as the sum of the long investments in each of the programs. Returns for these strategies are reported in dollar values only, since percentage returns on their net asset values do not represent their investment performance.

2 Includes short positions and hedges of systematic risks arising in Absolute Return Strategies.

CMF manages its investments based on a five-year investment horizon, and these results continue to deliver positive net income. Consistent with other public market investors, the CMF portfolio experienced negative performance in fiscal 2019 as investments underperformed the public market equity rally. At the same time, value-oriented factors contributed to losses for quantitative strategies.

During fiscal 2019, CMF's Absolute Return Strategies delivered net income of -$0.8 billion for the Fund and incurred costs of $980 million to support its investing strategies and activities. CMF incurred investment management fees of $730 million representing $327 million paid to external fund managers for performance fees and $403 million for management fees. Performance fees decreased from last year, reflecting lower returns from hedge funds while management fees increased as a result of a higher level of externally managed assets. Transaction costs of $68 million represent primarily public market commissions, trade settlement costs and prime brokerage costs. Transaction costs increased, largely due to growth in the investment programs pursued by the Quantitative Strategies and Risk Premia group during fiscal 2019. Operating expenses of $182 million have increased year-over-year primarily related to higher allocated core services costs required to support the department.

Net Income for Capital Markets and Factor Investing

($ millions)	Fiscal 2019	Fiscal 2018	5-Year
Investment Income	**143**	2,112	11,056
Investment Management Fees	**730**	1,070	4,100
Transaction Costs	**68**	45	249
Net Investment Income	**(655)**	997	6,707
Operating Expenses	**182**	125	846
Net Income	**(837)**	872	5,861

Fiscal 2019 activities

In fiscal 2019, CMF continued to facilitate a greater focus on total return across the base and additional Investment Portfolios and on delivering increased emerging markets exposure. CMF advanced top-down strategic tilting efforts (see page 27), launched new programs within its Macro Strategies (MS) group and expanded its emerging markets capabilities. CMF's team of 161 professionals is located across four global offices.

Quantitative Strategies and Risk Premia

The quantitative equity portfolio underperformed this year due to mixed performance across three factor categories (value, sentiment and quality), with value driving the bulk of underperformance. Quality-based factors performed well this year but it did not deliver sufficient performance to offset losses elsewhere.

The risk premia portfolio contributed to CMF's value-added returns despite heightened volatility stemming from global growth concerns, U.S.-China trade negotiations, Brexit uncertainty, and political instability. Volatility strategies were profitable in equities, interest rates, and currencies, while the commodities volatility strategy experienced losses in the natural gas market in particular. The carry strategies were responsible for gains across government bonds, currencies and commodities, with contributions from value factors more than offsetting losses in trend and carry factors, illustrating the importance of diversifying factor exposures in the portfolio. In fiscal 2019, the Quantitative Strategies and Risk Premia (QSRP) team continued to refine and expand its existing strategies, with a focus on innovation in the areas of portfolio construction, forecasting and risk modelling.

Highlights included:

- Establishing the QSRP team, bringing together investment teams focused on systematic investment strategies across CPPIB to build a portfolio with an attractive risk-return profile;
- Significantly expanding the Risk Premia programs to their full size; and
- Implementing the credit asset class within the Volatility Risk Premium program.

Financing, Collateral and Trading

Financing, Collateral and Trading (FCT) integrated financing, collateral optimization, and execution functions within a centralized model. In line with CPPIB's long-term view, FCT continues to broaden its expertise in emerging markets. FCT implemented platform capabilities to gain exposure into these markets.

FCT continued expanding the term debt program. As a part of that effort, FCT worked in collaboration with multiple departments across the organization to issue CPPIB's inaugural Green Bond, raising $1.5 billion with a term of 10 years. This further diversified CPPIB's investor base. In January 2019, CPPIB issued a second 10-year Green Bond in Europe, raising €1.0 billion.

FCT invested the first series of cash flows received from the Supplementary Pool. It also developed a process to manage residual additional CPP funds in short-term money market instruments and continued to manage cash flows to the CPP.

Macro Strategies

In fiscal 2019, the Macro Strategies (MS) group defined the infrastructure, processes and team that resulted in the launch of its discretionary investment programs in January. Consistent with CPPIB's 2025 vision, the group is building its focus on emerging markets and now has the ability to trade fixed income, equity and currency products across 23 countries. In the short period since approval and launch, MS has generated positive returns.

External Portfolio Management

External Portfolio Management's (EPM) assets under management grew to $39.5 billion from $37.0 billion last year. EPM experienced negative performance in fiscal 2019 due to mixed results across its strategies. Fundamental equity and credit underperformed buoyant markets, although this was partially offset by positive contributions in fixed income and multi-strategy.

EPM continued to scale its portfolio by making further investments in high-conviction managers, and improved portfolio transparency and alignment with our partners. The group added five new mandates and nine co-investments, increased funding to 10 existing mandates and redeemed four mandates. Allocations were made primarily multi strategy, as well as fundamental and quant equity strategies. The portfolio now includes 58 managers, up from 56 at the end of fiscal 2018. Overall, they direct 64 mandates.

Key activities included:

> Completing EPM's first investment in a manager based in India, in addition to another emerging market-focused manager;

> Continuing to scale our co-investment program both in fundamental equity and global macro strategies; and

> Expanding our portfolio of emerging managers, which help reduce the overall fee burden through attractive terms and revenue share agreements.

LOOKING AHEAD

Building on the progress made in fiscal 2019, CMF will focus its efforts on:

> Continuing to facilitate a greater focus on total return through the Strategic Tilting program as well as the Risk Premia programs;

> Further developing programs that support the delivery of desired levels of emerging markets exposure; and

> Enhancing CMF's infrastructure to help scale its investment programs, improve investment agility, and support CPPIB's long-term growth. This growth strategy is set out in the CPPIB 2025 strategy, described on page 29.

ACTIVE EQUITIES

AT A GLANCE

Fiscal 2019 Net Return ($ billion/%)

Absolute Return Strategies[1]
$1.0 billion / n/a

Net Investments

$1.0 billion in Net Investments

$63.2 billion in Assets Under Management

Key Focus this Year

- Increasing the Fund's emerging markets exposure by adding new investments, primarily in Asia and Latin America
- Collaborating with Real Assets to implement the Climate Change Security Selection Framework. This allows investment teams and approval committees to efficiently and effectively identify, assess and price key climate change risks and opportunities
- Launching knowledge-sharing and cross-collaboration initiatives

SUMMARY

At the end of fiscal 2019, Active Equities (AE) managed total net investments of $1.0 billion. Total assets under management, computed as the sum of the values of the long investments in the AE portfolio, were $63.2 billion. That is a $19.2 billion increase compared to fiscal 2018.

The distribution and development of AE's assets under management are shown below at the current and prior year ends.

The following chart also shows AE's contribution to dollar value-added in fiscal 2019. The returns are reported only in dollar amounts, because activities are conducted on a market-neutral or long/short basis. In such cases, there is no generally accepted and appropriate underlying asset base for measuring returns in percentage terms.

Active Equities

($ billions)	March 31, 2019	March 31, 2018
Absolute Return Strategies (ARS) – Assets		
Active Fundamental Equities	**27.5**	20.8
Fundamental Equities Asia	**17.9**	10.4
Relationship Investments	**12.0**	8.0
Thematic Investing	**5.8**	4.8
ARS Assets Under Management (AUM)[1]	**63.2**	44.0
ARS Liabilities[2]	**(62.2)**	(42.9)
Net Investments	**1.0**	1.1

($ billions)	Fiscal 2019	Fiscal 2018
Contribution to Dollar Value-Added		
1-year	**1.1**	1.6
5-year	**2.7**	1.5

1 Absolute Return Strategies (ARS) hold offsetting systematic exposures through long and short investments. As a result, their net asset values greatly understate their size and impact on the portfolio. To calculate the size of Absolute Return Strategies on a comparable basis with long-only programs, we calculate Assets Under Management as the sum of the long investments in each of the programs. Returns for these strategies are reported in dollar values only, since percentage returns on their net asset values do not represent their investment performance.

2 Includes short positions and hedges of systematic risks arising in Absolute Return Strategies.

During fiscal 2019, AE's portfolio delivered net income of $1,062 million for the Fund, and incurred costs of $261 million to support its investing strategies and activities. Transaction costs include public market commissions, trade settlement costs and prime brokerage costs. AE's investment expenses were driven by growth of the portfolio in fiscal 2019. Operating expenses of $173 million increased year-over-year primarily related to higher allocated core services costs required to support the department.

Net Income for Active Equities

($ millions)	Fiscal 2019	Fiscal 2018	5-Year
Investment Income	**1,323**	1,855	3,597
Investment Management Fees	**12**	5	22
Transaction Costs	**76**	54	265
Net Investment Income	**1,235**	1,796	3,310
Operating Expenses	**173**	151	617
Net Income	**1,062**	1,645	2,693

Fiscal 2019 activities

Since its creation in fiscal 2019, AE has continued to increase the size of its portfolio and increased its emerging markets exposure. AE's team grew by 5%, accounting for 131 professionals located across five global offices.

Active Fundamental Equities

The assets under management for the Active Fundamental Equities (AFE) portfolio grew from $20.8 billion to $27.5 billion at the end of the fiscal year. The team manages a concentrated portfolio, comprising 84 active positions, including 19 new securities. AFE performed well in fiscal 2019, primarily in the information technology and communication services sectors. AFE's investment in Mastercard Inc. was the group's largest position and also the top contributor to its performance.

Key investment highlights included investing:

- A further €490 million in E.ON SE, a German utility company that owns and operates electricity and gas grids, as well as energy supply businesses;
- €321 million in ASML Holdings, the world's largest supplier of photolithography systems for the semiconductor industry, based in the Netherlands; and
- US$347 million in Akamai Technology, an American content-delivery network and cloud service.

Fundamental Equities Asia

Despite the volatile market conditions in the region, particularly in China and India, Fundamental Equities Asia (FEA) was a large contributor to AE's positive net income in fiscal 2019. This return was generated by security selection that outperformed, as well as effective risk and hedging management.

The current U.S.-China trade tension has caused a slight slowdown in the Chinese economy and weighed heavily on the regional market sentiment. Chinese equity markets have reflected these challenges, with lowered expectations and valuations. FEA has taken advantage of the market weakness and increased its assets under management by $7.5 billion, reaching $17.9 billion at the end of fiscal 2019. FEA achieved this by increasing its investments at a lowered valuation and researching and incubating new investments in the portfolio.

Key investment highlights included:

- Deploying an additional $1.9 billion in three of the group's largest positions in Chinese firms: Alibaba Group, Tencent Holdings and AIA Group;
- Collaborating with Thematic Investing to invest a total of US$600 million in Ant Financial, China's leading financial services technology platform; and
- Increasing its holdings in China A shares by $1.2 billion through investments in Midea group, CITS and CATL.

Relationship Investments

In fiscal 2019, Relationship Investments (RI) delivered strong performance, mostly from investments in the industrials and communication services sectors. RI deployed approximately $1.7 billion through six new investments and an additional $0.8 billion through follow-on investments in four existing portfolio companies for a total of $2.5 billion capital deployed over the fiscal year. The portfolio's assets under management total $12.0 billion at March 31, 2019 compared to $8.0 billion at the end of last fiscal year. New capital deployment and positive performance of the portfolio also contributed to the changes.

During the year, strong global demand for high-quality professional services and data providers positively contributed to the outperformance of RI's investments in the business services sector. Additionally, RI's investments in the communication services sector including the telecommunications and media & entertainment subsectors have produced high relative returns.

Key investment highlights included:

- An additional US$324 million in IHS Markit, a global data and information services provider, bringing total ownership to 5.5%;
- €318 million in Cellnex Telecom, an independent operator of wireless telecommunications and broadcast infrastructure in Europe, for 4.95% ownership in the company; and
- An additional €120 million in Elis, the European leader in commercial linen and workwear rental and laundry services, bringing the group's total ownership to 12.4%.

Thematic Investing

In fiscal 2019, Thematic Investing (TI) increased its assets under management from approximately $4.8 billion to $5.8 billion, driven by scaling existing themes and adding a new theme called "Retail 4.0" during the year. Capital was deployed across public and private asset classes, as well as developed and emerging markets.

TI experienced negative performance during the year as mixed results across the individual thematic portfolios was insufficient to offset the losses from the hedge portfolio.

TI continued scaling its exposure and remains concentrated in both consumer discretionary and communication services sectors.

Key activities included:

- Pursuing direct private equity opportunities in a number of early stage companies including Lulu's Fashion Lounge, ChargePoint Inc., Zoox Inc., Urban Compass Inc and Aurora Innovation Inc.
- As mentioned previously, invested in Ant Financial (in collaboration with our FEA Team), which contributed to TI's growing exposure in the Asia region.

Sustainable Investing

During fiscal 2019, Sustainable Investing (SI) spearheaded CPPIB's Climate Change Program, directing the Program Management Office and chairing the Climate Change Management Committee. Working directly with each of the Program's work streams, SI played an important coordinating role across a complex, cross-departmental Program. This ensured CPPIB took full advantage of its internal capabilities, resources and knowledge to the benefit of the Fund.

SI played a leading role in climate change engagement and proxy voting described on page 28. In fiscal 2019, SI supported more than 30 shareholder proposals related to climate change. SI continued to lead and participate in engagements alongside other Canadian and global investors to press large greenhouse gas emitters in oil and gas, utilities and other sectors to improve disclosure related to greenhouse gas emissions, strategies and performance. CPPIB is also on an Advisory Committee of the United Nations-supported Principles for Responsible Investments (PRI). It engages collaboratively with the oil and gas and utilities sectors to encourage companies to reduce methane emissions, improve management of methane emissions and enhance disclosure.

LOOKING AHEAD

Building on the progress made in fiscal 2019, AE will focus its efforts on:

- Increasing its exposure in emerging markets through new investments and in-depth research;
- Advancing knowledge-sharing initiatives and cross-collaboration across the organization, including data and analytics; and
- Further supporting the development of the Climate Change Program across CPPIB.

CREDIT INVESTMENTS

AT A GLANCE

Fiscal 2019 Net Return ($ billion/%)

$3.0 billion / 10.8%

Net Investments

$36.6 billion

Key Focus this Year

> Establishing the new Credit Investments (CI) department to deliver the desired credit exposure for the Fund

> Formalizing a long-term, go-to-market strategy for Mainland China and India

> Continuing to scale our investment activities along the entire credit spectrum

SUMMARY

Credit Investments (CI) assets grew to $36.6 billion at the end of fiscal 2019. This growth was primarily driven by new investment activities of $14.4 billion and valuation gains of $1.2 billion, partially offset by $8.4 billion of dispositions within CI's private holdings. CI's assets represent approximately 9.3% of the CPP Fund, managed by 94 professionals located across four offices globally. As shown on page 75, CI's investments are diversified by industry and geography. The figures exclude Balancing Credit managed by Public Credit which are reported under the Balancing Portfolio.

The first table below summarizes aggregated returns in absolute terms with rates of return calculated on an unhedged time-weighted basis.

The second table shows dollars of dollar value-added.

Credit Investments

(%)	Fiscal 2019	Fiscal 2018
Returns		
1-year excluding foreign currency impact	9.8	11.2
1-year	11.2	9.2
1-year net	10.8	8.7
1-year return comparator[1]	5.4	6.4

($ billions)	Fiscal 2019	Fiscal 2018
Contribution to Dollar Value-Added[1, 2]		
1-year	1.3	0.8
5-year	3.4	2.3

1 Return comparator is the weighted return of return-risk factors representative of the department's investment programs. Dollar value-added is relative to the return comparator.

2 Foreign currency fluctuations have no impact on departmental value-added. See page 27 for more details.

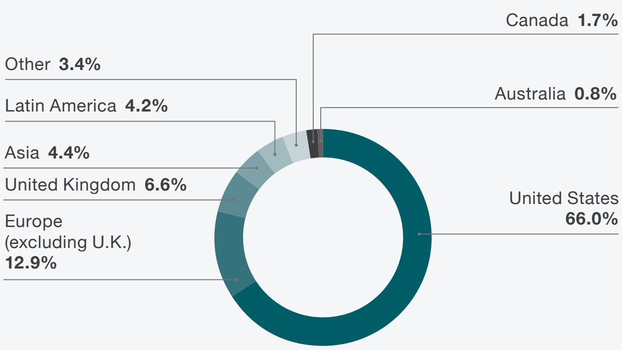
In fiscal 2019, the Credit Investments department delivered strong returns both in absolute and relative terms across all its programs, due to a combination of income flows, realizations, valuation gains and currency gains. The Credit Investments portfolio also continues to outpace the returns of relevant public market indexes over the long term. Over the past five years, the CI portfolio has generated a net return of 11.8% and net income of $10.7 billion.

During fiscal 2019, CI delivered $3.0 billion in net income for the Fund and incurred costs of $185 million to support investment activities. Investment management fees of $24 million mainly represent fees for structured credit and deployment vehicles. Transaction costs of $48 million primarily reflect the professional and advisory services related to acquisitions and dispositions. Transaction costs compared to last year were higher due to increased investment activities. Operating expenses of $113 million for Credit Investments have increased compared to last year due to higher allocated core services as well as personnel costs to support the portfolio's expanded mandate.

The charts below provide a summary of CI's holdings by geography and sector.

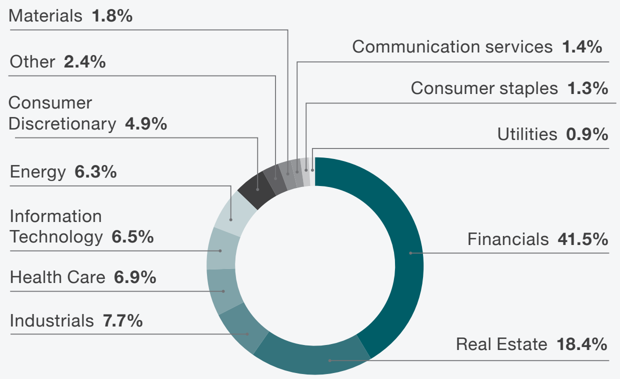
Credit Investments – Geographic Diversification

As at March 31, 2019



Credit Investments – Sector Diversification

As at March 31, 2019



Net Income for Credit Investments

($ millions)	Fiscal 2019	Fiscal 2018	5-Year
Investment Income	**3,161**	2,157	11,397
Investment Management Fees	**24**	13	68
Transaction Costs	**48**	31	233
Net Investment Income	**3,089**	2,113	11,096
Operating Expenses	**113**	94	425
Net Income	**2,976**	2,019	10,671

Fiscal 2019 activities

The CI department was formed in fiscal 2019, bringing together all public and private credit strategies across the Fund. Since the formation of the department, CI has established the organizational structure and investment processes needed to deliver the desired credit exposure for the Fund.

Credit markets experienced significant volatility in fiscal 2019. Credit spreads widened across geographies towards the end of calendar 2018. After outperforming most other asset classes throughout the calendar year, the credit market was ultimately not immune to the broader market sell-off. However, markets have rebounded substantially since the start of calendar 2019, ending the fiscal year with positive total returns.

Despite volatile market conditions, the breadth and flexibility of CI's mandate has enabled the team to deploy significant capital in investments with attractive risk-adjusted returns. In fiscal 2019, CI deployed $14.4 billion in capital across the credit spectrum and geographies.

Americas Leveraged Finance

At year end, Americas Leveraged Finance (ALF) assets totalled $13.3 billion, compared to $10.4 billion at the end of fiscal 2018. The growth in the portfolio was driven primarily by $4.9 billion in new investment activity and $0.8 billion in valuation gains. This was partially offset by dispositions totalling $3.1 billion. A team dedicated to credit investing in Latin America was formally established, and the Latin America portfolio grew to $1.2 billion by the end of the fiscal year.

Notable ALF transactions this fiscal year included:

> Closed a $508 million first-lien secured unitranche financing commitment for a Canadian-based industrials business. ALF and Antares, CI's platform investment, were sole lenders to the facility; and

> Closed a US$85 million term loan investment to Mutant, a provider of customer experience management solutions in Brazil.

Americas Structured Credit and Financials

At year end, Americas Structured Credit and Financials (ASCF) assets totalled $4.7 billion, compared to $4.6 billion at the end of fiscal 2018. The growth in the portfolio was driven primarily by $3.0 billion in new investment activity and $0.2 billion in valuation gains. This was partially offset by portfolio and portfolio distributions, refinancings and dispositions totalling $3.1 billion. ASCF continues to partner with high-quality originators and servicers across asset classes. The group is embracing new data and technology tools to assist with diligence, asset management and identification of new investment opportunities.

Notable ASCF transactions this fiscal year included:

> Committed US$285 million to a newly established vehicle used to purchase equity in collateralized loan obligations managed by Sound Point Capital Management, LP; and

> Acquired a portion of Theravance Biopharma's non-recourse notes, backed by a portion of future royalties related to net sales of Trelegy® Ellipta®, a drug marketed by GlaxoSmithKline for the treatment of respiratory disorders.

APAC Credit

At year end, APAC Credit (APAC) assets totalled $1.2 billion, compared to $1.1 billion at the end of fiscal 2018. The growth in the portfolio was driven primarily by $0.4 billion in new investment activity and $45 million in valuation gains. This was partially offset by dispositions totalling $0.3 billion. During the year, APAC worked with local advisors to formulate a long-term credit investment strategy for two strategic markets: Mainland China and India. It also continued to build out its investment team based in Hong Kong. The group made its first investment in India and executed several transactions in the offshore China credit market.

A notable APAC transaction this fiscal year included:

> Invested CNY704 million in loan financing to support an international sponsor's purchase of a non-performing loan (NPL) portfolio in Mainland China. This portfolio is primarily backed by commercial real estate properties in Guangzhou, one of the four Tier One cities in Mainland China.

European Credit

At year end, European Credit (EC) assets totalled $4.6 billion, compared to $3.0 billion at the end of fiscal 2018. The net growth in the portfolio was driven primarily by $2.1 billion in new investment activity, and $0.1 billion in valuation gains. This was partially offset by dispositions totalling $0.5 billion. The group continued to expand investments into senior secured loans and established a permanent structuring strategy for European non-performing loans.

A notable EC transaction this fiscal year included:

> Invested £75 million in the first-lien secured term loan of ZPG, a digital business offering online property portal and home-services price comparison to consumers primarily in the U.K. Silver Lake Partners took ZPG private in July 2018 alongside GIC and PSP.

Public Credit

Public Credit (PC) manages the Balancing Credit portfolio as part of the Balancing Portfolio for the Fund as well as an active portfolio under CI. The Public Credit portfolio, consisting of liquid investment grade credit products, grew from $3.4 billion to $9.2 billion in fiscal 2019, consisting of $5.4 billion in Balancing Credit and $3.8 billion in Active Public Credit. During fiscal 2019, PC established the Emerging Markets Hard Currency Public Credit program which provides an alternative access point for the diversification benefits of CPPIB's emerging markets exposure. The group also started research into an Emerging Markets Local Currency Public Corporate Credit program.

Real Assets Credit

At year end, Real Assets Credit (RAC) assets totalled $8.9 billion, compared to $6.1 billion at the end of fiscal 2018. The growth in the portfolio was driven primarily by $4.0 billion in new investment activity and $62 million in valuation gains. This was partially offset by dispositions totalling $1.5 billion. The group closed its first investments in Brazil and Poland in fiscal 2019, and started the work to develop an Infrastructure and Power & Renewables go-to-market strategy.

Notable RAC transactions this fiscal year included:

> Participated in A$500 million of seed lending to a newly established fund with Challenger Investment Partners. The fund invests in middle-market real estate loans in Australia and New Zealand;

> Originated a €250 million mezzanine loan investment in Echo Polska Properties N.V., owner of the largest retail property portfolio in Poland; and

> Committed US$375 million to LongPoint Minerals II LLC, the second company launched by the Denver-based group that focuses on the acquisition of oil and natural gas mineral interests in the U.S.

LOOKING AHEAD

With the ability to provide a complete solution across the credit market, CI is focused on scaling the portfolio globally and adding incremental returns in the most efficient manner. Specifically, CI will:

> Further scale its developed markets strategies and fill in the gaps in the credit spectrum;

> Develop a Public Credit active program and grow its emerging markets exposure;

> Develop a framework to price and allocate capital based on best relative value among strategies globally; and

> Use technology and data to enable better investment decision-making and portfolio management.

PRIVATE EQUITY

AT A GLANCE

Fiscal 2019 Net Return ($ billion/%)

$12.0 billion / 16.5%

Net Investments

$87.7 billion

Key Focus this Year

> Realigning the PE department to deliver a global diversified private equity portfolio across a breadth of investment types

> Expanding its opportunity set by partnering with other like-minded long-term investors

> Continuing to actively manage relationships with fund managers to generate deals while enhancing proactive sourcing efforts

SUMMARY

Private Equity's (PE) assets increased from $69.3 billion at the end of fiscal 2018 to $87.7 billion at the end of fiscal 2019. This growth was primarily driven by new investment activities totalling $20.1 billion, valuation gains of $10.6 billion, and foreign exchange gains of $1.6 billion. This was partially offset by distributions of $14.3 billion. PE's total exposure including unfunded commitments was $120.2 billion – an increase of $23.0 billion over the fiscal year. PE has 116 direct investments and maintains 142 manager relationships. The department's portfolio represents approximately 22.4% of the CPP Fund, managed by 153 professionals located across four offices globally. As shown on page 78, PE's investments are diversified by industry and geography.

The table below summarizes aggregated returns in absolute terms with rates of return calculated on an unhedged time-weighted basis, as well as dollars of dollar value-added.

Private Equity

(%)	Fiscal 2019	Fiscal 2018
Returns		
1-year excluding foreign currency impact	14.4	17.2
1-year	16.8	16.1
1-year net	16.5	15.8
1-year return comparator[1]	8.6	15.5

($ billions)	Fiscal 2019	Fiscal 2018
Contribution to Portfolio Dollar Value-Added[1, 2]		
1-year	3.4	0.8
5-year	5.4	0.8

1 Return comparator is the weighted return of return-risk factors representative of the department's investment programs. Dollar value-added is relative to the return comparator.

2 Foreign currency fluctuations have no impact on departmental value-added. See page 27 for more details.

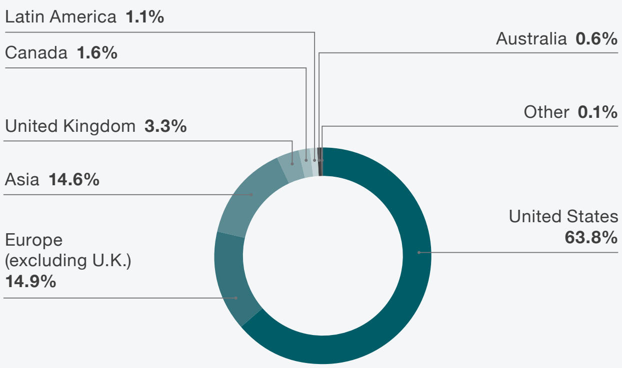
In fiscal 2019, the PE department delivered solid returns both in absolute and relative terms. This was due to a combination of strong income flows and valuation gains. The gains were recorded across programs and a majority of sectors, but primarily resulted from strong operational performance in several portfolio companies within Direct Private Equity. The PE portfolio also continued to outperform the returns of the relevant public equity benchmarks over the long term. Over the past five years, the Private Equity department has generated a net return of 17.1% and net income of $44.3 billion.

During fiscal 2019, PE delivered $12.0 billion in net income for the Fund and incurred costs of $849 million to support investment activities. Investment management fees of $562 million have increased over last year due to increased level of assets managed externally. Transaction costs of $82 million which primarily reflect professional and advisory services related to private market acquisitions and dispositions, were lower than last year. The higher transaction costs last year were attributed to sizeable underwriting costs related to an existing private investment that went public. Operating expenses of $205 million were higher than last year, driven by higher allocated core services and personnel costs to support deal activities.

The charts below provide a summary of PE's holdings by geography and sector.

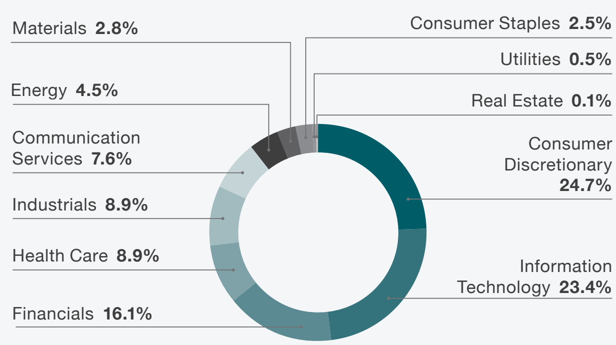
Private Equity – Geographic Diversification

As at March 31, 2019



Private Equity – Sector Diversification

As at March 31, 2019



Net Income for Private Equity

($ millions)

	Fiscal 2019	Fiscal 2018	5-Year
Investment Income	**12,853**	10,136	47,858
Investment Management Fees	**562**	523	2,418
Transaction Costs	**82**	120	386
Net Investment Income	**12,209**	9,493	45,054
Operating Expenses	**205**	168	770
Net Income	**12,004**	9,325	44,284

Fiscal 2019 activities

In fiscal 2019, PE deployed $20.1 billion in capital, continuing on its projected growth trajectory despite very competitive market conditions. By taking advantage of CPPIB's scale, the long-term nature of its capital base, internal expertise and partner relationships, PE has been able to expand its business beyond traditional private equity products and continues to source and execute innovative transactions across the groups. Examples include opportunities under the Private Equity Solutions and Structured Secondaries strategies.

The integration of the passive co-investments strategy with Direct Private Equity (DPE) and Private Equity Funds has increased the number of opportunities for passive direct investments. In fiscal 2019, DPE and Private Equity Funds closed 26 co-investments, representing $3.1 billion of invested capital, compared to 12 investments totalling $1.4 billion in fiscal 2018. Consolidating and streamlining the origination and underwriting process to improve execution efficiency made this possible.

The funds programs continued to focus on actively managing their relationships with General Partners (GPs) to generate deals across CPPIB. Meanwhile, the secondary and direct investment programs took a more proactive and systematic approach in deal sourcing and origination to scale our business.

High asset valuations persisted into fiscal 2019 and motivated sponsors to consider cashing in their holdings and finding other ways to generate cash. During the year, PE's distributions totalled $14.3 billion, with $6.9 billion representing original invested capital, $6.8 billion in realized gains and $0.5 billion in dividends and interest income.

Private Equity Funds

During the year, the Private Equity Funds (Funds) portfolio grew from $27.9 billion to $32.7 billion. The growth in the portfolio was primarily driven by $7.0 billion in new invested capital, $3.2 billion in valuation gains and $0.5 billion in foreign exchange gains. This was partially offset by distributions totalling $6.3 billion. The portfolio generated investment gains in all key markets, with North American investments outperforming European investments. Investments in the information technology sector continued to be the top performer as they generated 53% of Funds' investment gains. Although investments in consumer staples underperformed this year, no sectors materially detracted from the net return of the group's portfolio. The Funds group currently has relationships with 77 fund managers across 208 funds, with $55.0 billion of total exposure (up 12% from fiscal 2018).

Fundraising activity by private equity firms remained buoyant in fiscal 2019, as investors continue to allocate significantly to the asset class in pursuit of returns. The Funds group reviewed 60 relevant, on-strategy opportunities and after prudent judgment, made commitments to 16 funds for a total of $7.1 billion. Of these, 13 represented existing relationships, including three that backed adjacent strategies to a GP's core platform. Three relationships were completely new to the program.

The Funds group continued to focus on actively managing its relationships with GPs to generate deals for other investment programs within CPPIB and contribute to the growth of the Fund. Over the year, the group's GPs offered CPPIB 216 opportunities, of which 29 had closed as of March 31, 2019. The total dollar amount of closed opportunities represented $5.8 billion of CPPIB's invested capital, which was invested on a no-fee, no-carry basis.

Direct Private Equity

At year end, the Direct Private Equity (DPE) portfolio consisted of 80 direct investments valued at $32.8 billion compared with 64 valued at $23.2 billion one year earlier. The growth in the portfolio was primarily driven by $6.6 billion in new investment activity, $5.9 billion in valuation gains and $0.6 billion in foreign exchange gains. This was partially offset by dispositions totalling $3.5 billion. The group generated positive net returns of $6.5 billion with contributions from all core strategies.

In fiscal 2019, leveraged buyout valuations remained at cyclical highs, driven by borrower-friendly terms and availability of credit, as well as historically high public equity market valuations. This environment has resulted in downward pressure on prospective returns. Many assets traded at prices that did not meet our expected risk-adjusted returns. The DPE group remains disciplined in underwriting as it executes its investment program and focuses on strategic opportunities to invest alongside strong partners beyond traditional private equity funds. Partners include family offices, like-minded long-term investors, corporations, and entrepreneurs. We differentiate ourselves as a partner of choice due to the stability, scale and long duration of our capital. This year, DPE added two new investments alongside partners who were not managers in the Private Equity Funds portfolio for total invested capital of $2 billion.

DPE scaled up by integrating the former passive co-investments business into the group. It also harmonized processes on origination, underwriting and asset management for smaller, passive investments. In fiscal 2019, DPE originated and closed 17 passive investments representing $2.5 billion of invested capital.

Significant transactions executed by DPE this year included:

- Acquiring a stake in Sportradar, the global leader in sports data analysis, alongside growth equity fund Technology Crossover Ventures, at an enterprise value of €2.1 billion;
- Investing in Berlin Packaging, an American hybrid packaging distributor, as part of a recapitalization deal with Oak Hill Capital Partners; and
- Signing a definitive agreement to invest US$1 billion for a 12% stake in The Ultimate Software Group, Inc. alongside Hellman & Friedman and Blackstone, in a transaction valued at approximately US$11 billion.

Private Equity Asia

During the year, the Private Equity Asia (PE Asia) portfolio grew from $12.4 billion to $13.6 billion in carrying value. The portfolio consists of $8.2 billion (60.4%) in funds, $5.0 billion (36.4%) in direct investments, and $0.4 billion (3.2%) in secondary investments. The majority of PE Asia's investments were based in emerging markets, with 52.0% in Greater China (up from 47.6% in fiscal 2018) and 13.5% in India. The growth in the portfolio was primarily driven by $2.2 billion in new invested capital, $0.3 billion in foreign exchange gains and $0.6 billion in valuation gains. This was partially offset by distributions totalling $1.9 billion. PE Asia generated investment gains in both the funds and direct investments portfolios. Chinese investments were responsible for the majority of PE Asia's gains, which were partially offset by a notable write-down of a direct investment in South Korea.

Private equity investment activity across Asia remained strong in fiscal 2019, with an increase in large deals and transactions with ownership control. China and India continued to lead the region in terms of contribution to market growth. On the funds side, the fundraising market was robust, with over 250 funds raised in Asia during calendar year 2018. PE Asia remained selective against this backdrop and committed to nine managers out of 66 opportunities reviewed. While continuing to support strong existing managers, the PE Asia group also expanded relationships with a healthy mix of emerging and experienced managers across the region. On the direct investment side, PE Asia continued growing its co-investment business and its roster of investment partners. During the year, PE Asia committed $3.0 billion to funds in Asia and closed nine direct investments for $0.8 billion. The group continued to strengthen its partner network, enhance deal origination efforts, and expand its capabilities to pursue scalable, complex transactions. This will contribute to the desired emerging market exposure for CPPIB.

Notable PE Asia transactions this fiscal year included:

> Originating and closing an investment in Think & Learn Pvt. Ltd. (also known as Byju's), the leading educational technology company in India;

> Committing to three growth funds within Sequoia Capital's family of funds, including Sequoia Global Growth Fund III, to gain access to the emerging market and technology sector; and

> Committing to Baring Asia Private Equity VII, the group's third commitment to Baring Asia's private equity fund since commencing the partnership in 2010.

Secondaries

At year end, the Secondaries group assets totalled $8.6 billion, compared to $5.8 billion at the end of fiscal 2018. The growth in the portfolio was primarily driven by $4.3 billion in new invested capital, $0.9 billion in valuation gains and $0.1 billion in foreign exchange gains. This was partially offset by distributions totalling $2.6 billion. Unfunded commitments increased by $1.1 billion to $2.9 billion, for a total exposure of $11.6 billion. As at March 31, 2019, 69.5% of the total exposure was in North America, 20.6% in Europe, 5.5% in Latin America and 4.4% in Asia.

Secondaries delivered strong net returns in all three of its core investment strategies, including recent expansions into Structured Secondaries, Latin America, growth equity and venture capital. Broadening the focus of the group will support continued growth and diversification of the portfolio while allowing for the careful selection of attractive investment opportunities.

Transaction volumes in the private equity secondary market continued to grow due to a variety of cyclical factors and long-term trends, particularly the increased prevalence of GP-led transactions being executed by large, high-quality GPs.

During the year, the group invested $5.5 billion across 13 transactions, including:

> Four LP secondary transactions including an LP portfolio in excess of US$1.5 billion and three large and highly concentrated single manager/LP interest portfolios;

> US$290 million GP commitment financing; and

> US$100 million GP-led fund recapitalization in the venture capital sector.

LOOKING AHEAD

The Private Equity department will continue to support CPPIB's goal of increasing private equity exposure, particularly in emerging markets. It will focus on using technology, data and analytics in its investment decision-making. PE will maintain a large funds program and will further optimize how the department uses General Partner (GP) relationships to generate deals by focusing on relationship returns and portfolio construction. This will ensure efficient capital deployment across all programs with a wide selection of private instruments that can be tailored to specific investment opportunities. Specifically:

> The Private Equity Funds group will focus on building a new Venture Capital program aligned with other CPPIB technology-related initiatives to support the Fund's growth. The group will continue to proactively develop GP relationships to gain better insight into upcoming fundraising activities.

> The Direct Private Equity group will continue to optimize the deal execution process, particularly for smaller, passive investments, to ensure the portfolio can be further scaled in a resource-efficient manner. DPE will also prioritize information technology initiatives that will allow for more systematic performance monitoring, identification of strategic opportunities or threats, and enhanced value creation within our portfolio companies.

> The Private Equity Asia group will continue to deepen its local market expertise and network in the region, with a focus in Greater China and India. The group will build new GP and strategic relationships to support our direct investment capabilities.

> The Secondaries group will continue to execute on its mandate to grow and diversify its portfolio and to support increased active management of the department's mature private equity funds portfolio.

03

REAL ASSETS

AT A GLANCE

Fiscal 2019 Net Return ($ billion/%)

$6.7 billion / 7.7%

Net Investments

$94.1 billion

Key Focus this Year

- Pursuing growth in emerging markets via existing and select new local partnerships
- Launching a focused effort on the Energy Innovation, Technology and Services sector
- Establishing capabilities to invest in public real estate opportunities through the creation of a Listed Real Estate program
- Streamlining the investment reporting process to improve collaborative sharing of information across the organization

SUMMARY

The Real Assets (RA) portfolio increased from $83.8 billion at the end of fiscal 2018 to $94.1 billion, representing a net increase of $10.3 billion. The change in portfolio value was primarily the net result of several factors: new investment activity totalling $10.5 billion and changes in valuation of $6.5 billion, which was offset by asset dispositions and return of capital of $5.1 billion, distribution income of $1.0 billion and foreign exchange movement during the year of $1.1 billion.

The RA portfolio represents 24.0% of the Fund, managed by 198 professionals located across seven offices globally. The department's geographic footprint spans five continents and consists of 174 investments.

In fiscal 2019, RA further consolidated to include the Energy & Resources (E&R) group. The investment groups within RA, including E&R, share similarities with respect to risk profile and the capital-intensive and long-dated nature of its investment activities. Consolidation of these groups within one department enables the sharing of best practices and better allocation of capital to generate higher risk-adjusted returns. The groups are also among our most globally diverse businesses within the Fund.

Real Assets

(%)	Fiscal 2019	Fiscal 2018
Returns		
1-year excluding foreign currency impact	**9.5**	8.0
1-year	**8.0**	9.0
1-year net	**7.7**	8.7
1-year return comparator[1]	**5.3**	5.6

($ billions)	Fiscal 2019	Fiscal 2018
Contribution to Dollar Value-Added[1, 2]		
1-year	**2.1**	2.1
5-year	**8.6**	6.7

1 Return comparator is the weighted return of return-risk factors representative of the department's investment programs. Dollar value-added is relative to the return comparator.

2 Foreign currency fluctuations have no impact on departmental value-added. See page 27 for more details.

The department's four investment programs performed well on an adjusted basis against their respective performance objectives this year. In particular, the Infrastructure program showed strong performance due to valuation increases.

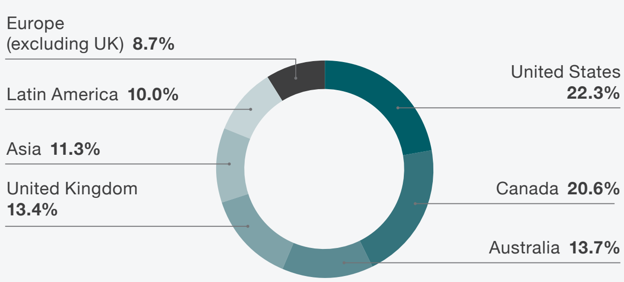
During fiscal 2019, RA delivered net income of $6.7 billion and incurred costs of $694 million to support their investing activities. Investment management fees of $258 million have increased over last year as a result of higher performance fees for real estate investments from increased valuations and realized dispositions.

Transaction costs of $159 million primarily represent professional and advisory services incurred during due diligence related to investment acquisitions and dispositions. Specifically, the increase in transaction costs this year is a result of higher transaction volumes within the Energy & Resources, Power & Renewables and Infrastructure portfolios. Operating expenses of $277 million are higher than last year driven by higher allocated core services costs and personnel costs to support the growing global reach of the portfolio and its investing activities.

The charts below provide a summary of RA's holdings by geography and sector.

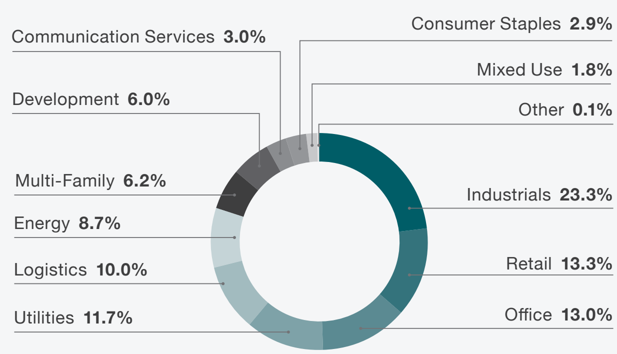
Real Assets – Geographic Diversification

As at March 31, 2019



Real Assets – Sector Diversification

As at March 31, 2019



Net Income for Real Assets

($ millions)	Fiscal 2019	Fiscal 2018	5-Year
Investment Income	**7,417**	6,941	32,091
Investment Management Fees	**258**	127	764
Transaction Costs	**159**	111	699
Net Investment Income	**7,000**	6,703	30,628
Operating Expenses	**277**	245	1,098
Net Income	**6,723**	6,458	29,530

Fiscal 2019 activities

Transaction volumes for global real assets continued to show growth in fiscal 2019, with a slight slowdown towards the latter half of the year. Global interest rates rose modestly, but still remain low historically, and income-seeking investors continued to allocate additional capital into real assets. This competitive landscape has pushed asset prices upward, dampening forward return expectations, especially for core deals.

RA's approach to acquisitions remains disciplined, yet agile. The department continues to favour situations where its strong partnerships and ability to offer scale, speed and certainty of execution allows access to complex, non-traditional deals that offer attractive return profiles.

Geographically, RA is focused on increasing its exposure to emerging markets such as India, Greater China and Brazil. The department has also been ready to divest certain assets where its original investment expectations played out, or where the market's view on future returns was lower than its own. While down from the pace of divestments RA achieved in fiscal 2018, the RA programs still repatriated $5.1 billion of capital to the CPP Fund in fiscal 2019, primarily from the Real Estate portfolio.

Real Estate

At year end, the Real Estate (RE) portfolio totalled $47.5 billion, an increase of 3.1% from fiscal 2018. The change in portfolio value was primarily the net result of several factors: new investment activity totalling $3.4 billion and $1.9 billion in valuation increases. This was offset by $3.7 billion in return of capital from asset sales and $0.6 billion in foreign exchange losses.

At year end, the RE portfolio consisted of 139 investments with 65 operating partners, managed by a team of 72 professionals across seven offices globally. This portfolio remains well diversified across major markets globally, with 82.5% in developed markets such as U.S., U.K., Canada and Australia, and 17.5% in the emerging markets, including Greater China, India and Brazil. The group's success in these markets can be attributed to its local presence, with almost 90% of its real estate investment professionals located in CPPIB's international offices.

Real estate investments continue to look relatively attractive in an environment where global investors are contending with rising interest rates, elevated trade tensions, political uncertainty and volatility in energy markets. Intense competition continues for core real estate assets in gateway markets calling for continued discipline, yet flexibility in our investment approach. As a result, Real Estate continued to broaden its opportunities this year and increased its investments in emerging markets in order to invest in areas that offer attractive returns on a risk-adjusted basis. The group also established the Listed Real Estate (LRE) program. This allowed it to further enhance the risk-return characteristics of the real estate portfolio by investing in public real estate in efforts to gain exposure to markets and sectors that are absent or under-represented in our current portfolio.

RE also continues to benefit from long-standing relationships with many best-in-class operating partners who are a valuable source of deals. More than 70% of the investment activity this year was made with existing partners such as Goodman Group, Longfor Properties, Global Logistic Properties and Oxford Properties.

Major transactions undertaken by the RE group in fiscal 2019 include:

> Expanding the relationship with Goodman Group and making an initial allocation of up to R$500 million for a 20% interest in the Goodman Brazil Logistics Partnership. This partnership invests in prime logistics and industrial assets in São Paulo and Rio de Janeiro.

> Forming a new investment cooperation alongside Longfor Group Holdings Limited to focus on rental housing programs in Greater China across Tier I and core Tier II cities. The initial targeted investment was approximately US$817 million.

> Forming a new investment vehicle with ESR and Kendall Square Asset Management to invest up to US$500 million in a newly established investment vehicle targeting modern logistics facilities in Korea.

Infrastructure

At year end, the Infrastructure portfolio consisted of 19 direct investments valued at $33.3 billion, compared with $28.6 billion a year earlier. The change in value was primarily the result of $1.9 billion in new investment activity, and $4.9 billion in valuation increases driven by strong portfolio performance and market pricing, This was offset by a $0.5 billion return of capital and dispositions, distribution income of $1.0 billion and $0.6 billion in foreign exchange losses.

The Infrastructure portfolio remains well-diversified globally, with 79.3% in developed markets such as North America, Western Europe and Australia and 20.7% in select emerging markets, primarily in Latin America and India. Infrastructure investments represent 35.4% of the RA portfolio. A team of 48 professionals located across five offices globally manages the Infrastructure portfolio.

Investors continued to dedicate significant amounts of capital into private infrastructure funds, with total global fundraising continuously increasing over prior years. Investors are attracted to the sector as a means of achieving returns that generally do not correlate to public markets, providing the opportunity for higher returns than fixed income alternatives and a hedge against rises in inflation.

The corresponding downward pressure on returns has resulted in many private investors seeking "core-plus" or higher-risk infrastructure investments to earn additional returns. However, CPPIB has remained focused on selecting quality, large-scale core opportunities with dependable partners.

During the year the Infrastructure group was active across its core geographies and markets. It acquired:

> As part of a consortium, a 51% ownership stake in WestConnex, the largest road infrastructure project in Australia. CPPIB holds a 20.5% interest in the consortium's A$9.26 billion ownership stake. CPPIB's investment was approximately A$1.8 billion.

> 30% of the units of IndInfravit Trust, the first private infrastructure investment in India, for approximately C$200 million. The trust focuses on the ownership and development of toll roads and road infrastructure in India.

> 29% of the Pacifico Sur toll road, which provides access between Guadalajara and Tepic in Mexico, for approximately 2.7 billion pesos (C$185 million), investing alongside our partners in another Mexican toll road, Ontario Teachers' Pension Plan and Impulsora del Desarrollo y el Empleo en América Latina, S.A.B. de C.V.

Energy & Resources

At year end, the Energy & Resources (E&R) portfolio consisted of 11 investments valued at $8.2 billion compared with $6.1 billion a year earlier. The growth in the portfolio was driven primarily by $2.8 billion in new investment activity.

The macro environment during fiscal 2019 contributed to another active year for E&R. Volatile commodities and capital markets reacted to the increasing availability of renewable energy, faster adoption rates of electric vehicles and near-term supply shocks. Policy-makers, industry and investors are increasingly re-orienting themselves to a new world order focused on returns over growth and optimization over speed.

This dynamic created an attractive opportunity for patient and flexible capital that believes in the following key energy transition themes:

> Energy demand will grow globally;

> The world will decarbonize;

> Energy infrastructure will recalibrate globally; and

> Traditional energy sources will continue to be important.

Notable E&R transactions this fiscal year included:

> Acquiring all of Chesapeake Energy's Utica Shale oil and gas assets in Ohio via Encino Acquisition Partners (EAP), for US$2.0 billion. EAP was formed in 2017 between CPPIB and Encino Energy to acquire large, high-margin oil and gas production and development assets in the U.S. CPPIB invested approximately US$1.0 billion in EAP and owns 98% of the partnership.

> Entering into a long-term service agreement for the construction and operation of the Alberta Carbon Trunk Line via Wolf Midstream, which is 99% owned by CPPIB. CPPIB invested approximately C$300 million in the project.

> Acquiring 100% of Shell E&P Ireland Limited for €830 million, which holds Shell's 45% interest in the Corrib Offshore Natural Gas Field. This marked E&R's first investment in Europe.

Power & Renewables

At year end, the Power & Renewables (P&R) portfolio consisted of five direct investments valued at $5.1 billion compared with $2.9 billion a year earlier. The growth in the portfolio was driven primarily by $2.4 billion in new investment activity.

Fiscal 2019 saw an acceleration of long-term changes in the power market. Several factors drove the changes, including:

> The increasing cost-competitiveness of renewable generation relative to new and existing conventional generation (such as from coal and natural gas);

> Continued policy support for a transition to a clean electricity system;

> A rise in the direct purchase of renewable power by corporations and communities; and

> The rapid adoption of new power technologies, such as battery storage, to facilitate integration of renewables into the electricity system.

The combined confluence of these trends has created a meaningful investment opportunity for CPPIB's flexible capital. With activity in equity capital markets remaining limited, private capital is now playing a leading role in funding the transition towards renewable generation, allowing for investment opportunities for the P&R portfolio.

Notable P&R transactions this fiscal year included:

> Acquiring all of NextEra Energy Partners' Ontario renewable assets for approximately C$740.4 million. Concurrently, P&R formed a new company, Cordelio Power, to manage these assets.

> Entering into a global joint venture with Enbridge by acquiring a 49% stake in certain U.S. and Canadian operating assets, as well as two in-construction offshore wind projects in Germany, for a total capital commitment of C$2.25 billion. In addition, Enbridge and CPPIB will collectively pursue future offshore wind opportunities in Europe.

> Acquiring the State of São Paulo's stake in Companhia Energética de São Paulo for R$1.9 billion through the group's Brazilian joint venture with Votorantim Energia.

Portfolio Value Creation

In fiscal 2019, Portfolio Value Creation (PVC) expanded its asset management activities to cover all direct investments in which CPPIB has material influence, across all Investment Departments. This comprises all platform investments and direct investments where CPPIB has one or more board seats. In addition to Direct Private Equity, Infrastructure, and Energy and Resources, PVC's expanded mandate now covers Relationship Investments, Thematic Investing, Private Equity Asia, Power and Renewables, and Real Estate.

The PVC group provided transition support from the beginning of CPPIB's ownership in portfolio companies. It also gave 100-day planning for newly acquired companies to establish robust, long-term processes and controls. The group continued to execute a thorough monitoring process across major CPPIB portfolio companies and provided due diligence support.

LOOKING AHEAD

The Real Assets department is very conscious of the ongoing conflict between increased capital being allocated to real assets globally and the risks posed by a decelerating global economy. However, the department believes that real asset investments will continue to generate growing income streams and, therefore, expect total returns that are very attractive on a risk-adjusted basis. Looking ahead to fiscal 2020, RA will focus on:

> Growing its investments with current long-standing relationships and establishing new and scalable relationships;

> Remaining committed to expanding its emerging-markets portfolio, specifically in Greater China, India and Latin America;

> Divesting assets where its business plans have been completed, and where it can capitalize on attractive asset pricing; and

> Continuing to find ways to broaden its horizon and focus on investments that further enhance the risk-return characteristics of the portfolio.

FISCAL 2020 OBJECTIVES

CPPIB's corporate objectives for fiscal 2020 are:

1. Scaling our investment programs and emerging market capabilities, and increasing our global presence.
2. Evolving our enterprise-wide business architecture to guide how we will operate in the future.
3. Operationalizing our new risk framework.
4. Building talent and reinforcing culture on the foundation of our Guiding Principles.
5. Continuing to integrate technology, data and our knowledge collaboration initiative to enhance investment decisions.

ORGANIZATIONAL ACCOUNTABILITY

CEO/CFRO CERTIFICATION

During the year, we completed an evaluation of internal control over financial reporting and disclosure controls and procedures, using the framework and criteria set out in the Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). CPPIB is not required by law or regulation to perform this annual evaluation. We do so voluntarily as part of our commitment to strong corporate governance and accountability.

The CEO and CFRO are responsible for establishing and maintaining internal control over financial reporting to provide reasonable assurance that it is reliable and conforms with International Financial Reporting Standards (IFRS). They are also responsible for the design of disclosure controls and procedures that provide reasonable assurance that all material information is gathered and reported to Management on a timely basis.

No changes were made in our internal control over financial reporting or disclosure controls and procedures that have affected, or are reasonably likely to materially affect, our reporting.

Based on the results of Management's evaluation, the CEO and CFRO have concluded that internal control over financial reporting and the disclosure controls and procedures are properly designed and operated effectively throughout the year.

ACCOUNTING POLICIES AND CRITICAL ESTIMATES

Our significant accounting policies are summarized in note 1 and the respective relevant notes to the annual Consolidated Financial Statements and are important in understanding and interpreting our reported financial results and financial condition.

Certain of these accounting policies require Management to make assumptions and estimates that affect the reported amounts of assets, liabilities, income and expenses. We have established procedures to ensure accounting policies are applied consistently and processes for changing methodologies are well-controlled. Management's most critical accounting estimates are with regard to the determination of fair value for investments and investment liabilities. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is a market-based measurement and therefore incorporates those factors that market participants would consider when pricing an investment or investment liability. Quoted market prices are used to measure the fair value for investments traded in an active market, such as public equities and marketable bonds. Where the market for an investment is not active, such as for private equity, private debt, real assets, and over-the-counter derivatives, fair value is determined by valuation techniques that make maximum use of inputs observed from markets, such as a multiple of earnings derived from a set of publicly traded comparable companies. Additional techniques include the use of recent arm's-length transactions, the current fair value of another investment that is substantially the same, discounted cash-flow analysis, pricing models and other accepted industry valuation methods.

The Valuation Committee is responsible for the oversight of valuation governance, processes and results. Committee members include the Chief Financial and Risk Officer (as Chair) along with select senior representatives from CPPIB's Finance team. We have developed robust quarterly valuation processes to ensure the fair value of our investments are reasonably presented in our financial statements. These processes include independent procedures and the targeted use of external appraisers and valuators.

CPPIB's Finance team includes accredited professionals who prepare or approve fair values independently from the investment team. This ensures a valuation that is free of potential bias. In addition, for a majority of the direct investments, we leverage independent third-party appraisals and external valuation experts at least once per year to support the valuation process. Assets are selected for third-party appraisals through a risk-based approach that is based on both the materiality and complexity of the investments.

For CPPIB's fund investments in private equity and real assets, net asset values (NAVs) are obtained directly from the Investment Manager and represent fair value. CPPIB performs certain procedures to validate our reliance on the NAVs provided by the Investment Manager. These procedures may include: an operational risk review, updating all publicly listed securities to the current reporting date, a cross fund holdings analysis, and ensuring that funds are subject to an independent audit.

Regardless of the techniques used, judgment is required to estimate fair value for investments which are not traded on an active market. Our valuation methodologies for investments and investment liabilities are summarized in note 3 to the annual Consolidated Financial Statements.

REPORT OF THE HUMAN RESOURCES AND COMPENSATION COMMITTEE

As the Chair of the Human Resources and Compensation Committee (HRCC), I am pleased to share with you our approach to assessing performance and determining CPPIB employee compensation.

The underlying principles of CPPIB's compensation framework are to deliver the long-term business strategy by focusing on:

- Attracting, motivating and retaining top investment and management expertise;
- Paying for performance; and
- Aligning the interests of employees with those of CPP contributors and beneficiaries over the very long term.

Fiscal 2019 Performance Highlights

A key underpinning of our compensation programs is the performance of the total Fund[1] and each of our departments. Over the past year, the Fund generated a strong return. The one-year total Fund net return was 8.95%, while the five-year annualized net return was 10.7%. For fiscal 2019, we outperformed the Reference Portfolio benchmark, reflecting the strong performance of global public equity markets and performance of our active investments programs in the fiscal year. We delivered positive dollar value-added (DVA) above the Reference Portfolio's return, with total Fund net DVA in fiscal 2019 of $6.4 billion, and the cumulative five-year net DVA of $18.0 billion.

Compensation Program

We believe that a focus on total Fund performance in our compensation program is crucial. It supports a strong alignment between CPPIB employees and the interests of 20 million CPP contributors and beneficiaries.

We implemented the current compensation program in fiscal 2016. It has an enhanced focus on total Fund performance, balanced with a continued concentration on dollar value-added, over a longer performance horizon – a five-year rolling period, to better align with our long-term investment mandate. Importantly, our compensation program continues to measure both the quantity and quality of outcomes, including how Senior Management and employees deliver on long-term strategic business objectives.

Fiscal 2019 was the fourth full year under this compensation program. We are confident that it continues to support our business strategy, to enforce the principle of pay for performance and to align employees with the long-term interests of beneficiaries. This year we outperformed the Reference Portfolio benchmark as well as the absolute return target, and as a result saw an increase in the five-year multiplier used to drive incentive compensation. Our Named Executive Officers' (NEO) compensation remained relatively consistent. This year, it is moderately higher for Mr. Machin and Mr. Cass, SMD & Global Head of Real Assets. Mr. Cass' performance multiplier drove the higher compensation. Mr. Carrier, SMD & Head of International, also received relatively consistent compensation. The other two NEOs are new members of the Senior Management Team – Ms. Suyi Kim and Ms. Deborah Orida. Both have higher compensation due to time in a regional office with higher market pay levels, as well as for Ms. Orida, a transitional adjustment to reflect both her promotion to SMD, as well as her transfer from Hong Kong to Canada.

Our compensation program provides competitive pay levels relative to our defined talent market in all regions where we operate. It provides a clear, transparent framework to CPPIB employees and to our stakeholders.

The Board approves all compensation benchmarks and multiplier rates. The Human Resources and Compensation Committee retains full discretion to reward performance for the Senior Management Team within a range of zero to two times target incentive levels, as well as any salary adjustments or other compensation arrangements. This allows the Committee to assess and reward not only results, but also the manner in which they were achieved.

Fiscal 2019 CEO Pay Decisions

Over the past five years, CPPIB's total Fund[1] return of 10.7% and dollar value-added of $18.0 billion has been strong and has resulted in a total Fund multiplier of 1.74. The Board assessed Mr. Machin against his corporate goals and deemed that all of these were substantially achieved, resulting in a multiplier of 1.59. Against his individual objectives, the Board determined a multiplier of 1.70 for fiscal 2019. The weighted average of these three factors resulted in an overall incentive multiplier for Mr. Machin of 1.68.

Ultimately, the Board awarded Mr. Machin a total direct compensation of $5,265,125 for fiscal 2019, consisting of salary, an in-year award, and deferred awards. Mr. Machin also received a pension and benefits. Further details on CEO compensation are included in the Compensation Discussion and Analysis that follows.

Other Activities of the HRCC

The HRCC adopted specific objectives to focus on strategic priorities in fiscal 2019. This included reviewing the Incentive Compensation Plan to ensure it adequately incorporates additional CPP. The HRCC concluded that the existing compensation design will drive appropriate focus for the enhanced CPP over the next several years. Please refer to page 88 for specific HRCC activities undertaken in fiscal 2019.

In conclusion, the HRCC is satisfied that the compensation paid for fiscal 2019 is appropriate. We are confident that our decisions regarding department/group and individual performance compensation factors reflect our assessment of the Senior Management Team's performance, relative to the pre-established objectives for fiscal 2019. They are also appropriately aligned with the interests of contributors and beneficiaries.

Karen Sheriff

Karen Sheriff
Chair, Human Resources and Compensation Committee

1 For the purpose of the incentive compensation plan, total Fund reflects the combined long-term investment portfolios of the base Canada Pension Plan and additional Canada Pension Plan. This excludes cash for benefits, which is consistent with prior years.

The role and structure of the Committee

The Human Resources and Compensation Committee (HRCC) helps the Board of Directors with human resources matters, including talent management and compensation.

The HRCC is composed entirely of Directors who are knowledgeable about human resources and executive compensation issues. All HRCC members also serve on the Investment Committee. They have a strong appreciation of the link between compensation and risk management.

The committee members for fiscal year 2019 were:

Ian Bourne – ceased to be a member July 1, 2018
Sylvia Chrominska – appointed September 12, 2018
Tahira Hassan
Douglas W. Mahaffy – ceased to be a member October 26, 2018
Mary Phibbs – ceased to be a member January 1, 2019
Karen Sheriff, Chair
Kathleen Taylor
Jo Mark Zurel – ceased to be a member January 1, 2019

The HRCC held eight (8) meetings during fiscal 2019. The Chairperson of the Board of Directors, although not an HRCC member, attended all meetings. The CEO, the Senior Managing Director & Chief Talent Officer, the Senior Managing Director & General Counsel, and the Corporate Secretary also attended portions of the meetings at the HRCC's request. Annual activities for the HRCC (including those performed in fiscal 2019) are:

Evaluation of the CEO:

> Reviewed and recommended for Board approval the CEO's performance objectives and performance evaluation process.

> Reviewed significant outside commitments of the CEO.

Compensation of Officer and non-Officer employees:

> Reviewed, approved and recommended for Board approval, salary increases and incentive compensation payouts for officers and employees.

> Reviewed executive compensation trends as provided by the HRCC's external compensation advisor.

> Reviewed Officers' compensation. This included requesting and reviewing a report from an external compensation advisor on the compensation of officers relative to other large Canadian pension funds and investment management companies.

> Oversaw the disclosure of Directors' and Officers' compensation and the compensation framework in the annual report.

> Reviewed and recommended for Board approval the benchmark and incentive compensation curve for the CPP Fund.

Talent Management and Development:

> Reviewed succession planning for Officers and talent management programs.

> Reviewed employee pension and benefits plans.

> Received the annual report of the Pension Committee and reviewed and approved pension plan documents.

> Reviewed material changes to employee benefit plans and Human Resources policies.

Committee Terms of Reference review:

> Reviewed and recommended for Board approval the HRCC Terms of Reference and reviewed performance against Terms of Reference.

The HRCC uses the services of Hugessen Consulting Inc. to provide independent advice, information and guidance on human resources and executive compensation issues. Hugessen cannot provide any services to Management without the committee's prior approval. Hugessen received $197,740 for its services to the HRCC in fiscal 2019 and $162,000 in fiscal 2018.

You can find out more about the HRCC's mandate in the Terms of Reference section posted on the CPPIB website.

COMPENSATION DISCUSSION AND ANALYSIS

This Compensation Discussion and Analysis summarizes the foundational principles of our compensation framework and reviews the elements of our compensation program. It also provides details on the performance results and remuneration paid to our Named Executive Officers (NEOs) for the fiscal year ended March 31, 2019 including:

> President & Chief Executive Officer (CEO) – Mark Machin
> SMD & Chief Financial and Risk Officer (CFRO) – Neil Beaumont
> SMD & Head of International, Head of Europe – Alain Carrier
> SMD & Head of Asia Pacific – Suyi Kim
> SMD & Global Head of Real Assets – Ed Cass
> SMD & Global Head of Active Equities – Deborah Orida

Principles of our compensation program

Our compensation program continues to rest on three key principles:

> Attracting, motivating and retaining top investment and management expertise;
> Paying for performance; and
> Aligning the interests of employees with those of CPP contributors and beneficiaries over the very long term.

Our compensation program is a key factor in attracting the talent and investment experience we need to manage a global active portfolio of our size. In our search for the best employees, we compete with the largest investment managers and financial institutions in Canada and around the world. As the Fund is one of the largest of its type globally, we require people with significant experience in investment management, investment operations and many other support and governance functions. A competitive compensation package is essential to attract, motivate and retain this talent and effectively execute CPPIB's mandate to maximize the rate of return without undue risk of loss.

Risk management

Our compensation program reflects our public mandate and our responsibility to CPP's contributors and beneficiaries. We have aligned incentives with our long-term investment strategy and mandate, while considering our target return and risk appetite.

Our compensation program includes a number of key risk mitigating features:

- Significant Pay at Risk – a significant portion of compensation for Senior Management and senior employees is variable and deferred. The deferred portion fluctuates with the Fund's performance over time;
- Long-term Horizon Measurement – CPPIB tracks performance over multiple years. This aligns with the long-term nature of our investment mandate;
- Maximum Payouts – there is a cap on the incentive multipliers;
- Robust Benchmark Investment Return Targets – benchmarks used to calculate dollar value-added and returns reflect an appropriate balance of risk and return aligned with the Board-approved investment strategy;
- Board-Approved Risk Limits – the target rates of return consider the Board-approved overall and specific risk limits; and
- Clawbacks – the Board can claw back or adjust all forms of incentive compensation.

Our compensation framework continues to meet or exceed the Principles for Sound Compensation Practices established by the Financial Stability Board and endorsed by the G20 nations.

Financial Stability Board Principles	CPPIB Compensation Framework
Based on long-term performance	Based on investment performance over up to five-year periods
Discourage short-term risk-taking	Five-year results discourage short-term decisions Total amount of risk is governed by the Board of Directors Where appropriate, benchmarks adjust for the degree of risk taken
Increased oversight powers of compensation committees	The HRCC and the Board of Directors make all decisions about the compensation framework

Our compensation framework

The design of our incentive program takes into account the environment in which we operate, our mission and the strategy we have chosen to execute. We are a growing organization, and one that is meant to endure for a very long time. As a result, a large element of Management's current focus is on:

> Attracting talent;
> Growing the organization globally;
> Establishing investment programs and processes that can be scaled up;
> Delivering strong performance;
> Improving the efficiency of technology, operations and risk management; and
> Establishing a strong culture with uncompromising standards of integrity and a commitment to inclusion and diversity.

The program considers these important priorities and reflects them in the performance measures used to determine incentive payouts. It also considers the public responsibility involved in managing the Fund for the benefit of 20 million contributors and beneficiaries by ensuring risk is considered appropriately. Further, we believe that what gets accomplished is important, but how activities are accomplished is equally important. Our compensation program is grounded in our Guiding Principles and we adhere to the following best practices in designing our compensation structure:

- Focus on Total Fund[1] Performance – each employee has 30% of their total incentive weighted on total Fund performance. The measurement of total Fund performance includes absolute total Fund return as well as dollar value-added. This emphasis on the total Fund allows for a closer tie between compensation and the interests of our beneficiaries and contributors.
- Align Performance Horizon with the Long-Term Nature of our Investment Mandate – the five-year rolling time period over which we measure total Fund performance reflects our long-term perspective. Department performance is also measured over a multi-year time frame. This long-term performance horizon improves measurement accuracy and reduces volatility.
- Measure Both Quantitative and Qualitative Outcomes – as our investment strategy and execution evolve, we consider both quantity and quality when measuring investment performance and other objectives.
- Align Pay Mix to Market Practice – the pay mix of fixed and variable compensation, as well as short-term and long-term compensation reflects market trends.
- Create a Consistent Framework for all Employees – all employees have the same weight on total Fund performance, department and group performance, and individual performance. This creates a consistent platform for rewarding all employees.
- In addition to researching best practices in incentive design, CPPIB conducts a competitive benchmarking of jobs across the organization annually. This ensures compensation levels are competitive and aligned with the organization's market for talent. We operate within the global investment management industry, and compete globally to attract, motivate and retain employees in Toronto and our offices in Hong Kong, London, Luxembourg, Mumbai, New York, São Paulo and Sydney. Accordingly, we review competitive pay information for Canadian pension funds and broader investment management organizations, as well as compensation in the other major markets in which we operate (e.g., United States, United Kingdom and Hong Kong).
- The HRCC also reviews competitive pay levels for each position on the Senior Management Team, including the Named Executive Officers (NEOs), relative to a significant market sample and data from proprietary consultant surveys. Specifically for the Senior Management Team and NEOs, we benchmark compensation against the following organizations:
- Canadian Pension Funds: Caisse de dépôt et placement du Québec (CDPQ), Ontario Teachers' Pension Plan (OTPP), bcIMC, AIMCo, OMERS, PSPIB, HOOPP and OPTrust.
- Canadian Publicly Traded Investment Asset Managers: CI Investments, AGF Management, Fiera Capital, Mackenzie Investments, RBC Global Asset Management, etc.
- Broader Labour Market: The top Canadian Pension Funds and/or the broad financial services market. This includes investment firms, insurance companies, and banks in Canada, the U.S., and other relevant international markets.

Aligned with Our Investment Objectives	> Maximize return to the total Fund within agreed risk parameters > Supports CPPIB's Guiding Principles
Market Competitive	> Enables CPPIB to attract and retain the right people
Right Time Horizon	> Strong alignment to our long-term investment horizon for performance measurement and for payouts
Simple	> Ability to distinctly differentiate based on individual performance
Enables Application of Informed Judgment	> Clear and simple framework transparent to key stakeholders and prospective employees > Yields increased stability and consistency of performance measurements
Differentiation Based on Individual Performance	> Ability to recognize the distinction of each asset class, strategic and operational objectives, and market conditions

1 For the purpose of the incentive compensation plan, total Fund reflects the combined long-term investment portfolios of the base Canada Pension Plan and additional Canada Pension Plan. This excludes cash for benefits, which is consistent with prior years.

Compensation elements

Base salary

Employees receive a base salary for fulfilling their core job responsibilities. Salaries reflect skill level, ability and sustained performance. We use annual compensation surveys from reputable compensation consulting firms to ensure that we remain competitive within our talent market.

We review salaries annually at the end of each fiscal year. Any changes to Senior Management Team compensation, including the Named Executive Officers' (NEOs') salaries, require Board approval.

Incentive compensation plan

At the end of each fiscal year, employees are eligible to receive an annual award according to the following formula:

Base salary x Incentive target x Performance multiplier = Annual award

We set incentive targets by the job level to align with market practices. A portion of the Annual Award is paid out in cash following the end of the fiscal year (In-Year Award). For senior employees, a portion is deferred over three years (Deferred Award) to align with the long-term focus of the CPP Fund. The Deferred Award vests and pays out over three years following the fiscal year for which it is awarded.

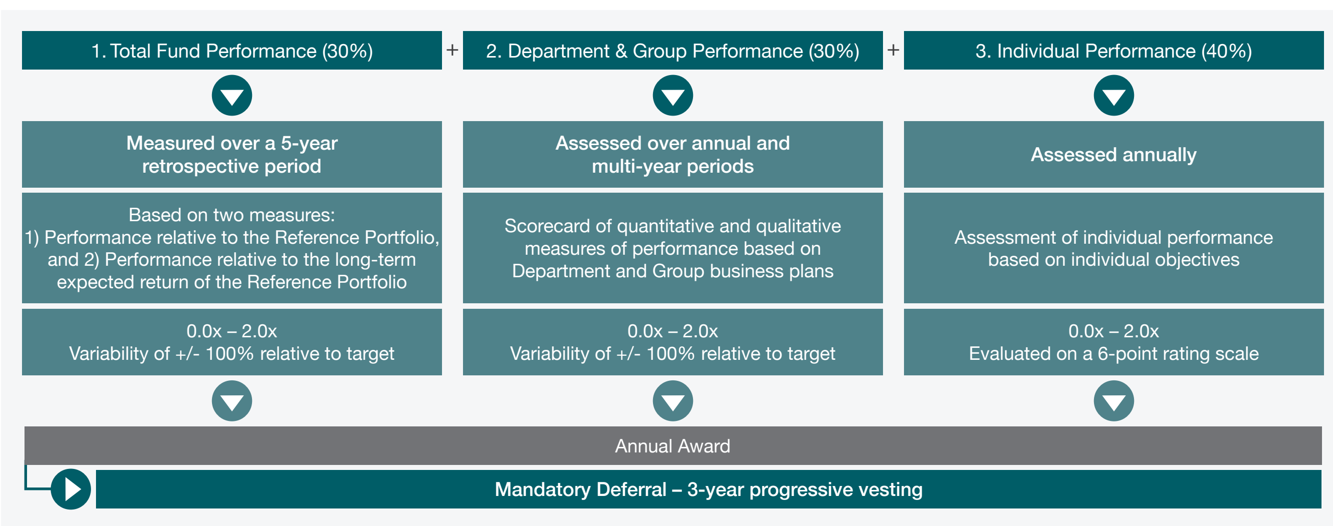
At the end of the fiscal year, the Annual Award is adjusted by a Performance Multiplier. The Performance Multiplier is based on a performance assessment of three factors:

1. Total Fund performance;
2. Department and Group performance; and
3. Individual performance.

Each performance factor contributes a fixed percentage or weight to the total incentive pay. These weightings are consistent across the organization. The Total Incentive may vary from zero to a maximum of two times the target amount for each performance factor. The award depends on performance relative to pre-determined objectives.

This structure applies to all employees across the organization regardless of department, group, seniority or geographic location.

The following chart illustrates the current incentive plan:



Below is more information on our three performance factors:

1. Total Fund performance – This performance factor includes equally weighted measures of both dollar value-added and total Fund return, each measured over a five-year trailing period. For the purpose of the incentive compensation plan, total Fund reflects the combined long-term investment portfolios of the base Canada Pension Plan and additional Canada Pension Plan, excluding Cash for Benefits.
2. Department and Group performance – Departments and Groups play an important role in contributing to and maximizing the performance of the total Fund. We determine performance objectives at the start of each year. We take both quality and quantity into account and align them with the strategic objectives of the organization. At year end, we measure performance against the objectives defined for each Department and Group, including value-added. We may measure performance over the year or over several years, depending on the objective and performance measurement approach.

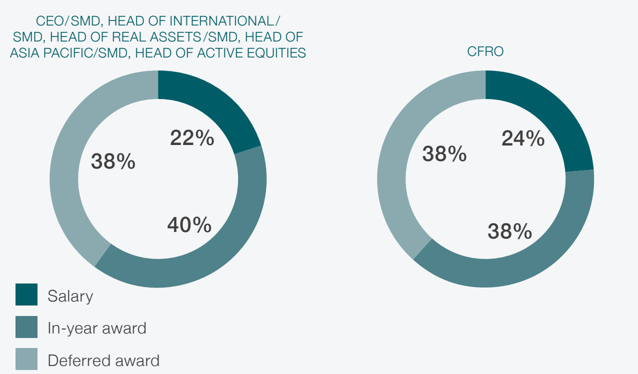
3. Individual performance – We assess this performance factor annually for each employee, based on specific objectives identified at the beginning of the year. Assessment of the individual is also based on their performance relative to the expectations of the job and their demonstration of our Guiding Principles of Integrity, Partnership and High Performance.

Employees receive their in-year cash payout following an assessment of their performance and approval by the HRCC and Board. All deferred awards are treated as if they were invested in the Fund and fluctuate with the total Fund return over time. Employees forfeit the incentive award and any unvested deferred awards if they resign during the fiscal year.

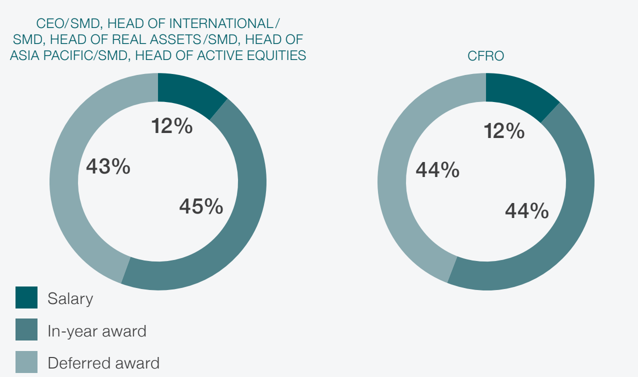
Pay mix

The mix of in-year cash and deferred compensation varies by role and level, with higher deferral targets for more senior professionals. The charts below illustrate the mix of salary, in-year cash, and deferred incentive for fiscal 2019 for the Named Executive Officers (NEOs):

Target awards



Maximum awards



Voluntary Deferral Incentive Plan (VDIP)

Where allowed under local tax law, employees may defer some or all of their in-year award in a given year. The deferred portion is treated as if it were invested. The employee can choose to make this nominal investment either entirely in the CPP Fund, or in both the CPP Fund and up to a maximum of 50% in the CPP Fund's portfolio of private investments. The deferred amounts fluctuate in value over the three-year deferral period with the returns of the Fund and, if elected, the portfolio of private investments. The VDIP provides another way to align employee interests with Fund performance.

Supplemental Restricted Fund Units (SRFU)

SRFUs are notional investments that fluctuate in value with CPP total Fund performance. SRFUs with multi-year vesting schedules can assist in attracting new employees. That is because they help ease in the compensation of new hires during their transition to CPPIB. For example, SRFUs can replace forfeited compensation from a previous employer. SRFUs can also be used as part of a transition arrangement to a new role or geography for current employees.

Fund Return Units (FRU)

FRUs are a type of long-term incentive compensation that align payouts to the long-term absolute performance of the Fund. The FRU grant pays out an amount equal to the total Fund return on a notional investment in the Fund, governed by specific Plan terms and contingent on positive cumulative return. The grant value is derived using a Black-Scholes model which takes into consideration volatility and risk-free rate of return. The grant issued to the CEO in fiscal 2017 has a fixed settlement date at the end of seven years and the grant issued to the CEO in fiscal 2019 has a fixed settlement date at the end of five years.

Clawback and Forfeiture Provision

The Board of Directors has the authority to interpret, change and discontinue the compensation plans at its discretion. In addition, the Board may reduce incentive awards or require employees to forfeit them if:

- Financial results are restated and the Board considers the award is therefore excessive. The Board can also require employees to forfeit unvested incentive compensation awards. This provision applies to those at the Managing Director level and above.
- The incentive award was granted in error.
- An employee is guilty of misconduct.

Pension
CPPIB provides its Officers and employees with the opportunity to participate in defined contribution retirement plans. These have relatively lower and more predictable costs than the more generous defined benefit plans offered by other organizations in the large pension fund and broader financial services industry.

Canada
All Canada-based employees are eligible to participate in our registered and supplementary defined contribution pension plans. Eligible earnings for both pension plans consist of:

- Base salary, plus
- The portion of the incentive paid in a given year (to a maximum of 50% of base salary).

Employees contribute 4.5% of annual eligible earnings and CPPIB contributes 4.5% to the maximum allowed under the *Income Tax Act* (Canada). For the supplementary pension plan, employees earn contribution credits equal to 9% of eligible earnings over the maximum for the registered pension plan. The supplementary plan is an unfunded plan. It grows at the same rate as the investment choices available under the registered plan.

Hong Kong
All Hong Kong-based employees are eligible to participate in the Mandatory Provident Fund (MPF) which consists of a mandatory program and a voluntary program which only CPPIB contributes to. Both programs operate as defined contribution pension plans.

Employees contribute 5% of annual eligible earnings and CPPIB contributes 5% to the monthly maximum allowed under the Mandatory Provident Fund Schemes Ordinance. For the voluntary MPF, CPPIB contributes 10% of eligible earnings less the employer mandatory MPF contributions. The voluntary MPF program has a vesting schedule where contributions fully vest once an employee reaches 10 years of continuous service.

Eligible earnings for the purposes of the mandatory MPF are all remuneration received by employees. The eligible earnings for the purposes of the voluntary MPF are (a) base salary, (b) housing allowance and (c) lifestyle spending account.

Employees based in other global CPPIB locations are eligible to participate in local pension plans that vary based on local regulations and market practices, where offered.

Benefits and other compensation
Our benefits programs are comparable to those provided by similar organizations in our industry. They include life insurance, disability benefits, health and dental benefits, time-off policies, a fitness reimbursement and an Employee-Family Assistance Program. Perquisites are limited to paid parking for the Senior Management Team members based in Toronto.

FISCAL 2019 RESULTS: ANNUAL OBJECTIVES, PERFORMANCE OUTCOMES AND COMPENSATION DECISIONS

This section describes the annual financial and non-financial performance measures and results we used to make compensation decisions for the Named Executive Officers (NEOs) for fiscal 2019.

Annual non-financial objectives
Management establishes the non-financial organizational objectives in the CPPIB business plan each fiscal year. The Board of Directors approves these goals. You will find the non-financial organizational objectives of fiscal 2019 in Table 1.

Management then aligns annual individual objectives for Officers and employees to these organizational objectives. The Board reviews progress against organizational objectives quarterly and at year end. This ensures a pay-for-performance approach to evaluation. Based on the Board's assessment, Management achieved the organizational objectives for fiscal 2019.

Table 1: Fiscal 2019 Non-Financial Objectives

1. Completing preparations to accept, invest and report on the additional Canada Pension Plan contributions that start in January 2019.
2. Scaling our investment programs and growing the Fund's exposure to emerging markets.
3. Improving our understanding of the opportunities and risks posed by climate change as part of a cross-departmental, multi-year initiative, and to adopt best-in-class climate-related financial disclosures.
4. Leveraging the power of our collective knowledge through our multi-year integrated technology, data and knowledge advantage initiative. This helps to drive better investment decisions and add value to the Fund.

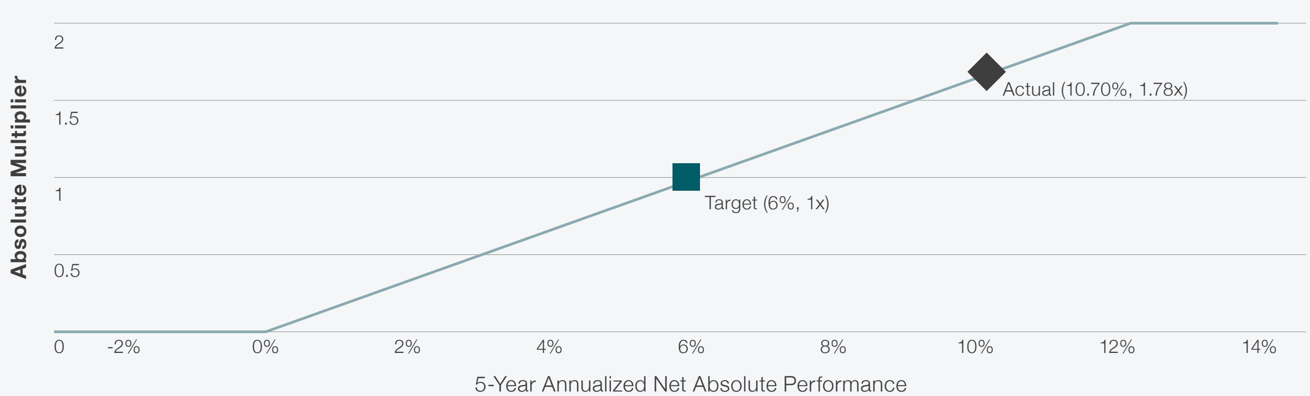
Total Fund[1] performance

We measure total Fund performance over a five-year period using two equally weighted criteria:

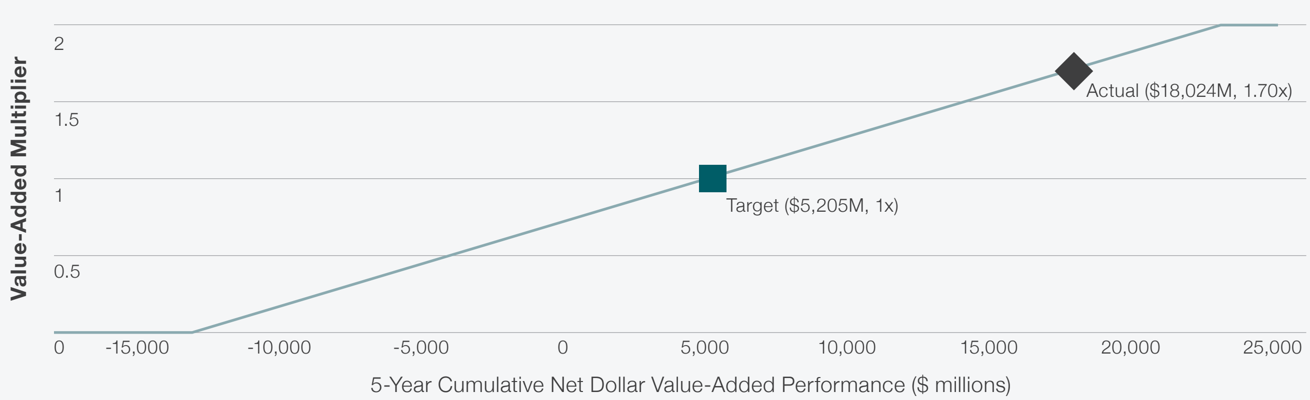
1. **Absolute performance** – Absolute total return of the Fund; and
2. **Relative performance** – Value-added relative return of the Fund compared to the Reference Portfolio.

For compensation payout purposes, we measure total Fund performance over a rolling five-year period relative to each of these two criteria and map it to a multiplier. For the absolute performance component, a target return of 6% will result in a target multiplier of 1x. For the relative performance component, a five-year cumulative target dollar value-added (DVA) of $5.21 billion must be reached to achieve a relative performance multiplier of 1x. The Board reviews DVA targets annually. The graphs below map the fiscal 2019 target and actual Fund performance.

Absolute Performance Component of the Total Fund Performance Multiplier



Value-Added Performance Component of the Total Fund Performance Multiplier



1 For the purpose of the incentive compensation plan, total Fund reflects the combined long-term investment portfolios of the base Canada Pension Plan and additional Canada Pension Plan. This excludes cash for benefits, which is consistent with prior years.

In Table 2 below, total Fund performance is measured over the five fiscal years beginning April 1, 2014 and ending March 31, 2019. The absolute and relative performance of the Fund in fiscal 2019 resulted in an equally weighted total Fund multiplier of 1.74.

Table 2: CPP Fund Performance, Fiscal 2015 to 2019 and Cumulative Results

	Absolute Performance				Relative Performance				
Fiscal year	CPP Fund Gross Return ($ billion)	CPP Fund Net Return ($ billion)	CPP Fund Net Return %	Total Fund Absolute Multiplier	Reference Portfolio Return ($ billion)	CPP Gross value-added ($ billion)	CPP Net value-added ($ billion)	Total Fund value-added Multiplier	Total Fund Multiplier
2015	41.4	40.6	18.31%		37.8	3.6	2.8		
2016	10.0	9.1	3.37%		(2.1)	12.1	11.2		
2017	34.4	33.4	11.84%		41.6	(7.2)	(8.2)		
2018	37.8	36.7	11.56%		31.0	6.8	5.7		
2019	**33.2**	**32.0**	**8.95%**		**25.6**	**7.6**	**6.4**		
Cumulative $ / Annualized % – 5 year	**156.8**	**151.9**	**10.70%**	**1.78**	**133.9**	**22.9**	**18.0**	**1.70**	**1.74**
Cumulative $ / Annualized % – 10 year	**245.9**	**238.9**	**11.18%**		**222.7**	**23.1**	**16.2**		

Department Performance

Each investment department has both financial and non-financial objectives. The CEO evaluates performance against these objectives for approval by the Board. We have summarized performance for fiscal 2019 for each investment department below.

Fiscal 2019 Investment Department Performance

	Fiscal 2019 performance
Total Portfolio Management	Exceeded target
Capital Markets and Factor Investing	Exceeded target
Active Equities	Exceeded target
Credit Investments	Exceeded target
Private Equity	Exceeded target
Real Assets	Exceeded target

A more detailed description of the total Fund and investment department performance is found on page 52 in the Management's Discussion & Analysis section.

COMPENSATION DISCLOSURE

We align with the best practices for compensation disclosure for a public pension fund. We disclose compensation information for key management personnel as a group. We also disclose individual compensation figures for the CEO, the CFO, and the next four highest-paid Senior Management Team members.

Compensation of Key Management Personnel

We define key management personnel as the Senior Management Team and the Board of Directors. For more information on Director compensation, please refer to the Governance Practices section of the Annual Report. The total compensation expense for key management personnel for fiscal 2019 is $52 million. Excluding one-time payments, the expense is $46 million, up 13% from $41 million for fiscal 2018. This increase was principally a result of headcount growth, especially in regional offices.

See note 12.1 of the Financial Statements for more information.

Compensation of the CEO

The CEO participates in the same incentive compensation plan as all employees at CPPIB. At the start of each fiscal year, the Board and the CEO agree on organizational and individual objectives for the CEO. At year end, the HRCC evaluates the CEO's performance against those objectives and presents its evaluation to the Board for review and approval. As well, each Director completes an annual evaluation of the CEO's performance with respect to his key areas of responsibility. These evaluations are summarized and presented to the Board of Directors. The Board uses this information to determine the organizational performance multiplier and individual performance multiplier of the CEO's incentive award for the fiscal year. These evaluations are also used to set the CEO's base salary for the upcoming fiscal year.

Mr. Machin's personal accomplishments for fiscal 2019 included achievement against the following goals:

1. Achieve strong returns, while managing to net of expenses.
2. Execute Vision 2020 and ensure alignment to 2025 strategy, and execute thereafter.
   - As part of Vision 2020, achieved additional CPP milestones on time. Key design considerations completed with zero risk exposure.
3. Grow, attract and retain top talent at all levels of the organization to create a wide and deep pool of diverse, global leaders.
   - Successfully onboarded new leadership team, including hiring a new Chief Technology & Data Officer.
   - Filled 31% of 45 vacancies at senior level positions with internal candidates, indicative of our excellent bench strength. Undertook detailed succession planning.
   - Took deliberate measures to ensure our talent pipeline embodies our commitment to a diverse and inclusive culture, with a particular focus on furthering gender parity across all levels of the organization. This improved female representation across the organization to 45% and across Investment Departments, from 32% in fiscal 2018 to 35% in fiscal 2019.
4. Achieve peer recognized practice leadership in Core functions.
   - Continued to ensure independence from the Investment teams and made significant improvements to management reporting to get greater insights.
   - Consolidated risk management and compliance oversight with improvements to evaluation, mitigation and reporting of risks.
5. Continue to develop CPPIB's global culture of high performance, partnership and integrity.
   - Participated in several domestic and global initiatives to highlight how CPPIB's evolving investment strategy continues to generate strong long-term results, ensuring the Fund remains well-positioned for future growth.
   - Drove the themes of Ambition, Agility, Innovation and Inclusion.

The Board of Directors awarded Mr. Machin a total incentive award of $4,200,125 for fiscal 2019. The compensation awarded to Mr. Machin is consistent with the principle of pay for performance and appropriately recognizes his many accomplishments as CEO. His leadership of the organization, its critical priorities and Fund management strongly position CPPIB to continue working in the best interests of CPP's contributors and beneficiaries.

The table below shows a summary of the CEO Total Direct Compensation for fiscal 2019.

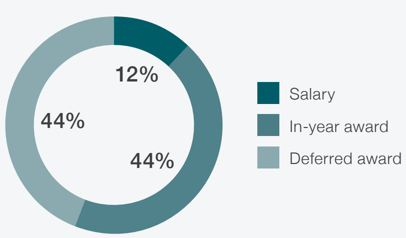
Table 3: Fiscal 2019 CEO Total Direct Compensation

	Fiscal 2019 Total	
	Target Annual	Actual Annual
Base salary (A)[1]	**625,000**	**625,000**
Total Fund	750,000	1,307,625
Department/Group	750,000	1,192,500
Individual	1,000,000	1,700,000
Total Incentive Award (B)	**2,500,000**	**4,200,125**
In-year Award	1,250,000	2,100,063
Deferred Award	1,250,000	2,100,063
Other Deferred Award (C)[2]	**440,000**	**440,000**
Total Direct Compensation (A) + (B) + (C)	**3,565,000**	**5,265,125**
Fiscal 2019 Total Direct Compensation	**3,565,000**	**5,265,125**

1 The CEO's base salary was reviewed by the Board. The CEO's base salary will remain unchanged for fiscal 2020.

2 Mr. Machin received a fiscal 2019 FRU award of C$440,000. Based on a Black-Scholes valuation, the underlying notional investment of this award is C$2.93 million.

Actual Pay Mix



Please refer to Table 5: Summary Total Compensation.

Compensation for the Named Executive Officers

Table 4 below shows the total direct compensation in fiscal 2019 for each Named Executive Officer (NEO).

Table 4: Summary Fiscal 2019 Total Direct Compensation

	Currency	**Base Salary (A)**	Total Fund	Department/ Group/ Individual	**Total Incentive Award (B)**	In-year Award	Deferred Award	**Total Direct Compen-sation (A) + (B)**
Neil Beaumont SMD & CFRO	CAD	**435,000**	739,462	1,498,576	**2,238,038**	1,119,019	1,119,019	**2,673,038**
Alain Carrier SMD & Head of International, Head of Europe	GBP	**436,000**	912,199	1,822,480	**2,734,679**	1,367,340	1,367,340	**3,170,679**
Suyi Kim[1] SMD & Head of Asia Pacific *From June 1, 2018*	HKD	**4,151,380**	7,353,932	14,692,399	**22,046,331**	11,346,386	10,699,945	**26,197,711**
Ed Cass SMD & Global Head of Real Assets	CAD	**465,000**	972,874	2,029,260	**3,002,134**	1,501,067	1,501,067	**3,467,134**
Deborah Orida[1] SMD & Global Head of Active Equities *From June 1, 2018*	CAD	**503,536**	920,811	1,850,247	**2,771,058**	1,484,487	1,286,571	**3,274,594**

1 All amounts are prorated for time spent in both MD and SMD roles.

The total compensation awarded to the Named Executive Officers is $24.7 million, relatively flat to $25 million in fiscal 2018.

Table 5 below shows total compensation over the past three fiscal years for the Named Executive Officers.

Table 5: Summary Total Compensation

Name and Position	Year	Currency	Salary ($) A	In-year Award ($) B	Deferred Awards[2] ($) C	Other Deferred Awards[3] D	Pension Value ($) E	All Other Compensation[4] ($) F	Total Compensation (with Deferred Award) ($) A+B+C+D+E+F
Mark Machin[1,6,7,8,11,12,14]	**2019**	CAD	**625,000**	**2,100,063**	**2,100,063**	**440,000**	**436,380**	**54,900**	**5,756,406**
President & CEO	2018		625,000	1,971,825	1,971,825		450,921	211,593	5,231,164
	2017		651,608	1,927,890	1,927,890	1,125,000	420,804	108,581	6,161,773
Neil Beaumont[5,15]	**2019**	CAD	**435,000**	**1,119,019**	**1,119,019**		**45,233**	**83,471**	**2,801,742**
SMD & CFRO	2018		285,384	728,761	728,761	1,400,000	12,929	112,196	3,268,031
Alain Carrier[5,9,10,11]	**2019**	GBP	**436,000**	**1,367,340**	**1,367,340**		**57,469**	**13,549**	**3,241,698**
SMD & Head of International,	2018		436,000	1,348,513	1,348,513		56,429	15,628	3,205,082
Head of Europe	2017		452,009	1,248,560	1,106,740	1,000,000	62,701	19,381	3,889,391
Suyi Kim[11,12,16]	**2019**	HKD	**4,151,380**	**11,346,386**	**10,699,945**		**461,481**	**1,478,837**	**28,138,030**
SMD & Head of Asia Pacific	2018		4,284,900	10,202,804	6,801,869		385,816	221,453	21,896,842
From June 1, 2018	2017		4,150,000	9,310,724	6,207,149		359,040	224,635	20,251,549
Ed Cass[4,5,11,12]	**2019**	CAD	**465,000**	**1,501,067**	**1,501,067**		**49,525**	**291,462**	**3,808,121**
SMD & Global Head of	2018		435,000	1,338,350	1,338,350		46,306	6,893	3,164,899
Real Assets	2017		430,000	1,319,100	1,319,100		47,456	6,819	3,122,475
Deborah Orida[13,14]	**2019**	CAD	**503,536**	**1,484,487**	**1,286,571**	**1,911,000**	**45,406**	**216,514**	**5,447,514**
SMD & Global Head of	2018		624,543	1,540,501	1,027,001		14,964	37,165	3,244,174
Active Equities	2017		636,528	1,528,441	1,018,961		32,462	36,911	3,253,303
From June 1, 2018									

1 Mr. Machin's compensation for 2017 (prorated for the period April 1 – June 12, 2017) is converted using the exchange in rate in effect on March 31, 2018 (CAD:HKD 1:6.08).

2 The Deferred Award represents the award value at the time of the award. The award fluctuates with the performance of the total Fund over the vesting period.

3 Other Deferred Awards refers to one-time, long-term awards. For Mr. Machin this includes Fund Return Units.

4 All other compensation includes life insurance, disability benefits, health and dental benefits, discretionary employment arrangements, fitness reimbursement as well as comprehensive health assessment conducted at a private medical clinic. Perquisites are limited to paid parking for officers based in Canada. For the time spent in Hong Kong, Mr. Machin, Ms. Orida and Ms. Kim receive(d) a housing allowance. Mr. Cass received a temporary allowance for the duration of his international assignment. These figures include all relocation and assignment costs as applicable.

5 NEO elected to defer all or part of the fiscal 2019 In-year award into the Voluntary Deferred Incentive Plan (VDIP).

6 Mr. Machin received a fiscal 2017 SRFU award of C$625,000 upon his appointment as President & CEO. This award vests progressively as 33%, 33% and 34% from fiscal 2017 to fiscal 2019.

7 Upon his appointment as President & CEO, Mr. Machin received a FRU award of C$500,000. Based on a Black-Scholes valuation, the underlying notional investment of this award is C$2.7 million and it is annualized over 5 years. In fiscal 2019 he received another FRU award of C$440,000 with an underlying notional investment value of C$2.93 million. It is also annualized over 5 years.

8 Upon his appointment as President & CEO, Mr. Machin received partial vesting on his unvested LTIP/ELTIP awards at the end of Q2 fiscal 2017. This payment was made in October 2016.

9 Upon promotion to SMD, Head of International on June 21, 2016, Mr. Carrier received an SRFU award of GBP 1 million. This award vests 50% in fiscal 2017, and 40% in fiscal 2018 and the final 10% in fiscal 2019.

10 As part of his original employment agreement, Mr. Carrier received an additional cash payment on his salary and in-year bonus payment. This arrangement was discontinued upon his promotion.

11 Final payout of outstanding fiscal 2015 LTIP grant was in fiscal 2018.

12 Final payout of outstanding fiscal 2015 ELTIP grant was in fiscal 2018.

13 Upon promotion to SMD, Head of Active Equities on June 1, 2018, Ms. Orida received an SRFU award of C$1.9 million. This award vests 8.5% in fiscal 2019, 8.5% in fiscal 2020, and 83% in fiscal 2021.

14 Mr. Machin and Ms. Orida's compensation and pension values during their time in Hong Kong are converted using an exchange rate in effect on March 31, 2019 (CAD:HKD 1:5.88), on March 31, 2018 (CAD:HKD 1:6.08) and on March 31, 2017 (CAD:HKD 1:5.83), as applicable.

15 Mr. Beaumont's fiscal 2018 compensation was prorated based on start date of July 24, 2017.

16 Ms. Kim's other compensation is converted using the exchange rate in effect on March 31, 2019 (USD:HKD 1:7.85), on March 31, 2018 (USD:HKD 1:7.85), and on March 31, 2017 (USD:HKD 1:7.77), as applicable.

Compensation and Estimated Future Payouts

NEOs must defer a portion of the annual incentive award. The deferred portion vests and pays out in equal installments over a three-year period following the fiscal year for which the award is given. All deferred awards fluctuate in value with the net total Fund rate of return during the vesting period. Table 6 below shows the outstanding deferred awards and the future payouts for each Named Executive Officer.

Table 6: Deferred Awards

Name	Currency	Type of Award	Year of Award	Award Value	Payments in current year 2019	Value of Unvested Awards[1]
Mark Machin[2]	CAD	Deferred Award	**2019**	**2,100,063**		**2,100,063**
President and CEO		Deferred Award	2018	1,971,825	716,101	1,432,202
		Deferred Award	2017	1,923,679	779,376	779,376
		Deferred Award	2016	2,505,952	1,135,493	
		SRFU Award[3]	2017	625,000	288,863	
		FRU Grant[4]	**2019**	**440,000**		**234,400**
		FRU Grant[5]	2017	500,000		938,255
Neil Beaumont	CAD	Deferred Award	**2019**	**1,119,019**		**1,119,019**
SMD & CFRO		Deferred Award	2018	728,762	264,662	529,324
		SRFU Award[6]	2017	1,400,000	340,325	340,325
Alain Carrier	GBP	Deferred Award	**2019**	**1,367,340**		**1,367,340**
SMD & Head of International, Head of Europe		Deferred Award	2018	1,348,513	489,735	979,470
		Deferred Award	2017	1,106,744	448,396	448,396
		Deferred Award	2016	704,500	319,222	
		SRFU Award[7]	2017	1,000,000	135,936	
Suyi Kim	HKD	Deferred Award	**2019**	**10,699,945**		**10,699,945**
SMD & Head of Asia Pacific		Deferred Award	2018	6,801,869	2,470,212	4,940,424
From June 1, 2018		Deferred Award	2017	6,207,149	2,514,819	2,514,819
		Deferred Award	2016	6,527,900	2,957,911	
Ed Cass	CAD	Deferred Award	**2019**	**1,501,067**		**1,501,067**
SMD & Global Head of Real Assets		Deferred Award	2018	1,441,025	523,332	1,046,664
		Deferred Award	2017	1,338,347	542,230	542,230
		Deferred Award	2016	1,319,100	597,708	
Deborah Orida	CAD	Deferred Award	**2019**	**2,771,058**		**1,286,571**
SMD & Global Head of Active Equities		Deferred Award	2018			
From June 1, 2018		Deferred Award	2017			
		SRFU Award[8]	**2019**	**1,911,000**	176,973	**1,905,062**

1 Value of unvested awards is estimated as at March 31, 2019. For Deferred Awards and SRFUs, it equals the award value at grant date times the cumulative net Total Fund rate of return. For FRUs, the value represents only the cumulative net Total Fund rate of return of the underlying notional investment since grant.

2 Mr. Machin's unvested grants have been converted to CAD using the exchange rate in effect on March 31, 2019 (CAD:HKD 1:5.88).

3 Mr. Machin received a fiscal 2017 SRFU award of C$625,000 upon his appointment to President & CEO. This award vests progressively as 33%, 33%, and 34% from fiscal 2017 to fiscal 2019.

4 Mr. Machin received a fiscal 2019 FRU award of C$440,000. Based on a Black-Scholes valuation, the underlying notional investment of this award is C$2.93 million.

5 Upon his appointment to President & CEO, Mr. Machin received an FRU award of C$500,000. Based on a Black-Scholes valuation, the underlying notional investment of this award is C$2.7 milion.

6 Per his employment agreement, Mr. Beaumont received a fiscal 2018 SRFU grant of C$1.4 million, which vests 60% in fiscal 2018, 20% in fiscal 2019 and 20% in fiscal 2020.

7 Upon appointment as SMD, Mr. Carrier received a fiscal 2017 SRFU award of £1 million, which vested 50% in fiscal 2017, 40% in fiscal 2018 and the final 10% in fiscal 2019.

8 Upon appointment as SMD and relocation to Canada, Ms. Orida forfeited past awards and received a fiscal 2019 SRFU award of C$1,911,000 which vests 8.5% in fiscal 2019, 8.5% in fiscal 2020 and 83% in fiscal 2021.

Pension Plans
As described earlier, all Canada-based employees participate in the regular and supplementary defined contribution pension plans. Employees based outside of Canada are eligible to participate in local pension plans that vary based on local regulations and market practices.

Retirement Compensation Arrangement (RCA)
The President & CEO participates in a Retirement Compensation Arrangement (RCA), a non-registered pension fund to which CPPIB contributes annually and Mr. Machin can choose from a range of options on how the available funds are invested. This is similar to the registered pension plan and supported by the same provider. As part of his compensation package as CEO, Mr. Machin took a greater proportion of his overall total compensation in the form of pension.

Table 7 below shows the contributions and investment earnings for the Named Executive Officers under both plans. The total unfunded liability for the Canada-based Named Executive Officers, as at March 31, 2019, is $581,381 (2018 – $854,718).

Table 7: Pension Plan Contributions

				Compensatory ($)			
Name	Plan Type	Currency	Accumulated Value at Start of Year ($)	Employer Contributions ($)	Investments Earnings ($)	Non-compensatory ($)[1]	at End of Year ($)
Mark Machin[2,3]	Registered	CAD	68,450	13,250		19,786	101,485
President & CEO	Supplementary		58,118	57,875	12,292		128,285
	RCA		362,263	365,000		(150,384)	576,879
	Mandatory[3]	HKD	164,806	1,500		8,553	174,859
	Voluntary[3]	HKD	1,738,826	0		57,046	1,795,873
Neil Beaumont	Registered	CAD	26,104	13,492	0	15,655	55,251
SMD & CFRO	Supplementary		0	31,740	2,689	0	34,430
Alain Carrier	GSIPP	GBP	756,771	0	0	50,691	807,462
SMD & Head of International, Head of Europe	Cash-In-Lieu[7]		0	57,469	See note 7		57,469
Suyi Kim	Mandatory	HKD	424,778	18,000		(13,799)	428,979
SMD & Head of Asia Pacific *Appointed June 1, 2018*	Voluntary[4,5]		3,346,641	443,481		(279,610)	3,510,512
Ed Cass	Registered	CAD	385,251	13,250		26,567	425,068
SMD & Global Head of Real Assets	Supplementary		350,161	36,275	(26,782)		359,654
Deborah Orida[7]	Registered	CAD	264,796	12,726		39,781	317,302
SMD & Global Head	Supplementary		58,122	0	890		59,012
of Active Equities	Mandatory[6]	HKD	110,810	6,000		4,924	121,734
Appointed June 1, 2018	Voluntary[6]	HKD	935,454	186,030		(19,306)	1,102,178

1 Represents employee contributions and investment earnings in the registered pension plans.
2 Mr. Machin's Retirement Compensation Arrangment represents investment earnings and government tax deductions in the plan.
3 Mr. Machin became an active and non-participating member of the Mandatory Provident Fund (MPF) for Hong Kong when he was appointed President & CEO, which has an employee and employer contribution of 5% towards relevant income capped at HKD 30,000 of monthly earnings.
4 Effective December 1, 2018, CPPIB provides an employer pension contribution of 10% towards eligible earnings above the HKD 30,000 monthly earnings ceiling, increasing from the previous 5% contribution.
5 Effective December 1, 2018, the definition of eligible earnings was updated to include base salary, housing allowance and health spending allowance only.
6 Ms. Orida, upon permanently transferring to Canada effective August 1, 2018 terminated her membership in the MPF and withdrew her funds.
7 Receives employer pension contributions as cash-in-lieu above annual U.K. pension limit less statutory deductions and the employer portion of National Insurance contributions.

Termination and Retirement Arrangements for the President & CEO
In the event of termination without cause, severance pay for the President & CEO is set at:

- 12 months of base salary and a prorated payment for the value of the Incentive Award at target (both In-year and Deferred), plus
- An additional month of salary and one-twelfth of the prorated Incentive Award value for each year of service.

Severance pay is capped at 21 months for the President & CEO. The President & CEO forfeits any deferred portion of the incentive awards, with the exception of voluntary deferrals. Insured benefits, such as health, dental and life coverage, continue during the severance period.

In the case of termination with cause, the President & CEO forfeits all incentives and benefits. There are no change-of-control provisions in the employment arrangements.

In the event of resignation, all incentives and benefits are forfeited.

The President & CEO is eligible to retire from the organization and receive certain benefits, provided he has served in the role of President for at least five years and has provided formal notice at least six months in advance of his departure. Any Annual Incentive Award during the year of retirement is paid out on a prorated basis. Any unvested deferred awards continue to vest as per the established vesting schedule. All benefits stop on the date of retirement.

Termination and Retirement Arrangements for the NEOs
In the event of termination without cause, severance pay for the Named Executive Officers (NEOs) is set at:

- 12 months of base salary and a prorated payment for the value of the In-Year Award at target of the respective fiscal year
- An additional month of salary and one-twelfth of the target In-Year Award for each year of service, up to a maximum of eighteen months of base salary and In-Year Award
- Deferred Awards that would otherwise have vested in that period to a maximum of 18 months.

In the case of termination with cause or resignation, the employee forfeits all incentives, unvested awards and benefits. There are no change-of-control provisions in the employment arrangements.

For E. Cass specifically, in the event of resignation and in consideration of adherence to post employment obligations, Mr. Cass will receive a prorated payment of the Deferred Award that would have vested at the end of the fiscal year of resignation. It is payable one year after resignation. All other incentives and benefits are forfeited.

As with other employees, NEOs are entitled to retire from the organization provided they have reached the combined threshold of age 55 and 10 years of service at CPPIB.

Upon retirement, employees continue to receive the ongoing deferral payments owed to them under the Incentive Plan, unless they have opted out and provided they continue to satisfy the retirement criteria under the Plan. The normal payment cycle applies and payments are subject to the same conditions. All benefits stop on the date an employee retires.

Table 8 below shows the payments that would be made, as of March 31, 2019, to the Named Executive Officers if they retire or are terminated without cause.

Table 8: Potential Termination and Retirement Payments[1]

Name	Currency	Completed years of service	Severance[2]	Retirement treatment of unvested awards[3,4]
Mark Machin President & CEO	CAD	7	4,947,917	4,311,700
Neil Beaumont SMD & CFRO	CAD	1	1,237,031	1,648,300
Alain Carrier SMD & Head of International, Head of Europe	GBP	11	1,962,000	2,795,200
Suyi Kim SMD & Head of Asia Pacific *From June 1, 2018*	HKD	11	18,992,564	18,155,100
Ed Cass SMD & Global Head of Real Assets	CAD	11	2,092,500	3,090,000
Deborah Orida SMD & Global Head of Active Equities *From June 1, 2018*	CAD	9	2,265,911	1,286,600

1 Excludes incentive compensation payouts for the current fiscal year, which are included in Table 5: Summary Total Compensation. Termination and retirement payments are estimated as of March 31, 2019. Actual payments are prorated based on time worked in the performance period.
2 Excludes the value of insured benefits, such as health, dental and life insurance, continued during the severance period.
3 Upon retirement, payout of the unvested awards will be subject to the following conditions:
– Performance is measured at the end of the vesting period;
– Payout is prorated based on length of service within the vesting period; and
– Payment is made at the end of the vesting period.
4 The unvested awards assume a net return of 0% on the CPP Fund for future years.

LETTER FROM THE CHAIR OF THE GOVERNANCE COMMITTEE

We believe sound governance practices are integral to CPPIB's successful long-term performance. They also help to ensure compliance with the law and with the ethical standards that we expect of everyone at CPPIB. We are committed to rigorous standards of corporate governance and strive to be a leader in setting global governance best practices for our industry. We also promote strong governance practices at the companies in which we invest.

Good governance starts with our Board of Directors. The Governance Committee of the Board regularly assesses our corporate governance. It takes into account evolving global best practices, regulatory changes and stakeholder expectations. The Committee reviews criteria and qualifications for Board Directors and takes the lead in assessing and planning for Board composition and succession. The Committee oversees processes related to the annual Board evaluations as described under *A Commitment to Accountability* on page 106. We also oversee the Director compensation review process every two years. In addition, we oversee Director orientation and ongoing development programs, monitor the application of the Code of Conduct across CPPIB, and recommend Proxy Voting Principles and Guidelines for Board approval.

My colleagues on the Committee for fiscal 2019 were: Ian Bourne (Governance Committee Chair until July 2018), Robert Brooks (until September 2018), Sylvia Chrominska (from October 2018 until December 2018), Tahira Hassan, John Montalbano (until December 2018), Heather Munroe-Blum (in an *ex officio* capacity), Karen Sheriff (from January 2019) and Jackson Tai.

Fiscal 2019 report on activities

The Governance Committee continued its work this year to prudently manage Board renewal. The last several fiscal years have been a period of significant change within the membership of the Board of Directors. Eight Directors retired during fiscal 2017–2019, four of those in fiscal 2019. Chuck Magro was appointed in July 2018, replacing Ian Bourne. Sylvia Chrominska was appointed in September 2018, replacing Robert Brooks. Upon completion of an in-depth director search, we recommended this year the appointment of Mark Evans to replace Douglas Mahaffy, whose term was completed in October 2018. This appointment was announced following fiscal year end. Our colleague Jackson Tai retired from the Board at fiscal year end, given other commitments.

All appointment and reappointment recommendations, including those made by us in fiscal 2019, are based upon the Board composition matrix set out on page 105 and our stringent Board and peer evaluation process. The Director Appointment and Reappointment Process is described on page 104.

The Governance Committee focused this year on overseeing the extensive orientation and ongoing education programs for Directors. These sessions support new Directors in becoming knowledgeable to perform their duties and ensure a consistent level of information among all Board members.

A key initiative of the Governance Committee in fiscal 2019 involved the review of CPPIB's conduct and culture with the goal of independently assessing our organizational culture against our Guiding Principles of Integrity, Partnership and High Performance. An ad hoc committee was struck for this purpose. I chaired this ad hoc committee, which focused on conduct and culture throughout our global operations. Its work led to the Governance Committee reviewing and recommending to the Board an updated Code of Conduct and related internal policies and the Board concluding that CPPIB's culture and values are strong overall.

In fiscal 2019, the Board endorsed the creation of a standing Risk Committee of the Board, as described on page 104. The Governance Committee oversaw the development of the mandate document for the newly formed Risk Committee, as well as the corresponding amendments to the mandates for each of the other standing committees to ensure specific elements of risk remain considered by other committees as appropriate. The Committee carefully considered committee chair appointments, transition issues and orientation needs resulting from the creation of the new Risk Committee.

The Governance Committee's activities this year also included committee chair succession planning and recommending revised membership for all Board committees.

In the upcoming year, we will undertake the biennial review of Director compensation and complete the director search now in progress to replace Jackson Tai. We also intend to focus on the effective integration of the new Risk Committee into the Board's overall operation and activities.

N. Ashleigh Everett
Chair, Governance Committee

GOVERNANCE PRACTICES OF THE BOARD OF DIRECTORS

This section sets out certain key governance practices of the Board of Directors. More extensive governance information is posted on our website.

Mandate, duties and objectives of the Board of Directors

The Board of Directors is responsible for the stewardship of CPPIB.

Among other duties, the Directors:

- Appoint the President & CEO and annually review his or her performance;
- Oversee succession planning for Senior Management;
- Set compensation policies and approve Senior Management compensation;
- Determine the organization's strategic direction in collaboration with Management;
- Review and approve investment policies, standards and procedures;
- Approve the Integrated Risk Framework;
- Approve investment risk targets and limits;
- Approve the guidelines for investment transaction approvals and for retaining external investment managers;
- Review the Investment Portfolio and the results of investment decisions;
- Review and approve the annual business plan and budget;
- Appoint CPPIB's external auditor;
- Establish procedures to identify and resolve conflicts of interest;
- Establish and monitor compliance with a Code of Conduct for Directors and employees;
- Assess the performance of the Board itself, including an annual Chairperson and Director peer review;
- Establish other policies relating to such matters as authorities, procurement, anti-bribery and corruption, privacy, and travel and expenses; and
- Review and approve material disclosures such as quarterly and annual financial statements and the annual report.

Directors must act honestly and in good faith with a view to the best interests of CPPIB. They must exercise the care, diligence and skill that a reasonably prudent person would apply in comparable circumstances. They must employ any expertise or skill they possess in carrying out their duties.

One of the Board's most important responsibilities is to preserve a governance model in which CPPIB operates at arm's length from governments, with an investment-only mandate.

One important way the governance structure balances independence with accountability is to make investment professionals accountable to an independent Board of Directors, which operates at arm's length from governments. The Board ensures that CPPIB's investment-only mandate is undertaken without regard to political, regional, social or economic development considerations or any other non-investment objectives.

CPPIB's Code of Conduct states that Board members shall not participate in any political activity that could:

- Be incompatible with their duties;
- Affect their ability to carry out their duties in a politically impartial fashion;
- Cast doubt on the integrity, objectivity or impartiality of the organization.

There is an expectation that Directors, like Officers and employees, will promptly report any attempted political interference with respect to investments, procurement, hiring or any other decisions. No such reports have been made. The Code of Conduct and related policies also establish a process for identifying, minimizing and resolving financial conflicts of interest. This enables Directors, Officers and employees to discharge their responsibilities effectively while maintaining their integrity. These policies also help Directors recognize when they may have a specific or systemic conflict of interest.

Mandates, activities and composition of Board committees

The Board has four standing committees that met during fiscal 2019: Investment, Audit, Human Resources and Compensation, and Governance. In addition, this fiscal year the Board approved the formation of a fifth standing committee – the Risk Committee – that will meet commencing in fiscal 2020. Membership is shown in the Board Attendance chart on page 109.

The **Investment Committee** oversees CPPIB's core business, which is making investment decisions within the context of a Board-approved framework. This Committee reviews and recommends investment policies to the Board. It also reviews, approves and monitors the long-term investment strategy. In addition, the Committee approves certain investment transactions and approves the engagement of external investment managers in accordance with the *CPPIB Act*.

The **Audit Committee** oversees management controls and financial reporting. This includes recommending for Board approval the Financial Statements and Management's Discussion and Analysis. It also includes overseeing the external and internal audit functions. Oversight also involves the appointment of the internal auditor and recommending the external auditor for appointment by the full Board. The Audit Committee reviews information systems and internal control policies and practices. It oversees the Assurance & Advisory function and financial aspects of the employee pension plans.

The Audit Committee advises the Board in connection with the statutorily mandated Special Examination, which reviews CPPIB's records, systems and practices. CPPIB's external auditors, as recommended by the Audit Committee, typically conduct this review every six years, with the final report provided to CPPIB's stewards. In fiscal 2016, Deloitte completed a Special Examination that resulted in a clean opinion. In its report, Deloitte concluded that there were no significant deficiencies in the systems and practices examined during the period covered by the review. A copy of the Special Examination report and the Special Examiner's report are available on CPPIB's website. The next Special Examination will be held in 2022. The Audit Committee regularly meets separately with each of the external and internal auditors, without Management present. It also meets with the CEO and CFRO.

The mandate of the Risk Committee is to provide a focus on risk governance and overseeing risk management. It reviews and recommends the Integrated Risk Framework and Risk Appetite Statements and monitors CPPIB's risk profile against its risk appetite. It also reviews key existing and emerging risks to which CPPIB is exposed. In addition, the Committee reviews and recommends material risk management policies and exceptions to those policies. For more details about CPPIB's risk governance practices, see page 47.

The Human Resources and Compensation Committee (HRCC) administers the performance evaluation process for the CEO and senior leadership. It reviews and recommends the compensation framework, reviews organizational structure and oversees Management succession planning. It also oversees employee benefits, human resources policies and the employee pension plans. The role of the HRCC is further outlined in the Compensation Discussion and Analysis, beginning on page 87.

The Governance Committee ensures that CPPIB follows appropriate governance best practices. The Governance Committee considers conduct and culture, including monitoring the application of the Code of Conduct and related policies and recommending any required amendments. It establishes and recommends performance evaluation processes for the Board, Board committees, individual Directors, and the Chairperson. It also oversees Board succession planning. This includes reviewing criteria and qualifications for Director appointments or reappointments and recommending candidates for appointment or reappointment. It also recommends Director compensation and oversees the design of orientation and ongoing education programs for Directors.

At every regularly scheduled meeting, the Board of Directors and all committees have in-camera sessions without members of Management present. As noted previously, the Audit Committee also meets privately with each of the internal and external auditors, and the CFRO. In addition, the Board meets alone with the CEO and CFRO at every regularly scheduled Board meeting.

Decisions requiring prior Board approval

Management's discretion in making operational and investment decisions is described in the policies approved by the Board or Board committees. This includes a detailed policy dealing exclusively with authorities. In particular, Board approval is required for matters affecting the strategic direction of the organization and for the annual business plan and budget. Annual and incentive-based compensation for Officers, as well as their appointments, also require Board approval.

Ensuring Board effectiveness

Managing prudent Board renewal

The *CPPIB Act* provides that each Director be appointed for a term of up to three years. Each Director may be reappointed for one or more additional terms. In order to ensure good governance practices, the Board aims to prudently manage continuity and renewal. It seeks to ensure that multiple tenured directors remain on the Board as other Directors complete their terms and new Directors join.

In fiscal 2019, the Board worked to ensure a smooth transition as several Directors completed their terms and new Directors joined the Board.

This fiscal year, three long-tenured Board members retired after their terms expired: Ian Bourne, Robert Brooks and Douglas Mahaffy. Mr. Bourne and Mr. Brooks were replaced by Chuck Magro and Sylvia Chrominska respectively, each of whom brings a distinct yet complementary perspective to the Board. Mark Evans' appointment as Mr. Mahaffy's replacement was announced following the end of fiscal 2019. The Board is also actively seeking a replacement for Jackson Tai, who retired from the Board effective March 31, 2019. The Board continues to work closely with CPPIB's stewards to ensure there is a prudent rhythm of Director turnover. Renewal contributes to the Board's effectiveness as it carries out its duties, yet it must be managed carefully.

Board appointment and reappointment process

The federal Governor in Council appoints Directors on the recommendation of the federal Minister of Finance, following the Minister's consultation with the finance ministers of the participating provinces. An external nominating committee, constituted by the federal Minister of Finance, assists in the process.

The Director appointment and reappointment process is designed to ensure that the Board has Directors who provide effective oversight and have proven financial ability or relevant work experience that will help CPPIB to achieve its objectives. CPPIB seeks to uphold its governance practices as a leading model in the oversight of public pension management. To that end, the Director appointment and reappointment process is based on the principles of merit, openness, transparency and diversity. The process aligns with our governance model to ensure an independent, qualified Board of Directors.

The Governance Committee regularly reviews and updates both desirable and actual competencies and attributes of the Board. This helps to ensure appointments and reappointments will create a Board that is fully capable of providing the oversight necessary for CPPIB to achieve its statutory objectives. The Committee establishes the essential attributes or “table stakes” required of individuals, along with other competencies required of the Board as a whole and in individual Board members to varying degrees. It then compares these requirements to CPPIB’s existing Board composition to determine which competencies and attributes are required or are likely to be required in the foreseeable future.

As part of the Director appointment process, CPPIB retains and manages executive search firms to source qualified candidates for consideration. To meet the principles of openness, transparency and independence, a Notice of Appointment opportunity is posted on CPPIB’s website. This enables members of the general public to view the eligibility factors and the critical competencies required of Directors. Interested individuals can then submit their names for consideration. These applicants augment the candidates identified by the Board and external executive search firms to ensure that the widest possible network of candidates is considered for appointment. The analysis of competencies described below is used to establish the selection criteria. The Governance Committee (or an ad hoc search committee) then uses these criteria to assess candidates.

In assessing potential Director reappointments, the Governance Committee considers table stakes, Board competencies, and applications in response to the Notice of Appointment opportunity. It also considers the results of the annual evaluations of the relevant Director and his or her performance on the Board.

Once finalized, the names of qualified candidates for appointments and reappointments are forwarded to the Nominating Committee for Appointments to CPPIB’s Board of Directors. After considering them, the Nominating Committee submits names of recommended candidates to the federal Finance Minister.

Skills matrix

	Experience and Expertise	Sylvia Chrominska	Ashleigh Everett	Tahira Hassan	Chuck Magro	John Montalbano	Heather Munroe-Blum	Karen Sheriff	Kathleen Taylor	Mary Phibbs	Jackson Tai[1]	Jo Mark Zurel
	Governance	X	X	X	X	X	X	X	X	X	X	X
	C-Suite Executive Leadership	X	X	X	X	X	X	X	X	X	X	X
Investment Management	Asset Management			X		X					X	
	Financial Services	X	X			X	X		X	X	X	
	Capital Markets	X				X				X	X	X
	Capital Project Management			X	X			X	X	X	X	X
	Risk Management	X	X	X	X	X	X	X	X	X	X	X
	Accounting/Finance	X		X		X		X	X	X	X	X
	Business Building and Transformation		X	X	X	X	X	X	X		X	X
	Government/Regulatory/Public Policy	X					X					
	Global Business	X	X	X	X	X	X		X	X	X	X
	Talent Management/Compensation	X	X	X	X	X	X	X	X	X		X
	Information Technology/Security			X			X	X			X	X

		Sylvia Chrominska	Ashleigh Everett	Tahira Hassan	Chuck Magro	John Montalbano	Heather Munroe-Blum	Karen Sheriff	Kathleen Taylor	Mary Phibbs	Jackson Tai[1]	Jo Mark Zurel
Diversity	Age[2]	67	62	65	49	54	68	61	61	61	68	55
	Years on Board[2]	0	2	4	0	2	8	6	5	1	2	6
	Gender	X	X	X			X	X	X	X		
	Non-Gender[3]			X							X	

1 Resigned effective March 31, 2019.
2 As of March 31, 2019.
3 Directors who self-identify in categories such as LGBTQ, Indigenous, a visible minority, disabled, or of an ethnic or cultural group, are noted in this category.

Board diversity
CPPIB believes that diversity, including gender diversity, is crucial in ensuring an effective Board of Directors with various perspectives and qualifications. The Board has adopted a written Board of Directors Diversity Policy. It reflects our long-standing belief that CPPIB is best served by a Board with a wide array of skills, backgrounds, perspectives and ideas. The Board Diversity Policy includes the objective of gender parity among Directors so that at least 40% are women and at least 40% are men. Overall, Board diversity is one factor considered in evaluating Director appointments and possible reappointments.

Board composition
The Board has determined that the governance, functional and industry experience of the Board, as well as its diversity, currently provide for the effective oversight of CPPIB's activities. Details of the competencies analysis and diversity of the Board, as at March 31, 2019, are set out in the table on page 105. Seven of the usual complement of 12 CPPIB Directors are currently women, including Heather Munroe-Blum who is the Chairperson.

Biographies of the CPPIB Board of Directors are on pages 112 to 115. They provide details of each Director's background and professional experience.

Board member orientation and development

The Board has an established orientation process for new Directors. This includes several comprehensive, full-day sessions with discussion of the background, history and mandate of CPPIB as well as its strategy, business planning process and current corporate and departmental business plans. Each new Director receives background material in advance and intensive interaction with Management during the orientation process. Directors are invited to attend supplemental orientation sessions to deepen their knowledge of the organization.

Professional development for all Directors is a key focus for the Board because of the evolving nature of a Director's responsibilities and the unique nature of CPPIB. Management provides ongoing presentations focused on our business, emerging global issues and corporate governance practices. Special development seminars outside of regular meetings feature both external and internal experts.

A key education component for Board members is to develop an in-depth understanding of the geographic regions in which CPPIB invests and operates. Over the past several years, Directors have held Board meetings in select international offices and gained valuable insights related to the political and economic climate in those regions. Meetings held in international locations have enhanced the Board's knowledge of the various challenges and implications of deploying capital on a global basis. In June 2018, the Board convened in South America, which provided Directors with an opportunity to engage with CPPIB employees in São Paulo and with select local partners in both São Paulo and Santiago. It also helped Board members to better understand CPPIB's Latin America strategy and activities.

Directors are also encouraged to participate in relevant external programs. Given CPPIB's scale and breadth of activities, the Board will continue to engage in both internal and external education programs as a central part of the Board's governance responsibility.

A commitment to accountability

Procedures for the assessment of Board performance
The Board has an established annual process for evaluating its own performance and that of its committees, the Chairperson and each Director. All assessments are currently conducted through confidential questionnaires. The full Board then reviews summaries of the evaluations. These summaries provide a basis for improvement plans.

The Chairperson leads the confidential annual peer review. This is designed to assist each Director to identify self-development initiatives and continuous improvement. It is also used to explore new Board and committee roles for individual directors. After receiving relevant questionnaire feedback, the Chairperson meets formally with each Director. The Chairperson also checks in with each Director at least one more time formally during the year regarding feedback. The Board looks for improvements to this process annually.

The Chair of the Governance Committee leads the confidential annual Chairperson review and, subject to the direction of the Board, provides feedback to the Chairperson.

A summary of the feedback obtained through the evaluations process is conveyed to the external nominating committee. It uses this information when considering the reappointment of CPPIB Directors and the reappointment of the Chairperson when his or her term expires.

To ensure independence among Directors, the Board of Directors monitors interlocking relationships, in line with leading governance practices. This includes Board and committee interlocks. CPPIB currently has one Board interlock: both Heather Munroe-Blum and Kathleen Taylor serve on the Board of Royal Bank of Canada. The CPPIB Board has considered this interlock and has determined that this relationship does not impair the independent judgment of these Directors.

Directors are also expected to notify the Chairperson in advance if they plan to accept an appointment to another board or to an executive position with any enterprise that might benefit from, or be in conflict with, the activities of the CPPIB Board.

Board expectations of Management

The Board expects Management to comply with the *CPPIB Act* and regulations and with all policies approved by the Board, and to act in accordance with applicable law. With involvement from the Board, Management develops the strategic direction of the organization in response to its growing asset-management responsibilities and the outlook for capital markets. The strategy incorporates risk-management policies and controls, as well as monitoring and reporting mechanisms. Management is also expected to sustain and promote a culture of high integrity, to manage any conflicts of interest appropriately and to adhere to a stringent Code of Conduct.

Management is charged with developing benchmarks that objectively measure the performance of the markets, asset classes and programs in which CPPIB invests. The Board approves benchmarks at the total Fund level. These benchmarks assist the Board in evaluating Management's investment performance and structuring performance-based compensation incentives.

Management is expected to disclose all material activities to the Board and the public on a full and timely basis. This includes new investments, the engagement of operational and investment partners, quarterly and annual financial results, and developments that may materially affect CPPIB's reputation.

Directors' compensation

The Governance Committee of the Board is responsible for making recommendations with respect to Directors' compensation. This compensation consists of an annual retainer, meeting fees, and travel time allowances. Directors' compensation is reviewed at least every two years. Changes, if any, are recommended to the Board for approval.

As described in CPPIB's fiscal 2018 Annual Report, the Board reviewed Director compensation in fiscal 2018 and approved for fiscal 2019 modest increases in annual retainers for Directors as well as the Chairperson. The Committee approved more material increases in retainers for Committee Chairs in order to align with the responsibilities of those roles. It also approved an annual allowance for Directors residing outside Canada to reflect the additional overall complexities and travel time associated with not residing in Canada while serving as a CPPIB Director. The aim of these changes was to ensure that Directors are competitively compensated, while still taking into account CPPIB's public mandate. This is consistent with CPPIB's Directors' Compensation Philosophy as outlined on page 108.

The following table reflects approved Directors' Compensation for fiscal 2019, and fiscal 2020.

	Fiscal 2019 and 2020
Annual Retainers	
Chairperson[1]	$ 245,000
Director	$ 70,000
Standing Committee chair, additional retainer	$ 25,000
Meeting Fees	
In-person meeting fee	$ 2,000
Telephone meeting fee	$ 1,000
Travel and Other Allowances	
One way travel time per meeting is 1–3.5 hours	$ 500
One-way travel time per meeting is greater than 3.5 up to 6.5 hours	$ 1,500
One-way travel time per meeting is greater than 6.5 hours	$ 2,500
Annual allowance for Directors residing outside Canada	$ 20,000

1 In the case of the Board Chairperson, compensation will continue to be a flat annual fee, for chairing the Board and Investment Committee, recognizing the difference in the role of the Board Chairperson versus individual directors. The Board Chairperson will, however, be eligible for travel time reimbursement for regularly scheduled meetings and meeting fees in the event the Chairperson serves on an ad hoc committee.

CPPIB Directors' compensation philosophy

Safeguarding the interests of CPP contributors and beneficiaries requires professional directors with the capabilities to ensure the effective stewardship and oversight of CPPIB. The Board maintains a compensation approach that takes into account:

> Leading governance performance;
> The recruitment and retention of directors with extensive international experience and expertise in business, finance or investments; and
> The considerable time demands of the position.

An equitable balance between CPPIB's commercial activities and public purpose promotes the selection of individuals who will reinforce the organization's unique culture.

CPPIB Directors' compensation principles

I. Pay Neutrality

Compensation alone should not attract or detract desirable candidates.

In reviewing the compensation of CPPIB Directors, the Board's objective must be to set a reasonable "threshold" level of compensation, which neutralizes compensation so that it is not a significant favourable or unfavourable influence on the decision of a candidate in joining the CPPIB Board.

II. Public Purpose

Canadian governments established CPPIB with a purpose to serve millions of contributors to the compulsory CPP program. Directors' compensation should reflect a purpose distinct from other commercial organizations oriented to profits and stock price.

While Directors' compensation should reflect the reality that both the workload and time commitment of a CPPIB Directorship, and the expertise and experience required are comparable to private sector directorships, the total pay opportunity for CPPIB Directors should reflect our public purpose.

III. Time Commitment

The compensation structure should recognize the differential in time commitment among Directors.

The Board must contemplate and design a compensation structure that takes into account the fact that the CPPIB Board is a true 'working board' with significant time and travel requirements. Directors are expected to be continuously engaged on organizational matters well beyond preparing for, and participating in, frequent Board and Committee meetings. The structure should recognize the incremental time, travel and meeting commitments expected of each Director Committee Chairs and the unique role of the Board Chairperson.

IV. Relative Benchmark

CPPIB is a complex global investment management organization and is correctly considered a peer relative to other major financial institutions and large companies globally.

There is a highly competitive global market for top director talent and the Board must consider how candidates perceive the value proposition of being a CPPIB Director to recruit and retain top governance talent. For compensation-benchmarking purposes, the Board should consider alternative directorship opportunities available to these candidates in three target talent markets: (1) pension funds and smaller Canadian asset managers; (2) TSX 100 Boards and larger Canadian asset managers; and (3) TSX 20 & U.S./U.K. asset managers and multinationals.

V. Appropriate Discount to Benchmark

A full market-based level of compensation is not appropriate given CPPIB's public purpose as described in Principle II.

Upon review of the relative target talent markets for benchmarking purposes, an approximate 20% discount was applied during the last review of compensation in 2017.

Board attendance

There were six regularly scheduled Board meetings in fiscal 2019. In addition, there were five regularly scheduled Audit Committee meetings, six regularly scheduled Human Resources and Compensation Committee meetings, six regularly scheduled Governance Committee meetings, and six regularly scheduled Investment Committee meetings. In addition, there were a number of special Board or Committee meetings held to address specific issues or approvals, some of which were scheduled at times where all Directors were not able to attend given pre-existing commitments. The Risk Committee, formed in fiscal 2019, will meet for the first time in fiscal 2020. The table below shows the number of meetings that each Director attended in fiscal 2019 relative to the number of meetings he or she could have attended.

Director	Board Meeting[1]	Investment Committee[2]	Audit Committee[3]	Governance Committee[4]	Human Resources and Compensation Committee (HRCC)[5]
Heather Munroe-Blum, Chairperson of Board and Chair of Investment Committee	10/10	13/13	–	–	–
Ian Bourne, Chair of Governance Committee[6]	3/3	4/4	–	3/3	3/3
Robert Brooks[7]	4/4	6/6	2/2	4/4	–
Sylvia Chrominska[8, 9]	6/6	7/7	1/1	5/5	4/4
Ashleigh Everett, Chair of Governance Committee[10]	10/10	12/13	–	9/9	–
Tahira Hassan	10/10	12/13	–	9/9	8/8
Chuck Magro[11, 12]	6/7	9/9	4/4	6/6	–
Douglas Mahaffy[13]	7/7	7/8	–	–	6/6
John Montalbano[14]	10/10	13/13	5/5	8/8	–
Mary Phibbs, Chair of Audit Committee[15, 16]	10/10	13/13	5/5	–	7/7
Karen Sheriff, Chair of HRCC[17]	10/10	11/13	–	1/1	8/8
Jackson Tai[18]	7/10	9/13	4/5	7/9	–
Kathleen Taylor	10/10	12/13	5/5	–	8/8
Jo Mark Zurel, Chair of Audit Committee[19]	10/10	12/13	5/5	–	7/7

1 Eight in-person and two teleconference meetings.
2 Six in-person and seven teleconference meetings.
3 Five in-person meetings.
4 Eight in-person meetings and one teleconference meeting.
5 Six in-person and two teleconference meetings.
6 Ceased to be a Director effective July 1, 2018.
7 Ceased to be a Director effective September 4, 2018.
8 Became a Director effective September 4, 2018.
9 Attended Audit Committee meeting by invitation. Appointed to Governance Committee effective September 19, 2018 (attended September 18, 2018 meeting as an observer) until January 1, 2019, and attended February 12, 2019 meeting by invitation. Appointed to HRCC effective September 12, 2018 and to the Risk Committee effective February 13, 2019.
10 Appointed Chair of the Governance Committee effective July 1, 2018.
11 Became a Director effective July 1, 2018.
12 Appointed to the Audit Committee and Governance Committee effective July 4, 2018.
13 Ceased to be a Director effective October 26, 2018.
14 Ceased to be a member of the Governance Committee effective January 1, 2019. Appointed to the Risk Committee effective February 13, 2019.
15 Appointed Chair of the Audit Committee effective January 1, 2019. Appointed non-voting member of the Risk Committee effective February 13, 2019.
16 Ceased to be a member of the HRCC January 1, 2019.
17 Appointed to the Governance Committee effective January 1, 2019.
18 Ceased to be a Director effective March 31, 2019.
19 Ceased to be Chair of the Audit Committee effective January 1, 2019, (now non-voting member). Appointed Chair of the Risk Committee effective February 13, 2019.

During fiscal 2019, the following ad hoc committees of the Board were formed or continued:

- The ad hoc Director candidate search committee, formed in fiscal 2018, met several times during fiscal 2019. The purpose of the committee was to consider potential candidates and recommend candidates to the Governance Committee and the Board (to be ultimately recommended to the external nominating committee). Membership consisted of Ms. Everett (Chair), Mr. Montalbano, Dr. Munroe-Blum and Mr. Zurel;
- A separate ad hoc Director candidate search committee was formed in fiscal 2019 to consider potential candidates for a fiscal 2020 Board vacancy. Membership of the committee consisted of Ms. Everett (Chair), Mr. Montalbano, Dr. Munroe-Blum, Ms. Phibbs and Ms. Sheriff;
- The ad hoc committee to oversee Management's preparations to receive additional CPP contributions, formed in fiscal 2018, met throughout fiscal 2019. Membership consisted of Dr. Munroe-Blum, Mr. Bourne (until his retirement from the Board), Mr. Brooks (until his retirement from the Board), Mr. Montalbano, Ms. Sheriff and Mr. Zurel. Mr. Montalbano assumed the role of Chair of this committee partway through the fiscal year;

- The ad hoc risk committee, formed in fiscal 2018 to review matters relating to evolving CPPIB's risk governance practices, met during fiscal 2019 until the formation of the standing Risk Committee of the Board. Membership of the committee consisted of Mr. Tai (Chair), Mr. Montalbano, Dr. Munroe-Blum, Ms. Phibbs and Mr. Zurel; and
- The ad hoc conduct and culture committee, formed in fiscal 2018 to oversee the review and optimization of CPPIB's organizational culture, met several times during fiscal 2019. Membership of the committee consisted of Ms. Everett (Chair), Mr. Bourne (until his retirement from the Board), Dr. Munroe-Blum, Ms. Sheriff and Mr. Zurel.

Director compensation for fiscal 2019

Based on the attendance and fee schedules, individual compensation for each of the Directors for fiscal 2019 was as follows:

Director	Annual Retainer ($)	Board and Committee Meeting Fees ($)	Public Meeting Fees ($)	Travel Fees ($)	Total Remuneration ($)
Ian Bourne[1]	23,750.00	24,000.00	–	5,500.00	53,250.00
Robert Brooks[2]	31,888.89	31,000.00	–	2,500.00	65,388.89
Ashleigh Everett[3]	88,750.00	75,000.00	–	6,000.00	169,750.00
Tahira Hassan	70,000.00	67,000.00	–	2,500.00	139,500.00
Douglas Mahaffy[4]	39,892.47	30,000.00	–	–	69,892.47
John Montalbano[5]	70,000.00	86,000.00	–	13,000.00	169,000.00
Heather Munroe-Blum*	245,000.00	41,000.00	2,000	7,000.00	295,000.00
Mary Phibbs[6]	96,250.00	76,000.00	–	17,500.00	189,750.00
Karen Sheriff[7]	95,000.00	70,000.00	–	2,500.00	167,500.00
Jackson Tai	90,000.00	52,000.00	–	5,000.00	147,000.00
Kathleen Taylor	70,000.00	61,000.00	–	2,500.00	133,500.00
Chuck Magro[8]	52,500.00	46,000.00	–	7,500.00	106,000.00
Jo Mark Zurel[9]	88,750.00	86,000.00	1,000	6,000.00	181,750.00
Sylvia Chrominska[10]	40,250.00	41,000.00	–	–	81,250.00
Total	1,102,031.36	786,000.00[11]	3,000	77,500.00	1,968,531.36

* Chair of the Board.

1 Ian Bourne ceased to be a Board Member July 1, 2018.

2 Robert Brooks ceased to be a Board Member September 4, 2018.

3 Ashleigh Everett appointed Chair of Governance Committee effective July 1, 2018.

4 Douglas Mahaffy ceased to be a Board Member October 26, 2018.

5 John Montalbano ceased to be a member Governance Committee January 1, 2019.

6 Mary Phibbs appointed Chair of Audit Committee effective January 1, 2019. Ceased to be Human Resources Compensation Committee member January 1, 2019.

7 Karen Sheriff appointed as member of Governance Committee effective January 1, 2019.

8 Chuck Magro appointed as Board member effective July 1, 2018. Appointed as Investment Committee, Governance Committee, Audit Committee member effective July 4, 2018.

9 Jo Mark Zurel ceased to be Chair of Audit Committee, Human Resources and Compensation Committee member January 1, 2019. Appointed Chair of Risk Committee effective February 13, 2019.

10 Sylvia Chrominska appointed as Board member effective September 4, 2018. Appointed as an Investment Committee and Human Resources and Compensation Committee member effective September 12, 2018. Appointed as a Governance Committee member on September 18, 2018. Ceased to be a member of Governance Committee January 1, 2019.

11 These meeting fees include attendance at ad hoc committee and formal orientation meetings.

Conduct and culture

A culture of integrity and ethical conduct

The Board places utmost importance on fostering an inclusive culture of ethics and integrity throughout CPPIB. It requires and expects Management to support the Board in setting the tone for a strong governance culture.

In fiscal 2019, an ad hoc committee of the Board was formed to oversee the review and optimization of CPPIB's organizational culture. The work of this committee led the Board to conclude that CPPIB's global culture and values are strong. As part of the review of corporate culture, the Governance Committee oversaw the refreshing of CPPIB's Code of Conduct and related internal policies, effective April 1, 2019.

Code of Conduct and related policies

The *Code of Conduct* can be found on our website. It is designed to help create a corporate culture of trust, honesty and integrity. It outlines what is expected of everyone at CPPIB and our accountability to each other.

The Code sets out strict criteria for the acceptance by Directors and employees of any entertainment, gifts or special treatment. Such benefits must not create or appear to create a favoured position for actual or potential contractors or suppliers.

It also deals with such matters as conflicts of interest, personal and professional conduct, confidentiality of proprietary information, and personal investments.

Related internal policies provide additional information on conflicts of interest and personal investments. These are intended to identify, manage and, where possible, eliminate conflicts of interest relating to Directors and employees. Conflicts of interest were anticipated in CPPIB's legislation as a result of the need to recruit Directors and employees with financial and investment experience. Our policies are designed to ensure that Directors and employees act in the best interests of the organization. They must disclose any personal or business interests that might lead to a real, potential or perceived conflict of interest. Any involvement in relevant decision-making is prohibited, should those circumstances arise. Further, Directors are expected to resign from the Board if they take on executive responsibilities with an organization whose objectives and mandates may be, or might reasonably be perceived to be, in conflict with CPPIB's objectives and mandate.

These policies also cover the personal trading of CPPIB employees and directors. They establish strict pre-clearance procedures and restrictions for personal trading in securities.

As part of the hiring process, new recruits must read and agree to comply with the Code of Conduct and related conduct policies. Together, these set a high standard for promoting ethical conduct and addressing conflicts of interest. Directors and employees must reconfirm their compliance semi-annually and employees must complete an online module semi-annually to confirm their understanding of the Code and their ability to apply it in day-to-day decisions and actions.

Guiding Principles

Our Guiding Principles of Integrity, Partnership and High Performance are embedded in the Code of Conduct. CPPIB holds annual sessions for all employees on the same day across all offices to renew their commitment to the Guiding Principles. We will continue to hold these sessions annually to maintain the focus on this cornerstone of our culture.

When the Board hires or conducts annual performance reviews of the CEO, it considers the individual's leadership in promoting ethical conduct and championing a culture of Integrity, Partnership and High Performance. These factors are also relevant in the hiring and review of all employees.

Conduct Review Advisor

To augment the Code of Conduct, the Board of Directors has appointed an external Conduct Review Advisor to discuss Code of Conduct issues with Directors, employees and relevant third parties on a confidential basis. The Conduct Review Advisor also assists the Governance Committee in monitoring how the Code is applied and in reviewing it for any appropriate changes. Ms. Sheila Block, a distinguished Canadian litigation lawyer, currently holds this position.

BOARD OF DIRECTORS[1]

COMMITTEE MEMBERSHIP:
Investment Committee (Chair), Audit Committee (non-voting member), Governance Committee (non-voting member), Human Resources and Compensation Committee (non-voting member), Risk Committee (non-voting member)

HEATHER MUNROE-BLUM, O.C., O.Q., PH.D., F.R.S.C., CHAIRPERSON

Corporate Director and Public Policy Scholar, Montreal, Quebec

Director since December 2010. Appointed Chairperson effective October 2014.

Served for over a decade as Principal and Vice Chancellor (President), McGill University; Former Vice-President (Research and International Relations), University of Toronto. Current Director of the Royal Bank of Canada and Chairperson of the Gairdner Foundation. Co-founder of the Canadian Children's Literacy Foundation. Member, Board of Stanford University's Center for Advanced Study in the Behavioral Sciences (CASBS), McGill's Tanenbaum Open Science Institute (TOSI), McGill's Bensadoun School of Retail Management, and the Trilateral Commission. Among others, served on the boards of Four Seasons Hotels, Alcan, Yellow Media Inc., Hydro One (Ontario), and CGI Group, and as a member of the President's Council of the New York Academy of Sciences, the Conference Board of Canada and the CD Howe Institute. Recipient of numerous domestic and international honorary degrees and awards of distinction. Officer of the Order of Canada, Officer of the Order of Quebec, Specially Elected Fellow of the Royal Society of Canada and Fellow of the Institute of Corporate Directors.

Building on a distinguished career of clinical, scientific and policy contributions, qualifications include more than 25 years of senior administrative leadership concentrated in higher education, public policy and research and development; 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.

COMMITTEE MEMBERSHIP:
Investment Committee, Governance Committee, Human Resources and Compensation Committee

IAN A. BOURNE

Corporate Director, Calgary, Alberta

Director since April 2007. Retired from the Board in July 2018, when his term completed.

Chair of Ballard Power Systems Inc., Director of Hydro One Limited, Wajax Corporation, and the Canadian Public Accountability Board. Former Chair of SNC-Lavalin Group Inc. and former Director of Canadian Oil Sands Limited. Retired Executive Vice President and Chief Financial Officer of TransAlta Corporation, a power generation company, and President of TransAlta Power L.P. Over 35 years of experience in senior finance roles at TransAlta, General Electric and Canada Post Corporation. Former Director of TransAlta Power L.P. Qualifications include expertise in finance in major corporations, corporate governance and international experience in Paris and London.

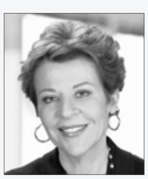
COMMITTEE MEMBERSHIP:
Investment Committee, Governance Committee, Audit Committee

ROBERT L. BROOKS

Corporate Director, Toronto, Ontario

Director since January 2009. Retired from the Board in September 2018, when his term completed.

Former Vice-Chair and Group Treasurer of the Bank of Nova Scotia, the culmination of a 40-year career with the bank serving in a succession of senior investment banking, finance and treasury roles. Director of Integrated Asset Management Corp. Director of Hamilton Capital Partners Inc. Former Director of numerous Scotiabank subsidiaries including Scotia Discount Brokerage, Inc., Scotia Life Insurance Company, ScotiaMcLeod, Inc. and Scotia Cassels Investment Counsel Ltd. Qualifications include more than 40 years of financial industry experience as a bank executive dealing with finance, risk management, pension fund asset mix, investment strategies, treasury functions and international operations.



COMMITTEE MEMBERSHIP:
Investment Committee, Human Resources and Compensation Committee, Risk Committee

SYLVIA CHROMINSKA

Corporate Director, Stratford, Ontario

Director since September 2018.

Currently serves on the Board and as Chair of the Human Resources and Compensation Committee of Wajax Inc., on the Board, and as Chair of the Management Resources and Compensation Committee of Emera Inc., on the Board and as Chair of the Stratford Festival and is also on the Board of the University of Western Ontario.

Previously served as Chair of the Boards of the Bank of Nova Scotia Jamaica and Scotiabank Trinidad & Tobago, as a Director and Chair of the Human Resources Committee of Dofasco Inc., as the Chair of the Board of Governors of the Canadian Bankers Association, and on the Dean's Advisory Committee of the University of Western Ontario's Richard Ivey Business School. Member and Honorary Fellow of the Advisory Council for Dalhousie University, Chair of the International Women's Forum; and Board Member and Vice President of the Canadian Club of Toronto.

Holds an Honours Degree in Business Administration and an Honorary Doctorate from the University of Western Ontario. Qualifications include over 30 years of banking experience, including executive positions in human resources and Corporate Credit Risk, as well as extensive board experience.

1 The biographies provided include all Directors who served on the Board in fiscal 2019. Ian Bourne, Robert Brooks, Douglas Mahaffy and Jackson Tai left the Board and Board committees during fiscal 2019. Committee membership is listed as of March 31, 2019, other than those directors who left the Board during the year.

COMMITTEE MEMBERSHIP:
Investment Committee, Governance Committee (appointed Chair effective July 1, 2018)

ASHLEIGH EVERETT

Corporate Executive, Corporate Director, Winnipeg, Manitoba
Director since February 2017.

President, Corporate Secretary and Director of Royal Canadian Securities Limited, the holding company of Royal Canadian Properties Limited, Domo Gasoline Corporation Ltd., and L'Eau-1 Inc. Director of The Wawanesa Mutual Insurance Company. Former Director of the Bank of Nova Scotia (Chair of the Corporate Governance and Pension Committees). Former Director of Manitoba Telecom Services (Chair of the Governance and Nominating Committees). Current member of the Premiers Enterprise Team for the Province of Manitoba. Qualifications include extensive board experience as a director on executive and risk, governance and pension, and human resources and compensation committees in the public telecom and finance sectors, with experience in international risk and governance issues. Over 25 years of senior management experience in private property development and retail business operations.

COMMITTEE MEMBERSHIP:
Investment Committee, Governance Committee, Human Resources and Compensation Committee

TAHIRA HASSAN

Corporate Director, Toronto, Ontario
Director since February 2015.

Non-executive Director of Brambles Limited. Vice Chair and Director of Ontario Shores Centre for Mental Health Sciences. Former Senior Vice-President at Nestlé SA with extensive international experience in transformative change including mergers & acquisitions. Held executive positions such as Global Business Head for Nescafé Ready-to-Drink, Head of Global Supply Chain and President of Ice Cream in Canada. Served on several international management and joint venture boards. Past member of the Dean's advisory council of the Laurier School of Business & Economics at Wilfrid Laurier University.

Certified Management Accountant of Canada. Fellow of the Chartered Institute of Management Accountants in the United Kingdom.

Qualifications include more than 39 years of business and board expertise, in countries such as the United Kingdom, Switzerland and Pakistan, in addition to Canada.

COMMITTEE MEMBERSHIP:
Investment Committee, Audit Committee, Governance Committee

CHUCK MAGRO

Corporate Executive, Heritage Point, Alberta
Director since July 2018.

Chuck Magro is President and Chief Executive Officer of Nutrien Ltd. He also plays an active role on the boards of the Business Council of Canada, the International Fertilizer Industry Association and the International Plant Nutrition Institute; and serves as chair of Canpotex Limited, and past chair of The Fertilizer Institute and the Nutrients for Life Foundation.

Qualifications include 25 years of international business experience primarily in North and South America, Australia, Europe, and Asia, as well as board experience.

COMMITTEE MEMBERSHIP:
Investment Committee, Human Resources and Compensation Committee

DOUGLAS W. MAHAFFY

Corporate Director, Toronto, Ontario
Director since October 2009. Retired from the Board in October 2018, when his term completed.

Retired Chairman and Chief Executive Officer of McLean Budden Ltd., an institutional money management firm. Former Managing Director and Head of Investment Banking (Ontario) of Merrill Lynch Canada Inc., and former Senior Vice-President, Finance and Chief Financial Officer of Hudson's Bay Company. Director at Methanex Corporation and former Director at Stelco Inc. and Woodward's Ltd. Chairman at Drumlane Capital, a personally owned investment firm. Former member of the Investment Committee at Sunnybrook Health Sciences Centre. Qualifications: more than 40 years of investment industry, general management, and mergers and acquisitions experience.

In Memoriam

Sadly, Douglas Mahaffy passed away on January 6, 2019. Appointed in October 2009, Douglas was a highly respected member of the CPPIB Board. His valued counsel and wisdom helped guide CPPIB's growth over the past decade. He will be sadly missed and fondly remembered.

COMMITTEE MEMBERSHIP:
Investment Committee,
Audit Committee,
Risk Committee

JOHN MONTALBANO

Corporate Director, Vancouver, British Columbia
Director since February 2017.

Served as Chief Executive Officer of RBC Global Asset Management from 2008 to 2015. Previously President of Phillips, Hager & North Investment Management and Vice Chairman of RBC Wealth Management. Serves as Director on a number of corporate boards, including Canalyst Financial Modeling Corporation, Accuro Technologies Inc. and Eupraxia Pharmaceuticals Inc.

Chartered Financial Analyst designation. Leslie Wong Fellow of the UBC Portfolio Management Foundation. Holds an Honorary Doctorate from Emily Carr University, serves on the Asia Pacific Foundation Board, is Vice Chair of The St. Paul's Hospital Foundation and Chairs The Vancouver Police Foundation.

Qualifications include nearly 30 years working in asset management and extensive senior management experience, including overseeing double-digit annual growth over seven years as CEO of the new RBC Global Asset Management, making it one of the 50 largest asset managers in the world.

COMMITTEE MEMBERSHIP:
Investment Committee,
Audit Committee (appointed Chair effective January 1, 2019),
Risk Committee (non-voting member)

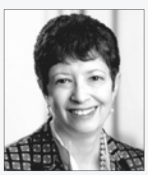
MARY PHIBBS

Corporate Director, London, United Kingdom
Director since May 2017.

Held senior positions at Standard Chartered Bank plc, ANZ Banking Group, National Australia Bank, Commonwealth Bank of Australia, and Allied Irish Banks plc among others. Non-executive Director of Morgan Stanley International Limited, Morgan Stanley & Co International plc and Morgan Stanley Bank International Limited. Previously a Director of Novae Group plc, New Day Group Limited, Nottingham Building Society, Friends Life Group plc, Stewart Title Limited, The Charity Bank Limited and Northern Rock plc during its period of public ownership.

Holds a Bachelor of Science (Honours) from the University of Surrey, is a Fellow of the Institute of Chartered Accountants in England and Wales and a Fellow of Chartered Accountants Australia and New Zealand.

Qualifications include more than 40 years of international business, risk management and board experience in various countries in the Australian, Pacific, Southeast Asia, Middle East and European regions including the United Kingdom.



COMMITTEE MEMBERSHIP:
Investment Committee,
Governance Committee,
Human Resources and Compensation Committee (Chair)

KAREN SHERIFF

Corporate Executive, Halifax, Nova Scotia[2]
Director since October 2012.

President and Chief Executive Officer of Q9 Networks from January 2015 through October 2016. Previously President and CEO of Bell Aliant; Chief Operating Officer, Bell Aliant. Prior to Bell Aliant, President of Small and Medium Business, Bell Canada; Chief Marketing Officer, Bell Canada; Senior Vice President of Product Management and Development, Bell Canada, and a variety of assignments with Ameritech and United Airlines. Director of WestJet Airlines Ltd. and BCE Inc/Bell Canada. Past director of Bell Aliant Inc., Bell Aliant Regional Communications Inc., Bell Aliant Preferred Equity Inc., Aliant Inc. and Teknion Corporation. Chair of the Board of Trustees of the Gardiner Museum of Ceramic Arts from 2006 to 2016. Named one of Canada's top 25 Women of Influence for 2013 by Women of Influence Inc. In 2012, named Woman of the Year by Canadian Women in Communications (CWC). Named one of Atlantic Canada's Top 50 CEOs (*Atlantic Business Magazine*). Recognized as one of Canada's Top 100 Most Powerful Women three times and named to the Women's Executive Network Top 100 Women Hall of Fame.

Qualifications include extensive senior management experience and expertise in strategic priority setting of major corporations, including oversight of Bell Aliant's conversion back to a corporation from one of the largest income trusts in Canada, and leading Bell Aliant's corporate transformation and industry leading fibre-to-the-home (FTTH) network build, the first of its kind in Canada.

2 At time of appointment.

COMMITTEE MEMBERSHIP:
Investment Committee,
Audit Committee,
Governance Committee

JACKSON TAI

Corporate Director, Greenwich, Connecticut, USA
Director since June 2016. Retired from the Board in March 2019, given other commitments.

Former Chief Executive Officer and Vice-Chairman of DBS Bank Ltd, and previously, President and Chief Operating Officer, and Chief Financial Officer. Served 25 years in the Investment Banking Division of J.P. Morgan & Co. Incorporated and held executive positions such as Head of Japan Capital Markets; founder of the firm's global real estate investment banking; Senior Regional Officer for Asia Pacific; and Senior Regional Officer for the Western United States. Currently serves as a non-executive director for several boards, including HSBC Holdings PLC, Eli Lilly & Company, and Mastercard Incorporated. Currently serves as a trustee for Rensselaer Polytechnic Institute and as a Director of Metropolitan Opera.

Qualifications include significant on-the-ground operating and governance experience in Asia, including in China, Singapore and Japan; a distinguished career in banking and capital markets with experience in investment and risk assessment; as well as global governance experience among active boards providing insights into U.S., EU and China.

COMMITTEE MEMBERSHIP:
Investment Committee,
Audit Committee,
Human Resources and
Compensation Committee

KATHLEEN TAYLOR, C.M., BA (HONS), JD, MBA

Global Executive, Corporate Director, Toronto, Ontario
Director since October 2013.

Chair of the Board of the Royal Bank of Canada and Board member since 2001. Chair of the Board of the Hospital for Sick Children Foundation and a member of the Hospital's Board of Trustees. Director of Air Canada since May 2016. Vice Chair of The Adecco Group since April 2017 and director since April 2015. Chair of Altas Partners, a Toronto-based private equity firm, since April 2019. Former President and Chief Executive Officer of Four Seasons Hotels and Resorts.

Recipient of the Order of Canada with the grade of member (2016). Recipient of an Honorary Doctor of Humane Letters from Mount Saint Vincent University (2015) and Honorary Doctorates of Laws from Trent University (2016) and York University (2014). Named the first woman Corporate Hotelier of the World by *Hotels Magazine* (2011) and was inducted to the Canadian Marketing Hall of Legends (2010). Recipient of the Inaugural Medal for Career Achievement from Hennick Centre for Business and Law (2010), and the Schulich School of Business Award for Outstanding Executive Leadership (2001).

Executive qualifications include almost 25 years of international experience building a global culture, overseeing major strategic and operations initiatives, negotiating expertise and strong relationship management capabilities. Also a seasoned Director, with 20 years of governance experience on a number of corporate and not-for-profit boards.

COMMITTEE MEMBERSHIP:
Investment Committee,
Audit Committee (Chair until December 31, 2018, non-voting member effective January 1, 2019),
Risk Committee (appointed Chair effective February 13, 2019).

JO MARK ZUREL

Chartered Professional Accountant, Corporate Director, St. John's, Newfoundland and Labrador
Director since November 2012.

President/Owner of Stonebridge Capital Inc., a private investment company that invests in a variety of businesses, including Atlantic Canadian start-up and high-growth companies. From 1998 to 2006 served as Senior Vice-President and Chief Financial Officer of CHC Helicopter Corporation. Director of Highland Copper, Director of Major Drilling Group International Inc. and Director of Fortis Inc. Current and recent volunteer activities include Chair of the Atlantic Provinces Economic Council, Chair of the St. John's Board of Trade, Chair of Junior Achievement of Newfoundland and Labrador, and Chair of a Red Cross Capital Campaign. In 2015, Jo Mark and his wife were named the Outstanding Philanthropists for Newfoundland and Labrador. Honoured as one of Canada's Top 40 under 40 in 2000.

Qualifications include extensive investment industry and corporate director experience including as an active angel investor and as Director of the Institute of Corporate Directors (ICD) and member of the founding executive of the ICD's Newfoundland and Labrador Chapter.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The Consolidated Financial Statements of Canada Pension Plan Investment Board (CPP Investment Board) have been prepared by Management and approved by the Board of Directors. Management is responsible for the integrity and reliability of the Consolidated Financial Statements and the financial information contained within the Annual Report.

The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards. The Consolidated Financial Statements include certain amounts based on Management's judgments and best estimates where deemed appropriate. The significant accounting policies used are disclosed in note 1 to the Consolidated Financial Statements. The financial information presented throughout the Annual Report is consistent with the Consolidated Financial Statements.

CPP Investment Board develops and maintains systems of internal control and supporting procedures. The systems of internal control are designed to provide reasonable assurance that assets are safeguarded; that transactions are properly recorded, authorized and are in accordance with the *Canada Pension Plan Investment Board Act*, the accompanying regulations, the by-laws and investment policies of CPP Investment Board; and that there are no material misstatements in the Consolidated Financial Statements or the financial information contained within the Annual Report. The internal control over financial reporting and disclosure controls and procedures are tested for both design and operational effectiveness as part of our CEO/CFRO certification process as described on page 86 of Management's Discussion and Analysis in the 2019 Annual Report.

The internal control framework includes a strong corporate governance structure, an enterprise risk management framework that identifies, monitors and reports on key risks facing the organization, a code of conduct and conflict of interest procedures, and other policies, management authorities and procedures that guide decision-making. The controls also include the establishment of an organization structure that provides a well-defined division of responsibilities and accountability, the selection and training of qualified staff, and the communication of policies, management authorities and procedures throughout the organization. The systems of internal control are further supported by a compliance management system to monitor CPP Investment Board's compliance with legislation, policies, management authorities and procedures and by internal and external auditors who review and evaluate internal controls in accordance with their respective annual audit plans approved by the Audit Committee.

The Audit Committee assists the Board of Directors in discharging its responsibility to approve the Consolidated Financial Statements. The Audit Committee, consisting of independent directors, meets regularly with Management and the internal and external auditors to discuss the scope and findings of audits and other work they may be requested to perform from time to time, to review financial information and to discuss the adequacy of internal controls. The Audit Committee reviews the Consolidated Financial Statements and recommends them to the Board of Directors for approval.

CPP Investment Board's external auditor, Deloitte LLP, has conducted an independent audit of the Consolidated Financial Statements in accordance with Canadian generally accepted auditing standards, performing such tests and other procedures as it considers necessary to express an opinion in its Independent Auditor's Report. The external auditor has full and unrestricted access to management and the Audit Committee to discuss any findings related to the integrity and reliability of CPP Investment Board's financial reporting and the adequacy of internal control systems.

Mark G. Machin
President and Chief Executive Officer

Neil Beaumont
Senior Managing Director & Chief Financial and Risk Officer

Toronto, Ontario
May 8, 2019

INVESTMENT CERTIFICATE

The *Canada Pension Plan Investment Board Act* (CPPIB Act) requires that a certificate be signed by a director on behalf of the Board of Directors, stating that the investments of CPP Investment Board held during the year were in accordance with the CPPIB Act and CPP Investment Board's investment policies, standards and procedures. Accordingly, the Investment Certificate follows.

The investments of CPP Investment Board, held during the year ended March 31, 2019, were in accordance with the CPPIB Act and CPP Investment Board's investment policies, standards and procedures.

Mary Phibbs
Chair of the Audit Committee on behalf of the Board of Directors

Toronto, Ontario
May 8, 2019

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Canada Pension Plan Investment Board

Opinion

We have audited the consolidated financial statements of Canada Pension Plan Investment Board ("CPP Investment Board"), which comprise the consolidated balance sheet as at March 31, 2019, and the consolidated statements of comprehensive income, changes in net assets and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of CPP Investment Board as at March 31, 2019, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS").

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of CPP Investment Board in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. The other information comprises the information, other than the financial statements and our auditor's report thereon, in the Annual Report.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

We obtained the Annual Report prior to the date of this auditor's report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditor's report. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing CPP Investment Board's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate CPP Investment Board or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing CPP Investment Board's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of CPP Investment Board's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on CPP Investment Board's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause CPP Investment Board to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

Further, in our opinion, the transactions of CPP Investment Board that have come to our attention during our audit of the financial statements have, in all material respects, been in accordance with the *Canada Pension Plan Investment Board Act* ("CPPIB Act") and the by-laws, as the case may be.

Further, in our opinion, the record of investments kept by CPP Investment Board's management, pursuant to paragraph 39(1)(c) of the CPPIB Act fairly presents, in all material respects, the information required by the CPPIB Act.

Deloitte LLP

Chartered Professional Accountants
Licensed Public Accountants

Toronto, Ontario
May 8, 2019

CONSOLIDATED BALANCE SHEET

(CAD millions)	As at March 31, 2019	As at March 31, 2018
Assets		
Investments (note 2)	$ 494,567	$ 428,827
Pending trades receivable	4,692	2,613
Premises and equipment	387	348
Other assets	244	153
Total assets	499,890	431,941
Liabilities		
Investment liabilities (note 2)	102,864	72,641
Pending trades payable	4,401	2,477
Accounts payable and accrued liabilities	645	689
Total liabilities	107,910	75,807
Net assets	$ 391,980	$ 356,134
Net assets, represented by:		
Share capital	$ –	$ –
Accumulated net income from operations	247,624	215,614
Accumulated net transfers from the Canada Pension Plan	144,356	140,520
Net assets	$ 391,980	$ 356,134

The accompanying notes are an integral part of these Consolidated Financial Statements.

On behalf of the Board of Directors

Heather Munroe-Blum
Chairperson

Mary Phibbs
Chair of the Audit Committee

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(CAD millions)	For the years ended March 31, 2019	For the years ended March 31, 2018
Investment income	$ 35,276	$ 39,931
Investment management fees	(1,586)	(1,738)
Transaction costs	(477)	(401)
Net investment income (note 5)	$ 33,213	$ 37,792
Personnel costs	802	712
General operating expenses	401	341
Operating expenses (note 12)	1,203	1,053
Net income from operations and comprehensive income	$ 32,010	$ 36,739

The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF CHANGES IN NET ASSETS

(CAD millions)	Number of shares outstanding	Share capital	Accumulated net transfers from the Canada Pension Plan	Accumulated net income from operations	Total net assets
As at April 1, 2017	10	$ –	$ 137,802	$ 178,875	$ 316,677
Total net income for the year		–	–	36,739	36,739
Canada Pension Plan transfers:					
Transfers from the Canada Pension Plan		–	36,425	–	36,425
Transfers to the Canada Pension Plan		–	(33,707)	–	(33,707)
Balance at March 31, 2018	10	$ –	$ 140,520	$ 215,614	$ 356,134
As at April 1, 2018	**10**	**$ –**	**$ 140,520**	**$ 215,614**	**$ 356,134**
Total net income for the year		**–**	**–**	**32,010**	**32,010**
Canada Pension Plan transfers:					
Transfers from the Canada Pension Plan		**–**	**38,581**	**–**	**38,581**
Transfers to the Canada Pension Plan		**–**	**(34,745)**	**–**	**(34,745)**
Balance at March 31, 2019	**10**	**$ –**	**$ 144,356**	**$ 247,624**	**$ 391,980**

The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

(CAD millions)	For the years ended March 31, 2019	March 31, 2018
Cash flows from operating activities		
Net income from operations	$ 32,010	$ 36,739
Adjustments for non-cash items:		
Amortization of premises and equipment	20	27
Realized and unrealized losses (gains) on debt financing liabilities	895	(152)
Adjustments for net changes in operating assets and liabilities:		
(Increase) in investments	(65,317)	(58,921)
(Increase) decrease in pending trades receivable	(2,079)	621
(Increase) in other assets	(86)	(7)
Increase in investment-related liabilities	23,473	8,078
Increase (decrease) in pending trades payable	1,924	(1,154)
(Decrease) Increase in accounts payable and accrued liabilities	(44)	7
Net cash flows (used in) operating activities	(9,204)	(14,762)
Cash flows from financing activities		
Transfers from the Canada Pension Plan	38,581	36,425
Transfers to the Canada Pension Plan	(34,745)	(33,707)
Proceeds from debt financing liabilities[1]	36,784	59,652
Repayments of debt financing liabilities[1]	(30,929)	(55,360)
Net cash flows provided by financing activities	9,691	7,010
Cash flows from investing activities		
Acquisitions of premises and equipment	(59)	(28)
Disposals of premises and equipment	–	1
Net cash flows (used in) investing activities	(59)	(27)
Net increase (decrease) in cash and cash equivalents	428	(7,779)
Effect of exchange rate changes on cash and cash equivalents	(18)	(1)
Cash and cash equivalents at the beginning of the year	8,296	16,076
Cash and cash equivalents at the end of the year	8,706	8,296
Cash and cash equivalents at the end of the year are comprised of:		
Cash held for operating purposes[2]	88	83
Cash and cash equivalents held for investment purposes[3]	8,618	8,213
Total	$ 8,706	$ 8,296

1 The comparative cash flow figures have been revised for the reclassification of net cash flow of $4,292 million from operating activities to financing activities related to proceeds from and repayments of debt financing liabilities.

2 Presented as a component of other assets on the Consolidated Balance Sheet.

3 Presented as a component of investments on the Consolidated Balance Sheet and money market securities on the Consolidated Schedule of Investment Portfolio.

The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED SCHEDULE OF INVESTMENT PORTFOLIO

The schedule below provides information on investments and investment liabilities held by CPP Investment Board and its investment holding subsidiaries. The nature of these investments and investment liabilities is further described in note 2.

(CAD millions)	As at March 31, 2019	As at March 31, 2018[1]
Equities		
Public equities	$ 141,189	$ 146,221
Private equities	96,659	75,737
Total equities	237,848	221,958
Fixed income		
Bonds	85,604	63,851
Other debt	27,325	22,183
Money market securities	9,829	8,213
Total fixed income	122,758	94,247
Absolute return strategies	25,512	21,027
Real assets		
Real estate	45,846	44,712
Infrastructure	33,131	27,450
Energy and resources	8,002	5,729
Power and renewables	5,075	2,949
Total real assets	92,054	80,840
Investment receivables		
Securities purchased under reverse repurchase agreements and securities borrowed	11,174	6,164
Derivative assets	3,192	1,918
Other	2,029	2,673
Total investment receivables	16,395	10,755
Total investments	$ 494,567	$ 428,827
Investment liabilities		
Securities sold under repurchase agreements and securities lent	(39,491)	(32,504)
Securities sold short	(29,027)	(13,574)
Debt financing liabilities	(30,861)	(24,056)
Derivative liabilities	(2,330)	(1,712)
Other	(1,155)	(795)
Total investment liabilities	(102,864)	(72,641)
Pending trades receivable	4,692	2,613
Pending trades payable	(4,401)	(2,477)
Net investments	$ 391,994	$ 356,322

1 Certain comparatives have been reclassified to conform to the current year's presentation.

The accompanying notes are an integral part of these Consolidated Financial Statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CORPORATE INFORMATION

Canada Pension Plan Investment Board (CPP Investment Board) was established in December 1997 pursuant to the *Canada Pension Plan Investment Board Act* (CPPIB Act). CPP Investment Board is a federal Crown corporation, all of the shares of which are owned by Her Majesty the Queen in right of Canada. The issued and authorized share capital of CPP Investment Board is $100 divided into 10 shares with a par value of $10 each.

CPP Investment Board is responsible for assisting the Canada Pension Plan (CPP) in meeting its obligations to contributors and beneficiaries under the legislation *Canada Pension Plan* (CPP Act). It is responsible for managing amounts that are transferred to it under Section 108.1 of the CPP Act in the best interests of CPP beneficiaries and contributors. CPP Investment Board received its first funds for investing purposes from the CPP in March 1999. CPP Investment Board's assets are to be invested in accordance with the CPPIB Act, the regulations and the investment policies with a view to achieving a maximum rate of return without undue risk of loss, having regard to the factors that may affect the funding of the CPP and the ability of the CPP to meet its financial obligations on any given business day.

In December 2016, Royal Assent was given to Bill C-26 titled *An Act to Amend the Canada Pension Plan,* the *Canada Pension Plan Investment Board Act* and the *Income Tax Act*. These legislative amendments increase the amount of CPP contributions and the corresponding retirement pensions and other benefits that will be paid on CPP contributions made after 2018. The CPP Act now defines two separate parts of the CPP. The "base CPP" refers to the existing benefits and contributions. The "additional CPP" refers to the additional benefits and additional contributions that began in January 2019. The assets attributable to CPP's additional CPP account are accounted for separately from those of the base CPP account. Note 17 provides information on the net assets, net investments and net income of the base CPP account and additional CPP account. All references to "CPP" mean base CPP and additional CPP collectively.

CPP Investment Board is exempt from Part I tax under Paragraph 149(1) (d) of the *Income Tax Act* (Canada) on the basis that all of the shares of CPP Investment Board are owned by Her Majesty the Queen in right of Canada. Further, all of CPP Investment Board's wholly owned subsidiaries are exempt from Part I tax.

The Consolidated Financial Statements provide information on the net assets managed by CPP Investment Board and do not include the liabilities and other assets of the CPP.

CPP Investment Board's registered office is located at One Queen Street East, Toronto, Ontario, Canada.

The Consolidated Financial Statements were approved by the Board of Directors and authorized for issue on May 8, 2019.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

AT A GLANCE

This note describes significant accounting policies that are relevant to the Consolidated Financial Statements as a whole. Where an accounting policy is specific to one financial statement element, the policy is described in the note to which it relates.

Use of Estimates, Judgments and Assumptions

The preparation of the Consolidated Financial Statements requires management to make estimates, judgments and assumptions that affect the amounts recognized for assets and liabilities, principally the valuation of financial instruments which are not actively traded. Uncertainty about these estimates, judgments and assumptions may result in outcomes that could require a material adjustment to the carrying amount of the assets or liabilities affected in the future.

1.1 Basis of presentation

These Consolidated Financial Statements present the financial position and the financial performance of CPP Investment Board in accordance with International Financial Reporting Standards (IFRS).

CPP Investment Board qualifies as an investment entity as it meets the following definition of an investment entity outlined in IFRS 10, *Consolidated Financial Statements* (IFRS 10):

- Obtains funds from one or more investors for the purpose of providing those investor(s) with investment management services. In the case of CPP Investment Board, we have one investor (more specifically, we invest amounts transferred from the CPP that are not required to pay current CPP benefits), but the funds are invested in the best interests of a wide group of individuals being the contributors and beneficiaries of the CPP.
- Commits to its investor(s) that its business purpose is to invest funds solely for returns from capital appreciation, investment income, or both.
- Measures and evaluates the performance of substantially all of its investments on a fair value basis.

No significant judgments or assumptions were made in determining that CPP Investment Board meets the definition of an investment entity as defined in IFRS 10.

Statement of compliance

The Consolidated Financial Statements of CPP Investment Board have been prepared in accordance with IFRS as issued by the International Accounting Standards Board and the requirements of the CPPIB Act and the regulations of CPP Investment Board.

1.2 Subsidiaries

CPP Investment Board is required to report the results of its operations in accordance with IFRS 10. As a consequence, the Consolidated Financial Statements represent the results of operations of CPP Investment Board and its wholly owned subsidiaries that were created to provide investment-related services to support its operations. Operating subsidiaries of this nature include those that provide investment advisory services or subsidiaries that were created to provide financing to CPP Investment Board.

Subsidiaries that are managed by CPP Investment Board to hold investments are referred to herein as investment holding subsidiaries. Such subsidiaries are not consolidated in these Consolidated Financial Statements but instead are measured and reported at fair value. Fair value for unconsolidated investment holding subsidiaries is based on the fair value of the underlying investments and investment liabilities held by the investment holding subsidiary together with its accumulated net income from operations less dividends paid. The determination of the fair value of the underlying investments and investment liabilities is based on the valuation techniques and related inputs described in note 2.

1.3 Financial instruments

Classification

CPP Investment Board classifies its financial assets and financial liabilities, in accordance with IFRS 9, *Financial Instruments*, as follows:

Financial assets

Financial assets are either classified at fair value through profit or loss (FVTPL) or at amortized cost. The classification depends on (a) the business model for managing the financial assets and (b) the cash flow characteristics of the financial assets. Financial assets are classified at FVTPL on the basis that they are part of a portfolio of investments which is managed to maximize returns without undue risk of loss and whose performance is evaluated on a fair value basis in accordance with investment strategies and risk management of the CPP Investment Board. Financial assets classified at FVTPL include investments in equity, fixed income, absolute return strategies, real assets, derivatives, securities purchased under reverse repurchase agreements and securities borrowed. Financial assets carried at amortized cost are pending trades receivable and other assets.

Financial liabilities

Financial liabilities are either classified at FVTPL or at amortized cost. A financial liability is classified as at FVTPL if it is classified as held for trading, it is a derivative, or it is designated as such on initial recognition.

Financial liabilities at FVTPL are derivative liabilities and securities sold short. Financial liabilities designated at FVTPL include debt financing liabilities, securities sold under repurchase agreements and securities lent and other investment liabilities. Financial liabilities at amortized cost include pending trades payable and accounts payable and accrued liabilities.

Recognition
CPP Investment Board recognizes a financial asset or a financial liability when, and only when, it becomes a party to the contractual provisions of the financial instrument. Investments, investment receivables, investment liabilities, pending trades receivable and pending trades payable are recorded on a trade date basis.

Derecognition
A financial asset is derecognized under the following situations: (a) when the contractual rights to receive the cash flows from the financial asset expire, (b) when CPP Investment Board has transferred the financial asset and substantially all the risks and rewards of the asset, or (c) in cases where CPP Investment Board has neither retained nor transferred substantially all risks and rewards of the asset, it no longer retains control over the asset.

CPP Investment Board derecognizes a financial liability when the obligation under the liability is discharged, cancelled or expires.

Initial measurement
Financial assets and financial liabilities are measured on initial recognition at fair value.

Subsequent measurement
After initial measurement, financial assets and financial liabilities continue to be measured at fair value or amortized cost. Subsequent changes in the fair value of those financial assets and financial liabilities classified at fair value are recorded as a net gain (loss) on investments and included in investment income. Interest income and dividend income from such financial instruments are also included in investment income.

1.4 Functional and presentation currency

CPP Investment Board's functional and presentation currency is the Canadian dollar, which is the currency of the primary economic environment in which it operates. CPP Investment Board's performance is evaluated and its liquidity is managed in Canadian dollars. Therefore, the Canadian dollar is considered to be the currency that most faithfully represents the economic effects of the underlying transactions, events and conditions.

1.5 Foreign currency translation

Transactions, including purchases and sales of investments, income and expenses, are translated at the rate of exchange prevailing on the date of the transaction. Investments and monetary assets and liabilities denominated in foreign currencies are translated at the functional currency exchange rate at each balance sheet date. Non-monetary items in a foreign currency are measured at historical cost using the exchange rates at the dates of the initial transactions.

Foreign currency transaction gains and losses on financial instruments classified at FVTPL are included in investment income in the Consolidated Statement of Comprehensive Income.

NOTE 2. INVESTMENTS AND INVESTMENT LIABILITIES

AT A GLANCE

All investments and investment liabilities are measured at fair value.

This note describes the types of investments and investment liabilities held by CPP Investment Board and its investment holding subsidiaries, and explains how management determines their fair value.

Accounting Policy
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

CPP Investment Board manages the following types of investments and investment liabilities and determines fair value as described below.

2.1 Equities

Public equities
Public equities are made directly or through funds, including hedge funds.

Fair value for publicly traded equities, including equity short positions, is based on quoted market prices. Fair value for fund investments is generally based on the net asset value reported by the external administrators or managers of the funds.

Private equities
Private equities are generally made directly or through ownership in limited partnership funds.

Fair value for investments held directly is primarily determined using accepted industry valuation methods such as earnings multiples of comparable publicly traded companies or discounted cash flows. Significant inputs for these valuation methods include company-specific earnings before interest, taxes, depreciation and amortization (EBITDA), earnings multiples of comparable publicly traded companies, projected cash flows and discount rates using current market yields of instruments with similar characteristics. Recent market transactions, where available, are also used. In the case of investments held through a limited partnership fund, fair value is generally based on relevant information reported by the general partner using similar accepted industry valuation methods.

2.2 Fixed income

Bonds
Bonds include non-marketable and marketable bonds.

Fair value for non-marketable Canadian provincial government bonds is calculated using discounted cash flows based on current market yields of instruments with similar characteristics. In the case of marketable bonds, including bond short positions, fair value is based on quoted prices or calculated using discounted cash flows based on benchmark yield curves and credit spreads pertaining to the issuer.

Other debt
Other debt includes investments in direct private debt, asset-backed securities, distressed mortgage funds, private debt funds, hedge funds and investments in royalty-related income streams.

Fair value for direct investments in private debt and asset-backed securities is based on quoted market prices or broker quotes or recent market transactions, if available. Where the market price is not available, fair value is calculated using discounted cash flows based on significant inputs such as projected cash flows and discount rates using current market yields of instruments with similar characteristics.

Fair value for fund investments is generally based on the net asset value as reported by the external administrators or managers of the funds.

In the case of investments in royalty-related income streams, fair value is primarily determined using discounted cash flows based on projected cash flows and discount rates using current market yields of instruments with similar characteristics.

Money market securities
Money market securities include cash, term deposits, treasury bills, commercial paper and floating rate notes. Cash equivalents consist of short-term deposits with a maturity of 90 days or less.

Fair value is determined using cost, which, together with accrued interest income, approximates fair value due to the short-term or floating rate nature of these securities.

2.3 Absolute return strategies

Absolute return strategies include investments in hedge funds whose objective is to generate positive returns regardless of market conditions, that is, returns with a low correlation to broad market indices. The underlying securities of the funds could include, but are not limited to, equities, fixed income securities and derivatives.

Fair value for these fund investments is generally based on the net asset value as reported by the external administrators or managers of the funds.

2.4 Real assets

Real estate
CPP Investment Board obtains exposure to real estate through direct investments in privately held real estate and real estate funds. Private real estate investments are managed by investment managers primarily through co-ownership arrangements.

Fair value for private real estate investments is determined using discounted cash flows based on various factors such as net operating income, discount rate and terminal capitalization rate, or using net asset value provided by the investment manager.

Fair value for real estate funds is generally based on the net asset value reported by the external managers of the funds.

Infrastructure, energy and resources, and power and renewables
Infrastructure, energy and resources, and power and renewables investments are generally made directly, but can also occur through limited partnership funds.

The fair value of these investments is primarily determined using discounted cash flows based on significant inputs including projected cash flows and discount rates. Earnings multiples of comparable companies may also be used for determining the fair value of certain investments.

Fair value for investments held through limited partnership funds are generally based on the net asset value as reported by the external managers of the funds.

2.5 Securities purchased under reverse repurchase agreements and sold under repurchase agreements

Accounting Policy
Securities purchased under reverse repurchase agreements represent the purchase of securities with a simultaneous agreement to sell them back at a specified price at a specified future date and are accounted for as an investment receivable. These securities are not recognized on the Consolidated Balance Sheet. The fair value of securities to be resold under reverse repurchase agreements is monitored and additional collateral is obtained, when appropriate, to protect against credit exposure. In the event of counterparty default, CPP Investment Board has the right to liquidate the collateral held.

Securities sold under repurchase agreements are accounted for as collateralized borrowing because they represent the sale of securities with a simultaneous agreement to buy them back at a specified price at a specified future date. The securities sold continue to be recognized on the Consolidated Balance Sheet with any changes in fair value recorded as net gain (loss) on investments and included in investment income.

Interest earned on reverse repurchase agreements and interest incurred on repurchase agreements is included in investment income.

Reverse repurchase and repurchase agreements are carried at the amounts at which the securities were initially acquired or sold, which, together with accrued interest income or expense, approximates fair value due to the short-term nature of these agreements.

2.6 Securities borrowed and lent

Accounting Policy
Securities borrowing and lending agreements are transactions in which CPP Investment Board borrows securities from or lends securities to third parties.

Borrowed securities are not recognized on the Consolidated Balance Sheet. The lent securities remain on the Consolidated Balance Sheet as CPP Investment Board retains substantially all of the risks and rewards of ownership of the transferred securities.

Collateral received or pledged is generally in the form of cash, equities or fixed income securities. Cash collateral received is accounted for as an investment liability while equities and fixed income securities received as collateral are not recognized on the Consolidated Balance Sheet. Cash collateral pledged is accounted for as an investment receivable, while securities collateral pledged by CPP Investment Board in securities borrowing agreements remain on the Consolidated Balance Sheet.

2.7 Securities sold short

Securities sold short represent securities that are sold, but not owned, by CPP Investment Board. CPP Investment Board has an obligation to cover these short positions, which are accounted for as an investment liability based on the fair value of the securities sold. Collateral is pledged to the counterparty, as required. Interest and dividends accrued on securities sold short are included in investment income.

2.8 Debt financing liabilities

Debt financing liabilities consist of commercial paper payable and term debt. Commercial paper payable is recorded at the amount originally issued, which, together with accrued interest expense, approximates fair value due to the short-term nature of these liabilities. Fair value for term debt is based on quoted market prices.

2.9 Derivatives assets and liabilities

A derivative is a financial contract, the value of which is derived from the value of underlying assets, indices, interest rates, currency exchange rates or other market-based factors. Derivatives are transacted through regulated exchanges or negotiated in over-the-counter markets.

Fair value for exchange-traded derivatives, which includes futures, options and warrants, is based on quoted market prices. Fair value for over-the-counter derivatives, which includes forwards, swaps, options and warrants, is determined based on valuation techniques such as option pricing models, discounted cash flows and consensus pricing from independent brokers and/or third-party vendors. Inputs used in these valuation techniques can include, but are not limited to, spot prices, price volatilities, currency exchange rates, interest rate curves and credit spreads. In determining fair value, consideration is also given to the credit risk of the counterparty.

CPP Investment Board uses the types of derivative described below.

Futures and forwards
Futures are standardized contracts transacted on an exchange, whereas forwards are customized over-the-counter contracts negotiated between counterparties. Futures contracts may be cash-settled or require physical delivery of the underlying asset. Examples of futures and forwards are described below.

Equity futures are contractual obligations to purchase or sell a specified quantity of an equity index, a basket of stocks, or a single stock at a predetermined price and date in the future.

Foreign exchange forwards are contractual obligations negotiated between counterparties to either purchase or sell a specified amount of foreign currencies at a predetermined price and date in the future.

Interest rate futures and forwards, including bond futures, are contractual obligations to purchase or sell a specified amount of an interest rate-sensitive financial instrument(s) or index at a predetermined price and date in the future.

Commodity futures are contractual obligations to purchase or sell a specified quantity of a commodity, such as precious metals and energy-related products at a predetermined price and date in the future.

Swaps
Swaps are over-the-counter contracts between two parties to exchange a series of cash flows. Examples of swaps are described below.

Equity-based swaps include equity swaps, volatility swaps and variance swaps. Equity swaps are contracts where one counterparty agrees to pay or receive from the other, cash flows based on changes in the value of an equity index, a basket of stocks, or a single stock in exchange for a return based on a fixed or floating interest rate or the return on another instrument. Volatility and variance swaps are contracts where cash flows are exchanged based on the realized volatility or variance of an equity index, a basket of stocks, or a single stock compared to the fixed strike level specified in the contract, respectively.

Interest rate-related swaps include bond swaps, interest rate swaps and cross-currency interest rate swaps. Bond swaps are contracts in which counterparties exchange the return on a bond, or group of such instruments, for the return on a fixed or floating interest rate or the return on another instrument. Interest rate swaps are contracts where counterparties exchange cash flows based on different interest rates applied to a notional amount in a single currency, with no exchange of a notional amount. Cross-currency interest rate swaps involve the exchange of both interest and notional amounts in two different currencies.

Credit default swaps are contracts that provide credit protection against a specified credit event such as the default or bankruptcy of the underlying financial instrument (referenced asset). The purchaser (buyer) pays a premium to the writer (seller) in return for payment, which is contingent on a credit event affecting the referenced asset. Credit default swaps require the writer to compensate counterparties for the decline in value of the referenced asset as a result of the occurrence of a specified credit event. The notional amount represents the maximum amount payable to these counterparties under these written credit default swap contracts.

Options and warrants

Options are contractual agreements where the seller (writer) gives the purchaser the right, but not the obligation, to buy or sell a specified amount of an equity, currency, interest rate, credit, commodity or other financial instrument at or before a specified future date at a predetermined price. The purchaser pays a premium to the seller for this right. Options can be transacted in standardized amounts on regulated exchanges or customized in over-the-counter markets.

Call or put options may require the writer to sell or purchase the underlying asset at a fixed date or at any time within a fixed future period. Due to the nature of these contracts, CPP Investment Board cannot reasonably estimate the potential maximum amount of future payments.

Warrants are transacted both over-the-counter and through exchanges. Under a warrant, the issuer gives the purchaser the right, but not the obligation, to buy a specified quantity of stock of the issuer at or before a specified future date at a predetermined price.

NOTE 3. FAIR VALUE MEASUREMENT

AT A GLANCE

In an active market, fair value is best evidenced by an independent quoted market price. In the absence of an active market, valuation can be significantly more complex and often subjective, requiring judgment.

This note categorizes the fair values of investments and investment liabilities within the three levels of the fair value hierarchy. For investment valuations that require significant judgment, the note further provides the roll-forward of these investments during the year and the range of valuation techniques and inputs used.

Accounting Policy

The fair value of CPP Investment Board's investments and investment liabilities is categorized into the following fair value hierarchy based on the level of significant inputs used in the fair value measurement:

- Level 1 – Quoted prices in active markets for identical assets or liabilities;
- Level 2 – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices); and
- Level 3 – Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

Significant Estimate

Level 3 investments consist of instruments held at fair value that are not traded or quoted in active markets. Fair value is, therefore, determined using valuation techniques that use models with unobservable inputs whilst maximizing the use of inputs observed from markets. The resulting values are particularly judgmental. Refer to note 3.4 for the valuation techniques used to determine the fair value of Level 3 investments.

3.1 Fair value hierarchy

	As at March 31, 2019			
(CAD millions)	Level 1	Level 2	Level 3	Total
Investments				
Equities				
Public equities	$ 129,212	$ 11,769	$ 208	$ 141,189
Private equities	–	–	96,659	96,659
Total equities	129,212	11,769	96,867	237,848
Fixed income				
Bonds	49,912	35,692	–	85,604
Other debt	–	5,215	22,110	27,325
Money market securities	–	9,829	–	9,829
Total fixed income	49,912	50,736	22,110	122,758
Absolute return strategies	–	23,588	1,924	25,512
Real assets				
Real estate	–	–	45,846	45,846
Infrastructure	–	–	33,131	33,131
Energy and resources	–	–	8,002	8,002
Power and renewables	–	–	5,075	5,075
Total real assets	–	–	92,054	92,054
Investment receivables				
Securities purchased under reverse repurchase agreements and securities borrowed	–	11,174	–	11,174
Derivative assets	2	3,189	1	3,192
Other	–	1,962	67	2,029
Total investment receivables	2	16,325	68	16,395
Total investments	$ 179,126	$ 102,418	$ 213,023	$ 494,567
Investment liabilities				
Securities sold under repurchase agreements and securities lent	–	(39,491)	–	(39,491)
Securities sold short	(29,027)	–	–	(29,027)
Debt financing liabilities	(26,538)	(4,323)	–	(30,861)
Derivative liabilities	(48)	(2,282)	–	(2,330)
Other	–	(1,155)	–	(1,155)
Total investment liabilities	(55,613)	(47,251)	–	(102,864)
Pending trades receivable[1]	–	4,692	–	4,692
Pending trades payable[1]	–	(4,401)	–	(4,401)
Net investments	$ 123,513	$ 55,458	$ 213,023	$ 391,994

	As at March 31, 2018[2]			
(CAD millions)	Level 1	Level 2	Level 3	Total
Investments				
Equities				
Public equities	$ 136,855	$ 9,093	$ 273	$ 146,221
Private equities	–	1,174	74,563	75,737
Total equities	136,855	10,267	74,836	221,958
Fixed income				
Bonds	36,347	27,504	–	63,851
Other debt	–	5,557	16,626	22,183
Money market securities	–	8,213	–	8,213
Total fixed income	36,347	41,274	16,626	94,247
Absolute return strategies	–	19,442	1,585	21,027
Real assets				
Real estate	–	–	44,712	44,712
Infrastructure	–	–	27,450	27,450
Energy and resources	–	–	5,729	5,729
Power and renewables	–	–	2,949	2,949
Total real assets	–	–	80,840	80,840
Investment receivables				
Securities purchased under reverse repurchase agreements and securities borrowed	–	6,164	–	6,164
Derivative assets	–	1,918	–	1,918
Other	–	2,667	6	2,673
Total investment receivables	–	10,749	6	10,755
Total investments	$ 173,202	$ 81,732	$ 173,893	$ 428,827
Investment liabilities				
Securities sold under repurchase agreements and securities lent	–	(32,504)	–	(32,504)
Securities sold short	(13,574)	–	–	(13,574)
Debt financing liabilities	(17,802)	(6,254)	–	(24,056)
Derivative liabilities	(11)	(1,701)	–	(1,712)
Other	–	(795)	–	(795)
Total investment liabilities	(31,387)	(41,254)	–	(72,641)
Pending trades receivable[1]	–	2,613	–	2,613
Pending trades payable[1]	–	(2,477)	–	(2,477)
Net investments	$ 141,815	$ 40,614	$ 173,893	$ 356,322

1 Pending trades receivable and payable are measured at amortized cost, which is a reasonable approximation of fair value.

2 Certain comparatives have been reclassified to conform to the current year's presentation.

3.2 Transfers between Level 1 and Level 2

During the year ended March 31, 2019, there were $11 million of transfers from Level 1 to Level 2 (March 31, 2018 – $137 million) and $338 million of transfers from Level 2 to Level 1 (March 31, 2018 – $13 million).

Transfers between Level 1 and Level 2 depend on the availability of quoted market prices in active markets and valuations using inputs other than quoted prices that are observable. These transfers have been recognized at the end-of-year values.

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3.3 Level 3 reconciliation

The following presents the reconciliations for investments included in Level 3 of the fair value hierarchy:

Reconciliation of changes in fair value for Level 3 investments

	For the year ended March 31, 2019							
(CAD millions)	Fair value as at April 1, 2018	Gain (loss) included in investment income	Purchases	Sales[1]	Transfers into Level 3[2]	Transfers out of Level 3[2]	Fair value as at March 31, 2019	Change in unrealized gains (losses) on investments still held at March 31, 2019[3,4]
Investments								
Equities								
Public equities	$ 273	$ 20	$ –	$ (85)	$ –	$ –	$ 208	$ 15
Private equities	74,563	12,712	22,191	(11,816)	1	(992)	96,659	6,488
Total equities	74,836	12,732	22,191	(11,901)	1	(992)	96,867	6,503
Fixed income								
Other debt	16,626	(162)	12,851	(6,911)	246	(540)	22,110	115
Absolute return strategies	1,585	68	550	(279)	–	–	1,924	57
Real assets								
Real estate	44,712	1,705	2,868	(3,439)	–	–	45,846	1,524
Infrastructure	27,450	3,257	2,952	(528)	–	–	33,131	3,301
Energy and resources	5,729	49	2,829	(605)	–	–	8,002	28
Power and renewables	2,949	8	2,387	(269)	–	–	5,075	9
Total real assets	80,840	5,019	11,036	(4,841)	–	–	92,054	4,862
Investment receivable								
Derivative assets	–	2	–	(1)	–	–	1	1
Other	6	(32)	93	–	–	–	67	(32)
Total investment receivables	6	(30)	93	(1)	–	–	68	(31)
Total	$ 173,893	$ 17,627	$ 46,721	$ (23,933)	$ 247	$ (1,532)	$213,023	$ 11,506

	For the year ended March 31, 2018[5]							
(CAD millions)	Fair value as at April 1, 2017	Gain (loss) included in investment income	Purchases	Sales[1]	Transfers into Level 3[2]	Transfers out of Level 3[2]	Fair value as at March 31, 2018	Change in unrealized gains (losses) on investments still held at March 31, 2018[3,4]
Investments								
Equities								
Public equities	$ 229	$ 8	$ 66	$ (36)	$ 6	$ –	$ 273	$ 4
Private equities	59,889	10,647	18,940	(13,628)	11	(1,296)	74,563	4,380
Total equities	60,118	10,655	19,006	(13,664)	17	(1,296)	74,836	4,384
Fixed income								
Other debt	15,728	131	8,329	(7,430)	–	(132)	16,626	–
Absolute return strategies	1,536	45	392	(388)	–	–	1,585	(84)
Real assets								
Real estate	38,732	2,864	5,877	(2,761)	–	–	44,712	2,328
Infrastructure	23,467	2,613	1,546	(176)	–	–	27,450	2,676
Energy and resources	3,688	116	1,930	(5)	–	–	5,729	117
Power and renewables	4,432	(865)	–	(618)	–	–	2,949	(638)
Total real assets	70,319	4,728	9,353	(3,560)	–	–	80,840	4,483
Investment receivables								
Derivative assets	1	(1)	–	–	–	–	–	–
Other	–	–	6	–	–	–	6	–
Total investment receivables	1	(1)	6	–	–	–	6	–
Total	$147,702	$ 15,558	$ 37,086	$ (25,042)	$ 17	$ (1,428)	$173,893	$ 8,783

1 Includes return of capital.
2 Transfers into and out of Level 3 are deemed to have occurred at the end of year values.
3 Includes the entire change in fair value for the year for those investments that were transferred into Level 3 during the year, and excludes the entire change in fair value for the year for those investments that were transferred out of Level 3 during the year.
4 Included in investment income.
5 Certain comparatives have been reclassified to conform to the current year's presentation.

During the years ended March 31, 2019 and March 31, 2018, transfers into and out of Level 3 were primarily due to changes in the availability of market observable inputs used to determine fair value.

3.4 Level 3 – Significant unobservable inputs

The following presents fair values of the investments held by CPP Investment Board and its investment holding subsidiaries categorized within Level 3 of the fair value hierarchy, valuation techniques used to determine their fair values, ranges and weighted averages of unobservable inputs:

	As at March 31, 2019				
(CAD millions)	Fair value	Primary valuation techniques used[1,2]	Significant unobservable inputs	Range of input values[3]	Weighted average[3]
Public equities					
Fund investments	$ 208	Net asset value provided by investment manager	–	–	–
Private equities					
Direct	38,106	Earnings multiples of comparable companies	EBITDA multiple	6.1X–16.9X	13.0X
		Discounted cash flow	Discount rate	11.6%–13.0%	12.6%
	9,340	Value provided by investment manager	–	–	–
Fund investments	49,213	Net asset value provided by investment manager	–	–	–
Other debt					
Direct private debt	10,534	Discounted cash flow	Discount rate	6.9%–29.4%	11.5%
	2,191	Value provided by investment manager	–	–	–
Direct private real estate debt	5,084	Discounted cash flow	Discount rate	4.5%–11.0%	6.7%
Asset-backed securities	2,010	Comparable pricing	Price	97.7%–103.7%	99.5%
Fund investments	2,291	Net asset value provided by investment manager	–	–	–
Absolute return strategies					
Fund investments	1,924	Net asset value provided by investment manager	–	–	–
Real estate					
Direct	17,862	Discounted cash flow	Discount rate	5.0%–14.3%	6.7%
			Terminal capitalization rate	3.7%–10.5%	5.5%
	25,353	Net asset value provided by investment manager	–	–	–
Fund investments	2,631	Net asset value provided by investment manager	–	–	–
Infrastructure					
Direct	33,080	Discounted cash flow	Discount rate	7.0%–11.9%	8.7%
Fund investments	51	Net asset value provided by investment manager	–	–	–
Energy and Resources					
Direct	8,002	Discounted cash flow	Discount rate	9.0%–15.0%	11.0%
Power and Renewables					
Direct	5,075	Discounted cash flow	Discount rate	7.9%–14.4%	10.4%
Investment receivables					
Derivative assets	1	Option model	Market volatility	30%	30%
Other	67	Discounted cash flow	Discount rate	9.2%–10.4%	10.1%
Total	$ 213,023				

1 In certain cases, external valuations are prepared by a third party and hence, valuation information is not available.

2 May include certain recently acquired investments held at cost, which approximates fair value.

3 The range of input values represents the highest and lowest inputs used to value the investments in a particular asset class. The weighted average of the input values is calculated based on the relative fair values of the investments within the asset class. The diversity of investments reported within each asset class, such as the geographic location and industry sector of the investments, may result in certain ranges of inputs being wide and unevenly distributed across the range.

4 Certain comparatives have been reclassified to conform to the current year's presentation.

	As at March 31, 2018[4]					
(CAD millions)	Fair value	Primary valuation techniques used[1,2]	Significant unobservable inputs	Range of input values[3]	Weighted average[3]
Public equities					
Fund investments	$ 273	Net asset value provided by investment manager	–	–	–
Private equities					
Direct	25,896	Earnings multiples of comparable companies	EBITDA multiple	8.5X–15.9X	12.6X
		Discounted cash flow	Discount rate	12.0%–12.9%	12.1%
	6,578	Value provided by investment manager	–	–	–
Fund investments	42,089	Net asset value provided by investment manager	–	–	–
Other debt					
Direct private debt	10,696	Discounted cash flow	Discount rate	5.7%–29.6%	12.1%
Direct private real estate debt	3,581	Discounted cash flow	Discount rate	4.7%–10.1%	6.6%
Asset–backed securities	3	Valuation model by third-party pricing vendor	–	–	–
Fund investments	2,346	Net asset value provided by investment manager	–	–	–
Absolute return strategies					
Fund investments	1,585	Net asset value provided by investment manager	–	–	–
Real estate					
Direct	21,318	Discounted cash flow	Discount rate	5.0%–14.0%	6.3%
			Terminal capitalization rate	3.5%–9.5%	5.2%
	20,071	Net asset value provided by investment manager	–	–	–
Fund investments	3,323	Net asset value provided by investment manager	–	–	–
Infrastructure					
Direct	27,401	Discounted cash flow	Discount rate	7.1%–15.3%	9.6%
Fund investments	49	Net asset value provided by investment manager	–	–	–
Energy and Resources					
Direct	5,729	Discounted cash flow	Discount rate	10.0%–13.6%	11.9%
Power and Renewables					
Direct	2,949	Discounted cash flow	Discount rate	10.0%–11.0%	10.5%
Investment receivables					
Other	6	Value provided by investment manager	–	–	–
Total	$ 173,893				

1 In certain cases, external valuations are prepared by a third party and hence, valuation information is not available.
2 May include certain recently acquired investments held at cost, which approximates fair value.
3 The range of input values represents the highest and lowest inputs used to value the investments in a particular asset class. The weighted average of the input values is calculated based on the relative fair values of the investments within the asset class. The diversity of investments reported within each asset class, such as the geographic location and industry sector of the investments, may result in certain ranges of inputs being wide and unevenly distributed across the range.
4 Certain comparatives have been reclassified to conform to the current year's presentation.

3.5 Sensitivity analysis of valuations using unobservable inputs

Significant changes in any of the above unobservable inputs would result in a significantly higher or lower fair value measurement. The interrelationship of significant unobservable inputs and fair value measurement for the most significant key inputs identified in the table above is as follows:

- An increase (decrease) in the EBITDA multiple will result in a higher (lower) fair value.
- An increase (decrease) in the discount rate and terminal capitalization rate will result in a lower (higher) fair value.

The fair value of these direct investments classified within Level 3 of the fair value hierarchy above are based on accepted industry valuation methods that may include the use of estimates made by management, appraisers or both where significant judgment is required. By using valuation methods based on reasonable alternative assumptions, different fair values could result. With all other variables held constant the use of reasonable alternative assumptions would result in a decrease of $7,900 million (March 31, 2018 – $5,200 million) or increase of $5,600 million (March 31, 2018 – $6,000 million) in net assets.
This sensitivity analysis is subject to the exercise of judgment and excludes investments where fair values are provided by investment managers as the underlying assumptions used are not available to CPP Investment Board.

NOTE 4. DERIVATIVES

AT A GLANCE

CPP Investment Board enters into a variety of derivatives to manage its exposure to currency exchange, credit, interest and other market risks, and to adjust the exposure in its assets and asset classes.

The fair values, notional amounts and contractual maturities of all derivative financial instruments are set out below. Through these breakdowns, information is provided regarding the extent to which different types of derivatives are used.

4.1 Fair value of derivatives

Derivatives generate positive or negative value, as the value of underlying assets, indices, interest rates, currency exchange rates or other market-based factors change such that the previously contracted terms of the derivative transactions have become more or less favourable than what can be negotiated under current market conditions for contracts with the same terms and remaining period to expiry.

The derivative-related market risk is a component of the total portfolio market risk, which is managed through the Risk/Return Accountability Framework described in note 7.

The maximum exposure to credit risk is represented by the positive fair value of the derivative and is normally a small fraction of the contract's notional amount. Negotiated over-the-counter derivatives generally present greater credit exposure than exchange-traded contracts. Credit risk on exchange-traded or centrally cleared contracts is limited because these transactions are either executed on regulated exchanges, or settled through well-capitalized clearing houses that assume the obligation of the writer of a contract and guarantees their performance. The fair value of derivative contracts is as follows:

	As at March 31, 2019		As at March 31, 2018	
(CAD millions)	Positive fair value	Negative fair value	Positive fair value	Negative fair value
Equity contracts				
Futures	$ –	$ –	$ –	$ –
Swaps	2,164	(1,596)	1,326	(967)
Options:				
Over-the-counter – purchased	1	–	–	–
Over-the-counter – written	–	(41)	–	(12)
Warrants	1	–	–	–
Total equity contracts	2,166	(1,637)	1,326	(979)
Foreign exchange contracts				
Forwards	88	(135)	185	(273)
Options:				
Over-the-counter – purchased	1	–	–	–
Over-the-counter – written	–	(12)	–	(2)
Total foreign exchange contracts	89	(147)	185	(275)
Interest rate contracts				
Futures	–	–	–	–
Forwards	–	–	–	–
Swaps	692	(206)	225	(271)
Options:				
Exchange-traded – purchased	2	–	–	–
Exchange-traded – written	–	(1)	–	–
Over-the-counter – purchased	1	–	–	–
Over-the-counter – written	–	(46)	–	–
Total interest rate contracts	695	(253)	225	(271)
Credit contracts				
Purchased credit default swaps	7	(229)	2	(174)
Written credit default swaps	235	(8)	180	(2)
Options:				
Over-the-counter – written	–	(9)	–	–
Total credit contracts	242	(246)	182	(176)
Commodity contracts				
Futures	–	–	–	–
Options:				
Exchange-traded – written	–	(47)	–	(11)
Total commodity contracts	–	(47)	–	(11)
Total	$ 3,192	$ (2,330)	$ 1,918	$ (1,712)

4.2 Notional amounts of derivatives by terms to maturity

Notional amounts of derivatives represent the contractual amounts to which a rate or price is applied for computing the cash flows to be exchanged. The notional amounts are used to determine the gains/losses and fair value of the contracts. They are not recorded as assets or liabilities on the Consolidated Balance Sheet. Notional amounts do not necessarily represent the amount of potential market risk or credit risk arising from derivatives. The terms to maturity of the notional amounts for derivatives are as follows:

	Terms to maturity					
					As at March 31, 2019	As at March 31, 2018
(CAD millions)	Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total	Total
Equity contracts						
Futures	$ 6,386	$ –	$ –	$ –	$ 6,386	$ 532
Swaps	104,749	3,618	–	–	108,367	89,708
Options:						
Over-the-counter – purchased	1	–	–	–	1	–
Over-the-counter – written	1,918	–	–	–	1,918	721
Warrants	–	3	23	–	26	10
Total equity contracts	113,054	3,621	23	–	116,698	90,971
Foreign exchange contracts						
Forwards	16,894	75	–	–	16,969	46,689
Options:						
Over-the-counter – purchased	375	–	–	–	375	–
Over-the-counter – written	4,282	–	–	–	4,282	849
Total foreign exchange contracts	21,551	75	–	–	21,626	47,538
Interest rate contracts						
Futures	4,110	–	–	–	4,110	6,571
Forwards	2,707	–	–	–	2,707	101
Swaps	48,987	24,379	12,422	7,641	93,429	34,645
Options:						
Exchange-traded – purchased	26,719	–	–	–	26,719	–
Exchange-traded – written	26,719	–	–	–	26,719	–
Over-the-counter – purchased	675	–	–	–	675	–
Over-the-counter – written	4,809	–	–	–	4,809	–
Total interest rate contracts	114,726	24,379	12,422	7,641	159,168	41,317
Credit contracts						
Purchased credit default swaps	1,986	10,376	1,410	–	13,772	7,276
Written credit default swaps	1,970	11,681	1,678	8	15,337	7,908
Options:						
Over-the-counter – written	4,676	–	–	–	4,676	–
Total credit contracts	8,632	22,057	3,088	8	33,785	15,184
Commodity contracts						
Futures	3,408	–	–	–	3,408	330
Options:						
Exchange-traded – written	1,847	–	–	–	1,847	538
Total commodity contracts	5,255	–	–	–	5,255	868
Total	$ 263,218	$ 50,132	$ 15,533	$ 7,649	$ 336,532	$ 195,878

NOTE 5. NET INVESTMENT INCOME

AT A GLANCE

Components of net investment income are included below to provide additional information on the nature of the income.

Investment income on investments made through investment holding subsidiaries and not directly held by CPP Investment Board legal entity, are presented as unrealized gains or losses under IFRS 10 in note 5.1. Further details on such investments are provided in note 5.2.

Accounting Policy
The accounting policies related to categories of income and expenses are described below.

Income from investments includes realized gains and losses from investments, changes in unrealized gains and losses on investments, dividend income and interest income. Dividend income is recognized on the ex-dividend date, which is when CPP Investment Board's right to receive the dividend has been established. Interest income is recognized as earned.

Transaction costs are incremental costs that are directly attributable to the acquisition or disposal of an investment. Transaction costs are expensed as incurred and included in net investment income.

Investment management fees, which include hedge fund performance fees, are paid to investment managers for externally managed investments. Investment management fees are expensed as incurred and included in net investment income.

5.1 Net investment income by nature

	For the years ended	
(CAD millions)	**March 31, 2019**	March 31, 2018
Interest, dividends, and other investment income[1]	**$ 20,990**	$ 6,323
Realized gains on private equities and real assets[2]	**49**	78
Unrealized gains on private equities and real assets[2]	**3,651**	1,005
Unrealized gains on investment holding subsidiaries[2] (note 5.2)	**3,291**	17,338
Realized and unrealized gains on public and other investments[2,3]	**7,295**	15,187
Total investment income	**35,276**	39,931
Investment management fees[4]	**(1,586)**	(1,738)
Transaction costs[5]	**(477)**	(401)
Net investment income	**$ 33,213**	$ 37,792

1 Net of interest expense on debt financing liabilities of $507 million (March 31, 2018 – $290 million).
2 Includes foreign currency gains or losses.
3 Consists of investment income from public equities, fixed income, absolute return strategies, derivatives and other.
4 Includes investment management fees of $1,140 million (March 31, 2018 – $1,101 million) incurred by investment holding subsidiaries.
5 Includes transaction costs of $156 million (March 31, 2018 – $141 million) incurred by investment holding subsidiaries.

5.2 Supplemental information on investment income

The unrealized gains generated from investment holding subsidiaries are a composite of the following income and expenses:

	For the years ended	
(CAD millions)	**March 31, 2019**	March 31, 2018[3]
Interest, dividends, and other investment income	**$ 4,308**	$ 3,119
Realized gains on private equities and real assets[1]	**6,400**	8,870
Unrealized gains on private equities and real assets[1]	**7,469**	5,945
Realized and unrealized gains on public and other investments[1,2]	**1,060**	1,252
Dividends paid to CPP Investment Board	**(15,946)**	(1,848)
Investment income from investment holding subsidiaries	**$ 3,291**	$ 17,338

1 Includes foreign currency gains or losses.
2 Consists of investment income from public equities, fixed income, absolute return strategies, derivatives and other.
3 Certain comparatives have been reclassified to conform to the current year's presentation.

NOTE 6. SEGMENT INFORMATION

6.1 Investment segments

CPP Investment Board's purpose is to manage amounts transferred to it under Section 108.1 of the *CPP Act* in the best interests of CPP beneficiaries and contributors. This requires investing in assets with a view to achieving a maximum rate of return without undue risk of loss. During the first quarter, CPP Investment Board made executive management and organizational changes.

This resulted in the reorganization of the previous five investment departments into six investment departments as described below. Comparative numbers have been revised to reflect this change.

- Total Portfolio Management – ensures the investing activities of the organization collectively produce a total portfolio that maximizes returns without taking undue risk. Total Portfolio Management also directs the Balancing Portfolio (the remaining portion of the CPP Investment Portfolios after excluding the assets of all active programs managed by the other investment departments) to achieve overall desired investment exposures.
- Capital Markets and Factor Investing – invests assets globally in public equities, fixed income securities, currencies, commodities and derivatives, and engages investment managers and co-investments to invest in public market securities. Capital Markets and Factor Investing is also responsible for managing CPP Investment Board's liquidity needs.
- Active Equities – invests globally in public and soon-to-be public companies as well as securities focused in emerging markets or long-term global changes, which can include earlier stage private companies. Active Equities also works with departments across the organization to ensure that environmental, social and governance risks and opportunities are incorporated into investment decision-making and asset management activities.
- Credit Investments – responsible for public and private credit investments globally. Credit Investments invests across the entire credit structure, including term loans, high-yield bonds, mezzanine lending, structured products and other credit instruments for borrowers in all sectors.
- Private Equity – responsible for private equity investments globally including funds, secondaries and direct private equity investments.
- Real Assets – responsible for investments in real estate, infrastructure, energy and resources, and power and renewables, which are typically long-term, tangible assets with steady income streams.

6.1.1 Net income from operations by investment segment

(CAD millions)	Total Portfolio Management	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total
	For the year ended March 31, 2019						
Investment income	$ 10,379	$ 143	$ 1,323	$ 3,161	$ 12,853	$ 7,417	$ 35,276
Expenses[1]	(297)	(980)	(261)	(185)	(849)	(694)	(3,266)
Net income (loss) from operations	**$ 10,082**	**$ (837)**	**$ 1,062**	**$ 2,976**	**$ 12,004**	**$ 6,723**	**$ 32,010**

(CAD millions)	Total Portfolio Management	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total
	For the year ended March 31, 2018						
Investment income	$ 16,730	$ 2,112	$ 1,855	$ 2,157	$ 10,136	$ 6,941	$ 39,931
Expenses[1]	(310)	(1,240)	(210)	(138)	(811)	(483)	(3,192)
Net income from operations	$ 16,420	$ 872	$ 1,645	$ 2,019	$ 9,325	$ 6,458	$ 36,739

1 Includes investment management fees, transaction costs and operating expenses.

6.1.2 Net assets (liabilities) by investment segment

(CAD millions)	Total Portfolio Management[1]	Capital Markets and Factor Investing	Active Equities	Credit Investments	Private Equity	Real Assets	Total
	Net assets (liabilities)						
As at:							
March 31, 2019	**$172,599**	**$ (31)**	**$ 1,047**	**$ 36,579**	**$ 87,696**	**$ 94,090**	**$391,980**
March 31, 2018	176,422	410	1,117	25,050	69,345	83,790	356,134

1 Net assets attributable to Total Portfolio Management include debt financing liabilities of $30,861 million (March 31, 2018 – $24,056 million) and net corporate liabilities of $14 million (March 31, 2018 – net corporate liabilities of $188 million).

6.2 Geographic information

Net investments are presented in the table below based on the region to which they have primary economic exposure:

(CAD millions)	Canada	U.S.	Asia	Europe (excluding U.K.)	U.K.	Other	Total
	Net investments[1]						
As at:							
March 31, 2019	**$ 60,897**	**$131,196**	**$ 90,060**	**$ 53,959**	**$ 22,078**	**$ 33,804**	**$391,994**
March 31, 2018	53,977	135,058	72,512	47,068	19,844	27,863	356,322

1 Includes debt financing liabilities of $3,828 million, $20,803 million, $6,230 million (March 31, 2018 – $3,466 million, $15,807 million, $4,783 million), based on the currencies of the issuances, in Canada, the U.S., and Europe (excluding the U.K.), respectively.

NOTE 7. RISK MANAGEMENT

AT A GLANCE

The base CPP Investment Portfolio and additional CPP Investment Portfolio (collectively CPP Investment Portfolios) are exposed to a variety of financial risks which is managed through a total portfolio risk approach. The underlying risk categories, exposures, and the related risk management techniques are described in the following notes:

- Note 8 – Market risk
- Note 9 – Credit risk
- Note 10 – Liquidity risk

Any references to the investment activities and risk exposures of CPP Investment Board also include those of its unconsolidated investment holding subsidiaries.

7.1 Introduction

CPP Investment Board employs the Risk/Return Accountability Framework, which establishes accountability of the Board of Directors, the various committees and the investment departments to manage investment-related risks. CPP Investment Board manages and mitigates financial risks through the Risk Policy approved by the Board of Directors at least once every fiscal year. This policy contains risk limits and risk management provisions that govern investment decisions. It has been designed to achieve the mandate of CPP Investment Board.

Upper and Lower Absolute Risk Limits and the Absolute Risk Operating Range (AROR) are included within the Risk Policy, and these govern the amount of total investment risk that CPP Investment Board can take in the CPP Investment Portfolios. CPP Investment Board monitors potential investment losses in CPP Investment Portfolios daily and reports to the Board of Directors on at least a quarterly basis. The target equity content for the base CPP Investment Portfolio and additional CPP Investment Portfolio is assessed using an equity/debt risk equivalence ratio for each of the Investment Portfolios that must reside within Board approved Absolute Risk Limits.

7.1.1 Independent risk oversight

The Risk Group within CPP Investment Board reports to the Chief Financial and Risk Officer. The function is responsible for assessing, monitoring and ensuring Management of the CPP Investment Portfolios is consistent with the risk appetite on limits established. This oversight is exercised through independent control and support functions.

Investment departments are accountable for managing risk within prescribed limits.

7.1.2 Investment risk measures

A suite of measures are used to estimate the risk of loss from small, moderate and significant market moves over various time horizons. In addition to industry standard market and credit risk models, CPPIB uses proprietary models to assess potential losses to the portfolio over longer time horizons. Furthermore, a number of trading desk-specific risk measures are tracked that are related to the specific nature of the strategy. For example, factor risks for real estate and public market equity portfolios.

7.1.3 Stress testing

To complement the suite of potential loss measures used to monitor the CPP Investment Portfolios, CPP Investment Board further examines the potential impact of exceptional but plausible adverse market events. Stress testing considers the effect of various hypothetical and historical based scenarios using a bottom-up approach that considers the effect of market shocks across the entire portfolio. Generally, the forecasted time line considered is one year in order to appropriately include the effect of private asset valuations, as well as the initial public market shocks. These assessments are reported to both Senior Management and the Board.

7.1.4 Model review and validation

The model validation function within the Risk Group validates strategically important portfolio construction and risk management models as well as valuation methodologies within our main investment systems.

7.2 Total portfolio risk

CPP Investment Board uses a simulation methodology to derive a distribution of potential portfolio outcomes at a future point in time. These distributions are used to estimate a variety of risk measures to monitor the absolute risk for each of the CPP Investment Portfolios across various time periods. The primary risk governance measure within the Risk/Return Accountability Framework is expressed using an equity/debt risk equivalency ratio. It is the proportion of equity versus debt in a simple two-asset-portfolio (Global Equity and Canadian Government Bonds) that would give the same measured absolute risk as that of the base CPP Investment Portfolio and additional CPP Investment Portfolio, separately. Absolute Risk for this purpose is defined as the Conditional Value at Risk (CVaR), after inflation, at the 90th percentile expressed over a five-year horizon and encompasses both market and credit risks.

The Absolute Risk measure, CVaR, is based on the average of the worst ten percent outcomes in the simulated return distribution over a five-year period. It captures the impact of extreme market events that would lead to large losses in the base CPP Investment Portfolio and additional CPP Investment Portfolio, separately.

The methodology employed to calculate CVaR assumes that historical market data is a sound basis for estimating potential future losses but it allows for the incorporation of forward-looking return expectations. If future market conditions and interrelationships of equity markets, interest rates, foreign exchange rates and other market prices differ significantly from those of the past, then the actual losses could materially differ from those estimated. To ensure a variety of business cycles and market conditions are captured within the risk model, a long historical data period (1971 – current) is used in simulating the distribution of potential outcomes. The CVaR measure provides an estimate of the average value in this distribution of potential losses that each Investment Portfolio could experience. It is not an estimate of the worst-case scenario.

As a result of different risk characteristics and the risk appetite of the base CPP and the additional CPP, the Absolute Risk of the two accounts is measured separately using the same methodology. As at March 31, 2019, the CVaR of the base CPP Investment Portfolio was $71,880 million (March 31, 2018 – $70,328 million) with an associated equity/debt risk equivalency ratio of 87% (March 31, 2018 – 86%). The CVaR of the additional CPP Investment Portfolio was $39 million with an associated equity/debt risk equivalency ratio of 51%. The CVaR estimate is strongly influenced by equity returns realized throughout the historical data period used within the risk model. As forward-looking expectations are further considered within the modelling process the CVaR value may move materially as the mean return estimates change through time. Changes in equity/debt risk equivalency ratio will also occur, but likely smaller in magnitude.

NOTE 8. MARKET RISK

Market risk is the risk that the fair value or future cash flows of an investment or investment liability will fluctuate because of changes in market prices and rates.

CPP Investment Board uses a tiered structure of limits to govern market risk by controlling the size of risk exposures. Board limits are based upon the equity/debt risk equivalency ratios of the two CPP Investment Portfolios. The next level of risk limits are set at management level and ensure that none of the individual investment departments' market risks grow faster than originally anticipated in the annual planning period. These measures are supplemented with drawdown triggers that highlight to Senior Management any individual strategies that are having losses outsized to their estimated investment risk levels. The lowest set of limits are investment program specific and are tailored to the way that the strategies are managed. Examples include DV01 that measures the possible loss/gain in the investment strategy as a result of 1 basis point increase/decrease in interest rate yield curves and divergence limits that track the portfolios' risks against their respective benchmarks.

Investment departments are expected to stay within their limits but are allowed to request increases to management level limits from the relevant Senior Management Team (SMT) member or Investment Planning Committee (IPC) dependent upon established escalation guidelines. Any limit excesses are reported to the SMT member and/or the IPC. These groups will then make an assessment as to whether to increase the limit or reduce the position.

Market risk includes equity risk, interest rate risk, credit spread risk and currency risk.

8.1 Equity

CPP Investment Portfolios invest in both publicly traded and private equities. Equity risk, which is the risk that the fair value or future cash flows will fluctuate because of changes in equity prices, is a significant source of risk of the two Investment Portfolios.

After taking into account derivative positions and with all other variables held constant, a 1% decrease/increase in the S&P 500 Index would result in a loss/profit of $1,021 million (March 31, 2018 – $1,200 million) on public equity investments. This calculation assumes that equities other than the S&P 500 Index would move in accordance with their historical behaviour conditional on a 1% decrease/increase in the S&P 500 Index.

8.2 Interest rate

Interest rate risk is the risk that the fair value or future cash flows of an investment or investment-related liability will fluctuate because of changes in market interest rates. The CPP Investment Portfolios are exposed to interest rate risk primarily through holdings of fixed income securities, certain investment liabilities and interest rate derivatives.

8.2.1 Interest rate risk sensitivity[1]

With all other variables held constant, 25 basis points increase/decrease in nominal risk-free rates would result in a decrease/increase in the value of investments directly impacted by interest rate changes as follows:

(CAD millions)	As at March 31, 2019	As at March 31, 2018
	Decrease of 25 basis points on net assets	
Maturity		
Within 1 year	$ (14)	$ (13)
1 to 5 years	557	306
6 to 10 years	434	329
Over 10 years	1,091	934
Total	$ 2,068	$ 1,556

1 This sensitivity only applies to debt instruments and interest rate-sensitive derivatives.

CPP Investment Portfolios' sensitivity to various countries' risk-free rates are concentrated in North America with 39% (March 31, 2018 – 51%) in Canada, 43% (March 31, 2018 – 47%) in the United States, 11% (March 31, 2018 – 1%) in Europe, and minor exposures to other regions in both years.

8.3 Credit spread

Credit spread is the difference in yield on certain securities compared to a comparable risk-free security (i.e. government issued) with the same maturity date. Credit spread risk is the risk that the fair value of these securities will fluctuate because of changes in credit spread. As at March 31, 2019, 75% (March 31, 2018 – 80%) of credit spread risk was in A or better rated debt, primarily in Canadian provincial bonds.

With all other variables held constant, a 1 basis point widening of the credit spreads would result in a decrease in net assets by $31 million (March 31, 2018 – $30 million).

8.4 Currency

CPP Investment Portfolios are exposed to currency risk through holdings of investments or investment liabilities in various currencies. Fluctuations in the relative value of foreign currencies against the Canadian dollar can result in a positive or negative effect on the fair value or future cash flows of these investments and investment liabilities.

8.4.1 Currency risk exposures

In Canadian dollars, the net currency exposures, after allocating foreign currency derivatives are as follows:

	As at March 31, 2019		As at March 31, 2018	
(CAD millions)	Net exposure	% of total	Net exposure	% of total
Currency				
United States dollar	$ 204,605	52%	$ 171,898	48%
Euro	33,539	9	36,135	10
British pound sterling	18,219	5	19,329	5
Australian dollar	13,587	3	11,889	3
Chinese renminbi	12,577	3	6,412	2
Hong Kong dollar	10,376	3	8,086	2
Japanese yen	8,416	2	15,019	4
Indian rupee	6,509	2	4,947	1
Brazilian real	3,620	1	2,422	1
South Korean won	3,136	1	3,680	1
Chilean peso	2,722	1	2,695	1
Swiss franc	2,623	1	4,002	1
Other	11,873	2	12,694	5
Total foreign exposure	331,802	85	299,208	84
Canadian dollar	60,192	15	57,114	16
Total	$ 391,994	100%	$ 356,322	100%

8.4.2 Currency risk sensitivity

With all other variables and underlying values held constant, a 10% appreciation/depreciation of the Canadian dollar against all other currencies would result in a decrease/increase in net investments as follows:

(CAD millions)	As at March 31, 2019	As at March 31, 2018
	Depreciation of 10% of the Canadian dollar against other currencies on net assets	
Currency		
United States dollar	$ 20,461	$ 17,190
Euro	3,354	3,614
British pound sterling	1,822	1,933
Australian dollar	1,359	1,189
Other	6,184	5,996
Total	$ 33,180	$ 29,922

NOTE 9. CREDIT RISK

Credit risk is the risk of financial loss due to a counterparty failing to meet its contractual obligations, or a reduction in the value of the assets due to a decline in the credit quality of the underlying entity. CPP Investment Portfolios' credit risk exposure arises primarily through its investment in debt securities and over-the-counter derivatives. The carrying amounts of these investments as presented in the Consolidated Schedule of Investment Portfolio represent the maximum direct credit risk exposure at the Balance Sheet date.

9.1 Counterparty exposures

The fair value of debt securities and over-the-counter derivatives exposed to credit risk, by credit rating category and without taking account of any collateral held or other credit enhancements was as follows:

As at March 31, 2019 (CAD millions)	Bonds[1]	Money market securities[1]	Reverse repurchase agreements[1]	Over-the-counter derivatives	Other debt[1,2]	Total	% of total
Credit rating							
AAA	$ 22,975	$ –	$ –	$ –	$ 1,111	$ 24,086	20%
AA	30,802	4,002	1,414	338	674	37,230	30%
A	25,231	3,857	5,001	2,398	614	37,101	30%
BBB	4,151	–	1,792	451	1,290	7,684	6%
BB	1,976	17	–	–	3,844	5,837	5%
B	1,240	–	–	–	7,874	9,114	8%
CCC/D	47	–	–	–	1,600	1,647	1%
Total	$ 86,422	$ 7,876	$ 8,207	$ 3,187	$ 17,007	$ 122,699	100%

As at March 31, 2018 (CAD millions)	Bonds[1]	Money market securities[1]	Reverse repurchase agreements[1]	Over-the-counter derivatives	Other debt[1,2]	Total	% of total
Credit rating							
AAA	$ 12,048	$ 24	$ –	$ –	$ –	$ 12,072	13%
AA	26,251	2,339	168	43	–	28,801	32%
A	24,638	2,788	4,066	1,500	465	33,457	37%
BBB	1,284	–	1,930	375	1,449	5,038	6%
BB	181	–	–	–	3,589	3,770	4%
B	–	–	–	–	6,065	6,065	7%
CCC/D	1	–	–	–	782	783	1%
Total	$ 64,403	$ 5,151	$ 6,164	$ 1,918	$ 12,350	$ 89,986	100%

1 Includes accrued interest.
2 Includes direct investments in private debt and asset-backed securities.

In addition to the above, CPP Investment Portfolios are indirectly exposed to credit risk on the underlying securities of fund investments.

CPP Investment Board limits credit risk on over-the-counter contracts through a variety of means, including dealing only with authorized counterparties that meet the minimum credit rating and limiting the maximum exposures to any individual counterparty, and the use of master netting agreements and collateral.

Credit risk exposure is mitigated on certain financial assets and financial liabilities, which have conditional offset rights in the event of default, insolvency or bankruptcy. For securities purchased under reverse repurchase agreements, securities sold under repurchase agreements and over-the-counter derivatives, collateral is collected from or pledged to counterparties to manage credit exposure (see note 13). In addition, in the event of default, amounts with a specific counterparty are settled on a net basis under master netting or similar arrangements, such as the Global Master Repurchase Agreement and the International Swaps and Derivatives Association Netting Agreements.

9.2 Credit VaR

Credit Risk for the two CPP Investment Portfolios is estimated using a Monte Carlo simulation that incorporates likelihood of default, credit rating migration and recovery in the event of default for underlying credit instruments. As at March 31, 2019, Credit VaR (99% Confidence level) of the base CPP Investment Portfolio was $5,317 million (March 31, 2018 – $4,106 million) which implies there is a 1% chance that the base CPP Investment Portfolio of credit instruments will lose more than this amount in any given year due to default and credit migration risk. As at March 31, 2019, the Credit VaR (99% Confidence level) of the additional CPP Investment Portfolio was $3 million.

NOTE 10. LIQUIDITY RISK

Liquidity risk includes two main components:

- Solvency risk – The risk of failing to obtain the funds needed to meet payment obligations as they come due.
- Portfolio Rebalancing risk – The risk that CPP Investment Board is unable to fund investment programs and optimize/rebalance investment portfolios.

Liquidity risk increases by the use of various forms of leverage which CPP Investment Board uses to manage certain other risks and enhance fund returns. The use of leverage is governed through various liquidity risk limits which require sufficient liquidity to be available to manage both components of liquidity risk. In addition, CPP Investment Board seeks to maintain its issuer credit rating at “AAA” and maintains leverage ratios consistent with this rating.

Management of liquidity risk is supplemented through the ability to raise funds through activities such as the issuance of commercial paper and term debt and transacting in securities sold under repurchase agreements. CPP Investment Board also maintained $6,176 million (March 31, 2018 – $6,012 million) of unsecured credit facilities to meet potential liquidity requirements. There were no credit facilities drawn as at March 31, 2019 and 2018. The ability to readily dispose of certain investments to meet liquidity needs is facilitated by maintaining a liquid portfolio of publicly traded equities, money market securities and marketable bonds.

CPP Investment Board is exposed to liquidity risk through its obligations to remit cash to the CPP. In order to manage associated liquidity risk, certain assets are segregated and managed separately. Liquidity risk is also managed by investing these assets in liquid money market instruments with the primary objective of ensuring that the CPP has the necessary liquidity to meet benefit payment obligations on any business day.

10.1 Terms to maturity

The tables below present the contractual maturities of investments and investment liabilities of CPP Investment Board and its investment holding subsidiaries:

Non-derivative investments

	Terms to maturity							
	As at March 31, 2019						As at March 31, 2018	
(CAD millions)	Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total[3]	Average effective yield	Total[3]	Average effective yield
Non-marketable bonds								
Canadian provincial government	$ 1,558	$ 5,820	$ 3,521	$ 12,540	$ 23,439	2.7%	$ 23,527	2.9%
Marketable bonds								
Government of Canada	–	7,007	380	1,166	8,553	1.7%	5,017	2.1%
Canadian provincial government	–	821	1,976	3,361	6,158	2.7%	6,483	2.9%
Canadian government corporations	–	1,881	1,043	357	3,281	2.2%	2,626	2.6%
Foreign government	554	13,358	8,858	13,700	36,470	2.3%	23,113	2.9%
Corporate bonds	96	3,200	3,249	1,158	7,703	4.4%	3,085	3.4%
Other debt								
Private debt[1]	48	4,483	4,948	1,871	11,350	8.1%	9,573	8.4%
Private real estate debt[1]	583	2,057	2,361	–	5,001	6.7%	3,582	6.6%
Asset-backed securities	–	6	67	1,937	2,010	3.0%	5	4.4%
Securities purchased under reverse repurchase agreements	8,205	–	–	–	8,205	0.8%	6,164	1.8%
Securities borrowed[2]	2,969	–	–	–	2,969	n/a	–	n/a
Total	$ 14,013	$ 38,633	$ 26,403	$ 36,090	$115,139	n/a	$ 83,175	n/a

1 Includes direct investments and excludes fund investments.
2 Relates to cash collateral, which has no effective yield.
3 Represents fair value.

Non-derivative investment liabilities

	Terms to maturity									
	As at March 31, 2019							As at March 31, 2018		
(CAD millions)	Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total[4]	Fair value	Weighted average interest rate	Total[4]	Fair value	Weighted average interest rate
Securities sold under repurchase agreements	$ 38,548	$ –	$ –	$ –	$ 38,548	$ 38,375	2.3%	$ 32,559	$ 32,504	1.7%
Securities lent[1]	1,116	–	–	–	1,116	1,116	n/a	–	–	n/a
Securities sold short[2,3]	29,027	–	–	–	29,027	29,027	n/a	13,574	13,574	n/a
Debt financing liabilities										
Commercial paper payable	4,378	–	–	–	4,378	4,323	2.7%	6,263	6,254	1.9%
Term debt	4,590	12,673	7,336	1,500	26,099	26,538	1.6%	17,910	17,802	1.8%
Total	$ 77,659	$ 12,673	$ 7,336	$ 1,500	$ 99,168	$ 99,379	n/a	$ 70,306	$ 70,134	n/a

1 Relates to cash collateral, which has no effective yield.
2 Considered repayable within one year based on the earliest period in which the counterparty could request payment under certain conditions.
3 Includes equities sold short for which the average interest rate is not applicable.
4 Represents contractual amounts.

NOTE 11. FINANCIAL INSTRUMENTS – RIGHTS OF OFFSET

Accounting policy

Financial assets and financial liabilities are offset and the net amount reported in the Consolidated Financial Statements if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.

The following table presents the effect of offsetting for derivatives and repurchase and reverse repurchase agreements that are subject to master netting arrangements or similar agreements that meet the criteria for offsetting. The table also presents the amounts that are subject to enforceable netting arrangements but do not qualify for offsetting. For certain derivatives, the gross amounts subject to netting arrangements include the daily settlement of variation margin which is netted against the fair value of the derivatives.

	As at March 31, 2019					
				Less: Amounts subject to master netting or similar arrangements but not presented net		
(CAD millions)	Gross amounts subject to netting arrangements	Less: Amounts offset in Consolidated Financial Statements	Net amount presented in the Consolidated Schedule of Investment Portfolio	Subject to agreements	Securities and cash collateral[1]	Net exposure
Securities purchased under reverse repurchase agreements	$ 8,205	$ –	$ 8,205	$ (7,335)	$ (870)	$ –
Derivative assets	3,192	–	3,192	(1,834)	(965)	393
Total investment receivables	**$ 11,397**	**$ –**	**$ 11,397**	**$ (9,169)**	**$ (1,835)**	**$ 393**
Securities sold under repurchase agreements	$ (38,375)	$ –	$ (38,375)	$ 7,335	$ 31,040	$ –
Derivative liabilities	(2,330)	–	(2,330)	1,834	235	(261)
Total investment payables	**$ (40,705)**	**$ –**	**$ (40,705)**	**$ 9,169**	**$ 31,275**	**$ (261)**

	As at March 31, 2018					
				Less: Amounts subject to master netting or similar arrangements but not presented net		
(CAD millions)	Gross amounts subject to netting arrangements	Less: Amounts offset in Consolidated Financial Statements	Net amount presented in the Consolidated Schedule of Investment Portfolio	Subject to agreements	Securities and cash collateral[1]	Net exposure
Securities purchased under reverse repurchase agreements	$ 6,164	$ –	$ 6,164	$ (6,164)	$ –	$ –
Derivative assets	1,918	–	1,918	(1,290)	(628)	–
Total investment receivables	$ 8,082	$ –	$ 8,082	$ (7,454)	$ (628)	$ –
Securities sold under repurchase agreements	$ (32,504)	$ –	$ (32,504)	$ 6,164	$ 26,340	$ –
Derivative liabilities	(1,712)	–	(1,712)	1,290	320	(102)
Total investment payables	$ (34,216)	$ –	$ (34,216)	$ 7,454	$ 26,660	$ (102)

1 Securities and cash collateral exclude over-collateralization and collateral in transit. Refer to note 13 for the total amount of collateral.

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NOTE 12. OPERATING EXPENSES

12.1 Compensation of key management personnel

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of CPP Investment Board, consisting of the Senior Management Team and the Board of Directors.

Compensation of key management personnel of CPP Investment Board is as follows:

(CAD millions)	For the years ended March 31, 2019	March 31, 2018
Short-term employee compensation and benefits	$ 26	$ 22
Other long-term compensation and benefits	26	19
Total	**$ 52**	$ 41

12.2 General operating expenses

General operating expenses consist of the following:

(CAD millions)	For the years ended March 31, 2019	March 31, 2018
Information technology and data services	$ 118	$ 98
Professional services[1]	107	71
Premises and equipment	40	38
Custodial fees	36	32
Tax on international operations	35	40
Travel and accommodation	25	21
Amortization of premises and equipment	20	27
Communications	14	9
Directors' remuneration	2	2
Other	4	3
Total	**$ 401**	$ 341

1 Includes auditor's remuneration of $4 million (March 31, 2018 – $3 million).

NOTE 13. COLLATERAL

Collateral transactions are conducted to support investment activities under terms and conditions that are common and customary to collateral arrangements. The net fair value of collateral held and pledged was as follows:

(CAD millions)	As at March 31, 2019	As at March 31, 2018
Third-party assets held as collateral on[1]:		
Reverse repurchase agreements	$ 8,207	$ 6,187
Over-the-counter derivative transactions	965	692
Securities lent[2]	1,627	–
Other debt	772	760
Own and third-party assets pledged as collateral on:		
Repurchase agreements	(38,383)	(32,621)
Securities sold short[3]	(34,549)	(16,610)
Over-the-counter derivative transactions	(407)	(315)
Private equities	(7,849)	(5,942)
Other debt	(4,562)	(4,417)
Total	**$ (74,179)**	$ (52,266)

1 The fair value of the collateral held that may be sold or repledged as at March 31, 2019 was $9,557 million (March 31, 2018 – $6,967 million). The fair value of collateral sold or repledged as at March 31, 2019 was $3,504 million (March 31, 2018 – $5,969 million).

2 Includes cash collateral of $1,116 million (March 31, 2018 – nil). The fair value of securities lent as at March 31, 2019 was $1,602 million (March 31, 2018 – nil).

3 The fair value of securities borrowed as at March 31, 2019 was $27,110 million (March 31, 2018 – $13,045 million) of which $26,631 million was sold or repledged (March 31, 2018 – $12,547 million) for securities sold short.

NOTE 14. COMMITMENTS

14.1 Investment commitments

CPP Investment Board and its investment holding subsidiaries have entered into commitments related to the funding of investments. These commitments are generally payable on demand based on the funding needs of the investment subject to the terms and conditions of each agreement. As at March 31, 2019, the unfunded commitments totalled $47,408 million (March 31, 2018 – $41,767 million).

14.2 Lease and other commitments

CPP Investment Board made lease and other commitments, which require future annual payments as follows:

(CAD millions)	As at March 31, 2019	As at March 31, 2018
Within one year	$ 42	$ 36
After one year but not more than five years	115	115
More than five years	10	26
Total	**$ 167**	$ 177

NOTE 15. RELATED PARTY TRANSACTIONS

Related parties of CPP Investment Board include unconsolidated subsidiaries, joint ventures and associates and all related party investments are measured at fair value.

Unconsolidated subsidiaries include 219 wholly owned investment holding subsidiaries (see note 1.2) (March 31, 2018 – 210) managed by CPP Investment Board. These investment holding subsidiaries hold private investments, debt, funds and real assets. The 219 investment holding subsidiaries are incorporated as follows: 148 in Canada (March 31, 2018 – 145), 25 in the United States (March 31, 2018 – 22), 20 in Australia (March 31, 2018 – 20), six in Hong Kong (March 31, 2018 – five), and 20 in other jurisdictions (March 31, 2018 – 18). CPP Investment Board provides financial or other support to these investment holding subsidiaries to fund their day-to-day operations and investment activities under loan agreements or shareholder's resolutions, as needed.

In addition, CPP Investment Board also owns interests in unconsolidated subsidiaries that are themselves investments. These investments, some of which may be wholly owned, are controlled through ownership rights directly or indirectly by CPP Investment Board.

Investments in joint ventures are those arrangements where CPP Investment Board has joint control. An associate is an entity which CPP Investment Board has the ability to exercise significant influence over decision-making.

Related party transactions consist of investments and investment income primarily in private equities, debt, funds and real assets. These transactions are measured at fair value and will, therefore, have the same impact on net assets and net investment income as those investment transactions with unrelated parties. Related party transactions with consolidated subsidiaries are eliminated upon consolidation.

NOTE 16. GUARANTEES

16.1 Guarantees

As part of certain investment transactions, CPP Investment Board and its investment holding subsidiaries agreed to guarantee, as at March 31, 2019, up to $4,437 million (March 31, 2018 – $2,842 million) to other counterparties in the event certain investee entities default under the terms of loan and other related agreements.

16.2 Indemnifications

CPP Investment Board provides indemnifications to its officers, directors, certain others and, in certain circumstances, to various counterparties and other entities. CPP Investment Board may be required to compensate these indemnified parties for costs incurred as a result of various contingencies such as changes in laws, regulations and litigation claims. The contingent nature of these indemnification agreements prevents CPP Investment Board from making a reasonable estimate of the maximum potential payments CPP Investment Board could be required to make. To date, CPP Investment Board has not received any material claims nor made any material payments pursuant to such indemnifications.

NOTE 17. BASE CPP AND ADDITIONAL CPP

AT A GLANCE

As a result of legislative amendments in December 2016, the *CPP Act* now defines two separate parts of the CPP:

1. base CPP – the part of the CPP that existed before January 1, 2019; and
2. additional CPP – the additional part of the CPP that came into effect on January 1, 2019.

The following note discloses the net assets, net investments and net income of base CPP account and additional CPP account.

17.1 Changes in net assets

Pursuant to Section 108.1 of the *CPP Act*, the *CPPIB Act* and an administrative agreement between Her Majesty the Queen in right of Canada and CPP Investment Board, amounts not required to meet specified obligations of the CPP are transferred weekly to CPP Investment Board. The funds originate from employer and employee contributions to the CPP. CPP Investment Board remits cash to the CPP as required, including the periodic return, on at least a monthly basis, of funds required to meet CPP benefits and expenses.

The accumulated transfers from/to the CPP and its two parts, the base CPP and additional CPP, as well as their accumulated net income since inception, are as follows:

	Accumulated net transfers from CPP			Accumulated net income			
(CAD millions)	base CPP	additional CPP	Total	base CPP	additional CPP	Total	Total net assets
As at April 1, 2017	$ 137,802	$ –	$ 137,802	$ 178,875	$ –	$ 178,875	$ 316,677
Total net income for the year	–	–	–	36,739	–	36,739	36,739
Transfers from CPP	36,425	–	36,425	–	–	–	36,425
Transfers to CPP	(33,707)	–	(33,707)	–	–	–	(33,707)
Balance as at March 31, 2018	$ 140,520	$ –	$ 140,520	$ 215,614	$ –	$ 215,614	$ 356,134
As at April 1, 2018	**$ 140,520**	**$ –**	**$ 140,520**	**$ 215,614**	**$ –**	**$ 215,614**	**$ 356,134**
Total net income for the year	**–**	**–**	**–**	**32,008**	**2**	**32,010**	**32,010**
Transfers from CPP	**38,160**	**421**	**38,581**	**–**	**–**	**–**	**38,581**
Transfers to CPP	**(34,745)**	**–**	**(34,745)**	**–**	**–**	**–**	**(34,745)**
Balance as at March 31, 2019	**$ 143,935**	**$ 421**	**$ 144,356**	**$ 247,622**	**$ 2**	**$ 247,624**	**$ 391,980**

17.2 Net assets of base CPP and additional CPP

The net assets of base CPP and additional CPP are as follows:

	As at March 31, 2019			As at March 31, 2018
(CAD millions)	base CPP	additional CPP	Total	Total
Cash and cash equivalents held for investment purposes	**$ 8,606**	**$ 12**	**$ 8,618**	$ 8,213
Net investments other than cash and cash equivalents	**382,979**	**397**	**383,376**	348,109
Net investments	**391,585**	**409**	**391,994**	356,322
Premises and equipment	**373**	**14**	**387**	348
Other assets[1]	**243**	**1**	**244**	153
Accounts payable and accrued liabilities	**(644)**	**(1)**	**(645)**	(689)
Net Assets	**$ 391,557**	**$ 423**	**$ 391,980**	$ 356,134

1 Includes cash held for operating purposes.

In preparation for the additional investment and reporting responsibilities associated with the additional CPP, CPP Investment Board incurred approximately $23 million of start-up costs. These costs were paid with funds transferred to CPP Investment Board on account of the base CPP. CPP Investment Board has reimbursed the base CPP account, with interest, using funds transferred to CPP Investment Board on account of the additional CPP during the year. $14 million of the start-up costs were incurred in connection with system changes and are capitalized in premises and equipment, the remaining $9 million was expensed.

17.3 Schedule of investment portfolio for base CPP and additional CPP

The table below provides details of the investments and investment liabilities for base CPP and additional CPP:

	As at March 31, 2019			As at March 31, 2018
(CAD millions)	base CPP	additional CPP	Total	Total
Equities				
Public equities	$ 141,105	$ 84	$ 141,189	$ 146,221
Private equities	96,601	58	96,659	75,737
Total equities	237,706	142	237,848	221,958
Fixed income				
Bonds	85,379	225	85,604	63,851
Other debt	27,309	16	27,325	22,183
Money market securities	9,817	12	9,829	8,213
Total fixed income	122,505	253	122,758	94,247
Absolute return strategies	25,497	15	25,512	21,027
Real assets				
Real estate	45,819	27	45,846	44,712
Infrastructure	33,111	20	33,131	27,450
Energy and resources	7,997	5	8,002	5,729
Power and renewables	5,072	3	5,075	2,949
Total real assets	91,999	55	92,054	80,840
Investment receivables				
Securities purchased under reverse repurchase agreements and securities borrowed	11,167	7	11,174	6,164
Derivative assets	3,190	2	3,192	1,918
Other	2,027	2	2,029	2,673
Total investment receivables	16,384	11	16,395	10,755
Total investments	$ 494,091	$ 476	$ 494,567	$ 428,827
Investment liabilities				
Securities sold under repurchase agreements and securities lent	(39,467)	(24)	(39,491)	(32,504)
Securities sold short	(29,010)	(17)	(29,027)	(13,574)
Debt financing liabilities	(30,843)	(18)	(30,861)	(24,056)
Derivative liabilities	(2,329)	(1)	(2,330)	(1,712)
Other	(1,154)	(1)	(1,155)	(795)
Total investment liabilities	(102,803)	(61)	(102,864)	(72,641)
Pending trades receivable	4,689	3	4,692	2,613
Pending trades payable	(4,392)	(9)	(4,401)	(2,477)
Net investments	$ 391,585	$ 409	$ 391,994	$ 356,322

17.4 Net income of base CPP and additional CPP

Details of net income of base CPP and additional CPP are as follows:

	For the years ended			
	March 31, 2019			March 31, 2018
(CAD millions)	base CPP	additional CPP	Total	Total
Investment income	$ 35,265	$ 11	$ 35,276	$ 39,931
Investment management fees	(1,586)	–	(1,586)	(1,738)
Transaction costs	(477)	–	(477)	(401)
Net investment income	33,202	11	33,213	37,792
Operating expenses[1]	(1,194)	(9)	(1,203)	1,053
Net income	$ 32,008	$ 2	$ 32,010	$ 36,739

1 Operating expenses of additional CPP includes $9 million of start-up costs expensed in the year.

10-YEAR REVIEW[1]

										For the year ended March 31
($ billions)	**2019**	2018	2017	2016	2015	2014	2013	2012	2011	2010
Change in Net Assets										
Net investment income	**33.2**	37.8	34.4	10.0	41.4	30.7	16.7	9.9	15.5	16.2
Operating expenses	**(1.2)**	(1.1)	(0.9)	(0.9)	(0.8)	(0.6)	(0.5)	(0.4)	(0.3)	(0.2)
Net contributions	**3.9**	2.7	4.3	5.2	4.9	5.7	5.5	3.9	5.4	6.1
Increase in net assets	**35.9**	39.4	37.8	14.3	45.5	35.8	21.7	13.4	20.6	22.1
Net assets	**392.0**	356.1	316.7	278.9	264.6	219.1	183.3	161.6	148.2	127.6

										As at March 31
($ billions)	**2019**	2018[2]	2017[2]	2016[2]	2015[2]	2014[2]	2013[2]	2012[2]	2011[2]	2010[2]
Equities										
Canada	**8.9**	9.7	11.7	13.5	19.5	18.6	15.3	14.2	21.0	18.5
Foreign developed markets	**162.7**	165.1	140.0	112.6	98.0	75.6	64.0	56.7	50.8	46.2
Emerging market	**51.5**	36.0	23.7	17.6	15.5	12.6	12.4	10.6	7.6	6.5
Fixed Income										
Non-marketable bonds	**22.2**	23.6	24.0	24.4	25.8	23.4	24.4	23.6	21.8	22.7
Marketable bonds	**63.9**	53.2	49.1	32.5	34.4	31.0	28.5	21.2	19.7	17.1
Cash and Absolute Return Strategies	**(16.2)**	(13.6)	(2.4)	16.8	18.8	17.4	8.7	2.5	2.3	1.7
External debt issuance	**(30.9)**	(24.1)	(19.9)	(15.6)	(9.9)	(9.7)	(9.5)	(2.4)	(1.4)	(1.3)
Credit Investments	**35.8**	22.6	17.6	17.0	17.2	11.4	8.6	8.8	6.1	3.5
Real Assets										
Real estate	**47.5**	46.1	40.1	36.7	30.3	25.5	19.9	17.1	10.9	7.0
Infrastructure	**33.3**	28.6	24.3	21.3	15.2	13.3	11.2	9.5	9.5	5.8
Energy and Resources	**8.2**	6.1	4.3	1.4	–	–	–	–	–	–
Power and Renewables	**5.1**	3.0	4.4	0.9	–	–	–	–	–	–
Net Investments[3]	**392.0**	356.3	316.9	279.1	264.8	219.1	183.5	161.8	148.3	127.7
Net Return										
Base CPP	**8.9%**	11.5%	11.8%	3.4%	18.2%	16.0%	9.7%	6.2%	11.5%	14.6%
Additional CPP[4]	**5.0%**									
Total Fund	**8.9%**	11.5%	11.8%	3.4%	18.2%	16.0%	9.7%	6.2%	11.5%	14.6%

1 The net investment table aligns with the Asset Mix within the Management's Discussion & Analysis.

2 Historical figures for fiscal 2016 to 2018 are consistent with the current year's presentation. Fiscal 2010 to 2015 figures have not been updated to the current year's presentation.

3 Includes $391.6 billion of base CPP and $0.4 billion of additional CPP.

4 Additional CPP return for 2019 is not annualized, representing the net return since the initial cash flow received from the additional CPP contributions in January 2019. Additional CPP return excludes the $9 million start-up costs that has been expensed and captured in the total Fund net return in fiscal 2019.

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